

CELEBRATING THE 50th ANNIVERSARY OF THE WILDERNESS ACT

The National Wilderness Conference Proceedings | Albuquerque, New Mexico | October 15-19, 2014



COVER PHOTO: By Michael Melford (michaelmelford.com) of the Gila River. The Mimbres people were active between 1000 and 1130 in the Gila Wilderness area, leaving cliff dwellings, ruins and other evidence of their culture. The Chiricahua band of Apache came into the area between 1200 and 1600. Because of their fierce protectiveness, the area remained undeveloped into the 1870's. In 1922, Aldo Leopold, a United States Forest Service supervisor of the Carson National Forest proposed that the headwaters area of the Gila River should be preserved by an administrative process. Through his efforts, this area became recognized in 1924 as the first wilderness area in the National Forest System. Gila became the first congressionally designated wilderness of the National Wilderness Preservation System when the Wilderness Act was signed into law by President Lyndon B. Johnson in 1964.

BACK COVER PHOTO: President Lyndon B. Johnson signed the Wilderness Act into law on September 3, 1964. Howard Zahniser was the principal author of the Wilderness Act. Sadly Zahniser died four months before it was made law. In this photo the President signs the Wilderness Act as Alice Zahniser, Howard's widow, and Mardy Murie, a conservationist and author, and others look on.

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Susan Fox, Aldo Leopold Wilderness Research Institute

Chelsea Phillippe, Sawtooth National Forest, USDA Forest Service

Vicky Hoover, Sierra Club

Lee Lambert, Wilderness Forever

www.wilderness50th.org/conference.php



THE NATIONAL WILDERNESS CONFERENCE PROCEEDINGS was produced in cooperation with the four federal land management agencies that administer designated Wilderness along with several participating partners of the National Wilderness Conference and *Wilderness50*.

Special thanks to Susan Fox, Director, Aldo Leopold National Wilderness Research Institute for her direction and guidance; Chelsea Phillippe, Wilderness Ranger, USDA Forest Service, Sawtooth National Forest, Sawtooth Wilderness for her compilation and organization of the documents contained within this Proceedings; Lee Lambert, Wilderness Forever and Vicky Hoover, Sierra Club, Chair, *Wilderness50* and principal editor for the Proceedings – but for whom the National Wilderness Conference and the 50th Anniversary Celebration would not have been possible.

WILDERNESS PHOTOGRAPHS: The photographs in these Proceedings are the winners or those selected for honorable mention from a photo contest run to celebrate the 50th Anniversary of the Wilderness Act. This competition for the best Wilderness photographs highlighting the beauty, diversity, and longevity of America’s Wilderness was organized by *Wilderness50*, Nature’s Best Photography, ESRI, and the Smithsonian Institution. These images provide a collective celebration of Wilderness drawn from more than 5,000 photos submitted by citizens across the United States and international visitors to U.S. Wilderness areas. They were judged in four categories: Scenic Landscape, Wildlife, People in Wilderness, and Most Inspirational. The exhibition, titled “Wilderness Forever: 50 Years of Protecting America’s Wild Places” was displayed in the Smithsonian during 2014 and 2015. www.wilderness50th.org/smithsonian

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Proxy Falls, Three Sisters Wilderness, Oregon
By Thomas Goebel, www.flickr.com/people/thomasgoebel

Dedication

The proceedings are dedicated to all the people who make Wilderness possible....

People all across America who love and cherish Wilderness
Congress for designating Wilderness areas
Wilderness advocacy groups
Wilderness scientists
Wilderness trainers and educators
Wilderness volunteers
Wilderness organizations and universities
Wilderness gateway communities
The four agencies that manage wilderness:
Bureau of Land Management, US Fish and Wildlife Service, US Forest Service
& National Park Service, their program managers, trail crews, rangers and stewards

*...without their support we would not be able to protect these unique lands
or the wildlife that make Wilderness their home.*

*“What a country chooses
to save is what a country
chooses to say about itself.”*

- MOLLIE BEATTIE,
Former Director, U.S. Fish and Wildlife Service



Red Fox, Denali Wilderness, Denali National Park & Preserve, Alaska
By Dee Ann Pederson, www.windowsofnature.com

Preface

In October 2014, over twelve-hundred people gathered to celebrate the 50th anniversary of the Wilderness Act being signed into law. This celebration was a time to offer respect for accomplishments of the past, and reflect on and discuss future challenges to preserving our nation's unique Wilderness heritage. The conference hosted nine plenary sessions featuring trios or quartets of multicultural, federal agency, and non-governmental keynote speakers around a variety of Wilderness topics; interspersed were concurrent sessions based on six themes – civic engagement, education, experience, history, science, and stewardship.

Conference organizers did extensive outreach to encourage multi-cultural diversity and youth involvement. There were three teacher workshops. And more than 350 local Albuquerque school children were transported to the conference site to participate in the “Wilderness Awareness Trail”. Here they received hands-on instruction on topics such as Wilderness history and philosophy, primary management issues, and how to get more involved with Wilderness. Also 100 youth from conservation and job corps programs, youth organizations and universities from around the country attended the conference and Youth Summit. Fourteen youth, with many with multi-cultural backgrounds, were awarded conference scholarships.

Many people from Albuquerque participated in the “Get Wild” Festival. The festival offered local residents free opportunities to not only join the Wilderness celebration, but to engage in a variety of Wilderness education and multi-cultural-based presentations and activities.

It was a powerful and wonderful gathering of people from all across the U.S., from a wide range of organizations, cultural community groups and private citizens—but what truly united us all...was our shared love for and devotion to – Wilderness!

These proceedings include as much as possible from the conference, as an historical record of what was important to Wilderness, reflecting 50 years of experience designating and managing the truly unique National Wilderness Preservation System. And we are proud to recognize the important contributions of our wide range of conference sponsors, we are extremely grateful for their support, because without it, this historical event would not have been possible.

Susan Fox, *Director, Aldo Leopold Wilderness Research Institute*
Missoula, Montana

*“To me, a wilderness is where
the flow of wildness is essentially
uninterrupted by technology; without
wilderness the world is a cage.”*

- DAVID BROWER, *Environmentalist and founder
of Friends of the Earth and other organizations*



Natural Firefall, Yosemite Wilderness, California
By Joseph Fronteras, www.500px.com/fronteras

New Mexico Wilderness Alliance

Mark Allison, *Executive Director*

The 50th anniversary of the Wilderness Act provided an important opportunity for us to look back so that we can look forward. It is vitally important that we remember the shoulders we stand upon and recognize the responsibility we have for further realizing that original vision. It is now our turn to make our own contributions to protect the increasingly rare wild that still remains.

We were thrilled to act as the local co-hosts of this historic National Wilderness Conference. Welcoming over 1,100 people from all over the county to Albuquerque was invigorating. Being able to meet, listen to and learn from giants in the movement was extraordinary. Having the opportunity to witness the passion and dedication of fellow activists was powerful. And seeing the hundreds of young faces and persons of color was inspiring. Thanks to everyone who made the trip and to everyone for standing up for Wilderness whether you made it or not.

New Mexico boasts a long history of Wilderness protection and the New Mexico Wilderness Alliance is proud to help carry the torch into the future. I can't think of anything that compares with the feeling of being part of a successful effort to permanently protect these special places so that future generations unknown to us will still have the opportunity to experience the humility, the wonder and awe that comes from Wilderness.

As we celebrated the 50th anniversary of the Wilderness Act and rededicated ourselves to the values it articulates, a small but persistent voice of opposition can be heard from time to time. Of course, there have always been those representing selfish commercial interests who don't believe any land should be off limits to for-profit exploitation. And the philosophical objection of those opposed to public lands in general is not new. Nor is the demagoguery of those who stoke those sentiments for their own narrow political reasons.

More insidious, perhaps, is an increasingly fashionable strain of thinking in certain circles that the Wilderness Act was a well-intentioned but romantic distraction or, in the most recent manifestation of this argument, that it is antiquated, irrelevant, no longer necessary and even harmful to the very places meant to be protected. We hear that it is quaint and that since no place is actually pristine from human behavior, the value of self-willed places is a dangerous conceit.

I respectfully disagree. I think arguments like this fundamentally misunderstand what Wilderness is or what makes it qualitatively different. They evidence a failure to internalize why Wilderness matters, why it still matters—as much now as ever before. Practically, politically, these arguments sounds dangerously naïve to me. They are a slippery slope that will inevitably aid and abet those who are hostile to the idea of Wilderness and who would despoil our precious few remaining wild places. Would there be any place left free from the belching of bulldozers and the din of chainsaws?

Supporters of Wilderness and our public lands don't necessarily have the same motivations, nor must they. Regardless, though, their support is deeply rooted in the values, traditions and culture that make us proud New Mexicans and Americans. At our best, we honor wisdom and prudence and common sense. We recognize an obligation to posterity. We value family and cherish memories of time spent together. We reflexively want balance and fairness; we cringe at thoughtless waste, destruction and despoliation. We grieve for loss. We intuitively know that destroying our few remaining wild places is irrevocable and lessens us. We know deep down that it is immoral to destroy fully and forever that which we didn't create.

Take for example this nonsense over transferring our federal public lands to the states—this isn't coming from a groundswell from everyday New Mexicans. It is cynically generated by out of state industry-funded front groups. They are well-heeled and sophisticated and do an increasingly good job of wrapping their rhetoric around freedom and access while the implications of what they want to do represent the very opposite.

The New Mexico Wilderness Alliance simply and unapologetically believes there are certain places that are so special, so increasingly rare, so critical to biodiversity, so integral to who we are as a people that they shouldn't be sacrificed for short-sighted, for-profit extractive interests. We believe that surely we are rich enough as a country, generous enough in spirit, conservative enough in foresight, prudent enough in temperament that certain places should be allowed to remain self-willed. With 98 percent of New Mexico's land area not enjoying the protection of designated Wilderness, for example, surely we can find literal and figurative common ground in identifying those special places that merit protection.

There can be legitimate, respectful disagreements and discussions about Wilderness about what appropriate percentage of our land should enjoy this highest level of protection (10 percent? 15 percent?) and certainly about what boundaries are important and when and how to make sure traditional uses are respected. But let's not allow ourselves to be used by outside forces with self-interested motivations or be convinced that we are as divided as they want us to think we are.

New Mexico's recent experience has been exactly the opposite, and our success has been in coming together. When land grant heirs and tribes and sportsmen and business and faith-based groups and conservationists come together, we represent the very best of the Land of Enchantment: people speaking with a collective voice that says this place is one we love and will defend.

Happy 50th to the Wilderness Act. What a great birthday party we had in Albuquerque! I'm glad to have the pages that follow to help us remember and remind us how important citizen activists will be in preserving more Wilderness over the next fifty years, in the context of what will certainly be some unprecedented challenges for our public lands and our planet. Hope to see you back in New Mexico sometime soon.

“These are islands in time – with nothing to date them on the calendar of mankind. In these areas it is as though a person were looking backward into the ages and forward untold years. Here are bits of eternity, which have a preciousness beyond all accounting.”

- HARVEY BROOME, Co-founder of The Wilderness Society

The Sierra Club

David Scott, *President May 2013 to May 2015*

“Poetic” is rarely among the first adjectives used to describe Acts of Congress. But the text of the 1964 Wilderness Act often elicits that word, and with good reason. The landmark law defines its subject matter – Wilderness – as “an area where the earth and its community of life are untrammelled by man, where man himself is a visitor who does not remain. An area... retaining its primeval character and influence...[and having] outstanding opportunities for solitude.”

Untrammelled. Primeval. Visitor. Solitude. Wordsworth’s epic poem *The Prelude* or Thoreau’s *Walden* come to mind – odes to nature’s inherent worth and reflection-inducing power. Those Wilderness Act words evoke images of Edward Abbey’s forbidding Southwestern desert, visions of cathedral redwood groves, of ancient cedars rising out of the Pacific’s coastal fog. After centuries of rampant exploitation and wildlife extermination, as Congress considered the fate of America’s last remaining Wilderness areas, for one shining moment its words nearly equaled the occasion.

What’s hard to appreciate now, more than five decades after this landmark law passed, is just how revolutionary the Wilderness Act was. In a time with no Clean Air or Clean Water Act, no Endangered Species Act, no EPA or Environmental Impact Statements, Congress voted overwhelmingly to create not just a park or even a series of parks, but a National Wilderness Preservation System – a concept new to the world – and a system that now protects an area of land larger than the entire state of California. We can barely begin to acknowledge our debt to the giants of the conservation movement – including Howard Zahniser, David Brower and countless others – whose dedication cleared the path for this law. Or acknowledge our debt to the unsung citizen activists who followed behind them, did the research and legwork, and got so many special places permanently protected as a result of the law. Now is the time to honor all of them, and to recognize the remarkable success of this law in protecting unique and irreplaceable public lands.

But even as we celebrate their achievement, we face challenges our forerunners could hardly have anticipated. A conservation movement that rightly saw encroachment and development as the great threats to Wilderness protected its treasures with lines on maps and protected space. But the greatest threat to Wilderness species today cannot be addressed by a system of discrete protected spaces alone. In a world now certain to face devastating climate impacts even under the best of scenarios, we need a new vision and new approaches that not only protect discrete spaces, but create wildlife corridors and other ways for species to adapt as well. We need science-based approaches that anticipate how to help species survive a climate-damaged world, and funding for the science. And we need to create the political courage and integrity to end the carbon pollution that threatens other species and humans alike on a scale few could have imagined as possible.

In addition to the needs of other species, we also need to recognize and address our nation’s breach of faith with other people here and now. We must finally pay due heed to the rights and needs of the indigenous people whose ancestors lived on our present-day Wilderness lands long before European settlers came to this continent. And we must also respect the needs of the many Americans who may never fly to the Brooks Range, hire outfitters, or shop for pocket-sized tents and packable stoves, but deserve to be able to use and enjoy our public lands, too, for their own low-impact outdoor recreation. Not that I mean we should turn our backs on preserving Wilderness or Wilderness-dependent species – not at all. That’s unthinkable. But we must recognize the unmet human need for more outdoor experiences and accessible nature near the places where people live.

Still, it is right and good that we should look back to 1964 and celebrate. It is surely no coincidence that the Wilderness Act came to pass in 1960s America, as the new Interstate highway system marked the dubious triumph of automobile culture, as advertising jingles filled the airwaves, and as somewhere far out of most American’s sight, enormous swaths of the Last Big Trees were felled and industrial-scale exploitation finally reached even remote places like Alaska’s North Slope.

Wallace Stegner wrote that
“Something will have gone out of us
as a people if we ever let the remaining
Wilderness be destroyed; if we permit the
last virgin forests to be turned into comic
books and plastic cigarette cases; if we
drive the few remaining members of the
wild species into zoos or to extinction; if we
pollute the last clear air and dirty the last
clean streams and push our paved roads
through the last of the silence...”

I'm proud to have served on a Sierra
Club board where John Muir, David
Brower, Dr. Edgar Wayburn, Ansel Adams,
William O. Douglas, and Wallace Stegner
himself once served. What those artists and
activists knew, what Howard Zahniser,
the Muries and so many other giants of
the conservation movement knew, is that
whether we're speaking of wild species or of
Wilderness places, once they're gone, they're
gone. Back in 1964, for a shining moment in
a now-distant time, some dedicated people
had cared enough, lobbied enough, cajoled
and demanded and pleaded enough that
they got a National Wilderness Preservation
System enacted into law, in hopes that some
of this nation's last best places would survive
as Wilderness in perpetuity. Even with the
challenges of climate disruption, rampant
greed and the other obstacles those of us who love America's
public lands now face, we remember and honor those who
worked so hard before us and succeeded so well. And we
dedicate ourselves to protecting what Stegner so aptly called
the Geography of Hope.



Cholla Cactus Sunrise,
Joshua Tree Wilderness Area, California
By Cliff LaPlant, www.sierralara.com

The Society for Wilderness Stewardship

David Cole, *Board Member*

The National Wilderness Conference was an exciting, joyful and thought-provoking gathering of more than 1,200 members of the Wilderness community. It was a time to look back over the 50 years since the Wilderness Act was passed, to celebrate successes – the 12-fold growth of the Wilderness system from 9 to almost 110 million acres. Attendees ranged from those involved in the effort to pass the Wilderness Act 50 years ago, through multiple succeeding generations to young people who will be instrumental in ensuring future protection of the National Wilderness Preservation System. Those advocating for Wilderness joined with those working to steward Wilderness and those who do research in, about and for Wilderness. It was also a time to look forward, with both hope and concern – hope for the benefits of an enduring Wilderness resource and concern that we can meet the challenges of its stewardship.

The Society for Wilderness Stewardship was proud to be a major sponsor of the conference and was heavily involved in its planning and conduct. The Society for Wilderness Stewardship is a nongovernmental organization whose mission is “to promote excellence in the professional practice of Wilderness stewardship, science, and education to ensure the life-sustaining benefits of Wilderness.” We have a unique niche and role, being one of the few organizations devoted to stewardship of designated Wilderness rather than to advocating for designation of new Wilderness. Moreover, we seek to advance professional stewardship in a proactive and positive manner rather than a reactive or “watch dog” way.

One of the highlights of the conference was meeting so many old friends and colleagues. Throughout the conference, one could feel the energy and strength that came from being part of this Wilderness community – people joined by their passion for Wilderness. But this community is an informal one – one that seldom meets and has not learned to fully take advantage of its strengths. Informal community can only go so far. Among the many positive outcomes of the National Wilderness Conference, one should be creation of a community of practice for Wilderness. A community of practice is “a group of people who share a concern, a set of problems or a passion about a topic, and who deepen their knowledge and expertise by interacting on an ongoing basis” (Wenger et al., 2002). Communities of practice stimulate mutual learning, joint exploration of ideas and shared practice. They connect people, enable dialogue, gather and share know-how, foster collaboration, organize action toward shared goals, innovate new techniques, and ensure that relevant knowledge is accessible to those who need it. For Wilderness, a community of practice would link professional Wilderness managers and practitioners, Wilderness scientists and other producers of knowledge, and those involved in formulating and implementing Wilderness policy to analyze, address and explore solutions to problems.

Toward this end, the Society for Wilderness Stewardship has developed the capacity and infrastructure to support a Wilderness community of practice, consisting of Wilderness managers, educators, scientists, and administrators, members of non-profit Wilderness organizations, students interested in Wilderness, and others interested in advancing the professionalism of Wilderness stewardship. To date, the Society has developed outreach and communication channels, a website and various other social media outlets. It has worked on delivering a variety of professional advancement programs. It has a stewardship committee, a vehicle for community members to come together to share information on Wilderness issues and challenges, formulate solutions to problems and, if need be, advocate for change in policy or practice.

Society has established long-term goals for enhancing the professionalism of Wilderness stewardship. Professionalism begins with ensuring that talented individuals are in stewardship positions. But having “boots on the ground” is not enough. Opinions about how best to respond to stewardship challenges have become increasingly divergent, polarized and politicized. Wilderness stewards need to know what they should do and they need to have the ability, motivation and support to do what they should do. Given this, the Society is pursuing the following agenda:

- Funding and resources need to be increased, so they are adequate to place professionals in the field and enable them to accomplish what needs to be done. Too many Wildernesses lack field staff and there are too many cases where stewards cannot do what needs to be done, such as implement a use limitation program, because they have insufficient resources.

- A Wilderness stewardship career ladder must be created. Without a career ladder, investments in training and experiential knowledge are lost as Wilderness stewards leave their jobs in order to be promoted and those in Wilderness leadership positions lack extensive Wilderness experience.
- Institutional commitment to Wilderness stewardship needs to be increased, to ensure an adequate Wilderness staff and to provide stewards with the resources they need and the political support to do the right thing. The importance of professionally stewarding the Wilderness resource must be elevated in agency culture and practice, where it is too often missing from agency priorities and desired outcomes.
- More meaningful policy and guidance regarding Wilderness stewardship practices and outcomes must be developed. When faced with controversial issues, such as whether to limit use or to intervene in ecosystem processes in an attempt to mitigate human impact, individual Wilderness managers are often left to decide what is appropriate based on their personal opinions and value systems, administrative and political pressures. With more specific agency policy and guidance, stewardship would be more consistent and effective.
- The capacity to conduct Wilderness stewardship research and provide training in best stewardship practices must be increased. In the United States, this could be accomplished by working to see that the Leopold Wilderness Research Institute and Carhart Wilderness Training Center are staffed and funded as originally intended and academic institutions are encouraged and given resources to engage in Wilderness research, continuing education and training.

At the Conference, the land management agencies signed the Vision 2020 document laying out the goals, objectives and desired actions for the future stewardship of the National Wilderness Preservation System. An immediate goal of the Society of Wilderness Stewardship is to play a key role in fulfillment of the 2020 Vision. For example, regarding the goal of Protecting Wilderness Resources, we are working with land managers to identify gaps and issues related to more consistent Wilderness stewardship, complete research and publish white papers annually. Regarding the goal of Connecting People to Their Wilderness Heritage, we are seeking to increase public awareness, understanding and support by ranging across the country, acting as a base of education and support for public knowledge of sound Wilderness stewardship. To prepare the next generation of stewards and scientists, we are mentoring students in the Eppley Institute Wilderness Stewardship Certificate Program, partnering with the 21st Century Service Corps to place young adults on Wilderness career paths, and offer students and seasonal staff training and resources to increase their knowledge, skills and abilities. Regarding the goal of Fostering Excellence in Wilderness Leadership and Coordination, we are contracting with land management agencies and agency partner organizations to provide instructors and curricula for Wilderness stewardship training nationwide and engaging current professionals in mentoring and training programs, allowing them to further develop their professional skills, lead nationwide and international trainings, and provide leadership to students and seasonal employees just starting on their Wilderness career path.

While the National Wilderness Conference was a great opportunity to celebrate past accomplishments, its value could be so much greater if it proved to be a catalyst for positive change. Few changes would do more to ensure the enduring benefits of Wilderness than the creation of a Wilderness community of practice. But a community is only as strong as its members and there is much to be done. If you see value in a Wilderness community of practice and want to contribute to the professionalism of Wilderness stewardship, please join us. Learn more about the Society for Wilderness Stewardship at <http://WildernessStewardship.org> and become part of the community.

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National Wilderness Preservation System

Nancy Roeper, *Steering Committee Chair, US Fish and Wildlife Service*

Jim Kurth, *Policy Council Chair, US Fish and Wildlife Service*

Four years after Congress passed the Wilderness Act, the Great Swamp Wilderness became the first designated Wilderness under the jurisdiction of the Department of the Interior. Thus began the ongoing cooperation between the Departments of Agriculture and Interior to secure for the American people an enduring resource of Wilderness.

Fifty years after the Act was signed, the National Wilderness Conference (Conference) brought together Wilderness managers from the Bureau of Land Management, the Fish and Wildlife Service, the National Park Service, the Forest Service along with non-governmental organizations; businesses; international, Federal, state, and city government agencies; and researchers and academics to celebrate the National Wilderness Preservation System (System). The System has grown from 9.1 million acres in 1964, to almost 110 million acres in 2014. But the Conference did much more than celebrate this amazing System of lands and waters. Through more than 84 sessions, lunch panels, a poster session and inspiring keynote speakers, participants pondered, planned, and plotted the future of the System. They shared challenges, such as how to respond appropriately to the effects of Hurricane Sandy in designated Wilderness, and successes, such as how to engage young professionals to assist in developing Wilderness character baseline assessments.

The Secretary of Interior, a keynote speaker, spoke of Great Swamp Wilderness and how it came to be, thanks to the efforts of dedicated community members who thought Wilderness was the best use for this special place. She also spoke of the need for a new generation of Wilderness stewards that can carry on such work to protect these special areas.

Seasoned Wilderness stewards and advocates know that success in this business requires perseverance and taking the long view. Most have maintained their passion to protect these areas because of a spark that was ignited in them when they were young. This Conference made great strides towards fanning that spark for a new generation of Wilderness advocates with many organizations and agencies making a special effort to engage young professionals.

More than 100 youths under the age of 25 attended the Conference and Youth Summit and 24 of them received competitive scholarships to attend. Young professionals introduced keynote speakers, presented their individual work on Wilderness character monitoring, attended pre-Conference training, and volunteered at booths. In addition, 14 Youth Leader Wilderness Scholarship winners were selected to develop Wilderness Ambassador Projects such as grassroots Wilderness designation awareness walks, videos and podcasts. Thanks to the Albuquerque community, many grade-and middle-school students and their teachers trekked the Wilderness Awareness Trail and many more children completed the Wilderness Passport Program at the Get Wild! Festival.

One of the most significant events was the Federal Agency leaders' signing of the *2020 Vision*, the agencies' priorities for future stewardship of Wilderness. The *2020 Vision* Implementation Plan will identify timelines and specific strategies that the agencies, with engagement from partners, will use to protect Wilderness resources, connect people to their Wilderness heritage, and lead us into the next 50 years of Wilderness stewardship.

The National Wilderness Protection System is dynamic, evolving, and relevant to a broad array of Americans. Unfortunately, the Federal Agencies cannot ensure the health and growth of the System by themselves. Americans who understand, value, and enjoy wild areas will need to continue to share their knowledge and appreciation with others. We need flexible, creative solutions to Wilderness stewardship challenges that will allow preservation of Wilderness values in the face of habitat loss, pollution, population growth, and a changing climate.

The proceedings of the Conference will serve as a useful reference to all the excellent conference presentations and we hope an inspiration to Wilderness managers, scientists, advocates, and supporters. But the true impact of the Conference will become apparent when we begin to see fewer inappropriate management interventions, new and enhanced partnerships, and an expansion of opportunities for young professionals to assist in meeting the priorities of the *2020 Vision*.

Wilderness Watch

George Nickas, *Executive Director*

“It was the best of times, it was the worst of times.” Like *A Tale of Two Cities*, the 50th anniversary of the 1964 Wilderness Act was a cause for great celebration. We celebrated a half-century of the Wilderness Act, and the 110 million-acre National Wilderness Preservation System it began and still governs. Public support for Wilderness remains high, and collectively we have built a Wilderness system that exceeds in size the dreams of the original Wilderness Act architects and it will continue to grow.

But it’s also the worst of times for Wilderness. The very entities – Congress, federal agencies, and conservationists – on which the future of Wilderness relies have collectively lost much of our understanding of the meaning and value of Wilderness. We have embraced compromise after compromise to add more areas to the Wilderness system, weakening the very definitions and meanings of Wilderness, and have tried to accommodate almost every special interest in legislation or management so that today Wilderness has become much less special, much less in contrast to other public lands. We’ve made Wilderness conform more to our human demands rather than the other way around, the fundamental challenge our forbearers sought to remedy with the Wilderness law. In fact, so many problems beset Wilderness today that the Wilderness envisioned by the Wilderness Act may not survive another 50 years.

Let me offer up a few examples that ought to give pause to even the most optimistic among us.

Let’s start with Congress, which has lost its institutional memory about Wilderness, as well as the giants who understood, passed, and implemented the Wilderness Act. Clinton Anderson, Hubert Humphrey, John Saylor, and the other chief sponsors of the Wilderness Act are long gone, and few who have come after have taken up the charge. Not since Congressman Bruce Vento’s efforts in the early 1990s has a member of Congress distinguished her or himself as a champion of the Wilderness Act or held the federal agencies accountable for their Wilderness protection responsibilities.

But it’s really much worse than that. Consider that 50 years ago the Wilderness Act passed Congress with near unanimous support, yet in 2012 a significant majority of the House of Representatives voted in favor of the “Sportsmens Heritage Act”, which would have effectively repealed the basic tenets of the Wilderness Act. Instead of preserving an *untrammelled* Wilderness, the new law would have allowed any management activity—logging, burning, chaining, fish stocking, water developments...you name it, if it was deemed to promote expanding game populations, or recreational hunting, angling, or shooting.

Moreover in the 50 years since the Wilderness Act passed, only one subsequent Wilderness bill has increased protections for any area beyond what the Wilderness Act itself provided, while dozens of bills with provisions that weaken protections have passed. It doesn’t take a crystal ball to see where this trend leads.

The federal agencies that administer Wilderness have also lost their way. It’s true that many good Wilderness advocates still work inside these bureaus, but as a whole, funding and other support for on-the-ground Wilderness programs has waned. The number of professional Wilderness rangers in the agencies continues to decline, forcing the agencies to increasingly rely on volunteers to perform Wilderness duties; well-meaning, dedicated volunteers, but who don’t have the training, experience or skills of professional Wilderness rangers. This downward spiral starves the agencies of dedicated professional Wilderness rangers and, over time, of leadership that understands and is committed to Wilderness.

The agencies also routinely make decisions that ignore the land’s Wilderness status and flaunt the protective provisions in the Wilderness Act. The use of helicopters, chainsaws, and other technologies has proliferated, in contradiction to the Act’s mandate to arrest *growing mechanization*. Actions that would have been unheard of a couple of decades ago, such as the National Park Service’s decision to conduct motorized van tours through the Cumberland Island Wilderness, the U.S. Fish and Wildlife Service’s decision to build 13,000-gallon water developments to artificially inflate bighorn populations in the Kofa Wilderness, or the Forest Service’s decision to build a new replica fire lookout/visitor center on a summit in the Glacier Peak Wilderness, stand as stark reminders of how far adrift the agencies have gone from the letter and spirit of the Wilderness law.

But nothing more threatens the future of Wilderness than the agencies’ recently developed Wilderness character monitoring framework, euphemistically called *Keeping It Wild 2* (KIW2). While born of good

intentions to determine whether Wilderness character is being preserved, the effort has veered off course, and created a management framework that relegates *wildness*, what Wilderness Act author Howard Zahniser called “the essential quality of Wilderness” to merely one value of Wilderness among many, no more a focus of Wilderness managers than is saving a relict cabin, trailside shelter, or recreational opportunity. KIW2 further encourages managers to protect the elusive concept of “naturalness” even at the expense of protecting an area’s wild character. As the effects of climate change bear down and wildlands evolve in unpredictable ways, the framework presents a ready excuse for interfering in the evolutionary processes shaping Wilderness in order to enhance a favored species, or some other manager-preferred value.

The conservation community is not faring much better in committing to Wilderness preservation. Neither Congress nor the agencies could have slipped so far had the conservation community not largely sat back in quiet acquiescence or in many cases outright support of those entities’ Wilderness derelictions. Our movement has largely acted as though passing new Wilderness bills, regardless of the bad provisions they contain or the trade-offs involved, is more important than protecting the integrity of the Act, the Wilderness system, or the conditions of existing Wildernesses. In order to curry political favor, some well-known organizations have endorsed motor vehicle tours, construction of hunting and fishing lodges, helicopter-assisted military training exercises, livestock herding with ATVs, predator control, constructing water developments and replica historic structures, and a host of other incompatible activities in Wilderness. Sadly, some of the most established organizations have fallen precipitously from the principled leadership of Howard Zahniser, Stewart Brandborg, Sigurd Olson, David Brower, and Olaus and Mardy Murie.

Despite all these challenges, it is not yet too late to save real, wild Wilderness. We have not yet, as Chris Barns so eloquently stated at the Albuquerque conference, “heard the chimes at midnight.” While we congratulate ourselves on the 50th anniversary and celebrate our extraordinary Wilderness system, we must also re-commit to the ideas and ideals of the Wilderness Act. Only if we in the Wilderness advocacy community, including the federal agencies, dedicate ourselves once again to the ideals of the Wilderness Act can we truly provide for current and future generations, as the law so eloquently proclaims, “an enduring resource of Wilderness.” More than ever, we need to heed the call of Bob Marshall and be those “*spirited people who will fight for the freedom of the Wilderness.*”

Let us make the future the best of times for Wilderness.



Bald Cypress Dome, Cypress Swamp, Marjory Stoneman Douglas Wilderness
By Bill Lea, www.BillLea.com

Youth Summit Representative

Dylan Lang, *Conference Youth Speaker*

Fifty years ago, Congress “[secured] for...present and future generations the benefits of an enduring resource of Wilderness.” Fifty years ago, the youth of today were one of those future generations; today, we are beginning to take our places in the Wilderness movement.

I was fortunate to celebrate the 50th anniversary of the Wilderness Act in a manner worthy of the occasion. I was eight days into a trip in Montana’s Bob Marshall Wilderness and my crew had spent a rainy morning climbing into Big River Meadows, a massive subalpine river valley just west of the Continental Divide. After setting up camp, a few of us ascended the ridgeline and made our way to the top of an unnamed 7,200 foot peak at the east end of the valley. We scrambled over scree and talus, snow pelting our faces, finally gaining the summit and earning the view of the approaching storm from the west. On September 3, 2014, we celebrated 50 years of Wilderness preservation in a snowstorm on top of an unnamed mountain in a Wilderness area named for one of the Wilderness movement’s greatest champions. And in that moment, could Bob Marshall have been any prouder of the six young adults on that peak?

Wilderness unites us. It is shared mirth, shared misery, shared memory. While telling this story at the National Wilderness Conference, I could see others relating to it. Thinking about the time they were stuck in the endless rainstorm or the relentless mosquitos, or enjoyed unparalleled summer afternoons spent by alpine lakes and cool spring days in blackwater swamps. There is a thread that connects all of us in our mutual quest to preserve: we truly love these places.

For those of us already invested in Wilderness, there is no questioning our passion. We expound on our views of mountain bikes versus horses. We wax poetic on the joys of the crosscut saw. Our hearts leap the moment a peer asks, “so, what’s the difference between a Wilderness Area and a National Park?” Then we smile and respond, “do you really want to get me started?” We relish these opportunities because we recognize that the future of Wilderness is a shared one, and we are on a recruitment mission. As Abbey said, “the idea of Wilderness needs no defense. It only needs more defenders.”

As youth attendees of the National Wilderness Conference, our experience began with the Youth Summit. We received tips on how to network, on how to pick which sessions and talks to attend, on how to make the most of our conference experience. But first, we gathered in one of the ballrooms and mingled. Conversations started with why we had come to Albuquerque and what we hoped to gain from the conference. And then, with the small talk properly dispatched, we got down to business—trading stories, swapping passions, dealing dreams.

Ours is a visceral experience. We share ties of loving animals, teaching children, eating berries, and overwhelmingly most common, wanting these opportunities for our kids and grandkids. Nearly all of us expressed this desire in one form or another. In many cases, such as mine, we learned our love for wild places from our parents or grandparents. For others, that passion was discovered independently, but the commitment to passing it on is just as strong.

In sharing our dreams, we also shared our fears. That the jobs aren’t available. That it’s hard to get a foot in the door. That seasonal work is great, but it can make food and rent a challenge. That we’re dreamers without resources. That sometimes we’re still seen as just kids.

The youth of the modern-day Wilderness movement are ready for the challenge. We may still have much to learn, but we bring with us a passion for preservation, brave new ideas, and the undying hope that 50 years from now, more young people can stand on top of a mountain in the blowing snow and feel smiles warm their faces.



Milky Way over Second Beach, Olympic Wilderness, Washington
By Joe LeFevre, www.joelefevrephoto.com



The Wilderness Act

WILDERNESS ACT

Public Law 88-577 (16 U.S. C. 1131-1136)
88th Congress, Second Session
September 3, 1964

AN ACT

To establish a National Wilderness Preservation System for the permanent good of the whole people, and for other purposes.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled.

Short Title

Section 1. This Act may be cited as the “Wilderness Act.”

WILDERNESS SYSTEM ESTABLISHED STATEMENT OF POLICY

Section 2. (a) In order to assure that an increasing population, accompanied by expanding settlement and growing mechanization, does not occupy and modify all areas within the United States and its possessions, leaving no lands designated for preservation and protection in their natural condition, it is hereby declared to be the policy of the Congress to secure for the American people of present and future generations the benefits of an enduring resource of Wilderness. For this purpose there is hereby established a National Wilderness Preservation System to be composed of federally owned areas designated by Congress as “wilderness areas”, and these shall be administered for the use and enjoyment of the American people in such manner as will leave them unimpaired for future use and enjoyment as wilderness, and so as to provide for the protection of these areas, the preservation of their wilderness character, and for the gathering and dissemination of information regarding their use and enjoyment as wilderness; and no Federal lands shall be designated as “wilderness areas” except as provided for in this Act or by a subsequent Act.

(b) The inclusion of an area in the National Wilderness Preservation System notwithstanding, the area shall continue to be managed by the Department and agency having jurisdiction thereover immediately before its inclusion in the National Wilderness Preservation System unless otherwise provided by Act of Congress. No appropriation shall be available for the payment of expenses or salaries for the administration of the National Wilderness Preservation System as a separate unit nor shall any appropriations be available for additional personnel stated as being required solely for the purpose of managing or administering areas solely because they are included within the National Wilderness Preservation System.

DEFINITION OF WILDERNESS

(c) A wilderness, in contrast with those areas where man and his own works dominate the landscape, is hereby recognized as an area where the earth and its community of life are untrammelled by man, where man himself is a visitor who does not remain. An area of wilderness is further defined to mean in this Act an area of undeveloped Federal land retaining its primeval character and influence, without permanent improvements or human habitation, which is protected and managed so as to preserve its natural conditions and which (1) generally appears to have been affected primarily by the forces of nature, with the imprint of man’s work substantially unnoticeable; (2) has outstanding opportunities for solitude or a primitive and unconfined type of recreation; (3) has at least five thousand acres of land or is of sufficient size as to make practicable its preservation and use in an unimpaired condition; and (4) may also contain ecological, geological, or other features of scientific, educational, scenic, or historical value.



Wilderness Champion - Howard Zahniser (left) discusses the proposed National Wilderness Preservation System with Sen. Lee Metcalf (D-MT). Howard Zahniser was a conservation activist and leader in The Wilderness Society. He wrote the first draft of the Wilderness Act in early 1956 and was the legislation's main proponent over its eight-year progress. He saw it through 65 rewrites, attended all 18 public hearings on the bill, and personally lobbied virtually all members of Congress to support the legislation. Senator Metcalf supported the Wilderness Act.

Photo courtesy Denver Public Library, Western History CONS Collection 130.

“Working to preserve in perpetuity is a great inspiration. We are not fighting a rear-guard action, we are facing a frontier. We are not slowing down a force that inevitably will destroy all the wilderness there is. We are generating another force, never to be wholly spent, that, renewed generation after generation, will be always effective in preserving wilderness. We are not fighting progress. We are making it. We are not dealing with a vanishing wilderness. We are working for a wilderness forever.”

- HOWARD ZAHNISER, *Principal author of the Wilderness Act*

NATIONAL WILDERNESS PRESERVATION SYSTEM - EXTENT OF SYSTEM

Section 3.(a) All areas within the national forests classified at least 30 days before September 3, 1964 by the Secretary of Agriculture or the Chief of the Forest Service as "wilderness", "wild", or "canoe" are hereby designated as wilderness areas. The Secretary of Agriculture shall -

(1) Within one year after September 3, 1964, file a map and legal description of each wilderness area with the Interior and Insular Affairs Committees of the United States Senate and the House of Representatives, and such descriptions shall have the same force and effect as if included in this Act: Provided, however, That correction of clerical and typographical errors in such legal descriptions and maps may be made.

(2) Maintain, available to the public, records pertaining to said wilderness areas, including maps and legal descriptions, copies of regulations governing them, copies of public notices of, and reports submitted to Congress regarding pending additions, eliminations, or modifications. Maps, legal descriptions, and regulations pertaining to wilderness areas within their respective jurisdictions also shall be available to the public in the offices of regional foresters, national forest supervisors, and forest rangers.

Classification. (b) The Secretary of Agriculture shall, within ten years after September 3, 1964, review, as to its suitability or unsuitability for preservation as wilderness, each area in the national forests classified on September 3, 1964 by the Secretary of Agriculture or the Chief of the Forest Service as "primitive" and report his findings to the President.

Presidential recommendation to Congress. The President shall advise the United States Senate and House of Representatives of his recommendations with respect to the designation as "wilderness" or other reclassification of each area on which review has been completed, together with maps and a definition of boundaries. Such advice shall be given with respect to not less than one-third of all the areas now classified as "primitive" within three years after September 3, 1964, not less than two-thirds within seven years after September 3, 1964, and the remaining areas within ten years after September 3, 1964.

Congressional approval. Each recommendation of the President for designation as "wilderness" shall become effective only if so provided by an Act of Congress. Areas classified as "primitive" on September 3, 1964 shall continue to be administered under the rules and regulations affecting such areas on September 3, 1964 until Congress has determined otherwise. Any such area may be increased in size by the President at the time he submits his recommendations to the Congress by not more than five thousand acres with no more than one thousand two hundred and eighty acres of such increase in any one compact unit; if it is proposed to increase the size of any such area by more than five thousand acres or by more than one thousand two hundred and eighty acres in any one compact unit the increase in size shall not become effective until acted upon by Congress. Nothing herein contained shall limit the President in proposing, as part of his recommendations to Congress, the alteration of existing boundaries of primitive areas or recommending the addition of any contiguous area of national forest lands predominantly of wilderness value. Notwithstanding any other provisions of this Act, the Secretary of Agriculture may complete his review and delete such area as may be necessary, but not to exceed seven thousand acres, from the southern tip of the Gore Range-Eagles Nest Primitive Area, Colorado, if the Secretary determines that such action is in the public interest.

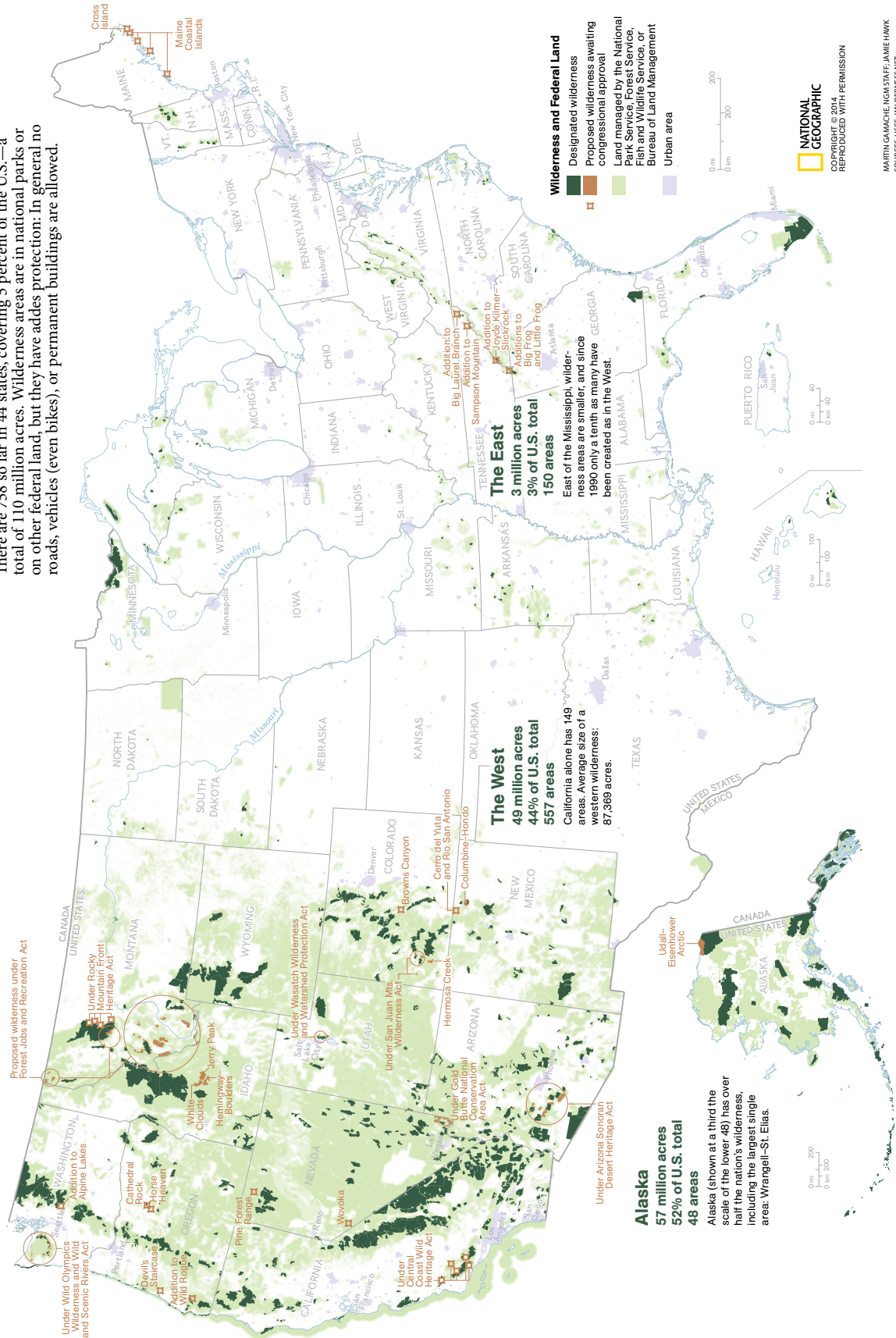
Report to President. (c) Within ten years after September 3, 1964 the Secretary of the Interior shall review every roadless area of five thousand contiguous acres or more in the national parks, monuments and other units of the national park system and every such area of, and every roadless island within the national wildlife refuges and game ranges, under his jurisdiction on September 3, 1964 and shall report to the President his recommendation as to the suitability or unsuitability of each such area or island for preservation as wilderness.

Presidential recommendation to Congress. The President shall advise the President of the Senate and the Speaker of the House of Representatives of his recommendation with respect to the designation as wilderness of each such area or island on which review has been completed, together with a map thereof and a definition of its boundaries. Such advice shall be given with respect to not less than one-third of the areas and islands to be reviewed under this subsection within three years after September 3, 1964, not less than two-thirds within seven years of September 3, 1964 and the remainder within ten years of September 3, 1964.

Congressional approval. A recommendation of the President for designation as wilderness shall become effective only if so provided by an Act of Congress. Nothing contained herein shall, by implication or otherwise, be construed to lessen the present statutory authority of the Secretary of the Interior with respect to the maintenance of roadless areas within units of the national park system.

America's Wilderness Areas

There are 758 so far in 44 states, covering 5 percent of the U.S.—a total of 110 million acres. Wilderness areas are in national parks or on other federal land, but they have added protection: In general no roads, vehicles (even bikes), or permanent buildings are allowed.



Suitability. (d)(1) The Secretary of Agriculture and the Secretary of the Interior shall, prior to submitting any recommendations to the President with respect to the suitability of any area for preservation as wilderness –

Publication in Federal Register. (A) give such public notice of the proposed action as they deem appropriate, including publication in the Federal Register and in a newspaper having general circulation in the area or areas in the vicinity of the affected land;

Hearings. (B) hold a public hearing or hearings at a location or locations convenient to the area affected. The hearings shall be announced through such means as the respective Secretaries involved deem appropriate, including notices in the Federal Register and in newspapers of general circulation in the area: Provided, That if the lands involved are located in more than one State, at least one hearing shall be held in each State in which a portion of the land lies;

(C) at least thirty days before the date of a hearing advise the Governor of each State and the governing board of each county, or in Alaska the borough, in which the lands are located, and Federal departments and agencies concerned, and invite such officials and Federal agencies to submit their views on the proposed action at the hearing or by no later than thirty days following the date of the hearing.

Any views submitted to the appropriate Secretary under the provisions of (1) of this subsection with respect to any area shall be included with any recommendations to the President and to Congress with respect to such area.

Proposed modification. (e) Any modification or adjustment of boundaries of any wilderness area shall be recommended by the appropriate Secretary after public notice of such proposal and public hearing or hearings as provided in subsection (d) of this section. The proposed modification or adjustment shall then be recommended with map and description thereof to the President. The President shall advise the United States Senate and the House of Representatives of his recommendations with respect to such modification or adjustment and such recommendations shall become effective only in the same manner as provided for in subsections (b) and (c) of this section.

USE OF WILDERNESS AREAS

Section 4.(a) The purposes of this Act are hereby declared to be within and supplemental to the purposes for which national forests and units of the national park and national wildlife refuge systems are established and administered and -

(1) Nothing in this Act shall be deemed to be in interference with the purpose for which national forests are established as set forth in the Act of June 4, 1897 (30 Stat. 11), and the Multiple-Use Sustained-Yield Act of June 12, 1960 (74 Stat. 215) (16 U.S.C. 528-531).

(2) Nothing in this Act shall modify the restrictions and provisions of the Shipstead-Nolan Act (Public Law 539, Seventy-first Congress, July 10, 1930; 46 Stat. 1020), the Thye-Blatnik Act (Public Law 733, Eightieth Congress, June 22, 1948; 62 Stat. 568), and the Humphrey- Thye-Blatnik-Andresen Act (Public Law 607, Eighty-Fourth Congress, June 22, 1956; 70 Stat. 326), as applying to the Superior National Forest or the regulations of the Secretary of Agriculture.

(3) Nothing in this Act shall modify the statutory authority under which units of the national park system are created. Further, the designation of any area of any park, monument, or other unit of the national park system as a wilderness area pursuant to this Act shall in no manner lower the standards evolved for the use and preservation of such park, monument, or other unit of the national park system in accordance with sections 1, 2, 3, and 4 of this title, the statutory authority under which the area was created, or any other Act of Congress which might pertain to or affect such area, including, but not limited to, the Act of June 8, 1906 (34 Stat. 225; 16 U.S.C. 432 et seq.); section 3(2) of the Federal Power Act (16 U.S.C. 796(2)); and the Act of August 21, 1935 (49 Stat. 666; 16 U.S.C. 461 et seq.).

(b) Except as otherwise provided in this Act, each agency administering any area designated as wilderness shall be responsible for preserving the wilderness character of the area and shall so administer such area for such other purposes for which it may have been established as also to preserve its wilderness character. Except as otherwise provided in this Act, wilderness areas shall be devoted to the public purposes of recreational, scenic, scientific, educational, conservation, and historical use.

PROHIBITION OF CERTAIN USES

(c) Except as specifically provided for in this Act, and subject to existing private rights, there shall be no commercial enterprise and no permanent road within any wilderness area designated by this Act and, except as necessary to meet minimum requirements for the administration of the area for the purpose of this Act (including measures required in emergencies involving the health and safety of persons within the area), there shall be no temporary road, no use of motor vehicles, motorized equipment or motorboats, no landing of aircraft, no other form of mechanical transport, and no structure or installation within any such area.

SPECIAL PROVISIONS

(d) The following special provisions are hereby made:

(1) Within wilderness areas designated by this Act the use of aircraft or motorboats,

where these uses have already become established, may be permitted to continue subject to such restrictions as the Secretary of Agriculture deems desirable. In addition, such measures may be taken as may be necessary in the control of fire, insects, and diseases, subject to such conditions as the Secretary deems desirable.

(2) Nothing in this Act shall prevent within national forest wilderness areas any activity, including prospecting, for the purpose of gathering information about mineral or other resources, if such activity is carried on in a manner compatible with the preservation of the wilderness environment. Furthermore, in accordance with such program as the Secretary of the Interior shall develop and conduct in consultation with the Secretary of Agriculture, such areas shall be surveyed on a planned, recurring basis consistent with the concept of wilderness preservation by the United States Geological Survey and the United States Bureau of Mines to determine the mineral values, if any, that may be present; and the results of such surveys shall be made available to the public and submitted to the President and Congress.

Mineral leases, claims, etc. (3) Notwithstanding any other provisions of this Act, until midnight December 31, 1983, the United States mining laws and all laws pertaining to mineral leasing shall, to the extent as applicable prior to September 3, 1964, extend to those national forest lands designated by this Act as “wilderness areas”; subject, however, to such reasonable regulations governing ingress and egress as may be prescribed by the Secretary of Agriculture consistent with the use of the land for mineral location and development and exploration, drilling, and production, and use of land for transmission lines, waterlines, telephone lines, or facilities necessary in exploring, drilling, producing, mining, and processing operations, including where essential the use of mechanized ground or air equipment and restoration as near as practicable of the surface of the land disturbed in performing prospecting, location, and, in oil and gas leasing, discovery work, exploration, drilling, and production, as soon as they have served their purpose. Mining locations lying within the boundaries of said wilderness areas shall be held and used solely for mining or processing operations and uses reasonably incident thereto; and hereafter, subject to valid existing rights, all patents issued under the mining laws of the United States affecting national forest lands designated by this Act as wilderness areas shall convey title to the mineral deposits within the claim, together with the right to cut and use so much of the mature timber therefrom as may be needed in the extraction, removal, and beneficiation of the mineral deposits, if needed timber is not otherwise reasonably available, and if the timber is cut under sound principles of forest management as defined by the national forest rules and regulations, but each such patent shall reserve to the United States all title in or to the surface of the lands and products thereof, and no use of the surface of the claim or the resources therefrom not reasonably required for carrying on mining or prospecting shall be allowed except as otherwise expressly provided in this Act: Provided, That, unless hereafter specifically authorized, no patent within wilderness areas designated by this Act shall issue after December 31, 1983, except for the valid claims existing on or before December 31, 1983. Mining claims located after September 3, 1964, within the boundaries of wilderness areas designated by this Act shall create no rights in excess of those rights which may be patented under the provisions of this subsection. Mineral leases, permits, and licenses covering lands within national forest wilderness areas designated by this Act shall contain such reasonable stipulations as may be prescribed by the Secretary of Agriculture for the protection of the wilderness character of the land consistent with the use of the land for the purposes for which they are leased, permitted, or licensed. Subject to valid rights then existing, effective January 1, 1984, the minerals in lands designated by this Act as wilderness areas are withdrawn from all forms of appropriation under the mining laws and from disposition under all laws pertaining to mineral leasing and all amendments thereto.

Water resources and grazing. (4) Within wilderness areas in the national forests designated by this Act, (1) the President may, within a specific area and in accordance with such regulations as he may deem desirable, authorize prospecting for water resources, the establishment and maintenance of reservoirs, water-conservation works, power projects, transmission lines, and other facilities needed in the public interest, including the road construction and maintenance essential to development and use thereof, upon his determination that such use or uses in the specific area will better serve the interests of the United States and the people thereof than will its denial; and (2) the grazing of livestock, where established prior to September 3, 1964, shall be permitted to continue subject to such reasonable regulations as are deemed necessary by the Secretary of Agriculture.

(5) Other provisions of this Act to the contrary notwithstanding, the management of the Boundary Waters Canoe Area, formerly designated as the Superior, Little Indian Sioux, and Caribou Roadless Areas, in the Superior National Forest, Minnesota, shall be in accordance with regulations established by the Secretary of Agriculture in accordance with the general purpose of maintaining, without unnecessary restrictions on other uses, including that of timber, the primitive character of the area, particularly in the vicinity of lakes, streams, and portages: Provided, That nothing in this Act shall preclude the continuance within the area of any already established use of motorboats.

(6) Commercial services may be performed within the wilderness areas designated by this Act to the extent necessary for activities which are proper for realizing the recreational or other wilderness purposes of the areas.

(7) Nothing in this Act shall constitute an express or implied claim or denial on the part of the Federal Government as to exemption from State water laws.

(8) Nothing in this Act shall be construed as affecting the jurisdiction or responsibilities of the several States with respect to wildlife and fish in the national forests.

STATE AND PRIVATE LANDS WITHIN WILDERNESS AREAS

Section 5.(a) In any case where State -owned or privately owned land is completely surrounded by national forest lands within areas designated by this Act as wilderness, such State or private owner shall be given such rights as may be necessary to assure adequate access to such State -owned or privately owned land by such State or private owner and their successors in interest, or the State -owned land or privately owned land shall be exchanged for federally owned land in the same State of approximately equal value under authorities available to the Secretary of Agriculture:

Transfers, restriction. Provided, however, That the United States shall not transfer to a State or private owner any mineral interests unless the State or private owner relinquishes or causes to be relinquished to the United States the mineral interest in the surrounded land.

(b) In any case where valid mining claims or other valid occupancies are wholly within a designated national forest wilderness area, the Secretary of Agriculture shall, by reasonable regulations consistent with the preservation of the area as wilderness, permit ingress and egress to such surrounded areas by means which have been or are being customarily enjoyed with respect to other such areas similarly situated.

Acquisition. (c) Subject to the appropriation of funds by Congress, the Secretary of Agriculture is authorized to acquire privately owned land within the perimeter of any area designated by this Act as wilderness if (1) the owner concurs in such acquisition or (2) the acquisition is specifically authorized by Congress.

GIFTS, BEQUESTS, AND CONTRIBUTIONS

Section 6.(a) The Secretary of Agriculture may accept gifts or bequests of land within wilderness areas designated by this Act for preservation as wilderness. The Secretary of Agriculture may also accept gifts or bequests of land adjacent to wilderness areas designated by this Act for preservation as wilderness if he has given sixty days advance notice thereof to the President of the Senate and the Speaker of the House of Representatives. Land accepted by the Secretary of Agriculture under this section shall be come part of the wilderness area involved. Regulations with regard to any such land may be in accordance with such agreements, consistent with the policy of this Act, as are made at the time of such gift, or such conditions, consistent with such policy, as may be included in, and accepted with, such bequest.

(b) Authorization to accept private contributions and gifts The Secretary of Agriculture or the Secretary of the Interior is authorized to accept private contributions and gifts to be used to further the purposes of this Act.

ANNUAL REPORTS

Section 7. At the opening of each session of Congress, the Secretaries of Agriculture and Interior shall jointly report to the President for transmission to Congress on the status of the wilderness system, including a list and descriptions of the areas in the system, regulations in effect, and other pertinent information, together with any recommendations they may care to make.

APPROVED SEPTEMBER 3, 1964.

Legislative History:

House Reports: No 1538 accompanying H.R. 9070 (Committee on Interior & Insular Affairs) and No. 1829 (Committee of Conference).

Senate report: No. 109 (Committee on Interior & Insular Affairs).
Congressional Record: Vol.109 (1963):

- April 4, 8, considered in Senate.
- April 9, considered and passed Senate.
- Vol. 110 (1964): July 28, considered in House.
- July 30, considered and passed House, amended, in lieu of H.R. 9070
- August 20, House and Senate agreed to conference report.



Meadow of Wildflowers, Jedediah Smith Wilderness, Grand Teton National Park, Wyoming
By John Richter, www.richterfineartphotography.com

National Wilderness Conference

Pre-Conference Training

Partnerships and Professionalism: The New Paradigm for Wilderness Preservation
Rio Grande Nature Center

Presented by: *The Society for Wilderness Stewardship (SWS), National Wilderness Stewardship Alliance (NWSA), and the Arthur Carhart National Wilderness Training Center (ACNWTC)*

The pre-conference training at the National Wilderness Conference was a collaborative, two-day training presented by SWS, NWSA and the ACNWTC.

More than 100 participants included agency employees, activists, students, and non-profit partners and volunteers. Special guests included Wilderness icon Polly Dyer and the leader of the USDA 21st century conservation corps initiative, Meryl Harrell.

Instructors from each of the three sponsoring organizations gave presentations, led small group discussions and demonstrated field skills to increase the knowledge and skills necessary to successfully steward Wilderness. The guiding premise was that developing effective partnerships and increasing the professional knowledge and skills of practitioners were essential components of sound future stewardship. Towards this end, the training offered foundational sessions on the Wilderness Act, concurrent sessions under two parallel tracks of partnerships and professionalism, and as a wrap-up, a united call for action centered around the 2020 Vision of “Protect, Connect and Lead”.

The success of the pre-conference training provides a blueprint for conducting collaborative interagency training events in the future that not only include agency employees but also non-governmental organizations, volunteers, and interns. As this statement from a young participant illustrates:



“Thank you for organizing and facilitating [the training], I truly learned a lot and gained some new useful perspectives on Wilderness management issues. The networking opportunity at that event was priceless for me. Once we got to the actual conference, I recognized all the people who attended the pre-conference and was able to strike up conversations with even those I didn’t have a chance to talk to initially. I felt I had formed a little community of familiar faces which, through them, enabled new connections to occur. I was especially inspired when we had our talk at the pre-conference training about the 2020 Vision. When I read that the first priority for the next 5 years within this vision is to complete Wilderness character inventories across the NWPS, I really realized how big of a role I have in the Wilderness community as I am first hand completing this task as a part of my current work. I felt so much energy flowing through me this past week and am thrilled to be contributing my knowledge and skills to the Wilderness movement.”

Pre-Conference Training Program

Partnerships and Professionalism: The New Paradigm for Wilderness Preservation

OCTOBER 14

Welcome

Introduction to session, participants, with Connie Myers, Bill Hodge, and Linda Merigliano.

The Challenge Ahead

An exploration of the state of Wilderness stewardship challenges with an eye to the future with Bill Hodge (NWSA) and Connie Myers (ACNWTC)

Honoring the public trust: America's 1964 Wilderness Act

What does it say, what does it mean, and how does it apply to you? With Chris Barns (ACNWTC) and Peter Appel (SWS)

Partnerships: The dynamics of building and retaining a robust volunteer community

What works to grow, sustain, and retain this valuable resource with Phil Hough (Friends of the Scotchman Peaks Wilderness), Jennifer Tripp (Pacific Crest Trail Association), Brenna Irrer (Southern Appalachian Wilderness Stewards), and Andrew Schurr (Friends of the Inyo)

Professionalism: Telling the Wilderness Story: Communication that Connects

Learn the fundamentals of effective communication and the science behind persuasive messages. Apply a six-step process (WISDOM) to professionally and safely make visitor contacts in the Wilderness with Ralph Swain (FS/SWS), Ben Lawhon (Leave No Trace/SWS), and Derrick Taff (SWS)

Partnerships: Long-Haul Models for Private Sector Partners In Wilderness Stewardship

From funding, to structure, policies to execution, how to build a program for sustained support of the Wilderness Preservation System with Sharon Netherton (Friends of Nevada Wilderness) and Bob Hazelton (San Geronio Wilderness Association)

Professionalism: Working for Wilderness

Ever wish you could learn from the experience and wisdom of "seasoned" field staff? Now you can - explore what it means to be a professional at the field level and what it takes to be effective and safe working in Wilderness with Maura Longden (SWS), Linda Merigliano (SWS), and Ken Straley (ACNWTC)

OCTOBER 15

Partnerships: Fully Productive Partnerships: How to Model an Effective Agency and Stewardship Partner Relationship

The methods and practices that lead to highly successful stewardship programs with Bill Hodge (Southern Appalachian Wilderness Stewards), Jimmy Gaudry (Forest Service), Jennifer Tripp (Pacific Crest Trail Association), Beth Boyst (Forest Service), Andrew Schurr (Friends of the Inyo), and Kirstin Heins (Bureau of Land Management)

Professionalism: Working in the real world: How Wilderness Decisions are Made

Learn how to conduct a Minimum Requirement Analysis and the realities of decision-making in the federal agencies so you can best position your Wilderness stewardship proposals for action with Chris Barns (ACNWTC) and an interagency panel – Ralph Swain (Forest Service), Joe Ashor (Bureau of Land Management), Tim Devine (National Park Service), Karen Lindsey (Fish and Wildlife Service)

Individual Call to Action

Break into small groups and work with facilitators and colleagues to identify actions to help address pressing Wilderness stewardship issues.

Topics may include citizen monitoring, building volunteer trail maintenance capacity and skill, visitor use management, cultural resource challenges, fish and wildlife issues, ecological restoration, illegal motorized trespass, responding to emerging technology, fostering public connection with Wilderness, and invasive species management. Response to survey will determine the specific sessions to be offered.

A United Call to Action

A system-wide response to the challenges and opportunities available to protect Wilderness character, connect people to Wilderness, and foster leadership for stewardship with Linda Merigliano (SWS), Connie Myers (ACNWTC), and Bill Hodge (NWSA). Special guest Meryl Harrell to present concluding remarks (co-chair, 21st Century Conservation Corps, Department of Agriculture)

Conference Companion Events

Field Trips

In September of 2013, the National Wilderness Conference began accepting applications for companion events to supplement the conference program. Relevant types of events included pre/post-conference trainings or workshops; education and cultural awareness events; outdoor field trips; gatherings specific to a particular organization or constituency; fundraising events; film screenings, performances etc. Sixty-one events were submitted and most were selected for inclusion in the formal conference program or as recommended activities listed on the conference website. Following are descriptions of the companion events conference attendees were treated to at the National Wilderness Conference.

Outdoor Field Trips

157 people participated in pre- and post-conference field trips to New Mexico Wilderness areas and cultural sites:

Wilderness Ranger Week

This field trip offered a chance to find out what it was like to be a Wilderness Ranger by performing various field work projects in the heart of the Blue Range Wilderness.

Sponsors: US Forest Service and New Mexico Wilderness Alliance

Backpacking into the Pecos Wilderness

Participants backpacked up the west fork of Rio Santa Barbara, following beaver ponds into a basin where they camped beneath majestic Trampas and Truchas peaks.

Sponsor: New Mexico Wilderness Alliance

Rio Grande Lower Gorge Full Day Rafting

Participants spent a full day rafting on the Rio Grande River in the spectacular Rio Grande Gorge, with walls rising to 1,500 feet. The morning was spent on the gentle Orilla Verde section, flanked by green meadows. Following a riverside lunch rafters were treated to an afternoon on the rollercoaster Class 3 rapids of the Racecourse, including the Narrows, Eye of the Needle, Sleeping Beauty. The trip finished with the thrill of Souse Hole.

Sponsor: Los Rios River Runners

Deception Peak Hike in the Pecos Wilderness

Participants experienced special attributes of the Pecos Wilderness, from the lush vegetation on the heavily forested slopes to the alpine tundra on the summit, with magnificent views of the many high peaks. Discussions along the trail offered opportunities to discuss the social, economic and climatic forces threatening the very concept of Wilderness and how each participant could become a Wilderness advocate.

Sponsor: Sierra Club - Rio Grande Chapter

Sandia Mountain Wilderness Work Day

The Wilderness Work Day involved participation in trail maintenance in the beautiful Sandia Mountain Wilderness and a presentation by Forest Service personnel on the challenges of managing a designated Wilderness area adjacent to the Albuquerque Metro Area (population 750,000).

Sponsors: US Forest Service, Cibola National Forest and Wilderness Volunteers

Conserving the Future on New Mexico's National Wildlife Refuges

Participants visited three National Wildlife Refuges: Valle de Oro, Sevilleta, and Bosque del Apache, to see wildlife conservation on the middle Rio Grande. At the urban refuge, Valle de Oro, participants saw efforts underway to introduce youth to the outdoors. At Sevilleta, they learned about the University of New Mexico's long term ecological research and Mexican wolf recovery programs. At Bosque del Apache, they experienced the challenges of managing three Wilderness units and providing habitat for endangered species and migratory birds.

Sponsor: US Fish and Wildlife Service, New Mexico Regional Office



Capitol Peak, Maroon Bells - Snowmass Wilderness, Colorado
By Nate Zeman, www.natezeman.com

Mi Casita: Aldo Leopold's Historic Home

Participants ventured to Aldo Leopold's historic home in Tres Piedras, NM. Built in 1912 and opened again in 2012 as the Aldo and Estella Leopold Residency Program, the home serves as retreat for writers, thinkers and artists around on the context of land ethics.

Sponsor: US Forest Service, Carson National Forest

Guided Rio Grande Sunset Paddling Adventure

Two guided evening explorations took participants on canoe tours of Rio Grande River as it flows through Albuquerque. Participants took in the famous Sandia mountain sunset while experiencing the serenity of the late afternoon river, followed by a campfire.

Sponsor: Quiet Waters Paddling

Wilderness Science at the Sevilleta National Wildlife Refuge

This was a science-focused tour and field trip of research sites in the Sevilleta National Wildlife Refuge and the University of New Mexico Sevilleta Field Research Station. Discussions centered on long-term ecological research and the ecological impacts of global environmental change on ecosystems in New Mexico; highlighting the role of National Wildlife Refuges in conservation and research; and illustrating how National Science Foundation funding had supported research, training and outreach in New Mexico.

Sponsor: University of New Mexico

A Tour and Discussion of the Sandia Mountain Natural History Center

The Sandia Mountain Natural History Center is an environmental education center located just east of Albuquerque. The beautiful 128-acre piece of pinon-juniper forest is owned by Albuquerque Public Schools and operated by the New Mexico Museum of Natural History. This event included a tour of the facilities and a short hike on the adjacent trails and into the Sandia Mountain Wilderness.

Sponsor: Sandia Mountain Natural History Center

Ojito Wilderness Hike: Making Wilderness A Reality

Participants split into two hiking groups: One to a hoodoo and ponderosa area led by James Sippel, BLM Wilderness Coordinator for NM; and the other to a seismosaurus dig led by Dr. Spencer Lucas, NM Museum of Natural History.

Sponsor: Great Old Broads for Wilderness

Bosque School: Citizen Science on the Local Landscape

The Bosque Ecosystem Monitoring Program (BEMP) taught about the role of Citizen Science on the local landscape by sharing innovative and low budget ways to successfully engage K-12 students to track environmental changes for land managers. Participants learned about simple data collections like groundwater, leaf litter and precipitation as well as BEMP's wildlife research and environmental education.

Sponsor: The Bosque School

How Wilderness Heals Us: Physically, Emotionally, and Spiritually

Held in Placitas, NM and led by Wilderness expert Budd Berkman, this event gently guided participants through the healing aspects of the natural world and how to reconnect with our deepest self by emulating nature's natural rhythms through a 2-hour therapeutic session.

Sponsor: ARCA, New Mexico

Aldo Leopold's Bosque and the Rio Grande Valley State Park Bike Tour

Two bike trips were offered to the Rio Grande Valley State Park's Paseo del Bosque River Trail, which winds beneath old growth cottonwoods.

Sponsor: Sierra Club – Rio Grande Chapter, Routes Rentals & Tours

Guided and Self-guided Rio Grande Paddling Adventures

A self-guided canoe tour of nearly 10 miles of the Rio Grande River was offered to experienced paddlers. For less experienced paddlers, a 3-hour guided canoe trip took participants through Class I water.

Sponsor: Quiet Waters Paddling



Conference Companion Events

Films at the KiMo Theatre

The following companion events offered conference attendees a unique perspective on Wilderness advocacy, activism and history. Eight hundred people attended the following events, held at the historic KiMo Theatre. Built in the 1930's by the Civilian Conservation Corps, the KiMo Theatre is on the National Historic registry and around the time Aldo Leopold lived in the region.

The People's Wilderness Film Gala

The Film Gala bookended the conference, showcasing new and old and short and long films on the beauty of Wilderness, its meaning, importance, history, relevance, and preservation. During its two day showing, the Gala offered opportunities for discussion, on the films and the ability to speak to the film producers and to support their efforts through the purchase of films and memorabilia. Organized by Ron Brinkley, Film Festival Organizer.

Day One

America's Wilderness

by Sarah Gulick, Erin Finicane, and Chuck Dunkerly

The title of a series, this first film is a simple and evocative presentation of the poetic and salient points of the Wilderness Act of 1964.

World Premiere

The Color of Wilderness

by Victor Masayesva

The eloquent views of diverse people are revealed, by an independent Hopi film maker, in this collage of perceptions regarding the inception of the Wilderness Act, its purpose, and its complicated relevance thirty five years hence.

North Cascades Wilderness: Experience the Awesome

by Sarah Gulick, Erin Finicane, and Chuck Dunkerly, America's Wilderness series

A sensitive and touching solo backpack trek story told in film as if in a dream, with beautiful mountain scenery, water, insects, and ice.

Gwich'in Women Speak

by Miho Aida, advised by Sarah James and Princess Lucaj, Gwich'in Steering Committee

The women of Arctic Village, in the Brooks Range of Alaska, speak out to protect their way of life, and their ancient interaction with the Porcupine Caribou herd, through Wilderness designation of the calving grounds on the coastal plain within the Arctic National Wildlife Refuge, "The Sacred Place Where Life Begins."

Untrammelled

by the US Forest Service Northern Region with many partners

A group of students are taught the values of Wilderness through experience on a horse pack trip and share their transformative experience with the audience. Forest Service and Backcountry Horsemen partnered up to lead the youths.

Evening Feature:

Yosemite Through the Eyes of a Buffalo Soldier

Produced by Sterling Johnson; written by and acted in by National Park Ranger Shelton Johnson

A historical re-enactment and story of the first protectors of our Wilderness and National Parks, from the point of view of a Buffalo Soldier working in Yosemite at the turn of the last century. Hypnotic footage and sounds of the back country Wilderness of Yosemite, filmed by following all of the rules of Ken Burn's documentary, *The National Parks: America's Best Idea*.

Day Two

Wilderness Forever

by Mike Decena, Kontent Films, and Sierra Club Productions

The how, what, and why of the 1964 Wilderness Act, with interviews from many perspectives, and spectacular Wilderness.

The Olympic Wilderness: If Wilderness Could Speak

by Sarah Gulick, Erin Finicane, and Chuck Dunkerly, America's Wilderness series.

Animals, plants, slugs, birds, surf, rain, sunlight, and space create a Wilderness symphony that surrounds the audience.

A Journey Through Prince William Sound

Produced by the Chugach Children's Forest, and the Alaska Geographic Association.

CCF participant, Reth, describes his experience on a habitat restoration adventure on the waters of Prince William Sound in Alaska.

Special Feature

Wilderness Traveler

by Gerry Cunningham

Gerry Cunningham, who wrote *How to Camp and Leave No Trace in 1970*, takes us on a three day Wilderness outing with his family, and shares his philosophy. This unique film is now a collector's item. Gerry's philosophy of minimal impact is everywhere people protect our natural world, from camping to the green building movement.

First Feature

American Highpoints

by Gary Scurka, Kathleen Wolff, Every Step Productions, LLC.

This documentary chronicles the adventures of weekend hikers, seasoned mountaineers, and the Highpointers Club, a group of nature lovers and hobbyists who strive to reach the highest points in each state, in more than a dozen in Wilderness areas. This film shows family empowerment with Wilderness experience, after which stewardship follows. A mother daughter team climb each of the highest peaks in the lower 48, and reach solitude and tranquility.

Managing Wilderness Across Borders; A Success Story of Interagency and International Cooperation

by Jennifer Zbyszewski, Methow Valley Ranger District

This film is from a talk, "Managing Wilderness Across Borders," and documents ten years of collaborative efforts and conflict resolution to protect and steward international Wilderness regions.

Second Feature

Meaning of Wild

by Pioneer Videography with the Sitka Conservation Society, Ben Hamilton and J. J. Kelley
Travel by boat, plane, kayak, and on foot through the Tongass National Forest and see bears, calving glaciers, ancient forest, rough seas, and intriguing characters who bring insight and demonstrate the value of real Wilderness, to inspire us and future generations for Wilderness protection.

Liberty and Wilderness

by John Concillo, Oregon Cultural Heritage Commission, intro by Douglas Brinkley
William O. Douglas was a beacon for the preservation of wild places and individual freedom. Douglas's Wilderness advocacy, with his rich writings, shaped and accelerated the timeline of the environmental movement and civil rights. As a Supreme Court Justice, no one in the nation brought such a high profile to these issues. His life stands as a record of courage to hold fast against the forces that would exploit or erode these precious American ideals.

Finale

The Wildest Act

by Doug Prose and Diane La Macchia, Earth Images Foundation
This travel documentary will tell the Wilderness story from across America, and the huge, positive impact of the Wilderness Act of 1964, signed by President Lyndon Johnson September 3, 1964, creating the National Wilderness Preservation System.

Wrenched

Wrenched is a documentary film that captures the fight for Wilderness from the pioneers of eco-activism. A musical prelude was provided by Bart Koehler, performer, activist and songwriter; and a post-film discussion by Wilderness warriors appearing in the film occurred after the film showing.

Sponsor: New Mexico Wilderness Alliance



Aldo Leopold – A Standard of Change

This one-man, one-act play written by and starring Jim Pfitzer takes place one evening in and around the famous Wisconsin Shack that inspired much of Aldo Leopold's writing.

Sponsor: Aldo Leopold Foundation



Wilderness Education Outreach & Community Involvement

Wilderness50 “Wilderness Investigations” (WI) Teacher Workshops

A series of interagency-sponsored teacher workshops were held pre-and post Wilderness50 Conference in the Albuquerque area. The first, held at the Bosque School (10/8 & 10/9/14), brought the Carhart Center-produced curriculum materials and methods to fifteen K – 12 teachers. The two-day event, along the Rio Grande, was well-received by regular classroom teachers, private school teachers and para-professionals in attendance. One teacher noted on her evaluation that, “All teachers should be doing this!”

The second WI workshop (10/10/14) was also held before the National Wilderness50 Conference. Twelve teachers met at Los Lunas High School for this one day training. One teacher explained that, “I loved and enjoyed learning how to expose children to wilderness... I will definitely use my new knowledge and materials in my classroom.” The third and final Wilderness50 sponsored workshop took place after the conference (10/24 & 10/25/14) at the Sandia Mountain Natural History Center. Twenty teachers joined Aurthur Carhart National Wilderness Training staff to broaden their wilderness background and experience activities from one of the three WI curriculums. The teachers reached during this series work with an estimated student audience of 800+ each year. This means that every year a significant number of New Mexico students will learn the wilderness story and be on their way to investigate wilderness in the future.

Additional Conference Companion Events and Activities

The following events were held in conjunction with the conference for interested conference attendees:

Thirty-Minute Aerobic Workout

A thirty-minute express aerobic workout was held at the beginning of the day to get conference attendees primed and ready for the day.

Sponsor: Cynthia Piirto, USDA Forest Service Cibola NF

Reception at Sister’s Bar

This reception, held at Sister’s Bar, featured Marble Brewery’s special 50th Anniversary Beer, food, networking and prizes for a Wilderness quiz.

Sponsors: The Wilderness Society of New Mexico and The Great Old Broads

Reception at Tractor Brewing Company

At this sportsmen-targeted reception, participants were treated to award winning beers, lively conversation, elk fajitas, oryx chili, smoked Merriam’s turkey and other wild-game New Mexico delicacies.

Sponsor: New Mexico Wildlife Federation

Wilderness Management Distance Education Program Meet and Greet

A special reception was held for past and present students from the University of Montana’s Wilderness Management Distance Education Program.

Sponsor: University of Montana, Wilderness Institute

Reception at Naturescapes Exhibit: Wilderness Photography New Mexico

Naturescapes is an annual juried exhibition of photographs around a natural history theme. In 2014, the theme was Wilderness in New Mexico. Amateur, professional and student photographers were encouraged to submit their work. To coincide with the conference, the New Mexico Museum of Natural History and Science hosted an opening reception and awards ceremony for the Naturescapes exhibition.

Sponsor: New Mexico Museum of Natural History and Science

Agency-Specific Lunches

The US Fish and Wildlife Service and US Forest Service each held lunch-time presentations, networking sessions, and awards ceremonies exclusively for their own agency employees.



White Pocket, Paria Canyon-Vermilion Cliffs Wilderness, Arizona
By Richard Ansley, www.richardansleyphotography.com

Plenary Sessions

October 16, 2014

Conference Welcome and Traditional Greeting

Gregory Hansen, *Society for Wilderness Stewardship*

Andrew Thomas, *Albuquerque Indian Pueblo Cultural Center*

Gregory Hansen

Society for Wilderness Stewardship

GREGORY HANSEN has successfully worked for over 35 years in Wilderness and natural resource management and outdoor education and is retired from the USDA Forest Service's Washington D.C. Office. During his tenure with the agency he served as a Wilderness Ranger, Wilderness/Trails Manager, Recreation Sub-Staff, Wilderness/Trails Staff Officer, Regional Wilderness/Trails Program Leader, National Leave No Trace Outdoor Education Program Coordinator and Wilderness Training/Management Coordinator for the continent of Africa - USFS International Affairs Office. Forest Service programs under Greg's leadership were recognized with the National Aldo Leopold - Top Interagency Wilderness Management Program Award; National Izaak Walton League - Top Interagency Wilderness Education Program Award; National Interagency Primitive Skills Award and the USFS 2015 Wilderness Legacy Award.



Greg authored and instructed for five years two upper-level division Wilderness management/outdoor education courses at Arizona State University and has also taught natural resource management and Native American cultural studies courses at the University of Arizona, Central Arizona College, Phoenix and Grand Canyon Community Colleges for the past 25 years. Currently, Greg consults, writes, and instructs for the Arthur Carhart National Wilderness Training Center, the USDA Forest Service, National Park Service, Bureau of Land Management and Fish and Wildlife Service, consults for the Arizona Conservation Corps and serves as their Tribal Relations Coordinator, is an active Board Member for the Society for Wilderness Stewardship and was honored to serve as the 50th Anniversary National Co-Chair- Federal Agency Lead.

Plenary Speech by Gregory Hansen

Once again, we'd like to welcome you-all to "your" 50th Anniversary Wilderness Conference! We had a good opening ceremony last night, had an excellent turnout, and the National Planning Team sincerely appreciates your participation.

This morning we'd like to start the conference off in a good and spiritually-positive manner! For years we have talked a great deal about the importance of engaging and involving all of our cultural communities in the Wilderness discussion. And therefore, the planning team has made a concerted effort to set the example here at this conference on how this can be sensitively and effectually accomplished. So today, we'd like to start-out this event with a traditional Native Blessing.

Andrew Thomas, Navajo Nation, is here with us from the Albuquerque Pueblo Cultural Center. Andrew is a spiritual leader, is a world renowned flautist, travels internationally sharing his culture and is very well respected throughout Indian country. So at this time, it gives me great honor, to introduce a friend and an important leader from our local Indian community- Mr. Andrew Thomas.



Andrew Thomas

Navajo Flutist

ANDREW THOMAS is a contemporary Dineh (Navajo Nation) flute player. He gives thanks to his extended family: *Haltsooí Diné'e* (maternal)—Meadow People Clan, *Bit'ahníí* (paternal)—Folded Arms Clan, *Kin Yaa'áanii* (maternal grandparents)—Towering House Clan, and *Tsé Nahabilnii* (paternal grandparents)—Over Hanging Rock Clan. He was born and raised in Rock Spring Chapter near Gallup, New Mexico. He is self-taught, and plays music composed from the heart. He has chosen the flute's voice to express his way of life, heritage and culture.

The flute provided him the opportunity to create the music and narration for a video documentary about male Navajo weavers entitled *Men Who Weave*. He feels fortunate that his music has allowed him to travel widely, both nationally and internationally. He has performed all over the United States, including the Indian Summer Festival in Milwaukee, the Winter Olympics in Salt Lake City, and over 10 years at the American Indian Powwow Gathering in Hawaii. He has performed in Mexico, Peru, South Korea, Canada, and throughout Europe, including Sweden where he had a story published in the book, *They Call Us "Indians"*. He was also the first Native American artist to play at the World Performing Arts Festival in Lahore, and was honored to perform for the president of Pakistan. Most recently, he returned from a tour through Russia where he performed as a cultural ambassador for the U.S. Consulate.

His first venture into recording has resulted in a CD titled *Changing Woman's Blessing*. More recently, he recorded in Perth, Australia, with a well-known Aboriginal actor and musician, Heath Bergersen. This cross-cultural collaboration culminated in a CD titled *Friends for Life* that mixes the sounds of the didgeridoo, a traditional Australian instrument, and the Native American flute.

Through his music and his life, he is an activist in preserving Native ways, creating awareness of the need for communication across cultures, and protecting all human rights. In this way, he strives to give back to the community. He most enjoys connecting with people of all cultures and sharing the musical language of the flute. "Flutes are not political. They transcend heritage differences."

Plenary Speech by Andrew Thomas

Travelling Mountain Song *Yaateeh abini!*

It's good to be here this morning, of course. I'm from the great Navajo nation, but Navajo is a generic word, we call ourselves *Dineh* which simply means the people of the Earth. In many instances, and of course, in commonality, we all become the people of the earth. We share our spiritual mother, the Earth, Father Sky, the cosmic, the heavens, the universe.

In that sense, we offer and render prayers. As we journey through our lives, we have the same commonality of spiritualism, sharing our natural order, mentally, emotionally, physically and of course, spiritually.

As you come to Indian country, welcome, if you're not from this area. We come to you with open arms and open mind, open eyes and open hearts. As you share the commonality, we also walk our prayers. We remember as you walk into this journey, a life journey, we remember the infants, the adolescents, the parents, the grandparents, also reflect the cycle of life.

As I mentioned the word "Indian" is a generic term, thanks to Christopher without a compass, I'm sorry, Christopher Columbus.

I'm sorry, for his calling us Indians. Of course, there are over 500 different nations. Our tribes are very strong, and intent on holding on to the land that we call Mother Earth. As you have a lot of work to do in preserving and protecting our Wilderness, so there's a good thing and also, in a real way, it's a good way.

I'm going to share a prayer with you, and my prayer is no different than to keep us out of harm's way. Come together to be strong, to share laughter, to share good, to share our experiences and how we can enrich our lives through protecting our Wilderness. Please join me.

Continued

Dineh Prayer

Hózhóogo naasháa doo
Shitsiji' hózhóogo naasháa doo
Shikéédéé hózhóogo naasháa doo
Shideigi hózhóogo naasháa doo
T'áa alto shinaagóó hózhóogo naasháa doo
Hózhó náhásdlií'
Hózhó náhásdlií'
Hózhó náhásdlií'
Hózhó náhásdlií'

Thank you so much.

I just wanted to add also that if you actually ask, and of course I remember my dad rendering prayers and he always tells me that you also enunciate your prayers in your language because our God doesn't understand English. Therefore, and of course, I'm glad we didn't ask our dad because his prayers are 30 minutes. Thank you.

Gregory Hansen: Thank you Andrew.

At this time, we would like to formally recognize Andrew in what we call a traditional way. In most instances, our Native spiritual leaders will not accept money for their blessings, for their ceremonies, or for their prayers. And so we are taught other ways in which to recognize them for their very sacred work. I conveyed last night how essential our USFS Tribal Relations folks have been in working with our Indian People to get them appropriately engaged in this conference. So at this time I would like to bring up these important Tribal Relations leaders: Estelle Bowman, Dan Meza and Diane Taliaferro to help me give-away/recognize Andrew for his beautiful and inspiring Blessing! Aho Thank You!

Estelle Bowman: *Ya'ateeh abinii. Naasht'ézhi "Zuni People," Táchi'nii "Red Running Into the Water." Ta'neesahnii "Tangle Water" and Bit'ahnii "Folded Arms People."* Good morning everyone. I gave you my Navajo clans. I am the assistant director for the Office of Tribal Relations for the USDA Forest Service in Washington DC. We want to give Andrew this blanket that has the Forest Service shield and thank him particularly for the beautiful prayer he offered us so that we have a good week here, we enjoy each other's company.

On behalf of the Forest Service Office of Tribal Relations, not only at the National Office, but the Regional Office, Diane Taliaferro and Dan Meza who made a lot of the connections for us. We appreciate Andrew coming today.

Andrew: Thank you.

Thank you so much. I think I'm going to tell my friends that my birthday will be on...

Just kidding. One of the most important factors that I actually slipped in just reminded that as I come to you no better than anybody that I look eye to eye to you. I'm not above you or below you. But also something critical that our language, I didn't announce my clan. My way of living is that *Haltsooí nishli, Bit'ahnii bashishchiin. Kin yaa'áanii dashicheii. Tsé Nahabilnii dashinali. Ákót'éego diné nishli. Ahéhee!* What I announced was my clan.

As I come into this life, I announced my mother's clan as I am on my journey as an infant. I also introduce my father's clan, which at that particular journey when I'm an adolescent. I also introduce my maternal grandparents, by that time, my role in life is parenting. Finally, I introduce my paternal grandparents, which declares my role as I become and elder, an older man, and that concludes the recitaling of my clans and the cycle of life. Thank you so much. Thank you for the blanket. Thank you.

October 15, 2014

Wilderness Past to Wilderness Future**Jimmy Carter**, *Former President of the United States***Mark Allison**, *New Mexico Wilderness Alliance***Martin Heinrich**, *New Mexico Senator***Jimmy Carter***Former President of the United States*

JIMMY CARTER served as the 39th President of the United States from 1977-1981, and was awarded the 2002 Nobel Peace Prize “for his decades of untiring effort to find peaceful solutions to international conflicts, to advance democracy and human rights, and to promote economic and social development.” His Wilderness legacy includes passage of the Alaska National Interest Lands Conservation Act in 1980, which doubled the size of the country’s national park and refuge systems, and tripled the amount of land designated as Wilderness. His expansion of the National Park System included protection of 104.3 million acres of Alaskan lands.

Among his achievements as President, he dealt with an energy shortage by establishing a national energy policy, decontrolling natural gas and oil prices, and encouraging the development of alternative energy sources. He prompted government efficiency through civil service reform, and proceeded with deregulation of the trucking and airline industries.

In 1982, he became University Distinguished Professor at Emory University in Atlanta, Georgia, and founded The Carter Center. Actively guided by President Carter, the nonpartisan and nonprofit Center addresses national and international issues of public policy. Carter Center staff and associates join with President Carter in efforts to resolve conflict, promote democracy, protect human rights, and prevent disease and other afflictions.

Plenary Speech by Jimmy Carter

Greetings to you all! I am pleased to welcome you to the 2014 National Wilderness Conference in Albuquerque!

I am truly disappointed I was not able to join you personally, but I am with you in spirit today as we honor the inspiring conservation successes that our nation has enjoyed since the passage of the 1964 Wilderness Act!

Over 100 million acres of protected Wilderness in 44 different states!

Today we commemorate a historic legacy, a wonderful gift to future generations. The Wilderness Act has been a model for land preservation efforts around the world, and we should feel proud to have set such a shining example for others.

Let us take a moment to remember this impressive accomplishment of the 88th Congress. It was 50 years ago, on September 3, 1964, that the Wilderness Act was signed into law by President Lyndon Johnson. America told the world that we are going to protect the wild places left in this country so that future generations of Americans can enjoy the healthy life and spiritual enrichment that only Wilderness can provide.

Our Wilderness System was established for the use and the enjoyment of the American people, as is written in the legislation itself. I commend Mr. Zahniser on the beautiful words with which he captured the underlying value of Wilderness: those “direct and in-direct benefits” of Wilderness that range from the scientific, ecological, and educational uses to the recreational, spiritual, and cultural. Beyond its own intrinsic value, Wilderness for me truly is a refuge.

I would like to talk a bit about one of the biggest challenges I faced as President of the United States.

I was determined to find a resolution for the longstanding controversy over the millions of acres of public lands in Alaska. And that determination only grew more resolute as Rosalynn and I began to develop a personal connection with the wild landscapes of that beautiful state. Having had the privilege of visiting Alaska on a number of occasions, we fell in love with the native people and with the land.

I knew that this could be a major stepping-stone for progress on the conservation front. With my good friend, Secretary of the Interior Cecil Andrus, and key members of the House and Senate, we studied detailed maps of the region to determine how much of Alaska’s natural beauty could be preserved without inhibiting the state’s economic development.

Continued

We began to forge compromises that ultimately resulted in the Alaska National Interest Lands Conservation Act. It was a landmark bill that I signed into law on December 2, 1980: one of my last legislative decisions as President.

With that law, we set aside for conservation an area that was larger than the entire state of California. We had doubled the size of our National Park and Wildlife Refuge System, and we had designated 25 free-flowing Alaskan streams as the wild and scenic rivers they were. With the stroke of a pen, we tripled our nation's Wilderness System!

Alaska was a milestone for the conservation effort, and it was a milestone for me personally. Passing that law was one of the most gratifying moments during my life in public office.

While it is important to celebrate what we have accomplished over the last 50 years, it is equally important that we keep a watchful eye on the horizon. We look back today on a proud and rich history of land protection in this country, but we must also consider—and plan for—the future.

As citizens, it is our right - and our duty - to challenge our elected officials; to guide them with suggestions on how to improve and how to progress. As the 114th Congress gears up for a fresh start in January 2015, this is the perfect opportunity for us to tell the President and the members of the 114th Congress that we believe in the need to preserve our wild lands, and that there is important work yet to be done.

At this time 44 of our states have designated Wilderness. We have come far, but can't stop there.

Millions of acres of public lands have been recommended to Congress for Wilderness designation. Some of these proposals have been sitting without action for over 30 years. Some of our most cherished national icons including Glacier, Yellowstone, Grand Tetons, the Great Smoky Mountains, and the Grand Canyon are on that list of recommended sites but have not been given the added level of protection afforded by the Wilderness Act. We **MUST** get these proposals back in the public spotlight so that Wilderness protection can be made permanent by law.

That is the Wilderness Challenge.

Let's leave a legacy of conservation to future generations. Let's inspire people around the world to protect special wild places by being the first to lead the way. And also, let's visit these areas and feed our wild spirits.

Working together, we can face this Wilderness Challenge, and make sure that the world we leave our children and our grandchildren is one rich with protected wild country.

Rosalynn and I hope you enjoy your days in Albuquerque. Talk with each other. Brainstorm together and build an even stronger community of Wilderness supporters. Set impressive goals for yourselves, and do what you can to preserve and protect America's Wilderness.

Thank you for all of your good work.

Mark Allison

New Mexico Wilderness Alliance

Mark Allison is the Executive Director of New Mexico Wilderness Alliance (NMWA). He comes to NMWA with 20 years of professional experience working with non-profit agencies in leadership positions, including 13 years as the executive director of the Supportive Housing Coalition of New Mexico. During his tenure there he led the organization to become an award winning, nationally recognized agency that in his last year was named New Mexico's "Housing Developer of the Year." Mark was named one of New Mexico's "40 under 40 Top Young Professionals" in 2008 by the NM Business Weekly.

Mark has demonstrated success in strategic planning, management, fundraising and media relations and is adept at partnerships and coalition building. He has experience working with elected officials at the local and national level. Childhood trips to Ghost Ranch near Abiquiú fostered a deep and abiding love and respect of wild places, which has led to hundreds of canoeing, camping and backpacking trips, including many solo ones.

After obtaining a bachelor's and master's degree in political science from Illinois State University, Mark moved to New Mexico in 1993. He believes passionately that we have a responsibility to permanently protect and preserve land, not only for us and our children to experience and enjoy, but for its own sake.



Plenary Speech by Mark Allison

Good evening and welcome to Albuquerque. My name is Mark Allison, and I'm the executive director of the New Mexico Wilderness Alliance. We're a home grown, statewide, grass roots organization dedicated exclusively to protecting Wilderness in New Mexico. We are honored to be the local co-hosts for this conference, and for what has to be the single largest concentration of Wilderness advocates on the planet. Thank you for being here!

We understand that one of the main reasons New Mexico was chosen for this very special occasion is because of our rich history of Wilderness protection. This legacy includes names like Edgar Lee Hewett who crafted what became known as the Antiquities Act. Aldo Leopold, of course, who through his vision and efforts led to the creation of the world's first protected Wilderness area right here in New Mexico, the Gila. Senator Clinton P. Anderson, who was the floor manager for the Wilderness Act, and about whom it has been said "without him there would be no Wilderness Act." And citizen activists like Ed Abbey, who wrote a number of his works just a few miles from here in the student ghetto at the University of New Mexico.

We're proud of the special role that New Mexico has played. During this special anniversary year, we want to remind ourselves why Wilderness is essential, honor the vision and efforts of those who've come before us, and renew our commitment to preserve additional deserving lands now under threat. It is with that kind of lineage in mind that I want to introduce to you tonight's keynote speaker.

First, I wanted to tell you a few fun facts about Senator Martin Heinrich that you might not know. According to "Open Congress", the Senator Martin is least likely to vote with is Senator Mike Lee of Utah. OK, maybe we did know that one.

Here's one that you might not know. A few weeks ago, Martin returned from six days on a deserted island with Republican Senator Jeff Flake from Arizona to do a show for the Discovery Channel. You'll have to tune in to see if Martin is in fact a "survivor man."

Another thing, we have pictures of Martin with very long hair, which we keep at the office in a safe locked box, just for emergencies. I would tell you Martin's birthday is this week too, which means he'll still be younger than virtually everybody else in the audience.

We have here tonight someone who, in his freshman term, is already recognized as a conservation leader in the United States Senate. The truth is, I can't think of another senator that comes to that office with his credentials as a steadfast and passionate advocate of our federal public lands. This is not a legislator that needs to be convinced of the value of Wilderness. This is a committed conservationist who became a legislator, in no small part, because of that commitment.

As a private citizen, Martin was a founding member of the New Mexico Wilderness Alliance. He was an AmeriCorps volunteer for Fish and Wildlife. He was Executive Director for the Cottonwood Gulch Foundation, providing young people with educational experiences through Wilderness expeditions.

As a city councilor, he was a vocal opponent of extending a major road through the Petroglyphs National Monument just a few miles from here. When Martin became the first Democrat ever to win New Mexico's first congressional district, he helped create the Ojito Wilderness, which was New Mexico's first new Wilderness in nearly 20 years. He also helped create two new open space properties in the Sandia Mountains, and defended the Valle Vidal from oil and gas development.

Now, in his short time in the Senate, Martin has already helped create the Rio Grande Del Norte National Monument – nearly 243,000 acres in northern New Mexico containing world class white water rafting, trout fishing and hunting, with jaw dropping views of the Rio Grande Gorge, plunging nearly 800 feet down to the river.

He has also helped establish the Oregon Mountains Desert Peaks National Monument, nearly 500,000 acres in southern New Mexico, which contains a rich diversity of Chihuahuan Desert wild lands, and important biological, cultural, and historic resources. Right now, he's working with our Senior Senator Tom Udall to pass legislation to create the Columbine Hondo, San Antonio, and Ute Mountain Wilderness areas.

A few weeks ago, several of us went to his office in DC, and we got there just in time to see him give a speech on the floor of the Senate commemorating the 50th Anniversary of the Wilderness Act. Senator Heinrich's leadership is not just good for New Mexico, it is critical for the entire country. He fights for the issues that we in this room care about.

Senator Heinrich comes to the Senate at a critical time, a time when hyper partisanship has paralyzed the legislative process that is needed to create new Wilderness. A time when some even question the relevance of Wilderness.

Martin has the makings to be one of that body's true greats as a champion for Wilderness. And we're going to help, and support, and push him to do just that to the best of our ability.

That is why the New Mexico Wilderness Alliance has decided to bestow upon Senator Heinrich our highest award... just as soon as he helps us secure an additional three million acres of Wilderness in New Mexico!

On behalf of the Board of Directors, the staff, the volunteers, and the thousands of members throughout New Mexico and beyond, it is my distinct pleasure and honor to introduce to you tonight Senator Martin Heinrich.

Martin Heinrich

U.S. Senator Martin Heinrich (D-N.)

U.S. SENATOR Martin Heinrich is the junior United States Senator for New Mexico. Elected in 2012, Heinrich serves on the Senate Energy and Natural Resources, Armed Services, Intelligence, and Joint Economic Committees.

With a background in engineering, Heinrich brings a unique perspective on how to create the jobs of the future, and protect the vital missions at New Mexico's national labs and military installations. He is a strong advocate for middle-class families, a longtime friend and staunch ally of Indian Country, and a champion for New Mexico's treasured public lands and burgeoning clean energy economy.

An avid sportsman, Heinrich is a lead proponent of preserving New Mexico's public lands and wildlife. He worked with communities across the state to designate the Río Grande del Norte and Organ Mountains-Desert Peaks National Monuments. Heinrich also helped lead the effort to designate the Columbine-Hondo Wilderness Area, establish the Manhattan Project National Historical Park in Los Alamos, and transition the Valles Caldera National Preserve to National Park Service management in order to increase public access.

In the Senate, Heinrich cosponsored legislation to raise the federal minimum wage, close the gender wage gap, reduce the burden of student loan debt, ensure all same-sex couples are treated equally under federal law, and prevent violence against women. Representing a border state with a remarkable spirit rooted in its diversity, Heinrich is a leading voice for fixing our nation's broken immigration system, while increasing investments in smart border security.

On the Senate Committee on Energy and Natural Resources, Heinrich introduced legislation to boost technology transfer and foster collaboration between New Mexico's national laboratories, local businesses, and research institutions. As a member of this committee, he's fought to combat the devastating effects of climate change and modernize our nation's electrical grid. Heinrich played an integral role in securing an agreement between the U.S. Department of Defense and U.S. Department of the Interior on the SunZia Southwest Transmission Project.

Heinrich is also a leader in protecting American constitutional liberties. He is an original cosponsor of the USA FREEDOM Act, a bill to end the National Security Agency's bulk collection of Americans' phone and other records, and to ensure more accountability and transparency with respect to government surveillance activities. As a member of the Senate Select Committee on Intelligence, Heinrich strongly supported the release of the committee's report on the CIA's detention and interrogation program and supports a series of reforms to prevent the future use of torture.

Serving on the Senate Armed Services Committee, Heinrich remains deeply committed to ensuring our men and women in uniform have the resources and support they need to keep our nation safe and to fulfill the promises we've made to those who serve. New Mexico is home to several military installations – Kirtland Air Force Base, Holloman Air Force Base, Cannon Air Force Base, Fort Bliss, and White Sands Missile Range – and two major national laboratories – Los Alamos National Laboratory and Sandia National Laboratories – and the Waste Isolation Pilot Plant. New Mexico plays a pivotal role in our national security, and Heinrich is a strong advocate for our personnel and missions.

Heinrich is a member of the Congressional Sportsmen's Caucus, Senate Climate Action Task Force, Senate Democratic Hispanic Task Force, National Service Congressional Caucus, and Congressional Dietary Supplement Caucus.

Prior to being elected to the U.S. Senate, Heinrich served two terms in the U.S. House of Representatives.

As a House member, he voted to cut taxes for the middle class, worked to make college more affordable, improved benefits for veterans, opposed cuts to Social Security and Medicare, and championed the DREAM Act as an original cosponsor. Heinrich authored the HEARTH Act to remove barriers to homeownership for Native families and led the effort in Congress to reauthorize the Indian Health Care Improvement Act. Heinrich also fought to secure language in the National Defense Authorization Act of 2010 that prohibited the retirement of the 150th Fighter Wing from Kirtland Air Force Base, which helped preserve 1,000 jobs.

Before he was elected to Congress, Heinrich served four years as an Albuquerque City Councilor and was elected by his peers as City Council President. During his time on City Council, Heinrich championed successful efforts to raise the city minimum wage, crack down on crime, support small local businesses, make Albuquerque a leader in energy and water conservation, and fought for campaign finance reform. He also served as New Mexico's Natural Resources Trustee, working to restore the state's natural environment and the services these resources provide.



After completing a Bachelor of Science degree in Mechanical Engineering at the University of Missouri, he and his wife, Julie, moved to Albuquerque where he began his career as a contractor at Phillips Laboratories, which is now Air Force Research Labs. Heinrich later served in AmeriCorps for the U.S. Fish and Wildlife Service, and was the Executive Director of the Cottonwood Gulch Foundation. He also led the Coalition for New Mexico Wilderness and founded a small public affairs consulting firm.

Heinrich's strong, just, and principled leadership is driven by his working-class upbringing, his wife, Julie, his two young sons, and the great people of New Mexico.

Plenary Speech by Martin Heinrich

It's great to be here tonight. This is fantastic. Thank you all for coming to Albuquerque, and coming to New Mexico to make this happen. I want to thank Mark for all the work that the Alliance has done in the last few years, in particular on the Organ Mountains [National Monument], which is really the greatest example of what the administration has done with the Antiquities Act yet.

I want to thank all of you for what you do every day in organizations and agencies, for what you stand for, to protect the places we all care about, our public lands. There is no other nation in the world that has this birthright that we have here in this country with our public lands, and our Wilderness.

For those of you who came from around the country, and I thank you for doing that, and I thank you for contributing to New Mexico's economy this week.

This is the land where Aldo Leopold worked so hard for years before the Wilderness Act was passed, to create the Gila Wilderness.

As we mark 50 years of success, and all of the successes that have occurred under the Wilderness Act, I think it's just as critical that we look forward to the future of American Wilderness, to the future of American conservation efforts, that will follow with the new leaders that you've already seen here tonight, with the youth that are here.

New Mexico's rich history makes this an ideal place to have this conversation. As Mark said, "We are a place where the history of Wilderness and the Wilderness Act is inseparable from our history." Think about what our public land system would look like today if it hadn't been for New Mexico residents with names like Aldo Leopold, like Senator Clinton P. Anderson, like Secretary of Interior, Stewart Udall, or Edgar Lee Hewett, just to name a few.

These were just some of the people who've not only called this state home but have really been trail blazers in this movement, in thinking about the future, and in making sure that we conserved rather than consumed our nation's greatest back country resources.

A full 40 years before the enactment of the Wilderness Act, it was sportsman and conservationist Aldo Leopold who had the vision, the fortitude, and the influence to protect half a million acres of mountains, rivers, and mesas in New Mexico that became known as the Gila.

He said, "In order to insure a roadless, and backcountry experience that was free of what he called "Ford dust," for those hardy enough to saddle up, or to hike into that wild country. In doing so, I think Aldo Leopold protected something much greater than geography, or even just land. He protected a living piece of our history, and our culture in this state, and in this country.

He protected a place that inspires and creates stories, from the time of the Mogollon Indians, to the birth of Geronimo, to my own story of hiking 53 miles through the Gila when I was trying to decide what was next in my life. What came next was my first run for public office.

With the passage of the Wilderness Act, the Gila became one of our very first, our prototypical Wilderness areas, and it's still there today as special as it ever was. New Mexico is also where the idea of tribal-administered Wilderness became a reality, when Blue Lake was returned to Taos Pueblo.

More recently, as Mark mentioned, we've made history again, working with many of the people in this room, and local elected officials, permittees, outfitter guides, organizations, tribes, you name it, and with people. I want to recognize in particular former Senator Jeff Bingaman of New Mexico who pulled together, and made it possible for us to protect both the Organ Mountain Desert Peaks, and the Rio Grande del Norte as national monuments.

As I would say, also as Bureau of Land Management national monuments, creating a culture of conservation in that agency. And some of the finest people that I worked with when I was an outfitter guide, who cared deeply about Wilderness resources, worked for the Bureau of Land Management. We need to continue that process of fostering an ethic of conservation in all of our land management agencies.

As you can see from these latest examples, the 50th Anniversary of the Wilderness Act is not just about the past. The future of our public lands conservation will depend on the collaborative relationships that many of you participate in.

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Where tribal leaders, business owners, with hunters and anglers, conversational organizations, with outdoor retailers, permittees, outfitters and guides, everyone here today who works together, so that we can protect our most treasured natural landscapes.

It's important to remember that even as we live and work in this current partisan environment, that there's an incredible history of bipartisan support for these ideas and these laws.

As Americans, we have a pretty unique and deep connection to the outdoors. In New Mexico, hunters and anglers, hikers and campers, chili farmers, acequia parciantes, even urban dwellers, they all benefit from the recreation, the wildlife, the clean water that our Wilderness provides.

I have to tell you that many of my own most formative moments, the times when I made big decisions in my life, when I created the memories that stick with me every day, the turning points have occurred in our public lands in Wilderness, designated, and proposed, and de facto.

I have to say that my strongest and my most cherished memories are from the trips that I've taken with my wife Julie, that we've made over the years along the spine of the Sangre de Cristos, the Rockies, the Tetons, in places with names like South San Juan, and Wheeler, and Jedediah Smith, and down canyons with names like Desolation and Gray, and Grand Gulch, the Goose Necks, and of course closer to home, the Chama River Canyon.

Wilderness has always been in my blood, and I make no apologies for believing that some places, some of our public lands are so very special that we can never improve upon them. These are the places worth fighting for—that's why you are here today.

The Wilderness Act is 50 years old now, and it has already protected many of America's most iconic landscapes. Today, what I'm most excited about is that there's a new generation of leaders working to forever protect places here in New Mexico like Columbine Hondo, like the Portillos and Ute Mountain, and places across the country like the Alpine Lakes Addition in Washington State, and Hermosa Creek promotes a creek across the border in southern Colorado.

Many of these places will be protected, they will be designated Wilderness. It will happen because of all of you, who built those broad and deep campaigns. The kind that are destined for success. Those kinds of efforts are destined for success, even when it means being incredibly patient. With the current gridlock in Washington, it means that we're having to be patient.

We are building what support will be necessary to succeed in coming congresses. Ask my friends in Washington State, or ask my colleague Senator Patty Murray, who worked for over a decade to protect the Wild Sky Region, about patience. Was it worth it? Wild Sky is now one of our most cherished Wilderness resources in the entire nation.

It wasn't easy, and to do it, we have to use the Wilderness Act, but not use just the Wilderness Act. There are many tools that we need to have in our toolbox, to protect the wildest, most natural places on our public lands. I would urge you to use them all where they are appropriate. Use the Antiquities Act, where it's appropriate. We wouldn't have the San Gabriels this week [alluding to President Obama's proclamation of a San Gabriel Mountains National Monument on the edge of Los Angeles the previous week.] if it hadn't been for the Wilderness values that those local coalitions were seeking to protect, even in that front country, close to that urban area, using the Antiquities Act.

I think that we owe a great debt of gratitude to President Obama, Secretary Jewell, Secretary Vilsack, John Podesta, for recognizing those locally driven conservation efforts that led to San Gabriels and to the Organ Mountains, the Rio Grande del Norte Monuments here in New Mexico.

Be willing to seek creative ways to achieve the interim protections until worthy areas that need a little more recognition for their values can be protected. Whether that means creating a new national wildlife refuge, or partnering with state governments, through programs like the "Outstanding Natural Resource Waters," program. We used that effort here in New Mexico to buy the time, to make sure that we could protect the Valle Vidal. The Valle Vidal may or may not ever be a Wilderness area, but it is one of our most treasured public lands in New Mexico.

It was using that tool to make sure that people realized just what we had that allowed us to then pass legislation to protect it. Frankly, in some states that don't have the gift of these incredible federal lands, don't be afraid to embrace private land philanthropy, and even statebased conservation efforts.

I think it's also clear that these efforts are important for conservation sake, but they're just as important for the future of our economy, across the West. I know that here, according to "The Outdoor Industry Association," in New Mexico alone, a small state with just two million people, outdoor recreation on our public lands generates over 6 billion dollars a year. It provides 68,000 high-quality jobs, spread across the entire state, and 1.7 billion dollars in wages and salaries.

Nationally, more than 140 million Americans make their living, or make outdoor recreation a priority in their daily lives. When they do that, they end up spending 646 billion dollars on outdoor recreation resulting in quality

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jobs for another 6.1 million Americans. We saw after Rio Grande del Norte National Monument was designated, just what these benefits can mean.

Within a year of that designation, the local community saw a 40 percent increase in visitors, and demonstrable increases in things like Lodgers tax, and gross receipts tax. That mattered for these local communities that are surrounded by some of our nation's most cherished lands.

Looking to the future, I have to say, we're really blessed with a new generation of conservation leaders. I can already see that my own kids, who are 8 and 11, already love our public lands as much as I do. A few days ago, I took my oldest son, Carter, into the backcountry, around Taos, for his first backpacking elk hunt. He helped call in a bull, that's going to feed our family for the next year, and a lot of our friends. That experience is going to feed his imagination and his love of the outdoors for the rest of his life.

Carter experienced his first hike into the proposed Columbine Hondo Wilderness, on my chest at the age of three months. His brother Mika has grown up exploring, and fishing in the Cruces Basin Wilderness his entire life. It's up to all of us to ensure that our kids have the same opportunities that we had, that we have shared with their generation, and that their children have those opportunities.

Be humble, work for the benefit of those generations that we'll never see, and we'll never know. There is very deep meaning in that simple work. I want to close with a quote from one of those New Mexicans: Aldo Leopold wrote in *A Sand County Almanac*, "When we see land as a community to which we belong, we may begin to use it with love and respect." Remember those words and carry on.

Grizzly Brown Bear, Katmai Wilderness, Katmai, Alaska
By Judy Lynn Malloch, www.naturestapestryilm.com



October 16, 2014

Wilderness Today; Wilderness Tomorrow

Jess DesRosier, *Vet Voice Foundation*

Chris Barns, *Arthur Carhart National Wilderness Training Center*

Sylvia Earle, *Oceanographer*

Jesse DesRosier

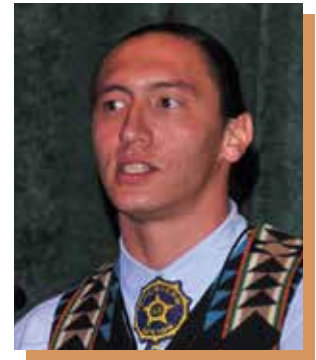
Vet Voice Foundation

JESSE DESROSIER, a member of the Blackfeet tribe, was born and raised on the Blackfeet reservation. His Blackfeet name, *Aasinaipoyii*, means “he who speaks Cree,” and was given to him when he was three days old by his great great grandmother. This was a name also given to an ancestor of his who was known for being multilingual, and Cree being one of the languages he spoke.

DesRosier attended the *Niitsipuwahsin*, or “real speak school”, on the reservation, which is a Blackfeet language immersion school educating children in their native tongue. In the late 1990’s, he and a fellow classmate traveled to Washington D.C., along with the late Darell R. Kipp (co-founder of *Niitsipuwahsin*), to testify on a language grant supported by then Senator Inouye.

After graduating from the immersion school, he attended Browning High School, earning his diploma in 2007. The following year, he joined the United States Marines, serving around the world (mostly in the Pacific) for four years. After returning home, he worked in and out of state until moving to Missoula.

In 2012, DesRosier joined Vote Vets, a branch of Vet Voice, where he campaigned for Senator John Tester in his election to United States Senate. In the summer of 2013 he traveled to Washington D.C., to lobby for the protection of wildlife and proposed Wilderness areas for Veterans health. Currently, he is a sophomore at the University of Montana, Missoula, studying and exploring various fields to expand his opportunities. DesRosier continues to work on, and contribute to, the revitalization of his native language “Blackfeet.”



Plenary Speech by Jesse DesRosier

Oki Niiksookowaks, Nisto anikohk ahsinapoi. That means “hello” in my native language.

I greeted you in Blackfeet. I’m member of the Southern Piegan or Southern Spotted Robe People from the Blackfoot Confederacy. I greeted all my relations today. We’re all connected as human beings. I thank you all for coming today. It’s a big honor for me to be here and I welcome all of you here for the Wilderness Conference in the 50th year anniversary.

My Blackfoot name is *Aasinaipoyii*, which means Cree speaker. It was the name given to me when I was three days old by my great great grandmother. I would also like to thank the sun for rising today; it’s a good day and it’s a good honor to be presenting in front of you. I have a slide show presentation. I titled my slideshow *Be-gun-ne-bat-dup-be-sin*, which means the Southern Spotted Robe People’s way of life.

I’d like to start out, with 50 years of Wilderness protection and some facts about Montana Wilderness, my home state, thinking like a human being, native perspectives on Wilderness on the outdoors, my oral culture and my connection with the outdoors and nature, and also my family connection, veteran families of the outdoors. I’m speaking also on behalf of Vet Voice Foundation and Veterans’ Health – creating awareness and alternative healing working together and speaking for *ksa-koom-me-dup-be*, which means mother earth.

Lastly, my acknowledgements. Re Montana and Wilderness Protection: the Mission Tribal Wilderness Area is the first recognized tribal Wilderness area of the nation. It is located on the Salish and Kootenai Indian Reservation. Montana is also a home for the first citizen-proposed Wilderness area and the Bob Marshall Wilderness area, which pioneered the concept of Wilderness.

The word I’d like to share with you all today is *Niitsitapi Siimstat* in my language which translates to “real people thoughts”. Breaking down *Niitsitapi* in my language is what we referred to not only ourselves, but all indigenous people of the continent prior to 1492. In reality, *Niitsitapi* means “human being”. The word *Siimstat* is the “power that comes before words and before actions”.

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Niitsitapi siimstat truly means “think like a human being”, meaning with respect, love, and care for all things. I started my education in my native language in the third grade where I attended the Blackfeet Immersion School, *Niitsipuwahsin*, co founded by the late Dr. Darrell Robes Kipp. I attended Blackfeet Immersion School from the third grade and graduated in the eighth grade.

This has been my biggest accomplishment. It was learning my native tongue. It gave me an identity in the world and it made me realize the connection I have with my environment as a native person, as a *Piikani*. The name of my people, the Blackfeet *Siksikawa*, it comes from an early time. Our main subsistence of life was buffalo, and we managed and maintained our herds throughout our territories.

One of the things we did was practice controlled burns on the prairies, which renewed the grasses each spring and allowed the buffalo to return. After times of walking through burnt areas, when we were seen by other people, they noticed our black moccasins and feet. They referred to us as *Siksika*, meaning Blackfeet.

Another word I’d like to share is the word *Miistakistsi*. It’s a word in my language: in English meaning “mountain.” But my language being very descriptive: it literally means “pushed up,” or the act of being pushed up. Showing that evolution and the creation of mountains takes place in the Rocky Mountain front, which is home to my people.

I’d also like to share some of my oral culture with you. My first Blackfoot teacher, Sikskiaki, once told me a story. She said, *Meeksiiks kahsinaaniks*. The trees are your grandparents. When I asked her, “So we came from trees?” she said, “No.”

She said, “Long ago, our warriors were very brave and we were feared. Not because of our brutality or because we had a large territory, but because when it came to our land and our children, a warrior would be willing to give his life in protection if necessary. On some occasions, our warriors would die in battle, their bodies would be taken and be placed high in the trees for their spirits to be free.”

“Over time through gravity their bodies would be pulled down to the earth, feeding the soil and the dirt and the roots for the trees. So your blood, your grandparents’ blood, your ancestors are in the trees, are in the ground. That’s why we respect our mother earth and we respect all of nature.”

The passing down of oral stories and traditions teaches a connection that we have as humans to our environment. It teaches our human roles with nature, understanding and maintaining these roles, and better understanding the circle of life.

After I graduated from high school in 2007, I fought forest fires for a summer, and then I went on and joined the United States Marine Corps, where I served my country from 2007 to 2011. Nearly three out of the four years I spent was overseas in different countries.

Upon returning home, I felt lost in a lot of ways. My father took me to our family ranch where I had grown up learning how to hunt and provide for myself through nature in the wildness. It was in these outdoors at our family ranch where I found myself again. I found my voice and my calling.

It was the same outdoors that my father returned to in 1972 after he came home from the army, and the same outdoors that my grandfather returned to after World War II as a sniper, and he credits his survival his first year to these outdoors. I can attest that if it had not been for these outdoors, I could not be here in front of you. It’s the same outdoors that my younger brother returned to, the same outdoors my children will someday get to know very well.

Native Americans have the highest percent per capita in the US armed forces. These are a couple of pictures to give you proof I do have a family. [referring to slides shown on the screen.]

To the left is myself on top of our sacred mountain, which is known as Chief Mountain, just off the reservation. To the right are my two brothers, my older brother and my younger brother, who’s also a Marine Corps veteran. This is the first time we all hunted together in seven years, after having me and my younger brother in active service military and not being able to be around each other.

The next picture in the middle is my daughter. She is my baby that I plan someday to show these outdoors to.

The last picture is myself on the left when I was in Washington, DC representing the Vet Voice Foundation where we lobbied senators in congress for protection of public lands for future generations. To the right is myself at an Idle No More rally, which is a Native American movement that was standing up for civil rights and environment issues.

Veterans’ Health promotes alternative healing for Post Traumatic Stress Disorder, PTSD, and Traumatic Brain Injury, TBI, through the outdoors. It’s one of the areas we are looking at now for healing. Depression is at an all time high for veterans. Suicide is the number one cause of death. Twenty-two veterans a day commit suicide, and there have been more veterans who have died and lost their lives from their own hands than in combat of Operation Iraqi Freedom and Enduring Freedom.

The Vet Voice Foundation, which I had the privilege of working with, has roughly 500,000 members. It gives a voice for key veteran issues. When I traveled to Washington, DC, I traveled along with a Vet Voice coordinator, Mr. Garrett Reppenhagen, and also Mike Marion.

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Our job was to talk to and lobby senators and congressman about public land protection and preservation of public land services and Wilderness areas. The primary concern of the veterans who were asked to lobby in Vet Voice Foundation were public, private, and Wilderness lands for future generations.

I started with Vote Vets. How I got in contact with the Vet Voice Foundation was through an organization called Vote Vets, which is a nonprofit organization whose main focus is campaign efforts for Representatives who stand up for veteran issues.

I'll go back to the last slide, if I could. 50 years in full circle. The word I will repeat that I wish to share with you all is *Nit-sit-da-be-ksim-stat*. Although I don't expect you to remember the whole word, if you remember the English terminology of "thinking like a human being," when we stand up for Wilderness and mother earth, we've got to keep this in mind.

Honoring the treaties is something that native people stand up for and have a voice for. We have to remember to work together and learn from each other when it pertains Wilderness. The knowledge of the native peoples of this continent is vast and the language serves as its tool.

I try to encourage everybody to bring past traditions and practices into present day culture. Land management and ways of life of the native people of different areas in the continent are important in protecting our natural resources and being a voice for *saa-koo-mee-da-be*, which is "mother earth."

I'd like to end this with a quote from one of my idols, Mr. John Trudell. He said, "I am just a human being trying to make it in a world that is rapidly losing its understanding of being human." Finally, my acknowledgements, which are very quick.

I'd like to acknowledge the Vet Voice coordinator, Garrett Reppenhagen, the late *Apinahkoowapiita*, Darrell Robes Kipp, founder of the *Nii-tsi-puh-wah-sin* School. Dr. Mizuki Miyashita, the University of Montana professor. Susan Fox, the University of Montana coordinator. Beverly *Siksiiki* Hungry Wolf, my first Blackfeet language teacher and spiritual elder. Peter Weasel Moccasin *Menebookaw* elder and spiritual leader.

My relative who is in attendance today, Dylan DesRosier, *Kiyiyokatoosi* for the wonderful pictures that he provided for my presentation. I'll also add that these pictures are from my reservation and Glacier National Park, which is very dear to me. Also lastly the University of Montana linguistics club. Once again, *Nit-sit-da-be-ksim-stat*. Thank you all for inviting me here today. It's been an honor.

Chris Barns

Arthur Carhart National Wilderness Training Center

CHRIS BARNs is a Wilderness Specialist with the Bureau of Land Management's National Landscape Conservation System. He is stationed at the Arthur Carhart National Wilderness Training Center in Missoula, Montana – the interagency office that trains Wilderness managers, disseminates Wilderness information to agency personnel and the public, and educates Americans on the values of our Wilderness areas.

Barns came to the Carhart Center in 1999 after serving almost 9 years leading the Wilderness, Recreation, and Paleontology programs for the Bureau of Land Management's Farmington office in northwest New Mexico. Proud of having reduced the number of Wildernesses in the country, he drafted the legislation that combined the Bisti and De-Na-Zin Wildernesses into one area by designating the land between them Wilderness as well. While working for the BLM in Farmington, he volunteered for the Forest Service as a Wilderness Information Specialist in the Weminuche Wilderness in southwest Colorado. He has also worked for the National Park Service at Zion, Isle Royale, and Lassen Volcanic National Parks. He has yet to work for the U.S. Fish & Wildlife Service, though that Agency did ask him to go to Hawai'i to teach staff of that agency and the National Oceanic and Atmospheric Administration the implications of possible Wilderness designation for Papah-naumoku-kea Marine National Monument.

Barns devised the futuring exercise at the Wilderness 30th Anniversary conference that led to the 1995 Interagency Wilderness Strategic Plan, for which he was the lead author. Among other film credits, he wrote and directed the 2004 documentary *American Values: American Wilderness* for the 40th Anniversary of the Wilderness Act. This film featured the last on-screen performance by Christopher Reeve, and was widely broadcast on PBS stations across the country. It is still aired in individual markets on PBS World.

Barns has written several articles on topics as broad as the direction of the National Wilderness Preservation System, as narrow as paleontological research in Wilderness, and is one of the co-authors of *Keeping*



It Wild: An Interagency Strategy to Monitor Trends in Wilderness Character Across the National Wilderness Preservation System.

He has helped develop the Bureau of Land Management's Wilderness policies, trained countless former, present, and future Wilderness managers from all four federal land management agencies, and is one of the Department's most outspoken Wilderness advocates.

Barns was graduated *cum laude* from Cornell University, went through the M.F.A. program in theatre at Penn State, and received an M.S. in Forestry from the University of Minnesota's College of Natural Resources. He lives in Lolo, Montana, with his wife, Kathleen Stachowski, founder of Other Nations.

Plenary Speech by Chris Barns

I want to thank the committee very much for the great honor of addressing you today. Before I begin, I need to make some disclosures. Just in case there is any confusion about it, what I'm going to say is my own personal opinion. It is not the official position of the Arthur Carhart National Wilderness Training Center. I don't think the Carhart Center has an official opinion on anything – except "follow the law."

Nor should anything I say be taken as an official position of – or even being blessed by – the Bureau of Land Management or the Department of the Interior.

A couple of years ago, I was at a dinner with Stewart Brandborg, who succeeded Howard Zahniser as Executive Director of The Wilderness Society. Brandy and I were commiserating about the state of the National Wilderness Preservation System, and the changes in direction over the last 50 years. He said to me, "I believe we have heard the last call to dinner. We have one chance left to get this right."

With all respect to Brandy – and he is due a lot of respect – I think maybe he's wrong. Or let me put it another way: I'm afraid, perhaps, that Brandy is wrong.

In Shakespeare's "King Henry IV, Part II," Falstaff is commiserating with his old friend Justice Shallow. Their good friend Prince Hal is about to become King Henry V; their good times have come to an end, and life as they knew it is over. Falstaff turns to Shallow and says, "We have heard the chimes at midnight, Master Shallow."

Have we heard "the chimes at midnight"? As I look into the future, I see a Wilderness system that is in trouble. In fifty years, will we be here celebrating a 100th anniversary? I don't know. I don't know if we'll be in here in ten years celebrating a 60th.

I'm not the only one with this fear. Fifteen years ago, the Pinchot Institute was asked by the Secretaries of Interior and Agriculture to put together a blue ribbon panel to look at the status of the National Wilderness Preservation System and how the agencies were doing managing it. Sometimes known as the Brown Commission (named after its chair, Perry Brown), it had some heavy hitters on it. In addition to Perry, we're talking about a group including Stewart Udall, Deborah Williams, and Joseph Sax. They said, and here I paraphrase slightly, "If the agencies don't get their act together, we are going to lose the National Wilderness Preservation System."

Sometimes I worry the Wilderness System might not even make it through this weekend.

I'm afraid that what we're going to do here is conflate the importance of the outdoors with the importance of Wilderness. Don't get me wrong, the outdoors is extremely important. It's vital to get young people into the outdoors. But "the outdoors" is not Wilderness.

We will talk about the strides we've made in the conservation of other areas, and somehow conflate that with protection of Wilderness. Don't get me wrong: conservation of other landscapes is extremely important. But they are not Wilderness.

I'm afraid we are losing the distinction that is Wilderness.

We'll be talking a lot this weekend about, "Isn't Wilderness wonderful?" Yes, Wilderness is wonderful.

Perhaps we will be saying, "Aren't we wonderful – because we're taking such good care of it?"

I'm afraid that the honest, kind, and short answer to that question is "no."

Are we hearing "the chimes at midnight"?

I'm afraid that the Wilderness support system is broken. There are three legs to this support system: the agencies, the nongovernmental organizations, and the public. They are all broken – or breaking.

Federal Agencies

Let's start with the elephant in the room – or perhaps the elephant that is not in the room. That is who is here.

The Forest Service was limited to 100 participants at this conference. That is one employee for every 4.5 Wildernesses managed by that agency.

That seems downright extravagant when you look at what happened to the Interior agencies. Originally, each Interior agency was limited to 75 people.

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One of the Wilderness program leads called me a few months ago and said, "My director has told me that I need to come up with a better reason to have 75 people go to Albuquerque than to celebrate a law that was passed in 1964." I was shocked. Really? We need to come up with a better reason to come to Albuquerque than to rededicate ourselves to one of the most important laws ever written?

Of course I was wrong. The director was right. And apparently, Ed Abbey was wrong when he wrote that "Wilderness needs no defense, only more defenders." Apparently Wilderness does need a defense, because the BLM was cut to 37 employees. For those of you who are keeping score at home, that is one employee for every six Wildernesses we manage. Twenty years ago, on the 30th anniversary of the Wilderness Act, the BLM sent 188 employees to that conference.

So what's up with this? Is it the money? I don't think it can be the money. The Park Service was allowed to send a grand total of 33 employees to this conference. If they had sent the "full" complement of 75, the increase in money to the Park Service would have amounted to approximately one-third of 1 percent of just the annual budget of just Yellowstone National Park. So it can't be the money.

We do like to blame GSA, but I looked through our agenda. I don't see any clowns putting together bicycles or whatever it was they did that's gotten us so in trouble.

So what's up? Is it that somebody thinks it just looks bad?

With that I have to agree – our agency participation here does look bad. It looks like we don't like Wilderness. Or perhaps more accurately, that we are embarrassed by Wilderness. This embarrassment we see all throughout the land, and I believe it is a symptom of the disease that is wracking the National Wilderness Preservation System.

I want to give you a couple examples. I'm going to be as vague as possible, though you might be able to identify the decision that I'm talking about – and I'm sorry for that, because I'm going to be purposely vague for two reasons. First, these are just indicative examples. There are dozens I could cite, and I don't want to do that. It's not a problem with a particular decision, but with a pattern of decision-making.

But more importantly, I don't mean to pick on any particular individual or any particular agency. I have not picked examples of bad people sabotaging Wilderness. I certainly could have done that. These are decisions made by good people doing what they thought was the best thing at the moment.

So let's look at an example.

A state game and fish agency comes to an agency, a federal agency, wants to go onto a Wilderness and reduce the number of predators so that there will be more prey.

Decision point number one: What does the local manager do?

The local manager did not stop this, and I'm going to give the local manager a pass because he, like so many of us, probably believed the old false dichotomy that the states manage the animals and the feds manage the habitat. So, he did not stop this. The decision went up the agency's chain of command, of course. And it was not stopped at any level.

Now let's be clear about this. The state wanted to manipulate the earth and its community of life. They wanted to trammel the Wilderness by altering the natural predator/prey relationship, thereby making the area less natural, too. Wildernesses are supposed to be untrammled and natural. And the agency did not stop this.

The Wilderness was sacrificed. By omission. We did nothing. The decision was, "Well, we have to weigh all our options. That's what we'll do – we'll take it under advisement." And if we happen to delay long enough, the state will finish and the whole question will be moot.

The Wilderness was sacrificed by doing nothing. By omission.

My other example is a sacrifice by commission. More decision points are involved here, because the agency actually did something.

Group X comes into the office, proposing project Y. Project Y involves the use of a tool prohibited by section 4(c) of the Wilderness Act. They come to the Wilderness manager and say, "We want to do this."

Decision point number one: What does the Wilderness manager say?

This is a good Wilderness manager, so the Wilderness manager says, "We'll have to write a minimum requirement analysis and do at least an environmental assessment." So the manager goes to the Wilderness specialist and says, "Please write up a minimum requirement analysis."

The Wilderness specialist writes up the minimum requirements analysis and determines that the minimum necessary is to allow the prohibited tool for part of project Y, but not all of it. The specialist conveys this to the manager, the manager goes to group X, and gives this decision. Group X says, "No, we insist on the prohibited tool for all of project Y."

Next decision point: What does the manager do?

The manager goes to the Wilderness specialist and says, "Redo the minimum requirements analysis to come up with the answer that group X wants."

Continued

Next decision point: What does the Wilderness specialist do?

He's a good Wilderness specialist. The Wilderness specialist says, "No. I can't do that. Besides, you've already signed the first minimum requirements analysis."

Next decision point: What does the manager do?

(Remember, this is a good manager. There's no censoring of the Wilderness specialist, no reprimand, no moving the specialist to the cubicle in the corner. This is a good manager.)

The manager said, "Thank you very much for bringing that to my attention. We'll just allow it in the EA and hope we don't get sued."

So the office wrote an Environmental Assessment and the manager signed a Finding of No Significant Impact for a decision that the agency's own analysis said was illegal.

These two examples have three things in common.

First is this sense of embarrassment on the part of the managers about Wilderness restrictions. We don't like to say "no," we just want to get along, so we'll just look the other way when it comes to that pesky Wilderness Act.

I'm sorry, but Wildernesses are supposed to be untrammelled and natural and undeveloped. These things are what Wilderness is.

The second thing they have in common is that the managers, the ultimate decision makers in these decisions, were either promoted or singled out for praise. I hasten to add that it's not because they threw Wilderness under the bus. These are good managers. They were promoted or singled out for praise because they were good managers and they did good work.

But the rest of the managers in the agencies see this. They understand: "There are no consequences to my career if I throw Wilderness under the bus. I can throw Wilderness under the bus and it will not in the slightest derail my career." If you don't mind my mixing of transportation metaphors.

The third thing both examples have in common is that some conservation nongovernmental organizations with Wilderness interests were complicit in the sacrifice of these Wilderness areas.

Non-Governmental Organizations

In the first case, some of the NGOs with Wilderness interests also sacrificed the Wilderness by omission, deciding not to engage in the lawsuit that arose over this. The attitude was, perhaps, "We're going to let somebody else do the dirty work. The unpopular work."

This is a change for some of these NGOs from their historic position, where they had forcefully defended the Wilderness Act. Recently, in a discussion about a similar situation concerning a Wilderness stewardship lawsuit, I heard someone ask an officer from one of these NGOs, "Why didn't you participate in this lawsuit on this illegal activity?"

The officer's response was, "We didn't think it was worth our while."

Really? Assuring that stewardship of a Wilderness area is in accordance with the Wilderness Act is not worth your while? It begs the question, what is worth your while?

In the second case, just as the agency sacrificed the Wilderness by commission, so, too, did the NGO in question by urging the agency to approve an alternative that they knew the agency's analysis said was illegal. I repeat: they urged the approval of an illegal alternative. Why? To remain in good graces of the proponent – so Group X, or Q, or whoever will still like them?

These are symptoms of the embarrassment we have over what Wilderness is. So embarrassed, that one of the NGOs started writing a series of fact sheets for the public. The fact sheets are inaccurate and misleading. And when the NGO's Executive Director was asked, "Why are you doing this?" He said, "Well, we want to make Wilderness palatable."

I'm not sure that the way to get the public to support Wilderness is by misleading them.

Or misleading the agencies. Because, you know, there are some in our agencies who think, "If such-and-such NGO says something, then it must be true." Or, "If so-and-so's NGO says this, we have no choice but to do that." As if the NGOs set agency policy.

But the question that arises here is, are the NGOs correct? Do we have to soft sell, to make palatable – do we have to weaken Wilderness for the new public?

The Public

A few years ago, there was a proposal – just outside the town of Missoula, Montana – to develop a resort with ski runs that were to be cleared on Lolo Peak right up to the Selway-Bitterroot Wilderness. The Forest Service held a listening session in which the participants gathered, six or eight of us per table, and discussed among ourselves whether we thought this was a good idea or a bad idea. My wife and I, a couple of 60-somethings, were sitting at a table with three 30-somethings and a 70-something.

Continued

The 70-something was waxing eloquent about the importance of not having ski slopes on the side of Lolo Peak – the northeast corner of the Selway-Bitterroot Wilderness, and a beacon for the people of Missoula. The citizens look up there, he said, and they know that beyond that is *Wilderness*. He was very eloquent in describing the symbolic importance of having an unmarred Lolo Peak.

One of the 30-somethings said, “Wilderness...that is like, so Sixties!”

In the few years since then I’ve been thinking, “Yes, but which Sixties? The 1960s? Or the 1860s? Or the 2060s? Or the 2160s? We have a clue from Howard Zahniser, who wrote, “The Wilderness that has come to us from the eternity of the past, we have the boldness to project into the eternity of the future.”

We see or hear a lot about the obsession of the younger generations with extreme sports, but I cannot believe that the new public cannot or will not relate to what is most important about Wilderness.

Wilderness lovers often mention solitude, spirituality, healing. The benefits of *being in* a Wilderness are great. I do not mean to minimize that. I’m sure that many of you have had life-changing experiences while you were in a Wilderness. The very first time I met the woman who became my wife, I was standing in the Bisti/De-Na-Zin Wilderness. It doesn’t get more life-changing than that!

But the in-Wilderness experience of a visitor is only part of what is essential in Wilderness.

Wildernesses are places that are undeveloped. They are natural. They are untrammelled. To borrow a Buddhist phrase, they’re the places of the no-self. They are the not-us. They are the places for the other species on this planet – or as naturalist Henry Beston put it in *The Outermost House*, places for the “other nations, caught with ourselves in the net of life and time.”

In the introduction to Mardy Murie’s autobiography, Terry Tempest Williams quoted Mardy as saying, “I hope we shall never be so poor that we shall lose our Wilderness areas.” I don’t think Mardy was talking about economically poor. I think she was talking about spiritually poor.

I refuse to believe that the new public is so poor that they cannot see their way to give five percent or maybe even ten percent to the “other nations” – to the ultimate places of the no-self.

The Way Forward

So what must we do? There are three things.

First, agencies and nongovernmental organizations together must not soft-pedal Wilderness into being palatable, but rather to boldly grow the concept that Wilderness is *desirable* – that *giving is good*. It’s not only about “what’s in it for me.”

This is a common ethic across the globe. You might have heard it expressed as, “It is more blessed to give than to receive.” A lot of this conference is going to be dedicated to getting the new public involved. I think we should start the dialog on how to make this happen.

Second, there has to be some self-examination. Do you love Wilderness passionately? Or is Wilderness kind of a neat thing, part of your duties, a convenient stepping-stone throughout your career?

At this point, I am tempted to paraphrase an old Irish prayer:

May those that love Wilderness continue to love Wilderness.

And those that do not love Wilderness, may the Lord turn their hearts.

And if He doesn’t turn their hearts, may He turn their ankles, so that we may now them by their limping.

But I do not wish turned ankles. Self-identifying will do. Ask yourself: Do I love Wilderness enough? If you do not love Wilderness....

The Wilderness system at the moment is in such a vulnerable spot that your lack of passion – your embarrassment, perhaps – is squeezing the lifeblood out of this precious thing that has been given to us from the eternity of the past. That can be OK – not everybody has to love Wilderness. Unless it’s part of your job. If it’s part of your job and you don’t love Wilderness...I don’t know...Pray for a conversion?

Or get that next job.

Those of you who do love Wilderness, you have a much harder job ahead.

Starting today, what are you going to do for the National Wilderness Preservation System? Tomorrow we will be signing the important *2020 Vision* document, which will outline where we are headed over the next six years.

So we’ll sign a document. But then what? The real hard work comes after that – when you go home.

Fifty years ago, I wasn’t paying attention to the passage of the Wilderness Act. I was attending a Boy Scout camp in New Jersey called Schiff. This was a national camp – I don’t think it exists anymore – devoted to growing young leaders. There was a sign over the door that said, “When you go home, if you don’t make a difference, you haven’t been here.”

I say all that to all of you. When you go home, if you don’t make a difference, you haven’t been here.

Continued

The only way to do that is through perseverance, and you know what perseverance is, right? Newt Gingrich defined it as "doing the hard work you do after you get tired of doing the hard work you've already done."

"But how?" you ask. "I have no money. There's no budget."

So, grow your volunteers. It's their Wilderness, too.

"Yes, but there's not enough staff."

So? Donate your life, and work longer hours.

"Yes, but I might burn out that way."

A couple of years ago Rebecca Oreskes came to Missoula and gave a marvelous speech as part of a centennial celebration of the Forest Service. She ended with a quotation from the Talmud: "You are not expected to finish your job, but neither are you excused from it."

So yes, you will burn out. Then you'll be excused and someone else will have to pick up the torch.

You all have to pick up the torch now. As bicycle racers would say, "Go hard or go home."

"But my boss doesn't love Wilderness."

Love Wilderness anyway.

"But my boss doesn't want me to preserve Wilderness character."

Preserve Wilderness character anyway! As the American painter-philosopher Robert Henri wrote, "Everything depends on those who go on anyway."

One last thing – I need to pay homage to my good friend Jeff Jarvis. For those of you who never had the opportunity to experience Jeff, I'm sorry for the poverty of your existence. He retired as the Division Chief of the BLM's National Landscape Conservation System. Jeff died three years ago this week – Monday, in fact. And I want to pass on to you something he frequently said to me at the end of our telephone conversations.

In that wry, understated way he had, Jeff would say, "Christopher, remember, what we do is rather important."

What we do *is* rather important.

So, instead of sounding the "chimes at midnight," let us resolve here, each of us, to do our part to proudly carry the singing Wilderness into the eternity of the future.

Thank you much for your attention, and I wish you all well.



Dr. Sylvia Earle

Oceanographer

SYLVIA EARLE is an American oceanographer, explorer, author, and lecturer. She was the chief scientist at the U.S. National Oceanic and Atmospheric Administration (NOAA) from 1990 to 1992. Since 1998 she has been a National Geographic Explorer-in-Residence.

She was a leader of the Sustainable Seas Expeditions, council chair for the Harte Research Institute for the Gulf of Mexico Studies at Texas A&M-Corpus Christi, and chair of the Advisory Council for the Ocean in Google Earth. She has founded three companies, among them DOER Marine (Deep Ocean Exploration and Research) in Alameda, California.

Her special focus is on developing a global network of areas on the land and in the ocean to safeguard the living systems that provide the underpinnings of global processes, from maintaining biodiversity and yielding basic life support services to providing stability and resiliency in response to accelerating climate change. Besides trying to arouse greater public interest in the sea, she hoped to raise public awareness of the damage being done to our aquasphere by pollution and environmental degradation.

Today, Dr. Earle is the Explorer in Residence at the National Geographic Society. More recently, she led the Google Ocean Advisory Council, a team of 30 marine scientists providing content and scientific oversight for the "Ocean in Google Earth." To date, she has led over 70 expeditions, logging more than 6500 hours underwater. Among the more than 100 national and international honors she has received is the 2009 TED Prize for her proposal to establish a global network of marine protected areas. She calls these marine preserves "hope spots...to save and restore...the blue heart of the planet."

Plenary Speech by Sylvia Earle

What an honor to be here in Albuquerque, New Mexico to celebrate 50 years of respect for the natural world, defined as Wilderness. Areas where the earth and its community of life are untrammled by man, where man himself is a visitor who does not remain.

That is embodied in the intent 50 years ago in establishing the policies that now enable us to have some of what remains of that distillation of 4.5 billion years of finetuning. It's an understanding that we're all visitors, if you will, on this little blue speck in the universe. How long will humans exist? I hope for longer than the dinosaurs, maybe. But they had 150 million years.

Our existence, it depends on how you count. Our civilizations, some say that beginnings of civilization were perhaps 50,000 years ago. Maybe even earlier, when humans had that capacity to have some feeling for who they are or who we are, where we might have come from and where we are, or where we might be going. Big questions. When did people start asking those questions?

I'm so honored to follow the speaker who preceded me who provided some perspective about these questions. Who are we? Where did we come from? Where are we going? Most importantly, I suppose, how are we going to get wherever there is? This is a moment in time that has never been possible before, to understand some of the nature of who we are and where we fit into the greater scheme of things.

I don't know where you were 50 years ago. Some of you didn't exist. Maybe most of you did not, except a gleam in your parents' eyes, maybe. But 50 years ago I as a young would-be oceanographer was leaving the country for the first time bound for the other side of the world. I had already spent a number of years exploring wild places in this country underwater. But I had never been outside, I hadn't been west of the Mississippi, since my origin was on the east coast.

But I went aboard a research vessel and had a chance to look at the ocean from the inside out and to compare it with places that I had seen in my earlier years as a young oceanographer. This was the era, after all, of the Beatles, for heaven's sakes. It's when Lyndon Johnson was the president.

In the last 50 years more has been learned about the nature of the world and our place in it than during all preceding history, more about our own bodies, the role of microbes, the existence of mountains in the deep sea. The fact that the continents move around at a stately, geologic pace – we didn't know that 50 years ago. We didn't have the evidence.

We didn't know that humans could change the nature of nature. We thought the ocean was too big to fail. We thought we could put anything under the sky that we wanted to or take anything out of the ocean that the ocean was so vast, so resilient that it didn't matter what we put in or took out of it.

Yet we had evidence from what we had done to the land over the years that humans do change nature, especially in the last century when our numbers swelled. Consider from 1800, globally, the population of the planet in 1800 had finally reached the one billion mark. By the time I arrived in the 1930s, there were two billion. In 1964 the numbers were still under four billion. That didn't happen until 1980.

From the time that the Wilderness Act first went into effect to the present, world population has doubled. Think of that. Think of the need that has increased during the time that our numbers have increased as well as our pressures on the natural world that has been responsible for our prosperity.

Everything we care about, life itself, is derived from the natural systems that have taken all preceding history to put into place, and it's taken us just a few centuries, mostly a few decades, to unravel some of those basic things that we take for granted. Like breathing. Where does air come from? It's taken a long time to get an atmosphere that is just right for the likes of us and the rest of life on earth as we know it.

Go back a billion years and we couldn't survive. We couldn't breathe. Not enough oxygen in the atmosphere. It's the wild world—the plants, photosynthesis in the ocean and on the land, the animals, the communities of life—that over millennia, in fact thousands of millennia, have given us a planet that works in our favor. Could we start with that little video clip, please? We can keep the music down fairly low.

There it is. 50 years ago we did not have that view of earth. We might have imagined it. I went to classrooms that had a globe that I could spin round like this. But there was no real evidence that this is the way the world looks from the skies above. Yet we're the only creatures on earth who have ever been able to get up high enough to see the whole world and hold it in our hands.

There are a lot of other smart creatures on the planet. Many of them fly high in the sky, but not high enough to get this view. Actually, it was this view of earth that we did not actually have until 1969 that enabled us to really get that shock of awareness. That this is it, everything connects. Land, sea, air, the fabric of life, and we're a part of it, not apart from it.

Two years ago I had a chance to go to that mighty place in Switzerland where big brains get together and talk about the fate of the world, the World Economic Forum, and to be able to see and deliberate the future.

Continued

Going back to the 1930s, long before most of you were born, there were scientists, one in particular, William Beebe, and an engineer, Otis Barton, who took the plunge into a Wilderness that largely still exists, into the ocean, a half a mile beneath the surface.

A half a mile underwater: that's deeper than most creatures who breathe can go, even the deepest-diving whales rarely go as much as half a mile. Some do go deeper. Sperm whales can go a mile beneath the ocean, holding their breath, staying submerged for sometimes as much as an hour. Try that sometime, you air breathers.

But for the very first time in all of human history, to be able to glimpse the part of the world where most of life on earth actually lives. In the ocean – below where sunlight shines. Sunlight that powers photosynthesis extends down to maybe a thousand feet beneath the surface. Most of the action is in the upper few meters, but it penetrates, sunlight does, with enough strength to have photosynthesis even as much as close to a thousand feet under the sea.

Life below that prospers. There's a rain of life from the surface down to the greatest depths, as much as seven miles beneath the surface. We're just beginning to explore this area and to recognize how that Wilderness connects with everything else on the planet. I think we can stop the video right there. I just wanted to take you down under the ocean as a starting point.

If ever you start to feel puffed up with your own sense of importance, I urge you to go out at night and look up at the sky and look at all of those unfriendly options. As beautiful as the stars are, and all those other parts of the solar system, our fellow planets, if you will, other than earth, there's no chance of setting up a place there, anywhere that we know about, and certainly no place within reach where seven billion people could prosper. Or even a billion. Or even a handful.

We may have outposts on the moon, Mars and elsewhere sometime in the future, but first, to make that remotely possible, we must make peace with the natural world. Our prosperity over the ages has come at costs that we're just beginning to account for. We've drawn down the assets, the water. We've contaminated the air with what we put into it, not thinking that it matters, that it will just go away.

But now for the first time we can see what we could not see until right about now. The capacity to understand how our impacts are changing this little blue speck in the universe and how and why actions such as protecting wild places are really the best security that we can imagine for ourselves.

We must respect what it has taken to get us to where we are, and in many cases restore what we've lost, protect what we can of the fabric of life. Find those areas on the land and in the sea that are still in pretty good shape and protect them as if own lives depend on them, because they do. They really do.

If we like to breathe, and most of us do, listen up. If you like the fact that water magically falls out of the sky and restores groundwater, lakes, rivers, streams, listen up, think about and do not take for granted the gifts that we heretofore largely have taken for granted.

If for a moment we forget, we should put an image like this up in front of our minds. There's the next-best alternative to a planet that works in our favor: that's Mars, our sister planet. Not as big as earth, although it looks that way on this image. But think about it. The atmosphere on Mars is mostly carbon dioxide. We have just enough carbon dioxide on earth, historically, until recent times. Now a little bit too much of a good thing.

We need CO₂ to power photosynthesis. But beyond a certain level, things go awry. We dream, perhaps, of living on Mars, of terraforming Mars, but meanwhile it looks as though we're doing a pretty good job of Marsaforming earth.

We have to just wake up. For the first time we are beginning to put things together – now that we have the knowledge that did not exist in 1964, or certainly not when I was a child.

One of the things we've been able to do is calculate how much water there is on the planet. Scientists at Woods Hole Oceanographic Institution have done this. They've taken all the water in the sky, all the water in all the plants and animals, including us, all the water in lakes, rivers, and streams, all the water in the ocean, and made a big blue ball of it and put it on the earth, and that's it. That's it.

That's all the water there is on this planet. There's plenty of water, it appears, in the solar system and in the universe beyond. But living water? Water that holds the history of life on earth? These systems that, although it's a thin layer, have maximum depth 7 miles, 11 kilometers.

In a way it's about the same depth at the maximum that the height of the atmosphere, at least most of the atmosphere above. Our life support system is really something that we need to respect and take care of in ways that previously we didn't think we had to think about such things.

But now we know, and now, starting in the 1980s, late in the 1980s, when nations began to think about the ocean in new ways, mostly in terms of, what can we take out of the ocean? Minerals, oil, gas, wildlife. That would be fish, squid, of course whales and other mammals. We began to establish around the world the exclusive economic zones that go out 200 miles for every nation with a coast. It's embedded within the Law of the Sea.

The United States has not ratified the Law of the Sea. We're among a handful of nations that still abstain. Yet we abide by the general policies, including the one that says the United States has suddenly become twice as big as it was before establishing an exclusive economic zone.

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Think of it. There's another country out there that if you look at the part that is extending these nations, our nation is really 55 percent of the other country, and it is largely unexplored. It's not unexplored, however. We're drilling for oil, we're extracting wildlife throughout that other part of this country.

Yet, here is an opportunity that, if you remember one thing about what I try to communicate today, let it be this: Early in the 20th century national parks were established. We're about to celebrate a hundred years of the National Park Service. Some say national parks were the best idea America ever had; maybe the Wilderness Act was an even better idea.

Yay! Come on, woohoo! But there's kind of a symmetry, 100 years ago, 50 years ago. Here we are with enlightenment and understanding of why the natural world rocks. Why we need the natural world. It isn't just as a source of goods, of commodities, of food, a place to live, whatever it is that we've taken from the land, and now moving sharply into the sea, mostly in the last 50 years.

We have not only learned more about the ocean in the last five decades than during all preceding human history, we've lost more. We've taken more. We've destroyed more than during all preceding history, because we have the power to do so. We have technologies that can now advance our reach into the ocean.

Even before we know what's there, we are taking at a scale that is unprecedented because we couldn't do it until we had ships that could go anywhere on the planet using materials, using technologies that enable us to find where the fish, or the krill, or the minerals, or the oil actually are. Then zero in on those places and extract, to take from what heretofore has been a blue Wilderness.

If you're ignorant, if you don't know, you can't care. You think it doesn't matter. But you know what? Now we know. There's a chance early in the 21st century, just as there was early in the 20th, to look at that other country that is out there and think about what can we do to protect the assets, to protect the wild, to protect our life support system.

And hurrah for President Obama for establishing the largest marine protected area in the world just a few weeks ago by establishing nearly half a million square miles of ocean in the western Pacific part of our exclusive economic zone as an area where even the fish and the lobsters and the plankton and whales, whatever lives there, the corals, they're safe from extraction within that part of our blue backyard.

But what else is out there? What else is down there that we need to think about with the same kind of reverence that we apply to those special wild places that magically, miraculously still remain on the land that magically, miraculously we have taken action over the last 50 years to establish protection. Not enough, but it's a really good start.

Here we are, in a world that is rapidly changing. With our pressure, as never before, a single species is altering the nature of nature. We're not doing it over millions of years, or even thousands of years. We're doing it in decades. The capacity to change the way the world works, and certainly not in our favor.

Every bit that we can do to protect the fabric of life that keeps us alive, to protect the waters, the land, the sea, is really vital to whatever plans we might have for the future. We simply don't know all of the things that we need to know about what is coming as a consequence of actions we've already taken.

Big surprise, the ocean is becoming more acidic, it's acidifying as a consequence of burning fossil fuels. More CO₂ in the atmosphere than has been the case for most of human history. The consequences we can see in terms of a warming planet, melting ice, sea level rise, and now, ocean chemistry is changing, too. Our life support system is changing, owing to our actions.

That sounds like a lot of bad news, but the good news is, – we know this. Fifty years ago we could not know what we now know, and knowing is the key. We've seen it happen to the land, stripping the land. What we thought for good reason, to feed ourselves, to make houses for ourselves, to use the land, to use the wild places, convert them to our near-term, short-term uses.

And then the ocean, we've been doing the same thing with increasing power, mostly in the last five decades or so. There are shrimp boats that are just trawling, like bulldozing, like clearcutting the ocean. We worry about clear-cutting forests. I do, anyway. I'm sure most of the people here do.

How about clear-cutting the ocean? We're doing it with a thought, just as we once thought the land was infinitely able to recover, that clear-cutting forests in order to plant agricultural goods seemed like a good idea. Conquering nature.

The same thing in the ocean. Let's go get the fish, let's go get the shrimp, let's go get the lobsters, the krill, the squid, whatever's there. We've done such a good job of this, going as far away from here as going to Antarctica. The United States is among the nations engaged, not only in the extraction of wildlife from distant waters, but consuming what is taken by us and by other nations.

Antarctica seems like a far place for us to be, but we have a vested interest. If you're a citizen of the world, you should have a vested interest in what happens anywhere in the world. Now we know this. We have authority to act in our own territory, in our own area of jurisdiction, but what happens anywhere affects everywhere. Now we know.

At times I just wish we could do away with these clever little things that we carry around in our pockets. I'm guilty.

On the other hand, it's knowledge in your pocket. Ten-year-olds are empowered the capacity to reach in their *Continued*

pockets and get information from the Library of Congress or talk to people on the other side of the world, kids, who can tell them what their life is all about.

Knowledge is power. It's the best hope we have of being connected in ways that were impossible until right about now, when we are connected. In terms of seeing the whole world and seeing what happens anywhere on the world and how that affects the rest of the planet.

Sometimes I just am overwhelmed with being trapped within a world that is so technologically run, if you will. You can't escape it until you deliberately take yourself into some wild place and yet, it is a technology that has taken us high in the sky that gives us this remarkable, unique insight. Elephants can't know what kids can know, human kids.

They now have the power to look over the shoulder of astronauts who, up high in the sky or who can stay in a space station long enough to really think about the kinds of things that just kids didn't think about until the present time.

There's some, I'm one of the lucky ones who has had the chance to live underwater, in an underwater space station. I've done it ten times starting in the 1970s. Over the years, most recently in 2012, to live underwater a week or two at a time, to be there day and night.

It's like camping in the woods, if you will. Camping in a Wilderness area, although the place where this underwater laboratory, the Aquarius is, down in the Florida Keys, is not exactly a Wilderness anymore. But it was, when I was a kid and first saw that area in the 1950s, at least more of a Wilderness than it is today.

But being able to actually be in the ocean, to spend day and night with the creatures who live there, to come inside, warm and dry, breathing air. Compressed air, but it's air, and then to go outside and be with the fish, to think like a fish, to imagine what their world is like, to see the changes that have taken place during their lifetime and mine.

Some of the creatures are as old as I am that you see out in the ocean. Lobsters can be as old as humans, or even older, some of the big fish, decades old. We can consume them in a matter of minutes when we take them out of the ocean, but allowed to live like whales, they can live to be as old as humans.

Getting to know them, getting to see them on their own terms, getting to see their faces. We recognize that every wolf, every bear, every coyote, every bird, is a unique individual, just as every cat and dog and horse and human is unique. But fish?

You open up a can of sardines, they all look alike. We come to think of fish as just commodities. But once you get into the ocean or a lake or a stream, you see that every frog is different from every other one, every fish, every minnow. Every fish with a speckled face has a different unique set of freckles. Listen up. We need to think differently about the wet parts of the planet.

Here we go. I think the image we just lost was a coral reef that just got lost. Actually, half of the coral reefs around the world have been lost. Since 1964, over the last 50 years, we've seen a decline of coral reefs that I knew as a child, now disappearing. The good news is, we still have half the coral reefs in pretty good shape. There it is. Pretty good shape. But things are changing.

Just at the same time that we're seeing these losses, we're gaining knowledge, gaining insight. If this picture looks like a whole lot of green nothing, think again. What you're looking at here is a microscopic view of something that helps keep you alive. One in every five breaths you take is generated, the oxygen, anyway, is generated by prochlorococcus, a little blue green microbe that until the late 1980s we didn't know existed.

Now, we understand, it's one of the most common forms of life on Earth. It gives rise to not only the generation of oxygen, but capturing carbon dioxide, helping to drive the carbon cycle and providing food for a lot of the creatures in the sea.

Capturing and storing carbon that is consumed by the little guys, zooplankton, the baby crabs, the baby shrimp, the baby fish, the baby starfish, the whole spectrum of wild creatures out there in the ocean that feed the next generation or the next level of the small fish and squid, and krill that are consumed by the big guys.

Capturing, holding, storing carbon, we've begun to respect the carbon capture and storage in forests in the wild places and even the places that aren't so wild, in our backyards, fields, and farms. Photosynthesis rocks, rules the world, generates oxygen, and takes up carbon. The wild places are really good at storing and sequestering carbon.

We've begun to account for it on the land, and it's high time that we accounted for it in the ocean as well. Blue carbon is protecting the wild because it keeps us alive. Maintaining the cycle of life, generating food, it becomes translated to carbon-based units that we call fish, like the carbon-based units we call trees.

But over the years, our way of looking at the carbon-based units we call fish, whales, shrimp, and all that, the highest and best use has been...let's capture them. Let's eat them. Let's think of them primarily as commodities. We're still in that state of mind largely around the world. We think of the ocean still as a great place to put things we don't want close to us on the land and a great place to extract things that we can use.

But we're now understanding that there are limits to what we can take. It doesn't mean that we can't take some fish to consume, but now we're armed with industrial skill, ways of finding, extracting, and marketing creatures that are taken from the distant waters and deep waters of the planet just for short term consumption by people all over the planet.

Continued

Ourselves, here in the United States, are very much included. We're great consumers of ocean wildlife. We have to rethink what that ocean wildlife means in terms of our life support system. Not just the source as calories. There are plenty of things that we can eat for calories.

But the value of sharks as part of the food web, as part of the carbon storage, as part of what maintains the health of the ocean, we've lost...no, we've actually taken 90 percent of many of the sharks and other large animals from the sea in the last 50 years. Think of that. We have the power to take, to extract that much millions of tons of the wild creatures.

OK. Shark fin has become popular, the shark fin soup. We've seen the decline on the land over the years. As E. O. Wilson says, we've consumed large, slow, and the tasty on the land. Over the last 10,000 years...over the last 100 years, we've done a really good job of taking the large, slow, and the tasty from the sea and even those that aren't so tasty, like krill, and turn them into products. We used to think of whales primarily as sources of goods. Now, we know that there are other ways to value whales and treasure them alive.

We now understand that trees along the shores, like mangroves, are really important for capturing carbon. They're holding the planet steady. The great masses of Sargassum weed out in the Atlantic Ocean that are like floating golden rainforest, capturing carbon, providing habitats, and generally helping to hold the plane steady in that great ocean Wilderness, homes for creatures that really rely on this mass of floating vegetation in the ocean. Seagrass meadows, we're beginning to see the waters of the world with new eyes, new appreciation.

That's the good news. Here we are armed with new technologies that not only enable us to extract from the ocean, but to get to know the ocean. There are little submarines that are so easy to drive that even a scientist can do it, and I'm living proof.

Imagine, just imagine that there were Hertz rentasub out there that any of you could take off on a Saturday afternoon and drive into the lakes, the rivers, the streams, the oceans of your choice to get to see our blue backyard to understand what we cannot see when we just sit on the shore and look at the surface, because the scenes from the surface appear to be the same as it has always been.

Whether it's in one person, two persons, or larger little subs, the technology now exists to go even to the deepest part of the ocean. It has only happened twice in history that people have gone to the deepest part of the ocean, seven miles down, in one of the areas that is under U.S. jurisdiction, the Mariana Trench in the Western Pacific that now has some form of protection, owing first to the actions of George W. Bush during his administration.

Now, with access to places that we can put on the balance sheet as Wilderness that we need to embrace and care for to see, to understand the deep vents, the hydrothermal vents that we couldn't access until the 1970s, and to be able to understand the value of these special places, foreign to most of us. But we need to understand some of the oldest living animals on earth that are in the deep sea.

Corals have been measured to be 5,000,000,000 years old. Deep sea corals that were there...imagine what this country was like 7,000 years ago when some of these deep sea creatures were at first getting started. Now we know there's reason for hope--because we know the idea of establishing on the land and in the sea places that we can adopt and someday I hope really officially designate for protection.

As we already have done with the land network of Wilderness areas, we can protect a coastal place in California recently established that finally recognizes the Drakes Estero. Decades ago an agreement was made to make this a Wilderness area, an ocean Wilderness area, but currently a lease for an oyster farm continues to occupy the place along the California coast.

Finally, although the occupants resist the idea of turning it back to Wilderness, the Supreme Court ruled in favor of the wild and in favor of us.

Consider very quickly the other options. There are plenty of them. All of us have a best at interest in making sure that around the world, we make our voices heard. Beyond the national jurisdiction, there's half of the world that is still regarded as the global commons. It's the high seas. Decisions are being made right now in the United Nations.

Shall there be governance in the high seas, or shall we just leave it open to the Wild West kind of exploitation that governed attitudes in this country going back several centuries? Here we are poised on the edge of one of the biggest decisions civilization will ever make.

We continue business as usual. We continue to consume the natural assets. Or will we think in terms of the future of what it will be like in another 50 years? The investment we can make in the generations coming along, I say, "No child left dry."

We do have, at this point, kids who are coming along empowered with knowledge, and we have choices. This is the moment, as never before, when we know what we couldn't know when any of us were kids.

Imagine 50 years from now when today's kids look at us and either really be crushed because we knew what the consequences of actions would be and we just continued business as usual. Or they will stand up and salute us, those of us alive right now, for being wise enough to change course to embrace the wild and protect it as if our lives depend on it? Because they do. Thank you.

October 16, 2014

Alaska Wilderness and Beyond

Sally Jewell, *Secretary, U.S. Department of the Interior*

Ken Brower, *Author*

Sarah James, *Spokesperson Neets'ain Gwich'in, Arctic Village*



Sally Jewell

Secretary, U.S. Department of the Interior

SARAH JEWELL is a British-born American businesswoman and the 51st United States Secretary of the Interior. The former president and CEO of REI, a Seattle-based retailer of outdoor gear, she studied as an engineer, and previously worked in the oil and banking industries. Jewell worked for Mobil Oil Company on oil fields in Oklahoma from 1978 through 1981, when she joined Rainier Bank. She worked in banking for twenty years, staying with Security Pacific, which acquired Rainier Bank, until 1992, and working for WestOne Bank from 1992 through 1995, and for Washington Mutual from 1995 through 2000. In 1996, she joined the board of REI and in 2000 was named chief operating officer. In 2005, she succeeded Dennis

Madsen as chief executive officer (CEO).

Jewell has sat on the boards of Premera, the National Parks Conservation Association, and the University of Washington Board of Regents. She helped found the Mountains to Sound Greenway Trust.

Community service has been very important to her for decades. Whether it was board work or volunteer work, she has demonstrated that you learn to lead through influence and not through power. In 2009, Jewell received the National Audubon Society's Rachel Carson Award for her leadership in and dedication to conservation. The Rachel Carson Award honors visionary women whose expertise and dedication advance conservation locally and nationally.

As America's 51st Secretary of the Department of the Interior, Sally Jewell knows the territory she oversees – the great outdoors. An avid skier, kayaker and hiker, Jewell stands out as the only Cabinet agency head to have climbed Mount Rainier seven times and to have recently scaled Mount Vinson, the highest mountain in Antarctica.

Her knowledge and appreciation of the outdoors serves Jewell well as she manages the activities of a 70,000-employee department responsible for more than 260 million acres of public land – nearly one-eighth of all land in the United States – as well as all of the nation's mineral resources, national parks, federal wildlife refuges, western water resources, and the rights and interests of Native Americans.

Plenary Speech by Sally Jewell

There are so many friends from throughout the community of people that care about public lands and open space and people that are going to carry this legacy forward for the next fifty years. I'm looking a little bit like a French General right here, I've been pinned twice this morning – I wear the 50th pin with great pleasure because this is a time to celebrate.

This will be my fourth opportunity to really celebrate Wilderness in a formal way since the fiftieth anniversary of the Wilderness Act in September. And my favorite experience was actually at the beginning of September, Labor Day weekend, when I was with my daughter, my sister-in-law, her sister, her daughters, two of their friends and my niece. That means eight women and girls in the outdoors, in the Stephen Mather Wilderness. It was the first backpacking trip for three of my trip-mates, it's a place deep in the forest where you have mountains beyond mountains beyond mountains – when you can see them – which you couldn't for part of that time, but that's okay. It's a place where people work with hand tools to repair trails, and I ran into the Washington Trails Association doing a great job.

These lands, these Wilderness areas are places that we work together to protect and to enjoy. Several of my trip-mates said it was a life changing experience for them. Because while it was rainy for part of the time, and when it's rainy and cloudy and you're in the middle of a cloud bank, you realize how beautiful it is when the sun actually lifts. And it also give you an opportunity to look at things that are a little bit closer to you, like the colors on the rocks,

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and the mountain blueberries that were our constant friends all the way up. In fact I think I probably ate a quart myself just picking along the trail; you get really good at picking and not breaking your stride – you really concentrate on that blueberry. We met a ranger at the fire lookout, built in 1934 that has not been changed since that time because it's Wilderness and it's land that is left to be untrammled by man. My second Wilderness adventure was right after that, I flew straight to the great Wilderness state of New Jersey – I'm sure you all associate New Jersey with Wilderness. I was at the Great Swamp Wilderness, a place where community members got together for the actual 50th anniversary. They said, "This swamp is home. It's home to over two hundred and forty bird species, and it should not be the fourth runway and jet port for New York and Newark." – for that's what it was slated to be. And it was community citizens like Helen Fenske who stopped that from happening, and enlightened politicians, and made it the first area of Wilderness to be added to the Department of Interior through Fish and Wildlife Service since the Act passed in 1964. So I invite you to go to the Wilderness in New Jersey, and yes we can have pockets of Wilderness everywhere, even within twenty five miles of Times Square – which is where that is located.

Then I had an opportunity in Washington DC in mid-September, in a smaller venue than this, to celebrate with many of you probably in the audience tonight, with champions for Wilderness like Tom Campion, whom I know from my days in retail as he ran Zumiez and I ran REI, and we competed against each other at times. He understands the role that business plays and the importance of giving back. And Jamie Williams from the Wilderness Society, and the Sierra Club and so many others who were in that room that night are in this room tonight celebrating the fiftieth anniversary. Celebration is what we need to do as we look at what has been accomplished over those past fifty years and look at what we have yet to accomplish. And today, my fourth opportunity to formally celebrate this anniversary in beautiful New Mexico, the state with twenty five Wilderness areas.

So as you go through your agenda and you talk about the history and the lessons learned from the people who conceived the Wilderness Act fifty years ago, and you say – what are the lessons we can take forward as we think about stewardship of Wilderness areas on public land – which is a big challenge for people like me in this time of constrained budgets. And you think about education and how the best classroom in the world is the one with no walls, and the really, really best classroom is the one that is still untrammled by man. And you think about the experience, and how you take people who are afraid of the sounds of Wilderness and the sound of the outdoors but they're not as afraid of the sound of gun shots because that's what they're used to. How do we give them experience that bridges them into this world that you all know and appreciate, that is so foreign to them, if we're going to expect them to support Wilderness and our beautiful public lands going forward? And how are we going to engage the civic community, which is so important, and civic engagement is also on your agenda – probably the single most important factor when we think about the creation and the nurturing and support of Wilderness in this next fifty years. And then science: science which I've seen up close over the last few days in my travels. So there are dedicated individuals and organizations like those who are sponsoring and organizing this conference. People trust the Sierra Club and the Wilderness Society and so many more of you who work together to make events like this happen. And I'll tell you, it is really hard work to put events like this on, so let's give them a hand.

It takes a very large village to protect these public lands. People like you, in this room, conservation champions in Congress like two Senators from the great state of New Mexico that you have heard from – Senators Heinrich and Udall. There are many more like them and we do need to clap for them and encourage them, and help others that are their colleagues in Congress. But I am optimistic about our future because of people like you, and people in communities that care, and people like Senators Heinrich and Udall and the others who really step up to help all of us. I am also optimistic because I work for a great man, a great man who just a few weeks ago, in a very powerful way, talked about how it's our obligation to lead when it comes to climate change.

The President has said that it's not okay to wait for other countries to act, we must act, and a fair amount of that falls on my shoulders and I'm delighted to take it on because combatting climate change is one of the main reasons I took this job. I'm about to have a grandchild in less than one month, and when you care about the environment and about a greener energy future, that gives you perspective on the future as you all know. And the President has made it clear that fighting climate change is important to him. Secretary Kerry, my colleague on the Cabinet has also made it clear that climate change is important to him. And I'm optimistic that we can make a difference. The President has also said that he's got a pen and he's got a phone, he can call people and use his influence. He can use his pen when Congress refuses to act. And so since I last met with that wonderful group of Wilderness advocates in Washington DC in the middle of September, the President has named not just one, but two new national monuments.

The first is one that should make my friend and colleague from my work on the National Park Second Century Commission a few years back very happy, you heard today from Sylvia Earle – the Pacific Remote Islands National Monument expansion, going from ten miles to two hundred miles, yes.

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I didn't hear Sylvia, but I have a pretty good idea of what she said because I've heard her many times before, and her advocacy for the blue part of this planet is so important. Preventing commercial fishing in this massive National Monument in these remote Pacific Islands is going to make a difference, an impact, and it's going to give us the opportunity to police those waters to make sure that they are in fact pristine where the fish and the critters can swim freely and not worry about getting caught up in a net.

And then of course just a week ago, the San Gabriel Mountains just got protected as our newest National Monument. Our friends in the Park Service who have managed these lands for a long time have been struggling with the increase in use and the limited resources to really take care of them. This National Monument designation will do just that, with the support of the people in the greater Los Angeles Community who say "We want these special lands that are so close to our urban areas to be available for a positive experience for young people." So I am optimistic looking out across all of you and the young people in this audience, and the cheering sections around the room that represent young people, I'm optimistic that we're going to do great things together. So it takes a village, as I've said a few times, and we have a bit of a case study just here in New Mexico. I had the great privilege of going hiking with Senators Udall and Heinrich in the Desert Peaks area by Las Cruces, New Mexico as the Senators helped introduce me to that region and explained why their legislation to set aside lands in the Wilderness and to set aside the Organ Mountains-Desert Peaks region was so important but had gone nowhere in Congress. So we hiked together along the draws and beautiful landscapes in the Desert Peaks region. And we had an interesting driving experience for my colleagues from Washington DC that aren't quite used to some of that terrain. It looked like one of those commercials for four wheel drive vehicles. But we got there and we hiked along this draw, and we saw ancient pictographs, and we saw a tarantula which was not moving very quickly because it was very shady out, we saw a fox just above the draw and we saw what Wilderness really looks like close to this area of Las Cruces that is so beautiful and so close to these areas that seem so far away. I learned about a stage coach line that used to run through that area, I learned about the dinosaur trackways there.

My next visit down there was a great celebration, an opportunity to hike in the Organ Mountains area and to be with the community that made the Organ-Mountains Desert Peaks National Monument a reality. And what a joy that was to experience the community of Las Cruces, which had rallied together when I held a community meeting with over seven hundred and fifty people – standing room only. There were all kinds of perspectives, and those perspectives were welcome, but at the end of the day the community spoke and said this is a place that needs protection – not just the Organ Mountains but also the Desert Peaks. And we satisfied the concerns of border control and of law enforcement in that critical area and look at what a beautiful place we have. So if you haven't yet had time to go down to Las Cruces and visit your National Monument, the Organ-Mountains Desert Peaks – I encourage you to do so.

What does the future look like? Well there is lots and lots of work ahead. As I mentioned earlier, with the President's Climate Action Plan, we need to build a clean energy future, we don't have that right now. We all have burned a number of fossil fuels today, I'm sure we're burning a few just sitting here in a lit room; we flew in here on airplanes; we drove here in cars. We are a nation that is dependent on an energy past that is producing carbon pollution that's problematic for us, but it is also important to our economy. So we can't just stop doing what we're doing, but we need to look to a brighter future, and we need to look to a future with more effective planning on our public lands.

Just a few weeks ago I was in Southern California, in our desert landscapes as we launched the draft of the Desert Renewable Energy Conservation Plan, a massive effort by the state, non-profit organizations and federal government, community groups, and community citizens saying "how do we take this California desert, which people used to think of as a wasteland, that is in fact home to many, many species, that is part of Joshua Tree National Park and Death Valley and so many other places that are really special. And how do we harness the new energy of the future – solar, wind, geothermal, and do it in a way that doesn't have the impacts that we felt on our landscapes from energy development in the past? And that landscape level approach is the way to move to the future. And I'm proud of those in the Bureau of Land Management who are looking now for more a landscape-level approach to development. It's not easy to get from here to there overnight, but they are working very hard on master leasing plans, on understanding the impact of our development, conventional and otherwise, on these landscapes that you care about so much and these regions of the country that you know about – but that we may not know about in Washington D.C if you don't speak up.

The next thing we need to do is understand our ecosystems. Sylvia talked about the ecosystems of the blue and how they are in trouble from ocean acidification and overfishing and so on. We are just beginning to understand our landscapes on shore, like the last three days that I spent in Idaho and in Wyoming with ranchers and farmers and conservation biologists and soil zoologists and wildlife biologists and the Governors of Idaho and Wyoming as

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we have to understand the Sagebrush Steppe ecosystem. Much we now are learning about it just teaches us how much we didn't know. And, yes, we're looking across these landscapes, in a lot of the Western states as we try and conserve sage-grouse habitat, as the Greater sage-grouse is a candidate for listing under the Endangered Species Act. But we also understand that mule deer and pronghorn antelope and golden eagles and so many other critters depend on this ecosystem that we used to not understand. We used to "till under" and plant grasses and say this is better for grazing, and now we know better, and it's just in the nick-of-time.

At least I hope it's in the nick-of-time, because I stood, as I stood on that hillside, China Mountain in Oregon, and I looked out across the valley devastated by a thousand square mile fire in 2007 and I could see no sagebrush – I could only see grass, I understood that issue. And as I looked down behind me, onto Brown's Bench, critical sage-grouse habitat in the beautiful sagebrush ecosystem that is just one fire away from it going goodbye, I recognized the importance of efforts to work across states to protect these ecosystems. And that's why the science part of the conference is so important. As Governor Mead, of Wyoming, was then at the podium along with Dan Ashe, the Director of the Fish and Wildlife Service, and a local rancher about to sign a candidate conservation agreement of assurances between the ranchers and the Fish and Wildlife Service it was unbelievable. The migrating antelope had been getting slaughtered on the freeway below for many years. The State of Wyoming built an overpass, and the antelope were using that overpass in the hundreds as we were speaking, unbelievable. It's not too late to make a difference but we have to understand these ecosystems, we have to understand the impact of our activities, and we have to get on with doing a better job in the future than we have done in the past. We had, and I'm not kidding you, an entire migration of pronghorn antelope going on right behind us.

The third thing we need to do, is to honor the work of that 88th congress – that passed the Wilderness Act fifty years ago – and reauthorize another piece of critical legislation that passed in that year and that is the Land Water Conservation Fund. So, let's translate that applause to advocacy with those who make those decisions, okay? Promise? The Land and Water Conservation Fund passed fifty years ago because we were developing offshore oil and gas, and basically the bill passed unanimously in the house, with one dissenting vote in the senate – and that was because a Senator was mad because a national park was going to charge a 25 cent entrance fee they didn't think was appropriate, so almost unanimous passage. And those visionary members of Congress at that time, they said when we drill offshore there are going to be impacts for ecosystems (don't we know that now with the Deep Water Horizon Spill, in particular). And they said, let's mitigate those impacts by investing onshore in the lands and waters that are important to us. And I have seen across these landscapes, from parks in Fort Worth, Texas to Carmel, Indiana to conservation easements in Montana, to critical inholdings that are important to the pronghorn antelope migration to open spaces in North Carolina, and the Appalachian Trail, and state parks that our elected officials really want to preserve and protect. But we need money to do that. Nine hundred million dollars a year is a drop in the ocean compared to what the oil and gas industry is producing in terms of revenue. The Fund was set aside for this purpose, but it has not been appropriated by Congress since its inception, with the exception of one year, and that was the year that Newt Gingrich wanted the Chattahoochee River to be protected and he got it. So we need to make the nine hundred million dollars a year permanent, so that we can address increasing need for parks for recreation.

There are more special places that need protection and they need your help. Nine million acres was set aside when the Wilderness Act was passed 50 years ago, grown to one hundred and nine million acres today. I mentioned 25 Wilderness areas just in the state of New Mexico alone, like the Sandia Mountains and the Carlsbad Caverns. That beautifully written poetic bill, by the hand of Howard Zahniser, said, "an area where the earth and its community of life are untrammelled by man, where man himself is a visitor who does not remain." And he later went to say, and I quote him regularly, "A place where we should be guardians, not gardeners." I saw that so starkly in those sagebrush ecosystems.

There are dozens of bills in Congress and they need to be passed. There are dozens of bills, bipartisan bills, with wide support broadly, but no one has the courage to pass them, and we need to encourage this Congress to get on with it, to learn from that 88th Congress and to move forward. Otherwise we will take action, as I mentioned, on those places that are special where the community really, really wants us to take action. These are places that fuel our economy and define us as a nation. They're not just places that are special to you – they are places that should be special to all of us. John Muir said "Everybody needs beauty as well as bread, places to play in and pray in, where nature may heal and cheer and give strength to body and soul alike." So as I think about young people growing up in urbanized areas more than ever before, and even young people in rural areas who are more disconnected from nature than generations before them for all kinds of reasons, I think about how we're going to have a new generation of conservation stewards, how we're going to help young people understand how places like Wilderness keep the soul, as John Muir understood. How we're going to look across this audience fifty years from now and recognize that the face of the United States of America has changed. That the advocates in the Wilderness community have not yet changed with it and that is all of our jobs to do.

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So as Gloria mentioned in the introduction we have a major initiative at the Department of the Interior and across the federal family, to get more young people engaged in public lands. First to play – if you don't play, you don't have a good time, you're not going to go out there; second to learn in the best classroom of all – Mother Nature; and third, to serve alongside people like those Washington Trails Association volunteers that I saw on the trail; and fourth, to work – to put the kinds of careers that you're all in, the kinds of careers we support at the Department of the Interior, the USDA Forest Service, and the Natural Resource Conservation Service, and the state parks across these lands, and the local parks – we need young people to have these things on their radar. So it's up to all of us to engage that next generation, to take young people out into the Wilderness or even to what feels like Wilderness in our own backyards.

This Conference builds on the vision of giants like Aldo Leopold and others. One of those giants is Mardy Murie, a hero in Alaska, hero in the passage of the Wilderness Act, the Alaska National Interest Lands Conservation Act in 1980, and in testimony before Congress on Alaska – and I know you have sessions that are going to be on Alaska here – she said, “Duty is a resource in and of itself, Alaska must be allowed to be Alaska, that is your greatest economy. I hope that the United States of America is not so rich that she can afford to let these Wildernesses pass by, or so poor that she cannot afford to keep them.”

I want to thank all of you for being here, for your work, for your commitment to Wilderness and the values that it holds, for your commitment to making sure that the United States of America continues to recognize these special places, as we look around the world and we see so many of them disappear or slip away. If you go to the Alps and you hike, you'll see beautiful grassy fields, cows, sheep, cow bells, you'll come around the corner on the trail and you'll find a little inn, you'll get a soft bed, you'll get a warm meal, you'll get a cold beer, but it is not Wilderness in any dimension. If you want to see wildlife, you won't see it there. I've done a lot of hiking in the Alps and I've seen one ibex, that's it. That's what will happen here, if we don't pay attention to these assets that we have. That is why you're here, that is why we need to be champions together. I'm not done yet, I've got a few decades in front of me, and I'm guessing you have a few decades in front of you – more than I do. I ask you all to join together to support the next fifty years of Wilderness and conservation.



Kenneth Brower

Author

KEN BROWER is a writer who specializes in environmental issues and natural history. He is the oldest son of David Brower, the first executive director of the Sierra Club. As a child and young man, Ken observed the eight-year campaign for passage of the Wilderness Bill. He watched the close collaboration between his father and Howard Zahniser of the Wilderness Society, the bill's author. He was witness to the hard work that went into this epochal law.

The fieldwork for Ken's writing on Wilderness has taken him to the Arctic and Antarctic, the rainforests of Amazonia, Central America, West Africa, Borneo, and New Guinea, the open ocean, the coral reef, and the mountains and deserts of the American West. In 1967, at 22, to research his book on the Brooks Range, he walked for five weeks across those northernmost of Alaska's mountains and out to the Beaufort Sea. He has written on the Wilderness of Wrangell-St. Elias. His book *The Starship and the Canoe* was set, in part, in the Wilderness of the outer coast of Glacier Bay.

Plenary Speech by Kenneth Brower

Sally Jewell's family experience of the Northwest—lots of rain—reminded me of my own family experience. When I was a kid, my siblings and I got drafted by our father, David Brower, the first executive director of the Sierra Club, into making movies that argued for the Wilderness preservation, and one of those films brought us up to the Pacific Northwest.

We did a movie called “The Wilderness Alps of Stehekin,” which was Sierra Club propaganda for Wilderness and for a North Cascades National Park. Or he did the movie—my father did. We were the actors. Or not actors so much as small figures to give scale to the landscape and to add cuteness. He stiffed us. We were not paid union scale for our acting. We got no compensation at all. We grumbled about it a bit, little stirrings of rebellion. We resented having to do take after take, walking again and again down that same wet, mossy log in the North Cascades. But we got used to it and now we are proud we did it.

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My father wrote, produced, filmed, and narrated “Wilderness Alps of Stehekin.” There was no budget in those early days of environmentalism to hire any help. One of my father’s lines in the movie was “The Northern traveler is seldom bored by blue skies.” That’s a very glass-half-full sentence. Another half-full line went “Epidermis is waterproof; what doesn’t get wet can’t get dry.”

These lines became mantras in our family. If we were doing a backpack together in the rain in the Cascades someplace, we would look at each other and say, with irony, “The Northern traveler is seldom bored by blue skies.” But it’s true! The Northern traveler really is seldom bored by blue skies. Epidermis really is waterproof, and what doesn’t get wet can’t get dry.

I was a fly on the wall to the making of the Wilderness Act. I got exposed to its evolution at home, because my father always brought his work home, and the Wilderness Bill was his work. He was one of the most driven guys I know, and for eight straight years the Wilderness Bill was at the top of his agenda. He worked closely with Zahnier—Howard Zahniser—who was the author of the bill and was the closest thing my father had to a mentor. Is Ed Zahniser here? No? I was going to say that Ed will remember a trip we all took, in the rain and mist of the Northwest, going up to Cascade Pass with these two fathers of the Wilderness Act walking ahead of us. We kids were miserable. These two guys ahead were talking the fine points of the Wilderness Act, completely oblivious to their actual children—that would be us—trailing behind.

Every other spring my siblings and I got dragged around to the Sierra Club Biennial Wilderness Conference, a series that my father and Zahniser put together. These conferences were designed to develop a think tank for pushing the Wilderness Bill and to energize the grassroots. As kids, we were just bored stiff. All these old people in plaid! And yet in these long sessions we couldn’t help but absorb, by osmosis, some of the ideas.

At one of these Wilderness conferences, for example, William O. Douglas, who was not just a great jurist, but great mountaineer, spoke to the gathering. Bill Douglas was the longest serving member of the Supreme Court. He was not only a great liberal in civil rights issues, but also way ahead of his time on environmental issues. He advanced the idea, in one opinion, that trees should have standing in court. It’s such a good idea! It’s an important idea that we need to pursue again, because Wilderness, wild animals, elk, wolves, don’t have a vote or a voice. We have to speak for them, and we need statutes to help us. What a fine, radical idea! Trees have standing!

Another thing that Justice Douglas said at this Wilderness conference—it was the Seventh Biennial Wilderness Conference—was that Wilderness is a human right. He said that everybody has a right to know sphagnum moss. Everyone has the right—and here I can’t remember the exact line—but everyone has the right to drink from a mountain stream, “to bury his face in cold water while the Wilderness bowl remains unbroken.”

As a kid, you hear these things at Wilderness conferences, and they stick. In the proceedings of one of the conferences, my father published Wallace Stegner’s famous “Wilderness Letter” for the first time. It was one of the best statements ever on Wilderness. Maybe the best. I’m sure most of you know this letter, or have heard it. Stegner ends it by saying that wild places are valuable to us even if we only drive to the edge and look in. They are valuable as places we might go someday. They are part of the “geography of hope.”

At another of the conferences, Gerard Piel, president of the American Association for the Advancement of Science, spoke to all the people in plaid. “We need these wild places just as benchmarks against which to measure the degradation we bring to the rest of the planet,” he said at one point. Later he delivered a line that I love, but can’t find anymore. I’m worried, in fact, that I myself might be the last repository of this line, this warning, and it’s a heavy responsibility. It can’t be Googled. I hope I have it right. Piel said, “Without Wilderness we are, in a deeply terrifying sense, on our own.”

The Wilderness Act is such a good, and completely novel, idea. “National parks are America’s best idea,” Ken Burns says. Yes, and Wilderness is the quintessence of that national park idea. Wilderness is at the heart of it. It is the best part of the best idea.

Now in the national parks eighty percent of the land is managed as Wilderness. We can’t lose it. It’s a wonderful idea. It’s a good, simple idea. It’s simply the idea that natural systems manage themselves better than we do. The record of our failure in managing natural systems is almost perfect and complete. It’s a record of miscalculation, unintended consequence, and catastrophe.

When have we ever intervened in a natural system without screwing it up? Recognition of our failure at making “improvements” on nature is one of the basic ideas driving the Wilderness Act. There are other ideas, but that’s the main one. The idea is that we need a few places—at present five percent of our Republic, 110 million acres—where we save the original model, places where we can learn how nature works naturally, how God, or natural selection, or creation, made the world. Without that, in a deeply terrifying sense we are on our own.

The Wilderness idea is beautiful idea, and lately it has come under renewed attack. Designated Wilderness has been under attack from the very beginning, from stockmen, from loggers, from miners. Even before the Wilderness Bill was a gleam in Howard Zahniser’s eye, or in Aldo Leopold’s eye, the Wilderness has had opposition from people

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in the extractive industries. They have never stopped working hard against it. That's one of the reasons it took my old man and Howard Zahniser and Polly Dyer, who's here in the audience, those nine years of really concentrated work to bring it off, the Wilderness Act.

Almost immediately after the Wilderness Act became law there came a second attack on it. It was an attack on the idea of Wilderness. It was led by academics who had nothing better to do than speculate, in their abstract ways, and come to the conclusion that Wilderness is an abstraction. They developed the arguments and philosophy of Wilderness denial. Dave Foreman describes these people as the Wilderness deconstructionists. This is perfect, because they really did just take deconstructionist principles that Jacques Derrida applied to philosophy, and certain of his American disciples applied to literature, and they adapted them to Wilderness. The same barren deconstructionist principles were applied to wild places. A cadre of sophists continue to be busy at this. What they are up to is a kind of a clear-cut. They are out to clear-cut of the Wilderness idea. The one way you cannot read literature, without deflating it, is the way deconstructionists read it. And so it is with the way Wilderness deconstructionists read Wilderness.

We're told by the deconstructionists that the Wilderness is just a fantasy. It's a construct, it's an illusion. Bill Cronon, who's one of the fathers of this school of thought, argues that Wilderness is entirely a production of civilization and culture. He says that Wilderness is like a mirror, it's just reflecting at us what we want to project on it.

I think anybody who's really been in Wilderness knows this is just not true. For those of us who love it, Wilderness is the realest thing there is. I would've said to Cronon, if I ever had ever met him on the trail, "Are you sure it's a mirror? Isn't it a little bit more like a store window, where in passing you see your reflection, yes, but there's also some actual merchandise on the other side?"

No, according to Cronon. It's all just projection.

This is what happens when you live in a world entirely of ideas. You begin to think everything's an idea. The scary thing to me is, especially in the last few years, is how this notion is catching on. I think our very good idea, Wilderness, is actually in danger of losing out to the very bad ideas that its opponents have been advancing.

We're told, for example, that American Indians didn't have the term "Wilderness." Today Sarah James told us that her people, the Gwich'in, didn't have such a term. It's understandable that they would not. For Gwich'in and other traditional, subsistence peoples, the need for the word "Wilderness" wasn't compelling. It was an unimportant distinction. Wilderness was everything, the entire world in which the Gwich'in lived. But there were thousands of indigenous languages in the Americas, most of them extinct by the time ethnographers arrived to record them. I bet there were hundreds of words meaning "Wilderness" in those thousands of languages. There were names for those places away from the village and off the trail where you went for solitude and to have your visions and to learn your true name.

We're told that the Wilderness idea is imperialistic. We're told that it's misanthropic, for it sets up this false dichotomy of man and nature. "Man is part of nature, don't you know?" say the deconstructionists. Ideally, yes, but in reality, no. The man vs. nature dichotomy is real. It makes the best explanation yet for the disaster unfolding now in the biosphere.

We're even told by Bill Cronon and others that Wilderness is a kind of opiate. I just heard this notion expressed three days ago by a UC Berkeley scholar. We were on a panel discussing Wilderness, and he ventured this idea that Wilderness is pernicious because it works as a kind of opiate. Wilderness set-asides allow people to believe that everything is okay on the American landscape. This is nonsense. Nobody thinks that way. Nobody imagines that because five percent of the nation is designated Wilderness, we are free to pollute and degrade the remaining ninety-five percent. The opposite is true. National parks and Wilderness, as models of respect for land and wildlife, can't help but rub off on citizens and benefit the ninety-five percent.

The trouble is that on panel after panel addressing this subject, I look out at the audience, and listen to my co panelists, and I'm stunned by how many are under the sway of Wilderness deconstructionism. Today at the conference we heard about that twenty-something who said, "Wilderness, that's so '60s!" But that sentiment is widespread. Even among forty- and fifty-year-olds who identify as environmentalists. It's clear to me that we've got to go back and win this battle of ideas again. We need to reclaim from the deniers the Wilderness idea.

Another group has followed the Wilderness deniers and deconstructionists into the fray: the Wilderness interventionists. "Climate change is coming," they say. "This alters the rules of the game. We're going to have to go in there and manage the Wilderness. We're going to have to go help."

As if we humans ever did demonstrate any competence at managing Wilderness.

The interventionists are in total denial of the actual history of our intervention. The actual record is horrendous, but the new interventionists are not fazed at all by this. "Well, we know better now," they say. Yes, but what history teaches is that every generation of interventionists thinks they know better now, and every generation, every time, is proven wrong. This doesn't register with them. They're offering this fantasy again.

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In July, in *The New York Times*, Christopher Solomon wrote an interventionist credo in an op-ed piece he called "Rethinking Wilderness." Joshua trees in the Mojave Desert, says Solomon, are endangered by climate change. "Let's go move the Joshua trees up higher," he proposes. The pika of Western mountains, AKA the rock rabbit or the cony, is being driven higher and higher by global warming. "Assisted migration!" says Solomon. "Let's assist the pika to a better place."

Where's that? The pika lives up in the Arctic Alpine zone, the last and highest zone in our western mountains. It is an alpine obligate. It can live nowhere else. That last peak in the Sierra Nevada, or the Great Basin, comes to a point, and above that there nothing but blue black sky and clouds. There's no place for the pika to go. To talk about assisted migration for the pika, that's fantasy. That's equivocation. That's deflecting us from the real fate of the pika, which is now being run right out of the top of its habitat by anthropogenic climate change.

It's the same with these Joshua trees that Solomon wants to move. How do the interventionists know that Joshua trees are going to do better at higher altitudes? How come they're not already up there right now? What's growing there now that the intervention is going to displace? What organisms are dependent on whatever's growing there right now? Where will those communities go? Are they going to be like the Palestinians of the Mojave Desert?

Solomon proposes that maybe we should cross breed the Joshua trees with something that will allow it to better handle heat. Yes? With what thermophilic organism are we going to cross a Joshua tree so that it can better stand the heat? The Joshua tree is the indicator species for the Mojave Desert. The highest temperature on Earth, 134 degrees Fahrenheit, was recorded at Furnace Springs in Death Valley in the Mojave. What organism has evolved to handle heat better than the Joshua tree? The lichens of Mars? Lichens on Mars are just an old hypothesis. We haven't found any yet.

There are plenty of legislative threats to Wilderness. There's the Roadless Wilderness Area Release Act, and the Sportsmen's Heritage Act, laws that would really disembowel Wilderness. And there's what we heard earlier this morning about the problems in government agencies changed with interpretation and regulation. Those are deep problems, for sure. But I really think the deeper and more fundamental trouble we have to address, on our way to solving those problems, is the erosion of the Wilderness idea with so much of the public.

As a boy and young man, I was witness to how the Wilderness Act came to be. I can testify that it happened because of the hard work of Wilderness advocates in selling the Wilderness idea. They convinced the American public and the American Congress that this idea was good. Wilderness must have a constituency that loves it, and believes in it, if it is to survive all the Sagebrush Rebellions, Wise-Use Movements, Reagans, Jim Wattses, and Bill Cronons of the future.

The Wilderness idea was a hard sell. It swam upstream against Manifest Destiny, against the course of empire, against the main currents of American thought. We have go out and make that hard sell all over again.

Sarah James

Spokesperson Neets'ait Gwich'in, Arctic Village

SARAH JAMES was raised in a traditional Gwich'in lifestyle and did not begin speaking English until she was 13 years old. Living in the small community of Arctic Village, she has traveled widely, from Washington, D.C. to foreign countries, speaking out for the rights of indigenous peoples through grassroots activism. In recognition of her leadership, she has received many awards. In 1993 Sarah received the Alston Bannerman Fellowship award. In 2001, she received a Ford Foundation "Leadership for a Changing World" grant given to "outstanding but little known leaders". She, along with the late Jonathon Solomon Sr. and Norma Kassi, received the Goldman Environmental Prize for "grassroots environmentalists" in 2002. Sarah also received the 2002 National Conservation Land Trust award. In 2004, she was the recipient of the "Ecotrust Award for Indigenous Leadership" and she received the 2006 Alaska Conservation Foundation "Celia Hunter Award". In 2009, Sarah was inducted into the Alaska Women's Hall of Fame. Sarah is very thankful for the support of the Gwich'in Nation, her community, her son and her family. She credits the hard work of the Gwich'in and other people throughout the United States and the world as having greatly contributed to her successful efforts.

The impetus for her activism and the strength of her convictions may be best summarized in her own words, spoken in 2006: "This is my way of life. We are born with this way of life and we will die with it. It never occurred to me that something had to wake me up to do this. Nothing magic happened to me. Our life depends on it. It's about survival; it's something that we have to protect in order to survive. It's our responsibility. It's the environment we live in. We believe everything is related".



Plenary Speech by Sarah James

My name is Sarah James, and I am honored to be here today to speak on behalf of my people - the Gwich'in Nation. I speak for our Elders and our youth and for our relatives who have passed and all those who gave us clear direction back in 1988, and also for the unborn generations of Gwich'in to follow.

[Gwich'in]

I am also honored to share this stage with Secretary of Interior Sally Jewell, a great friend of Native people, and a great conservationist. Thank you to the young person from Alaska for introducing me. And thank you Ken Brower for being here. Ken walked across the Arctic National Wildlife Refuge 50 years ago and knows what a special place it is. Thank you for inviting me.

My name is Sarah James. I am *Neetsa'ii Gwich'in* from Arctic Village, Alaska.

My mother was Martha James, and her parents were Rev. Albert E. Tritt and Sarah Tritt, all from Arctic Village.

My father was Ezais James from Birch Creek, along the Yukon River, and his parents were Agnes James and Birch Creek James. I am honored to be named after both of my grandmothers – Sarah Agnes.

I grew up way out on the land, our nearest neighbor was Arctic Village, approximately 50 miles away and also further east, on Sheenjek River. I spoke only Gwich'in until 13 years old when I went to school. At that time there was no running water, no phones, no roads, hardly any money, just beautiful country.

Our country.

We lived off the land and ate what we could hunt, trap, fish, and gather. Even today people in Arctic Village hunt, trap, fish and gather 75% of the food from the land; mainly wild meat (especially caribou), birds, fish, berries and roots.

Arctic Village is the farthest north Indian village anywhere, 100 miles northeast from the Arctic Circle in Interior Alaska. Only the Inuit live north of us – along the Arctic coast.

Today the Gwich'in live in about 15 villages in northeast Alaska and northwest Canada.

We are Caribou People. We still rely on the land and especially Porcupine caribou for our way of life. It is our song, dance and stories, food, tools, clothing and shelter and it means everything to be Gwich'in. Caribou is our life.

Back before Columbus, we live in caribou skin huts, the door always faces the sunrise, we go in clockwise direction with the sun. I will sing the caribou skin-hut song. It's a welcome song.

Welcome to Wilderness, welcome to the first people of this land, welcome to Albuquerque, welcome to this conference, welcome to my home, welcome to Arctic Village, welcome to the universe.

[Caribou skin-hut song]

We are the Caribou People. Twenty-six years ago the Gwich'in faced growing pressure in the Congress to open the Arctic National Wildlife Refuge, coastal plain to oil development.

This is the birthplace and nursing grounds of the Porcupine (River) Caribou Herd. Also many different animals including more polar bears than anywhere in Alaska, Arctic fox, grizzly bear, muskox, Dall sheep, wolverine, wolf, eagles, white owl, and 150 species of birds from all over the world nest there every year. We call this place *Izhik Gwats'an Gwandaii Goodlit*, the "Sacred Place Where Life Begins."

The threat to the caribou was alarming to Gwich'in elders. Our Chiefs decided to call the people together in Arctic Village in early June 1988. It was the first gathering of the Gwich'in Nation in more than 100 years. All our Chiefs were there, hundreds of people came from the Gwich'in communities. We visited for two days, and then it began.

The elders spoke first, then every Gwich'in who wanted to, including our youth, took the talking stick and talked to the people in our language. We talked and told stories and prayed for 4 days, and danced every night. Then the Chiefs met behind Frankie's cabin around the campfire to decide how to protect the caribou and our way of life.

The next day the Chiefs passed two resolutions to the gathering: The first, "*Gwich'in Niintsyaa*," calls on Congress and the President to permanently protect the coastal plain of the Arctic National Wildlife Refuge as Wilderness. That resolution is reaffirmed every two years at the Gwich'in Gathering. We might be the first Indian Nation ever to ask for Wilderness designation to protect our way of life.

The second resolution created the Gwich'in Steering Committee. Our direction is: To speak for the Gwich'in Nation on the issues of protecting Porcupine caribou and their habitat. To stay united and to do it in a good way with no compromise.

The Gwich'in decided to support Wilderness protection for the Coastal Plain because that was the best way to permanently protect the birthplace and nursery grounds of the Porcupine Caribou Herd. We haven't won yet, but with your help we will.

Continued

We do not have a word for Wilderness. It took awhile for Gwich'in to define Wilderness. The elders finally concluded it means *Izhik Gwats'an Gwandaii Goodlit* –“Sacred Place Where Life Begins” which means leave it the way Creator has made it, leave it how God has made it, leave it alone.

We can always thank God for his sacred creation. We know the “Sacred Place where life begins” *Izhik Gwats'an Gwandaii Goodlit* will always be protected, the sacred birthing ground and nursery of the Porcupine caribou we depend on. This is Wilderness to us and why we want permanent protection as Wilderness.

We are the CARIBOU PEOPLE just like buffalo is to the Plains Indians; this is human rights versus oil to us. We have the right to be who we are. God put us here where we are today to take care of that part of the world. This is our responsibility.

We did very well for thousands of years, we did not come from anywhere, we are not leaving, we are here to stay and take care of this land, the Sacred Place Where Life Begins, *Izhik Gwats'an Gwandaii Goodlit*.

The International Covenant on Human Rights states in Article 1: “In no case may a people be deprived of their own means of subsistence.”

It is our basic human rights to continue to live on our traditional lands and to continue to rely on the natural resources of the Arctic Refuge where we belong.

We have made many friends by travelling across the country and the world. For example, right now Miho Aida is tirelessly bicycling around the country with her film, *Gwich'in Women Speak* shown in the film festival here. And for decades Lenny Kohm—who recently passed on— travelled with Gwich'in people educating the grassroots of America.

Americans have spoken loud and clear, repeatedly, for no gas and oil development of the Coastal Plain of the Arctic Refuge. We have support from the Episcopal Church and many faith based communities, and from Tanana Chiefs Conference comprised of 42 Interior Alaska tribes, National Congress of American Indians, and many, many other tribes.

As women, we give birth and have the power to give life. As I gave birth to my son, I needed a clean, quiet, private place to give birth and rich nourishment for the beginning of life.

Izhik Gwats'an Gwandaii Goodlit.

Shalak Naii! All my Relations!

Climate change is real in Alaska.

In my lifetime, I see the treeline move North. The whole Arctic, the whole world, it is happening in everybody's backyard, there are no boundaries.

The only answers I gather from the Elders is to work toward clean air, clean water, clean land and life. This is our life. Nature is life. Only then peace might come to the heart and mind.

That is Wilderness.

If we use less oil until we no longer need to, that's a step towards Wilderness. Do the 4 R's: Recycle, reduce, reuse, and REFUSE, that's what we need to do towards Wilderness.

We ask for all your help for permanent protection for the Arctic Refuge coastal plain.

The Gwich'in look forward to each bold step by the President and the Congress to bring us closer to the day when we pass the bill that finally protects the Coastal Plain of the Arctic National Wildlife Refuge - *Izhik Gwats'an Gwandaii Goodlit* – as Wilderness forever.

This is our life and land. *Shalak Naii!* All our Relations!

Thank you again for inviting me. May God bless us all.

If you would like to visit with me or Kay Wallis from the Gwich'in Steering Committee who is also here, please come see us.

October 16, 2014

Why Outdoor Businesses Invest in Wilderness: The economic benefits of Wilderness revealed

John Sterling, *Conservation Alliance Executive Director*

Ben Alexander, *Headwaters Economics*

Chris Enlow, *Keen Footwear Corporate Social Responsibility Manager*



John Sterling

Conservation Alliance

JOHN is the Executive Director of the Conservation Alliance, which engages businesses to fund and partner with organizations to protect wild places for their habitat and recreation values. John was Director of Environmental Programs at Patagonia, Inc. until 2002, and represented the company on The Alliance board. He left Patagonia to launch a career to help businesses engage in meaningful conservation work. John was hired as Executive Director in 2005, and has helped The Conservation Alliance build its membership and profile within the outdoor industry. Prior to his time at Patagonia, John was a staffer at Earth Island Institute. He serves on the boards of the Oregon Natural Desert Association and the advisory council of Earthjustice.

Plenary Speech by John Sterling

About two thirds of our [Conservation Alliance] funding has gone to organizations working on public lands issues, primarily Wilderness. We have been involved in the Wilderness effort for a very long time.

When Lisa [Ronald] asked us to talk about why outdoor businesses care about Wilderness, the answer lies on several levels. The first is that the outdoor industry, the manufacturers of backpacks, sleeping bags, climbing gear, footwear, all those companies started from a Wilderness experience.

These products, these companies that have grown into the big companies that you know today, like Patagonia and retailers like REI, these were all started by people who were spending their weekends or their summers out in the Wilderness. They were trying to figure out ways to make that experience more enjoyable by creating more comfortable backpacks or warmer sleeping bags or whatever it might be.

The first answer to that question is that this is part of the DNA of the outdoor industry and giving back to protecting places is part of the deal. They're not going to give it to buying laptops for poor kids in the inner city. This is something that is part of the DNA.

But then the connection to Wilderness goes a little beyond that. Lots of you, I'm sure, have seen catalogs from companies in the outdoor industry or visited their websites. You know the connection between the products these companies are making and selling. They're often branded and marketed against the backdrop of the Wilderness experience. It's important to the companies that are making these great products, to show them in the landscape of their intended use. You see a lot of that in the marketing of these companies.

Somebody may say, "Well that's sacrilegious to use Wilderness to sell products." But I don't think that's really the way that these companies look at it. These places were what inspired the company in the first place. I spent seven years working for Patagonia. The owner of Patagonia, Yvon Chouinard, whom some of you may know, he used to talk about how he designs products for the hardcore user, the person who is climbing the mountain or running the trail. But he knows that a lot of those products are being sold to people who will never climb a mountain. But to him, he liked to say that "As much as we're selling products, we're selling dreams." Those people aspire to be the person in that catalog photograph. There's a very deep connection between the place and the product and where the companies started making things.

So that's the second level. There's this communications piece. The third piece – and I am sorry that our colleague Peter Metcalf, the CEO of Black Diamond Equipment, couldn't be here today. Peter is a great spokesperson for the notion that if you want to attract and retain good employees, you have to give them a work environment and a quality of life in that community that is going to attract them there and keep them there.

Continued

So when Peter and colleagues moved Black Diamond Equipment from a beach town in southern California to the Wasatch Front in Salt Lake City, they did so because they knew that they wanted to attract employees that liked to climb and ski and adventure in the Wilderness. And they have had a great track record of keeping employees on board. And then finally there's what we like to call enlightened self-interest. Like I said, most of the people that I work with in the outdoor industry, they are like you and me. They spend a lot of their time in the Wilderness. It's what they love. They're not working for a government agency or for a nonprofit organization. They happen to be more entrepreneurial and they wanted to work in the business world.

At the same time, they recognize that if we don't protect these wild places, their customers aren't going to have places to go and use the products that they make and sell. So there is a certain amount of enlightened self-interest in investing in Wilderness because of that fact. Like a tennis racket manufacturer needs tennis courts, the outdoor industry needs Wilderness area. It is the infrastructure for outdoor recreation.

And finally, there's a really economic story that's starting to take shape more and more. Thanks in large part to the efforts to the Outdoor Industry Association, which is a sister organization of ours, the trade association of the outdoor industry, they recently attempted to quantify the contribution that outdoor recreation makes to the overall economy. And you can see the numbers are pretty impressive, \$646 billion dollars annually in to the economy. To be clear, that's not \$646 billion dollars of Keen shoes, that's the retail sales of gear and equipment. Plus the gas that you use to get to the trail head and the food that you buy to eat while your hiking or climbing or whatever it might be. But it all adds up.

With that economic story, and the inherent interest that the outdoor industry has in protecting wild places, I want to talk a little bit about what that's looked like in the political realm. Some of you may recognize this picture. Anyone know what this is? What's President Obama signing here? This is back in 2009. He's signing the Omnibus Public Lands Management Act of 2009. The bill, as many of you know, protected about three million acres of land and 1000 miles of rivers.

I want to start with the end of the story, and then work backward on how the outdoor industry engaged in that successful effort. It started with, through the conservation lines, we made grants totaling about half a million dollars to about 20 different organizations. Many of you represented in this room were working to secure new Wilderness designations. At the time, we also started to recognize that we weren't a bunch of backpackers who made gear. We were also job creators and employers who had a certain amount of sway with decision makers. We started lobbying Congress. Over the course of several years we took about 10 delegations of business leaders back to DC to lobby for the individual bills that eventually got packaged into the Omnibus. For those companies that couldn't make it out to DC, we did sign-on letters where we'd get company after company saying, "we need this." We also supplied the senators and congress people that we met with talking points so that they could talk about protecting Wilderness as more than the inherent values of Wilderness, but that there is a real economic benefit. I'll remind you that Obama signed that bill April of 2009, when the economy was in an absolute tailspin and nobody quite knew where the bottom was. The senators that had bills in that package used those economic arguments—now is the time to invest in Wilderness because outdoor recreation is a really important part of our growing economy. So we've engaged politically as well.

Hopefully I helped to answer why outdoor companies care about Wilderness. I'm going to pass it over to Ben Alexander, who works with an economic outfit in Montana called Headwaters Economics. In keying up Ben's part of the talk, I want to tell the quick story of my hometown of Bend, Oregon and show you how an economy can transition away from resource extraction and into tourism and outdoor recreation if given enough protected lands in its vicinity. This is the old Brooks-Scanlon lumber mill in Bend. For most of its history, Bend was a resource extraction based economy centered on logging and milling. Over time, people started discovering central Oregon for its outdoor amenities. We're fortunate to have a nice collection of protected lands in central Oregon, starting with the Three Sisters Wilderness that was part of the original Wilderness Act in 1964. In the Omnibus bill, we added the Badlands Wilderness in 2009.

We've got Newberry Crater National Monument to our south, Smith Rock State Park to the north. Through the middle of it runs the wild and scenic Deschutes River. We have a lot of protected lands in the area.

If you go on the visit Bend website, you don't see anything about healthcare or logging, or whatever it might be. They're pitching the outdoor opportunities there, Three Sisters, Smith Rock, mountain biking. Then, finally, this shot of people stand up paddle boarding in the river near what is now a shopping mall. The funny thing is, that shopping mall used to be a lumber mill, and now those smokestacks from the mill are an REI store. I don't know if Sally's [Jewell] still here, but she was down there when they opened that store. Wilderness is important to the outdoor industry for all the reasons I mentioned, but it has a much bigger impact on local economies throughout the West.



Ben Alexander

Headwaters Economics

BEN ALEXANDER is the Associate Director of Headwaters Economics, an independent, nonprofit research group with a mission to improve community development and land management decisions in the West. Ben has extensive experience working with land management agencies, county commissioners, rural development specialists, and ranchers in the West. He has published in the areas of ranch economics, collaborative land management, and community development. Ben holds a B.A. from Tufts University, and an M.A. and M.Phil. from Yale University.

Plenary Speech by Ben Alexander

Thanks for the opportunity to be here, great to be back in New Mexico. I live up in Bozeman, Montana. I'm a co-founder of a research group called "Headwaters Economics."

We've been working for the last eight years on doing research in communications work to support better decisions around managing our public lands, and in ways that create community development opportunities, primarily in rural places across the West.

John reminded me, the last time I flew into Bend to visit him, I was sitting next to a large husky gentleman. We got to talking. He told me his story, which is not uncommon in central Oregon or many places around the West. His father was a worker in the mill John showed you, and was laid off and his family left Central Oregon. He ended up getting a football scholarship to UNLV. When he grew up, he decided where he wanted to go. He came back to Central Oregon.

Now he works in the IT department for Apple and their servers in Prineville. That example is pretty emblematic of the shift of the economy in many parts of the West, and how we generate value and support our families and communities around public lands today.

My belief is to talk a little more broadly about Wilderness economics. Then I'm going to hand it over to Chris from Keen, who's going to talk a little more about how their company engages on these issues, primarily on a corporate responsibility. I want to start by saying, let's be honest.

The economic value is not the primary value of Wilderness. It's a value that we find ourselves talking about more and more in order to be relevant and to have standing. I'd also suggest that we talk about it because many communities, people, and families across the West, around the country are not doing well. Places that are directly adjacent to public lands have historically worked in relation to those public lands.

We find ourselves talking about the economic value of Wilderness. Even though I want to recognize it's not the primary value, there is some danger in doing so, because we may mis-recognize the other important values as we get down the rabbit hole of this and that benefit associated with land protection.

That said, it's important that we talk about the economic benefits, both because people aren't doing it well, and because our congressionals are demanding it. And for the first time in the last couple of decades, we now have a consistent body of literature, which shows that protected wild lands have economic benefits. In peer-reviewed studies again and again, we find these results coming back. I'm going to talk to you a little bit about those.

For the first time now, we have a body of evidence that allows us to talk alongside more extractive industries and non-sustainable uses about the value of managing public lands for their natural aspects. It gives us a standing in a public arena that we didn't have before. It's important to recognize that and to use that in the competitive political market place to try to advance well planned values.

It's obviously counterintuitive to think that restricting types of access activities would enhance economic value. There is a core to the premise here that economists are still wrestling with. There's this notion that environmental amenities might have as much or more value than the physical resource itself, understood merely as a commodity. There's a whole bunch of pointy-headed folks who've been thinking about this, and there is that main street version of it, which you can appreciate. I think people are trying to understand the dimensions and the ways in which economic values are being created from protected lands. They talk in terms of market values, things that we can measure that are related to direct use. For this panel, recreation would be the prime example. There are a whole host of non-market values that are very hard to measure, for which there is no price, and very little way for buyers and sellers to exchange value and get some service. Yet those values, whether they are subsistence or things that we take for granted—clean air, clean water, ecosystem services, habitats—have tremendous value for everyone in this room and for our society as a whole. We find ourselves looking at a whole range of values, market and non-market.

Continued

For our purposes today, we want to talk a little bit about recreation and the amenities side of things. Let me say that the body of evidence is compelling enough, that a couple of years ago, Ray Rasker (my colleague in founding Headwaters Economics) and I, canvassed professional economists with PhDs around the country to see if they would be willing to write the White House, the current administration, a letter expressing interest in balancing the management on public lands – in light of recognizing the competitive advantages that land protections confer on adjacent communities and their businesses. Within two weeks, we had 100 PhD economists and social scientists who'd signed a letter, and agreed to the drafting of that letter, including three Nobel laureates. We sent that to the administration in recognition both of the body of knowledge that's been developed over the last couple of decades, and a growing recognition on Main Street as well that there's economic value in protecting wild places.

John's talked to you a little about the outdoor industries protection value, and that's the impact analysis approach. There is the narrow self-interest of the company, and then there is the spending benefits from people who buy those goods and services. That ramifies through the broader economy, and benefits a whole wider range of industries and people.

If I could talk a little bit about something that's slightly different but related to that, people love the outdoors, and as much as they love to live in places where they have access to the outdoors, it turns out when they choose to do that, they don't just visit. They come to live. When they come to live, they bring their businesses with their business connections. They also bring their capital, their investment resources with them. That's a big part of the story. It's the attractant component of wild lands.

We know about the existence value. We drive to the edge of it, we know it's there. That's tremendously important. We know about the value of going into them and experiencing them.

But there's a value of living near them, which in part has a recreation economic component and in part has what we are calling increasingly an amenity migration and a larger economic value because people continue to do all sorts of business activities, and participate in all types of industries, but are now increasingly living close to the places that they most identify with. These are some of our most cherished landscapes and these include Wilderness.

In order to grasp the real value here of this amenity angle, I don't have time to unfold the full argument, I want to give you a sense of how dramatically our Western and national economy has changed in recent decades. Our economy is largely a services economy. That is to say, it's mostly not related to cutting trees, mining minerals, extracting energy, or growing things in an agricultural sense. In fact, 97% of the jobs in the West today are unrelated to those sectors. We still make things, but primarily we do so in more knowledge-based sectors that focus on innovation, design and high-tech manufacturing. We've got an economic shift that's been pretty profound, and we're trying to figure out what the competitive advantages of public land resources are as the economy shifts from primarily resource extraction in the West to knowledge and innovation. I want to read a short quote from Enrico Moretti who wrote a wonderful book that I suggest called *The New Geography of Jobs*.

"Over the past century the United States has shifted from an economy centered at producing physical goods to one centered on innovation and technology. In the 20th century competition was about accumulating physical capital. Today, it is about attracting the best human capital."

Now to put that in perspective, 100% of net-new jobs created in West in the last four decades are in service industries. Now this will include lower paying tourism-type industries, but it also includes many higher-paying industries that are very skilled- and knowledge-based including lawyers, engineers, doctors, software designers, etc.

Alongside the shift in the industry structure of our economy, and the importance of quality, and things like education, we find that companies have fewer locational constraints where they can locate because of communication, and transportation structure and innovation. Increasingly those companies, as John suggested, are choosing to locate closer to the places that they identify with. Those places have a host of values. But among them concisely when we survey the CEO's and recruitment officials who are trying to place employees into competitive industries where there's tremendous competition for talent and resources, they tell us natural landscapes and wild lands are among their top criteria. It's one of the things that's been very important for the recruiting and retainment of talent. And, as we see the economy shift, we see companies' moving into places where they just never were.

So I grew up in Bozeman, Montana, and if you told me that Oracle would buy a home grown company called Right Now Technologies for close to three billion dollars in my backyard, I would have said you're Looney Tunes, but that happened. We're seeing that happening in many places.

As I mentioned there is a large body of literature that's recognizing the shifting industry structure, the direct impact from recreation activities, and the broader amenity benefits of people, jobs and income, increasingly locating close to quality landscapes because it's part of the quality that people want to be associated with. That literature, it's not without differences in results and findings, but overwhelmingly it shows positive connections, between protecting lands, including Wilderness, and the growth of population from in-migration, creation of new jobs, and the growth of personal income.

Continued

A couple of things I wanted to share from our own research. In some ways, we're more interested in the non-metropolitan West, the West outside of the Albuquerque, the Denvers, and the Salt Lakes of the world in our research. And it's also easier there to measure the relationship and the importance of wild lands and economic performance, which is pretty damn hard to do. It's white noise in Albuquerque, white noise in Denver. There's so much going on. So from an analyst stand point, the real West is also more interesting. But we found, looking over a four decade period from 1970 to 2010, to give you an example of the premium here that we're talking about, the counties that had 30% of their land base in federal protected status including Wilderness grew jobs at four times the rate that non metropolitan counties in the West did that had no protective federal lands within their boundaries. That's a four times job creation premium. That's aggregating the entire West. So there are clearly some places that are doing that; other places are not.

Similarly we did a very rigorous statistical analysis recently looking at particular income benefits because obviously growth is a double-edged sword, as Wilderness advocates in the room, and managers, you can appreciate. We were interested in some qualitative benefits and for the first time we found a statistically significant relationship between the presence of protected federal lands and higher per capita income for non-metropolitan counties across the West. In fact, we found a very specific relationship, and it can be stated like this: Non-metropolitan Western counties have, on average, a per capita income that is \$4,360 dollars higher for every 100 thousand acres of federal protected lands within their boundary. To put that into perspective, the average per capita income for the non-metropolitan West is a little over \$40,000. Call it the Wilderness premium of about 10%, on average. So that's peer-reviewed published research, I'm proud to say, that's out in circulation.

Lastly, before I close up here in a second, I want to gesture at one of the big opportunities, something we are starting to study and learn more about, and that is retirement of the American demographic bubble that we call the baby boomers. If you were born from 1946, until the year of the Wilderness act 1964, you're officially a baby boomer. It's a nice symmetry with the Wilderness Act here. These folks are plentiful, and they are wealthy. I can see the wealth around the room. But interestingly, they are also pretty passionate about wild places, natural landscape, as well as safe, friendly communities, and they are increasingly relocating in their retirement years, adjacent to public lands and places that are rich in natural amenities. The USDA economic research services has done a lot of really pioneering work on that, and we followed that up with some of our own showing these demographic trends in relationships. I want to suggest a potential here as well, as what we have we don't fully understand currently.

Forty percent of personal income in the West is what we call non-labor income. It's retirement income and government transfer payments and investment income. Sixty percent of the growth of new income in the West over the last decade is non-labor income. This is the single largest income stream that we have in the West today and in many rural communities. It is not just a theoretical spending opportunity, it is currently driving health care spending, metro-construction and real estate spending. It is supporting many communities among the West, and in some good and bad ways. As more retirees are attracted to quality landscapes, we're seeing an income opportunity and certainly measuring, from a gross standpoint, benefits. These are all typically average benefits, and it's a positive story.

A couple of things I want to mention, the distribution of these benefits is not even. There are places that are more in a position to capitalize on them than others. It's harder to see that in the larger urban areas. In the very small rural isolated places, there are clearly positive economic places, but it's not enough, in general, to offset the serious and severe decline to many traditional sectors. And so you see continued resentment and frustration there. There is a sweet spot in the middle where John lives and frankly where I live, the Bends and Bozemans of the world, where people are trading very successfully on this Wilderness asset, and creating tremendous new opportunity. I want to mention that distribution is uneven. Also there is some maybe naive assumptions out there that, if we protect it, the economic benefits flow. And let's be honest, protecting wild lands, branding them and providing a certain standard of management and access is only one piece of a larger economic development strategy. I would suggest that at a minimum in today's more knowledge-based and focused economy, it's critical to be talking about education and skills, transportation, in particular, and access to markets. If rural areas—this has been a challenge forever—cannot successfully connect to larger markets and provide some value, there's very little promise, apart from perhaps a subsistence promise.

So what does the future hold? In a country with a growing population economy, where more and more people are demonstrating survey result after survey result, more interest in wild lands, we are talking about a scarce resource, which translates to resource that has more value. But that may in fact be more imperiled in some ways because there'll be more demands on it. We should be clear that the demands we are placing on our existing Wilderness system have impacts.

That's why I am excited to turn the mike over to Chris Enlow, who is head of Corporate Social Responsibility for Keen company to talk a little bit about how they are thinking about their footprint and also about managing their company, in the way they trade on and promote the stewardship of natural resources that are important to their competitive positioning.

Chris Enlow

Keen Footwear

CHRIS ENLOW is the Corporate Social Responsibility Manager for Keen Footwear. Chris grew up in Southern Indiana, and has traveled extensively throughout the Western United States and Mexico. He attended graduate school at Arizona State University, where his thesis focused on evaluating a youth-at-risk camping program sponsored by Disney and the BLM. Chris spent two years in Bulgaria with the Peace Corps, which included oversight of a youth-led trail restoration project in the pristine Rhodope Mountains. Previously Chris was the Development and Communications Director for Falmouth Heritage Renewal, a non-profit organization focused on community revitalization in Falmouth, Jamaica.



Plenary Speech by Chris Enlow

My name is Chris Enlow and I work for Keen Footwear. I've been there a little over eight years. Our company is only 11 years old, so I've seen a lot of growth. We went from a handful of folks in Alameda, California, and made the big moveup to Portland for literally every reason that Ben stated around transportation. I was attracted there because of these wild places that are so close by, and as well as many of our employees.

Today we are a three hundred million dollar business. We have offices in Europe, Canada, and Japan, and we also have distribution in about 60 countries. A lot of our business is still in the United States. I know a lot of folk in this room are wearing Keen, so thank you so much. I'm not going to go into any more details on that other than, our owner, he grew up climbing in Yosemite so our focus on protecting Wilderness, and related types of work on conservation is very much based on what he believes in. Employees like myself, we have a passion for this and can do it. We are like-minded people working in the company. They want to protect these places; they want to go fishing on weekend with their kids; They want to go camping; They want to know it's there. For us it's the mountain Wilderness areas, as an example.

This is the obvious stuff that both John and Ben mentioned. We're advertising the outdoors. This is our current campaign here. On your left is our new brand collection. We are probably one of the few companies that is bringing manufacturing back in the United States, we have a factory in Portland, and that's a big deal for us.

Who can guess what trail it is? I'll give you a free shoe card. It's in a national park, somewhere close to the state. It's in the Grand Canyon. It's on the Hermit Trail on the south rim. We use iconic places in our advertising, and obviously the one with the water is more close to home on the Columbia River gorge. I wanted to show the obvious things for marketing the outdoors.

Then the things aren't so obvious, and something that we say internally, I have no idea who said this, "we live in favor of the future." That's in my role, and we truly believe that and have been given the latitude by our owner and his extended family to work in this area.

And one thing, we've been very much investing both time and resources in the Conservation Alliance. Obviously the Conservation Alliance was around 25 years ago. We've invested several hundred thousand dollars in the last 8 to 10 years, more like a million. We're like, how can we get more members involved? So, we did an incentive program. You, the company, would sign on, and Keen would do a dollar-for-dollar match. It was extremely effective to get John and his team to be able to give out \$1.5 million in excess annually. That's really our goal. How can we put a collective tax on the industry? It's our self-imposed tax. We're really proud of that work. We also go to DC, myself. We have a colleague that's on the board of the Conservation Alliance. What I'm trying to get at is, we have select, nonprofit partners that we're super engaged with. Resources, time, and we also create collateral and whatnot. Leave No Trace and American Whitewater, we're very much engaged at that level with them. I wanted to make sure that I called that out.

I want to give you a few more examples. You've probably guessed this already, this is our company. We volunteer. This is a picture we had up on our blog. That's our president in the middle with some of our folks across the company. That's in Forest Park. Another one of our partners that we invest a lot of time and money is with the Forest Park Conservancy. You can see it from our office. We run in that park; we do all kinds of things; we love it; why should we not be supporting it? We volunteer there at least once a year. We also partner with the Conservation Alliance over the years to do additional work there. We say it and we do it.

This is recent. We have an internship program over the summer. We wanted to do something around, if you think about the ads you saw, the Durand Collection, so that the whole theme in the marketing department is, it's the outdoor resource. We don't talk about the shoe. We want to talk about Leave No Trace. We want to talk about one

Continued

of our ambassadors that's out playing in the shoes. We wanted to do something relevant for Leave No Trace. Minus the Keen logo in the corner because I put that there, there's no logos on those graphics. We created them for Leave No Trace to use. We had no clue what it was going to be. It was a social campaign. They've gotten hundreds upon hundreds of scout leaders, people from different agencies, [saying] "We love this one. We're going to make patches. These are cool posters. We love these tech tips." In the true spirit of philanthropy, we literally gave them the assets. We're like, "Do with them what you want if it's going to help fulfill your mission around Leave No Trace." Again, that's a real time example of working with Millennials to think about fun ways to share tech tips, which are technical.

Third thing, we do what's called the Keen Effect. It's only through the lens of social media. We promote it. It's a global program. We gave out a hundred thousand dollars this past year to 25 grantees. Obviously, these are some examples you can see here from around the United States. This was a way to engage with our fan base through the lens of social media. Going, "Hey, you know a local nonprofit that's getting people outdoors responsibly? You should share this link. They should apply." We had almost 700 applications from around the world. It was incredibly difficult. We had to break down to the top 100, then we had to choose 25 from that. These are some of the examples.

In Ohio, we supported the Raccoon Creek Partnership, which is in the Wayne National Forest. We are supporting efforts in this room here. You are looking at the one from Colorado, which is the Mountain Studies Institute. They're focused in the San Juan National Forest, which is relatively close to here. Working with the next generation of citizen scientists and helping them fund this really cool application that they're using in their elementary school system now. Really cool. Obviously, Outward Bound, where I live in Oregon, we support them and their work. I believe most of you know their work and what they do. Out in South Carolina, they're working on the Millennium Legacy Trail system. This is from the sea to the mountains. It's a trail system. We supported that as well. These are examples, and I'll give a plug for the next round of grants that is going out. We'll announce them on our social channels in January. It will be likely far north of a hundred thousand dollars.

We also want to tie our values at retail. We designed what's called the Give With Purchase program, and we work with outdoor specialty retailers. When you're selling stuff, you want to do different types of programs for different markets, different places where you sell your things. We exist today because of outdoor specialty, the Mom and Pops in the small towns. That's why Keen exists. Obviously, we're very thankful for our partnership with people like Mountain Equipment Coop and REI that have been very helpful in allowing us to grow. It's those small groups.

This past spring, we wanted to tie this notion of cleaning up your local rivers to a shoe collection. \$5 from every pair went to the River Network, which helped us fund 14 river cleanups across the country. This is a great way for us to engage our retailers. We only had 14 cleanups, but it touched every single one of our regional territories so our sales reps and some key retailers could participate. We don't just want to give checks and say we support. We truly want that engagement, that involvement from our staff. Not just myself. I'm supposed to say this stuff, I get paid to do this, but we want it across the organization. That includes our business partners, our retail partners.

In closing, Secretary Jewell would have appreciated seeing this. We also lend a voice. You can see some different Oregon-based companies. We want to put something in the local papers to get Senator Wyden, "Hey. Pay attention to Land and Water Conservation Fund. We, these companies support that." We love doing this stuff. Most other companies that support the Conservation Alliance do it. There is money involved, obviously, because there's advertising and design work. These types of activities are a fun way to engage outdoor companies beyond help support our mission through a grant.

October 16, 2014

Wilderness and Our Sense of Place

Nathan Small, *Las Cruces, New Mexico, City Councilman*

Dr. Greg Cajete, *Native American educator*

Terry Tempest Williams, *Author*

Erin Halcomb, *Author*

Nathan Small

Las Cruces, New Mexico, City Councilman

NATHAN is serving his second term as Las Cruces City Councilor for District 4. He continues to focus on existing neighborhoods, expanding economic opportunity, and city sustainability. Nathan has worked for the New Mexico Wilderness Alliance since 2004. Nathan is a third generation New Mexican.

He attended the College of Wooster in Wooster, Ohio, earning dual degrees in English and Philosophy. After working on a commercial fishing vessel in Alaska and graduating from college, he returned home. A lifelong outdoorsman and sportsman, Nathan enjoys the outdoor education and recreation opportunities near Las Cruces with his family and also as Conservation Coordinator for New Mexico Wild.

Nathan received the 2012 Hispano Chamber of Commerce de Las Cruces' Citizen of The Year Award and the 2011 Excellence in Range Management Award from the New Mexico Section of Society for Range Management. Nathan helped lead the effort to protect the Organ Mountains-Desert Peaks National Monument.



Plenary Speech by Nathan Small

I want to briefly tell a bit of my own story of place. It begins here in New Mexico where I was very fortunate to be born and raised. Of course, my wonderful mom is there in the audience.

Of particular importance to us was Mount Taylor, where Dr. Cajete's work and that of many others has been critical to the designation as a traditional cultural property.

There were long trips back and forth to Mount Taylor. Oftentimes, leaving in daylight, returning at night to Los Lunas.

The stars would come out. They would shine, not only over Mount Taylor and the monolith that it presented, but on the return to Los Lunas, they would shine brightly over the Manzano Mountains, east of where we called home there out on the mesa. Which, of course, was a designated Wilderness area here in the state of New Mexico, which became, and has forever remained, a source of happiness, life, and a simple smile that I find returns to my face whenever my direction points me toward those mountains.

Those long trips, back and forth with Mom, helped set deeply in me not only a sense of place, but a sense of people as place. We would have long discussions, and, perhaps, exaggerate a little.

It was always her contention that everything was natural, which may or may not be an idea that we want to embrace, because there are things that we either do or do not like as we see out there in the world.

As I've come to go away from New Mexico, I attended school there at the College of Wooster. We'll be able to tell a couple of stories about that. It was where I first met Terry. It was in a place, there at the College of Wooster, with very little public land, with very little open space in the sense that I had come to know it, in which I once, in a longer story, tried to explain to a nice police officer about why I was just trying to go on some travel like I was used to doing back home in New Mexico.

It was here, at home, this wide open Western sense that always remained there within me. As I came under the influence of seminal writers and thinkers, in college beginning with Edward Abbey, it was that sense of place and that everything is natural, that gave me a place to fight for those places that we hold special.

If everything is natural, can I be out there working to defend that which I've come to know and love? In which I see so much benefit for my community, for the people that I love, for many different things?

This story of place, for me, brought me back to New Mexico. I sometimes say one of the best things I learned at the College of Wooster was to come back to New Mexico.

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I came back to be a hunting guide, having grown up hunting and fishing there in the Cibola National Forest with my grandfather. Instead I began work with the New Mexico Wilderness Alliance.

My very first job was to go out at tables, in front of different locales, and talk to people about the special places in New Mexico. Why they were worth saving, and how those people could have a voice in their protection. It was tough work.

As I came to think about it, I came to realize that these people didn't wake up, and the first thing, nor the last thing on their mind, was that, "I want to talk to Nathan Small from the New Mexico Wilderness Alliance today."

In fact, they just wanted to go into REI and purchase something. They wanted to go to the co-op to get a little bit of food after a long day at work and get home.

It became my job and my mission. I was quite well prepared, through personal mentors but also through the written word, to demand, in a sense, a short amount of their time. What I found worked better than almost anything, because this took place usually here in Albuquerque, was that I could simply point over to the Sandia Mountains, another designated Wilderness area, and it immediately gave us a connection. It gave me a little bit of time and space to talk about some of the exciting efforts and opportunities that were out there. It created my place back here in New Mexico.

Now, that was in some very difficult and dark times for land conservation in the middle of the second Bush administration. That sense of assault on these special areas that gave so much, whether it was spiritual, whether it was for us as sportsmen, whether it was clean water and economic opportunity that created for communities, it bound us as folks. We were quite successful in motivating and finding new people to join in this effort.

I'm going to jump ahead. We had a fun tour that took me around different parts of the United States, and I got to tell folks in Ohio, Nebraska, Illinois, several places – although many do have designated Wilderness – one of the definite strengths of our presentation was all of the wild lands in New Mexico.

In 2005, I began going down to Las Cruces. That is where the Organ Mountains are located. Something that it came to be quickly known were worth protecting across the entire board. It crossed the ideological spectrum.

As folks looked closer, as more people talked to more people, it became very clear that there were many other places worthy of protection, so I embarked on a journey that, again, started with people. I went down as an organizer.

I found the best way to organize was to be there where people were. To be able to talk to them not only about the mountains outside of their community, but the issues inside of their community, and the issues they faced in their daily lives.

It was always that shared sense of place, that mountain range outside of the window that we could settle on and know together.

We very quickly turned a nascent movement down in southern New Mexico, where there had been very little conservation since some of the original Wilderness designations in a brief period in the 1980s, and begin to find folks who now become minute touchstones for place.

Folks like Angel Peña certainly comes to mind, somebody who put himself through school. He and his daughter, his partner, in very tough times did extra work but always longed to be able to get out into the mountains. Went back to school for archaeology.

Through exciting work, we worked on the ground in Doña Ana, with a group of young kids from the community, to go out into their lands, the public lands surrounding their community, and inventory their cultural resources.

This is something where we found archeological sites. They found archeological sites no one knew about, none of us. Whether from the agency, or as advocates, or in other places.

The same types of stories, tied to place, played out with business leaders. John Muñoz, and others we invited out into parts of the proposed protection area. We had cookouts. Always, the running joke, of course, with John and his wonderful wife – John is one of the biggest employers with over 600 employees there in Las Cruces – they always talked about, "If we had an espresso maker that worked outside, then they would be out there."

It was these types of efforts with people out in their place that gave us a campaign and an effort that was unbeatable. It survived many different attempts, by different interests, to undercut what quickly became clear was a vast community consensus to protect a landscape.

When one route to protection, Wilderness designation was closed by a Congress that simply refused to pass anything, a new route through the Antiquities Act, and with strong support from a vast array of different individuals, became the clear way forward.

I always say that the President's "yes" for the national monument was the second most important "yes" I ever received in my life. Of course, the first was when my wonderful wife, Xochitl, said she would marry me, in fact.

There are many different people that I want to name but simply don't have the time to do so. What I hope to convey, though, is that someone born here in New Mexico and with the great, great fortune to have been in this land of

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enchantment, to have, actually, that sense of place, and I, literally, can drive very little on regular routes here in the state that I don't feel a kinship with an area. In a sense, and certainly in an advocacy sense, it has to be grounded in people.

It's the people that I know who also love that place. It's the people that I know who might become advocates for conservation, who need to know that place. That I find myself increasingly thinking of.

That sense of place, and one last thought to leave with before we go to the introduction of Terry. That sense of place and of people has led to greater responsibility. So often, in the past, we've heard of conservation, of certainly, Wilderness protection as very narrowly focused efforts.

But to do it right, to do it successfully, to take people out into place, to help people be part of places, we actually had to take more responsibility. It led, in very large part, to me considering a run for city council there in Las Cruces, in which we were fortunate to be successful.

I have colleagues in the New Mexico Wilderness Alliance, and in other organizations, who have taken on positions of greater importance in these ever challenging times.

As I've come to think of it, it's because people are looking for leaders who think about a wider array of things. They're not looking for that narrow, tailored only, special interest. They're looking for folks who can think about layers. A sense of place, especially in the Wilderness, is nothing if not layered.

Something we learned, incredibly well, down there in Doña Ana County, where cultural values layered upon biological values, layered upon economic values many of which have been discussed at this conference, led by folks like Ben Alexander and others layered upon historical values from back to prehistory.

But also during the American Expansion, all of those things we had to think about. Now, that it's been designated, of course, on May 21st of this year, President Obama designated the 496,000 acre national Organ Mountains Desert Peaks National Monument. There you go.

Now that it's designated, we have to think about management, stewardship, honoring the commitments that were made, and continuing to make it right for our community. Thank you for allowing me to explore a bit of my sense of place. It's something rooted in New Mexico in Wilderness. As you can see, is closely connected to people.

Gregory Cajete

Native American Educator

GREGORY CAJETE is a Native American educator whose work honors the foundations of indigenous knowledge in education. He is a Tewa Indian from Santa Clara Pueblo, New Mexico, and has served as a New Mexico Humanities scholar in ethno botany of Northern New Mexico and as a member of the New Mexico Arts Commission. In addition, he has lectured at colleges and universities in the U.S., Canada, Mexico, New Zealand, Italy, Japan and Russia.

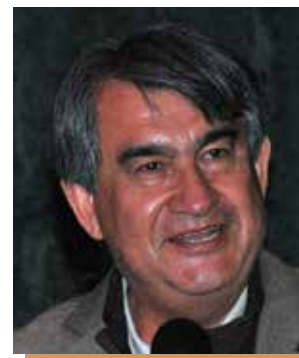
Cajete worked at the Institute of American Indian Arts in Santa Fe, New Mexico for 21 years, where he served as Dean of the Center for Research and Cultural Exchange, Chair of Native American Studies and Professor of Ethno Science. He organized and directed the First and Second Annual National Native American Very Special Arts Festival held in respectively in Santa Fe in 1991 and Albuquerque in 1992. In 1995, he was offered a position in American Indian education in the University of New Mexico, College of Education.

Currently, he is Director of Native American Studies and an Associate Professor in the Division of Language, Literacy and Socio Cultural Studies in the College of Education at the University of New Mexico. Cajete earned his Bachelor of Arts degree from New Mexico Highlands University, with majors in both Biology and Sociology and a minor in Secondary Education. He received his Masters of Arts degree from the University of New Mexico in Adult and Secondary Education, and his Ph.D. from International College – Los Angeles New Philosophy Program in Social Science Education, with an emphasis in Native American Studies.

Cajete has received several fellowships and academic distinctions, including the American Indian Graduate Fellowship from the US-DOE Office of Indian Education (1977-78); the D'arcy McNickle Fellowship in American Indian History from the Newberry Library, Chicago, IL (1984-85); and the Katrin Lamon Fellowship in American Indian Art and Education (1985-1986) from the School of American Research in Santa Fe.

He is a practicing ceramic, pastel and metal artist, and is extensively involved with art and its applications to education. He is also an herbalist and holistic health practitioner. In this capacity, he has researched Native American, Chinese and Ayurvedic healing philosophies and the cultural perspectives of health and wholeness.

Cajete also designs culturally-responsive curricula geared to the special needs and learning styles of Native American students. These curricula are based upon Native American understanding of the "nature of nature,"



and utilizes this foundation to develop an understanding of the science and artistic thought process as expressed in indigenous perspectives of the natural world.

Cajete has authored five books: *Look to the Mountain: An Ecology of Indigenous Education*, (Kivaki Press, 1994); *Ignite the Sparkle: An Indigenous Science Education Curriculum Model*, (Kivaki Press, 1999); *Spirit of the Game: Indigenous Wellsprings*, (2004); *A People's Ecology: Explorations in Sustainable Living; and Native Science: Natural Laws of Interdependence*, (Clearlight Publishers, 1999/2000). One co-authored book with Don Jacobs (Four Arrows), Jong Min Lee, entitled: *Neurophilosophy and Indigenous Wisdom*, Sense Publications, Netherlands.

Plenary Speech by Gregory Cajete

I began as a Field Biologist in my early career. I transitioned into science education with the focus on developing a culturally based, culturally responsive science curriculum for native students and other ethnic minorities. (That's the reason why I'm going to be in Los Angeles tomorrow doing a presentation.)

This evening, I want to give some insights and perspectives into my own people and my own sense of place in the context of this presentation and also with these slides.

There are many ways to look at a sense of place. There are many ways to describe a sense of place. I'm also an artist, I taught at the Institute of American Indian Arts in Santa Fe, New Mexico for 21 years, before I came to the University of New Mexico.

I'm very involved with the use and the application of art and story as metaphor for the kinds of issues and challenges that we especially face today. A world that is climate changed. Challenge by the climate change that we are going through. Also the environmental, social, and economic issues, as well as spiritual issues, that are also part of that context, that challenge.

I present to you this evening some thoughts and perspectives related to this whole idea of what it is to understand your relationship to a place. I'm going to use a little bit of sense of metaphor along with a cultural historical tour of probable life in the context of New Mexico and the entire Southwest.

This first slide is a slide from Bandelier National Monument. It's the sun as it is appearing at the mouth of the cave. As you are looking at it from this ceremonial cave that is in Bandelier National Monument, you can see the glimmer of the sun as well as the darkness and the shadow of the cave.

I really like this image because for me, it represents a concept or an idea that is a part of indigenous thinking. One of the things that many times is not realized – because we tend to be off the radar screen or in the margins of societies – is that indigenous people have for a very long time been involved with this issue of environmental challenge. Now, with global climate change, even more so.

There is an indigenous movement. I call it, essentially, the indigenous mind rising. As I travel all over the world, talking mainly to indigenous people, but, actually, to people from all walks of life, I'm beginning to see a kind of consciousness taking hold that I hope, in a sense, to perpetuate in the context of the work that we're doing as educators, the work that we do as scientists, within the context of this very urgent challenge of beginning to find a different way of living, and a different kind of consciousness to move us forward and help us essentially to survive into the next generations.

For me, this light talks of that dawning of a new sun, and that polar sense of place is that perspective I want to present to you.

This first light is, being an artist, for me, it really evokes this whole notion visually of what the native eye sees. Indeed, this piece is called "In the Native Eye."

As you see that collage of images, those shapes and forms, you can begin to see what the native eye sees, which is really a tapestry of relationships, interdependence, of mutual, reciprocal action within the context of a place, that you live the place that you grew up in, a place that gives you life.

For indigenous peoples, this evokes a whole philosophy, living and understanding your relationship to a place. As you can see, the native eye looks upon the corn, the eagle, the turtle, the antelope, and the different forces of nature as they come together to form the world that we know and the world that we understand and the world that we're related to.

Very much as this place, as all places, has a story, and it's a very ancient story. For Puebloan people, that story extends through the 10, 12, maybe as much as 15,000 years in this place, because that's how long indigenous people have lived here, and that's how long Puebloan and the ancestors of Puebloan peoples have lived in this area.

For us, this notion of place is also evoked in a metaphor that I would call a journey through a storied landscape, in the sense that every place or every part of this place in the Southwest is storied by that people that have

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lived here, the experiences that they've had, the interactions that they've had with each other and also with the plants and the animals and the places in which they've lived.

In the Southwest you find evidence of Puebloan habitation literally everywhere. It was a huge, and is a huge, territory. It was a place in which people moved almost every other generation in a cycle of relationships to the places in which they lived.

That's why I say this is a storied landscape, and there are many, many stories involved with these places that are viewed as being important for Pueblo people.

Many times, I also deal with this whole notion of indigenous education. One of my books, "Look to the Mountain" is called, "An Ecology of Indigenous Education," in that, I was trying to address the question, what is indigenous education, what does that mean, not only for indigenous people, but also for us collectively?

For native people, there is not a term that can be precisely translated into the word "education" as it's used today, but, rather, its parallel terms many times refer to moving on a journey in a storied landscape in a place. Even that sense of place is incorporated into the way in which the whole notion and the whole process of education is described.

In my book, I use "mountain" as metaphor because if you study indigenous languages, you see that they are replete with metaphor. It's a metaphor of language. It's a language of active being.

When indigenous people describe place, they describe it in terms of the stories that that place holds for them, the experiences that they've had in that place and also metaphorically, in terms of the meanings of their relationships to those places.

I remember as I was growing up, my grandmother used to use the term that, translated into English, would be "looked to the mountain."

Tewa is all of the Pueblo people here in New Mexico, the Navajo, the Apache, the whole people. We bound our place, our sacred space, if you will buy sacred mountains. These are mountains that are recognized not only for their uniqueness because each mountain is unique in terms of its ecology, placement, various plants and animals.

That idea of mountain as metaphor is used many times to describe how to understand a challenge, problem or an issue. The idea is that, as you climb a mountain, you take a storied path to get to the top of the mountain. Once you're on top of the mountain, you're in a place, a space that allows you to see other mountains, valleys, places around you in a 360 degree kind of way.

The path that you've taken to get to the mountain is your history. The place that you end up on the top of the mountain is your present reality. The view and the perspective that you can see from the top of the mountain is the vision of the places where you may go next.

It takes all of those. It takes that understanding of history, present reality, and that sense for vision of where you're going to go next really to begin to address the kinds of issues and challenges, especially those challenges that we face today. That's the kind of way of looking at and understanding the sense of place.

Water, also, because we're in the area of the Southwest, is used as a metaphor to describe many things. Water is life. Water is community. Water is that energy that flows in every living thing. Water becomes another way of describing this relationship.

There are multiple terms for water in Puebloan languages. Usually, it refers to the state of being of water. In other words, if you use water that's running, water as stagnant, warm, cold, et cetera.

Those ideas of water in relationship to water are very deeply engrained in the language, art, culture, ways and notions of relationship and sustainability that prescribe essentially the Pueblo world.

As you take a look at indigenous people around the world, you begin to see that all indigenous people hold these understandings and perspectives in their own kinds of ways, formed, shaped and reflected upon in terms of the places in the environments in which they exist.

That sense of place is very deeply embedded. I would even say that it is a deep, deep human instinct to relate to places. It is a deep human instinct to relate to each other. In this context, we have to begin when you think once again in those kinds of ways because these are the kinds of challenges that we face today – like global climate change – that no one person, culture, group of people, country is going to be able to solve. It can only be solved collectively.

That collective sense of being, place, is something that is a kind of a consciousness that has to take hold once again, especially in terms of global society, global issues.

What the indigenous paradigm is as I said, is the indigenous mind rising. What that represents for nonindigenous people is essentially a change of consciousness of revisiting, reimagining, revalorization of that very deep instinct that Edward Wilson calls biophilia.

That sense of connectedness to other living things and connectedness to each other in society and community. Because water flows through all of those kinds of relationships— through all of those kinds of levels of being – both deep and superficial, it also in a sense perpetuates and extends our life as we know it. That idea of water has many ways that it is referred to.

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I use the concept called windows and mirrors because in many ways, this whole presentation is a way of using that concept, windows and mirrors. It just looks into the reality – in this case of the Pueblo sense of place – of what should be been happening to you in your mind if you're looking into these images as a reflection of your own understanding, your own sense of consciousness and being in the world, as we say.

Looking back in our past, especially our indigenous past, to begin to understand the lessons and the principles especially as it relates to human sustainability in environments, becomes a very important path to look back upon, as we begin to look forward into the future to try to create a more sustainable vision for our grandchildren and the generations to come.

For all of those ideas, the mirror of our past is a very, very important perspective to begin now to recapture and to honor once again. Pueblo people are very history minded, if you will. Not in the Western sense of history, but in that sense of what the ancestors bequeathed to us. Remembering essentially to remember those key lessons, principles and understandings that will sustain us now as we look into the future.

As I said before: in the Southwest, this ancient covenant of people and place has been evolving continuously for I would say at least 15,000 years. This is true of other indigenous cultures in other parts of the world as well.

This is a long storied relationship. Given that ancient relationship that has really moved through epochs of time, we actually describe this in our stories how we as Puebloan people's evolved and moved from one world to the next.

That each world that we inhabit has certain lessons that we have to learn in order to move to the next world. That understanding literally determines our survival.

In prior worlds certain people survived, others didn't. Initially in those worlds there were lessons that had to be learnt that primarily dealt with sustainability. How to sustain yourself in that place, how to in a sense be both respectful and responsible to the place in which you live.

As you begin to think about what we have to do in the context not only of preserving Wilderness but also in terms of the future that we must collectively share – that is we have now to begin to think about.

In what kinds of ways can we in a sense restore it and reclaim this deep indigenous consciousness? Because at one time all human cultures were indigenous to some place and to some time.

Thinking of the indigenous mind rising gives you that opportunity, if you will, of creating that space to begin to think about these issues of Wilderness preservation in a much larger, grander scope.

For us as we move through these worlds, these evolutions of relationship, responsibility and respect, we move through different stages. The early clans of which there's still evidence of throughout the Southwest of Puebloan groups moving from place to place following essentially the seven year cycle of the land, pine and juniper, farming, fishing, hunting, gathering plants.

That evolved into, in a sense that learning of sustaining... but then that evolved into more complex societies as we find in Chaco Canyon.

Then we really began to see the challenges of community, the challenges of human impact on environments as societies. As populations get larger and larger, you affect your environment in very particular kinds of ways.

That understanding and that consciousness and that respect with relationship and responsibility are lessons that have to be relearned in each context of time, given the issues and given the challenges of that time.

That's how Puebloan people think in terms of this long storied journey that we continue to be on in this time and in this place. That's why we hold so strongly and tenaciously to those stories of origin and those stories of creation, those stories of emergence.

For us these are our guiding paradigms, these are our guiding principles. Each generation is responsible for interpreting them in their own particular kind of way given their own particular circumstance. They are still the same principles of sustainability, relationship, respect and understanding of not only the individual but also the community in relationship to places.

We continue this tradition and I use the area where my wife is from, as this kind of continuing story that Pueblo people continue to build their communities but also root that understanding of building communities in the past. Nonetheless they are still challenged as each generation is challenged with new issues of that time and of that place.

Our indigenous communities today, especially Puebloan communities, face many issues and some of them were talked about I'm sure during different panels in the conference as a whole.

As we move through this thought process, our traditions talk about our relationships to animals and the spirit heart the same as Pueblohunters canteen, which represents that idea of our deep relationship and respect for the animals that give us life.

The whole context of hunting and taking life in order to perpetuate our life is very respected in the context of Pueblo in society and thought. It is remembered historically, it is danced.

So, dancing those relationships to animals, those relationships to plants, those relationships to places is the Pueblo way of remembering what it is to be responsible and respectful in relationship to those entities in our environments.

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Dancing for life is also a prayer for life. Relationship to plants. . . we have a saying. "we are all kernels in the same corn cob." You see that the individual kernels of corn are individuals. They are going to be individual corn plants, but all of them sit adjacent to each other on the corn cob which is the structure of the community. This is unity and diversity in a natural kind of representation of the corn cob itself.

Our relationship as children of the earth to our corn mother who gave us life and sustenance. . . is where traditional ecological knowledge comes and is contexted within that paradigm of thinking of relationship, responsibility, and respect.

The use and development of appropriate technologies to live in places like the Southwest are represented in this case by the Hopi farmer cultivating the special Hopi corn that has deep roots in its ability to take water from the clay below the sand in these arroyos. Many, many examples – of which this is just one.

We are very famous for our dances so this is one of our corn dances. There are dances or commemorations of every stage of the growing of corn, from its seeding to its harvest.

The key is to understand that the community is brought together to celebrate and to remember those relationships to each other as a community and also to the plant which is corn and also to the place that brings forth the humans and the plants.

Of course the harvest – which is plentitude. The intent of human society is really to achieve a level of sustainability, to maintain it and to realize in that context of relationship with a place of plentitude. That really is the metaphor of harvest, you harvest what you reap.

Thinking in those terms, native foods, foods for life become a household metaphor. The idea is that the land sustains us, and thus sustaining the land is also a mutual reciprocal responsibility.

The understanding that it's only through that process that you can truly understand the nature of feast, which is really to celebrate the life you have been given both as individual and also as community.

The role of elders in the context of being the repositories of those stories and those experiences that form the bridge between one generation and the next.

I leave you with the reminder that this figure called Kokopelli who's been in a sense marketed as the icon of the Southwest I would say, is really a very important metaphor.

For Puebloan people the Kokopelli is really the procreative spirit of nature itself. He spreads seeds, brings news, he's really the creative spirit within all of us and also within nature.

You see Kokopelli in many petroglyphs representing that idea, that perspective of relationship to the creative spirit which is within human beings, plants, animals and places.

As you think about the work that you are doing with regard to this commemoration of the 50th anniversary of the Wilderness Act, remember that the work is not done. In many ways it's just beginning.

The real challenges are before you—particularly as resources are becoming more scarce, worldwide indigenous populations and the places in which they live are under attack because those are the few places where there are still resources to be had.

Wilderness will come under the same kinds of scrutiny as indigenous people have come under in present time, in terms of the land that they inhabit. In a sense we are all kernels in the same basket.

As we move forward we have to begin to think of seven generations before us as seven generations in the sense that we are historic ancestors of ourselves and understand that we must think about the future seven generations in the sense that they are the ones to whom we will bequeath what we do at this point in time.

I want to thank you. I hope this was not death by power point as my students sometimes say of my power points.

I purposely did not do a technical power point, which I certainly can do, but I wanted to give you a sense of that spirit, that sense of perspective, a sense of the big picture of what we are here for in terms of preserving Wilderness and also in terms of preserving our own sense of who we are as people of place.

Thank you very much and I wish you the best.



Terry Tempest Williams

Author

TERRY TEMPEST Williams has been called “a citizen writer,” a writer who speaks and speaks out eloquently on behalf of an ethical stance toward life. A naturalist and fierce advocate for freedom of speech, she has consistently shown us how environmental issues are social issues that ultimately become matters of justice. “So here is my question,” she asks, “what might a different kind of power look like, feel like, and can power be redistributed equitably even beyond our own species?”

Williams, like her writing, cannot be categorized. She has testified before Congress on women’s health issues, been a guest at the White House, has camped in the remote regions of Utah and Alaska Wildernesses and worked as “a barefoot artist” in Rwanda.

Known for her impassioned and lyrical prose, Terry Tempest Williams is the author of the environmental literature classic, *Refuge: An Unnatural History of Family and Place*; and fourteen other books including, *Finding Beauty in a Broken World*, and *When Women Were Birds*. Her most recent book, *The Hour of Land: A Personal Topography of America’s National Parks* will be published by Farrar, Straus & Giroux in 2016.

In 2006, Williams received the Robert Marshall Award from The Wilderness Society, their highest honor given to an American citizen. She also received the Distinguished Achievement Award from the Western American Literature Association and the Wallace Stegner Award given by The Center for the American West. She is the recipient of a Lannan Literary Fellowship and a John Simon Guggenheim Fellowship in creative nonfiction. In 2009, Terry Tempest Williams was featured in Ken Burns’ PBS series on the national parks. She is also the recipient of the 2010 David R. Brower Conservation Award for activism. The Community of Christ International Peace Award was presented in 2011 to Terry Tempest Williams in recognition of significant peacemaking vision, advocacy and action. In 2014, the Sierra Club presented her with the John Muir Award.

Terry Tempest Williams is currently the Annie Clark Tanner Scholar in Environmental Humanities at the University of Utah. Her writing has appeared in *The New Yorker*, *The New York Times*, *Orion Magazine*, and numerous anthologies worldwide as a crucial voice for ecological consciousness and social change. She and her husband, Brooke Williams, divide their time between Castle Valley, Utah and Jackson Hole, Wyoming.

Plenary Speech by Terry Tempest Williams

This is a meeting of the Coyote Clan. Individuals who discreetly tuck their tails inside their pants or beneath their skirts. They can laugh louder and cry harder than anyone on the planet. You know them well. They are sitting next to you, and you recognize yourself every morning when you brush your teeth.

This gathering, of the 50th anniversary of the Wilderness Act, does feel like family, our chosen family, in all its wildness, unruliness and grace. I want to dedicate this talk to Lenny Kohm.

Lenny was one of the great Wilderness advocates in the Arctic, in the American West, and he returned home to Appalachia, where he spent the last several years working with Appalachia rising and mountaintop removal. He never forgot the people, and he never forgot the wild. He was as humble a hero as I have ever known.

The full spectrum is here today, and I can’t believe the depth of our histories. We could go around this entire room. I want you to know, (and I know Brooke shares this with me) how much we love you, appreciate you, and honor the work you do on the ground, in your own chosen place, where you take your love and put it into action. I especially am grateful for Tisha Broska, for all your care, for Vicky Hoover, for your relentless activism, and for the incomparable Dave Foreman who invited me to be part of this conference.

How could you ever say no to Dave Foreman?

You are, and will be forever, our preacher, giving sermons on behalf of the wild. Today was no different. Standing room only. This afternoon’s homily was the story about almost being stomped to death by a bull muskox in the Arctic and what a good death might look like. Indeed.

In Wilderness, where the goal is not to be protected but to be present. So many dear friends here too many to mention, but I’m going to mention two and they are formidable.

Howie Wolke, who drove me back to Jackson Hole, Wyoming. I was 22 years old. I was still an active Mormon. It was in 1977, Mardy Murie had spoken, at the Alaska lands hearing in Denver. I needed a ride back to Jackson, but she didn’t have any room in her car. Mardy said, “Let me find you a ride.” The next thing I knew, I was sitting in the back seat of a pretty beatup VW with Howie driving.

Continued

The floor was completely gone; I had my feet up close to my chest watching the road go by. Then we ended up on a myriad of roads to our great dismay in the Red Desert figuring out what areas had Wilderness quality.

That day changed my life and I realized I wanted to be part of that kind of firebrand joy.

It was Mardy Murie who spoke to us that day on wild Alaska and said, "Gentlemen, I come to you today and speak as an emotional woman, and, gentlemen what's wrong with emotion?" I've never forgotten that. She brought the house down.

The same way I saw Edward Abbey bring the house down at East High school in 1987 in Salt Lake City where I asked my father for one favor. He said, "What is it?" "I can't tell you, you have to say will you do it?" He said, "You're my daughter, what can I say?"

I said, "Will you come with me to go hear Ed Abbey?" He said, "Why would you make me go see this man who is my enemy?" I said, "So you can understand me." My father came because I was his daughter. I believe he came because he was curious.

This is a man whose pipeline construction company had seen its own fair share of sugared gas tanks. Monkey-wrenching wasn't a fiction for my father. It was reality.

After Abbey's long, rambling talk of river trips, slow elk, and immigration policy, someone in the audience asked Ed what was next for him.

"Voter turnouts appear to be a bit low in Arizona," he said. "I think I'm going to run for governor."

After the evening was over, my father stood up from his chair and walked directly up to Ed. I was terrified. I saw him shake his hand. Then I saw him pull out his wallet and he said, "Let me be the first to contribute to your campaign."

Why? How? What turned my father in an opposite direction? Passion, Wilderness, integrity. He recognized those qualities in himself. My father secretly loved Wilderness, too. He not only saw Abbey's conviction, but he felt it. Ed was a man of imagination and action. My father was inspired.

Conspires

When the pot lid of night slides into place

When the frogs shout their one word love, "Me! Me! Me!"

When the moon and the stars get down to business

Feigning serenity, and the nighthawks make good on their name

You and I will be in bed, tangled as we were meant to be

The improbable geese on the other side of the ceiling

Flying south against all odds. It's not enough to love the world

You must dive in. When I was young, I used to go out at night

And howl at the moon, just for practice, just for kicks, and just in case

It came to that. Look around, the moonlight taught me

Everything conspires to love

— A poem by Charles Finn.

This is what I want to talk about for the next half hour or so. Love. We are here because of love. A love that is wild. Our love for the wild, Wilderness, wildness with or without us.

To be part of a community, as Aldo Leopold taught us, that includes rocks, rivers, plants, animals, not just human beings. We see ourselves as Harvey Locke says, "one species among many." This is our passion. This is our life's work. This is the continuum. Conservation is a generational stance.

When I met Mardy Murie in 1974, I was 18 years old. I was a student at the Teton Science School, being mentored by Ted and Joan Major in Kelly, Wyoming.

I saw Mardy's slide show on the Sheenjek, and I listened to her stories of "a spirited people." That's what she always said Olaus called us, called conservationists, "a spirited people." I saw the likes of Olaus and Adolph Murie, Louise Murie, and George Schaller, who, as a graduate student, asked Olaus what he should do when they went to the Sheenjek. Olaus said, "Wear out your boots." And he did.

I heard names like Celia Hunter, Ginny Wood, William O. Douglas, Rachel Carson, Stewart Udall, Nancy Newhall, Brock Evans and the Wayburns. They were biologists, activists, politicians, judges, writers, and artists, and I wanted to be like them. I wanted to care about Wilderness as much as they did. I wanted to be in Wilderness as much as they were.

I was from Utah, and I believed through my Mormon upbringing that when Brigham Young said, "This is the place," it included Red Rock Wilderness. Red rock walls rising upward looked like praying hands. For me, it was spiritual.

Continued

**Lake Ann Reflection,
Mount Baker Wilderness,
Washington**
By Ethan Welty,
www.weltyphotography.com



It was Mardy who allowed me to believe at a young age that I had a voice in the Wilderness and I had an obligation to use it.

Looking back over 50 years, we have much to thank our elders for within the traditional Wilderness movement. The Wilderness Act of 1965 is chief among them. This is our past, we are thinking about our future. Let's talk about the present.

I am hearing powerful voices speaking on behalf of our Wilderness, and they are indigenous people like Sarah James and Princess Lukaj of the Gwich'in Nation, who are calling for the protection of the Arctic National Wildlife Refuge, because it's their home.

There are the Fort Peck Assiniboine and Sioux. When the bison crossed the line at Yellowstone and walked out of the national park, now vulnerable, unwanted, and poised to be shot – It was the tribes who said, "We will bring them back home."

It's William Mark Junior, here, with us tonight, who is the field manager of Black Rock in Nevada at the Winnemucca District Office where he oversees seven Wilderness areas and three WSAs and the largest NCA on public lands in America – where the largest "Leave No Trace" public event on public lands known as "Burning Man" takes place.

William grew up in Alabama, where in his words, "He grew trees fast and cut them fast" and he ended up working with the BLM. This morning, he said to me, "The environmental movement is a continuation of the civil rights movement, which is a movement of justice." He has never forgotten that.

He works for the Bureau of Land Management and I am so proud to know him.

The Wilderness movement is growing and it is growing beyond our traditional history with a broader base and a broader vision. This does not mean a compromise of Wilderness. This means a vision of Wilderness that is being shared with more people, more people with a different kind of vocabulary from a different point of reference.

I've asked Erin Halcombe to share her perspective tonight –giving some of my time to her. She is a former employee of the Forest Service where she not only fought fires but served as a fire lookout, at Dutchman in the Rogue River National Forest in Oregon.

She is a biologist by training and received her Master's degree in the Environmental Humanities program at the University of Utah.

She is now a Program Coordinator at the Taft Nicholson Environmental Humanities Center in Centennial Valley in Montana, but most importantly, she is a lover of Wilderness and words.

Literature has always been one of her lifelines within the conservation community. Erin's words are a lifeline for me now and I want you to hear her.

Erin Halcomb

Author

ERIN HALCOMB has worked in the woods for well over a decade. She has experience staffing a U.S. Forest Service fire lookout and fighting wildfire. She's performed a variety of land restoration activities, such as thinning and burning young trees, and also surveyed for wildlife: bats, fishers and flying squirrels. Simply put, she loves the outdoors. But her simultaneous passion for writing, as a unique method for sharing the beauty and value of nature, brought her to the University of Utah. She graduated from the Environmental Humanities master's program and, now, between fieldwork and teaching at an environmental education center, she is (slowly) compiling a collection of essays.



Plenary Speech by Erin Halcomb

Good evening. It is a terrifying thrill to be here. To be amongst this tribe: our nation's Wilderness advocates. Thank you Terry and Nathan for the opportunity, and I thank all of you – my kindred kernels on the corn cob – for the work that you do, sincerely.

Over this past week I've been asking myself, what can I offer to a room full of environmentalists?

My story?

Let's begin at twenty one, my senior year of college, when I called my mother to complain that I'd be spending my birthday studying for a final exam. She responded, offhandedly, "Well, at least you're not getting shipped to Saigon."

And I heard her for the first time in a long while. So after graduation, I enrolled in a national service program called AmeriCorps. I moved from Georgia to Oregon, and banded tightly with a crew of folks that had come from all across the country to perform, like me, one year of environmental restoration.

Our projects were diverse. We fought forest fires and restored fish habitat. We served across a wide variety of public land ownerships and designations, packing in crosscut saws and camping out for weeks to clear trails in the Wilderness. I gained knowledge and skill and confidence.

I signed up for another term, and I became increasingly more feral.

In fact, when I returned home, my mother, having served as a nurse in Vietnam, saw the areas on my back and arms where the pigment had discolored and identified it as a fungus. – She said soldiers would get it from wearing their soiled uniforms for too long. She asked me just how often was I showering and laundering my work shirts?

This from a Georgia girl, who cried in grade school, because her clothes weren't good enough, and who was ticketed in college, for littering. My lesson: never underestimate the power to transform, to transcend. My invitation to you: Go Feral.

Presently, I'm employed on a research team that questions how forest thinning – to reduce the risk and intensity of wildfire – affects small mammals, and I spend the day hiking the hills of Southern Oregon and checking hundreds of mini wire-mesh cages for critters.

Most often, when I peer behind the door of a trap, I am greeted, or scolded, I can never tell which, by the chatter of a chipmunk. Sometimes, when I look in, I see a soft glint off the quiet eye of a flying squirrel.

I ear-tag what I find, and then I turn the animal over in my palm. If it's a female, I blow across her belly, in order to part the fur, and determine if she has yet nursed young.

Ultimately, I handle these animals because they are deemed valuable as prey. Flying squirrels and bushy-tailed woodrats, in particular, are considered critical meals for the region's Pacific fisher and spotted owl. But they've given me much fodder too.

I wonder how my values would differ, if I had stayed in Atlanta. What would be my desires? My metaphors?

These days, I desire the durability and pluck of a chipmunk, who, after being bear-rolled in the night stands up inside its cage and cheeps at me, what is without a doubt, the sound of protest.

I seek the stealth magic of a flyer: to glide, with elegance, through the dark.

And when I glance around my room at any time, I am reminded of what a scientist once catalogued inside a packrat's stick nest: feathers, socks, a bar of soap, a bottle, and a jellyroll. I see my own compulsion to covet, carry-off, and accumulate.

And so I pray.

For restraint: To stop myself from taking, and doing, simply because I can.

For imagination: To redefine what exacts pleasure and valor.

And I try each day, to re-dignify myself, by re-calculating my own capacity for generosity.

Continued

Last year, the dysfunction in our political system led to the closing of our national parks and refuges. I thought, "What if we had elected to give our lands a rest day? A week or two? What if we didn't divide watersheds into hiking and biking days, but offered wildlife quietude during breeding season?" What a lovely gesture.

To date, I think the greatest gesture Americans have made is the preservation of Wilderness. We limit our work and play in acknowledgement of our collective disturbance. We've set up a trust fund for the future.

Gary Snyder wrote that grasses photosynthesizing are the ultimate working class.

What a humbling thought.

Before you leave here, I ask that you close your eyes. Forget the labels, inches, pounds, and years that define you, and think only of the future. Feel how much you want.

I feel, at times, that I could burn right through my skin. I want so much. And I believe that this is our commonality, and our strength. I believe that, now, as always, there is a great hunger within people to understand the wit of their universe, and that through service and story, we can cultivate conservationists from all generations.

I believe that "Elder" is a title that must be earned. That our movement isn't a "job" that you can retire from. And so I ask of you to stay with me in this, because the sentiments behind Wilderness – generosity and respect and reverence – don't diminish with age, or with how much you give.

Trust me: love does not have a net zero sum.

Thank you.

Terry Tempest Williams continues

This is what the present looks like. This is what the future looks like. I'd like to see how many individuals here tonight are in their 20s, 30s, and 40s. Would you please stand?

You will stand for us at the 100th anniversary.

Is there anyone here that was present in 1964?

This is what stamina looks like.

"Half Earth is the goal," says E. O. Wilson. "People haven't been thinking big enough," he says. "Especially conservationists. I see a chain of uninterrupted corridors forming with twists and turns. Some of them opening up to become wide enough to accommodate national biodiversity parks. A new kind of park that won't let species vanish."

"I also am thinking about such wildland chains as 'Long Landscapes,'" Wilson continues in his latest article that appeared in last month's Smithsonian Magazine. It sounds a lot like the Wildlands Project, doesn't it? "I like the idea," he says, "that they could meet climate change head on."

It's what biologist Michael Soule has been saying for years, the father of conservation biology, a discipline he defined as mission-oriented, interdisciplinary, because our survival is at stake.

He wrote in an essay called "An Emotional Call To Arms," "Perhaps the hardest thing to grasp is the geological and historical uniqueness of the next few decades. There is simply no precedent for what is happening to the biological fabric of this planet, and there are no words to express the horror of those who love nature."

"Loss of habitat and loss of species is not the whole disaster," Soule says. "Perhaps even more shocking than the unprecedented wave of extinction is the cessation of significant evolution of new species, of large plants and animals. Death is one thing, an end to birth is something else, and nature reserves are too small to gestate new species."

As humans, we evolved in Wilderness, and we will continue to evolve with Wilderness. That's why our public lands have never been more precious and never been more relevant. We cannot give in, not when the salmon are still swimming upstream.

Not when the yellowbilled loon is seen solitary in Gates of the Arctic Wilderness. Not when the wolverine knows that its place is in the Northern Rockies, even if the politicians don't. Not the willow flycatcher, who is surviving drought along the Colorado River. We cannot give in.

Wilderness is a place where all elements are working in concert as a natural system with one goal, passing life on to the future. Evolution is about adapting to changing conditions, but climate changes are occurring faster than we can biologically evolve or adapt.

Because we humans have so quickly modified the planet's ability to support life, we must call on a different evolutionary adaptation, something conscious and deliberate, diverging away from anything yet we've been able to perceive.

What if wildness is the highest form of imagination?

Imagination leads to creative acts.

I want to tell you a story about a German composer named Max Richter. His favorite piece of music is Vivaldi's "Four Seasons." We're all familiar with it. He had played it as a musician hundreds of times, and heard it many more times than he had performed it.

Continued

As a musician, the strangest thing happened. This favorite piece of music...He couldn't hear it anymore. It had become so commercialized, so trivialized, played in elevators and the backdrop to cheap commercials, that he could no longer hear its beauty. It had become lost to him, demoted to musical wallpaper.

Max Richter did the unthinkable, the blasphemous. He reimagined Vivaldi's masterpiece, and recomposed it so that he could hear it once again at this moment in time. He brought in the base notes, the shadows, so appropriate for where we are now.

"I wanted to reclaim this piece," he said. "I wanted to fall back in love with it all over again." Richter said by getting inside it and rediscovering it for himself, he was able to take a new path through a well-known landscape. Let us hear Max Richter's reimagined Four Seasons.

Can we recompose ourselves? Can we reimagine a different way of being in the world, still holding on to the essentials of what we love and what we will fight for: land health, wildness and a livable future?

Breyten Breytenbach, the South African poet, said to me years and years ago, and I've never forgotten it, "You Americans have mastered the art of living with the unacceptable."

Our institutions and agencies are no longer serving us. Across the board, I believe this to be true – our governments, our educational systems, and our religious organizations are failing us. The conservation community is no exception. We have never been here before.

It is time to reimagine the Wilderness movement as a movement of direct action, each in our own way, each in our own time, with the gifts that are ours.

For some, it may be civil disobedience. For some, it may be arrest, as it was for Tim DeChristopher. For some, it may be protesting as an employer in one of our federal agencies. For some, it may be staying home. For some, it may be strengthening our core values in the work that is ours. Each one of us must decide for ourselves. We have never been here before.

If you would have told me a decade ago, that going out to Dead Horse Point would become an annex to an oil and gas field with a cluster of roads that appear on desert roads like an exposed nervous system....

If you would have told me that America's first tar sands development will be in Utah's Book Cliffs at the heart of some of the wildest country in North America waiting for Wilderness designation....

If you would have told me that sagebrush in our beloved American West would become endangered, threatened alongside sage-grouse, pronghorn and prairie dogs, even mule deer, I would not have believed you.

But this is what I know to be true. It is time to lay our bodies down, now, physically, metaphorically. May we make vows today, tonight, to one another about what that will might look like?

Sarah James told us today how Gwich'in are Caribou people. She said, "It is our song, our dance, our story, our food, our tools, our clothing, shelter. It means everything to us," she said.

I thought to myself, "We are Wilderness people."

How serious are we? Can we go deeper? Can we be braver? Can we take more risks? We are just beginning to understand what it means to live in a storied landscape.

Here, now, present with our hearts wide open, we are stripped bare. We have no choice but to stand our ground in the places we love, knowing in our bones, knowing in our veins, that wild lands, wild lives are the beating heart of "The Open Space of Democracy."

I do not believe we can look for leadership beyond ourselves. I do not believe we can wait for someone or something to save us from our global predicaments and obligations. I need to look in the mirror and ask this of myself, "If I'm committed to seeing the direction of our country change, how must I change myself?"

We are in need of a reflective activism born out of humility, not arrogance. Reflection with deep time spent in the consideration of others opens the door to becoming a compassionate participant in the world.

It is time to stage a public lands revolution. Evolution from the ground up. We can do this. Right here, right now, with those of us in the room, we can do this.

It is time to ignite the federal agencies with our passion, with our love when possible and our outrage when necessary. From the Forest Service to the Park Service to the National Fish and Wildlife Service to the BLM, let them fear us for what we insist and resist.

Susan Sontag says, "The likelihood that our acts of resistance cannot stop the injustice does not exempt us from acting in what we sincerely and reflectively hold to be in the best interests of our communities."

While we're at it, we might as well terrorize the Department of Homeland Security.

We're already known as ecoterrorists, so why not bear it out? Bear is the key word here.

Because life as we know it, our home ground as we understand it, is under siege. Call it the failure of our imagination, call it the corruption of consumption where we've made a God out of capitalism, call it the wholesale ecocide of our planet.

Continued

How serious are we on the 50th anniversary of this beloved, sacred Act?

The most powerful individual in the American West right now is the sage-grouse. Why? Because it's the only living being that threatens to curb the grotesque, hunger and thirst of the oil and gas industries assault on our land, on our water at the expense of our communities.

One bird stands between greed and grace. Wilderness watches, Wilderness watch. We have our models. This is our time. Here, now, together, gatekeepers of the wild.

Part of this revolution must be connecting the dots. We can no longer be a movement that exists in isolation. The Wilderness cannot be an island of ecological isolations. They must become communities and corridors of ecological health and wealth.

400,000 people gathered in New York City and around the world in the name of climate change on September 21, 2015, just a few weeks ago. If you will bear with me just five more minutes, I want to share with you what happened.

They just kept coming in waves, in torrents, a river of people convening on the streets of New York City. In the march for climate justice, they just kept coming. Hundreds of thousands of individuals, indigenous, black, white, brown, yellow and red, a rainbow of colors winding to the Canyons of Manhattan.

This movement of climate justice is no longer segregated, is no longer privileged, is no longer young or old, or the radical friend moving towards the center. Instead, this movement resides in the core of a collective concern. Earth has a fever. There is no planet B. What we witnessed on Sunday, September 21 was 400,000 individuals standing in the center of this crisis with love.

At 1:00, the river of the people's march became quiet, silent in a hunting moment of stillness. And then a rolling cry of care rose from the street with undulating momentum like an animated heatwave blown by the wind, that electrified the crowd like thunder, like lightning followed by a rain of voices.

The written language of hand painted signs created its own poetry.

"Save the Earth"

"Heal the spirit."

"I can't swim."

"Let our voices rise, not the sea."

"I can't swim."

"Divest from fossil fuels if the Rockefellers can do it, so can we."

"I'm building a community that runs without fossil fuels."

"No more oil, no more coal."

"Keep our future in the soil."

"It's raining. It's pouring."

"We are all Noahs now."

"Wall Street corporations are junkies."

"Renewables bring peace."

"People and the planet over profit."

"Please love your Mother."

"We have to make peace with nature."

"Care now. You might be coming back."

"Quilters for the planet"

"Chefs for climate change"

"Howling for the future."

"Earth first."

"Abbey was right."

"Frack off. Obama, don't need no fracking drama."

"Protect me, I cannot swim."

"Hi, I'm a friendly sociable scientist. Come talk to me."

"Clean water is a right, not just for the rich and white."

"I am water. I am earth. I am fire. I am air."

"We are engaged in a crisis of breath. "

"We can overcome."

"Our planet has a fever. We know who is responsible."

"Look out the window, UN. The debate is over."

"The facts are in. The evidence is clear."

Continued

"The next flood will be Biblical."
"Stop the fossil fuel octopus. Stop the tentacles of tar sands and oil shale."
"Apathy kills"
"Our planet, our patients, our future.»
"Interfaith power and light."
"Why not? What's next?"
"The future of all life depends on our mindful steps."
"We, the people walk with the river."
"This is what love looks like."

Activists are flooding Wall Street. The present is now locked in hands with the future. We can thank the organizers for mapping the territory of our engagement.

That next night, inside the Cathedral of St. John the Divine with the great phoenix rising above the congregation, the Reverend Cyrene Jone said, "We have a soul size work before us."

Something has been set in motion. With throbbing feet, we are river walking.

That night one of the most powerful things for me was listening to one of the elders from Greenland. They called him Uncle. He said simply this:

That his grandmother told him there was only one thing he had to do as a human being. That was to melt the ice in each man's heart. If he could do that, then that person could feel the heart beating of the Earth and all would be taken care of.

The voice of emotional urgency is vital. Our cause is the cause of life. It is coming to be understood in new and unexpected ways. We have a son from Rwanda. We have come to know their family now as our own. There's a young man, Louis's brother, whose name is Faustine, who has just now entered college.

I just received this text from him on Thursday:

Dearest Mom, before the short experience that I'm about to share with you, I had not yet understood the importance of the environment. Being honest, one day I ask myself as a kid in Rwanda why you talk about the environment so much.

Then one Friday, I got an answer. There is a tree where I used to sit, and I would revise my life in playing my guitar. I used to love it so much. As I was there on Friday, the following day, I went there and the tree was nowhere to be seen. I was almost crying. I had forgotten I had tears since the war."

Since then, I came to understand the importance of protecting the environment."

Wilderness is not an abstraction, idea or a recreation. It is our sanity. It is our survival. Our survival is rooted in relationships. Wilderness in the 21st century is not a sigh of nostalgia for what once was, but rather, it is the seedbed of creativity for what we have yet to imagine.

Let us be clear. Let us be bold. Let us be unapologetic, passionate and fearless. Let us lay our bodies down as a gesture of love.

This morning, Chris Barnes asked if we heard the chimes at midnight. He brought us a bowl. The bowl broke. It shattered. Someone in the audience said, "That's an omen." Chris was shaken. I think it was an alchemical moment, an omen. We are broken. Our wild lands are broken.

We must bear witness to the beauty that remains, and re-imagine our place on the planet. In the name of wild mercy, we can do this. We must do this.

How serious are we?

The eyes of the future are looking back at us. They are praying that we might see beyond our own time. They are kneeling with hands clasped that we might act with restraint that we might leave room for the life that is destined to come. To protect what is wild, is to protect what is gentle. Perhaps the wildness we fear is the pulse between our own heartbeats. The silent space that says we live only by grace. Wilderness lives by the same grace. Wild mercy is in our hands.

Direct action is our prayer.

We can do this.

October 17, 2014

Traditional and Contemporary Experience of Wilderness Through Stories

John Olivas, Mora County, New Mexico, Commissioner

Jamie Williams, The Wilderness Society President

Tom Udall, New Mexico Senator

Dave Scott, Sierra Club President



John Olivas

Mora County, New Mexico, Commissioner

JOHN OLIVAS is currently the traditional community organizer for the New Mexico Wilderness Alliance in northern New Mexico, a non-profit conservation group. John works to protect federally owned public land from future development, such as oil and gas, and commercial logging, through federal protection under the Wilderness Act.

Mr. Olivas has an Undergraduate Degree in Biology and a Masters Degree in Environmental Science from New Mexico Highlands University. He is currently the managing partner and owner of JACO Outfitters, LLC who specializes in guided hunting and fishing trips throughout New Mexico. John Olivas is currently Chairman of the Mora County Commission and represents traditional communities in north-

ern New Mexico, focusing his conservation work with grazing permittees, land grant members and Acequia Mayordomos and Parciales.

John has worked in the federal sector with the US Fish and Wildlife Service, Mora National Fish Hatchery and Technology Center as a Fisheries Biologist. He has also worked with the private sector as a manufacturing engineer with Intel Corporation in Rio Rancho. He is a past board member for the Santa Getrudis de lo de Mora Land Grant and is very active in the state wide Land Grant efforts in New Mexico.

Plenary Speech by John Olivas

My name is John Olivas. I am the Traditional Community Organizer for the New Mexico Wilderness Alliance. I also sit as Chairman of the Mora County Commission, in which we're in dire straits. We're in a fight with oil and gas at this time about protecting our landscape.

There's a lot of things that are happening, but I wanted to thank you all for coming out to New Mexico. This is a beautiful state. Our noon panelist, Dan Ashe, did say that the sunsets are to die for. If you missed today's sunset, please get up early tomorrow and visit the sunrise, because it is beautiful!

It is something that we cherish here in New Mexico. I just can't say that often enough. When I'm driving down the road and I have the opportunity to see either a sunset or a sunrise, it is something that I don't think I've seen in any other part of the country. It is definitely New Mexico that is the Land of Enchantment. It is the birthplace of Wilderness. I am glad to be called "New Mexican" here in our state.

I would also have to reflect back on what Dan Ashe said. He was actually talking about cutting his hand in the Pecos Wilderness. I did the same thing. I have the same scar. My scar doesn't go to here, because my tendon was actually up here. I was actually doing an archery elk hunt at the time, and I had just got up to the Pecos Wilderness. I was setting up camp. I was getting some woodchips for starting a fire, and cut my hand.

I actually spent the next five days up there. I had a first aid kit, and I was able to protect it. It didn't get infected. Little did I know, he couldn't do this, and I couldn't do this. I related so much with his story. It's definitely something – that Wilderness – when you're out there, you just need to think ahead of what you're doing and just be cautious out there.

We have plenty of it here in New Mexico. Not as much as any of the other states, in the Western United States, but we want more. I didn't know Neil Kornze [referring to Bureau of Land Management Director Neil Kornze, who spoke earlier in the day] had mentioned that there was definitely a lot of Wilderness study areas that are out there within BLM land, that are worthy of Wilderness protection. I happen to be part of a coalition up in northern New Mexico that got the Rio Grande del Norte National Monument passed.

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As a result of that, there are actually two Wilderness areas that are being proposed. There's legislation that is drafted right now in Congress to protect one of the Wilderness study areas, the San Antonio Wilderness Study Area.

There's also Ute Mountain, that's another Wilderness study area. There's approximately 21,000 acres of Wilderness within that national monument. We're hopeful that's happening.

Up in northern New Mexico, we also have the Columbine Hondo Wilderness Study Area. There's legislation that has been drafted. We're penning Congress to do what they need to do on their end, and to act accordingly. We're hopeful in this Congress that we get a markup. We're hopeful that we can get that done possibly in the next Congress.

We also have the Pecos Wilderness Campaign that's actually ongoing. There's a whole bunch of Wilderness that was identified by the Forest Service back in 2001. What we're doing with that campaign is we're trying to expand the Pecos Wilderness by about 120,000 acres.

So another plus. It's awesome! It's definitely lots of good campaigns that are happening here in New Mexico, specifically northern New Mexico. The Gila, it's our birthplace Wilderness. There's a lot of discussion that's happening there. The New Mexico Wilderness Alliance is actively working on the Gila Wilderness for a potential expansion of that. Keep your eyes open, and keep your fingers crossed on what we can do within that landscape.

My story is, I work with the New Mexico Wilderness Alliance. I'm the Traditional Community Organizer. I reside up in northcentral New Mexico. I'm fifth generation in that community. When we had industry that was coming into our community and wanting to change the landscape, there were a lot of community members that stood up and wanted to defend what they felt was their right.

What we did is deal with a lot of traditional community folks up in Northern New Mexico. You have land grant heirs. You have land grant leaders, board members. You have *acequias pacientes* in Madron. Acequias are irrigation canals that we use throughout the State of New Mexico. That's a big component of the life blood of our communities.

When you have industries that are coming in and wanting to compromise some of those resources, those are things that we're looking to protect. Those are things that go back many of hundreds of years, so many generations.

We also work with our Native brothers and sisters up in northern New Mexico. We have the Taos Pueblo that is pretty actively involved in a lot of things we do. They were actually invited to the White House last year in March 2013, to witness the signing of the proclamation for the Rio Grande del Norte National Monument. They actually butt up against National Monument, and they support the conservation community in what we do.

They've been on the landscape so long, and they're a strong voice for the conservation work that happens in the north. What we have is the coalition that we put together up in northern New Mexico to get the Rio Grande del Norte. It was actually a coalition that was put in place, that was instrumental for getting this a success within the Rio Grande del Norte.

What happened during that time frame was, it was a campaign that had been in place for about 20 years now. I guess, late '80s, early '90s was the first introduction of that area. It actually wasn't until March 2013 that we got any type of protection within that landscape.

There was 242,000 acres protected, so it gets out of the hands of oil and gas developments or any type of development around road building, or any major commercial wood cutting. So, that was a huge win in regards to what we had done. There were many participants that were part of that coalition. There were sportsmen. There were, as I had mentioned earlier, land grant heirs.

There was *acequia pacientes*, Land Grant heirs, grazing permittees, many elected officials, business owners and individuals who came to the table during the campaign.

I can remember when Secretary Salazar actually came into Taos, New Mexico, and normally when there is some action proposed within the Antiquities Act for National Monument Designation, they usually send the Secretary to come out and visit the community. I can remember that there was a room of roughly about 250 to 300 people in there, and there was a unanimous decision to go ahead and make the Rio Grande del Norte National Monument.

So, when they come in here and you have that type of support behind you, it's up to the elected officials to make sure that happens. That was definitely a campaign that's memorable. I'm glad that I had the opportunity to be part of that, knowing that landscape is going to be protected today and for all future generations. It was a huge win for all of us. Now, we go onto the next campaign.

We go on to the next campaign. We have Columbine Hondo and Pecos which I'm part of. Hopefully, we'll be able to get them in the not too distant future. The economic benefit that happens as a result of these protected landscapes is very evident. I think within the Rio Grande del Norte, we're seeing a lot of the lodgers tax, within Taos County, really spiked as a result of that designation. The numbers tell the story.

I think over the next few years, we're going to be able to really identify what that economic impact is going to be for that community. It's been a very good ride. I really appreciate what everybody in this room is doing.

Let's push for more Wilderness. We understand this is the 50th anniversary. Let's go ahead and go on for the 75th and the 100th anniversary of the Wilderness Act. I think there are going to be more things to celebrate during that time frame.



Jamie Williams

President of The Wilderness Society

JAMIE WILLIAMS was named President of The Wilderness Society in 2012. Jamie leads The Wilderness Society in its mission to protect Wilderness and inspire Americans to care for our wild places. Jamie brings a wealth of experience and a track record of outstanding achievement to his role.

Before coming to The Wilderness Society, Jamie led The Nature Conservancy's work to protect large landscapes in North America. There he focused on helping Conservancy programs and key partners protect large landscapes through innovative, private and public finance.

Previously, Jamie also served as the Conservancy's Northern Rockies Initiative Director (2007–2010) and Montana State Director (1998–2007), where he focused on protecting the Northern Rockies' largest, most intact landscapes through strong community-based programs. Jamie started working for The Nature Conservancy in 1992 in NW Colorado (1992–1997) where he spearheaded a community-based effort to conserve the Yampa River. A former river guide and Wilderness instructor for the National Outdoor Leadership School (NOLS), Jamie's passion is getting outdoors with friends and family.

Plenary Speech by Jamie Williams

Good afternoon. Thank you for having me here today.

I know this conference has been a year in the making – and what an incredible gathering it is.

I want to thank the many advocates and staff at the USDA and the Department of the Interior for organizing it.

Let me just say how great it is here to be in New Mexico at the 50th anniversary of the Wilderness Act. It was this rugged terrain that inspired Aldo Leopold to give America its first big protected Wilderness area in the Gila in 1924, and to go on to advocate for the Wilderness idea nationally.

It is here where so much great conservation is being achieved today, thanks to the new voices who are leading on conservation here and the political leadership that has championed those community-based efforts.

To this end, I want to give a special thanks to Senator Tom Udall and Moras County Commissioner John Olivas, who are not only such great champions for sustaining our outdoor heritage but who have also helped deliver some of the nation's biggest, recent conservation victories, especially the Rio Grande Del Norte and Organ Mountains Desert Peaks National Monuments.

Both of these milestones originated as decades-long, homegrown campaigns that succeeded because of the diverse, broad support they had on the ground.

Let me add my thanks to Dave Scott and the Sierra Club, who have been such great partners and leaders in protecting our wild, public lands.

But it is also great to be here in New Mexico on a personal level. For my part, I grew up in the flats of Oklahoma but I was drawn to the mountains like a magnet on my soul. At 15, my best friend and I set out on our bikes to head for New Mexico, where we would backpack into the Pecos Wilderness and climb Truces Peaks.

I will never forget that experience, for it gave me my first taste of mountaineering and I would never look at the world the same again.

That trip into the Pecos gave me that sense of possibility, that sense that I could make my life whatever I wanted it to be. It put me on a path toward outdoor education and conservation. It literally changed my life. One thing we have all come to learn is that no one defines Wilderness in the same way. But that common thread is that these experiences are deeply personal and deeply rooted in who we are as a country.

That is why 1964 was so important. It gave our country a measure of humility by checking our head-long rush to develop every corner of the country with the policy that we would protect our wildest places, places that shaped our character as a nation and that today are so vital to our well-being.

We know that all conservation success starts on the ground with communities working to protect a special place. But our ability to unite as a movement has also been so central to our success; from defeating the dam at Echo Park in Dinosaur National Monument in 1956; to the passage of the Wilderness Act itself in 1964; to the Act's biggest victory in 1980 with passage of ANILCA – doubling the size of the National Wilderness Preservation System; to the many Wilderness milestones we are celebrating today.

Indeed, the Wilderness Act was a bold and visionary step not because of what it did in 1964 to protect nine million acres but what it empowered Americans to do in its wake. It turned us from being a defensive movement with temporary victories to a proactive movement advocating what we were for. What we were for was permanently

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protecting wild lands for nature to thrive on its own terms and for people to get out and experience these lands for their own self renewal.

The Act empowered people all over America to stand up for the places they love, unleashing 50 years of citizen campaigning which is why the system has grown from nine million acres in 1964 to 109 million acres today. It is why more than two dozen bills are awaiting action by Congress today.

I must say, the 50th anniversary of the Wilderness Act has been a great moment for all of us to see the country take such great pride in this tremendous legacy. But it has also been a critical moment to reassert the relevance of Wilderness today. Like many of you, I have had news reporters ask me many probing questions about climate change, about the country's changing demographics, and about the importance of sustainability –in essence asking me if Wilderness still matters.

My answer is not only yes, but that we need wild lands now more than ever. We need wild lands to help nature adapt to a warming world, and we need wild places for the human spirit – places where we can unplug from the grind of our daily lives to reconnect with ourselves in a deeply powerful way.

We all know that climate change is the defining crisis of our time, literally shifting the habitat out from under wildlife so many protected areas are supporting. So it is clear that we need much bigger protected areas than we have today if our plants and animals have any chance of persisting in a changing world. We not only need to protect more wild lands, but we need to build corridors that connect our existing wildlands to each other. If we do not do this, we will compromise a century of conservation. If we do this well, we will make that legacy meaningful and enduring for a new age.

Until moving to DC in 2012, I had spent most of my last 15 years working in Montana. One of the most inspiring landscape efforts I have been a part of is the community effort to protect the Rocky Mountain Front. The Front is just east of the Bob Marshall Wilderness, where the mountains dive into the prairies. It is the last place where grizzlies still wander onto the prairies as they did in days of Lewis and Clark, emblematic of the incredible wildlife that inhabit this landscape.

Ranchers have done an amazing job of stewarding and protecting several hundreds of thousands of acres of native grasslands with conservation easements. The Bob Marshall Wilderness protects the mountain core, but the foothills in between the Bob and the prairie remained vulnerable, especially to oil and gas leasing. Development would sever this entire system.

A tremendous coalition of local landowners, outfitters, local business, sportsmen, and many conservation organizations came together under the name, the Coalition to Protect the Rocky Mountain Front. The story of their success has been remarkable. It was Gloria Flora, the regional supervisor for the U.S Forest Service who bravely stepped out to withdraw the area from oil and gas development in 1997, despite the Bush Administration's overall push to develop. That decision was followed up with a legislative withdrawal by Senator Baucus on both Forest Service and BLM lands. The Forest Service followed with a great travel plan that managed uses to preserve the Front's wild character. From this framework, local landowners put together a lands package—part Wilderness, part conservation area to allow for existing uses – that would protect the entire Rocky Mountain Front—close to 300,000 acres. This legislation is still awaiting action by Congress, but it is the right kind of homegrown bill to succeed.

Had we taken a Wilderness-only approach to protecting this landscape, I guarantee you, no bill would exist today. I tell this story because this larger landscape approach is what I see working in so many places now, for nature and for people. We need to use a broad range of tools from national monuments to recreation areas to Wilderness to protect big connected landscapes.

But we also need to protect wild places close to home because most of America lives in urban areas now and if there is one thing we have learned it is that if one can connect to wild places locally they are more likely to care for wild places everywhere.

If you look at the writings of Wilderness Act author Howard Zahniser, he was a huge champion for protecting Wilderness belts along every river in America. He knew that protecting places close to home would be the key to success, so I believe we need to be about connecting a diverse country to our common public lands from urban parks all the way to big, remote wild places.

I had the great opportunity to celebrate September 3rd – the actual 50th anniversary – with Secretary Jewell and many others at the first designated Wilderness in the Department of the Interior, the Great Swamp Wildlife Refuge in New Jersey. It is a wonderful story of a local woman by the name of Helen Fenske who rallied her community to buy this land and then donate it to the U.S. Fish and Wildlife Service. The community went on to get it designated as a Wilderness area in 1968. The designation not only saved this 3,000 acre beautiful wetland and forest from becoming an airport, but more importantly, it gave one of the largest metropolitan areas in the US a special place to experience nature.

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The Great Swamp success paved the way for the Eastern Wilderness bill in 1975 that would make clear that the Wilderness act is not confined to pristine lands, but largely unaffected wild places managed for their natural integrity and for people to enjoy.

Just last Friday, I had the honor to see President Obama designate the San Gabriel Mountains of the Angeles National Forest as our nation's newest national monument just outside of Los Angeles. It was so inspiring to hear from California Representative Judy Chu and local leaders about what this victory meant for them – reconnecting the mountains to the city and expanding recreational opportunities for the diverse communities of Los Angeles. As Representative Judy Chu said, designation of this area as a national monument “makes us all feel welcome.”

As we urbanize as a nation, we need to expand urban wild parks and we need to help connect diverse urban populations to the outdoors. Nowhere is this more important than with youth. I think one of the most important endeavors we can all engage in is connecting youth to the outdoors. Thanks to Richard Louv and others, we are just coming to understand that kids who spend time outdoors do better in school. In fact, they do better in life. And guess what? So do we.

Getting kids engaged in youth service projects not only improves the stewardship of our public lands, but also transforms their lives in the process. Service gives kids a sense of purpose – the confidence to pursue their dreams and teamwork skills they will take with them for life. To this end, I have to applaud and thank the U.S. Departments of Agriculture and of the Interior for their exceptional leadership in promoting and expanding the 21st Century Youth Conservation Corps. With the help of incredible partnerships around the country, the 21st Century Conservation Corps will engage 100,000 young people and veterans per year in conservation service.

TWS is a proud partner with USDA and Interior in the 50 for 50 project – 50 stewardship projects to highlight 50 important wild places across the country. When complete, crews will have made improvements to 40,000 acres of land, and built 900 miles of trail. These are projects that will build the next generation of conservationists, broadening and diversifying our movement.

I also have to tip my hat to the incredible work of outdoor educators, backcountry guides, independent backcountry groups, and so many agency staff who are working with youth, veterans, and diverse communities. You are bringing people back into the wild and getting more people to care about the fate of our wild places. It is important to recognize that how we manage our existing public wildlands has everything to do with our ability to protect more land. So welcoming people into these lands and supporting outdoor education programs are how we will get more lands protected and engage a new generation of conservationists in this country. We all owe a tremendous debt of gratitude to the federal agencies for their stewardship and engagement in youth programs.

And this brings me to the final point I want to make. We know the central challenge of our time is sustainability for people and for nature. But we cannot hope to solve the climate crisis or any of the environmental ills of the day if we do not first realize our connection to the natural world. There is nothing that connects people better to nature than to behold its grandeur in the wild – much like it did for me on Truces Peak.

Wallace Stegner said in his famous Wilderness letter to America in 1960 that getting into the wild gives you a “*sense of bigness outside yourself.*” It draws you out of yourself to see the bigger world around you and your connection to nature.

Indeed, Wilderness is the foundation of building a sustainable world. This is why Aldo Leopold wrote in the first issue of TWS's magazine the “Living Wilderness” that protecting Wilderness would forge a new attitude in America, “*an intelligent humility toward our place in nature.*”

We need that intelligent humility now more than ever. As we recommit ourselves to protecting wildlands for the next 50 years, let's remember that the framers of the Wilderness Act did not create it just to save nature; they did it to save the human spirit. That is why it is so extraordinary to be here today with so many friends and giants for conservation.

Thank you.

Senator Tom Udall

New Mexico

TOM began serving as United States Senator in 2009, after two decades of public service as U.S. Representative and New Mexico's State Attorney General. Throughout his career, Tom has been a strong advocate for the hardworking families of New Mexico, for a clean energy economy and the environment, for affordable and accessible health care, and for our nation's veterans. He has also been a leader in the fight for campaign finance reform and for making government more accountable to the American people, not the special interests.

Tom graduated from the University of New Mexico Law School in 1977. He then served as a Law Clerk to Chief Justice Oliver Seth of the U.S. Tenth Circuit Court of Appeals and became a federal prosecutor in the U.S. Attorney's criminal division. As Chief Counsel to the New Mexico Department of Health and Environment, he also fought for stronger environmental and health protections. Tom serves on five committees as New Mexico's senior Senator: Appropriations, Foreign Relations, Commerce, Indian Affairs, and Rules and Administration.

As a member of the powerful Appropriations Committee, Tom has a voice in federal funding for departments, agencies and other programs. With its labs, military bases and public lands, New Mexico has a large federal presence. Tom continues his important work on energy and environmental issues. On the Indian Affairs Committee, he carries on his longtime mission of helping shape the unique matters concerning Native Americans, including economic development, trust responsibilities, land management, Indian education and health programs.



Plenary Speech by Tom Udall

We should be celebrating the idea of 50 years of Wilderness, because we've done a lot. You've heard the numbers there. It's gone up from when my dad stood next to President Johnson, there were 9 million acres, to now 110 million. There's a lot of progress that we have to celebrate here.

But two things really strike me here. One, is the Wilderness Act was a starting point – historic, monumental legislation – but a beginning, not an end. We need to really remember that: a beginning, not an end.

The second thing that strikes me is we must pass the torch someday to a new generation. They will need this connection, this reverence to the land. That is something that must be experienced firsthand, and especially by our young people.

We think in this world of video games, and iPhones, and Instagram – it is even more important to get young people out into the Wilderness and see the absolute beauty of the Wilderness. I heard several speakers – you started this on Wednesday with talking about young people and getting young people out. We need to really engage them because some I think aren't engaged, because of the world they are in.

Growing up in the Udall family meant growing up outdoors. My dad loved the land and he taught us to love it – it was in our DNA. Dad used to say, "Plants help to protect air and water. Wilderness and wildlife are in fact plants to protect the man." We sometimes forget that very important point. This isn't an abstract idea.

For me, it's a clear picture. The way the New Mexico Mountains looked under all that sky, the crisp and cold feeling on the trail just before dawn, that first ray of sunlight in the morning. There are some marvels here in New Mexico. One of my favorites is the Gila National Forest, the nation's first Wilderness area which was designated in 1924, 40 years before the Wilderness Act.

Thanks to Aldo Leopold, this was a milestone in conservation, and then the conservation movement for New Mexico and for the nation. Today, the Gila still calls us to explore its legendary footprints, to hear echoes of the past from Geronimo to Ben Lilly, from the Mogollon and Apache to the Spanish explorers searching for gold.

The Gila is so rich in its history, its incredible spaces like Raw Meat Canyon and Grave Canyon. I think all of us – and this for me is very true – I do some of my best thinking when I'm in the outdoors, on a trail, in one of the great stretches of Wilderness in New Mexico or someplace else in the country.

Our time on this planet is brief. The world changes very fast, sometimes too fast. The Wilderness teaches us to pause, to see what is enduring, what is unchanged, and to see how all life is connected. This is humbling and uplifting, this sense of connection to something so much larger than ourselves. Congress might get a lot more done if we met out on the trail. Do you agree with that?

I think Thoreau was right when he said, "In wildness is the preservation of the world." *In wildness is the preservation of the world.* We've come a long way, as I talked about a little bit in the beginning. From the days of

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Teddy Roosevelt when House Speaker Joe Cannon famously said – this is the Speaker of the House – he said, “Not one cent for scenery.”

My Dad used to tell me about Joe Cannon in that comment. And it seems today, comical. It probably was comical to a lot of folks then, but it speaks to the uphill battle, the necessary vision to go against the current.

When my Dad was the Secretary of Interior for Presidents Kennedy and Johnson, he always said, “We have to hold the land in trust, and we have one main goal – a revival.” He had one main goal, a revival of respect for the environment. He used to say back then, “You could fit the conservation movement in a broom closet, and still get the brooms in.”

Look at this, look at this great gathering. We’re well beyond that. My Dad, he worked with legends like Rachel Carson to move the nation forward and protect these treasures. My Dad, Rachel Carson, The Wilderness Society, Howard Zahniser, New Mexico Senator Clinton Anderson.

Clinton [Anderson] played the key role [in the Senate]. My Dad always used to defer to Clint when people give him all the credit for the Wilderness Act. He’d say, “Clint played the big role, and he was chairman of the committee. He took on the forces that were against us,”- that have been talked about today. They left big shoes to fill, they left big, big shoes to fill and that was a great generation back then.

We are here today because of them. We stand on their shoulders, their determination. They helped pave the way, and they created landmark legislation: “The Wilderness Act,” “The Clean Water Act,” “The Land and Water Conservation Fund.” It was hard work but Democrats and Republicans worked together.

There was hardly a vote against the Wilderness Act. They worked together because they understood our common heritage, our national treasures, the health and safety of American families. This should not have a party label. They knew speaker Cannon was wrong, it wasn’t just about scenery. It was about a way of looking at the world that has changed the world, and is spread all over the world.

People want to visit and work and live near these treasures. This strengthens our communities, grows our communities, and creates jobs. That’s one of the things we forget on many of the areas: how many jobs have been created.

We made great progress, but as Robert Frost said, “We still have miles to go before we sleep.” We honor our past but it should challenge us. Not just look back, but look ahead to the future generations. What will they celebrate a half a century from now? What will we leave them? I hope we leave them a safer planet where the threat of climate change has been met. Where a clean energy economy is thriving and where our natural treasures are protected.

We all share the same goal. We need careful management of our natural resources. Conservation is not just a personal virtue, it is essential to our prosperity, to our security and to our planet.

Back to John Olivas here: Thanks to the “Antiquities Act,” we have had some great victories here in New Mexico: Rio Grande del Norte. I hope you, some of you from out of the state, have been down to see it, and get down to see it and the Organ Mountains-Desert Peaks new National Monument.

I’m very proud of some of the Wilderness areas, all the Wilderness areas, but some of the ones that I’m mentioning here – Ojito Wilderness, Sabinoso Wilderness – that we’ve created. This are big, these are good strong additions.

Our state is rightly called, “The Land of Enchantment.” I looked it up the other day and I had my staff work on this. Do you know we’re the only state where we use the word *land* in our slogan about our state? Land of Enchantment.

Our state is called the Land of Enchantment because of these natural treasures. They put New Mexico on tourist maps all over the world.

Young folks got involved in this. Groups like Groundwork in Doña Ana County. They had a thing called The Green Team working with archaeologists and anthropologists, mapping out the pictographs and all of the unique features that helped lead to special designations like Organ Mountains-Desert Peaks National Monument.

There was a young man there, Adrian Avila, one of the Green Team leaders. I think he said it best when he said, “These lands and the artifacts found here tell our story. We have to protect them so the future generations can understand their roots and their connections to the very land we stand on.”

Adrian Avila. Adrian is already carrying the torch. He is part of the great tradition and the key to future progress. We need Adrian, we need all of his peers to stand up for the environment, because we still have work to do. Congress needs to pass significant public lands legislation. It has not done so for four years. You know that; are you ready to work hard for that?

Several of the speakers went through all of the battles. It took a while so we’re going to have struggles ahead of us. But as I conclude here, I want to say a couple of things to you. It’s hard to imagine a world where the Wilderness is not wild. The outdoors is our second home, but for those who do not share this connection, it sounds more like an abstraction – a luxury instead of the central part of the human experience.

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Our natural treasures are priceless. If we lose them, no amount of money can buy them back. So it is our job to keep up the fight, to stay the course. Wilderness is not a luxury, it's a habitat for America's wildlife, and a refuge for all of us, a sanctuary for us.

Long after we are gone, a new generation will hike historic trails, and they will know the land remains much as it was when humans first saw it. That is an experience money cannot buy. All of us in this room have felt it and give thanks to those who came before us. It is their gift to us held in trust, and one we will pass on to those who come after us.

Now, you all are activists. Never forget what Margaret Mead said about activism and democracy, and getting things done.

She said, "Never doubt that a small group of thoughtful, committed citizens can change the world. Indeed, it is the only thing that ever has." I'm glad to have you at my shoulder and at my back and to be working hard with you. Thank you very much, great to be with you today. Thank you.

Dave Scott

Sierra Club President

DAVE SCOTT was elected Sierra Club President in 2013, after being elected to the board of directors by Sierra Club members in 2009. He previously served for three years as vice president and helped lead the Sierra Club's Conservation Program. Since starting out as a Sierra Club outings leader years ago, he has a long history of conservation leadership roles at the national and state levels, including campaigns for Great Lakes, national forest and Wilderness protection.

An attorney, Dave began his legal career representing low-income clients in Appalachia, and has also done civil rights work on behalf of individuals with disabilities. He lives in Columbus, Ohio.



Plenary Speech by Dave Scott

When you tell people you're from Columbus, Ohio, different things come to mind. Long-suffering college football fans. A November media invasion every four years in a perennial swing state. One word that doesn't come to mind is "Wilderness." And I'd be the first to admit that growing up in the East creates a different perspective. A few years back, I took part in a weeklong Sierra Club backpacking trip at Lake Superior's Isle Royale National Park, a 43-mile-long island that is almost entirely protected as Wilderness, except for the eastern tip. On the fifth or sixth day, I stopped part of the group in mid-hike and took out my camera. Our hike leader, a Himalaya expeditions veteran, came back to see what I'd stopped for. A moose? One of the wolves that Isle Royale is best known for? When she saw the hare I'd paused to take a few pictures of, I heard her mutter dismissively, "We don't stop for bunnies." Gently admonished for my Eastern sensibilities, I kept my eyes trained for wolves or moose.

Ohio jokes aside, no Wilderness lover should dismiss the states east of the Mississippi. I say that in part because the Eastern half of the country has larger and more spectacular Wilderness areas than some might imagine. Isle Royale itself is a backpacker's paradise, and I could cite many others, including Minnesota's Boundary Waters, North Carolina's Nantahala Wilderness, Florida's imperiled but unique Everglades, or other areas that deserve more protection than they have, such as Maine's North Woods. The Eastern US also matters because so many important public lands champions have hailed from east of the Mississippi, including former congressmen John Seiberling and Ralph Regula of my own home state.

But what I want to talk about today is the Wilderness Act, about where we've been, and about crucial new directions we need to go.

To appreciate the significance of the Wilderness Act, one has to think back to 1964 and understand what the laws were at that time and how federal public lands were being managed.

In the early 1960s, there was no Wilderness Act, no Wild and Scenic Rivers Act, no Endangered Species Act, no National Environmental Policy Act, no Clean Air Act, and no Clean Water Act. There were no requirements for public notice or public hearings and no environmental law firms bringing citizen suits to protect the environment. We had in many respects a continuation of the Wild West buffalo hunter mentality – exploitation of what were still perceived as limitless resources, and the taming of all things wild in the name of progress and profit.

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In 1964, the post-World War II housing boom was still going strong. With no regard for sustainability, our national forests were being clear-cut for lumber. Timber companies got huge taxpayer subsidies for logging projects, subsidies so large that many timber sales actually cost the taxpayers money. Large portions of our public lands were literally in disposal status, managed primarily to promote such uses as mining and livestock grazing with no regard to environmental impacts.

Not even the national parks were safe. In the early 1960s, plans were being drawn up to usher in a flurry of major development in the parks, and to encourage more tourism by building more roads, more hotels, and other commercial attractions. Throughout the arid West, parks were also under assault by water developers and the Bureau of Reclamation. The Sierra Club, which had cut its teeth fighting the damming of Hetch Hetchy Valley in Yosemite, now engaged in national campaigns to block dams in Dinosaur National Monument and the Grand Canyon.

Onto that scene came a group of visionaries, citizens who were intent on changing the status quo and establishing a system of permanently protected wild areas on our public lands – areas where there would be no logging, no mining, no roads, no airports, no dams, no stores, no private homes, and no hotels. These lands were to be kept “untrammelled” and administered in order to maintain “outstanding opportunities for solitude” where “man would be a visitor who did not remain.” In a nation with a tradition of Manifest Destiny, with a history of subjugating the natural landscape and its original inhabitant and converting much of a continent to private ownership and use, this proposal must have struck many as radical.

Of course, the Wilderness visionaries’ idea actually wasn’t radical at all – or even that novel. In the early 1800s, Henry David Thoreau and his colleagues were repeating the mantra “in wildness is the preservation of the world.” In 1864, the world’s first Wilderness park was established when President Lincoln granted to the state of California the Yosemite Valley and the Mariposa Grove of giant Sequoias as a reservation to be “held inalienable for all time.”

In 1872, that grant was followed by the establishment of Yellowstone National Park, thus launching what has been called “America’s best idea” – the national park system. And in 1885, the New York State Legislature established the Adirondack Preserve as an area that “shall be forever kept as wild forest lands.”

Building on those efforts, in 1892 John Muir and a band of prominent men and women in the Bay Area founded the Sierra Club. 2014 marks the 122nd year that the Sierra Club has been working to protect our Wilderness heritage. That work started with struggles to protect such iconic California landscapes as Yosemite and what are now Kings Canyon and Sequoia National Parks, but it quickly spread into a worldwide Wilderness movement.

John Muir would write in his unpublished journals, “In God’s wildness lies the hope of the world – the great fresh unblighted, unredeemed Wilderness.” And throughout the 20th century, those inspired by Thoreau and Muir carried on the battle to protect wild places from destruction. In every decade new national parks, wildlife refuges and other preserves were established.

The Forest Service took a few modest steps of its own, such as administratively setting aside the first official Wilderness area – the Gila Wilderness – in New Mexico in 1924. The man who prodded the agency to take this step was a young forest ranger named Aldo Leopold, who wrote that “Wilderness is premised on the assumption that the rocks and rills and templed hills of this America are something more than economic material [that] Wilderness is the very stuff America is made of.” That 1924 Forest Service action was followed by other administrative Wilderness designations in the national forests, but none enjoyed permanent protection. It would be 40 long years after that first official federal Wilderness that federal lands would receive the statutory permanent full protection of law under the Wilderness Act.

The case for Wilderness was most eloquently put forward by Wallace Stegner, a creative writing professor, award-winning novelist, and former member of the Sierra Club’s board of directors. In 1960, Stegner wrote what has been since called “The Wilderness Letter.” I will share just a few passages from this gifted advocate and writer, but I encourage you to seek out the entire text this anniversary year as a source of inspiration.

The following is from Stegner’s letter:

“What I want to speak for is not so much the Wilderness uses (such as recreation), valuable as those are, but the Wilderness idea, which is a resource in itself. Being an intangible and spiritual resource, it will seem mystical to the practical-minded – but then anything that cannot be moved by a bulldozer is likely to seem mystical to them. I want to speak for the Wilderness idea as something that has helped form our character and that has certainly shaped our history as a people. It has no more to do with recreation than churches have to do with recreation, or than the strenuousness and optimism and expansiveness of what the historians call the ‘American Dream’ have to do with recreation. . .

Something will have gone out of us as a people if we ever let the remaining Wilderness be destroyed; if we permit the last virgin forests to be turned into comic books and plastic cigarette cases; if we drive the few remaining members of the wild species into zoos or to extinction; if we pollute the last clear air and dirty the last clean streams and push our paved roads through the last of the silence, so that never again will Americans be free in their own country from the noise, the exhausts, the stinks of human and automotive waste. And so that never again can we

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have the chance to see ourselves single, separate, vertical and individual in the world, part of the environment of trees and rocks and soil, brother to the other animals, part of the natural world and competent to belong in it...

One means of sanity is to retain a hold on the natural world, to remain, insofar as we can, good animals. Americans still have that chance, more than many peoples; for while we were demonstrating ourselves the most efficient and ruthless environment-busters in history, and slashing and burning and cutting our way through a Wilderness continent, the Wilderness was working on us. It remains in us as surely as Indian names remain on the land. If the abstract dream of human liberty and human dignity became, in America, something more than an abstract dream, mark it down at least partially to the fact that we were in subdued ways subdued by what we conquered...

We simply need that wild country available to us, even if we never do more than drive to its edge and look in. For it can be a means of reassuring ourselves of our sanity as creatures, a part of the geography of hope."

Today, the idea of protecting Wilderness by law may seem like a no-brainer, but the Wilderness Act was no easy sell to a Congress beholden to miners, grazers and loggers. It took nearly 17 years of blood, sweat and tears to ultimately see the Wilderness Act signed into law. The campaign was spearheaded by The Wilderness Society Executive Secretary Howard Zahniser and Sierra Club Executive Director David Brower. Their idea was ultimately embraced by President Kennedy and his Interior Secretary, Stewart Udall, and the Wilderness Act was finally signed into law by President Johnson in 1964.

But passage of the Wilderness Act did not instantly protect all the threatened and deserving candidate Wilderness areas. Those original Wilderness areas established when the act was passed were mostly high mountain areas in the Western national forests – areas with few known conflicts with logging and mining. Moreover, the price of passing the law included a provision to allow miners and energy developers to continue to stake mineral claims and lease energy resources in Wilderness areas for an additional 19 years, up until 1983, just in case the Congress might have locked up any valuable mineral resources by accident.

The original Wilderness areas established in 1964 mostly covered 9.1 million acres of Western high peaks. Today, the National Wilderness Preservation System protects a total area larger than the state of California, with over 110 million acres in 758 Wilderness areas stretching from the Brooks Range in northern Alaska to an island off of Cape Cod, from the deserts of the Southwest and the volcanoes of Hawaii to the cloud forests of Puerto Rico.

Even my home state of Ohio has a Wilderness area – Lake Erie's 81-acre West Sister Island, designated as a national wildlife refuge in 1937 by President Franklin D Roosevelt, in order to protect the Great Lakes' largest nesting colony of wading birds. In an especially ironic example of the concept of multiple use, the island was used for artillery practice during World War II, but it remains an important wildlife refuge, and the island was recognized in 2000 as part of a globally important bird area, Lake Erie's Pelee Archipelago.

What is remarkable, and well worth our celebrating this year, is that not only West Sister Island, but every one of these 758 Wilderness areas was championed by citizen activists who loved their particular prized piece of the earth, and were determined that it would not be exploited and destroyed for private profit. These passionate citizens and Wilderness champions waged campaigns that sometimes took decades of hard work, heartache, and personal expense to win. Their selflessness and sacrifice have given us all an enduring Wilderness legacy for present and future generations. Most of their names will never be known to us – many of them are here in this room – but thanks to the permanent protection guaranteed under the Wilderness Act, the gift they gave us will last an eternity.

But what does the next 50 years hold for the Wilderness system, and how permanent is that protection we fought so hard to win?

I want to turn to some of the challenges for all of us Wilderness advocates, challenges for the country and for the Wilderness system itself. How we rise to these challenges will determine not only the fate of our Wilderness, but literally the fate of humankind as well.

The promise in The Wilderness Act was that once we established a Wilderness area, it would be protected intact for present and future generations in its present condition, and that the wildlife and native plants dependent on that Wilderness would have a safe haven.

Tragically, human-caused climate change is eroding that promise. As global warming intensifies, seas rise and become more acidic, snowpack disappears, temperatures soar, the wildfire season lengthens and severe storms increase. These unnatural climatic changes are not only threatening urban areas and farmlands, but also putting the very foundation of our Wilderness system at risk.

Scientists project that Joshua Tree National Park Wilderness may no longer be able to grow Joshua trees. We could lose up to 90 percent of our native amphibians and native trout and salmon. Alpine ecosystems in the Sierra Nevada are projected to lose 90 percent of their snowpack, and tree line is projected to move upward, reducing the habitat for alpine species such as pikas and alpine chipmunks. By the middle of this century, there may be no glaciers left in Glacier National Park.

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Early Wilderness advocate Robert Marshall wrote in 1937: “Wilderness is melting away like some last snow bank on some south facing mountainside during a hot afternoon in June...” Marshall was referring to the loss of Wilderness due to logging, mining, and roadbuilding, but his observation proved to be prophetic, as we now have Wilderness literally “melting away” due to global warming impacts on our wild lands. In fact, no Wilderness area is safe from climate change, and some of the most threatened are the most remote, such as in the Arctic.

In order to address this, the first line of defense must be to reverse the alarming rise in greenhouse gas emissions and to bring atmospheric concentrations back to a safer level. No amount of irrigation of plants and translocation of species will head off the projected mass extinction that is likely to occur if we allow global emissions to continue to climb as they have been. Even with greenhouse gas concentrations of 400 parts per million, we are already witnessing climate-change-induced extinctions, and if we don’t act soon, we will bring on a mass extinction similar to the time when dinosaurs and their ecosystems were wiped off the face of the earth.

A world with a 2 degree Celsius temperature increase will experience significant loss of species and Wilderness values, but much can still be saved. If the world is forced to cope with a 4 degree Celsius increase, no amount of management and stewardship will head off disaster. It will be climate chaos and catastrophe. Adaptation efforts will be overtaken by mass extinction.

This is one major reason why an organization like the Sierra Club, which has spent over 100 years defending Wilderness, is now so dedicated to addressing climate disruption. We have not forgotten our roots or abandoned the Wilderness cause – instead we realize that the most important thing we can do to defend Wilderness, nature, and humanity is to address climate change.

That said, there are still very important land use policy decisions that can protect Wilderness and wildlife from climate change if we can manage to hold warming to 2 degrees Celsius or less. Establishing big, connected climate refugia with Wilderness as the core is one of the best adaptation strategies. We need large, landscape-level protection plans that spread across public and private lands. As the planet warms, species need to shift to more hospitable habitats, which often means migrating up in elevation or toward the poles to find acceptable climatic conditions. If there is a protected corridor to make that migration possible, the species can survive. If a species is isolated in a small island of wilderness with no chance to migrate, it will most likely perish.

We also need to reduce non-climate stressors, which means stepping up our efforts to restore damaged lands and curtail pollution, water diversions, logging, mining, energy development, invasive species and harmful impacts of off-road vehicles.

A now famous Grinnell resurvey of Yosemite, conducted by the University of California, offers grounds for hope. When researchers went back 100 years later looking to see where various park mammals were living after a century of climate change, they found that the animals’ ranges had changed dramatically, but because there were connected pathways to allow migration, none of the species were lost. For example, researchers found that the pinyon mouse – formerly a resident of pinyon-juniper-sagebrush in east slope foothills at 8,000 feet – had moved up to subalpine whitebark pine forests at 10,200 feet, but it still was thriving. But what will another 2 degrees of warming bring – what happens when there is no more room to move up the mountain? Connectivity is essential, but it can only get you so far. If we don’t cap and reduce carbon emissions it will be game over for all too many Wilderness-dependent species.

We will still have a Wilderness system, but we may find that pikas, wolverines, salmon, and millions of other species were not able to survive in a climate-changed world. And that those species that enriched our lives perished on our watch because of our failure to act. We must re-envision the Wilderness system for present and future dangers posed by climate disruption.

Just as surely, we must re-envision Wilderness protection in a way that acknowledges egregious wrongs from the past, wrongs that remain to this day. Indigenous peoples populated North America’s Wilderness for thousands of years before they were systematically removed, infected, overrun and killed. We have a moral obligation to them and their progeny, and we must fulfill it.

Only after the continent’s wild places were cleared of the original inhabitants did conservationists come onto the scene and wax poetic about Wilderness areas as pristine lands where “man is but a visitor and does not remain.” In some cases, lands that were reserved for tribes were later taken away and made into parks or national forests, and conservationists were sometimes accomplices to those takings. For too much of our history, the white environmental movement has failed to acknowledge its complicity in the displacement of indigenous people, and in the disregard of their rights regarding wild areas and public lands.

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The brutal history of genocide and displacement in no way diminishes the need to protect Wilderness, but we have an obligation to try to right wrongs where we can. Here are a few examples of how the Sierra Club believes we must respect and partner with indigenous people regarding Wilderness protection.

- Where treaties and legislation reserve special rights to native people, we need to help find ways to honor those rights while also continuing to protect the Wilderness. For example, natives in Alaska are guaranteed subsistence hunting and fishing rights and access in all parks and Wilderness areas.
- Where indigenous people have traditionally used lands and waters for religious and spiritual activities, we need to protect those sites and accommodate those traditional uses – even in parks and Wilderness areas.
- As we export the concept of parks and Wilderness areas to countries where indigenous people still inhabit wild areas, we need to promote a concept of Wilderness and parks that accommodate and benefit indigenous people, instead of seeking to displace them.
- Park interpretation efforts should accurately convey the history and present status of native people and the land, even when that history reflects badly on the way our government and society acted toward the native people. Indigenous people should be sought out to provide their own interpretation of their culture and their relationship with the parks and Wilderness areas. Because of their special and unique relationship to the land, who better than indigenous people to show us how best to protect nature?
- Where tribes are interested in co-management of parks and Wilderness areas where they have historic and religious ties, these options should be pursued.
- When planning and carrying out our land and water protection campaigns, we must reach out to indigenous people, listen to their concerns and perspectives, and build a trusting partnership with them whenever possible.

In addition, we must also recognize and act on our obligation to make the experience of nature and wild places more broadly available to all.

Statutory federal Wilderness is usually large, wild, remote, and hard to get to, located in places “where the sights and sounds of civilization are substantially unnoticeable, with outstanding opportunities for solitude and primitive unconfined recreation.”

Protecting big, remote Wilderness areas and keeping them wild and remote still remains an important goal that I hope we will always pursue – and pursue with zeal. But in addition to protecting the wild backcountry, we need to balance that by also protecting the “front country”, or what we call “nearby nature.”

To share America’s wild heritage with all, we need wild places where a family can access the area by public transit and have a picnic or take an hour-long stroll, instead of only providing areas that are accessible by private car, hundreds of miles away, in places where a multiday backpacking trip is the primary way to experience the area. Nearby nature wild areas might have more amenities such as toilets, trash and recycling barrels, picnic tables, accommodations for the disabled, multilingual interpretive signs, or guides and programs to better accommodate day users and help protect the resource from overuse.

The San Francisco Bay Area’s Golden Gate National Recreation Area, which the Sierra Club and past club president Dr. Edgar Wayburn fought so hard to protect, serves a model for a nearby nature national park. Dr. Wayburn received a Presidential Medal of Freedom recognizing his role in protecting many places, especially Alaska Wilderness.

Just last week, President Obama’s designation of the San Gabriel Mountains National Monument marked an important step in making large-scale natural areas accessible to diverse communities of citizens – assuring protected nature and recreation in the vicinity of where they live.

Wilderness and national parks have been criticized as a set of protected areas that are visited primarily by affluent white people. While parks and Wilderness areas are open to all, it is true that remote Wilderness areas today are predominantly used by white recreationists.

But love of nature is shared by people of all cultures and all income levels. Polls have shown that Latinos, for example, are very supportive of nature protection and action to prevent climate change. All too often, there are barriers to urban low income and people of color experiencing nature and Wilderness. The Sierra Club and all Wilderness advocates need to join with our natural allies to remove these barriers and form a powerful partnership to protect Wilderness and wild places for everyone. This will not only provide a healthy and renewing nature experience for all, but also help broaden the social movement of those demanding more protection for wild places and the environment in general.

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The Sierra Club is doing this in a number of ways:

- We have an Inner City Outings Program – to introduce inner city youth to the wonders of nature – at no cost to participants. This volunteer-led program operates in over 50 locations and takes over 13,000 kids out on hikes, overnights, and river trips every year.
- Sierra Club Chapters offer over 12,000 free local outings that are open to all as a way to make nature more accessible. Each year, over 200,000 participants enjoy these local outings. We also run over 250 multi-day volunteer led national outings for a modest charge, outings that serve over 3,000 participants annually.
- The Sierra Club has run a Military Families and Veterans Initiative in the Outdoors Program, a program that has helped over 1,500 veterans and their families experience nature each year, and helped heal the mental and physical wounds of war and military service.
- The Club's Our Wild America campaign deploys Spanish-speaking organizers and leaders in urban areas with large Latino populations, and promotes wildland protection and wildland experiences from Los Angeles to Puerto Rico.

Finally, we have an obligation to re-dedicate ourselves to the noble cause of the visionaries who fought and protected so much.

The battle to protect Wilderness is far from over. Over the years, we have helped secure protection for over 250 million acres of parks, Wilderness areas, wild and scenic rivers, national monuments and other preserves, but much more needs to be done. This generation and the next generation need to re-dedicate themselves to the Wilderness cause and protect the next 100 million acres before it is lost forever to development.

The 50th anniversary of the Wilderness Act is a time to celebrate, but is also a time to re-dedicate ourselves to the cause. As climate change, fossil fuel extraction, logging, mining, off-road vehicle abuse and population growth put increasing pressure on our remaining unprotected wild spaces, we need a renewed and expanded movement to carry on the fight.

This campaign is already underway. In addition to the nearby nature examples I cited, we should protect such large landscapes such as the Greater Canyonlands and the Arctic National Wildlife Refuge coastal plain, as well as places of national significance close to urban areas.

As Sierra Club founder John Muir told us, "The battle we have fought, and are still fighting . . . is a part of the eternal conflict between right and wrong, and we cannot expect to see the end of it. . . . So we must count on watching and striving . . . and we should always be glad to find anything so surely good and noble to strive for."

In this golden anniversary year of the Wilderness Act, my hope is that we all leave this celebration not only proud of what has been accomplished, but rejuvenated and rededicated to meet the enormous challenges of the future. I hope we leave this celebration prepared to not only protect more wild places on a map – important as that is – but to also counter the enormous challenge of climate disruption, to make our environmental movement and our society more broad, more just and more inclusive, and to leave for future generations the beautiful, livable planet and the wild places that are their birthright.

Thank you.



Bald Eagle, Glacier Bay Wilderness Area, Alaska
By David Bahr, www.bahrimages.com

October 18, 2014

Wilderness: An American Icon

Doug Scott, *Historian*

Douglas Brinkley, *Historian and Author*

Joseph Acaba, *NASA Astronaut*

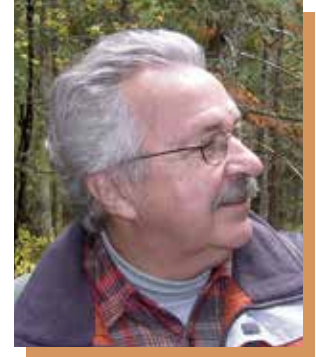
Doug Scott

Historian

DOUG found his vocation at the University of Michigan, School of Natural Resources, where he earned his Bachelor of Science degree in forestry in 1966. A trip to the Wilderness of Isle Royale National Park in Lake Superior changed his life; he found himself testifying at the National Park Service's field hearing on their inadequate preliminary Wilderness recommendation for the park, met a mentor from The Wilderness Society, and never looked back.

On the basis of his academic research and his own practical experience, Doug wrote and *The Enduring Wilderness: Protecting Our Natural Heritage through the Wilderness Act* and *Our Wilderness: America's Common Ground*, both published by Fulcrum Books. His anthology, *Wild Thoughts: Short Selections from Great Writing about Nature and Wilderness and the People Who Protect Them* will be available in mid-2015. He serves on the boards of The Wilderness Land Trust and the National Wilderness Stewardship Alliance.

Doug says that he was extraordinarily fortunate to come into the Wilderness movement at a time when the staffs of the national organizations were tiny and the lobbying demands so great that he became a front-line Wilderness lobbyist from day one. "To work with champions of the Wilderness Act itself, in the advocacy groups and on the Hill, was the greatest privilege of my life."



Plenary Speech by Doug Scott

John of the mountains told us, "In Wilderness we return to reason and faith. Find the glad tidings by climbing the mountains, any mountains. One near you."

Valerie Andrews tells us, "That a child has the magical capacity to move among the many areas of the earth, see the land as an animal does, experience the sky from the perspective of a flower or a bee, to feel the earth quiver and breathe beneath us."

In our urbanized world we must return to reason and faith, relearn the wisdom of the earth that we had as children, and spread it far ... spread it wide ... and spread it deep. Johnny [addressing Doug Brinkley's 9-year-old son, John, who was sitting in the front row below the podium], that's why you are here. Today and all week, we celebrate the immense importance of the Wilderness Act of 1964.

The Act is only seven pages, just pages of parchment. Important parchment buried in the National Archives in Washington D.C., but it signifies the solemn compact that our society has made to preserve these sacred places for Johnny, Johnny's children, and their children.

We do so, not primarily for ourselves, but for all of the generations to come, and not just Johnny. The Johnny salmon, the Johnny grizzlies, the Johnny mosquitos, and Johnny pelicans.

In this work, tens of thousands, hundreds of thousands of ordinary people are doing great work. Bending together to persuade, cajole and occasionally pressure members of congress to get behind the bills to protect the wild place that they love.

They're druggists, soccer moms, primary school teachers, small town mayors, dreamers, loafers, hardware store dealers. If you are from Montana, you know the story. [Doug was alluding to the work of Cecil Garland, the Ace Hardware dealer in Lincoln, Montana. He loved to hike and hunt in the Lincoln-Scapegoat Backcountry (an unprotected category) right behind town. Learning of Forest Service plans to road and log it, he got mad and got organized. The upshot was the Lincoln-Scapegoat Wilderness Area designated in 1966 – the first de facto Wilderness areas, that is, not arising from the study of an old USFS "primitive area."]

Enough about them. All of you – and all the folks that you work with back home – are already deep in your own Wilderness campaigns. You're outpacing anything any of us did by leaps and bounds – big leaps, and big

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bounds. For you have the love of a favorite wild place to propel you. You have the field knowledge to fuel you. You have the skills and you have the persistence.

As for preserving new areas of Wilderness. You and your local groups will simply not take “no” for an answer. We never forget and you never go away. Johnny may have to pick up the sword and carry it on. That’s the way it always is.

We learned that from Brower and in particular from Zahniser. His name, less known, has been mispronounced a few times around here.

He used to introduce himself at hearings by saying, “I’m Howard Zahniser – Z-A-H NI SIR.” Please memorize that. He is our model, for he was a lobbyist, beyond any other. Ever evangelizing, like John of the mountains. Ever eager for each new convert on Capitol Hill.

He simply would not accept an enemy. He would surround them with love. Everyone loved him. You get it: the ground truth to your work is the spirituality of the Wilderness that you’re seeking to save and that you have experienced.

Hear this from Lawrence of Arabia, “The idea, the truth, the ground belief of all the Semitic religions, was waiting there, in the desert, but it had to be diluted to become comprehensible to us. The scream of the bat is too shrilled for many ears, and the desert spirit escapes through our coarser texture.

The prophets returned from the desert with their glimpse of God, and through their strained medium, as through a dark glass, showed us something of the majesty and brilliance of those whose full visions would otherwise, blind, deafen, and silence us.”

We know the barrier that we face in Washington and state capitols, from the cynicism, the deadly cynicism that corrodes our national politics.

We hear it 24 hours a day on CSPAN and, not only CSPAN, on the FOX news channel, which none of you watch. The social media are telling all the young people, “Don’t you believe it, Johnny.” That no one can make the difference. That our politicians are bought and sold, that we just need to sit down and shut up.

I know that it’s not true and so do you. We know there’s nothing more important than telling the story about Wilderness, because most people get it, everybody gets it, as Doug said. We must fight cynicism. Every day, with everybody we meet.

On the bus, in the airplane, every day with everyone. John the evangelist set us on that course. Our system doesn’t work? Poppcock, that’s the polite version. I’m here to say thank you to Lisa, Lee, Greg, Karen, Roger, Chris, Ashley, Peter, Pauly, Sharon, Jeff, Donna, and all of the others who have done great work for this conference.

To all of you, for we know this, we will go forth to do even greater work, fired in the hot oven of these last few days together.

I know that most of you spent hours deep into the night in dark bars, plotting superb cutting edge and beyond cutting edge strategies for your campaigns. It’s sad that you can’t remember the nuances. It was always thus, go forth, you’re fired up. As some famous politician told us.

You’re fired up and you’re ready to go! Do good work, do good work for perpetuity. Perpetuity is forever, not just for the life of our children and their children. It’s forever. As I say, “It’s for the children of the salmon and their children, and the grandchildren of pasque flower and their children, and for all the wild creatures, plants, and the mosquitoes that accompany us on this planet.

You’re the cutting edge.

You have a solemn obligation to take what you’ve learned here and the energy that you have gathered into your soul here – and get to work.

Go forth!

Douglas Brinkley

Historian and Author

DOUGLAS BRINKLEY is Professor of History at Rice University, CBS News Historian and a contributing editor to *Vanity Fair* magazine. A public spokesperson on conservation issues, Brinkley serves as an *Audubon Magazine* editor. The *Chicago Tribune* wrote of him as “America’s new past master” and the late Stephen Ambrose called him “the best of the new generation of American historians.” CNN boasts that Brinkley is “a man who knows more about the presidency than just about any human alive.” Brinkley has served on the faculty of The U.S. Naval Academy, Hofstra University, the University of New Orleans, and Tulane University. *The Wilderness Warrior* (2009) is Brinkley’s monumental biography of Theodore Roosevelt as “naturalist president”. It documents the former president’s tireless crusade for the American wilderness—a legacy now more important than ever. The New York Times called this book “inspiring and enormously entertaining.” It also wrote, “What this book makes abundantly clear is that Roosevelt’s inspiration, vision and courage were as rare 100 years ago as they are today, and without them, our country would be uglier, and poorer. It is a vital reminder of the key element of conservation, so often neglected “You cannot save what you do not love.” Brinkley’s second installment of his five-volume Wilderness Cycle was *The Quiet World: Saving Alaska’s Wilderness Kingdom 1879-1960* (2011). He is currently writing *Rightful Heritage: Franklin P. Roosevelt and the American Conservation Movement* (2015).

The speech Douglas Brinkley gave can be heard online at <http://www.wilderness50th.org/conference.php?useraction=conf-presenters>



Joseph Acaba

NASA Astronaut

JOSEPH ACABA is an astronaut with NASA. He worked as a hydro-geologist in Los Angeles, California, primarily on Superfund sites, and was involved in the assessment and remediation of groundwater contaminants. Spent two years in the United States Peace Corps as an Environmental Education Awareness Promoter in the Dominican Republic. Manager of the Caribbean Marine Research Center at Lee Stocking Island in the Exumas, Bahamas. He was selected as a mission specialist by NASA in May 2004. In February 2006, he completed astronaut candidate training. Acaba has logged a total of 138 days in space during two missions.



Summary of National Wilderness Conference Speech by Joseph Acaba

Joseph Michael “Joe” Acaba is a NASA astronaut. In May 2004 he became the first person of Puerto Rican heritage to be named as a NASA astronaut candidate. He completed his training in 2006 and was assigned to space mission STS-119, which flew from March 15 to March 28, 2009 to deliver the final set of solar arrays to the International Space Station. Joe served as a Flight Engineer aboard the International Space Station, having launched on May 15, 2012. He arrived at the space station on May 17 and returned to Earth on September 17, 2012 as recorded by the Russian Federal Space Agency. His presentation focused on the training that an astronaut receives, preparing for space flight, and then space flight itself. He showed many beautiful slides of his training and adventures.

October 19, 2014

Inspiration for the Future of Wilderness

Monica Patel, *Wilderness Coordinator at Gulf Islands National Seashore*

Christina Mills, *Outdoor Recreation Planner at Yellowstone National Park*

Robert Glenn Ketchum, *International League of Conservation Photographers*

Dave Foreman, *Longtime Wilderness Advocate*



Monica Patel

Wilderness Coordinator at Gulf Islands National Seashore

MONICA PATEL started her National Park Service career in 2010 as a George Wright Climate Change intern at Fire Island National Seashore in New York. Her work in Wilderness stewardship began when she joined the first cohort of Park Service Wilderness Fellows at Buffalo National River in Arkansas – America’s first “National River”. She also served as a Wilderness Fellow for the U.S. Fish and Wildlife Service, and completed three Wilderness character monitoring reports for the Great Swamp and E.B. Forsythe National Wildlife Refuges in New Jersey, and the Moosehorn National Wildlife Refuge in Maine. She also worked as a Geospatial Analyst for Rutgers University, assisting in the development of a digital geomorphic map for Fire Island National Seashore in New York and Gateway National Recreation Area in New Jersey.

Patel later moved to the Mississippi Gulf Coast as a Resource Advisor on the Deepwater Horizon Oil Spill Response. She currently serves as the Wilderness Specialist at Gulf Islands National Seashore in Mississippi, heading up the development of the Wilderness and backcountry stewardship plan. Monica is also a member of the Wilderness Leadership Council, an advisory body to the Directorate on all matters pertaining to Wilderness in the National Park System. She earned a Master’s degree in Environmental Management from Duke University in 2010, with a focus on ecosystem science and conservation.

Plenary Speech by Monica Patel

This is the last day, the closing session. I am very honored and I’m humbled to be here and part of that. I hope that each of you had a little chance to get a little wild at the Get Wild Festival.

Also, when I was walking, I saw the Sierra Club had that really great display with the trees and the leaves you can write something on about Wilderness. I saw one, and it said—and I’m thinking it’s from a child, I’m assuming it’s from a child – but it said, “A place to remember what it feels like to be human.”

My parents emigrated from India and settled in the land of the turnpike. That would be New Jersey. I was born and raised in this wildly urbanized reality. But within this concrete jungle, I had a special green patch, a backyard that I spent most of my time in.

I’d say this is a similar story to a lot of young people, especially now, disconnected from what we call the natural world, from Wilderness. But let me also suggest it’s a disconnection from a natural consciousness that already exists within ourselves.

I was taught from a very young age that nature and I were one and the same, as this is one of the core teachings in the Hindu philosophy. I existed within nature and nature existed within me. But I hadn’t really experienced what that idea was that I was being taught, having spent most of my time in this urbanized city with some sprinkles of trees here and there.

I will have to say that not all of New Jersey is like that. We do have two Wilderness areas, after all.

I was unsure of how to cross that bridge between my reality that was dominated by human constructs and construction to one that was dominated by wildness, and even to take it a step further, my responsibility to protect these wildlands.

I’ll share two stories that come to mind that played an important role in helping me to cross that bridge.

I had a hardhat and a headlamp strapped on my head, and I was following Chuck Biting, who is a park geologist at Buffalo National River Wilderness. My eyes adjusted to this dark cave that we were crawling into.

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I came to an area that opened up, so I got up to my feet, and I was two inches away from a pendulous bat snoozing upside-down. There was this incredible sense of fullness in my being, one of deep joy and connection, and sentiments I often saw reflected in Chuck's eyes.

In a single conversation, you'd know, even a stranger would be able to know, that Chuck had this incredible knowledge of the land, of that Wilderness, as if it was woven into the very fabric of his being. He is one of many, many who are in this room today that carry that spirit of Wilderness within them.

In my opinion, these are the Wilderness warriors that continue to carry that torch forward. Their passion and dedication is contagious, and without their realizing it, they have inspired, mentored and empowered the next generation, people like me, to develop the skills and explore Wilderness and cross that bridge, not to look at Wilderness, but to look from Wilderness.

The second story is the day I decided I was ready to venture into Wilderness alone. I had a little sense of apprehension. Actually, I had a lot of sense of apprehension, but also an overwhelming sense of wonder what it would feel like to go to this place alone.

I hiked deeper. I was stunned at this lush forest of magnificent balsam fir. The sun rays would filter through the dense canopy and illuminate the forest floor. There were the songs of the birds and the leaves in the wind. This sense of overwhelming awe immobilized me, and so I just stopped and I sat down on this bed of needles.

The quieter I became and sat in stillness, the more I became part of this beautiful symphony. I felt quite viscerally this feeling of being connected to something much larger than myself. In that solitude, I felt that idea I grew up with. I felt that nature was within me and I was within nature.

Both these experiences were while I was a Wilderness Fellow, first with the National Park Service and then with the Fish and Wildlife Service. This program was born out of a great need at the local level to build on-the-ground capacity to move these Wilderness stewardship and planning efforts forward.

A program, yes, but more so the Wilderness leaders behind it is what inspired a girl that grew up in this concrete jungle, and empowered her to engage in Wilderness stewardship to the point that I humbly stand here as a Wilderness specialist for Gulf Islands National Seashore. I also sit on the Wilderness Leadership Council.

More importantly, I stand here with a passion for Wilderness. You could even say I caught the Wilderness bug four years ago. But this is absolutely not any kudos to myself, but rather one example of the power of mentorship.

The future of Wilderness depends on the collective efforts built upon from one generation to the next, and I would even say it's efforts from this generation to the previous one – a two-way street.

I'll tell you, in just the past five days, I've had amazing conversations with brilliant young minds. This conference has been a celebration, but I think it also has re-energized us forward and renewed that commitment.

To echo Chris Barns, and I kind of reordered it, "Go home and make a difference, and prove that you've been here."

“Without enough wilderness America will change. Democracy, with its myriad personalities and increasing sophistication, must be fibred and vitalized by the regular contact with outdoor growths – animals, trees, sun warmth, and free skies – or it will dwindle and pale.”

- RALPH WALDO EMERSON, American writer and philosopher and co-founder of Transcendental Club



Christina Mills

Outdoor Recreation Planner at Yellowstone National Park

CHRISTINA MILLS began working with the National Park Service in 2010 as a Wilderness Fellow at Guadalupe Mountains National Park in Texas. She later relocated to the Agency's WASO Wilderness Stewardship Division in 2011. After spending 6 months in Washington, she traveled to Fire Island, Bryce Canyon, Death Valley, Rocky Mountain, Olympic, Glacier Bay, Western Arctic, and Lassen Volcanic National Parks, assisting with Wilderness character training and planning, writing Wilderness character narratives, and developing monitoring strategies. She also served as a member of the Wilderness Character Integration Team, an interdisciplinary group created to provide leadership for incorporating Wilderness character into

park planning, management, and monitoring.

Mills currently works as an Outdoor Recreation Planner in the Superintendent's Office at Yellowstone National Park where she works primarily on Winter Use planning and operations. She has a Bachelor's degree in Environmental Studies from the University of North Carolina at Chapel Hill and recently completed her Master's degree in Resource Conservation from the University of Montana, where she studied the National Park Service's ability to adapt to rapid social and ecological change, focusing on cultural and structural barriers to adaptation.

Plenary Speech by Christina Mills

Over the last few days, I've heard a lot in this conference about getting young people involved and engaging the next generation of Wilderness leaders and I'd like to speak to that from the perspective of a millennial who is really excited about Wilderness.

My first reaction to a lot of the discussion this week is that there are a lot of young people out there who really want to be involved in Wilderness stewardship. Actually, many of us are here. We also didn't get here by ourselves, so I'd like to tell you a little bit of my story.

Like Monica, I began to love Wilderness, not as a result of my upbringing or childhood camping trips, but through the Wilderness Fellows program. Five years ago, I found myself in Chapel Hill, North Carolina, with a brand new environmental studies degree and no idea what to do with it. Or, rather, I wanted to do everything with it.

I applied to teach children in Honduras, to work with monkeys in Costa Rica, and to an SCA program with the National Park Service. Sure enough, I received a call back from the Wilderness Stewardship Division [with NPS]. I think I had something like three or five days to accept the job.

I'm really glad I did. I didn't know it then, but I had inadvertently stumbled on something that would give that dilettante undergrad a direction and a life's purpose.

In June of 2010, I flew down to Everglades National Park for training. I met the other Wilderness Fellows and really began the most amazing two years of my life.

My job was to provide training to parks staff on the Wilderness character framework, write Wilderness character narratives, develop monitoring strategies, and generally get the ball rolling on Wilderness stewardship planning efforts. If you're not familiar with Wilderness character narratives, they are these descriptive documents that allow park staff to articulate what is exceptional and important about their Wilderness.

They're often organized by the quality of Wilderness character, so they become these really useful foundational documents for planning, monitoring, and essentially they're about what makes Wilderness special. As you all know, there are a lot of really special Wildernesses out there.

My first year was in Guadalupe Mountains National Park out in West Texas. They're these amazing mountains that just seem to pop out of the Chihuahuan Desert. After that, home base became Washington DC, which is arguably a different kind of Wilderness.

If there's one thing that Garry [Oye] taught me, and Garry taught me a lot of things, but if there's one thing Garry taught me, it's that you really have to get out there on the ground and talk to park staff and understand the Wilderness in which they work and live and recreate.

I got the opportunity to do that at Bryce Canyon and Fire Island. I was lucky enough to spend two months at Death Valley working on part of their Wilderness stewardship plan. In my final few months, I wrote Wilderness character narratives and developed monitoring strategies at Rocky Mountain National Park, Olympic, Glacier Bay, and Western Arctic Parklands, and you can't spend time in places like that and not come to love Wilderness.

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One of my biggest take aways was the extent to which Wilderness means so many different things to so many different people. For me, Death Valley just humbles me, the sheer scale of the place. Like the scale Robert was talking about in Glacier Bay. It instills that smallness and that humility that I think is such an important part of Wilderness.

When I was working in West Texas, the people of West Texas are really proud that they have a Wilderness where they can take their children and teach them about nature in wild places without getting chased off the property. The Alaskan parks opened my eyes to the intrinsic and indescribable living relationship that many Native peoples have with Wilderness, so far beyond our understanding of the term.

Some of the coolest moments I had were during Wilderness character narrative workshops with park staff. We'd start by assembling an interdisciplinary team. We'd try to make it as representative and diverse as possible. I'd ask park staff to brainstorm the things that make their Wilderness special and a lot of the things that people brought up were fairly common themes across Wildernesses, you know, the solitude they feel, the freedom.

But, every now and then, you'd get a really unique response. Sometimes a really specific description or a metaphor, and you look around the room and everyone would sort of be nodding their heads and you knew you hit on something really, really special about that place.

Let me give you an example. Someone at Olympic brought up the palpable role of time in the Olympic Wilderness. I think they said that time feels paradoxical, and that everything is always moving and changing and in flux, whether it's the salmon runs or the tides. But at the same time, there's this agelessness to it. You can hike through an old grove forest and find a sea fossil on top of a mountain.

These were the really inspiring moments to me, when a description like that, the paradoxical role of time, would resonate with everyone in the room.

While every Wilderness was certainly unique, one element that was common to every Wilderness I was in was change – changing climate, budget and staffing levels, demographics, recreation activities, and technologies that are changing faster than ever before.

I also noticed that some things don't change. The passion that so many staff across divisions and across pay grades have for the Wilderness in which they work could not have been more apparent and was really energizing, the extent to which people of all ages love the way that Wilderness makes them feel. Personally, I think as my generation and the next grow up in an increasingly populated and technological world, Wilderness will only become more essential and more relevant.

Stewarding Wilderness in an era of change will continue to be a challenge, but I feel incredibly lucky to have come across the Wilderness Fellows program five years ago.

That internship has turned into a career for me, and it won't be an easy job, but I know that I speak for Monica and myself when I say that we are lucky enough to have learned from some great leaders out there.

As I mentioned earlier, we didn't get there by ourselves. For each of us, there were at least three, four, or five people who opened doors for us, took us under their wings, and became our champions and our advocates.

Not every young person is lucky enough to have mentors like this, and I fully and truly believe that that is why we are here today.

I've been blown away by how many people I've met at this conference alone who have reached out to us, engaged with us about our ideas, and offered their support in one way or other, and I really hope to repay that one day.

I receive probably between five and ten emails a year from peers of mine, young smart motivated peers, who want to be involved in Wilderness stewardship and in government, but they don't know how.

It's programs like the Wilderness Fellows programs that are so important for giving young people a way in. But thanks to so many individuals as well who have opened doors for us, for people like Monica, myself, and the other 48 Wilderness Fellows that followed us.

There are now a lot of young people out there, who are really excited about the next 50 years of Wilderness stewardship, and we have very big shoes to fill.



Robert Glenn Ketchum

International League of Conservation Photography

OVER THE last 40 years, Robert Glenn Ketchum's imagery, writing, exhibitions, numerous books and personal activism have helped to define photography's successful use in conservation advocacy. Ketchum was named by Audubon magazine as one of the 100 people "who shaped the environmental movement of the 20th Century." American Photo magazine listed him one of the 100 most important people in contemporary photography in the 1990's, and then in 2010, named him fifth in their very select American Masters series. Henri Cartier-Bresson, Richard Avedon, Helmut Newton, and Annie Leibovitz, were the four previously recognized.

Ketchum's distinctive and very dimensional prints are in numerous collections including the Museum of Modern Art (NY), the National Museum of American Art (DC), the Museum of Contemporary Art (Los Angeles), and the Metropolitan Museum of Art (NY). Significant archives (more than 100 images) have been acquired by the Amon Carter Museum (TX) and the Huntington Library (CA), and substantial bodies of work can be found at the High Museum (Atlanta), the Los Angeles County Museum of Art, the Akron Art Museum (OH), Stanford University Art Museum (CA), and the Herbert F. Johnson Museum of Cornell University (NY).

As an undergraduate at UCLA, Ketchum studied with Edmund Teske, Robert Heinecken and Robert Fichter while shooting 1960's era rock bands that included The Doors, Cream, Jimi Hendrix, Donovan and Traffic at clubs along the Sunset Strip. He received a Design B.A. cum laude from UCLA, did technical work in view cameras and color printing at the Brooks Institute and concluded with post-graduate work at California Institute of the Arts (MFA '74), mentoring there with Leland Rice.

Prior to his emergence as a photographer, he was a widely recognized curator. For 15-years, Ketchum served as the Curator of Photography for the National Park Foundation for whom he organized the exhibit and wrote *American Photographers and the National Parks*, the defining history of conservation photography in North America. After publication of this last title, Ketchum began to concentrate on his own politically focused projects and publications, such as *The Tongass: Alaska's Vanishing Rain Forest*.

Ketchum's work has been integral to many diverse environmental struggles including passage of the Tongass Timber Reform Bill of 1990; enlargement of Saguaro National Park and mitigation of neighboring resort developments; creation of three new state parks in California; popularizing the Arctic and its beauty to underscore threats from global warming; and publicizing the threat of the Pebble Mine to southwest Alaska and the Bristol Bay fishery. Ketchum is a founding Fellow of the International League of Conservation Photographers and a lifetime Trustee of the Alaska Conservation Foundation. He is also a distinguished lecturer and teacher whose public engagements have included everything from small high schools to large colleges, multi-national corporations and the National Academy of Sciences.

Plenary Speech by Robert Glenn Ketchum

Good morning, everybody. Thank you for being here. I'm honored to be chosen as the closer or one of the closers with my good friend. I've got a lot of pictures to show you, so I'm just going to jump in if we could take the house lights down and start.

As you can see, [refers here and throughout to specific slides as the images appear on the screen.] this is a portrait of me in 1966 when I left high school and went into college, and shifted from a prelaw major to a fine arts major and went into a photography department with very nontraditional teachers. I was studying under Robert Heinecken and Edmund Teske. I also fell into the entourage of an emerging LA band called "The Doors," so I spent most of my college career photographing bands and rock and roll.

As I went through my four years of college, I was at Monterey Pop, and I was coming home from the festival. I was very burned out from being around so many people and all of that. I actually pulled off in a small redwood canyon in Big Sur with some friends to camp for the night before going on into LA.

In the morning, I had an incident very much as was just described to us, where I wandered by myself back up into this redwood canyon and sat down by this stream. While my head was clearing from three days of Rock-and-Roll music, I started thinking about what I had read in Rachel Carson's *Silent Spring* and Aldo Leopold's *Sand County Almanac*. Someone had also just given me Eliot Porter's *Glen Canyon: The Place No One Knew*.

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To me, the surprise of *Glen Canyon* was (Eliot's other books were picture books. They were beautiful, but they were still just picture books.) at the end of *Glen Canyon*, there was this confrontational essay, a lament about the building of the dam. I thought, "Wow! A picture book with a political message in it. This is really different."

While I was sitting there, thinking about all of that, the cosmic flash of the '60s descended on me, and I thought to myself, how vicarious is all this Rock-and-Roll photography and what if you could do something like Eliot with your pictures?

I took some pictures that day of the forest, and I was a horrible amateur photographer. I'd never been in a condition like that. I knew nothing about Ansel's fantastic darkroom techniques or anything else. Nonetheless, that was a launching moment for me. For the first 10 years out of college, the joke among my friends was – I had gone from Rock-and-Roll to rocks and trees.

Part of that language of art at the moment was what we now refer to as post-modernism. I was shooting black and white in 35 millimeter, because it was flipping Ansel off. That was really the idea yet I'm also acknowledging what he had done. You're looking at black and white images beautifully printed out, but, nonetheless, shot from what was considered an amateur's camera, a 35 millimeter camera.

Significantly, I chose not to have the big scenic point of view like Ansel. I was much more interested in the essence of Wilderness. My family had a home in Idaho. And all my local friends never skied on the Sun Valley slopes – they went off into the mountains and skied in the backcountry.

The more I went with them and the more I experienced the Sawtooth Wilderness, the White Clouds, and the Challis mountains, the more I began to see this fantastic wild world that I was adventuring in and what it meant to be out there, with just my friends as a support team and no parents to fall back on, and no rescue units even knowing where we were or anything else.

These photographs are of extreme environments and minimalist views that really didn't have anything to do with scenic viewpoints or more obvious monuments.

Simultaneously I also was working with a big view camera like Eliot and going off into color. Most of those experiences were on the East Coast in places like the Shenandoah Wilderness and the Nantahala Wilderness.

This was my emerging point in which I was still talking a post-modernist art school language. These works were about accepting and rejecting my mentors and my fellows. But clearly, I was immersing myself personally in Wilderness, while all this was going on.

Then I got this opportunity from a very substantial fund in New York called, "The Lila Acheson Wallace Fund," to go to Alaska and photograph a rainforest. I said, "There's a rainforest in Alaska?" That wasn't the first time I would hear that question.

I'd never even heard the word, Tongass. I had heard of the Inside Passage. I went up into the Tongass for the first time at 45. This was when my Wilderness experience in the lower 48 had started to take a toll on me. I was doing a lot of backpacking in the Wind River Mountains.

I'd even done some extended 12-day solos. You start carrying packs like that over 11,000-foot passes, and eventually your knees and your lower back don't like you as they used to. I was beginning to think that kind of backpacking wasn't going to be part of my more mature years.

When I got up to Alaska, they put me in a kayak. It was like being reborn. This is Glacier Bay, one of the great Wildernesses. It was already designated in Alaska when I got there. This is the Tongass Rainforest, and it's spread out over many millions of acres and hundreds of islands.

Unfortunately it's millions of acres of oldgrowth trees were being hammered by clearcutting. It is a forest that looks very much like something Spielberg would've liked to put in *Jurassic Park*, if he could have. In fact, the Tongass is more biologically evolved than the forest that he used. It is the northernmost temperate rainforest in the world.

I was once called out, during a lecture in Washington about what rainforest was. I said, "How do you define it?" The biologists said, "Well, its 90 inches of rain a year." I said, "Ketchikan gets 320 on average. Do we qualify yet?"

This is what was happening to all this old-growth, and the cheap wood, the sitka spruce, which wasn't as usable, was being turned into pulp for diapers in the Third World.

The rest of the fine large logs were all being sent to Japan and sunk in Subic Bay, so they could be used later when wood was no longer on planet Earth. The idea that this kind of an environment that you see here was being traded for this just struck me the wrong way.

I was a child of a Republican family taught to also take a libertarian view about this economically and look at the real dollar thing going on here, and it was a joke. It was being subsidized by tax dollars. It was destroying biological habitat. It was wiping out the salmon fishery.

The clearcuts right here are on slopes that are so steep that the 300 inches of rain just bring down avalanches of mud and rock into the salmon streams – and wipe the salmon streams away. There was no enforced regulation.

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This is completely illegal right here. It's all too steep. The roads go up too far.

Nobody was doing anything about it at all. My first wife, Carey Peterson, and I, were angry at this pointless destruction so I am happy to say we co-authored, *The Tongass: Alaska's Vanishing Rain Forest*,

Many years later, I'm not happy to say, the cut is still going on. Helping to pass the Tongass Timber Reform Bill was accomplished through lobbying in Washington DC and the handing out of the book in Congress. Senator William Proxmire also hosted an exhibition in the Senate Rotunda and simultaneously gave the Congress the Golden Fleece Award for their management of the Tongass. All of those things built momentum over the four years from '86 to 1990. Finally, in 1990, George Bush Senior signed the Tongass Timber Reform Bill into law: the largest reform of American forestry practices in the history of the country.

I'd like to say that my mentor in all of this is a good friend of Dave Foreman, and also was a partner and in founding Earth First! – Bart Koehler, who has been singing for you and who is with this conference today.

If it hadn't been for Bart and Julie, I don't think Carey and I would have ever gotten to or have known the places and the people that we met. I'm forever grateful for that. This is Ward Cove, Louisiana-Pacific Ketchikan's mill in Ward Cove in Ketchikan.

I'm happy to say that this mill is now gone. Ward Cove has been cleaned up. The trees have grown back. The idea that I've lived long enough to take a picture like this and know that it's gone back to real forest is really fantastic, in my own recognition of what's happened.

The beauty of the moment of when they passed the Tongass Timber Reform Bill – and it's why I'm on your stage today is that, many photographers photograph in Wilderness because of their love of Wilderness, and I'm unique in that I'm one of the only photographers in America that has actually created Wilderness and I tried to defend it.

There were 11 Wilderness areas and over a million acres of oldgrowth trees protected by the Tongass Timber Reform Act.

Inspirationally, I'd like to take you into what Wilderness means. For me, the very first big moment of my life was a three-person kayak trip up into Tracy Arm-Fords Terror Wilderness in Southeast Alaska in the Tongass rainforest. It's a very narrow fjord. We chose to go in on the solstice high tide of summer.

That means that fjord fluctuation was plus or minus 18 feet of tide, twice a day. In a fjord, the question might be, with an 18 foot tide, exactly where do you camp? The paddling around with the big icebergs and the amazing weather and the streaming waterfalls coming off 3,000 vertical foot summits right down onto your kayak is all pretty breathtaking.

Looking for a camp site with fresh water where you won't end up underwater when the tide comes up is even more breathtaking. I believe it was Edward Abbey that said, "It isn't Wilderness until when you enter it, you realize you are no longer at the top of the food chain."

In Alaska, that's true, because, certainly, there are the great brown bears out there. It's also true, because the weather would just as soon take you out, as well. There was some fantastic power about being out there for 12 days, just the three of us on our own.

We never saw anyone else in the entire time we were there. We had massive ice flows coming back and forth with the tidal flux. We got stages of really horrible weather and really fantastic weather.

The idea that we were even out there and living, literally living in that environment, even for a brief time, was really quite extraordinary and empowering in some other place down in here about self-confidence and self-determination and personal capabilities that, I think, only Wilderness reinforces in us.

The farther up into the fjord you get, there aren't a lot of beaches to hang out on. There's my fresh water source, but I don't see where the tents are going to go. Here's another really good example of the shore lines that we were looking for a beach on.

Here is where we found our deepest camp. I am actually in a stream bed, hoping that it doesn't rain during the night and have the stream come up. This is pretty typical to the camping. Being in there like that, and being in such a wild place, and having that experience renewed me, like you couldn't even imagine.

On the way back out, Russell, a young friend of a friend who was helping us paddle and carry gear and stuff like that, turned around and said, "it must be amazing that you've got something to do with this and that you are connected to this, I hope that in my lifetime I can do this too." He has gone on to do that too. For me, it was the proof of the value of Wilderness.

To have that experience at my age and to think that it was almost like being 20 again and backpacking in the Bridger Wilderness in Wyoming. Here I was mid-40s and I was out there completely alone again in this amazing place. Scale is a big deal in Alaska, so I threw in this shot of the Sawyer Glacier so you could get some sense of what it'd be like in a kayak to paddle up to that thing.

That was the creation of Wilderness right there and I was lucky to be connected to that. It was the good fortune of the passage of the Tongass bill.

Continued

Then I was asked by the Nature Conservancy if I would like to float a river that came down out of Canada and split Glacier Bay National Park and Wrangell Saint Elias National Park before flowing to the ocean. Apparently the Canadians were going to put a mine on it and the Conservancy was hoping I'd take some pictures and maybe make a difference.

They hooked me up with two Alaskan pioneer women, Celia Hunter and Ginny Woods, who had founded Camp Denali. They were sort of the stars for the float trip. Ten or twelve of us floated the Tatshenshini River out of Klauene Provincial Park, a Wilderness park in Canada, and then down the river. It ultimately becomes the Tatshenshini-Alsek because the two rivers come together.

At the point they come together, it's over two miles wide and it's flowing at about 15 knots. This is a river that's raging. It has a lot of water and it has a lot of snag trees. It's a pretty wild float.

This is where the location of the mine was to be built. It was to be called the Geddes Mine. It was going to take the top off of the mountain off, creating an open pit copper mine up there. Then the tailings would inevitably be in the river and come down between two American national parks and out into the Pacific. We believed that was a bad idea.

There's Ginny and Celia right there. Bless both of them, they're two absolutely remarkable pioneer women. I'm honored to have served on the Alaska Conservation Foundation Board with Celia. They're in one ear, on this side, and one on the other side talking to me endlessly on the whole float and trying to bring out the best in pictures.

This image was ultimately given to Senator Al Gore and Prime Minister Harcourt, because my story on the Tatshenshini that broke in *Life* magazine was the first story in the American press. It got picked up by *Newsweek*. It got picked up by *Time*. Lots of other photographers jumped in. Many Canadian photographers got involved.

We started to develop a book and I lobbied Senator Gore directly. Gore's friend was Prime Minister Harcourt. Gore got on board with it and then he went to Harcourt, and Harcourt pulled the mining permit.

He did this before the book came off press, so we actually pulled the book off press and took Harcourt's letter and wove it in to the signature in the book. So, the letter is in the book. We all said – this is amazing. This is the first time we've ever done a proactive book and the campaign ended before the book got put out. It was very cool. This print was given to both Gore and Harcourt. I'm flattered to have it hanging on their walls.

When you finish the float, you come out between Wrangell Saint Elias and Glacier Bay Parks in the amazing Alsek Lake, with these monstrous calved-off bergs that are now flowing out of the lake and down the Alsek to the Pacific. We all had a beautiful evening that evening.

Our last beach before the plane pick up was looking at the Alsek Glacier, seven miles across its face with Mount Fairweather at 15,000 feet in the background. It's one o'clock in the morning and that's alpen-glow on Mount Fairweather. We're having dinner in camp on our final night.

This Tatshenshini campaign created the largest protected area by designating the river as a world heritage biosphere site, which Harcourt got done. He wed Klauene, Wrangell Saint Elias, Glacier Bay, and the "Tat" Corridor into what is now the largest contiguous protected wildlands on the entire planet. That is really a unique thing.

For those of you that are familiar with Alaska, down to the right corner is the Tongass Rain Forest and the islands of the Tongass. Now, I'm going to take you out to the west where the hook of the Aleutian Islands swings out into the Pacific, and that bay right there is called Bristol Bay. – You can see the perfectness of the bay right there. Just upriver where that lake is, that's Iliamna.

Slightly above that to the north, in the headwaters of the greatest salmon fishery in North America, Canadians are proposing to put in the largest open pit and cyanide, gold, leach copper mine in the history of the world. It's called the Pebble. It would be in the headwater of the three most significant rivers in the Bristol Bay fishery drainage. Any time you pour something like that in the headwaters of fishery, it's probably not a good thing to have happen.

Bristol Bay and Southwest Alaska are relatively undisturbed. There are two towns and 26 native villages, population of less than 30,000 – all of those put together – an area nearly the size of the state of Washington that is basically rivers, lakes and really, really wet saturated top soil.

This is one of the 20 largest freshwater lakes in the world, Lake Iliamna, with its own unique species of fresh water seal. Sometimes the lake looks like an inland sea. Then some spectacular, already established Wildernesses and national parks.

This is Katmai. Katmai, many of you know because Katmai is considered to be one of the greatest bear watching, viewing areas in the world. Brooks Camp and Brooks Falls is where all those pictures are taken where you see the fish jumping into the bear's mouth.

Thank you, Tom Mangelsen, Art Wolfe, Frans Lanting and all the rest of you who have taken this amazing shot. It's also the home of the Alagnak, which is a designated wild and scenic river – but there are hundreds of rivers within the park.

There is this unique area called the Valley of Ten Thousand Smokes that indicates just how volcanic and seismic the park is. This was one of the greatest volcanic eruptions, in 1912, that the planet ever saw. This was the eruption of *Continued*

Novarupta. It buried this valley under a 150 feet of ash and produced one of the biggest pyroclastic flows that science has ever documented.

To the north of Katmai, on the other side of Lake Iliamna, is Lake Clark, one of the national parks and Wilderness that almost nobody knows anything about. Very few of us have ever visited: I feel fortunate.

Lake Clark is extremely volcanic. It's extremely seismic. It's Grand Central for some of the biggest earthquakes to ever occur on the planet. It's got active volcanoes in it that have recently, as recently as the last ten years, gone off and shut down the airport at Anchorage. This seems like a really bad place to put in earthen dams larger than Three Rivers Gorges, to hold back cyanide gold leach ponds. I don't know, it just doesn't seem to work.

As you can see how volcanic this is, one of the other unique things we have discovered in the watersheds is they seem to be porous and actually waters from one river system intermix, through the porosity of the volcanic rock, into other river systems. So you poison one of them, you might well poison all of them. This is Twin Lakes, a spectacular lake system. It isn't only Lake Clark, there are about 15 very large lakes and another hundred, all within Lake Clark National Park.

Then, to the west is another Wilderness area called Togiak National Wildlife Refuge and Wilderness. Togiak is a spectacular fishery. These are rivers that recreational fishermen come in to fish from all over the world and pay small fortunes to stay in a lodge for five days and go after trophy trout.

These are beautiful places. They are already designated, so I am not creating Wilderness here, I am simply trying to defend it from what I believe is a really bad idea. Already in place is a huge, ten million dollar recreational industry and a one billion dollar salmon fishery that is a renewable resource every year.

These parks are not even developed yet. The economy of ecotourism is not even really tapped into. I think the future of this place lies with the fishery and the renewable resource industries rather than these kinds of extractives.

This is the Bingham Mine in Utah. This is a very big open pit mine here in North America. If you don't know it an open pit mine, the minute you dig in to the earth, exposes the rock to water. Then the iron immediately oxidizes, turning into a sulfate and you get really poisonous acids and toxins.

This is the Berkeley Pit in Montana. In the Berkeley Pit, the water is rising and they have to pump the water out all the time. The water is so toxic. They are actually mining the water now. Think about that. This open pit mine was mined. Now it's filling with water and it's so toxic, they are mining the water.

I would really hate to see this happening in the headwaters of Bristol Bay.

Here is the map. The red area represents the mining zone. Considering Lake Iliamna is one of the largest freshwater lakes in the world take a look at the comparative size. Lake Clark just immediately adjacent. Katmai directly below. Togiak off to the left.

My concern is, the water is so at the surface, the minute they put the shovel in, the mine and the pit are going to start to flood. Then they are going to have to pump all that out into the slurry containment ponds, which will cover 20 square miles and they will be held back by dams larger than the Three Rivers Gorges Dam.

As it turns out – for those of you that followed the news about the destruction at Mount Polley when the earthen dam blew out and poured all the toxins into the Fraser, wiping out that salmon fishery for Canada or damaging it severely – the contractors are the same ones that were contracted to build the Pebble. This is really good news to me, because it makes the Pebble construction group seem even more suspect.

This is the site of the mine. If the mine were to be built, what you'd see here is an open pit two miles across. It would reach all the way to the horizon, and everything in this picture would be a hole in the ground. Like that.

I would say Southwest Alaska should stay like this. It should remain the habitat that it is. The resources that are out there that should be used, should be renewable and not extractive. I hope you'll all join with me in saying no to the Pebble mine, because the EPA is days away for making an announcement.

Social media and a partnership of over 160 alliances have driven out all three of the principal investors. I helped to bring in Tiffany's and Orvis, and three days ago, I brought in Tommy Hilfiger. How about that? Fashion for nature, whatever. Any way, you can get the word out. It's all fine with me.

In any case...This is Bristol Bay and I hope it continues to be the greatest salmon fishery in the world. Now, I'm going to close because I'm running over...

I want to celebrate. These are the books we produced to promote this campaign. Robert Redford is our spokesperson. These are our full-page ads we run in newspapers like the "Washington Post" and others criticizing the mine and talking about the costs. This is Secretary Salazar being given one of my prints by the Pew Trust. Thank you very much for doing that. I appreciate the honor.

I'm staying active in that effort, and people ask what are you working on now? I'm not working on anything new. I'm not going anywhere until this is over. EPA is due to come out with a decision very soon, and I'm hoping it will be negative, canceling the permits. I don't think that's going to end it, but it's going to help move along the death of the Pebble mine proposal.

Continued

Once again, I couldn't resist that: Celia and Ginny being hugged by River Guide Dick Rice.

I'm going to close by taking you to what is the penultimate example of American Wilderness. It's Denali. Denali is just absolutely the most amazing park to be in, that you could be in. It's like the American Serengeti. Life plays out. I've taken my kids in three time and we've seen wolves kill goats. We saw a wolf pack attack a grizzly. We saw two male moose fight. The landscape is beyond spectacle. The scale of it all is as you might want to know Wilderness, whether you're hiking in it or flying over it, looking down on it like in these pictures.

Even my daughter who is 15 – and she's more worried about fashion than Wilderness right now – We were up in a plane, and when we came up over the ridge and we saw Denali, she exclaimed, "Oh my God!" You know that classic OMG exclamation. This terrain to me is one of the most spectacular I have ever walked in. I definitely realized that I'm not at the top of the food chain when I'm in there. I used Denali as an example of what Wilderness is and how we experience Wilderness. Why we ought to be out there in Wilderness and appreciating it and building more of it and creating more of it.

I think that as climate change affects species migration and habitat shift, having these big wild places and the corridors linking them is going to be ever more important. I appreciate that you are all here working on that, and I want to close with the very rare shot of the double summit of Denali showing, because it shows maybe 25 days of the year. The weather around the summit is so bad.

This was my daughter's OMG shot.

I would like to say that, on the first day here, when everybody stood up in their various age groups and took some hand clapping, it was impressive to see so many young people here and they even understand what Wilderness is. But I have to say this to you. You don't understand it until you absolutely get out in it. So, if you are working for it and you're in it administratively, get out of the office and go get wild in a wild place and then you feel it here.

Thank you, very much.

Dave Foreman

Longtime Wilderness Advocate

DAVE FOREMAN has worked as a Wilderness conservationist since 1971. From 1973 to 1980, he worked for The Wilderness Society as Southwest Regional Representative in New Mexico and as Director of Wilderness Affairs in Washington, DC. He was a member of the board of trustees for the New Mexico Chapter of The Nature Conservancy from 1976 to 1980. From 1982 to 1988, he was editor of the *Earth First! Journal*. Foreman is a founder of The Wildlands Project and was its Chairman from 1991-2003 and executive editor or publisher of *Wild Earth* from 1991-2003. He is now the Executive Director and Senior Fellow of The Rewilding Institute, a conservation "think tank" advancing ideas of continental conservation. He was a member of the national Board of Directors of the Sierra Club from 1995 to 1997 and is a founder of the New Mexico Wilderness Alliance. Foreman was the lead author and network designer of the Sky Islands Wildlands Network Conservation Plan and the New Mexico Highlands Wildlands Network Vision from The Wildlands Project. He speaks widely about Wilderness and wildlife conservation and is author of *Rewilding North America*, *The Lobo Outback Funeral Home* (a novel), *Confessions of an Eco-Warrior*, *The Big Outside* (with Howie Wolke), and *Take Back Conservation*. His book, *Man Swarm and the Killing of Wildlife* (2011), deals with human overpopulation its effect on wildlife. His latest book, *The Great Conservation Divide* (2014), lays out the history of the battle for the last Wildernesses in the 20th Century. His work appears in many anthologies, including *Rediscovery of the Wild* (2013) and *Life on the Brink* (2012). Dave's internet column, "Around the Campfire," is featured on The Rewilding Institute's website, and deals with a wide range of conservation issues. He received the 1996 Paul Petzoldt Award for Excellence in Wilderness Education and was named by Audubon Magazine in 1998 as one of the 100 Champions of Conservation of the 20th Century. He is considered one of the most effective and inspirational public speakers in the conservation movement. Foreman has spent much of his life backpacking, running rivers, and photographing Wilderness and wildlife. He lives in his hometown of Albuquerque, New Mexico. For more information see www.rewilding.org.



Plenary Speech by Dave Foreman

Well, thank you for being here on a Sunday morning. I generally don't do Sunday mornings, but I am very glad to be here.

This conference has been thoroughly wonderful for me seeing so many old friends. And, in some ways, probably this is meant, me being the closing speaker, as recognition of rehabilitation for Dave Foreman, the bad boy of the Wilderness Movement, but I have to disappoint you all. I'm not rehabilitated, and never will be.

I thought the greatest pleasure of this would be seeing all of my old friends from the last 40 years, but actually my greatest pleasure has been meeting young people, like Christina, Monica and others. To know that there are those coming behind you who share the same values, the same passion, the same commitment to action, is a wonderful, wonderful thing.

The most terrible thought I could possibly have upon dying would be to think that there was nobody coming after me to carry on my work and that of my peers. I can die happy because I know that there are a lot of people coming. As you will hear in a few minutes, as clumsy as I am and as adventurous as I am, that's always just around the corner.

Thank you, all you folks, who are in your 30s and 20s and younger, who are here, and those like you who are carrying on – because you are the hope of the future. You truly are the greatest generation and you have the greatest responsibility of any generation that has ever lived since we came out of Africa 50,000 years ago and spread around the world.

Your job is nothing less than to save Earth from all the damage all the previous generations of *Homo sapiens* have done. And don't worry, you've got plenty of help from the past. All you have to do is look back at the great champions of life on Earth, the great champions of humility, and know that you're following in those footsteps. You just need to have bigger shoes than we had and do more and really save it.

To show how this works, let's look at what human society really is. Edmund Burke, the great English philosopher and the founder of intellectual traditional conservatism – and there are no more intellectual traditional conservatives alive other than me today – said, "Society is a compact between those who came before, those who are here now, and those who are yet to come."

If we look back on what Howard Zahniser, Aldo Leopold, Mardy Murie, Celia Hunter, Polly Dyer, and so many did, we are carrying on their work today, and we have a responsibility to live up to the example they set, to live up to the power and the passion and the accomplishment they had, and to make sure their accomplishments are not lost, but rather to take them even farther.

When Howard Zahniser was working on the Wilderness Act, he thought we might get 30 million acres. We have a 109 million acres.

That is a tribute to my generation. But the task for you younger folks is to take it even farther. By the time some of you are my age, we need a Wilderness system, on land of 300 million acres. And we need a Wilderness system in our marine lands of 500 million acres.

So, you have a lot to do, but you also have to stop the extinction crisis. You also have to stop the population explosion, you have to stop the overcoming of the Tree of Life by mankind.

If we go back to the purpose of the Wilderness Act, it says, "Because of expanding settlement, exploding population and growing mechanization, unless we the Congress act now, future generations will have no legacy of Wilderness to live with."

Howard Zahniser said, "We have to have the boldness to take the Wilderness from the eternity of the past and pass it on boldly to the eternity of the future." And that is the job for all of us to do.

Many of us have been doing it. Some of you are just coming in to doing it. But that is what we have to do. And we have stay true to Wilderness. Zahniser also said, "The primary character of Wilderness is its wildness."

In that sense, Wilderness is a compact between us and the land: that we will act with great humility and great restraint in whatever we do in Wilderness.

There are times that we need to do some things in Wilderness, such as the New Mexico Wilderness Alliance, pulling cheat grass out of the borders of the Sandia Mountain Wilderness here.

But there are times that we need to be hands off and let the Wilderness be. So we need to seek the humility, to respect the wildness of Wilderness. But we also need to have the undying urge to experience that wildness of Wilderness and to open ourselves up to what one Wilderness leader back in the '60s called the hush. And to me the hush is a key experience to have in Wilderness – to be surrounded by the quiet, to be away, deep in your mind, from civilization and technology.

I want to call for a new campaign of quiet Wilderness recreation. At one time, I liked to dash through the Wilderness, 25 miles in a day with a fifty-pound backpack. You see a lot of country, but you see it superficially.

You are not stopping to meet the wildflowers. You are not seeing the birds. You are not learning their names.

Continued

I had a day this spring in the foothills of the Sandia Wilderness, where I was able to go on a slow walk, and greet 50 species of wildflower by name. That is because the Wilderness is a wild neighborhood and you need to know your neighbors.

You need to be a polite, respectful, wayfaring visitor through this wild neighborhood and recognize who the folks are that live there. I consider curve-billed thrashers folks just as much as I consider you to be folks.

There was a tree that blew me away once, down on the Rio Chujuaqui, south of Alamos in Sonora. It was a giant fig tree. It was huge. Its canopy could cover half of this auditorium. It had all these branches and trunks and stems and twigs going out.

There must have been a few thousand, a few million leaves on it. It was the most incredible tree I have ever seen. And I have seen the redwoods, I have seen the Sequoias. But this fig tree just blew my mind and to me it represents the Tree of Life.

You see this sprawling tree spreading out its boughs for a hundred yards in every direction, and you walk up to it, to this low leaf here and say, "Wow, that is us, that is *Homo sapiens*. What about all these other leaves? They are on the Tree of Life too. We need to respect them and respect their rights to be here."

So, for me, when I go into a wild neighborhood, I like to know who my neighbors are and be able to talk to them. That's why I am known among the hikers and the runners as the crazy guy who talks to flowers.

Because, how can you know your neighbors without greeting them? It's good to know their names too, or at least to greet them if you don't know their names and say, "Boy, you're sure pretty today."

Always pass out compliments to the birds and flowers, and other things you see. "Boy wind, you're really mighty today," those type of things. "Oh lightning, good hit. You almost got me." Be complimentary. Be friendly. Be a respectful wayfarer. I would just like to give some examples of appreciating the wildness of nature.

A number of years ago, my wife and I canoed the Noatak River, from the Gates of the Arctic to the Noatak National Preserve, for 375 miles in 22 days. Among my favorite animals of all are musk oxen, and we saw a number of them on the Noatak. Including one, as Nancy and I were canoeing along, ahead of everybody else, there was a musk ox up on the bench.

So I said, "Let's pull into this little cut here. I'm going to get up and go try to get some pictures of the musk ox," because there was another little cut separating us. I thought, "perfectly safe," so I was creeping up to that cut, and all of a sudden, the musk ox comes out of the willows. It had been traveling, too. There we were. Two alpha males staring at each other, but one alpha male was a very puny alpha male.

That bull musk ox snorted and pawed the ground, and started to chase me. Here I am, running across the tundra with this musk ox after me, as the rest of our party comes down the river and sees the scene up on top. Afterwards, one of my friends, Kenyon Fields after the musk ox says, "OK, I've taught this asshole a lesson. I can let him go [snorts]." And the musk ox is wandering off that way, feeling really tough.

Kenyon says, "You know, Dave, I can't think of a better way or place for you to die."

That was the finest compliment I've ever gotten in my life, because I was in a 16 million acre Wilderness. To think about going out there, trampled to death by a musk ox, boy, what a way to go!

I had the commitment from Nancy that if I went, she would give the rescuers or the people who wanted to collect my body the wrong GPS coordinates, so I would not be found right away and everybody could have a good time eating me before I was hauled off out of there.

That's a Wilderness experience, and even though it was exciting, there was the hush of Wilderness about it. You only hear the snorting of the musk ox and the pounding of its hooves. It's a different thing than being on the freeway.

I don't encourage everybody to be as clumsy and oafish in Wilderness as I am. Every injury I have, I've gotten in Wilderness and I can just sit back and start at my toes, and go to the top of my head, feeling every pain I've got and remember, "Oh yeah, that was such and such a place," and remember all those wonderful Wilderness experiences that I've had.

I want to encourage you to seek the hush of Wilderness, quiet Wilderness. To go out in the Wilderness somewhere, and find a tree, and sit down under it and go to sleep, or pretend to sleep, and begin to filter out all the sounds you hear, and try to parse them out and find who's making this little part of the symphony, and who is making this part of the symphony. Because at first, it's just as one background noise, but if you listen closely, you can begin to pull each out.

When you open your eyes, there might be birds in the tree right above your face. Or you might open your eyes because something falls on your face. But that, to me, is as great a Wilderness experience as anything I've ever had. It's just, lie back, surrounded by the Wilderness, and feel the hush. That's where we get humility.

I gave a talk this morning about the anthropoceniacs, those arrogant folks who think that we have taken over Earth. They're highfiving each other saying, "We're gods now. We run the planet. We're going to be good at it, we're going to do a better job, but we are going to get rid of all of this trash out here."

Continued

As Peter Kareiva, the chief scientist of the Nature Conservancy and a leading anthropoceniatic, said, “The passenger pigeon went extinct, but it didn’t have any impact.” Well, it had an impact on the passenger pigeon.

It didn’t just *go* extinct. *We slaughtered it!* That was a *sin*, and it’s a *sin* to say the passenger pigeon “went extinct”, because that absolves us and our foreparents of blame.

Let’s just look at the passenger pigeon. In 1803, John James Audubon sat on the banks of the Ohio River, and for three days and three nights, the sky was dark from horizon to horizon as a single flock of passenger pigeons flew over him. He estimated there were two billion birds in that one flock. By the time of the Civil War, there were still billions of passenger pigeons out there.

My family in Kentucky at the time, they had gone there with Daniel Boone, were used to the great passenger pigeon flights. Everybody thought they could never end, but then the telegraph began to call hunters in when there were great pigeon nestings. By the last great pigeon nesting, not of millions and millions of birds, but of only 250,000 birds, along the Green River in Kentucky, the hunters came in. They slaughtered the pigeons, maybe five thousand escaped, 40,000 were left on the forest floor to fatten the hogs that were herded in, 200,000 passenger pigeons were loaded up in barrels and shipped on the railroad back to Baltimore to be sold on street corners.

There was a derailment on the track ahead, the pigeons rotted and they were just dumped into a ravine, in West Virginia. It was the end of a living storm and the last passenger pigeon in the wild was shot in 1903 in Ohio. So all hail the man or boy that did that, for he was the true soul of the American pioneer.

The last passenger pigeon named Martha, died in the Cincinnati Zoo, a hundred years and a month ago. I have often wondered about Martha, born in a giant nesting with a million other passenger pigeons, flying through the air as this living storm that made deer run for cover just by the beat of their wings, being surrounded by all of these other passenger pigeons. What an incredible loneliness she must have felt. Just an emptiness. When that darkness finally came to her, did she see before her closing eyes, the great flocks to which she had been born?

So, to say the passenger pigeon became extinct and it had no impact, to me, is one of the most grievous sins we can make. It’s a wicked thing to say or to think. We have to have a much greater-hearted relationship with the world around us and all the wild things in it. Do we have the generosity of spirit and the greatness of heart to share Earth with our neighbors, with our fellow leaves on the Tree of Life? Can we rise to that?

The conservationists of my generation and the generation before us tried to lift us up to that ethic. But we are still far from it. That’s why you young folks here are so important. Why you need to go out and meet all your wild neighbors, why you need to get to know them – so that their welfare is deep in your heart, and when something happens to them, it hurts you. To get out and feel the hush, surrounded by wild things.

Whether it’s just the little vestpocket Wilderness here or the great Brooks Range up there, we have to feel it, we have to open ourselves up and let nature come in. We have to be willing to take it on its own terms. Like my wife Nancy and I did this summer, to celebrate the 50th anniversary of the Wilderness Act, we thought what better thing to do than to canoe the Sheenjek River – which Mardy Murie writes about in *Two in the Far North* and celebrate the Muries and celebrate the Wilderness and canoe 300 miles of the Sheenjek River in the Arctic Wildlife Refuge.

We did and after our friend left us, because he had to take out early, we were gone for a month. We were all alone in 20 million acres of Wilderness, but there were record rains. The river flooded, and it was really exciting for a couple of relatively ancient out-of-shape people – dodging all of the snags, choosing which new channel to take.

Then we got washed into one channel where the bank was being cut out by the force of the river. There were sweepers hanging down and one took us out. Over we went in our heavily loaded canoe. For over a mile, we floated downstream, trying to hold on to the canoe, being hit by other sweepers, being pulled under water by currents and all of that.

We finally drug ourselves and our canoe out on a gravel bar. Boy, what a Wilderness that is!

Again, I don’t recommend clumsiness or foolhardiness such as I demonstrate. But it’s a way to experience Wilderness, and it’s a way to experience the real power of Wilderness, and it’s a way to find humility. Humility, my friends, is what we need more than anything else in the world. We need a humility before the workings of nature. We need a humility before all of our wild neighbors. We need a humility before the process of evolution, which I see as the essential characteristic of Wilderness.

That’s what Lowell Sumner and George Collins saw back in 1953, when they first explored the eastern Brooks Range as a possible national park. It’s Arctic Refuge now. But they saw it as a place big enough and intact enough for the mysterious, wondrous process of evolution to go on and on, and for every species up there to be free to follow its own evolutionary tendencies.

We have gotten away from seeing evolution as the essence of Wilderness since then. I think we need to bring it back. I think we need to recognize that we are just interlopers here that we are not in charge of the planet that we have not taken it over. No matter how much we may think we have, the price of arrogance, of hubris, as the Greeks knew, is destruction.

Continued

Never before has the human species been so arrogant, so full of itself, so sure of itself, so willing to talk about monstrosities, like the singularity – where we become machines and live forever. What a disconnect from life to have your consciousness in a laptop or a cell phone! My God! How did those people become so alienated from the wild world? Lordy, I'd love to drag them along on the Noatak and put them up on that bench with that old musk ox's will.

What we really need to do is develop an ethic again. It's Sunday morning, there's nothing wrong with talking about good and bad, righteousness and wickedness. To cause the extinction of other species is wicked. It is a sin whether you're secular like I am or a believer like maybe some of you are. But sin is sin, and there is no greater sin than consciously or carelessly causing another species to go extinct or to destroy the last of an ecosystem or to put a monstrous, poisonous mine in the middle of the Alaska Peninsula.

We ought to call people out on this stuff. Let's not be afraid of being ethical, of talking about good and bad, and how we need to rediscover good in our souls, in our hearts.

There are many ways to do that. Let me just tell you, I'm multilingual. It's not just because Texan was my first language and I had to learn English later.

I'm multilingual in another sense. I'm absolutely fluent in cat. I'm also fluent in western scrubjays. I'm not bad in musk ox. I'm not bad in raven. I can get by. But where I really shine is in chickadee.

"Chickadee, chickadee, dee, dee, dee." My God, what a song that is! When I'm up on the mountains and here comes a little flock of chickadees, "Chickadee, chickadee, dee, dee, dee." I'm just overwhelmed with joy. There's no more joyful sound than that but it's also a sermon. It's a sermon from the wild to us, saying "We're chickadees. And we're chickadees for being chickadees. We aren't chickadees for you. I mean you might enjoy us. You might be turned on by us, but we're chickadees for ourselves and we're good-in-ourselves.

"If you look up ethics in the Encyclopedia Britannica, it says that whatever is good in ethics, an ethically good thing, is good-in-itself. We chickadees are good-in-ourselves. We have a right to exist just as much as you do. You don't have a right to wipe us out and all our neighbors. Chickadee, dee, dee, dee, dee."

There is so much in that little song.

Such a sermon. Such a celebration of life. When I'm with Nancy, and hear a chickadee, I start going, "Chickadee, dee, dee, dee." She just, "Oh my God! He's going to drive me nuts!" because I go on like that for 20 minutes. I'm so full of it. I feel like a chickadee myself and I'm trying to parse out all the things they are saying to me. And so, "Chickadee, dee, dee, dee." Say it, sing it. "Chickadee, dee, dee, dee." "Chickadee, dee, dee, dee."

Thank you.

“Wilderness is an anchor to windward. Knowing it is there, we can also know that we are still a rich nation, tending our resources as we should—not a people in despair searching every last nook and cranny of our land for a board of lumber, a barrel of oil, a blade of grass, or a tank of water.”

- SENATOR CLINTON P. ANDERSON,
former Senator of New Mexico and former U.S. Secretary of Agriculture



Racetrack Playa at sunset, Death Valley Wilderness, Nevada
By Bobby Wheat, www.bobbywheat.com

2020 Vision

October 17, 2014

2020 Vision Interagency Stewardship Priorities for America's National Wilderness Preservation

Connie Myers, Arthur Carhart National Wilderness Training Center

Chad Dawson, Society for Wilderness Stewardship

Cameron Sholly, National Park Service, Midwest Region Director

Thomas Tidwell, Forest Service Chief

Daniel Ashe, Fish and Wildlife Service Director

Neil Kornze, Bureau of Land Management Director

Connie Myers

Arthur Carhart National Wilderness Training Center

CONNIE MYERS is director of the Arthur Carhart National Wilderness Training Center, the only federal interagency that provides Wilderness training, information, and education to Wilderness managers and the public.

Since establishment in 1993, and through interagency collaboration and partnerships, the interagency Carhart Center Team has provided training and coaching, information and advice, education and outreach to more than 30,000 federal employees, volunteers, teachers, and kindergarten through college students.

A native of CO, Connie grew up chasing wild turkeys on the Uncompahgre Plateau and counting deer on the highway between Glenwood Springs and Aspen with her dad who was a biologist for Colorado Division of Wildlife. Connie started to work with the Forest Service straight out of graduate school in 1985 as a wildlife biologist and social scientist on the Ketchikan Area of the Tongass National Forest in Southeast Alaska where she conducted survey research in remote communities to help resolve community and agency differences on timber harvest. Connie moved north to Juneau in 1987 where she spent five years working as subsistence and public affairs specialist on the original Tongass Land Management Plan Revision Team.

Connie moved to Montana in 1991 as Assistant District Ranger on the Ninemile Ranger District. It was in this position that she began work on several national Wilderness projects which, in turn, lead to establishment of the Arthur Carhart National Wilderness Training Center and her current position as director.

More than two challenging decades after establishment of the Carhart Center, Connie and the Carhart Team still believe that, no matter how difficult, interagency collaboration is the right thing to do for taxpayers of the United States and for the Wilderness resource they have entrusted into our care.

Connie holds a BS, Natural Resources Management, University of Tennessee at Martin; MS, Wildlife Biology, Michigan State University; MA, Communications, Michigan State University.



Plenary Speech by Connie Myers

Good afternoon. My name is Connie Myers. I'm Director at the Interagency Arthur Carhart National Wilderness Training Center. And it is indeed an honor and my great privilege and pleasure – along with my colleague and friend, Susan Fox, Director at the Aldo Leopold Wilderness Research Institute – to welcome you here to this lunch session on *2020 Vision: Interagency Stewardship Priorities for America's National Wilderness Preservation System*.

In the very brief time that we have this afternoon, we're going to do four things: We're going to take a look at how the **2020 Vision** document was developed, and the major goals and objectives in that document. We're going to hear perspectives on Wilderness stewardship from the directors and the chief of the four Wilderness managing agencies, and we're going to witness their commitment to interagency and partner collaborative efforts by their signature to this document.

The Interagency Wilderness Policy Council includes the four Wilderness Land Managing Agency representatives at the Washington office level who have Wilderness directly under their portfolio – and a member of the USGS. They recognized that the 50th Anniversary presented an incredible opportunity to reflect on how well we've done in interagency stewardship of the System, what the contemporary issues of the day are, and how we can move forward to address those issues, collaboratively. And so, they decided it would be a really good idea to capture the opportunity of the 50th Anniversary and put together an Interagency Vision for Stewardship.

We recognize that right now there's a tremendous amount of incredibly effective work going on within each agency – and among our partners. But how powerful it would be if together we found what the fit is. If we could sort out among each other and among our partners where we have synergy to forge a united interagency nationwide, system-wide approach to activities and actions to advance America's National Wilderness Preservation System that would be a powerful force. That's what we're after today.

And here briefly to share how the Vision was put together and the background for that is Chad Dawson. Chad is one of the members of the science team that put together the Wilderness Manager Survey. Chad is Professor Emeritus of Recreation Resource Management at the State University of New York. He is coauthor of the Wilderness Management textbook, along with John Hendee, and he is editor of the International Journal of Wilderness and a member of the Board of the Society of Wilderness Stewardship: Chad.



Fishing in The Alaskan Mist, Lake Clark Wilderness, Alaska
By Virginia Short, www.photosbyginna.com

Chad Dawson

Society for Wilderness Stewardship

DR. CHAD P. DAWSON is a Professor Emeritus of Recreation Resources Management and former Chair of the faculty of Forest and Natural Resources Management at the State University of New York College of Environmental Science and Forest in Syracuse, NY. He worked in teaching and research related to the visitor management and Wilderness management at SUNY-ESF for 24 years. Previously, he worked 15 years as an educator and researcher at Cornell University and the University of Minnesota. Dr. Dawson is the Editor-in-Chief of the *International Journal of Wilderness* and co-author with John Hendee of *Wilderness Management: Stewardship and Protection of Resources and Values* (4th edition in 2009), Fulcrum Publishing, Golden, CO.



Plenary Speech by Chad Dawson

It is very much a pleasure to be here. I have to reflect back. In 1995 there was a similar gathering of people in Santa Fe to do the 1995 Strategic Wilderness Plan. And at that time, we didn't know what the future would be. Would we be here today? What would the National Wilderness Preservation System (NWPS) look like? Here we are, nearly 20 years later, in 2014 with 1,000 in attendance having a continuation of that conversation. But it leads me to question a little bit, what will happen in 2020? Those meetings moved from Santa Fe in 1995 to Albuquerque in 2014. Is the next stop Truth or Consequences, New Mexico in 2020? Probably it should be since it would be a very appropriately named location for such a future discussion.

But what I'd like from you here today is a commitment. Who is going to be here in 2020? I can't see that well across this auditorium. Please raise your hands. Who is going to be here in 2020? Those of us with gray hair are going to try and be here. I'll be well into my 80s. If I'm here, I hope I know I'm here. That's one of the problems. But, you know, we have to be able to succeed each other, to pass this on. And that's really what the interagency 2020 *Vision* document is all about.

One input to the interagency 2020 *Vision* document is the Wilderness Manager Survey. Let me tell you a little bit about the science team that was made up of seven scientists. Leading it from the Southern Research Station for the Forest Service, Ken Cordell, and his group from the University of Georgia, Gary Green and Ramesh Ghimire – they worked on the survey implementation and analysis. Alan Watson from the Aldo Leopold Wilderness Research Institute worked together with Troy Hall, Rudy Schuster, and myself to design the survey. It was very much a collaborative effort and a lot of volunteer time went into the process.

The survey was designed to measure: the past success on achieving the objectives of the 1995 Interagency Strategic Plan; challenges facing managers today; the science information needed for stewardship of the NWPS; and the education and training needs of managers to address current management conditions and situations. The Wilderness Manager Survey was administered by the University of Georgia team who conducted it with an online survey approach.

The research design used was a distributive sampling technique where by agency administrators sent the survey out to people in the field because there was no comprehensive list available of the stewards and managers of the NWPS. There are many managers with small or large Wilderness assignments throughout all four federal agencies. We had to develop a process to contact them. We tried to contact everybody who was a manager, planner, or field staff at state, regional and national levels within the agencies.

Thank you to those 368 people who responded to the survey. We appreciate your responses. The survey didn't get to everybody. The approach was designed to gather input from the people who were on the ground as managers. We contacted as many people as we could.

The survey information used in the *Vision 2020* document is from Question 11: "Please describe what you believe are the most important problems managers and agencies need to collectively address in strategic planning to protect Wilderness qualities in the coming 20 years for the National Wilderness Preservation System?" From the 368 survey respondents, we received over 600 responses to that question because each respondent listed one or two important problems.

The summary of Question 11 responses was taken to workshops with the four agencies for validation and to guide the discussion process for the interagency 2020 *Vision* document. The discussion was primarily lead by Connie Myers from the Arthur Carhart Wilderness Training Center and Alan Watson from the Aldo Leopold Wilderness

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Research Institute. That summary information also went out to the agencies – BLM State Wilderness Leads, Forest Service Regional Wilderness Program Managers, National Park Service Wilderness Directorate and Wilderness Leadership Council, Fish and Wildlife Service State Wilderness Leads.

This discussion process took a lot of time and effort and it led to a preliminary document listing goals and objectives for the interagency *2020 Vision* document. The preliminary document was drafted by staff from the Arthur Carhart Wilderness Training Center and the Aldo Leopold Wilderness Research Institute and was based on interagency workshops and discussions, a comparison with the 1995 Strategic Plan, and a comparison with strategic plans for Wilderness

within the four agencies. And finally it was reviewed, discussed, and edited by the Interagency Wilderness Steering Committee and Policy Council.

And that brings us to the document that you have presented to you today – the *2020 Vision*.

Thank you.

Connie Myers introduces 2020 Vision and Leadership of the Four National Wilderness Preservation System Agencies

As Chad said, hundreds of responses were coded, looked at and compared with the existing strategic plans for each of the agencies, and with the 1995 plan. We laid them all out in front of us. We used language in *2020 Vision* that came straight from the words that people gave in their survey responses. And it basically boiled down to three things – protect, connect, and lead. And that's what this Vision is all about. Let's look at each one of those categories for a minute here.

We heard from Chris Barns, I think it was just yesterday, how important it is to follow the law. And we see three times in the law that we're supposed to do what? What are we supposed to protect? Protect Wilderness character. It's kind of difficult to do that and not be paying attention to the challenges of the day, right? So in addition to protecting Wilderness character, we have to do that in the context of preparing for ecological change. The questions become, "What is the role of Wilderness as the country and the world faces the consequences of climate change?" Could it be that Wilderness is, in fact, our ecological hedge fund? Could it be that Wilderness is an anchor for natural processes that we can research, we can do science to determine how these places, on their own, will recover from the challenges of climate change?

Those are some of the questions that we need to, together, ask and explore. Which brings us to how critical it is that we have the science that we need to do the work of Wilderness stewardship today and in the future. But, you know what? It's going to be kind of hard to get any resources to do that when people don't care.

So we've heard a tremendous amount today, and in the last couple of days, about relevancy, right? So I find it fairly interesting, that as I look at the Wilderness Act when it was passed in 1964 – and as it still says today, "In order to assure that an increasing population, accompanied by expanding settlement and growing mechanization, does not occupy and modify all areas within the United States..." And what did we hear from Sylvia? We heard about population growth, right, and how exponential it is. We see that we're losing open spaces at incredibly rapid rates. Wilderness is more relevant today than it ever was. The challenge we have is telling the story. The challenge we have is connecting people to their Wilderness heritage, expanding their awareness of its significance, its importance, and its relevance to them. Telling the story is one thing, but there's nothing like showing it. We've had a number of conversations, and will continue to have conversations, about how to make those connections and how important it is.

It was interesting in visiting with the Directors and the Chief, when I asked them about their most significant Wilderness or outdoor experiences, almost to a person, they related something that happened when they were a kid, when they were young, and how exciting that was. And I know that we're all supportive of providing those opportunities for every generation. So what would happen if we collectively, rather than individually, started moving in that direction in a more meaningful way?

Who are going to be the next generation of Wilderness stewards and scientists? We've got to nurture that. We have to make sure they can get there, right? All that's good. We need to protect. We need to connect. And how are you going to do that? You're going to do that by leading. And it's pretty exciting that the agencies here today have recognized that and have taken a leadership role and said, "We need to refocus. We need to figure how, together, we can do this business of Wilderness stewardship."

Wouldn't it be pretty exciting to cultivate in all agencies the kind of leadership that we're looking for in Wilderness stewardship? Wouldn't it be amazing, as I think Chris pointed out, if our leaders actually were rewarded for a good job in Wilderness stewardship? We have the opportunity to explore how to demonstrate to our leaders of tomorrow what a great job they're doing by rewarding that work and encouraging others to follow.

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And here's the big one, right? Nobody has the resources to get the job done. So how is it that, together, the people in this room, both the agencies and their partners, can join shoulder to shoulder and lean in to this business of Wilderness stewardship? It's a new day. It's a new time. Nobody has the ability to, on their own, get this business done. And that's why we're all here, to figure out how together we can move forward. And we're excited that today we have leaders in this room that are going to be making a difference. And we're going to hear from them now.

John Jarvis was called away for a family emergency, and we're very fortunate to have, in his place, Cam Sholly. Cam is the Associate Director, and he is the head of Visitor and Resource Protection for the National Park Service. He is on the Interagency Wilderness Policy Council and is an incredible advocate for how we can move forward together.

From the Forest Service, Tom Tidwell, Chief, has been with the Forest Service for almost 40 years now. And he's excited recognizing that collaboration across partners and agencies is critical to how we're going to move forward.

In addition, then, Dan Ash is Director of the U.S. Fish and Wildlife Service. He has he been in the business of land management for almost his entire life, because his father was a U.S. Fish and Wildlife Service employee. Dan knows what it means to pass things from one generation to the next.

And while relatively new to the BLM, Neil Kornze is certainly not new to the politics associated with it. As Special Assistant to Harry Reid, he became quite familiar with what it takes to get bills passed that protect areas. And that can't be done alone.

So, I'd like to hand it off now to Cam Sholly.

Cameron Sholly

National Park Service, Midwest Region Director

CAMERON (CAM) SHOLLY is currently the Midwest Regional Director of the National Park Service. As regional director, Sholly oversees approximately 60 national park units in 13 states of the Midwest and a workforce of over 2,000 employees. The region's headquarters is in Omaha, NE.

From 2012 to 2015, Sholly served as the associate director for the National Park Service's (NPS) Visitor and Resource Protection Directorate, overseeing a national portfolio that included 30 program areas, 850 employees, and a budget of \$220 million. During his tenure, he focused largely on improving the NPS safety program, interagency Wilderness partnerships, and the quality and consistency of NPS law enforcement training. His team also completed a wide range of national policies, reduced the NPS regulations backlog, and began a major realignment of the NPS wildland fire workforce to ensure better fiscal and operational effectiveness.

From 2009 to 2012, Sholly was the superintendent of the Natchez Trace Parkway, where he managed the eighth most-visited NPS unit in the country. As superintendent, he oversaw multiple partnership projects including a major rehabilitation of the Meriwether Lewis Death and Burial Site. He worked closely with Choctaw and Chickasaw nations on a variety of partnerships including completion of one of the largest Native American repatriations in the country. He also helped energize new economic, tourism, and conservation partnerships with the city of Nashville, and many other state and local partners along the three-state, 444-mile corridor. Sholly was named superintendent of the year for the Southeast Region in 2011.

From 2005 to 2009, Sholly was the deputy associate director for visitor and resource protection in Washington D.C. From 2002 to 2005, he was the chief of ranger operations in Yosemite National Park. In 2008, he served on detail as special assistant to the NPS director responsible for a major projects portfolio that included assisting with a new national monument designation and multiple other project areas.

Sholly is a U.S. Army veteran and was deployed to Operation Desert Storm. He is also a six-year veteran of the California Highway Patrol.

Sholly received his master's degree from Duke University in environmental management with concentrations in economics and law and policy. He received his bachelor's degree from St. Mary's College of California in management. He is a graduate of the Harvard University Senior Executive Fellows Program and the FBI National Academy.



Plenary Speech by Cameron Sholly

Thanks Connie – appreciate that introduction – good afternoon everyone – as Connie mentioned, Director Jarvis was diverted at the last minute due to a serious family emergency – and sends his regrets – he was looking very forward to being here, but our thoughts are definitely with him and Paula as they take care of family.

For those of you who know Director Jarvis, you know he's an ardent champion of Wilderness. He has managed Wilderness extensively during his 40-year career. . . he understands its value, not only within the National Park Service, and across this country, but around the globe.

A major focus of the Director, and our entire agency has been relevancy – I know all of us understand that without clear public support for Wilderness, and our other protected lands, we make it impossible to accomplish our core objectives of leaving these great places unimpaired for the enjoyment of future generations.

It was important to the Director that he give you a personal message in his words – So I'll open with Jon's message to you on relevancy and then follow it up with some other key points on the *2020 Interagency Vision* document, our path forward in the NPS, and some other thoughts that I hope will continue the great discussions that have been going on this week:

From Director Jarvis:

There have been recent articles, even some scholarly writings, waxing on the relevancy of Wilderness to today's society. Some opine that this "social construct" needs to evolve, adapt, or face elimination. Others point out that human caused climate change, global transport of mercury, and the spread of exotics make the concept of "untrammeled" moot and unattainable.

The old, hard bitten backpackers, proudly wearing their resoled leather boots, grumble as a colorfully clad trail runner passes them as if they were standing still. "Do it my way" they shout, but of course the runner can't hear them due to their iPod earphones delivering a set of tunes they downloaded specific to this run.

Back in Washington, or in some local communities, there are people who never liked the concept of lands off limits to development in the first place, smell blood in the water, and advocate opening up these lands to the jaws of extraction.

Well, as least one thing has not changed, and that is the debate around the value of Wilderness. Freedom of expression is a core value of our country, so a healthy debate around the value of Wilderness is a good thing.

Each succeeding generation gets the opportunity to evaluate the achievements and institutions of the previous generation and accept, adopt, adapt or reject them in accordance with their values. Wilderness does not get a bye, therefore, those of our generation who care deeply about Wilderness, who know of its benefits to us as individuals and to society at large, must not take for granted that the future of Wilderness is guaranteed. It is incumbent upon us to build a connection to the next generation so that they become the stewards.

The 1964 Wilderness Act did not spring out of the minds of congress and the public fully formed, but was the culmination of a decade of experience with our national parks and other public lands. 1964 was eight years into Mission 66, the buildup (and out) to the National Park Service 50th anniversary. The promotional aspect of that effort invited all Americans, especially the WW2 Vets and their families to "See the USA" (in their Chevrolet) and introduced millions to the Grand Canyon, Yellowstone, Yosemite and many other national parks.

The inspiration was mixed with shock over development, in some cases inside the National Parks and the need to seek legislation that protected lands, even from the whims of the management agencies, NPS included. I can attest personally to this as I used the Wilderness designation at North Cascades to eliminate early NPS proposals for aerial trams, new roads into virgin forests, and proposed small hydro-electric developments on pristine streams in the park.

The take-away message from Mission 66 and the Wilderness Act of 1964, is that through an active promotional effort and resulting contact with these special places, a passion for their protection was ignited nationally.

A recent email I received detailed the two sets of tears shed by a family at the Grand Canyon, one for seeing this magical place for the first time, and the second when their daughter raised her hand to take the Junior Ranger oath.

That memory will live forever, and more are being made every day. But not for everyone. We all know, and freely admit, that there is a racial and economic disparity in the visitation to national parks, and probably even more so to Wilderness. That does not necessarily mean that people of color do not support national parks and Wilderness in concept, but it does mean they are missing out on the benefits of the experience. And that is a social equity, environmental justice issue. The good news is that is fixable, and the Centennial of the National Park Service is the opportunity to address it directly.

Put simply, the goal of the National Park Service Centennial is to connect with and create the next generation of park visitors, supporters, and advocates. Implicit within that goal is the target population: the millennials, that

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complex, urban, multicultural, diverse, and plugged-in cohort of 18-35 year olds. I firmly believe that if we get them to come, yes with their smart phones and ear plugs, things will change, and a life long passion will ignite.

With all the debate about Wilderness, we are a species connected to nature, and it is in wild places we rediscover that connection, reactivate synapses that may have been unused for years, and reflect upon ourselves in the world, and our responsibility to protect nature, for ourselves and for future generations.

I look forward to seeing you in Wilderness in the future and appreciate everything you're doing to ensure the next 50 is as or more successful than the last. Jon

I had to smile reading the message about the millennials – and as Jon's comments outlined – that group is the next wave of stewards and connecting with them really has been and needs to continue to be a primary focus – then I think about my son is almost 13, he's in generation Z, (otherwise known as the digital natives) and he's regularly giving his mom and dad clinics on iPhone and Mac use – I'm afraid of what the expectation might be when that group starts entering the Wilderness on a regular basis...but our strategies for how to connect these generations better not lag to far behind – they will pass us by...if they haven't already.

As the Director outlines in his message – 2016 marks the 100th anniversary of the National Park Service – a defining moment that offers an opportunity to reflect on and celebrate our accomplishments as we prepare for a new century of stewardship and engagement. He issued a Call to Action in 2011 that charts a path toward a second century vision that the NPS will inspire and offer new hope to each generation of Americans.

Similarly, 2014 is a defining moment for Wilderness – and just as the NPS prepares for its second century of stewardship, it's prepare for another 50 years of strong support of the Wilderness Act.

The two are not mutually exclusive – in fact, each one of our key Centennial Themes or Focus areas have direct benefits to Wilderness and tie in very well with what Connie just outlined in the 2020 – connecting people to parks – advancing education – preserving America's special places, enhancing organizational excellence.

Within these major themes are 36 actions, being taken across the service – things like promoting large landscape conservation, addressing the impacts of climate change, reducing the NPS carbon footprint, providing employees with the tools and training needed to do their jobs effectively, creating a new generation of citizen scientists, going digital...

We have a tendency to say—here's what we're doing in the Centennial, here's what we're doing in Wilderness... the reality is these efforts are all inter-connected and what we need to do is really tie them together more effectively.

Unquestionably, the next 50 years are going to be much tougher, the challenges are going to be larger, and our collective responsibilities much greater.

That means celebrating the successes of the system up to this point, which there are many – it also means being honest with ourselves about where we have fallen short and how we can do better moving forward.

The question is how do we ensure consistent strategic Wilderness decision making within the entire system and along those lines – how do we better leverage our collective resources, even in times of fiscal constraint to maximize our efforts and future successes.

Over the past several years, we've done a considerable amount – we've issued new policies and guidelines to help ensure better and more consistent decision making across the Service, we've developed a formal Wilderness character user guide and stewardship plan that will really help integrate Wilderness character into park planning, management, and monitoring.

We've recently increased funding significantly in our Wilderness stewardship division – with specific intentions of improving the Wilderness acumen of our workforce and in concert with our great interagency partners at Carhart...like Connie...We've worked to increase the role of science in Wilderness management, using both internal agency resources as well as the collective expertise found at institutions like the Aldo Leopold Research Institute... Susan Fox and her great crew.

Director Jarvis has worked a great deal with our international partners, especially with his counterparts on this stage, in Mexico, Parks Canada, through great efforts like the North American Intergovernmental Committee on Cooperation for Wilderness and Protected Area Conservation – NAWPA—working with ardent champions like Vance Martin and Julie Randall –and we continue to work with many other great partners, many of you who are in this audience to address the challenges we face and improve our overall capacity and strategic direction.

We need to do more... and we can do better. Each one of you has an idea of where our capacity should be – what our funding levels should be, what our staffing levels should be, what our policies should say, how we should implement policy across the system – and it's a balance.

Fundamentally, speaking for the NPS, we need to greatly increase our capacity in Wilderness – that doesn't necessarily mean filling up a bunch of new offices with new employees dedicated to Wilderness Stewardship.

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It does mean making sure that the Wilderness standard is clear and embedded into the minds of every manager and employee who works in and around Wilderness. It means that our commitment to civic engagement remains stronger than ever, and that our strategies, actions, and decision processes are transparent, and grounded in law, policy and science.

Lastly, it means that we more effectively focus and align our existing resources in ways that advance not only individual agency missions as outlined by Congress, but advance the entire Wilderness Preservation System.

The *2020 Vision* Connie outlined is a solid, basic interagency framework – from which we all agreed on its key points of Protecting, Connecting, and Leading. We've also agreed that much more needs to be done in all of these areas. The power of this document though isn't us continuing to just do good things in our respective silos but continuing to expand on a lot of the great interagency, intergovernmental, and international work that is in play now.

Committing to this framework is one thing – following through and developing priorities and actions that are actually executable and that make a difference on the largest scales possible is another. The *2020 Vision* helps to identify our collective Wilderness needs, priorities, and goals; and it aligns with recent National Park Service policy updates for Wilderness stewardship as well as the overarching goals as an agency.

I want to thank each one of you for all you do, whether in the government or out, you represent the primary reason why we are here today and you'll be the ones largely responsible for Protecting, Connecting, and Leading us through the next 50. It's important that we stay on a positive trajectory, learn from the past, that we recognize that the challenges in front of us are not insurmountable, but they are major, and will take the collective leadership of this country to protect this great system.

I appreciate a few minute of your time this afternoon and now turn it over to Chief Tidwell of the U.S. Forest Service.



Thomas Tidwell

Forest Service Chief

TOM TIDWELL has spent 37 years in the Forest Service. He has served in a variety of positions at all levels of the agency, including as district ranger, forest supervisor, and legislative affairs specialist in the Washington Office. As deputy regional forester for the Pacific Southwest Region, Tom facilitated collaborative approaches to wildland fire management, roadless area management, and other issues. As regional forester for the Northern Region, Tom strongly supported community-based collaboration in the region, finding solutions based on mutual goals and thereby reducing the number of appeals and lawsuits.

In 2009, after being named Chief, Tom set about implementing the Secretary's vision for America's forests. Under his leadership, the Forest Service is restoring healthy, resilient forest and grassland ecosystems—ecosystems that can sustain all the benefits that Americans get from their wildlands, including plentiful supplies of clean water, abundant habitat for wildlife and fish, renewable supplies of wood and energy, and more.

Such benefits are at risk from the effects of climate change, and Tom has led the way in forging a national response. Under Tom's leadership, the Forest Service has charted a national roadmap for addressing climate change through adaptation and mitigation. The Forest Service is taking steps to help ecosystems adapt to the effects of a changing climate while also taking action to mitigate climate change, partly by reducing greenhouse gas emissions.

Tom has facilitated an all-lands approach to addressing the challenges facing America's forests and grasslands, including the overarching challenge of climate change. Such challenges cross borders and boundaries; no single entity can meet them alone. Under Tom's leadership, the Forest Service is working with states, Tribes, private landowners, and other partners for landscape-scale conservation—to restore ecosystems on a landscape scale.

Tom is married to Kim, and they have one daughter, MacKenzie.

Plenary Speech by Thomas Tidwell

Thank you. It's a pleasure and a privilege to be here today.

It is fitting that we celebrate the 50th anniversary of the Wilderness Act here in New Mexico, where Wilderness got its first start. The Forest Service was founded in 1905, not long after the closing of the western frontier. The wildness of the American frontier was part of what we were protecting on the national forests.

Aldo Leopold and Arthur Carhart were both Forest Service employees in those early years, and they worked tirelessly to give wild places on the national forests special protections. In 1924, acting at its own discretion, the Forest Service established the first Wilderness area anywhere in the world, the Gila Wilderness here in New Mexico. In 1926, another area was designated for special protection. Today, we know it as the Boundary Waters Canoe Area on the Superior National Forest in Minnesota.

In 1939, Bob Marshall—yet another Forest Service employee—drafted the first comprehensive regulations for protecting Wilderness areas. By the 1960s, the Forest Service had built a system of Wilderness, wild, and primitive areas extending to 14.6 million acres. The Forest Service's 9.1 million acres of Wilderness and wild areas became the core of America's National Wilderness Preservation System following the Wilderness Act of 1964.

Today, we stand on the shoulders of conservation giants like Arthur Carhart ... like Aldo Leopold ... like Bob Marshall. They had the courage to lead the early Wilderness movement, and we follow in their footsteps today.

Fifty years ago, Congress established America's National Wilderness Preservation System. The system guaranteed that all federal lands designated as Wilderness will be managed under common guidelines. That led to collaboration among the four federal agencies that manage Wilderness as we pursued consistent approaches and common goals.

In that same spirit, working together, we established the Interagency Arthur Carhart National Wilderness Training Center and the Aldo Leopold Wilderness Research Institute. For 21 years now, these centers have demonstrated that no single agency can accomplish alone what we can accomplish together by collocating employees and collaborating across agencies. This model of effectiveness and efficiency was the right thing to do in 1993 ... and it's the right thing to do today as we move forward with Wilderness stewardship in the 21st century.

So we have a record of success in Wilderness stewardship, but we also face tremendous challenges, not only in Wilderness areas, but across landscapes of all kinds.

- Climate change is gradually disrupting entire ecoregions, shifting plant and animal assemblages for generations to come. When the climate changes, many things change with it: temperature, precipitation, snowpack size, and runoff.
- Add to this population growth, land use changes, water shortages, water pollution, air pollution, invasive species, and a host of other challenges, and America's land managers are in a whole new problem environment.

Already, we are seeing major disturbances—devastating droughts, huge wildfires, and widespread insect outbreaks. All these stresses and disturbances are affecting America's forests and grasslands on an unprecedented scale.

And Wilderness, too, is seeing the effects. Wilderness also faces special challenges, some of them involving visitor use, others involving iconic species such as bighorn sheep. The challenges are truly daunting. In 2003, the Forest Service conducted a survey of units with Wilderness areas, and we found that less than 18 percent of our Wilderness areas were managed to standard based on a set of 10 performance elements.

In 2004, we responded to that shortfall through our 10-Year Wilderness Challenge. The Challenge was designed to bring together line officers and Wilderness managers and focus them on addressing the biggest, most pressing Wilderness stewardship needs. It was a huge boost to Wilderness management and an effective vehicle for engaging our partners because it provided a plan of action and funding through the National Forest Foundation.

Today, I am proud to announce that we've met the Challenge—that 99 percent of Forest Service Wildernesses in the Challenge met the goal—that only 4 Wildernesses out of 406 didn't meet the mark. That's a tremendous accomplishment, and I wholeheartedly thank the Forest Service employees and our partners who worked so hard to get us here. Thanks to them, the Forest Service Wilderness program is strong and ready for the future.

The Interagency Arthur Carhart National Wilderness Training Center and the Aldo Leopold Wilderness Research Institute were instrumental in that effort. Now the centers have set the stage for us as Wilderness managers, working together, to realize an interagency vision of sound Wilderness stewardship. The Forest Service wholeheartedly embraces the *2020 Vision*.

On this 50th anniversary, we are renewing our commitment to interagency leadership so that Wilderness managers and our partners and volunteers have the tools, the skills, and the science they need for Wilderness to endure. I am proud to declare the Forest Service's ongoing commitment to interagency collaboration and coordination by signing this document. I would now like to invite my colleague Dan Ashe, Director of the U.S. Fish and Wildlife Service, to share his observations.



Daniel M. Ashe

Fish and Wildlife Service Director

DANIEL M. ASHE was confirmed on June 30, 2011 as the 16th Director of the U.S. Fish and Wildlife Service, the nation's principal Federal agency dedicated to the conservation of fish and wildlife and their habitats. His appointment by President Obama is the culmination of a lifetime spent within the Fish and Wildlife Service family.

Prior to his appointment as Director, Ashe served as the Service's Deputy Director for Policy beginning in 2009, where he provided strategic program direction and developed policy and guidance to support and promote program development and fulfill the Service mission.

Ashe also served as the Science Advisor to the Director of the Fish and Wildlife Service. Appointed to this position in March, 2003, he advised the Service Director and provided leadership on science policy and scientific applications to resource management. As Science Advisor, Ashe led an organizational renaissance for science and professionalism, leading the Service's efforts to respond to changes in the global climate system; shaping an agency agenda for change toward a science-driven, landscape conservation business model; defining an agency Code of Scientific and Professional Conduct; authoring new guidelines for scientific peer review and information quality; building state-of-the-art, electronic literature access for employees; and reinstating internal scientific publication outlets. From 1998 to 2003, Ashe served as the *Chief of the National Wildlife Refuge System*, directing operation and management of the 150 million-acre National Wildlife Refuge System, and the Service's land acquisition program. From 1995 to 1998, Ashe served as the Fish and Wildlife Service's Assistant Director for External Affairs, where he directed the agency's programs in legislative, public, and Native American affairs, research coordination, and state grants-in-aid. During his tenure in this position, the Service restructured and broadened its communications programs and capacities, incorporating communications expertise into all of its program areas and employee training. The agency implemented a forward vision for Congressional relations, which led to several groundbreaking legislative accomplishments, including enactment of the National Wildlife Refuge System Improvement Act.

From 1982 until 1995, Ashe was a Member of the Professional Staff of the former Committee on Merchant Marine and Fisheries, in the U.S. House of Representatives. In 13 years on Capitol Hill, Ashe served in several capacities, advising the Committee's Chairmen and Members on a wide range of environmental policy issues.

Ashe is very active in local civic affairs in Montgomery County, Maryland, where he and his family reside. He is an avid waterfowl hunter, angler and tennis player. Ashe's father, William (Bill) C. Ashe, also a career employee of the U.S. Fish and Wildlife Service, retired in 1990, and now resides in Harvard, Massachusetts.

Plenary Speech by Daniel Ashe

It's really a joy to be here with you all today in Albuquerque where 40 years ago I was a high school student. I went to El Dorado High School right up here up against the mountains in Albuquerque. My hotel room's on the tenth floor, looks to the east, and this morning I was up in my room—I saw the sun coming up over Tijeras Pass, and it made me think about 40 years ago I was – I think I was getting ready for a big grudge football game with Manzano High School.

But in the mornings on Saturdays and Sundays, I used to go up onto the mountain and chase away two wily mule deer around up there, throwing pointy sticks at them. And, the summer after my senior year in high school, I was up in the Pecos Wilderness with some friends for a 10-day trip, and on the first day of that trip I decided to run a knife through my thumb. And I really didn't think it was a problem that I couldn't deal with. And so we tried to make the 10-day trip. About five days into the trip, I decided that was not such a good idea.

And so we came out and came back here to Albuquerque and now I have a scar that goes all the way from my thumb, all the way down here onto my wrist—because they had to go all the way down here to find the tendon and pull it back up. So we all have scars from Wilderness. And I think about that and the sunrise this morning, and I think that today we find ourselves really at a sunrise for Wilderness conservation.

And I say that because a sunrise is usually a time of reflection. When you look at the sunrise you can't help but reflect. And it's a time of renewal of commitment. And when we start a new day, we begin a day, we see the sunrise – we're making a commitment to the day and to accomplishment of the day, of seeing things of value, of facing challenge. And that's where we are today, because commitment is crucial today because we certainly face an environment of great challenge.

Continued

I understand you heard about world population, but when we think about the Wilderness Act in 1964, the world population in 1964 was just a little above three billion people. Today, we live in a world of 7.2 billion people and, by the middle of this century, we'll be sharing the planet with about 9.6 billion people, if we're lucky. If we're not, more than that.

And it's not just more people, it's the increasing affluence in the world and in the United States of America. And so we will have more people and we will have more affluent people. And people that want the things that create quality of life – like access to electricity and transportation and healthcare and education. And so it's important that we acknowledge that. And the implications of that are things like a change in climate, which as Tom [Tidwell, Forest Service] indicated, means really that no place on the earth, no remote corner of the earth is truly untrammeled by man.

So at once, Wilderness is more important than ever to our existence as human beings, but more difficult to create and defend. So I'm going to make two points as we think about *Vision 2020* and our commitment to Wilderness preservation and stewardship. And those two points are vigilance and relevance.

As managers, certainly we have a responsibility to steward Wilderness areas in a way that protect and preserve them for future generations. And that is not always black and white, much as we think that it might be. And so we need to support our managers—as the speakers before me, I think, have both spoken to so eloquently. We need to recognize that it is not always black and white and that managers have to make decisions – and they have to make complex decisions.

And we have to support and sustain them in making those decisions. And yes, we have to criticize them when they make poor decisions. And they will make poor decisions, but mostly they will make good decisions and we need to support them in those good decisions.

And I saw a good example of that recently. I think when Sally Jewell was up here yesterday, she probably spoke about how she and I celebrated the 50th Anniversary of the Wilderness Act together at the Great Swamp National Wildlife Refuge in New Jersey. Yes, that New Jersey. But I believe there we really saw an unrivaled dedication to Wilderness stewardship. We went out into one of the trails on the refuge with a long crosscut saw and had the opportunity to see how they used a crosscut saw to clear deadfalls from across the trails in the refuge Wilderness.

And yes, Sally Jewell and I succeeded in getting that crosscut saw firmly stuck. And it was a unique experience, because we had a Cabinet Secretary and a Bureau Director and two members of Congress, and there were at least four opinions on how to get that saw unstuck – until we wisely decided to defer to the judgment of the Conservation Corps students, who became the teachers.

So when we think about vigilance, again we need to ensure that we continue good stewardship and as leaders of Wilderness, as land managers, that we support and we recognize good management, and we hear good criticism when it is offered.

But we also must resist, as a community, at all costs, intrusions to the very heart of the concept of Wilderness. And we have a great example of that today and I think that we must, as a community, ensure that we do not allow a road through the heart of the Izembek National Wildlife Refuge Wilderness.

And on the subject of relevancy, I guess I want to give you – I want to issue maybe a bit of a warning. On one of the panels yesterday I heard my U.S. Fish and Wildlife Service colleague, Roger Kaye, describe “wild” as a state of freedom from human intervention. And of course, like every place, when we go into Wilderness we have rules. There are rules that we must abide by in order to ensure the continuation of that Wilderness and the opportunity to enjoy the solitude that the Wilderness offers.

But Wilderness is an opportunity for solitude. And when I think about solitude, I think solitude to me is both a personal and a situational concept. And so when we think about Wilderness, especially if we're trying to connect to a new generation, young people who come from different experiences than us, who think about solitude maybe in a different way than we do, that is important. If we want them to come to Wilderness, if we want them to appreciate Wilderness, then we need to let them appreciate it in their way. We should not be trying to impose our way upon them.

So Wilderness should not be about piety. It should not be judgmental. We should not be telling people how to create and enjoy their own personal, situational solitude – as long as it doesn't impinge on the opportunities of others to find their own personal and situational solitude. So when we think about cell phones and we think about ear buds, is there a difference between reading Marty Murie from a book or reading Aldo Leopold from an eReader?

Said with great piety. So think about that as we reach out to new generations, new parts of American society, and we invite them to come to Wilderness, to be a part of this community, to help us defend and expand the opportunity for Wilderness and Wilderness solitude. Let's be careful about imposing our ways upon them.

Continued

So I'm going to close with words of Howard Zahniser, as Tom said, one of the principle architects of the Wilderness Act and once a Fish and Wildlife Service employee. He said, "We are not fighting a rear guard action. We are facing a frontier. We are not fighting progress. We are making it." And when I read that, it's words of optimism. And that optimism was crucial to the enactment of the Wilderness Act and it is vital as we gather here today and we think about the future of Wilderness.

And I'm proud to be here on behalf of the women and men of the United States Fish and Wildlife Service, and to demonstrate the commitment of the U.S. Fish and Wildlife Service to interagency collaboration and coordination by signing the [2020 Vision] document that we will sign today. Thank you for having me with you.



Sunset Paddle, Boundary Waters Canoe Area Wilderness, Minnesota
By Dawn M. LaPointe, www.RadiantSpiritGallery.com

Neil Kornze

Director, Bureau of Land Management

ON APRIL 8, 2014, Neil Kornze was confirmed by the U.S. Senate as the Director of the Bureau of Land Management. From March 1, 2013, until his confirmation, Kornze led the BLM as the agency's Principal Deputy Director. Kornze oversees the agency's management of more than 245 million acres of public land nationwide under the mandate of multiple-use and sustained-yield.

As Director, Kornze has led the BLM through a number of transformative initiatives spanning the agency's energy, recreation, planning and conservation programs. Under Kornze's leadership, the bureau is modernizing its conventional energy programs like oil and gas and coal, while continuing to break new ground in the development of clean, renewable energy sources with efforts like the Western Solar Plan. Through the Planning 2.0 initiative and a greater focus on communications and outreach, Kornze is helping to ensure that the public has a clear connection to the work that the agency is undertaking across the nation. Kornze is also a leader in efforts to improve tens millions of acres of vital sage-grouse habitat and in ensuring that the BLM National Conservation Lands, American's newest conservation system, is properly strengthened and supported.

Before coming to the Bureau of Land Management in January 2011, Kornze worked as a Senior Advisor to U.S. Senate Majority Leader Harry Reid of Nevada. In his work for Senator Reid, which spanned from early 2003 to early 2011, he worked on a variety of public lands issues, including renewable energy development, mining, water, outdoor recreation, rural development, and wildlife. Kornze has also served as an international election observer in Macedonia, the Ukraine, and Georgia and is co-author of an article in *The Oxford Companion to American Law*.

Raised in Elko, NV, Kornze is a Phi Beta Kappa graduate with a degree in Politics from Whitman College in Walla Walla, WA. He earned a master's degree in International Relations at the London School of Economics.



Plenary Speech by Neil Kornze

Good afternoon. It is great to see so many people here today. I always feel a little bit better about our public lands after hearing Dan Ashe speak. Thank you, Dan.

I want to start today by asking my colleagues at the Bureau of Land Management to raise their hands. And now anyone that works on BLM lands as a partner or as a volunteer. That's a lot of folks in this room. Fantastic.

The reason I asked you to identify yourselves is that you are not supposed to be here. Neither am I. If we followed the exact wording of the 1964 Wilderness Act, a lot of people would disappear out of this room because the Bureau of Land Management was not included in the '64 Act. It took a little time for the BLM to be included in this effort of Wilderness preservation. And we are so proud to be here.

So with that, today I would like to talk about the history of Wilderness and the BLM. And I will argue that the nation's conservation conversation today largely centers around the Bureau of Land Management – an agency I am so proud to lead but also one that has not always been known for conservation. I would like to help change that conversation, and I hope that you will help us change it.

Let us start at the beginning of the Bureau of Land Management. For that, we go back to 1812, when we were tussling with the British. That is when the General Land Office was originally organized as part of the Department of Treasury. The job of our predecessor agency was to essentially take all of the land west of the Appalachians and to survey it, sell it, and move on. That is what we did for a very long time.

But for Wilderness, and public lands in general, this country has had changing attitudes and changing ideas about what we want from our public lands. So as the nation expanded west, and as we got to know ourselves in different ways and on different landscapes, we started to ask more of our public lands, and we started to think more about what it means to have a management regime around these assets that we hold together, in common.

There were beautiful moments, like when President Lincoln stepped forward and placed protections on the land in and around the Yosemite Valley in California. There was the Forest Reserves Act that gave land to the U.S. Forest Service for safekeeping and for growing trees. Not too long after that was the Antiquities Act, a very powerful, very important piece of legislation.

In 1920 we had the Mineral Leasing Act, which is probably not something you think about every day. But those of us in the BLM certainly do. The Mineral Leasing Act was a revolution in terms of how we deal with the natural assets that can be drawn from the public lands, and specifically how we deal with oil and gas and similar resources.

Continued

Next came the Taylor Grazing Act of the 1930s that ended the open range situation in the west. When you talk about the wild west, a lot of that was rooted in the period before the Taylor Grazing Act. In terms of public lands history, the Taylor Grazing Act started a bit of a revolution. When an area was designated as a grazing district, there was a presumption that it would stay in public ownership.

Now we zoom forward to the passage of the Wilderness Act in 1964. That was a beautiful day for three land management agencies in this country. But not the BLM.

Then in 1976, after a few decades of debate and dialogue, Congress passed the BLM's organic act, known as the Federal Land Policy and Management Act, or FLPMA. It is not something that rolls off the tongue, but it is very dear to me and critical to the history of public lands in this country.

In that piece of legislation, Congress determined that the United States was going to retain the 280 million acres that remained of the public estate. This was a radical moment in American history – I would argue that it was as radical as the passage of the Wilderness Act. Whereas previously we had a massive public estate that we could not dispose of fast enough, with FLPMA we committed ourselves to retaining and managing the public lands for the good of the American people.

And over time, we have been figuring out what that means. We have FLPMA, which gives us a mission of multiple use and sustained yield. Now, most people refer to the Bureau of Land Management as a multiple-use agency. But if you read our founding document, it is multiple-use *and* sustained-yield. And inside the definition of multiple-use, in that piece of legislation, it does not direct the BLM to always go for the highest dollar value. It specifically states that the agency should consider preserving opportunities and places for future generations. FLPMA is a conservation document at the same time as it is an energy document and a range document. It is many things.

Moving forward in history, 1983 was a big year for the BLM. It was the first time that a law specifically called out the BLM as a manager of Wilderness. We got on the map with the Lee Metcalf Wilderness Area in Montana. Then in 1996 we had another revolutionary moment for American public lands when President Clinton and Secretary Babbitt designated the Grand Staircase-Escalante in southern Utah as a National Monument to be managed by the Bureau of Land Management.

Now, after all these big moments that we just walk through, we have about 250 million acres under our management. About 31 million of those acres are part of our National Conservation Lands system. We are very proud of the National Conservation Lands and we are moving forward with strengthening that system. We have put some serious backbone behind it with recent policies developed by Carl Rountree and our entire National Conservation Lands program. We are committed to managing these areas in a comprehensive way and we take the responsibility seriously.

Let me conclude with some thoughts about how the Bureau of Land Management is at the center of the national conservation conversation. If you look at the designation of Wilderness in the 1980s, lands under BLM management represented less than one percent of all those designated. In the 1990s, Congress made us more than 40 percent of the Wilderness conversation. And since 2000, the Bureau of Land Management has been the steward of a full two-thirds of new Wilderness designations in this nation.

Similarly with the Antiquities Act, since 1996 there have been 38 national monuments designated by the President. Half of those have been with the Bureau of Land Management. And of the terrestrial acreage of those monuments, about 70 percent of that is on BLM-managed lands.

And this great effort is ongoing. The BLM currently manages about 200 Wilderness areas, but there are also over 520 Wilderness study areas all across the country that are waiting for you, waiting for your community leaders, and waiting for your members of Congress to weigh in and make decisions. Those discussions will be vibrant and it will likely take multiple generations to complete that discourse.

One of my special moments in my time at the BLM was watching Bob Abbey, our former director, as he testified on a particular Wilderness bill before Congress. He was pressed about how he could justify supporting a Wilderness designation that was slightly bigger than the Wilderness study area it would resolve. In response, he pointed out that our Wilderness surveys are old, and yet landscapes and people change. Rightfully, he noted, we always need to be taking a fresh look. It was a subtle moment, but an important one.

Finally, I would like to note that we stand up here as individual leaders running individual organizations – the Fish and Wildlife Service, the Forest Service, the Park Service, the Bureau of Land Management. But far more important than our individual work is the work that we do together. Because after all, when you and your family are visiting your favorite lands, your primary concern is not what agency is managing a particular area. You just want it to be taken care of and you want to ensure that it will be there for tomorrow.

So that is our commitment to you. And that is what is represented in the document that we are signing today. Thank you.

Connie Myers concludes the 2020 Vision Interagency Stewardship Priorities for America's National Wilderness Preservation System

If you had any doubt about where our leaders and our agencies stand on the stewardship of Wilderness, I would think by now that all doubt is eliminated. Upon signature of the Wilderness Act in 1964, President Johnson said this, "So it seems to me that this reflects a new and strong national consensus to look ahead. And more than that, to plan head, better still to move ahead. We know that America cannot be made strong by leadership which reacts only to the needs or the irritations or the frustrations of the moment. True leadership must provide for the next decade, not merely the next day."

Today, these men are committing to leadership, not for the next day, but for the next decade. And with their special 1964 to 2014 50 Years of Wilderness signature pen, I invite them to sign *2020 Vision*. How exciting for all of you to be here at this historic moment. In 1993, there was a ceremony for establishment of the Carhart Center and the Leopold Institute. And at the end of the day, among the people who were there, was Paul Petzoldt, the legendary mountaineer, environmentalist, and the person who established the National Outdoor Leadership School.

And he invited me, after it was over, to go to dinner. Diane Taliaferro was there with me. And he went on and on about his adventures; what an honor to be in the same room with somebody like that, much less having dinner with him. And after dinner he says, "Okay, now I need to talk to you." And I thought, "Great. This is the part where he gives me the marching orders, right, and tells me, 'This is how you're going to do what has to be done.'"

So I sat back and I waited for it. And he said, "This is the greatest moment for Wilderness since 1964 because this is the first time ever that all four agencies have stood on the same platform and dedicated themselves and their agencies to Wilderness stewardship." Today, you guys are part of what now is the next greatest moment for Wilderness stewardship, at the signing of the *2020 Vision* document. I thank you all for being here.

With that, thank you so much for your time and attention, and thank you.

2020 Vision



Interagency stewardship priorities for America's National Wilderness Preservation System



Wilderness is ...

... an indispensable part of the American story. Native Americans depended on the bounty of wilderness for survival and held Earth and its wild places sacred. Western explorers Meriwether Lewis and William Clark were inspired by the untamed beauty of wilderness that became the forge upon which our uniquely American national character was created. After just 200 years, the essential wildness of our country was transformed. As Americans realized that the long-term health and welfare of our nation was at risk, a new vision for conservation emerged.

In 1964, Americans formally acknowledged the immediate and lasting benefits of wild places to the human spirit and the fabric of our nation. In that year, Congress passed the Wilderness Act that permanently protected some of the most natural and undisturbed places in the world. The Wilderness Act established America's National Wilderness Preservation System to "...secure for the American people of present and future generations the benefits of an enduring resource of wilderness."

Wilderness is America's legacy. Wilderness is...

© BILL LEA / NBP

... every American's story



"When I come here by myself, I feel tranquil. When I come here with children, I feel like I'm passing on something that was given to me – a gift – on to somebody else."

– Carlos, educator

"The preservation of wilderness is about preserving ourselves. We take great steps to preserve homes of famous and influential people. We make efforts to preserve historical areas in cities. Why not preserve wilderness areas – the environment that we all have derived from?"

– Eugene, minister

"If there were no wilderness the United States would be just technology, just cars, machines, we'd be nothing natural, we'd be dull, gray, metal. Wilderness brings harmony; it brings serenity, the peace we all look for. You can just listen to the river and you hear yourself, you can hear your own self echo inside."

– Noon, Cambodian refugee

"Outfitting in wilderness has been our family's living for two generations. Over the years we've hosted guests from every state in the union and every conceivable walk of life. Some of them already have the passion, but for those who don't, we're able to bring alive their passion for wild places."

– Jack, outfitter and rancher

The Purpose

2020 Vision presents interagency goals, objectives, and actions to guide collaborative stewardship of America's National Wilderness Preservation System.

In 1995, Directors of the Bureau of Land Management, Fish and Wildlife Service, and National Park Service, and the Chief of the Forest Service signed the *Interagency Wilderness Strategic Plan*. In 2013, the Interagency Wilderness Policy Council¹ (IWPC) requested that the Aldo Leopold Wilderness Research Institute and the Arthur Carhart National Wilderness Training Center facilitate revision of the 1995 *Plan*. *2020 Vision* is that revision and is informed by the *National Wilderness Manager Survey 2014 Analysis Report* and planning strategies from all four agencies.

The Promise

The 1964 Wilderness Act promised citizens of this country they can forever find special places of solitude and refuge from the sights and sounds of civilization, places where ecosystems remain undeveloped and intact and natural processes unfold without direct human intervention.

Our Vision for Keeping the Promise

To keep this promise, we are forging a unified vision and set of shared interagency priorities and actions for stewardship of America's National Wilderness Preservation System that will be directed by the IWPC to effectively use limited resources and inspire new partnerships. *2020 Vision* and the products, services, and programs that derive from it reflect and help fulfill the promise of the 1964 Wilderness Act and foster the commitment, expectations, responsibility, and skills needed to protect America's National Wilderness Preservation System.

Our first priorities for the next five years are to:

1. Complete wilderness character inventories across the NWPS using standardized interagency protocols and institutionalize ongoing monitoring.
2. Foster relevancy of wilderness to contemporary society by inspiring and nurturing life-long connections between people of diverse cultures and wilderness.
3. Strengthen commitment to, and support of, the Interagency Arthur Carhart National Wilderness Training Center and the Interagency Aldo Leopold Wilderness Research Institute to foster excellence in interagency leadership and coordination.
4. Conduct climate vulnerability and adaptation assessments across the National Wilderness Preservation System to improve ecological resiliency across broad landscapes.

To achieve these first priorities and the remaining goals and objectives of the Vision, the IWPC, with input from our partners, will develop an Implementation Plan by April 30, 2015.

¹(BLM Assistant Director, National Landscape Conservation System and Community Programs; FWS Director, National Refuge System; NPS Associate Director, Visitor and Resource Protection; NPS Associate Director, Natural Resource Stewardship and Science; FS Director, Wilderness and Wild & Scenic Rivers; FS Associate Deputy Chief, Research and Development; and, USGS Associate Director, Ecosystem Mission Area)



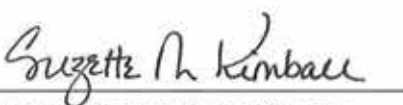
Neil Kornze, Director
Bureau of Land Management



Thomas L. Tidwell, Chief
U. S. Forest Service



FAC Jonathan B. Jarvis, Director
National Park Service



Suzette M. Kimball, Acting Director
U. S. Geological Survey



Daniel M. Ashe, Director
U. S. Fish and Wildlife Service

Protect Wilderness Resources

The top biophysical issues that managers identified for interagency solutions were inventory and monitoring, climate change, fish and wildlife, wildland fire, and invasive species.



TO PROTECT WILDERNESS RESOURCES, WE WILL:

PRESERVE wilderness character.

1. Complete wilderness character inventories across the NWPS and track changes to wilderness character over time.
 - a. Use standardized interagency protocols to achieve a baseline for each NWPS unit.
 - b. Implement a system-wide interagency data management system for data entry and storage and for reporting on trends in wilderness character within a wilderness, and across regions, agencies, and the entire NWPS.
2. Identify, conserve, and restore native fish and wildlife species and habitats in wilderness.
 - a. Complete a state-of-knowledge synthesis of law and policy and biophysical and social sciences related to the management of fish and wildlife in wilderness.
 - b. Strengthen collaborative partnerships for managing fish and wildlife species and habitats in wilderness.
3. Minimize management interventions that modify natural conditions by using the Minimum Requirements Analysis process to make decisions on all proposed management interventions.
4. Manage use of technologies that are likely to degrade wilderness character.



PREPARE for ecological change.

5. Focus on the stewardship of dynamic landscapes through evaluating the role of wilderness in landscape scale conservation and ecosystem resiliency as climate change progresses.
 - a. Continue to support climate vulnerability and adaptation assessments across the National Wilderness Preservation System to contribute information for adaption actions across a broader landscape.
 - b. Develop guidance for determining if and when action should be taken in wilderness to address climate change and other ecological disturbances.
6. Restore fire to its natural role in the ecosystem.
 - a. Ensure fire plans identify where the risks to values inside and adjacent to wilderness are greatest; identify the conditions and circumstances under which natural fires will be

- allowed to burn or be suppressed; and where prescribed fire is appropriate for resource benefit.
- b. Incorporate wilderness fire concepts into appropriate All-Hazard, firefighter, resource advisor and National Incident Management System training.
- 7. Implement integrated exotic plant and animal management, including prevention, education, detection, quick elimination of spot infestations, and control of major occurrences.
 - a. Ensure objectives to manage non-native invasive plant and animal species in wilderness are included in every wilderness stewardship plan or invasive species management plan.

INFORM wilderness stewardship decisions using the most current and credible science.

- 8. Identify and conduct the wilderness science needed for present and future management decisions.
 - a. Through collaboration of managers and scientists, develop and prioritize a national science agenda for wilderness.
 - b. Seek and develop partnerships through entities such as Landscape-scale Conservation Cooperatives (LCCs) to accomplish wilderness science agenda priorities.
 - c. Develop effective communication networks to facilitate the transfer of knowledge and feedback from practitioners.



“Wilderness exists in order to give the planet an opportunity to have spaces where nature can express itself without man’s interference, so wilderness areas aren’t locked up in a sense that they are of no use, because they are always of use if to nobody else but the planet itself.”

- Press Stevens, former outfitter

Connect People to their Wilderness Heritage

The top social issues that managers identified for interagency solutions were relevance, education, visitor management, and access.

TO CONNECT CITIZENS TO THEIR WILDERNESS HERITAGE, WE WILL:

EXPAND public awareness, understanding, and support of Wilderness.

9. Utilize consistent and culturally relevant messages about Wilderness values and benefits.
 - a. Identify and share the ecological, economic, and social values and benefits of wilderness.
 - b. Develop and implement a national interagency Wilderness communication strategy that integrates with ongoing agencies communications and matches messages and media with diverse audiences.
10. Foster wilderness visitor understanding and responsible behaviors that improve wilderness stewardship.
 - a. Develop tools and materials for managers to enlist public support for wilderness stewardship and for compliance with resource protection measures.
 - b. Emphasize *Leave No Trace* principles through signs, programs, and practices.
 - c. Utilize the Interagency Visitor Use Work Group and others to develop and implement standards and monitoring protocols to minimize visitor use impacts to wilderness character.



INSPIRE and nurture life-long connections between people of diverse cultures and wilderness.

11. Build respectful, long-term partnerships among wilderness managers, educators, Tribal leaders, cultural resource managers, and citizens from diverse traditions, to develop and implement programs and products that enhance connections to wilderness.
 - a. Expand partnerships with conservation corps and other educational and youth programs and organizations to provide outdoor experiences from backyard to wilderness.
 - b. Develop a plan to increase our capacity to replicate, distribute, and integrate K-12 wilderness curriculum in classrooms across the country through existing and new environmental education, mentoring, and train-the-teacher programs.

NURTURE a new generation of future stewards and scientists.

12. Foster a welcoming culture of inclusion for diverse cultures around wilderness work.
 - a. Collaborate with existing recruitment programs to create volunteer, internship, and employment opportunities in wilderness.
 - b. Expand citizen science and volunteer-based monitoring programs for both social and biophysical conditions. Create career appeal for youth by developing and improving wilderness career options and opportunities.



RESTORE trails connecting wilderness and people

13. Secure commitment from a diverse coalition of partners for the restoration of wilderness trails while preserving wilderness character.

"The richest values of wilderness lie not in the days of Daniel Boone, nor even in the present, but rather in the future."

- Aldo Leopold

Foster Excellence in Wilderness Leadership and Coordination

The top administrative issues that managers identified for interagency solutions were leadership, budget and staff, planning and management, and interagency coordination.

TO FOSTER EXCELLENCE IN WILDERNESS LEADERSHIP AND COORDINATION, WE WILL:



CULTIVATE strong interagency leadership throughout the National Wilderness Preservation System.

14. Ensure wilderness science and training facilitates interagency coordination and consistency across the NWPS.
 - a. Strengthen commitment to and support of the Interagency Arthur Carhart National Wilderness Training Center and the Interagency Aldo Leopold Wilderness Research Institute.
15. Deliver consistent and high quality on-the-ground wilderness decisions, stewardship skills, and wilderness awareness.
 - a. Develop interagency responses to System-wide issues.
 - b. Identify opportunities for developing consistent, interagency wilderness regulations.
 - c. Establish a system similar to the interagency wildland fire Red Card system to identify, develop, and track qualifications and competencies among employees and volunteers for various aspects of wilderness stewardship and traditional tool use.



REINVIGORATE commitment to wilderness stewardship.

16. Improve wilderness program stewardship accomplishments and recognize excellence in wilderness management.
 - a. Develop performance measures to document success in meeting wilderness management objectives.
 - b. Establish national recognition for managers who demonstrate success in preserving wilderness character.
- c. Identify, develop, and showcase innovators in wilderness stewardship.

BUILD workforce capacity and wilderness program resources.

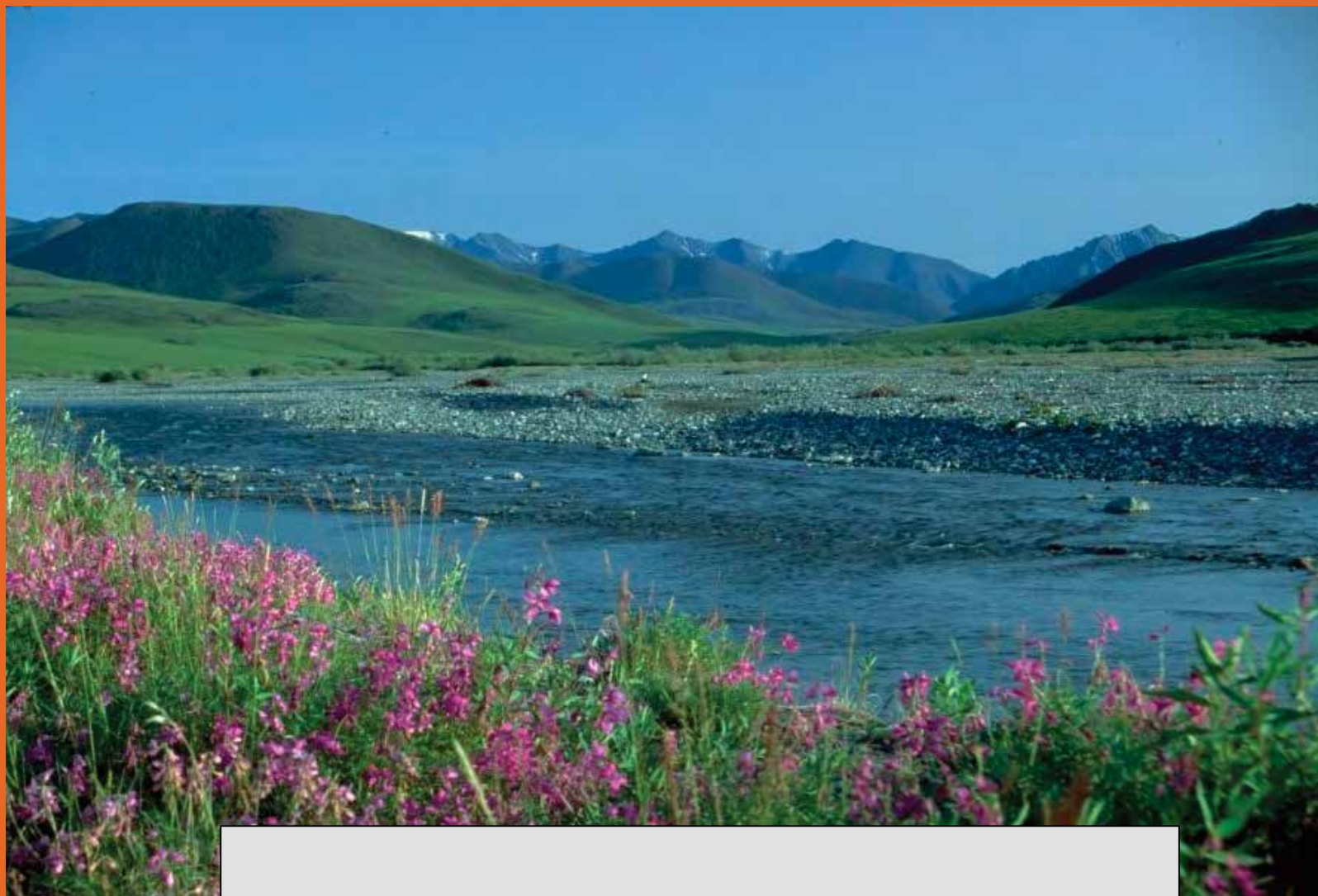
17. Identify strategies for developing organizational capacity for wilderness stewardship, outreach, research, and enforcement duties.

- a. Develop workforce capacity plans that identify the right mix and numbers of workers with the right skills and knowledge to preserve wilderness character.
 - b. Create an interagency business plan that identifies the shared multi-disciplinary nature of wilderness.
18. Improve capacity for recruiting and training volunteers.
 19. Strengthen and expand partnerships engaged in wilderness stewardship and complete the goals of this Vision document for the NWPS.



“So it seems to me that this reflects a new and a strong national consensus to look ahead, and, more than that, to plan ahead; better still, to move ahead. We know that America cannot be made strong by leadership which reacts only to the needs or the irritations or the frustrations of the moment. True leadership must provide for the next decade and not merely the next day.”

- President Lyndon Johnson upon signing the 1964 Wilderness Act



"I hope the United States of America is not so rich that she can afford to let these wildernesses pass by, or so poor she cannot afford to keep them."

- Margaret Murie



Agency heads, Director's Neil Kornze and Daniel Ashe, Mid-west Regional Director Cameron Sholly (acting for Director Jon Jarvis), and Chief Thomas Tidwell sign the 2020 Vision Interagency Stewardship Priorities for American's National Wilderness Preservation System. Chad Dawson with the Society of Wilderness Stewardship helps Elaine Poser with the Arthur Carhart National Wilderness Training Center handout, the 2020 Vision document for signing.

“I believe we have a profound fundamental need for areas of the earth where we stand without our mechanisms that make us immediate masters over our environment.”

- HOWARD ZAHNISER



Little Blue Heron, J.N. "Ding" Darling Wilderness, Florida
By Nate Zeman, www.natezeman.com

Civic Engagement Track Summary

CIVIC ENGAGEMENT TRACK COMMITTEE

Gregory Hansen, *Society for Wilderness Stewardship*

Elwood York, *US Forest Service*

Ron Brinkley, *Film Festival Organizer*

Alan Watson, *Aldo Leopold Wilderness Research Institute*

Ken Watson, *National Park Service*

INTRODUCTION. The *2020 Vision* (http://www.Wilderness.net/toolboxes/documents/50th/2020_Vision.pdf) is a statement of intent for action in the next five years by the federal agencies in the U.S. charged with stewardship, science and training for the National Wilderness Preservation System. This vision, signed by agency leaders at the conference, included five priorities, one of which is to “foster relevancy of Wilderness to contemporary society by inspiring and nurturing life-long connections between people of diverse cultures and Wilderness.” The purpose of the conference’s Civic Engagement Track was to honor this promise by increasing understanding of barriers to and opportunities for nurturing, creating, and in some instances, restoring these connections between Wilderness and diverse populations.

BUILDING A DIVERSE COALITION FOR WILDERNESS. The cultural communities sessions in the Civic Engagement Track were carefully crafted from enthusiastic proposals to present creative ideas about relationships between Wilderness and American Indians, Alaska Natives, urban and rural youth, Hispanics, African Americans, citizen groups, NGOs, and the greater international wildlands community. The conference placed specific focus on inviting and including Native Peoples with a primary goal of lending these, our original peoples, a free voice with which to speak to the Wilderness community. While this conference may have been a milestone event in such regards, it only began to open the door to developing the types of honest communications that are imperative to create, enhance and maintain quality partnerships with Native and cultural communities.

The *Voices of Wilderness Across Cultures—Ways We Engage* panel highlighted the struggles faced by underserved communities and minorities. Panelists provided solutions for managers and program directors to use in their organizations. *Walking it Off*, a session on the benefits of Wilderness for war veterans, featured ways to engage and tap the strengths of this service-oriented demographic. Veterans organizations have documented the restorative values of Wilderness for our veterans and have continuously proven that these honorable men and women serve, in part, to protect wild places.

Moreover, African American, Hispanic and Asian agency and non-agency Wilderness advocates from a variety of disciplines played key roles in many of the conference plenary and concurrent sessions, throughout all six tracks. These meaningful, and in many cases inspirational presentations demonstrated the importance to agency managers and NGO Wilderness leaders of recognizing and harnessing the dedication of people from diverse socio-economic backgrounds.

The conference was a primary example of just how many untapped opportunities exist to engage people of all ethnic and socio-economic conditions at “*all levels*” of Wilderness stewardship. Speakers stressed that the time is ripe to actively seek ways to honestly and respectfully engage our Native and cultural community Wilderness neighbors in all aspects of Wilderness, even in these difficult times of limited budgets and increasing stewardship complexity.

WILDERNESS INTERNATIONAL. While the “Wilderness Movement” extends much longer than the 50 years celebrated at this conference (to before the passage of the Wilderness Act in 1964), it also extends across our North American borders to Canada and Mexico and around the world. The *International Journal of Wilderness* is over 20 years old, and though it is dominated by articles about the U.S. written by U.S. authors, there have been many special issues focused on burgeoning and successful Wilderness programs around the

globe. These broader-based articles help North American readers better understand the influence of our “Wilderness Movement” on world-scale conservation and increasingly suggest new and creative approaches from abroad for accomplishing U.S. Wilderness protection objectives.

Similarly, the World Wilderness Congress has met ten times, beginning in 1977, and continues to be the leader in this area by providing an international opportunity to explore the Wilderness concept in other cultures in both legislative and policy contexts. While at least 11 nations have implemented Wilderness protection policies, there continue to be differences in the definition of Wilderness across cultural and geographic boundaries. Furthermore, while delegates in the International Perspectives session were enthused to learn more about Wilderness applications around the world and of the positive influence U.S. leadership has, the focus continually fell back to the future challenges of working with our North American neighbors to assure trans-boundary protection objectives are met.

A new and exciting partnership along the U.S. border with Canada is aimed at protecting an international treasure – the largest expanse of public green space in the heart of North America – the Heart of the Continent. While borders, rules, and regulations differ across these lands from Quetico Provincial Park, Superior National Forest (Boundary Waters Canoe Area Wilderness), Voyageurs National Park, Grand Portage National Monument, numerous Minnesota state forest lands and parks and Ontario’s provincial parks, their cumulative value greatly exceeds piecemeal protection.

This type of collaboration has many possible benefits, with current efforts aimed at geotourism planning and connecting volunteer resources. Many other possibilities exist for such trans-boundary cooperation. Along the border with Mexico there are also several existing collaborative efforts, but unfortunately, the representative from Mexico who was scheduled to share outcomes from these efforts via the International Perspectives session was unable to attend.

ENGAGING YOUTH FOR THE FUTURE OF WILDERNESS. As a reflection of concerns within the “Wilderness Movement,” conference planners committed to including discourse on leadership development for Wilderness advocacy and management and to ensure Wilderness remains accessible to everyone. “Millennials,” citizens roughly between age 18 and 30, are forming values influenced by new information regarding our relationship to the environment. In our effort to strengthen understanding of the relevance of Wilderness to young people, it is increasingly believed this well-defined segment is where Wilderness/conservation educators should focus their efforts.

CONFERENCE YOUTH PRESENTERS. Nine youth presenters were sponsored, in part or in full, to attend the conference. The two main youth-delivered presentations were Future Stewards and Listening to Youth. Both of these presentations were well attended, with approximately 40 people at each program, and audience members commended the speakers for the caliber and importance of their messages. The youths shared their personal stories about how Wilderness has impacted them. They also provided tangible advice for current managers on how to reach younger audiences and make Wilderness relevant to youth.

EMERGING AS LEADERS. A future when millennials are our Wilderness leaders is not far off. These emerging adults are unique, and are very different from the preceding “X” generation. Engaging millennials in conservation/Wilderness programming before they reach their mid-twenties may positively affect their environmentally-based decisions, as well as their every-day social and ethical choices, ultimately contributing to a more conscious general population and a more environmentally-supportive future society.

Academic (University of Montana’s Wilderness and Civilization Program) and immersion (Youth Conservation Corps) programs focus on 18-25 year olds, utilizing experiential learning, community interaction, and place-based education as tools to engage young people in nature, community, and to enhance their personal understanding of their future. Alaska Geographic and Yosemite National Park are two places that have successfully built a cadre of partners and local youth who are helping to reverse some of the harmful trends in relevancy of public lands and public engagement.

Lessons learned in Alaska and California are highly pertinent to the 2020 *Vision* statement for building relevancy. Successful pathways to leadership roles within the public lands arena are designed to create a ladder of experiences, regardless of the program type, and are meant to develop trust within communities through long-term commitment by the sponsoring organization. Partnerships between government agencies and non-governmental organizations are essential in creating these programs, and attracting and retaining more youth and culturally-diverse communities in Wilderness stewardship.

Young people are becoming strong advocates for responsible public lands management. At the conference, we heard evidence of this from Alaska youth engaged in changing perceptions of exclusivity of wildlands and seas. Messages they struggle to combat include: Wilderness is only for people seeking extreme solitude or risk; Wilderness is only for people who represent a very small segment of our country's rapidly changing demographics (a concept developed and promoted by an entitled class); and one must be well equipped with experience and expensive gear to venture into Wilderness.

CONCLUSION. The diversity evident in these sessions is a positive indication of the growth of relevancy of Wilderness to the American public. For the first time in the history of our nation's Wilderness struggle, American Indians, Alaska Natives, Hispanics, Asians, youth, veterans, diverse coalitions, urban minorities, and a broad range of non-governmental organizations came together in a national forum to talk, sometimes to criticize, but always to express feelings of hope and expectation of inclusivity of all people to share the many benefits and responsibilities associated with Wilderness stewardship.

Listed below are a few examples of Wilderness cultural-community outreach/cross-cultural activities that have either already been realized or are being seriously considered for implementation as a result of the discussion, presentations and information sharing facilitated by the Civic Engagement Track:

- Involve Tribes and cultural communities in Wilderness/public land strategic planning
- Conduct National Wilderness Cultural Communities/Youth Conference in 2016
- Establish National Wilderness Cultural Communities Advisory Council by spring 2016
- Increase the number of Wilderness Investigations Teacher Workshops in Native and culturally diverse communities in 2015 and 2016
- Expand and sustain Native and/or urban youth conservation corps programs: La Plazita Native American Youth Urban Corps (Albuquerque, NM) and Conservation Legacy's Native Youth Conservation Corps (Phoenix, AZ)
- Laddered Outdoor Leadership Programs: Yosemite Leadership Program (Merced, CA)
- Engage veterans in outdoor-based projects and activities: Rivers of Recovery (Eagan, MN), Not Forgotten Outreach (Taos, NM)
- Develop, implement, evaluate and sustain collaborative local agency, NGO, Tribal and cultural community outreach/Wilderness awareness programming

A strong strategic plan to continue stewardship of Wilderness into the future should contain broad efforts to understand diverse orientations to Wilderness, to facilitate realization of both visitation and non-use benefits of Wilderness to the American public, and to assure that Wilderness is for all people and all people can be for Wilderness.

“Wilderness is a necessity ... They will see what I meant in time. There must be places for human beings to satisfy their souls. Food and drink is not all. There is the spiritual. In some it is only a germ, of course, but the germ will grow.”

- JOHN MUIR, American naturalist and co-founder of the Sierra Club

Youth Perspectives on Wilderness

Elisabeth Gustafson, *Alaska Geographic*

Dylan Lang, *University of Montana*

Aricia Martinez, *University of California*

Ashley Sawyer, *Girl Scouts USA*

Anna Warnock, *Chugach Children's Forest*

Santiago Pasquale, *Southwest Conservation Corps*

One of the most effective ways to engage youth is to empower them to be leaders in environmental issues and public lands advocacy so they see themselves as stakeholders with an investment in the preservation of the natural world. One way to do this is to encourage youth to share their insights and ideas on how to engage youth and allow them to take the lead in implementing these ideas. Youth are uniquely qualified to understand reasons behind dwindling youth engagement in public lands and effective ways to reverse this trend. Today's youth are living in an increasingly urbanizing society inundated with technology and near-constant socialization via social media. Young people, like our panelists, understand the ramifications our changing culture may have on the future of our wildest places, and can provide guidance to public lands professionals on how to adapt and adjust policies to attract younger generations to the outdoors and build their connection to our country's Wilderness areas. This panel of highly engaged young Wilderness advocates discussed their experiences, perspectives, and their hopes for the next 50 years of Wilderness.

Engaging You to Engage Us: Youth Take On Disengagement with Public Lands

Elisabeth Elin Gustafson, *Alaska Geographic*

The Chugach Children's Forest is a symbolic designation for the entire Chugach National Forest, located in Southcentral Alaska. The Chugach National Forest aims to incorporate a youth component into everything they do – from hosting public meetings tailored to receiving input from youth to offering multi-day kayak-based stewardship expeditions for local youth who otherwise would not have an opportunity to experience the outdoors. The Chugach Children's Forest (CCF) has been successful in reaching a diverse range of Alaskan youth from urban and rural locales in their programs, in part due to a model that is independent from self-selection by youth and their families. Rather than providing expeditions to youth already engaged in outdoors experiences, the Chugach National Forest and its nonprofit partner, Alaska Geographic, provide these experiences free of charge and ask nominators from schools or youth programs to recommend youths who would excel in the program, but who would not otherwise have the opportunity to participate in a similar experience. Youth involvement in CCF continues beyond the expeditions. Many participants form relationships with Alaska Geographic and Forest Service staff who act as mentors and support them as they seek additional opportunities in environmental fields.

We brought a group of dynamic and engaged youths to the panel to offer public lands managers and advocates a unique and valuable perspective into effective ways to engage youth in public lands. We addressed the crisis of dwindling youth involvement in public lands by discussing pressing questions such as: How can public lands managers more effectively engage youth? What are strategies to be as inclusive as possible of a diverse range of youth? Do youth see a place for themselves in public lands? Do youth consider Wilderness to be relevant to their lives?

Many Wilderness advocates point to their childhood experiences in public lands to explain the origins of their passion for protecting these areas. This passion is often passed from generation to generation; those whose families have the resources to explore parks and forests become imbued with a sense of the importance and value of natural lands. This subset of the population is the most likely to grow up to work in public lands management, and to determine policy and action related to these areas. It follows that many of their decisions inadvertently serve privileged populations similar to the decision-makers themselves.

CCF operates with the understanding that exposing a diverse range of youth to adventures and opportunities for recreation in the outdoors will result in a more diverse applicant pool, ready and eager to protect and manage public lands. This leads to a diversified workforce that can bring a wider range of perspectives to the decision-making process, and effectively serve more audiences. But until that happens, it is crucial to hear directly from diverse youth about how to increase the number of their peers recreating in the outdoors. Today's youth are living in an increasingly urbanizing society that is inundated with technology and near constant

socialization via social media. Our program participants understand the ramifications our changing culture may have on the future of our wildest places, and can provide guidance to public lands professionals on how to attract younger generations to the outdoors.

Alaska Natives Engage in Wilderness

Ilario Mercurief, Global Center for Indigenous Leadership and Lifeways

Alaska Natives and other indigenous peoples worldwide have had intimate, sustained relationships with what is commonly referred to as “nature” for thousands of years, relating to “Wilderness” as homeland, ancestral domain, and all that is. Most indigenous languages do not have an equivalent word for “Wilderness.” This western concept has evolved into laws that preclude the way indigenous peoples have interacted with the natural world, striking at the heart of what indigenous peoples call the “Natural Laws” and the “Original Instructions.” This presentation focused on the creation of new paradigms as it applies to “Wilderness.”

Tribal Engagement with Wilderness: Recognition, Resilience, Restoration and Resolve

Linda Moon Stumpff, Evergreen State College

This presentation explored multiple facets and benefits of multi-cultural engagement with American Indian Tribes. The first element is RECOGNITION and respect for tribal self-determination and self-governance. Tribes develop responses that protect their uniqueness and diversity. Through resolve and determination, they turn federal policies around and build the foundations for self-governance. Concerns for uniform policies that don't fit were at the heart of why the Wilderness Act was not adopted by the BIA in the early days. Some disjuncture exists between the Wilderness Act and indigenous cultural understandings of the human relationship to wildlands. At the same time, some of this disjuncture may not be critical for negotiation and reaching shared outcomes. Tribes may be coming to recognize that the Wilderness Act or special protected area status is perhaps the only effective way of preserving essential cultural values on lands. If they had extended Wilderness designation to Mt. Graham as suggested by Rare II, Apache people would not have the problems we have today. If the Kachina Wilderness in the San Francisco Peaks were absolved of the rectangle cut into it for a ski-resort, we would not have that troubling issue in a most sacred area. Wild areas are homelands for Tribes. Tribal relationships to wildlands live on and they are the strongest allies in the fight to save them if shared benefit and trust can be realized. New perspectives may be gained by looking at Indian Claims areas as vast and overlapping with Rare I and Rare II studies. RESILIENCE. Wilderness has an important role in cultural well-being. Wilderness has connections to sacred areas and spiritual needs. Closely connected is the need to honor the collection of medicinal herbs and natural objects for ceremonial purposes. Wilderness and protected areas on tribal lands may be different than the prescriptions of the Wilderness Act, but we should explore the reasons why this is so and ensure there should be no less respect, support and encouragement of these culturally-determined wild areas on tribal lands. What may appear to be non-regulatory and excessively flexible in tribal land protection may have a long-term foundation firmly embedded in culture. Tribal Wilderness may not have boundaries in some cases, but its protection is founded in cultural continuity through the review of land management actions by a council of elders or inter-tribal institutions. RESTORATION. Restorative actions are increasingly necessary due to the vulnerabilities present in the fire-prone ecosystems of this continent under stress from climate change and development. For indigenous peoples, restoration is a moral responsibility with a stewardship response required for the gift of wildlands. Restoration in this context also includes sacred site policy and the protection and restoration—both spiritual and temporal—of sacred sites in Wilderness. Restoring lands and restoring culture are not separate endeavors. RESOLVE. It is important to understand that Tribes were already in the Wilderness before other versions of Wilderness were shaped. Tribal positions may be rooted in thousands of years of culture and experience: this is important to remember in negotiations. Agencies tend to cut up mountains into pieces of Wilderness, uranium mines, and recreation areas. These policies are sticking points for many Tribes and political deals may not be acceptable if they are not in line with cultural values. To a Tribe, a mountain may be a whole thing, and not divisible into use areas. Research and consultation are the steps for building trust and collaboration.

Engaging Youth in Wilderness

Jay Watson, *Student Conservation Association*

Harry Bruell, *Conservation Legacy*

David Muraki, *California Conservation Corps*

Jackie Ostfeld, *Sierra Club*

Chris Sawyer, *Boy Scouts of America*

This panel highlighted a well-balanced representation of some of the most established and flourishing youth-engaging Wilderness programs in operation. From SCA, the Southwest Conservation Corps and the California Conservation Corps to the Boy Scouts of America, this adult-leader's panel conveyed their valuable insights on how to efficiently build, manage, and maintain a meaningful and life-changing youth Wilderness program.

Successes and Defeats in Maryland Wilderness Campaigns

Jennifer Browne, *Frostburg State University*

As of November 2013, Maryland has 43,779 acres in a protected Wilderness system, the Maryland Wildlands Preservation System. These Wilderness areas are part of the State Forest system. Since the first Maryland Wildland was created in 1973, the system has seen several expansions in the late 1990's and 2002. A major expansion is proposed and will be debated in the Maryland Legislature in the spring of 2014.

Although Maryland is regarded as a strong Democrat held and liberal state, these Wilderness tracts are predominantly in areas of the state with a strong conservative majority. The residents in these areas, and their elected legislators, have typically opposed Wilderness in favor of economic development. Those economic activities include timber harvesting, which funds the local county governments. An alliance between a small number of local residents and conservation groups based in the Baltimore/DC area has used Civil Engagement during each expansion, but depending on the political climate of the state at the time, took separate direction during the creation and expansion of the Maryland Wildlands system.

Our presentation focused on the political methods that Wilderness advocates have used to create and expand the Maryland Wildlands system in the last 40 years. This included the spring of 2014, the first expansion in Maryland in the age of social media and the internet.

Wild Indigo: Restoring and Connecting Diverse Natural and Human Communities in Cook County

Arnold Randall, *Forest Preserves of Cook County*

The Centennial Anniversary of the Forest Preserves of Cook County inspired us to take actions that will ensure that our natural areas thrive with biodiversity and are cherished by all residents. Our Centennial is an opportunity to re-envision, re-commit, and re-evaluate programming and operations that align with our mission. A key priority of this initiative is to engage diverse audiences, and in particular to connect underrepresented communities with nature. Our goal is that the more than 5.2 million Cook County residents feel welcome at the nearly 69,000 acres of forest preserves and seek them out for learning, renewal and fun.

The Forest Preserves recognizes that collaboration is critical to fully engaging the diverse residents of this large metropolitan area. Through a partnership with Audubon Chicago Region, Eden Place Nature Center, and the US Fish and Wildlife Service, the Wild Indigo Nature Explorations program was launched. This program has become a model for how to improve the connection of urban communities with nature and how to build advocates for biodiversity conservation. One key lesson learned through the Wild Indigo initiative is that forming relationships of trust takes time and organizations have to commit to engaging in meaningful dialogue, to actively listen, and to building a long-term commitment with community members.

The Wild Indigo initiative hired three people, referred to as "fellows," from within the communities we wanted to reach; for this project we wanted to reach Chicago's Southside which includes a large African-American population. Fellows were trained in conservation basics, and plant and bird identification skills. In addition, the Fellows bring their diverse backgrounds and talents including, art, business, communications, and personal connections on the Southside of Chicago which add depth and creativity to the program.

Partners and fellows worked to invite people from the community that would be interested in participating in bird walks, hikes, and experiential learning during field trips to forest preserve sites. Fellows regularly presented to community groups, schools, churches, and senior centers and promoted Wild Indigo Nature Explo-

ration events that emphasized building a sense of belonging, restoring self-esteem, and showcasing local nature as a friendly, accessible place. Restoration workdays were also organized and attracted participants of color.

The Wild Indigo project collaboration has been extremely successful at giving people who have never set foot in the Forest Preserves the chance to be comfortable experiencing nature. We believe that because Wild Indigo fellows reflect their community and because of the partners' commitment to this project, community groups were willing to try a new experience and engage with the Forest Preserves. Wild Indigo has focused their efforts in the Calumet region on Chicago's Southside and because of the program's success we are now considering replicating the program in other parts of the county.

Women in Alaska's Conservation Movement: Tundra Trips, Treks, and Letters Weave Community for Wilderness

Pamela A. Miller, *Arctic Connections*

Alaska's women conservationists played a key role in Alaska's Wilderness history and influenced the national movement but most books and articles at the time were by men. An early exception was Margaret Murie's *Two in the Far North* (1962) full of stories of Wilderness and its value from her honeymoon by dogsled to the 1957 Sheenjek River expedition that launched the campaign for the Arctic National Wildlife Refuge.

Celia Hunter and Ginny Hill Wood, often called the "grandmothers of Alaska conservation," founded Alaska's first statewide grassroots organization in 1960 to fight two megaprojects in concert with local communities (Project Chariot, an Atomic Energy Commission plan to blast nuclear bombs in Inupiat hunting grounds near Point Hope, and Rampart Dam that would have flooded Gwich'in homelands along the Yukon River) and accomplished by year's end the establishment of the Arctic Refuge by President Eisenhower's Interior Secretary. Ginny and Celia's personal letters with Mardy Murie and others played a key role in developing and sharing Wilderness ideas, goals, and conservation strategies for the Arctic Refuge and Wilderness Act of 1964 and later on the Alaska National Interest Land Conservation Act of 1980.

At the center of the state, Fairbanks is a travel hub for the north. As pilots and guides for early tourism ventures, Ginny and Celia knew the land and remote communities – a great challenge then and perhaps more so today – which helped to grow their network of Alaskans who cared about the land and supported conservation. From their summer base at Camp Denali for 25 years they energized individuals and national leaders and so grew the Wilderness movement and action on Alaska conservation. They gathered them into the fold for grassroots action from that point on. Celia Hunter travelled extensively to workshops and conferences, was the first woman to lead a major conservation organization (The Wilderness Society), was a founder of the Alaska Conservation Foundation, and wrote a regular column for the *Fairbanks Daily News-Miner* and *Alaska Magazine*. Ginny Wood remained a Wilderness guide on rivers and backpacking into her seventies and wrote a regular column "From the Woodpile" in the Northern Center's newsletter, the *Northern Line*, for decades and frequent letters to the editor. Her stories form *Boots, Bikes, and Bombers: the Adventures of Ginny Hill Wood* edited by Karen Brewster (2012). They both gardened in summer, cross-country skied on neighborhood trails all winter for health, sustainability and sanity. They shared tea around their kitchen table with neighbors or distant travelers. They took the time to get to know you, explained complex issues.

In the 1990's the Alaska Women's Environmental Network brought together conservation elders, including Celia, youth, and the generation at the forefront of work in Alaska today, through mentoring, conferences, and e-mail communications. Indigenous women leaders have played a strong role in recent Alaska conservation campaigns, particularly in the long fight to permanently protect the Coastal Plain of the Arctic Refuge as Wilderness. In this age of 24-hour news, social media, and tumultuous climate change, how can leaders still take enough time to build and deepen relationships through trips, tea, and talk to build communities for enduring Wilderness?

A Strategic and Diverse Collaboration Wins: Organ Mountains—Desert Peaks National Monument

Mark Allison, *Executive Director, Wilderness Alliance*

A long, collaborative, strategic process in Wilderness protection started in 1972 when former New Mexico Wilderness Alliance Board Chairman Wesley Leonard and board member Dave Foreman started work on a proposal to protect Bureau of Land Management lands in Doña Ana County. Doña Ana County landscape conservation efforts began in the early 1980s when the Bureau of Land Management (BLM) began granting temporary protections for eight local Wilderness Study Areas (WSAs) across the county. NM Wild co-founders were involved in advocating for the protection of local mountain ranges, including the Organ, Potrillo, and Robledo mountains. In the last 10 years, diverse members of the community including elected officials, business owners, historians, tribal governments, sportsmen, conservationists, and thousands of citizens have urged New Mexico's federal delegation to move forward to protect the Organ Mountains and surrounding landscape. The New Mexico Wilderness Alliance opened and staffed its field office in Las Cruces in 2004, and in 2005 organized a community coalition to work toward the permanent protection of these lands along with other areas identified that possessed outstanding ecological and historical importance. In 2006 NM Wild formed a community coalition and helped pass resolutions from local communities urging adoption of a Citizens' Land Protection Proposal. 2007 saw a Community Memorandum of Understanding signed. Senators Jeff Bingaman and Tom Udall introduced Organ Mountains-Desert Peaks Wilderness Act (S.1689) in 2009 to protect WSAs and additional citizen proposed lands in Doña Ana County. The Hispano Chamber of Commerce de Las Cruces (HCCLC) and NM Wild held a Wilderness economics forum, which brought in economic development leaders from across the country to discuss the economic benefits of protected public land near communities. A U.S. Senate field hearing drew more than 600 supporters of S.1689. This was followed in 2011 when Sens. Bingaman and Udall introduced Organ Mountains-Doña Ana County Conservation and Protection Act, S.1024. March 20, 2012: NM Wild, along with diverse community of supporters, announced a proposal that called for the designation of a national monument. The next year U.S. Sens. Martin Heinrich and Tom Udall introduced the Organ Mountains-Desert Peaks Conservation Act to establish the Organ Mountains-Desert Peaks National Monument. On January 25, 2014, United States Secretary of the Interior Sally Jewell visited Las Cruces for a town hall meeting to gauge support for the proposed national monument and tour proposed monument areas. Support for the national monument at the forum was overwhelming. The national monument proposal was broadly backed by the local community—in a recent survey, more than 70 percent of people said they supported an Organ Mountains-Desert Peaks National Monument. These efforts, under the authority of President Obama, came to fruition on May 21, 2014, with the designation of the Organ Mountains-Desert Peaks National Monument. Thus a dynamic coalition of diverse community members permanently protected many of our most important natural and historic resources in Doña Ana County. The Organ Mountains-Desert Peaks National Monument designation caps a historic year and a half period in New Mexico that also saw the designation of the 242,455 acre Rio Grande del Norte National Monument outside Taos in 2013.

Voices of Wilderness Across Cultures: Ways We Engage

Elwood York, US Forest Service

Wayne Hubbard, Urban American Productions

Nina Roberts, San Francisco State University

Linda Moon Stumpff, Evergreen State College

Gabe Garcia, US Forest Service

Most cultural communities have always had varying perceptions of “designated” Wilderness. Therefore, after fifty years, many of these cultures have not yet fully engaged in using the Wilderness system. This panel included presentations from the Urban American Outdoors- cultural-youth outreach program, the Urban Conservation Corps (UCC) of Southern California, and dynamic educator and respected leader Nina Roberts who spoke on her highly regarded research in the areas of culture and natural resources.

The US Wilderness Act: Its History, Impact, and Future Role in Growing a Global Wilderness Community

Vance G. Martin, *WILD Foundation*

There is a long history of approaches to protecting wild nature per se, and de facto. But the 1964 Act can be seen as a transition point in global affairs addressing and regulating our relationship to wild nature....it is a seminal document. At its launch, it captured, interpreted, elevated and encoded a human approach to wild nature under a specific and new category of land use based on “what nature needs” rather than purely what humans require or would enjoy. Though of course it was not the first approach to protecting wild nature, it was the first of its kind both in its specific subject and its multiple implications that integrated biological, economic, political, and moral factors. It is an unusual model of balance, and a policy focused on the power of human restraint in regards to nature in order to enhance health, prosperity, and quality of human – and all other – life.

This presentation had three general sections.

The first quickly set the stage, and dealt in small part with the global history that lead to and created the conditions for the US Wilderness Act. The rest and main part of the presentation focused more completely on the years since the Wilderness concept was first mooted specifically in the 1964 Act.

The second section looked at the impact of the Wilderness Act, and how the concept and its usage has spread internationally in many ways and forms – ad hoc usage, popular communications, administrative enactment, and statutes at jurisdictional levels including national (from many state, provincial and communal, to approximately 11 nations). It specifically addressed the challenge of definition. Though Wilderness is a wide ranging concept, the term Wilderness is not so elusive as to defy any definition and it is possible to establish some clear scientific and social parameters for the term that provide fairly firm and universally recognizable boundaries. It is a challenging but healthy reality that there will always be some variation in the definition of Wilderness because different societies will have different standards, and because the condition of their lands will vary.

The third section had the most emphasis. It will dealt with:

- Major implications and challenges of the Wilderness Act for global nature conservation.
- The difficulties and advantages of applying the model and lessons of The Wilderness Act to different countries and cultures.
- What can be learned by US conservationists from the subsequent implementation of other national and sub-national approaches to Wilderness legislation and management.
- Suggested ways in which the US sector can assist other countries and cultures in moving towards legislated Wilderness protection.
- Suggested ways in which a collaborative global Wilderness movement and community could be significantly enhanced, the reasons for doing so, some of the challenges to doing it, and the benefits to be realized.



Backpacker at sunrise over Isolation Lake, Alpine Lake Wilderness, Washington

By Daniel Silverberg, www.danielsilverberg.com

Heart of the Continent Partnership: International, Innovative and Inspiring Wilderness Engagement

Paul Danicic, *Friends of the Boundary Waters Wilderness*

Ann Schwaller, *US Forest Service*

Lisa Radosevich-Craig, *US Forest Service*

Spanning the international border between northeastern Minnesota and northwestern Ontario lays an international treasure: the largest expanse of public green space in the heart of North America - the Heart of the Continent. Several separately managed natural areas are encompassed by this ecosystem at the “heart of the continent,” including Quetico Provincial Park, Superior National Forest (Boundary Waters Canoe Area Wilderness), Voyageurs National Park, Grand Portage National Monument and numerous Minnesota state forest lands and parks and Ontario provincial parks. These public lands have numerous borders, rules, regulations and laws from different international, federal, state, local and private entities impacting them and often causing confusion, gridlock or even detrimental activities inadvertently degrading the value this prime open space.

The Heart of the Continent Partnership (HOCP) is a Canadian/American coalition of land managers and local stakeholders working together on cross-border projects that promote the economic, cultural and natural health of the lakes, forests and communities on the Ontario/Minnesota border. HOCP started with a belief that if a moose could move across these barriers without drama, so should our human conversations and initiatives. In 2009 HOCP organized an epic, cross-border canoe trip involving elected leaders, agency staff, citizens and conservationists to celebrate the 100th anniversary of the Quetico Provincial Park and Superior National Forest. On the heels of this canoe trip HOCP conceived the International Community Congress. This four-day workshop saw over 100 Canadian and U.S. elected and tribal leaders, conservation/recreation group staff, agency staff, business leaders, foundation staff and gateway community citizens participate on ten teams. Each team represented a community around the region. There were expert presenters and facilitated time for each team to create a project that would benefit their local economy in a sustainable manner. These projects were carried out in the following year with overwhelming success rates and relationships were created and strengthened.

Two important new initiatives have resulted from these activities, 1) a collaborative initiative with the National Geographic Society to create a unique geotourism destination with goals to increase visitorship, build support for the sustainable economic value of the region, and build community and shared identity among those who live in the gateway communities and 2) a Volunteer Initiative to connect organizations needing volunteers with interested individuals.

The Heart of the Continent Partnership engages citizens in two countries working with several different agencies with very different cultures that manage over five million acres of cherished natural public lands. The positive benefits of this effort include increased understanding and value for the Boundary Waters Canoe Area Wilderness, America’s most popular Wilderness, and the people who live around it.

NGOs and Politics: Engaging for Wilderness and Our Constituents

Julie Randall, *WILD Foundation*

Andrew Pike, *Pew Charitable Trusts*

Terri Martin, *Southern Utah Wilderness Alliance*

Louise Lasley, *Wilderness Watch*;

Paul Spitler, *The Wilderness Society*

Engaging with local politicians on any number of issues relating to Wilderness stewardship is an everyday occurrence for our most established Wilderness non-governmental organizations (NGOs). Some of the best-of-the-best spoke about how they have been successful at building solid and lasting working relations with politicians and their staffers. Also discussed was how these positive politico-relations can translate into significant user-group and Wilderness resource-based benefits.

Lessons Learned Over Thirty Years Working for Wilderness in the Reddest State of the Union

Terri Martin, *Southern Utah Wilderness Alliance*

This presentation focused on the lessons learned by the Southern Utah Wilderness Alliance from working to defend and win protection of Wilderness lands over 30 years in one of the most challenging political environments in the country.

The reflections are relevant and helpful to any individual or group engaged in Wilderness activism, including those focusing on building an organization, defending wild lands against threats, developing political strategies and tactics, or organizing citizen activists.

The Southern Utah Wilderness Alliance is known as one of the premier state-based Wilderness organizations in the U.S. Over the last 30 years, it has grown from a “junk yard dog” born in the trenches of desperate times to a highly sophisticated organization which effectively integrates legal, legislative, communication and citizen organizing efforts. In those three decades, SUWA has: largely stopped the loss of Wilderness on the ground; gained some level of protection for over 5.5 million acres of Wilderness lands; built a national constituency for wild lands in Utah; and begun to turn the conversation around in Utah on Wilderness. And it has realized these accomplishments in the reddest state of the Union at the heart of Sagebrush Rebellion country.

Some of the issues we touched upon include:

- The relationship between being visionary, tough-minded and uncompromising in the defense of Wilderness and being strategically pragmatic
- The value and power of on-the-ground expertise
- The integrated roles of legal and political action
- The importance of building the organization and an army of citizen activists
- Surviving and thriving in seemingly politically impossible conditions

Role of NGOs in Caring for the National Wilderness Preservation System

Gary Macfarlane, *Friends of the Clearwater*

Louise Lasley, *Wilderness Watch*

Wilderness Watch is America’s only organization dedicated to defending and keeping wild the nation’s 110 million-acre National Wilderness Preservation System. Wilderness Watch, founded in 1989, watchdogs the federal Wilderness agencies to see that Wilderness administration preserves Wilderness character and follows the law. Wilderness Watch believes that Wilderness is defined by two primary characteristics. First, it is a place where nature is free to exist as it did in ages past, self-willed and untrammelled. Second, it is a place where humans are free to roam through nature in its wild condition, to experience a feeling of solitude and self-reliance found nowhere else. While NGO’s have been heavily engaged in Wilderness legislation and more recently many NGOs have been involved in trail maintenance or other projects—acting as agency volunteers—Wilderness Watch’s role is unique and one that needs to be filled.

Engaging 18-25 year olds in the Values of Wilderness:

Digital Media Arts and Encountering the Wild

Kimberly Sultze, *Saint Michael’s College*

Jon Hyde, *Saint Michael’s College*

Our concurrent presentation addressed practical and interdisciplinary approaches to engaging 18-25 year olds in research, analysis, and media production related to nature and the outdoors. We are two university professors with 40 years of combined experience in curriculum development and pedagogy in Media Studies, Digital Arts, and Environmental Studies. Our examples involved experiential learning, community interactions, and place-based education; they came from assignments and projects we’ve undertaken in our courses, but the projects could be adapted for students of various ages.

We began by profiling the current screen-based media diet of American 18-25 year olds, and how such habits provide barriers to and opportunities for the development of Wilderness values. We shared a series of assignments and projects we’ve had success with. Our focus has been engaging young adults in the values

of Wilderness, the outdoors, and environmental issues through multiple forms of digital media. The projects involve research – including field work and observations, natural history, and in-depth interviewing of experts, as well as various forms of digital storytelling (writing, online media, digital audio and video).

Here are some samples:

- The Encounters Project: Facilitating Solitude and Self-reliance Using Multiple Forms of Media
- The Wild Soundscapes Project: Cultivating a Deeper Sensory Experience of Nature through Sound
- Adventure Filmmaking and Community Partner Documentaries: Working Together for a Cause
- Environmental Film Documentary: Production and Critical Analysis
- The Week without Cellphones: Making it Possible to Be Alone and Out of Touch

Millennial Service Learning in California’s Wild Places

Emilyn Sheffield, *California State University*

Millennials—America’s most diverse generation—are transforming campuses, communities and the workforce. Their voices and vision will carry the Wilderness idea forward. What are their hopes? How and why do they choose to invest their time and talents? Hundreds of student volunteers preserve and enhance parks, forests, wildlife refuges, trails, and Wilderness areas every year through CSU, Chico Field Schools. They remove invasive plant species and restore trails. They staff special events, manage conferences, and provide Millennial consultations. They develop marketing materials and utilize social media to engage people of all ages. They volunteer, they return, and they bring their friends.

Millennials volunteer for reasons as diverse as the generation itself, and seek to develop different skills through their volunteer efforts. Chico’s program grew from five to 500 volunteers in five years by incorporating Millennial preferences to increase the attractiveness of nature and wildlands as service learning settings.

Key findings from the research and field practice are illustrated through case examples from Field Schools sponsored by four federal agencies (Bureau of Land Management, US Fish and Wildlife Service, USDA Forest Service, and the National Park Service) and California State Parks. Recruiting strategies and program design elements are essential in efforts to engage diverse participants. Risk management protocols and third party partners augment campus resources to enable more students to participate. Techniques have been field proven to intentionally incorporate:

- Intergenerational mentoring for first-generation college students
- Story-telling and technology to increase the appeal of wildland stewardship
- Milestone celebrations to attract new participants
- A tiered leadership model to leverage student and sponsor strengths

Chico’s Field School program has grown quickly, affordably, and safely through a four-step formula that focuses on the aspirations of Millennials, and coordinates closely with campus and agency sponsors. Chico’s experiences in program development and strategies for funding campus field schools can be adapted by any campus or agency to engage Millennials in wildland and Wilderness stewardship efforts.

Sharing Civic Engagement Successes: Successful NGO Programs

Harry Bruell, *Conservation Legacy*

Nathan Newcomer, *New Mexico Wilderness Alliance*

Robert Dvorak, *Society of Wilderness Stewardship*

Rose Chilcoat, *Great Old Broads for Wilderness*

Bob Hazelton, *National Wilderness Stewardship Alliance*

This high-powered panel session offered attendees a myriad of practical/field-tested tools in the areas of non-governmental organization (NGO) development, management and program sustainability, and was presented by leaders of the most-successful Wilderness NGOs in the business. If you are involved in any way at any level with a Wilderness NGO or agency Wilderness program this concurrent session was not one to miss.

Listening To Youth: Youth Perspectives on Connecting Young People to Wilderness

Aricia Martinez, *University of California, Merced and Yosemite National Park*

Calesia Monroe, *Chugach Children's Forest*

Daniel Spain, *Kern County Conservation Corps*

James Lynn, *American Conservation Experience*

Andres Estrada, *University of California, Merced Yosemite Leadership Program*

Unfortunately many youth in America only ever experience wild places through television and computer screens, books and magazine pages, or – at most – through the window of a car. For most, these distant, removed experiences are inconsequential. The experiences aren't deep enough to create meaningful connections. As a result, to these young people, the Wilderness seems a far-off, irrelevant, fictional, or perhaps even dangerous place. Obviously, if we hope that future generations will continue to protect the wild places left on our planet, we must reunite the younger generations with those places. Clearly, this disconnect comes from a lack of physical, sensory, and emotional experiences with the Wilderness. But knowing that young people must experience the Wilderness to develop a relationship with it is not enough. We need to better understand the barriers that keep young people from Wilderness in the first place from the perspective of young people themselves.

When we take the time to listen we find that for some, the barriers are physical: geographical distance to Wilderness or a lack of resources (time, money, transportation, etc). For others, the barriers are psychophysical: something about the culture surrounding Wilderness makes them feel unwelcome. And of course, none of these hurdles are mutually exclusive. So the question remains: how do we best address these challenges? To examine this, we will hear from three individuals who have experienced and overcome these barriers first-hand. First, Calesia Monroe, a Chugach Children's Forest youth leader explains that it was difficult to envision herself kayaking in Prince William Sound because she had never heard of other African Americans doing something similar. Yet today, Calesia has not only had this experience, but now serves as a premier ambassador for the Chugach Children's Forest and offers wonderful insight in ways to engage her peers in the Wilderness. Second, we'll hear from Daniel Spain, a member of the Kern County Conservation Core. Daniel addresses some of the challenges surrounding getting a new youth organization off the ground and will share personal experiences he has had in his time as part of the group. After, we'll hear from James Lynn, an alum and current employee of a program called ACE (American Conservation Experience). James offers insight into the struggles that many urban youth face in their everyday lives, and the ways that those struggles create barriers that discourage his peers from going outdoors. Finally Andres Estrada, a graduate of Yosemite Leadership Program and the Bren School of Environmental Science and Management, tells the story of an urban Southern Californian teenager turned outdoor enthusiasts and environmental professional. Andres raises questions surrounding the role of young environmental professionals in shaping the future of wild lands. Together, these three young leaders demonstrate the importance of inclusivity in designing programs to engage youth in the Wilderness, and highlight the necessity of diversifying the pool of advocates for wild lands.

“The wilderness holds answers to questions man has not yet learned to ask.”

- NANCY NEWHALL, Editor and photography critic

Engaging the Full Spectrum of Wilderness Stewardship: Partner Viewpoints

Anne S. Fege, *US Forest Service, retired*

Randy Rasmussen, *Back Country Horsemen of America,*

Aaron Clark, *International Mountain Bicycling Association*

Will Roush, *Wilderness Workshop,*

Paul Andersen, *Director, Huts for Vets*

At the very heart of Wilderness stewardship are the thriving partnerships that exist between Wilderness managers and their integral non-governmental and user-group partners. This high-energy panel session offered varying perspectives and possible solutions to emerging Wilderness stewardship issues, and engaged attendees in a lively discussion about working together to build advocacy for Wilderness use and preservation.

The founders of Back Country Horsemen of America (BCH) lobbied for passage of the Wilderness Act over 50 years ago. Today, BCH are among the dwindling practitioners of Wilderness tradition in their use of primitive tools to maintain trails and by their primitive mode of travel – a mode that was favored by Wilderness champions that include Aldo Leopold, Teddy Roosevelt and Howard Zahniser. Although some advocate for prohibiting or severely restricting horses and mules in Wilderness, the BCH are among the few organizations with a history of public service whose primary purpose is to keep trails open for everyone.

Successful Wilderness bills are all about trust, balance and fair and open conversations. The International Mountain Bicycling Association (IMBA) has transformed the way mountain bikers engage in Wilderness proposals and it has resulted in a win-win outcome for conservation and recreation advocates. IMBA shared their perspective, the unique approach and perspective they bring to the Wilderness discussion, and how to work together with the broader conservation community to achieve collective goals.

Wilderness Workshop focuses on protecting and conserving the Wilderness and natural resources of public lands in western Colorado. Wilderness Workshop engages in research, education, legal advocacy and grassroots organizing to protect the ecological integrity of local landscapes and public lands – not just Wilderness. This includes monitoring air and water quality, wildlife conservation, habitat restoration, leadership in the Roaring Fork Valley Future Forest Roundtable, and advocacy to protect the Thompson Divide from gas development.

Huts for Vets organizes short Wilderness trips and stays at 10th Mountain Huts in Colorado for small groups of veterans and active-duty service members. Huts for Vets is committed to fully engaging participants at psychological and experiential levels through immersion in Wilderness, physical challenge, group discussions and contemplative thought.

As urban dwellers increase, future support for Wilderness and public lands will depend on making clear connections to urban nature for children and adults. Nationally the Children & Nature Network, and locally the San Diego Children and Nature Collaborative, work to increase opportunities for children to learn in nature, play outdoors, and experience nature in their everyday lives.

Back Country Horsemen: America's Best Kept Secret in Wilderness Trail Stewardship

Randy Rasmussen, *Back Country Horsemen of America*

The founders of Back Country Horsemen of America lobbied for passage of the Wilderness Act over 50 years ago. Today, Back Country Horsemen are among the dwindling practitioners of Wilderness tradition in their use of primitive tools to maintain trails and by their primitive mode of travel—a mode that was extolled and favored by Wilderness champions that include Aldo Leopold, Teddy Roosevelt and Howard Zahniser. Yet some organizations fervently advocate that horses and mules should be strictly regulated or outright prohibited in Wilderness.

With ecosystems imperiled as a result of climate change and a century of fire suppression, are concerns from a few individuals who feign outrage at the site of horse manure on a Wilderness trail to be taken seriously? Do these newcomers fail to understand that the vast majority of trails in most Wilderness areas were constructed to accommodate saddle and pack stock use? Do they understand that the Back Country Horsemen are among the few organizations with a history of public service whose primary purpose is to keep trails open for everyone?

Packstock use represents a primary mode of travel for transporting materials and supplies to trail crews and restoration activities in Wilderness. Hike-in crews can carry-in tools and supplies only so far. Consistent with the “Keeping it Wild” philosophy, the desire of federal land management agencies to minimize use of helicopters and motorized equipment in Wilderness is expected to increase. Therefore, Wilderness advocates

that welcome this trend should realize that use of packstock is both necessary and desired in order to preserve and enhance Wilderness character.

The 2014 fire season in California provided a good example of the importance of pack stock as a management tool in preserving Wilderness character. Region 5 packers, stock and mule teams associated with the U.S. Forest Service Southern Center for Excellence (USFS SCE) worked on seven different Wilderness fires. Suited to the rugged terrain, mules carried loads up to 160 pounds each and were capable of travel up to 30 miles in a single delivery. As a result, each mule string precluded the need for up to 12 helicopter supply trips. Pack stock operated throughout adverse weather, including 11 days when helicopters were grounded due to inversions. On those occasions, pack stock were the sole means of supplying back country fire crews, in many cases providing critical supplies and in two cases transporting sick firefighters out of the back country. A mule team supplied and operated by Back Country Horsemen of California evacuated a California Conservation Corps trail crew to a work camp away from an active fire area. Mule teams also were instrumental in saving the historic Hodges Cabin, located within the Trinity Alps Wilderness, during the early days of the Coffee Complex fire.

Overall, the USFS SCE estimated that pack stock use to fight Wilderness fires eliminated the need for 110 helicopter flights during the 2014 fire season, reducing cost and exposure of personnel. Use of pack stock in lieu of helicopters also served to preserve and enhance Wilderness character through the promotion of a primitive and time-honored mode of travel.

Building Political Clout by Engaging a Full Spectrum of Recreationists

Aaron Clark, International Mountain Bicycling Association

Politicians are increasingly leery of going out on a limb. This makes passing Wilderness bills with luke warm support all but impossible. Broad support by people cut from the same cloth (ie: traditional allies) won't cut it so-to-speak and diverse allies are no longer diverse enough. What is needed to turn heads in Congress? Support from non-traditional entities with economic clout. This is more than a "check the support box" exercise. To win, support must be mobilized and enthusiastic trailed closely by the promise of economic stimulation.

This session will explore the political realities of today's "show me the money" economic atmosphere. What non-traditional partners want from the viewpoint of outsiders (Outdoor Alliance/IMBA) and what is needed to reverse the trend of stalled bills.

Spurred on by this very conference a decade ago, the Wilderness community has made great strides at embracing the recreation community in Wilderness advocacy. IMBA and Outdoor Alliance (OA) have been at the center of that shift. While minuscule in comparison to larger institutionalized organizations, OA is fresh and new and creating a stir on Capitol Hill.

Together we discussed examples and engaged the audience on what is working, what deserves more attention, and how engaging the broad recreation community as well as the most adversarial of nontraditional partners, will restore public trust and earn congressional support.

Wilderness Advocacy in the 21st Century: Working with Mechanized and Motorized Users

Will Roush, Wilderness Workshop

Achieving Wilderness designation has become increasingly challenging over the past five years. A polarized Congress, unwilling to address even must pass bills, has been reluctant to take up individual Wilderness bills. Politicians are reluctant to sponsor bills with any controversial issues and similarly both the House and Senate are passing few if any Wilderness bills with any controversial issues out of committee. The 112th Congress was the first since 1966 not to pass a single Wilderness Bill and prospects don't look particularly good for the 113th. This presentation addressed the advantages and challenges of working with the mechanized and motorized recreation community within this environment of congressional inaction on Wilderness.

Technological improvements and greater use have increased the mechanized and motorized community's ability to influence and even prevent Wilderness designations. Though historically opposed to Wilderness designation, some mechanized and motorized enthusiasts and organizations are beginning to work alongside Wilderness advocates. Most notable among these is the International Mountain Biking Association, but local groups are also beginning to work in cooperation with Wilderness advocates, rather than in opposition to help shape existing and new Wilderness proposals. Key to many of these efforts is the use of non-Wilderness designations, often called companion areas or Special Management Areas. Designed to permit one or more non-conforming uses, these designations provide more protection to lands than existing administrative management but still allow mechanized or motorized uses generally prohibited under the Wilderness Act.

Drawing on examples and experience from several Wilderness campaigns in Colorado (including the Hidden Gems, Central Mountains, Gunnison County, and Hermosa Creek) the presentation examined what factors make collaboration with motorized and mechanized users successful and worthwhile or not. Specifically, I addressed working with national versus local groups, formal and informal collaborations, and the uses of Special Management Areas.

Connecting with Communities Across Cultures: Empower, Engage, and Encourage to Make a Difference

Nina S. Roberts, San Francisco State University

“Why do so few minorities visit some parks or Wilderness areas?” is a question that has been asked for decades. Empirical research on outdoor recreation experiences of ethnic minorities has occurred since the early 1960s and while studies persist, there is so much more to explore. Our nation’s forests and parks receive millions of visitors annually yet few of those visitors to Wilderness areas are from diverse racial backgrounds. Although various pioneering initiatives have achieved some notable success, many ethnic minorities are still underrepresented in varied forms of outdoor recreation participation across the country. National studies consistently show people of color still at the lowest end of the participation spectrum; this has generated new inquiries into barriers and perceptions as well as use patterns and preferences of Wilderness areas.

How these perceptions or use patterns, for example, may be changing also relates to a surge of racial/ethnic minorities many of whom are, and eventually will be, part of the Wilderness preservation system. According to the U.S. Census, this nation will be “majority minority” by 2042 so a cultural shift is inevitable. How this change will impact our programs, policies, personnel, and management practices relating to Wilderness remains to be seen. Underserved audiences must be embraced yet challenges abound for professionals coast-to-coast.

Wilderness is incredibly difficult to define and, consequently, it provides ample opportunity for a wide-range of individual interpretations, and arguable viewpoints. Imagine words and phrases that are associated with “Wilderness”, in general. For some people statements such as solitude, natural, untrammled, and freedom come to mind. For others, terms such as hostile, unwelcoming, barren, inaccessible and scary surface. Such views are based upon morals, values, attitudes, and beliefs that have been instilled in us by the type of life we have led, by the experiences and opportunities we have had (or not), and more specifically the environment that we grew up in.

Our real challenge lies in not trying to “bring people of color into the woods” to teach them, but more importantly, to create opportunities for them to learn on their own. In this session we will talk about connections. Connecting people with parks and Wilderness areas through education and recreation provides an open door that is all too often closed. Wilderness may or may not inspire people for very different reasons that are often unknown or misunderstood. Wilderness does not know the difference between cultures; how, then, can we build stewards out of new users or potential users who are foreign to the traditions of our history of preservation or benefits of use, or who are unfamiliar (or unaware) of the needs and issues surrounding Wilderness? How can land managers continue to learn from the very communities they are trying to serve?

Furthermore, why do some people continue to even believe ethnic minorities do not value parks and protected areas? Hence there is also a need to dispel persistent myths about the minority experience regarding Wilderness. Engaging communities and effective outreach can be challenging yet efforts are absolutely essential. A successful future isn’t possible any other way.

Rio Grande del Norte National Monument: Successes of a Diverse Coalition

John Olivas, *New Mexico Wilderness Alliance*,

Esther Garcia, *Former Mayor of Questa*

Erminio Martinez, *Grazing Permittee*

Francisco Guavara, *Los Rios River Runners*

Stuart Wilde, *Llama Trek Adventures*

Roberta Salazar, *Rivers and Birds*

Larry Sanchez, *Taos County Commissioner*

Max Trujillo, *Rio Grande del Norte Campaign*

The Rio Grande del Norte National Monument is located in Taos County in north central New Mexico, dissected by the Rio Grande River/Gorge. The Rio Grande Gorge encompasses 800 foot cliffs from its rim to the surface of the Rio Grande River. The Rio Grande serves as a major flyway for migratory birds in North America and is home to a diverse range of birds and mammals that including; Bald Eagles, Golden Eagles, Big Horn Sheep, Rocky Mountain Elk, Rocky Mountain Mule Deer and Pronghorn Antelope.

The success of the Rio Grande del Norte National Monument designation that was signed into law by President Barack Obama on March 25th, 2013 was successful in part by a diverse coalition of partners that crossed many boundaries within Taos County. Coalition members including Acequia Parciantes and Mayor-domos, Grazing Permittees, Land Grant heirs, Elected Officials, Business Owners, Conservation Organizations and many individual supporters came together to protect one of northern New Mexico's crown jewels; The Rio Grande del Norte National Monument.

This coalition has been referred to by the New Mexico federal delegation as a model campaign for the entire country to follow when working on land conservation campaigns across the country.

The coalition discussed some of their efforts, threats and challenges that took place during the 20+ years that this campaign had been in existence. The panel discussed the efforts that were responsible for protecting the Rio Grande del Norte National Monument for all future generations.

Who Will be Our Future Leaders? A Crisis of Relevancy with Younger Generations

Ann Mayo-Kiely, *Alaska Geographic*

Of all the critical concerns for the Wilderness Preservation System, more effectively engaging younger generations and more diverse audiences should be a high priority. Without the engagement of diverse younger generations all of the challenges with stewardship, policy, and science will become increasingly difficult over the next 50 years. Several trends are relevant to the future leaders in Wilderness and public support for the Wilderness Preservation System—from social and demographic trends to ways we communicate about and manage Wilderness.

Although public recognition of the value of protected lands is high, people who benefit from direct experiences with Wilderness come from a small segment of our population. Some of the strongest messages conveyed (intentionally or unintentionally) that reinforce perceptions of exclusivity and alienation include:

- Wilderness is for people seeking extreme solitude and risk.
- Wilderness is for people who represent a very small segment of our country's rapidly changing demographics, and is a concept developed and promoted by an entitled class.
- You must be well equipped with experience and expensive gear to venture into Wilderness.

The values of Wilderness remain highly relevant today, especially with growing recognition of the importance of human connection with nature. However, concepts like solitude, self-reliance, and primitive are all relative. The practices and messages that focus on narrow definitions of solitude, primitive recreation and self-reliance can exacerbate perceptions that direct experiences with Wilderness are for an entitled few.

In the 1600s Wilderness was something to be feared and in need of being "civilized". This is not a perception left to our early American History, but remains prevalent. An important segment of our population comes from family cultures where Wilderness is a place of danger or difficult life that was left behind for a more comfortable urban American life. How many of today's Wilderness professionals and supporters were initially inspired by life-changing Wilderness experiences, or grew up with adults who shared Wilderness with them? Today it is becoming less common for young people to grow up adventuring into the Wilderness. The implica-

tion is that an overwhelming proportion of younger generations are being left behind, and we have a looming crisis of relevancy for Wilderness. Whether it's concern for future advocates, voters, workforce, visitors, scientists, teachers, scholars, artists, philosophers,...We should be concerned.

Alaska Geographic and our public lands partners, led by the Chugach National Forest, are taking new approaches to focus on local partnerships to better understand challenges and opportunities with engaging new audiences. Over the last 5 years we've built up a cadre of partners and local youth who are helping us to reverse some of the trends in the relevancy of public lands and public engagement. With Alaska's changing demographics (Anchorage is a minority-majority school district with more than 90 different languages spoken in homes, and 3 of the nation's most diverse high schools and neighborhoods are in Anchorage). The lessons we are learning in Alaska are highly relevant to the national Wilderness debate.

Walking it Off: The Curative Benefits of Wilderness for Veterans

Paul R. Andersen, *Huts For Vets*

Adam McCabe, *Huts for Vets*

Garett Reppenhagen, *Vet Voice Foundation*

Dan T. Cook, *Rivers of Recovery*

Thousands of combat veterans are adrift; searching for meaning that often comes most powerfully from Wilderness. This panel explored veteran organizations involved in supporting veterans who are not only using our Wilderness areas to heal from the trauma of war, but also engaged in protecting existing Wilderness and supporting new designated areas. Veteran panelists described how Wilderness areas are crucial to healthy transitions from combat to the civilian world and how veterans work with decision makers to help preserve the lands they swore an oath to protect.

As the son of a Vietnam Veteran, grandson of two World War II Veterans and as a honorably discharged US Army Cavalry/Scout Sniper in the 1st Infantry Division, Garett Reppenhagen knows these issues well. Garett is the Rocky Mountain West Coordinator for Vet Voice Foundation, serving as an advocate for veterans and a connection between veterans and organizations seeking the strength and stories they have to share.

Huts for Vets was founded in 2013 to run Wilderness programs at no cost to combat veterans. The program's methodology is to take small groups of veterans into the Wilderness to remote cabins of the Tenth Mountain Hut system. Time in the Wilderness offers an antidote to angst and alienation, a soothing respite from the uncertainties of life, and an opportunity for rejuvenation and reaffirmation. Adam McCabe, an impassioned advocate and a Marine Corps veteran of the Iraq War, serves on the Huts For Vets board and staff. He provides "tools" for participants to take away and practice after the programs.

Besides their significant price tag, traditional forms of veterans' rehabilitation suggest a trip to the doctor, loading up on a host of medications to simply mask the problem without truly treating it. To treat these rampant, costly and debilitating issues requires a new and effective approach. Dan T. Cook, founder and Executive Director of Rivers of Recovery, incorporated research into the program from the beginning. Through these efforts and years of study he is able to say Rivers is a scientifically-proven treatment. Results from independent research conducted with participants found that after six months post-traumatic stress symptoms, anxiety and depression had all decreased. Rivers of Recovery is designed specifically for combat veterans suffering with invisible wounds of war.

It is estimated that over 500,000 Iraq and Afghanistan veterans suffer from psychological injuries. Research has shown that $\frac{3}{4}$ of these individuals receive minimal to no care. Data further demonstrates without treatment intervention these veterans are significantly more likely to suffer from substance abuse, get divorced, be unemployed, be homeless and commit suicide. Conversely, if healthy, our country's veterans represent an unparalleled source of leadership, knowledge, talent and skills that can help build our country's future. We invite you to learn their stories and how to join with these and other organizations to change our veterans' lives.

Education Track Summary

EDUCATION TRACK COMMITTEE

Sandra Snell-Dobert, *National Park Service*

Connie G. Myers, *Arthur Carhart National Wilderness Training Center*

Steve Archibald, *Arthur Carhart National Wilderness Training Center*

Tisha Broska, *New Mexico Wilderness Alliance*

Greg Hansen, *Society for Wilderness Stewardship*

Sara Kaner, *Bureau of Land Management*

At the 50th Anniversary of the Wilderness Act Conference, leaders of the four federal land management agencies signed, *2020 Vision: Interagency stewardship priorities for America's National Wilderness Preservation System*. At the heart of *2020 Vision* are three broad themes: 1) Protect Wilderness resources; 2) Connect people to their Wilderness heritage; and, 3) Foster excellence in Wilderness leadership and coordination. Protection and leadership hinge on connecting people both within and outside the Wilderness managing agencies to Wilderness – to expand awareness, understanding and support of America's unique heritage. So how do we do this? What is it about Wilderness that sets it apart from other public lands and how do we tell that story in a way that resonates with and unites users and non-users, students and seniors, managers and partners, and people from an increasing diverse citizenry? These are the just some of the questions that were addressed in the Education Track of the 50th Anniversary of the Wilderness Act. Educators and interpreters, managers and writers convened to discuss their craft, share lessons learned and to consider the future of Wilderness interpretation, education and outreach. Nearly 40 presentations, panels, and posters focused on several major categories: Messaging, Marketing, Interpretation, Nurturing the Next Generation, Wilderness in the Classroom, The Classroom in Wilderness, and Broadening the Constituency with some overlap occurring between categories.

WILDERNESS MESSAGING. Wilderness holds significant ecologic, economic, and social values and benefits. While the Science Track focused on identifying these values and benefits, this session focused on what people think about Wilderness and how that information can be used to craft messages that connect with an increasingly diverse public. From university students running public involvement sessions to student essays, to personal experiences, people expressed the belief that Wilderness symbolizes our independent spirit as a country and who we are as a nation. It is the forge upon which our uniquely American national character was created. Wilderness is about freedom and freedom crosses every ethnic, economic, and social boundary. In Wilderness, we become part of something larger than ourselves and this truth inspires humility. Even as the other values change and disappear, Wilderness presents the opportunity to learn humility. Other views confirmed a disconnect between some Millennials and Wilderness. This topic was more thoroughly addressed in the Broadening the Constituency session.

WILDERNESS MARKETING. It is said that if a thing is not understood it is not valued, if it is not valued it is not protected, if it is not protected, it is lost. Using consistent and culturally relevant messages about Wilderness through messaging and marketing are the things we do to share what we know, to help people understand Wilderness, to ask for compliance and to draw people to Wilderness despite the challenges that increased visitation brings. Signs, trailhead kiosks, brochures and permits are some of the more traditional approaches to messaging, but some Wilderness stewards are exploring new ways to get the word out. The interagency Jr. Ranger booklet/badge program, Wilderness Explorer reaches younger audiences with broad messages of stewardship and understanding. Wilderness Ranger Cookbooks, Walk for Wilderness, Wilderness Wednesdays on social media were all discussed and demonstrated. The appropriateness of new media and other emerging communication tools requires us to take new looks at how we manage Wilderness. Minimum Tool Requirement Analysis is one way to approach this challenge.

WILDERNESS INTERPRETATION. Wilderness Interpretation has gradually evolved as land management agencies struggle with going beyond the basics of Wilderness stewardship principles embodied in such programs as Leave No Trace to engage Wilderness audiences in dialogue and planning interpretation through thematic design. It is going beyond the facts and rules, the regulations and orientation to a deeper understanding of the human/Wilderness nexus. Examples include the USFS Region 6 developing Wilderness Interpretation

plans for units in their region that revolve around broad Wilderness based themes and call for training Wilderness staff to use interpretive themes to develop Wilderness stewardship products and services. National Park Service interpreters use thematic interpretation to facilitate connections between the interests of the visitor and the meanings of the resource. Getting at those meanings – those intangible ideas of stewardship, solitude, legacy, freedom, patriotism, independence, humility, hope, etc. is the work of interpreters and educators using thematic approaches to interpretation. Newly evolving interpretive methods, especially Facilitated Dialogue, begin to focus on asking Wilderness users, non-users, local communities and other stakeholders what Wilderness means to them, what resonates, or repels them, about Wilderness and even what would be their desired future conditions for Wilderness. Wilderness means something different to everyone – getting at those meanings is the work of interpreters and educators. What brings you to Wilderness?

NURTURING THE NEXT GENERATION OF WILDERNESS STEWARDS AND SCIENTISTS. The figures are staggering. Depending upon which reference you use, youth obesity, increasing alienation from the natural world, increasing connection to the digital world, and young people losing hope for their future show numbers that frighten even the hardest among us. Experiential education programs abound in institutes and educational institutions around the country yet so many are left unmoved and innocent of the healing powers of Wilderness. Best practices shared from successful programs like that of North Cascades Institute and many others brought good news of what can be done on a local and national level to bring youth to Wilderness, involve them in service projects, and encourage them to share their experiences with others. Hope comes when we hear from projects like that of Smith and Kirby of Carleton College who interviewed millennials and found that they too find value in solitude, the ability to find and appreciate their authentic selves, to disconnect from social norms. Citizen science was discussed as a means of involving stakeholders in the gathering of meaningful information as well as building stewards.

WILDERNESS IN THE CLASSROOM. This session focused on meeting children right where they are – in the classroom! Children spend nearly 1200 hours in school each year. By aligning Wilderness education with Common Core Standards, a compelling case can be made for equipping teachers to integrate Wilderness into their curriculum, and reconnect children with their own backyard through place-based and whole child education. Many children may never go to Wilderness but they can come to understand, value, and grow up to preserve it if we take the initiative and introduce them to Wilderness through their teachers while they're still in school. Whether integrated into curriculum or through special programs like the Boundary Waters Canoe Area Wilderness', Canoe on Wheels program, teachers and school children can connect with their Wilderness heritage.

THE CLASSROOM IN WILDERNESS. Formal and informal programs that bring children and youth into Wilderness abound. In higher education, institutions are expanding their idea of curriculum – moving from one dimensional Wilderness education constructs to multi-faceted approaches that mix humanities, natural sciences, communication, and recreation disciplines and offering Wilderness stewardship as minors in support of other major fields of study, and as online certificate programs. One panel explored the question of whether our institutions of higher education were preparing leaders to take on new stewardship roles as land management agencies lose long term employees to retirement. From green spaces to wild places, collaboration between federal agencies, professional organizations, non-profit mentoring organizations like Big Brothers Big Sisters, and higher education institutions was inspired to introduce, train or prepare Wilderness stewards.

BROADENING THE CONSTITUENCY. Reaching new audiences became a rallying cry as many participants acknowledged the need to draw new support from a changing population. As Janet Zeller of the USFS wrote in her abstract, "As agencies we need to ensure the outreach, education and interpretation of Wilderness experience is shared in a manner that is representative of the diversity of the age, race, gender and abilities of all of our visitors, thereby broadening the understanding that these lands are there for all people." Experiential outreach programs to African Americans, Latinos, Hispanics, Native American's Veterans, and People with Disabilities all validated the connective and healing power of Wilderness. From backyard to backcountry, we can reach new audiences through experiential and non-experiential programs like the New Mexico Museum of Natural History and Science where exhibits center on Wilderness themes and audiences are encouraged to explore the nearby Gila Wilderness.

CONCLUSIONS. The Education Track of the 50th Anniversary Conference affirmed that we can encourage life-long engagement with nature and communities; equip classroom teachers, land managers, and outdoor educators; rekindle creative wonder; and, inspire the next generation of managers and scientists by providing opportunities for people to experience Wilderness first-hand or by meeting them in their own backyard, classroom, or family vacation destination; by delivering consistent messages in unique ways and places that go beyond just the facts and meaning of facts about Wilderness to tap into core American values of freedom and independence. Youth participants shared their perspectives and experiences in many presentations and brought a new energy and spirit to the “old dogs” in the crowd. They validated for us once again that Wilderness transcends generations, abilities, and ethnicities. Wilderness is the land that was – wild land beyond the frontier – land that shaped the growth of the Nation and the character of its people. Wilderness is the land that is – rare, wild places where one can retreat from civilization, reconnect with the Earth, and find healing, meaning and significance. We hope that the positive messages of America’s unique National Wilderness Preservation System continue to inspire you.

The Next 50 Years: Using Public Involvement & University Students To Identify Key Wilderness Issues

Dr. Ed Krumpe, *University of Idaho*

Dr. Tammi Laninga, *University of Idaho*

The University of Idaho Conservation Social Sciences (CSS) department has a long history of educating students about Wilderness, conducting research in Wilderness areas, and developing Wilderness area management plans and monitoring protocols. To celebrate the 50th Anniversary of the Wilderness Act, two CSS courses, *Wilderness Management* and *Public Involvement in Natural Resource Management*, teamed up to conduct Wilderness awareness and input sessions with diverse stakeholder groups, including college students, conservation organizations, outdoor recreation clubs, the Rotary and others. The two-fold objectives of the sessions were to: 1) educate meeting participants about the history of Wilderness areas and current/future management challenges and opportunities, and 2) gather input from meeting participants about the above topics.

The sessions, organized by the *Public Involvement* class, were developed around six posters created by the *Wilderness Management* class. The poster themes included:

- The inspirations of Wilderness through artistic expressions
- Why Wilderness areas are managed differently than national forests and parks
- The benefits of Wilderness to people and local economies
- Wilderness in Idaho and near the Palouse
- Management challenges such as restoring fire to its natural role
- Ways for individuals and organizations to get involved in Wilderness stewardship

After meeting participants reviewed the posters, student teams asked participants a number of questions related to their perspectives on current Wilderness resources and the challenges facing Wilderness management. During our presentation, we shared the innovative public participation methods used in the input sessions and provide an analysis of the information collected from the diverse perspectives with respect to what the public sees as the key challenges and opportunities facing Wilderness in the next 50 years.

Wilderness 2.0: What Does Wilderness Mean to the Millennials?

Kimberly Smith, *Carleton College*

Matt Kirby, *Sierra Club*

It is nearly 25 years since Bill McKibben declared “the end of nature.” What he meant was the end of Wilderness—the idea of Wilderness. In the era of climate change, he claimed, we can no longer conceive of a natural world that is free of human influence—a pristine Wilderness where our spirits can awaken to authentic nature. Generations Y, Z and beyond will never know that pristine Wilderness; they will know only what humans have created. And the outlook has only gotten worse: in 2005, Richard Louv warned us that “nature deficit disorder” was on the rise. Today’s children, he worried, spend far more time in front of screens than they spend in the woods, and end up radically disconnected from the natural world. They may care about biodiversity, sustainability, and environmental justice—but do they care about Wilderness?

So we pose the question: What does Wilderness mean to the millennial generation? Does the idea of Wilderness have any relevance for twenty-first century environmentalists? Is there still a case to be made for Wilderness? If so, how can we make that case?

This question can’t be answered by ordinary public opinion research. Such research can describe the distribution of Wilderness values across the millennial generation, but it can’t tell us how the small group of environmental leaders and advocates are engaging with and interpreting the traditional idea of Wilderness. We are interested in the evolution of the *Wilderness tradition* – an intellectual, literary, and political tradition developed and passed down by a small group of highly engaged Wilderness advocates, represented by such figures as John Muir, Aldo Leopold, Robert Marshall, and Wallace Stegner. We want to know whether and how that tradition is being adapted so that it remains relevant to the millennial generation and beyond.

In order to investigate the question, we organized an essay contest. Sponsored by the Sierra Club, the contest invited anyone born after 1980 to submit an essay on the meaning of Wilderness. The first two paragraphs above served as the prompt. We analyze the 40 contest entries and the invited essays to determine common themes, identifying continuities and discontinuities with the inherited Wilderness tradition.

Our analysis suggests that millennials continue to find in Wilderness the values of solitude, the ability to find a more authentic self, and to disconnect from social norms. Religious themes and spiritual values remain a prominent element of their thinking about Wilderness, and they continue to find in wild landscapes a way to forge meaningful relationships with nonhuman nature. However, we find that they are likely to find some of those values in small, degraded landscapes (rather than only in large Wilderness areas “where man is a stranger.”) They also reflect on how wild landscapes are shaped by social practices, including (in some cases) environmentally destructive practices. And we find that they have much to say about how the intrusion of technology, such as cell phones, into large-scale Wilderness areas affects the Wilderness experience. In this presentation, we shared our full analysis and discussed the implications of our findings for public policy, as well as discussed avenues for further research.

Bits of Eternity: The (ultimate) End of Wilderness

Spencer Phillips, *Key-Log Economics, LLC*

John F. Kennedy observed that “if you look throughout human history... the central epiphany of every religious tradition always occurs in the Wilderness.” Among the reasons are: the encounter with remnants of a created order less diminished by the hand of man; appreciation of nature as a reflection and fellow creature of a powerful deity; or the sense of timelessness that piques a longing for eternity. All of these no doubt play a role, but there is a strong case that the signal spiritual lesson Wilderness has to teach is humility – the position or state of mind from which spiritual renewal, awakening and growth become possible.

“Spiritual renewal” is often included in the litany of Wilderness values, but it seldom shows up the case for Wilderness stewardship. With even Wilderness-centric organizations focusing more (with good reason) on the non-Wilderness portions of the public estate and considering (with less good reason) approaches to Wilderness stewardship that include more trammeling for the sake of intermediate ends (*New York Times*, July 5, 2014), it is all the more important to recall – or perhaps to encounter for the first time – humility as the key value or ultimate end of Wilderness.

Based on existing literature as well as personal experience and observation, I examined the various ends – social, economic, scientific, ecosystem service, etc. – we have come to rely on as the reasons to designate Wilderness. I also considered the reflection of these values in the goals of, and approaches to, Wilderness stewardship. These include the “heresy” and “apostasy” (word choices perhaps more apt than the *NY Times*’

reporter imagines) of extraordinary measures intended to save Wilderness from change. Such intermediate ends however, fall short both as a compelling reason for designating Wilderness and a worthy guide to Wilderness management.

Humility provides both. The choice to stay our hand and do less than is in our power to turn the land toward or own immediate or intermediate ends is what distinguishes Wilderness designation from all other land use choices. And to be in Wilderness is, at least potentially, a choice to experience nature on its terms. The recognition and experience of personal and societal limitations is how Wilderness teaches humility. Where individuals go from there – that is how they arrive at the ultimate end – is of course a personal journey. But as a guide to management, the corporate choice should be clear: continue to stay our hand and retain, even as the experience of other values change and disappear, the opportunity to learn humility.

Guardians of Freedom and Diversity of People and Places

Connie G. Myers, *Director, Arthur Carhart National Wilderness Training Center*

In 1964 Congress passed two ground breaking pieces of legislation which define us as a nation and set a standard for America's leadership in the world. In signing the Civil Rights Act of 1964 President Lyndon B. Johnson said, *"This is a proud triumph. Yet those who founded our country knew that freedom would be secure only if each generation fought to renew and enlarge its meaning."* America is great because it recognizes and values the freedom and diversity of its people.

In passing the Wilderness Act of 1964, Congress also recognized and valued the freedom and diversity of America's natural heritage by establishing a small, humble portion of our public estate to be protected and managed so as to preserve its' natural conditions, untrammelled, free. Like the Statue of Liberty, America's National Wilderness Preservation System is a tangible representation of an intangible, quintessential core American value, freedom.

Upon signing the Wilderness Act President Johnson said, *"So it seems to me that this reflects a new and strong national consensus to look ahead, and, more than that, to plan ahead; better still, to move ahead. We know that America cannot be made strong by leadership which reacts only to the needs or the irritations or the frustrations of the moment. True leadership must provide for the next decade and not merely the next day."* Wilderness cannot be made strong by leaders who react only to the "needs, irritations, or frustrations of the moment." Rather, Wilderness, and America, will be made strong by leaders of who are willing to make, no matter how difficult, decisions that honor both the spirit and intent of the Wilderness Act.

The opinions on freedom of speech and the right to privacy from Louis Brandeis, Associate Justice on the Supreme Court of the United States, 1916 – 1939 are, according to legal scholars, among the greatest defenses every written by a member of the Supreme Court. He wrote, *"Our government...teaches the whole people by its example. If the government becomes the lawbreaker, it breeds contempt for law; it invites every man to become a law unto himself; it invites anarchy."* Wilderness leaders are keepers of the public trust. When that trust is violated, one seemingly harmless decision at a time, more than integrity of America's National Wilderness Preservation is at stake. At stake is who we are as Americans, as America. At stake is freedom itself.

There is an inextricable link between people and places, and to flourish, both need to be free. The Civil Rights Act and Wilderness Act were passed to ensure those freedoms. It is the heavy and humbling responsibility of Wilderness leaders to appreciate that they are more than land managers, manipulators, or gardeners. Wilderness leaders are guardians of freedom.

The Role of Higher Education in Shaping Our Wilderness Future

Robert G. Dvorak, *Central Michigan University*

Derrick Taff, *Penn State University*

Peter A. Appel, *University of Georgia School of Law*

Chad P. Dawson, *Society for Wilderness Stewardship*

Stephen F. McCool, *University of Montana*

Over the past fifty years, we have witnessed an evolution in the training and instruction of Wilderness professionals and practitioners in higher education. From its roots in the historical disciplines of forestry, wildlife biology, and range management, Wilderness in higher education now embraces resource conservation, political science, law and policy, recreation management, and other social sciences. Education and training in these disciplines have adapted to changes, in society and higher education instruction. Trends in higher education predict that older adults, nontraditional students, and greater diversity will grow in their representation in student enrollments. Increased emphasis on online education, alternative degree programs, and distance learning has changed how instructors interact and deliver curriculum to students. These changes are significant, especially in the Wilderness discipline where traditional skills and fields experiences remain critical in preparing future professionals for the Wilderness context.

This panel discussion focuses on Wilderness in higher education. The primary goals and objectives of the session are to: 1) discuss the historical development of instruction and curriculum for Wilderness programs and how academia has evolved to meet the training needs of Wilderness professionals; 2) examine the role higher education has played in professionalizing Wilderness stewardship and training Wilderness stewards through instruction, research, and technical assistance; and 3) determine the focus of higher education for future Wilderness stewardship, through the use of such techniques as continuing education, citizen science, and service learning. The session provides an opportunity for the audience to respond to the panel's proposed ideas and methods for the role higher education plays in Wilderness stewardship and responding to its challenges for the next 50 years. Opportunities for collaboration and partnership between federal land management agencies, professional organizations, and higher education institutions are explored along with needed areas of focus for the continued professional practice of Wilderness stewardship.

Beyond Leave No Trace: Interpreting Wilderness Resources and Values

Bonnie Lippitt, *US Forest Service*

When educating Wilderness visitors, managers typically focus on teaching the importance of Leave No Trace (LNT) ethics. The LNT program is quite effective in sharing appropriate visitor use behavior but it was not designed to interpret Wilderness values or resources, nor is it specific to Wilderness. To inspire support for Wilderness, we need to generate understanding of its values and benefits.

This case study from the USFS Pacific Northwest Region (PNW) demonstrates the value of interpretive planning and program development in creating and delivering compelling and consistent messages about Wilderness resources and values. Interpretation is a purpose-driven communication process that connects audiences with the meanings inherent in our natural and cultural resources. It is a critical tool that can and should be deployed more fully to support future Wilderness Management.

The PNW Wilderness Interpretation and Education Plan was completed in February 2012 to guide the coordinated development and delivery of messages and products across the 65 Wildernesses managed by the FS in Oregon and Washington. It follows the NPS Comprehensive Interpretive Plan format. Foundational components include statements of resource significance and resource issues, interpretive themes, interpretive audiences, and interpretive objectives. It also looks at management goals and considerations before recommending desired future interpretation and education programs. The scope and scale of this plan is integral to its successful implementation, allowing the Region to pool resources, tap into technical expertise, and maximize effectiveness and impact. Individual Wildernesses and field staff benefit by being freed up to focus on those tasks only they can perform while at the same time engaging a broader spectrum of internal support to the cause of Wilderness management.

Over the last two years, the PNW has undertaken the following initial projects to implement the Plan: developed standard text for agency-produced Wilderness Maps, upgraded all of the Forests Wilderness pages on the internet portal, designed and deployed a Regional Wilderness trailhead sign project, developed two Wilderness pocket guides, and created a narrated PowerPoint program targeting Wilderness outfitter and guides. Each has been crafted to achieve goals and issues identified in the plan. These products have been developed

by agency interpretive and graphic design specialists and contractors with field rangers and managers involved in review each step of the way. Local units can develop additional materials, with the caveat that they still reflect goals and guidance of the Regional plan.

Do we still encourage visitors to learn and practice LNT techniques? You bet! But now we go beyond that to share what makes our PNW Wildernesses special, why they are important to the region, and how we can work together to help ensure that they will endure forever.

The Marketing of Wilderness: Using the 50th Anniversary as a Way to Tell the Wilderness Story

Ralph Swain, US Forest Service

Just the idea of marketing Wilderness is enough to concern most Wilderness rangers, managers and volunteers. Their concerns are valid until one understands the meaning of marketing and how it can be applied to tell the Wilderness story. If used properly, the 4P's of marketing – product, price, place and promotion – can be extremely effective in helping Wilderness managers create a brand image that is congruent with the Wilderness Act of 1964 (P.L. 88-577) and the establishment of the National Wilderness Preservation System.

Understanding your product is the first step in effective marketing. It's difficult for most Wilderness managers to accept congressionally designated Wilderness as a product, but it is and has been since September 3, 1964, the day President Johnson signed the Wilderness Act into law. Once a manager accepts Wilderness as a product, the other P's become tools to help managers set the course of their marketing strategy.

Setting a price is next. Yes, there is a price for Wilderness just as there is a price for all products that perform within the supply and demand mechanisms of markets. The price must align with the quality of the product you bring to the market place. If managers profess that protection and preservation of Wilderness character is the central mandate of the Wilderness Act, the price must reflect the high bar that has been set by Congress.

One might think that place – the third P of marketing is determined by Congress when it designates a new Wilderness. Place, in marketing terms, is the distribution of getting the product to the consumer. For Wilderness managers, they must think in reverse, it is not how the physical product, designated Wilderness, is delivered to consumers; instead, going in reverse, it is how the consumer – the right consumer – is exposed to Wilderness.

But who is the right consumer? The Wilderness Act states that Wilderness is for the whole people (Preamble) and later in the Act, for the American people (section 2). Therefore, the 4th P in the marketing strategy is to promote the product to the whole of America – to all Americans, those that might visit Wilderness as well as those that might never go there. To tell the story managers need to abandon traditional bureaucratic ways of communicating and develop new ways to explain the values and benefits of Wilderness to a diverse audience of direct and indirect consumers.

Several new 50th Wilderness Anniversary products and events were developed and hosted that demonstrate new ways to reach a broader audience of whole people. In conclusion, marketing can help Wilderness rangers, Wilderness managers and volunteers steward wild lands. It is a tool. Like a crosscut saw, if it is sharpened to perfection, it can cut through the mis-marketing of the past and help steward the protection of the endure resource of Wilderness.

Books, Backpacks and Bob Marshall: Wilderness in Higher Education

Natalie G. Dawson, *Wilderness Institute*

Rachel James, *Wilderness Institute*

The 1964 Wilderness Act not only gave avenue to public lands protection, but it spurred an entire movement around Wilderness that reached beyond land management boundaries into educational institutions. Visionaries in higher education felt a need to create a program devoted to educating the next generation of Wilderness managers, researchers, activists, and storytellers. Thus, the Wilderness and Civilization program was born in 1974.

Each year, 25 students come to the University of Montana to participate in the Wilderness and Civilization program, an interdisciplinary program in Wilderness Studies that explores the concept of “Wilderness” through ecology and conservation, literature and philosophy, politics and policy, cultural history, service learning projects and direct field activities in Wilderness areas. Through backpacking trips, classroom discussions, field activities, service learning projects, seminars, and rigorous academic activities, students leave the program with a “transformative experience” that leads many of them into careers associated with Wilderness, natural resource, conservation, or public policy. On the cusp of its 40th anniversary, this program remains one of the few in the country focused on Wilderness education within a public university.

The Wilderness and Civilization program is the cornerstone program of the Wilderness Institute, an institute of higher learning at the University of Montana, focused on Wilderness research, education and outreach. Over the years, more than 800 students have gone through this program, with alumni adventures ranging from Wilderness managers, to writers, politicians, and activists. Over the years, the program has shifted curriculum to match the changing face of Wilderness theory, practice, and practical skills. Originally established as a humanities-focused program, with significant emphasis on Wilderness history, Wilderness writing and poetics, the program now contains a strong natural resources based curriculum including Wilderness ecology, field studies, and a service-learning project as part of the requirements for the program. Enrollment strategies have also changed with shifts in student interests. Prior to 2009, the Wilderness and Civilization program was a one-year program at UM, resulting in a minor in Wilderness Studies. Recruitment for the program became difficult, primarily because students are more interested in programs allowing them to complete university degrees in four years. In an effort to work with more campus programs, and attract students in other departments from UM and other universities, the program became a “semester-plus” program, allowing students to receive a minor in Wilderness Studies in less than one year’s worth of course credit. In total, students now take 24 credits to complete the program and receive the minor in Wilderness Studies.

As a program, we ask the question, “Is Wilderness education relevant in the 21st century?” Our answer is a resounding, “Yes.” Transformative experiences in this program will train a new generation of Wilderness enthusiasts in a world needing reconnection with its wildest places. The future of what we celebrate in 2014 rests in the hands of the young people, some of who will for a visceral connection with Wilderness through this opportunity in higher education.

Past Present and Future: Teaching Wilderness Leadership through 50 Years of Wilderness History

Mathieu Brown, *Prescott College*

Doug Hulmes, *Prescott College*

This paper documents the outcomes of an undergraduate interdisciplinary field course based on the 50th anniversary of the Wilderness Act. Over 24-days twelve students were immersed in Wilderness ideas, politics and place to determine how younger generations interpret, value, and relate to Wilderness concepts. As a cohort they visited a spectrum of Wilderness areas and met with managers and stewards representing five eras of Wilderness values: historical background of Wilderness designation, Wilderness proliferation and political paralysis, political recoil, conservation value and scientific perspective, and contemporary politics and new perspectives. Student outcomes and values of Wilderness varied. In many instances student experience demonstrated that traditional values of Wilderness continue to bare credence in a new era, but numerous novel and contemporary perspectives dominated. These included: personal conflicts with contemporary Wilderness management regarding restrictions of use, desires and praise for new forms of land protection emphasizing ecological values, concern over private land values that significantly impact human and ecological experience, and an interest in broadening designations. The cohort expressed concern that contemporary societal values, such as technology and economics will dominate over traditional values in forthcoming decades. In general ecological and human experience were noted as the greatest benefits of the previous fifty years of Wilderness legislation.

The Wilderness Institute, University of Montana: Thirty-nine Years as a Wilderness Education Provider

Kari Gunderson, *University of Montana*

Natalie Dawson

Lisa Gerloff, *University of Montana*

The Wilderness Institute, University of Montana, College of Forestry & Conservation offers real-life Wilderness education success stories. Founded in 1975, the Wilderness Institute offers field-based Wilderness courses, citizen science monitoring projects, distance education courses, and a Wilderness issues lecture series. Audiences include university students, federal and state agency employees, volunteers, and other community members.

The **Wilderness Management Distance Education Program (WMDEP)** is the longest running set of accredited university courses offered as a comprehensive study of Wilderness management. WMDEP is a valuable tool for understanding the Wilderness resource and the issues surrounding its management. Students benefit from the combined expertise of professional Wilderness managers and researchers. Each course is designed to meet the needs of a broad range of students from Wilderness professionals, outdoor recreational planners and educators, to members of conservation groups and interested citizens. The Graduate Certificate in Wilderness Management provides students and professionals with training and expertise in the key topics related to Wilderness stewardship. Courses cover the history and philosophy of the Wilderness system, Wilderness law and policy, Wilderness recreation management, Wilderness ecosystem conservation and resource monitoring, and Wilderness planning. Taken together these four courses provide the necessary foundation for students to pursue careers in Wilderness management.

The Wilderness Institute's **Citizen Science Program** builds on a growing movement that engages citizen volunteers in monitoring the ecological and social aspects of our wildlands. Wilderness stewardship is increasingly jeopardized by declining federal dollars available to Wilderness managers. Since 2005, the Wilderness Institute has worked closely with agency and community partners to address this short-fall by recruiting citizens to help trained field staff assess on-the-ground conditions, perform basic stewardship activities, and monitor Wilderness character.

Citizen science in Wilderness provides an opportunity to broaden civic engagement in Wilderness stewardship. Citizens often have local knowledge of particular ecosystems and can help managers and scientists understand the broader social, economic, and political context of changes occurring in Wilderness. Through citizen science, citizens can also build community capacity to use science to understand ecological change, and inform discussions with land managers on issues of Wilderness management.

Wilderness and Civilization is an inspiring and demanding academic program. Each year, a small group of students from around the country are immersed in the study of wildland conservation and the human-nature relationship. Wilderness and Civilization combines the strengths of classroom and field learning, interactive classes, dedicated faculty, and applied learning through internships. Wilderness and Civilization offers students the opportunity to explore contemporary conservation debates, make connections between disciplines, and learn how to work for positive change.

Wilderness Dialogue: Facilitating Conversations and Interpreting Controversy

Paul Ollig, *National Park Service*

Sandy Snell-Dobert, *National Park Service*

Tracy Ammerman, *National Park Service*

Interpretive techniques are useful in initiating meaningful conversations with a variety of Wilderness audiences. In order to go beyond an encounter about what is or is not allowed in Wilderness to meaningful discussion of why we should care requires advanced skills in interpretation, in facilitating dialog and having meaningful conversations about Wilderness. Facing controversy and listening to divergent opinions can help Wilderness communicators build stewards for the next 50 years.

Engaging Wilderness users in dialog, rather than one-way communication, can help to share the diversity of personal experiences and perspectives beyond ourselves. National Park Service interpreters are encouraged to explore ways of increasing audience interaction using facilitated dialog and other interpretive techniques to expand our understanding of Wilderness and its meanings. Questions, well-crafted and intentionally designed, can lead a discussion about our wild places, designated as Wilderness or not. Using the World Café model, this presentation explored the controversial nature of Wilderness, its role in society, and discussed techniques for

engaging with diverse audiences and stakeholders about the critical issues facing our Wilderness areas. Have you asked your Wilderness visitors why they come there? What brings them back time after time? What is their view of the Wilderness Act of 1964? Are they aware of the nuances of Wilderness versus wild places? This presentation used the philosophy of crowd-sourcing to explore the rich experiences and perspectives that each of us bring to the conversation, while simultaneously reflecting on strategies to handle conflict and embrace the controversial nature of Wilderness management and policies.

How Education Must Change Today to Allow Wilderness to Exist Tomorrow

Christopher Nye, *Orion Magazine*

Depending on the paradigm we use to shape public education in this country, we have the opportunity to grow a generation of adults who will be drawn to the nourishment nature can provide, will love Wilderness, and will fight to protect it; or we can snuff out the capacity to appreciate the very things this conference is designed to celebrate.

The current paradigm of accountability, curriculum standardization, and intrusive testing now being mandated represents a profound, if indirect, assault on Wilderness. There is little room in this test-oriented regime for place-based education, for projects outdoors, for creativity, for anything that does not lend itself to being measured on machine-graded, high stakes tests. This retreat from the real and natural world is reinforced by the prevalence of mobile devices and the large amounts of time children spend in front of screens.

These disturbing trends can be countered effectively with a different paradigm.

This workshop outlined a vision for Whole Child Education, not a single formula but a framework or big tent covering many potential approaches. What they share is the ability to focus on the individual child, provide a nurturing alternative, drawing out inherent creativity and an appetite for learning intended to last a lifetime. Whole child education also builds a comfort with and appreciation of nature that nourishes the healthy sense of adventure and self-reliance. These qualities in turn can equip young people to succeed in what will likely be a challenging and complex world.

The workshop drew on the pioneering work in place-based education of media sponsor for the conference, *Orion* magazine, as well as writing by Richard Louv (*Last Child in the Woods*), Otto Scharmer (*Leading from the Emerging Future*), and Bill Plotkin (*Nature and the Human Soul*).

Growing Up Wild: Connecting A New Generation with the Wilderness

Jeff Rennie, *Conserve School*

The numbers are hard to face: obesity rates four times what they were in the 1960's, the average teen spends 44 hours a week on electronic devices, last year alone kids spent \$8 billion on video games. Yet, at a time when the world faces its greatest environmental challenges, connecting kids with Wilderness has never been more important.

To help young people connect with the wild, we need to go back to some of the fundamental elements that led us to those connections in the first place. Such things include 1) the re-instatement of unstructured outdoor play, 2) ensuring that Wilderness education instills a sense of wonder and not just a bombardment of facts, 3) a meaningful connection to Wilderness areas nearby through classroom study and field trips, 4) instilling a sense of responsibility through Wilderness service programs, and 5) providing a spirit of hope to help stem the seemingly oppressive dark tide of negative environmental issues. Ways to help instill these things in the lives of young people include:

1. **Surprise!** Never "lead" a child on a Wilderness hike: let them lead you. Let them discover the deer tracks or bird feathers first and share their surprise with you. Children love surprises and nature is full of them. Let them be the discoverers.
2. **The Game of Living Things:** Give each child a pocket notebook and pencil. Have them keep lists of every living thing they see in the Wilderness (birds, flowers, animals, insects) and tally the score at the end of the trail.
3. **Glow in the Dark:** Even the tamest trail goes "wild" at night. With glow sticks on their wrists to help you keep track of them (or pocket flashlights with red lenses) take a night hike and explore the wild world of the dark.

4. **Wild Weather:** Not the sunny day you hoped for? Go out anyway. With the right gear and an eye towards safety, wild weather can be exhilarating. Bundle up. Don rubber boots. Put up an umbrella or a tarp. Nature doesn't stop in a storm; neither should you.
5. **Trust Hikes:** Nature can be experienced with all the senses. On a beach, a safe stretch of trail, or around camp, let your kids blindfold you and lead you on a "trust walk." Then, blindfold them and let them experience the touch, taste, feel, and smells of nature as you supervise.

If it is true that we will only work to protect that which we love and understand, then working to be sure kids grow up loving and understanding the joys and importance of Wilderness is the only way to ensure that they have the will to make the tough choices that may be necessary in the future of our species and of wild places.

It's About the Journey: A Model for Wilderness Education

Kelly Pearson, US Forest Service

Within the boundaries of Wilderness lie many educational opportunities, especially in seeking to connect people of all ages with nature. Ideas for events and programs abound but perhaps funding and/or resources are not readily available. Several innovative, engaging tools may be available to enhance your outreach toolkit. To enhance the connection opportunities, the Shawnee National Forest has developed several outreach endeavors which are offered on a year-round basis. From alternative spring break programs and experiential education nature based adventures for urban area students to building partnerships with a variety of groups, including Job Corps, National Civilian Conservation Corps and more. This presentation will introduce you to ideas that will excite you about new ways to utilize your Wilderness areas as an outdoor classroom and places for individuals to connect with the great outdoors in informative and engaging ways.

It takes a village to craft an experience that starts someone's Wilderness journey. Increasing program capacity and capability through collaboration, curriculum development and using a thematic approach to building each experience was discussed in this presentation.

The journey should not end when the lesson plan is over. It is important to reflect on the outcome of each experiential event for the provider and for the participants. Well thought out experiences that create memories, develop self-efficacy and promote stewardship are the cornerstones for developing Wilderness advocates. Building relationships through collaboration with colleagues and partners increase the capacity and sustainability of experiential service and education.

Making Schools Wild about Wilderness: Why Wilderness Education Needs an Update

Alexa Stine, Southwestern Conservation Corps

Joseph Maatman, Northern Arizona University

Wilderness education for children is a crucial part of creating a future with an informed public that will have the ability to preserve and enjoy designated Wildernesses. However, schools don't always have the time to fit in Wilderness education with the constraints of education standards. So then, how can you get schools to find your programs more relevant? And what are the current standards in national school systems?

In 2010 public Education systems created National Common Core Standards to ensure that students make progress each year and graduate from school prepared to succeed in college and in a modern workforce. Traditionally, Wilderness education has been focused on providing Wilderness information to students, without integrating the Common Core Standards into education plans. In order to modernize Wilderness education, educators should seek to align their curriculum with these core standards. This will allow schools to more widely accept Wilderness education programs and will better prepare children for careers and college education.

The presenters for this session worked directly with The Alpine Leadership Academy which offers a two-year experiential learning program at Mount Elden Middle School in Flagstaff Arizona. Students at 'Alpine' are engaged in experiential education, connecting classrooms to natural spaces and communities through learning expeditions. By learning from real-life teachers a new program was developed, implemented and evaluated that integrates the needs of public educators and the US Forest Services' mission to develop future Wilderness stewards within our community. The end result allowed for a program directed at middle school aged children that was relevant to national teaching standards that was justifiable for schools to participate.

The main conclusions of this program include: the success of the program and the extent of acceptance into school. The success was measured by performing pre and posttests asking students simple questions such as: what are 3 LNT principals, what are three prohibited activities in Wilderness and to define Wilderness. Overall, we found a great leap in understanding and often vocabulary that reflected taught ideas. The other conclusion that we reached was that better success and interest can be found with programs similar to 'Alpine' that emphasize outdoor learning and non-traditional teaching methods.

This presentation helped you understand the changing trends in public education and how to make your Wilderness education programs relevant to new standards. We also shared our experience in developing and implementing a new program with Common Core Standards including evaluating our successes and future improvements.

A Service Learning Partnership for Wilderness Education in Coastal Georgia

John Peden, *Georgia Southern University*

Monica Harris, *US Fish and Wildlife Service*

Phillip Brice, *Georgia Southern University*

James Fritz, *Georgia Southern University*

Kristin Love, *Georgia Southern University*

Mady Russell, *Georgia Southern University*

Julie Swantek, *Georgia Southern University*

Scott Waters, *Georgia Southern University*

Service learning is a form of experiential education that requires students to conduct meaningful volunteer work that enhances learning outcomes in academic courses. Effective service learning requires a clear link between academic objectives and the needs of the host organization. When properly implemented, it promotes academic achievement, community awareness, and interpersonal skills, while allowing the host organization to accomplish goals that would often remain unmet due to a lack of funding and other resources. Service learning has considerable potential as a means of promoting both Wilderness education and stewardship of public lands. In March 2014, students from an environmental education and interpretation course at Georgia Southern University planned and delivered formal and informal interpretive talks on the Wilderness Act of 1964 and Leave No Trace principles for Natural Resource Discovery Day, a community event hosted by the Savannah Coastal Refuges Complex. The talks defined the Wilderness Act of 1964 for all age groups, explained its importance and relevance throughout the last 50 years, and advocated for responsible stewardship of local Wilderness areas. Participants were also educated on the use of Leave No Trace principles as a means of minimizing depreciative behavior in Wilderness environments. Discovery Day participants were generally unaware of federally protected Wilderness and did not realize that the Savannah Coastal Refuge Complex manages two Wilderness areas in coastal Georgia: Blackbeard Island and Wolf Island. Leave No Trace principles were also new to Discovery Day participants, who seemed receptive to practices designed to minimize recreation impacts on Georgia's unique Wilderness resources. The students who delivered the talks stated that class project increased their understanding of the Wilderness Act, Tilden's principles of interpretation, and the use of indirect management strategies. They also noted that the experience resulted in a greater appreciation for the mission of the USDI Fish & Wildlife Service and the importance of partnerships in promoting stewardship of public lands. Collectively, the project provides evidence of the potential inherent in service learning as a means of educating diverse stakeholders about the importance of Wilderness and the need to protect it as an enduring legacy for future generations.

From Education to Employment

Connie G. Myers, *Arthur Carhart National Wilderness Training Center*

Steve Wolter, *Eppley Institute for Parks & Public Land*

Chad Dawson, *Society for Wilderness Stewardship*

Tina Terrell, *Job Corps Center*

Considerable emphasis from the Wilderness management agencies is being placed on recruitment and retention of volunteers and a diverse workforce. Efforts have met with mixed results. Simultaneously, the federal workforce is aging, and institutional memory and skills critical to preserving integrity of America's National Wilderness Preservation System are being lost.

To address these issues, the Eppley Institute for Parks and Public Lands, the Society for Wilderness Stewardship, and the interagency Arthur Carhart National Wilderness Training Center have partnered to develop the Wilderness Certificate and Mentoring Program (WCMP), and are collaborating with the Trapper Creek Job Corps Center to pilot the program for the 2015 field season. Panelists described program purpose and components.

WCMP is designed to meet four needs, including: 1) proactive and strategic succession management and provision of personal growth opportunities among youth aspiring to work in Wilderness and backcountry areas; 2) continuing professional development for federal employees who wish to be considered that advances Wilderness stewardship as a profession; 3) accelerating the spread of ideas, encourage innovation, and inspire peer-to-peer collaboration across the agencies; and, 4) expanding capacity of the Wilderness managing agencies by credentialing state and local agency employees, non-profit employees, volunteers, veterans, and youth who wish to build competency in Wilderness and backcountry stewardship.

WCMP is a comprehensive approach to workforce development that will develop and strengthen capacity through four critical program components: 1) formation of a solid foundation and a clear understanding of Wilderness and backcountry stewardship through online coursework, 2) development of on-the-ground field skills in Wilderness, backcountry and trails restoration and stewardship through field training; 3) application of on-the-ground skills through seasonal and internship immersion experiences; and, 4) grounding and guidance through mentoring to nurture confidence and skills.

At the 50th anniversary of the Wilderness Act, it is timely for agencies and partners to consistently provide a comprehensive program to inspire, educate and equip at-risk youth to successfully compete for volunteer, limited field positions or contract work in Wilderness and backcountry stewardship while, simultaneously, getting much needed field work done. It is also critical to equip employees for the increasing complexities of Wilderness stewardship. Panelists described how WCMP will meet these needs and explore potential for including Wilderness science components.

“There is just one hope for repulsing the tyrannical ambition of civilization to conquer every inch on the whole earth. That hope is the organization of spirited people who will fight for the freedom and preservation of the wilderness.”

- BOB MARSHALL, *Co-founder of the Wilderness Society*

Wilderness Investigations: Bringing Wilderness Awareness to Our Nation's Classrooms

Steve Archibald, *Arthur Carhart National Wilderness Training Center*

There are a number of effective efforts that inform visitors about the values and benefits of Wilderness. However, the majority of Americans do not visit Wilderness. So, how do we reach non-Wilderness users? One effective method that has surfaced is to train teachers how to connect their students to Wilderness through Wilderness Investigations (WI).

WI is a program that inspires connection, responsible stewardship, and respect among elementary, middle, and high school students for wild places, starting in their own backyard. WI is a program of the Arthur Carhart National Wilderness Training Center – the nation's only interagency office responsible for providing Wilderness training, information, and education to reconnect Americans of all ages to their Wilderness heritage. WI includes three distinct Wilderness awareness curriculums: 3rd/4th grades, 5th – 8th grades, and high school. Teachers receive curriculum materials upon attending rigorous two-day workshops where they also receive interactive instruction on what Wilderness is, why it's important, whether or not they or their students ever visit Wilderness, and how to apply WI in their classroom. Post-workshop support is provided through online and in-person opportunities.

Reviews of WI are highly positive and demand for teacher workshops has outstripped capacity to deliver. At a recent multi-agency sponsored workshop in Glacier National Park, one participant wrote in her evaluation, "This is the best teacher workshop I have ever taken. The materials and information are relevant, and useable. I will integrate these with my students on Monday!" An educator in Florida, after taking a WI workshop sponsored by the state environmental education organization said, "I didn't even know we had Wilderness in Florida. I can't wait to share this chapter of the conservation story with my high school students." Teachers report the worth of WI as they attempt to reach students who are challenged by the traditional subjects but who light up when the focus turns to the natural world. Also reported are countless new outdoor experiences facilitated by newly motivated WI teachers. Wilderness Investigations increases awareness about Wilderness, supports teachers by providing information and tools, and motivates teachers and students as they expand their classrooms to include outdoor settings. This makes a positive difference as we as we cultivate young citizens, the next generation of educators and managers.

Since June 2011, over 1,200 educators, coast-to-coast have been trained as WI educators. Collectively these teachers reach well over 50,000 students annually. Students come from rural South Carolina, urban Denver, remote Native Alaskan villages, suburban California and points in between. These students will soon become voters and, as a result of WI, be better informed to support Wilderness and to address public lands issues. To expand capacity, we are working to implement a Train the Trainer WI program that equips top WI master teachers to conduct WI workshops for their peers and includes the next generation of apprentice teachers still in college. Together we can inspire and nurture life-long connections between students of all ages and cultures and Wilderness.

The Canoe on Wheels: A Wilderness Voyage Inside Public Schools

Steve Robertsen, *Suzanne Cable, US Forest Service*

How does a Forest provide Wilderness education to people who are not visitors, and may not ever visit the Forest? How can it make Wilderness education stick in the minds of people? The Superior National Forest in Minnesota, home of the Boundary Waters Canoe Area Wilderness (BWCAN), addresses that question with its school centered Wilderness Education Program.

School based programming has an advantage of hitting students across the board, and avoids the 'preaching to the choir' that often happens with nature education. The burden of travel is on us. Teachers usually want to participate, even if not invested in Wilderness education themselves.

The Wilderness Education Program is offered to the 2nd, 4th and 7th grades. By visiting the same students at three grade levels, we focus on different aspects of Wilderness education. 2nd graders learn what Wilderness is and why it is special, 4th graders are given pragmatic rules on Wilderness behavior and their rationale, and 7th graders have a higher level discussion of what Wilderness is for and why people have created Wilderness areas. These visits allow us to repeat important points, teach at different cognitive levels and learning styles, and create program permanence.

Each grade level has its specific program. For 2nd grade, we meet in the classroom, usually in the designated 'reading corner'. The familiarity of the setting creates a comfortable learning atmosphere for 2nd graders. Student/teacher ratios are kept to one class per presenter. Personal anecdotes and simple props help students

to understand the difference between Wilderness and other places, then audio recordings help fuel an imaginary trip to the BWCAW.

4th grade is the most elaborate presentation. Two to three classrooms of students are gathered on mats in the gym and taken on a ‘trip’ to the BWCAW. Set up in the gym are pine trees, tents, steel fire grates, bushes, and even Wilderness latrines. Best yet, there is a canoe on wheels with a rubber tipped paddle that allows one of the presenters to actually canoe in the gym. Scenes of the trip are projected onto a screen, and students get to accompany a Wilderness ranger for a day. Some students get roles at campsites illustrating Leave No Trace behaviors such as fishing, hanging packs, and cooking, while others get to be in the canoe.

In 7th grade, there is a shift from the concrete rules determined by ethics given in 4th grade to the ethics themselves. How ethics change over time, and what influences ethics are concepts that fit well with the seventh grade mind. A short skit involving a 1800s trapper and a modern camper serves to illustrate that ethical behavior in the Wilderness has changed, and challenges students to examine their own ethics and see if they are outdated. We also look at what public land is, and how Wilderness can be seen as a use of public land.

At the conclusion of this final program, students look at the question of ‘What’s a Wilderness for?’ which is a question whose answer determines if you work to preserve Wilderness or not. Our three sessions have equipped them by this time to answer the question themselves, and students are able to teach themselves why Wilderness is important and why we preserve it.

“Gila: Biodiversity and Conservation” – A Proposed Exhibit at the New Mexico Museum of Natural History and Science

Ayesha S Burdett, New Mexico Museum of Natural History and Science

Museums in urban centers can be an important tool for creating a greater appreciation and understanding of the natural world. Museums can provide informal educational events, promote scientific inquiry and – importantly – bring nature to an audience that may not seek outdoor experiences or be able to visit remote locations. While learning about Wilderness inside a museum is not the same as visiting Wilderness Areas, museum exhibits can be useful way to raise awareness of natural systems. An exhibit can teach about the underlying geology or intricate biology of a region. Visitors can learn about the dynamics of ecological functions and processes, and be encouraged to continue their enquiry after leaving the museum. Learning in a relatively ‘safe’ environment like a museum could be a gateway to exploring – figuratively and literally – the natural world. Understanding a natural system can develop a personal appreciation, which can encourage stewardship of nature.

At the New Mexico Museum of Natural History and Science, we are currently developing an exhibit about the Gila ecosystem to engage visitors and highlight why the region is so valuable and important. Following workshops with local experts, three focus questions were developed for the exhibit: (1) Why is the Gila so unique? (2) What is the human influence on the ecosystem? (3) What can the Gila teach us? The Gila can be used as a valuable case study of natural resource management, particularly because it includes the first designated Wilderness Area. Conservation issues are not unique to the Gila and provide a more ‘global’ context for the exhibit.

In order to assess the understanding of the Gila region by the general public, a visitor survey was developed. Approximately half of the survey respondents had visited the Gila region, or could accurately place it on a map of New Mexico. Respondents were also asked about the value of the region, and of Wilderness areas in general. Nearly all respondents agreed that there is an intrinsic value to Wilderness, whether or not they visited regularly. The results of these surveys will be used in the design process for the exhibit.

Informal education in museums can be one valuable way to learn about the natural world and bring remote Wilderness Areas to more people. The Gila exhibit will highlight the natural aesthetic of the Wilderness, but also encourage an appreciation and respect for our natural heritage.

Equipping Employees and Partners for the Next 50 Years of Wilderness Stewardship: Keys to Implementing a Shared Vision

Carl Rountree, Bureau of Land Management,

Jim Kurth, US Fish and Wildlife Service

Liz Close, US Forest Service

Cam Sholly, National Park Service

Connie Myers, Arthur Carhart National Wilderness Training Center

Wilderness stewardship challenges are more complex today than they were when the Wilderness Act was passed in 1964. Externally, our population is larger and more diverse; our economy is strained; and the landscape for conservation has changed – there is less undeveloped land, more invasive species, and we are experiencing the impacts of a changing climate. Internally, priorities are increasingly competitive while resources are increasingly limited, and we are relying more heavily on partners to fulfill basic stewardship responsibilities. The key to addressing today's challenges is development and implementation of a unified set of shared interagency priorities and actions that leverage increasingly limited agency resources and inspire conversation, connection and momentum for action among like-minded non-agency partners. To this end, in June 2013, we directed the Interagency Arthur Carhart National Wilderness Training Center and Aldo Leopold Wilderness Resource Institute to: 1) evaluate the degree to which objectives outlined in the 1995 National Wilderness Preservation System Strategic Plan were met, 2) describe the two most important problems managers and agencies need to collectively address in strategic planning to protect Wilderness qualities in the coming 20 years; and, 3) identify science, training, information, and education need to address challenges; and, 4) prepare for signature at the 50th anniversary conference, *2020 Vision: Interagency stewardship priorities for America's National Wilderness Preservation System*.

2020 Vision presents a number of interagency goals, objectives, and actions to guide short- and long-term collaborative stewardship of America's National Wilderness Preservation System: At the heart of *2020 Vision* are three themes: 1) protect Wilderness resources; 2) connect people to their Wilderness heritage; and, 3) foster excellence in Wilderness leadership and coordination. Individually, we can point to progress made in these three critical areas; in some cases, significant progress. However, we recognize that to take Wilderness stewardship and science to the next level, we must, with our partners, develop a shared program of work to implement *2020 Vision* that focuses on stewardship of America's National Wilderness Preservation System as a whole, rather than as individual, agency-specific parts. As the Interagency Wilderness Policy Council, we are committed to exploring how to make that happen.

Building Wilderness Stewardship through Service Learning: A Win-Win University-Agency Partnership

Marty Lee, Northern Arizona University

Brian Poturalski, Northern Arizona University

Universities have valuable resources that are accessible to land management agencies through partnerships. Professional schools in particular strive to create a variety of experiential learning opportunities for students (e.g., internships and field experiences). For almost 15 years a course taught in the School of Forestry at Northern Arizona University has partnered with the U.S. Forest Service and other local land management agencies to design and carry out Wilderness-related projects. *Wilderness Management*, an upper division course, has three primary educational objectives: enhance student understanding of Wilderness and the management of designated Wilderness areas; cultivate in students a greater sense of Wilderness stewardship; and involve students in Wilderness-related projects needed by participating land management agencies. Each year projects are selected by agency personnel and the course instructor. Student teams select a project based on their interests and relevant expertise and meet weekly with agency partners to develop and implement their projects. Student teams present their projects as a final report and a presentation at the end of the semester to agency partners and other invited agency and university administrators and staff. Participation in such projects benefits students in a number of ways: it provides more in-depth exposure to Wilderness, its importance, and the complexity of management than classroom activities alone; students gain experience working on real, needed, and valued projects; interaction with land managers provides valued role models and mentors, and potential jobs. The Forest Service benefits by having field-going personnel specifically focused on Wilderness management planning and management projects; critical field work is completed; managers work closely with possible future seasonal/career employees from the Wilderness class; and tangible products/deliverables are

completed and presented to the Forest Service at the end of the class. Class projects focus on Wilderness planning, stewardship, and management. Examples of the types of projects completed by the class include design and implementing visitor, manager, and outfitter/guide surveys; conducting campsite inventories; invasive plant surveys; designing panels for Wilderness trailhead kiosks; co-hosting public meetings and workshops on various Wilderness-related topics; developing printed materials and videos on Wilderness preparedness and ethics; developing a protocol for monitoring Wilderness character; designing training manuals for Wilderness volunteers and Forest Service frontliners; and developing and presenting educational programs and co-sponsoring a poster contest for grade school students to celebrate the Wilderness Act 50th Anniversary. In recent years the focus of class projects has been on helping the Coconino and Kaibab National Forests meet the Ten-Year Wilderness Stewardship Challenge. Projects have included Wilderness character monitoring, dispersed campsite inventories, visitor surveys, and developing and presenting Wilderness education materials. We encouraged Wilderness managers attending the conference to seek out and nurture similar partnerships with local colleges and universities.

North Cascades Wilderness as Teacher

Saul Weisberg, *North Cascades Institute*

John Miles, *Western Washington University*

As Mount St. Helens erupted on May 18, 1980, a group of young people deep in the Pasayten Wilderness of northern Washington State marveled at this display of wildness. Every year since, under the auspices of Western Washington University and the non-profit North Cascades Institute, youth have traveled, worked, and learned in the many Wilderness areas of the North Cascade Mountains. Their teachers have been storms, rangers, scientists, bears, wild lakes, high passes, glaciers, wildflowers, and wildness. The emphasis in this session was on best practices. How might the Wilderness classroom be made to offer its most powerful lessons to young people? How do you take youth from urban Seattle or any urban place, immerse them in wildness, and help them gain from the experience a sense of wildness, of place, and of the values such encounters with the natural world can add to their lives back home? How can leaders and program structure help transfer lessons learned in the wild to life after the Wilderness experience? How might Wilderness experience lead to learning by young people about how to live and prosper in a complex world? Over 35 years many insights have been gained about how to launch and sustain such programs and how to get the most out of them. Miles and Weisberg spoke to such questions.

Brief descriptions and testimonies of what they learned and how they learned were shared by young people on video clips. We examined best practices in the session that include methods (tools, techniques, approaches) that demonstrated successful or superior outcomes. We discussed methods of continuous rigorous, qualitative, and quantitative evaluation and described how programs may be adapted to changing circumstances. Ways that Wilderness education can be built into organizations such as the Institute and the University were described and key factors for doing so examined. We explored how the examples shared may be scaled to serve as models for others engaged in similar work, and how organizations in places less blessed with “Big W” Wilderness may apply methods and approaches used in the North Cascades. The goals of the session were to explore not only how Wilderness education for youth has been conducted in the programs described, but to suggest how the lessons learned in the Pacific Northwest Wilderness might be extended to organizations and programs in other places. These are lessons not only about good teaching and learning but also about caring and working for restoration, protection, and conservation of the natural world in general and Wilderness in particular.

Outdoor Explorers Mentoring Program: From Green Spaces to Wild Places

Steve Archibald, *Arthur Carhart National Wilderness Training Center*

Gregory Hansen, *Society for Wilderness Stewardship*

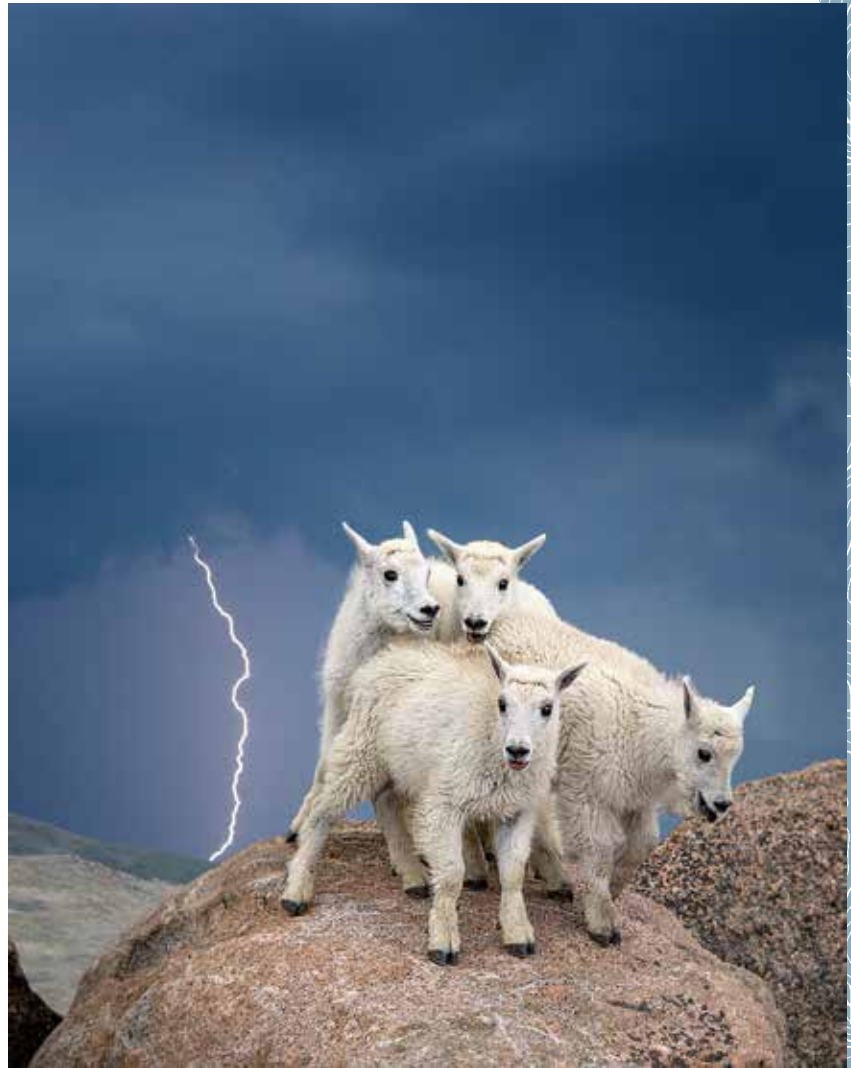
Many Wilderness and public land users were introduced to the outdoors through family camping trips, hikes with grandmothers, fishing trips with grandpa or other family activities. Today, with economic challenges and changing family dynamics, like single or geographically separate parents, fewer children are connected to the outdoors through family experiences. One creative and highly successful effort to overcome this challenge is the Outdoor Explorers Mentoring Program (OEMP) funded in part by the Society for Wilderness Stewardship.

OEMP connects Big Brothers Big Sisters Mentors and their Littles with university students who are trained to lead fun, safe, and educational monthly outdoor adventures on federal, state, and Tribal lands. OEMP was initiated by Student Conservation Association intern, Jennifer Lutman, at the interagency Arthur

Carhart National Wilderness Training Center. OEMP success hinges on three organizational components: a federal public land management agency, a non-profit youth organization, and university students. Using program elements designed by the Carhart Center, partners including Big Brothers Big Sisters, and the Montana Wilderness Association, plan, promote, and facilitate monthly outdoor adventures. University students from University of Montana, Montana State University, and Carroll College, take the lead on planning while logistical help, advice, training, and funding are provided by partner organizations.

From backyard to backcountry, young explorers participate in a wide range of monthly activities all year long. “Thank you for providing outdoor experiences for my child. I just can’t do them myself and I’m pleased that my daughter and her Big have this opportunity,” wrote one grateful OEMP parent. From several hours exploring animal tracks in town to weekend camping trips in Yellowstone, OEMP activities grow youth exposure, interest, connection, and confidence in the outdoors, not just in Wilderness. “Because my Little had minimal exposure to the outdoors, she was always hesitant to try outdoor activities. She has really blossomed and become much more open minded about the outdoors after experiences with OEMP. It was a great gift to have this opportunity,” wrote one OEMP mentor.

OEMP brings together the very best that public land managing agencies, youth mentoring organizations, and organized university students have to offer. OEMP builds capacity to connect underserved youth to fun and outdoor experiences close to home. In turn, this builds confidence among youth and mentors, lasting networks of community through multi-generational relationships, grows leadership skills among university students, and provides stepping stones for careers in natural resources. OEMP has expanded from one to three programs since 2011 with demand for a fourth program scheduled to launch in 2015. Efforts have resulted in completion of 30 events for 600 youth participants, each with a matching adult sponsor, 60 university mentors, and thousands of hours of activity and education on public lands. We are exploring opportunities with a number of non-governmental organizations to expand OEMP capacity so more kids can participate in meaningful, outdoor experiences from backyard to Wilderness.



Mountain Goat Kids, Mount Evans Wilderness, Colorado
By Verdon Tomajko, www.verdonrocks.com

Connecting People with Disabilities to Wilderness

Janet Zeller, *US Forest Service*

PROBLEM. Wilderness is often viewed as an exclusive playground for the young, healthy, and wealthy and as a resource that has to be modified to be accessed by people with disabilities. And the obvious question is would people with disabilities really go there anyway? There is a need to understand the reality of people with disabilities currently spending time in Wilderness and doing so for the same range of reasons people without disabilities are drawn to Wilderness. The assumption that a person with a significant disability couldn't get into Wilderness without wide, harden pathways with gentle grades and other infrastructure that would change the Wilderness character similarly needs to be overcome. Only when these myths begin to be set aside will the Wilderness experience be truly open to all who are willing to meet it on its terms and thereby gain the understanding and appreciation of Wilderness that leads to its advocacy.

METHOD. Integrate some of the readily available photos of people in Wilderness in a full range of age, race, gender and obvious disability into photo displays, publications and on web pages. Wilderness training opportunities, in person or online, need to consistently include the facts about the number of people with disabilities; the reality through statistics and examples they too spend time in Wilderness; a thorough understanding of the tight definition of a wheelchair and its application for devices allowed in Wilderness; as well as when accessibility standards do and do not apply in Wilderness.

RESULTS: Nothing says welcome to a person more clearly than seeing a photo of someone who looks like they do in displays of photos of an area or activity. Integrating Wilderness photos of people of diverse ages, races, genders and abilities powerfully extends the outreach of the Wilderness message to all. Through training, the knowledge is shared that millions of people with disabilities are currently recreating across the full range of federal lands including in Wilderness for the same variety of reasons as others, despite the effort involved. That effort and the risks involved are essential parts of the Wilderness experience for all. Managers will be able to apply the tight legal definition of a wheelchair (ADA Title V Section 508c) and understand that a device that meets that definition is not mechanical transport when it is moving a person and will not negatively impact the natural resource. Clarifying that no agency is required to modify any of conditions of the Wilderness lands to facilitate wheelchair use corrects misconceptions and avoids resource impacting infrastructure. This training aids in changing perceptions of people with disabilities thereby opening opportunities.

CONCLUSION. People, including those with significant disabilities, willingly make the effort it takes to spend time in Wilderness for their own challenge, solitude and self-renewal in that unique, untrammelled environment. As agencies we need to ensure the outreach, education and interpretation of the Wilderness experience is shared in a manner that is representative of the diversity of the age, race, gender and abilities of all of our visitors thereby broadening the understanding these lands are there for all people. When individuals see themselves as part of these lands, the valuing of Wilderness areas increases and along with it the support that's essential for the future of Wilderness.

Leave No Trace on the National Scenic Trails

Tom Banks, *Appalachian Trail Conservancy*

The Appalachian National Scenic Trail traverses or is adjacent to 31 designated Wilderness areas along its 2185 mile length from Georgia to Maine. Backpackers embarking on a "thru-hike" of the Trail starting in Amicalola Falls State Park in Georgia are typically inexperienced in backpacking and lack good understanding of Leave No Trace ethics and practices. The majority have never been on a backpacking trip exceeding two nights, but they are embarking on a journey that may last six months. Their unfamiliarity and inexperience leads to Wilderness resource impacts (biophysical and social) that could be avoided through effective outreach, education and training. Volunteers and staff at the Appalachian Trail Conservancy have made a concerted effort since 2010 to address the need for educational outreach. This presentation offered these materials for discussion. We (1) viewed and discussed the emerging "state of the art" for teaching Leave No Trace best practices to visitors using signs, posters (viewable at <http://atleavenotrace.wikispaces.com>), and Internet media on hand-held devices; (2) discussed the efficacy and controversial aspects of using signs and Internet media within designated Wilderness (for example, use of signs vs. "smart phones" vs. other techniques for communicating Leave No Trace or other information); (3) discussed a minimum requirements analysis to evaluate the use of educational tools for protecting Wilderness resources and visitor experiences.

Knowing Outdoor Experience: A Field Guide for Discovering the Literature and Landscape of the Wild

Clayton T. Russell, *Northland College*

Sigurd Olson's first High School teaching experience was in Nashwauk, MN, a small rural town in the northern part of the state. Olson's gravitation towards an outdoor pedagogy was not taught, rather it was instinctual. In his book, *Open Horizons*, he describes a style of teaching long promoted by outdoor and environmental educators.

"During the first fall, I practically deserted the classroom, discovered anew the tremendous value of field observation no matter what the general coursework involved. Slides, dissections and books were vital, but only in reference to the living world; better to know a bird, a flower, or a rock in its natural setting than to rely solely on routine identification and description. This kind of teaching had as much to do with awareness and appreciation as the actual accumulation of knowledge. Observations on the ground, I decided, were just as important as laboratory experiments: in fact, they went hand in hand, and one without the other was meaningless." (70) This observation is perhaps even truer today as the sheer amount of information has grown and the speed at which new ideas replace older ones has increased. Our best efforts are aimed at helping students "learn to learn how to learn" and nurturing their sense of wonder, awe, awareness and appreciation for learning. And the best place for this to happen is in the real world. The world out of doors.

In my teaching at Northland College I have found that even simple outdoor activities, like the ones in this guide have reawakened in my students a childlike joy for learning and exploring in the out of doors. They have told me of a rekindled sense of awe and wonder for the natural world; a feeling some report having "lost" or "not felt for years." Students have also reported feeling a greater appreciation for the role of play in teaching and learning and a greater interest in their own thinking and reflection about nature and their sense of commitment to the world in which they live. The exercises in this guide have created in my students both a deeper learning and a personal commitment to continue to provide quality outdoor experiences to their future students.

Overall, my intention is to get people outdoors again! Give them an excuse to head out to the back 40, breathe fresh air and stretch out their limbs in pursuit of both structured and unstructured time in nature. Find again the wildness in ourselves as well as the wildness in both front country and back country alike. The benefits of being outside to the educational endeavor, our health and personal wellbeing are well supported. It is time to relearn and reclaim our connections to place. Time to honor our duty and obligations to the planet. Time to contribute more directly to making the kind of world that Leopold, Muir, Olson and Zahniser envisioned. Reconnecting with the wild makes for a full and richly imagined life. As Ed Zahniser says, "You could fall in love with far less".

Aventura en el Wilderness: Forest Service Delegates Share Stories of Wilderness Education and Adventure

Tamberly Conway, *US Forest Service*

Tim Williams, *US Forest Service*

A growing concern nationwide, among agencies and organizations, focuses upon improving reach to diverse audiences with messages and stewardship opportunities related to conservation of natural resources. The USFS has expanded its reach to diverse communities, with a specific emphasis on youth and millennials, and a focus upon developing pathways toward higher education and potential careers in the natural resource field and is being supported through a variety of conservation education, sustainable recreation and interpretation driven activities, materials and programs.

One such program, the Latino Legacy - Youth Leadership in Nature Challenge, is a program now in its eighth year, designed to reach diverse youth in Texas with conservation-related opportunities. This program enabled inner-city youth, primarily of Latino descent, to have meaningful experiences on different Wilderness Areas on National Forest lands. Over thirty youth and millennials were exposed to these special places through site visits, special programs such as a "Wilderness Survival" course, participation in stewardship activities and a variety of youth engagement activities that helped to tie the students to these special places. The Junior Ranger Wilderness Explorer Guide is a tool that was utilized to measure personal impacts and response related to student exposure to Wilderness and their relationship to Wilderness as a result of their personal experiences. Wilderness education methods offered by the USFS were used with participating students.

Other tools and educational materials, such as Discover the Forest, a web-based campaign between the USFS and the Ad Council has helped to promote Wilderness awareness and stewardship nationwide. The Spanish-language campaign, Descubre el Bosque, helps the USFS and partners reach Spanish-speaking audi-

ences worldwide with similar Wilderness presentation and stewardship messages. Social media also has also played a significant role in sharing these critical messages and the experiences of youth and millennials with others both nationwide and worldwide.

In addition, the *Natural Inquirer*, a partnership between USFS Research and Development and the USFS Conservation Education Program, is an educational publication based upon USFS research and tailored to the middle school grade level. *Natural Inquirer* has developed several Wilderness-related issues and also publishes many of the works in Spanish in order to reach a broader audience. *Natural Inquirer* staff is currently working in collaboration with Native American leaders to create a publication focused upon research on National Forest lands that has direct impact upon Tribal lands and Tribal communities.

These various tools, materials and programs have increased the ability of the USFS and other partners, to provide access and to create meaningful and culturally relevant materials to improve reach to diverse audiences. A continued effort to invite, include and involve diverse youth, adults and community leaders in the development of these tools will benefit both the USFS and future generation we will continue to serve.

Wilderness Education for Underserved Youth Utilizing the *Natural Inquirer*

Timothy Williams, *Conservation Education Specialist*

Barbara McDonald, *Social Scientist*

Natural Inquirer's (NI's) are journals (4–7) articles and monographs (single articles). The Wilderness Benefits Series includes a journal and monographs. The *NI's* are written from published Forest Service Research. These journals and monographs can be used to connect urban youth to the Wilderness Preservation System through Wilderness Literacy and Wilderness Science. *NI's* are based on language arts education theory, practice, and applied to science and social studies education. *NI's* are reviewed by scientists for accuracy. *NI's* are also reviewed by students (5th Graders) for relevancy and clarity. These science journals will help Wilderness advocates teach urban youth about Wilderness benefits and help them to relate their personal experiences through connections to clean water, clean air, habitat for wildlife and fauna, their personal spiritual awakening, and their personal connection to solitude and nature.



Bisti/De-Na-Zin Wilderness, New Mexico

By Natalia Plekhanova, www.prowessphotography.com

Experience Track Summary

WILDERNESS EXPERIENCE TRACK COMMITTEE:

Alan Watson, *Aldo Leopold Wilderness Research Institute*

Tisha Broska, *New Mexico Wilderness Alliance*

Kayce Cook Collins, *National Park Service*

Randy Gimblett, *University of Arizona*

Roger Kaye, *US Fish & Wildlife Service*

Rebecca Oreskes, *International Journal of Wilderness*

The 2020 *Vision* statement (http://www.Wilderness.net/toolboxes/documents/50th/2020_Vision.pdf) signed by the leaders of the federal land management agencies at the 50th Anniversary of the Wilderness Act Conference in Albuquerque, New Mexico, listed 4 priorities for the next five years for work by the federal agencies managing Wilderness in the U.S. In one of these stated priorities, the agencies committed to fostering relevancy of Wilderness to contemporary society by inspiring and nurturing life-long connections between people and Wilderness. The Experience Track of the 50th Anniversary of the Wilderness Act Conference facilitated 11 sessions during the Conference and hosted several posters on topics very much aimed at understanding this relevancy and ways to foster it. Presentations and panel sessions were accepted that somehow related to the experiences received by people in Wilderness or experiences that were related to Wilderness. Many of the presentations can provide ideas to those developing the implementation plan for the 2020 *Vision* statement.

WILDERNESS ECONOMICS. This Conference Track included a broad array of experiences derived, dependent upon or fostered in Wilderness, but also extended to the economics of Wilderness, a particularly important relevancy topic. While there was an economics session within the Science Track at the Conference, this session on economics in the Experience Track was intended to foster discussion about the historic evolution of Wilderness economics with focus on how Wilderness protection contributes to local economies in terms of quality of life and job creation. It wasn't so much about the science of Wilderness economics as a presentation and discussion of multiple case studies with emphasis on specific sectors of the economy that are impacted through Wilderness designation. Impacts are suggested to be actually relatively small on resource extraction sectors, though protection benefits many sectors positively and in perpetuity.

WILDERNESS AND CULTURAL MAKE-UP OF AMERICA. *America's Wilderness* (<https://www.youtube.com/user/NPSWilderness>), a collection of innovative and visually enticing webisodes that feature unique (and sometimes unconventional) stories between people and Wilderness was presented and discussed. These experiences certainly can originate through intensive trips into Wilderness territory, but they can also be from members of the Wilderness support community that never physically visits Wilderness. From experiences shared by photographers, to first-time hikers, and nature-inspired songwriters and musicians, Wilderness reaches many people through digital media. The idea of Wilderness differs for each depending on the experiences and personal associations we attribute to it. This film series is built upon the premise that Wilderness contributes to the cultural make-up of this country.

WILDERNESS AND AMERICAN INDIANS. While American Indian Trust wildlands administered by the Bureau of Indian Affairs (BIA) were not included in our National Wilderness Preservation System under the Wilderness Act in 1964, long term protection of wildlands under BIA jurisdiction was certainly the intent of Bob Marshall when he served as Chief Forester of the Indian Office in the 1930s. We learned that he designed policy to protect at least 16 scenic areas on a dozen Indian reservations, but without tribal consultation or consent. That policy kept nearly five million acres of Indian lands free from roads and motorized vehicles for two decades, until most were declassified. Today, however, several American Indian tribes have enacted protection of lands for a variety of purposes, very much like Wilderness purposes. In many cases the purposes of these protected lands overlap considerably with general Wilderness values protecting both cultural and natural elements of the landscape. Around the world, indigenous people are engaged in protecting nature from a variety of threats and Wilderness designation is being pursued or has been accomplished in many areas.

Wilderness designation (or other protection of nature) on Tribal lands also protects culturally significant landscapes. The only research reported to date about how tribal and non-tribal people differ in their relationships with Wilderness landscapes, suggests that Wilderness protects nature and culture for both parts of society, but with different cultural relevance; functional, emotional and symbolic attachments for both but

with very different cultural roles; wildlife and watersheds are protected, but for different purposes; and access, beauty, privacy and recreation are significant benefits, but again, in culturally very different contexts.

WILDERNESS AS CONTESTED GROUND. A potential theme for some presentations in the Experience Track could be “Wilderness/wildland experience as contested ground.” Some presenters had an “agenda” or a specific point about the unique nature, meaning or value of Wilderness experiences: e.g., hunting is a meaningful, perhaps critical means for people to connect with nature and their own wild heritage; traditional (subsistence) lifestyles and ways of being on the land transcend labels like Wilderness. These presentations were not controversial advocacy, but provoked an audience to think about some meanings associated with Wilderness that are not commonly thought of as Wilderness values. The audience was fully engaged throughout and a great deal of learning occurred.

WILDERNESS AND THE ARTS. Art brings relevance to the receiver as a method of communicating Wilderness values. Partnerships, such as between the Sawtooth National Recreation Area and a well-known artist and dance group to use dance in commemorating the 50th anniversary of Wilderness; creation of a film about plein air painters going into Wilderness; and the view of an individual artist who has been painting and sharing her paintings of wild places over a lifetime opens up the relevancy discussion at a new level. There was tremendous energy among the audience; people who obviously cared and felt passionate about the ties between art, artistic expression and Wilderness. It seemed that everyone who attended felt a kinship—a kind of joy that there are people thinking about and sharing art connected to Wilderness; that more people can be touched through art than might otherwise be and that this is good for protecting Wilderness.

WILDERNESS AND THE HUMAN SPIRIT. Within the Experience Track, there were certainly some presentations and discussion of new experiences being found in Wilderness due to advancement in technology or humans pushing at traditional restraints, but there are also ancient forms of interaction and relevancy of wild places to human beings that we haven’t sorted out completely. There is a well-documented literature about priests, shamans, and saints awakening during prolonged sojourns in wild country. The almost mandated separation of reclusive hermits on Asian high peaks and plateaus, Native Americans seeking visions in remote places and Australian Aborigines on walkabouts strongly suggest the value of Wilderness to those seeking spiritual guidance. What is the role of wild nature in spiritual transformation? How do stewards of these places increase the possibility of receipt of these transformative experiences? And how do managers look at other ways modern humans express desire to engage in other ancient human behavior patterns in wild nature, such as Wilderness running? In a provocative description of Wilderness running behavior patterns, it was noted that the freedom felt by a runner is unmatched, and the runner’s encounter with wild nature should be brief, reflecting the idea that Wilderness welcomes our arrival but will be grateful for our departure. These experiential aspects of Wilderness may not be among the mainstream focus of managers or visitors, but the enthusiastic discussions make it obvious that the human spirit thrives on wild nature and extreme engagement could just as easily involve a fast-paced, intensive run in Wilderness or a much longer, more meditative visit to fully recognize the self, emptiness, nonduality and the wild mind.

CREATIVITY AND VISION. Quite unusual for a Wilderness conference probably, but so essential to discussions of relevancy of Wilderness to people, was the expanded number of presentations and discussions about creativity and vision through the arts to understand Wilderness. Federal managers have worked in recent times to foster greater activity among artists of all types to engage in and communicate about Wilderness in creative ways. Artists have brought Wilderness to viewers and listeners from the very earliest times. Whether artists want to work in solitude in Wilderness or in group learning activities, many opportunities are available to artists now to foster creativity through nature-based “artist-in-residence” programs and are broadly supported by federal and private sponsors. Creativity and vision also extends to the bureaucrats and foundation managers struggling to provide opportunities to artists while meeting their own stewardship objectives with the firm belief that throughout time painters and composers and other artists have been crucial in recognizing and reinforcing the role of nature in our national identity through their own creativity and vision. Creativity can require efforts to develop “new eyes” by the artist, but also can contribute to development of “new eyes” by witnesses to efforts by artists to capture and release the wildness in nature.

WILDERNESS AND EVERYDAY LIFE. Connections between Wilderness and everyday life dominated in more primitive times. Even our immediate forbearers (like our parents and grandparents) sometimes suggest that those of us who are Wilderness-minded or prefer a more primitive lifestyle are searching for something

they worked their whole lives to get away from. As society continues at a rapid pace to put distance between us and nature, how do we maintain or create this everyday relevancy between people and Wilderness? Giving Wilderness a voice in the digital age seems like an attractive alternative, but how do we do that? Is it our conscience or is it some beckoning invitation that is competing with our stock market tweets and facebook notices from friends, family and businesses we “like”? The term “wildhood” is intended to move us beyond thinking about Wilderness and the things people have done there historically as relic, but as a mode of being that can help us be more resilient to expectations for conformity and pressure for consumption with the constraint that is ingrained in us to allow us to survive through challenging times.

WILDERNESS STORIES. Another creative part of communicating about Wilderness is through stories. Whether around the campfire or at bedside or on the stage, stories most certainly bring Wilderness to life and provide opportunities to pass down lessons and ethics to new generations. While organized, systematic efforts to preserve the stories attached to a specific area are very rare, at least one example was presented, funded by the National Endowment for the Humanities, and focused on the Selway-Bitterroot Wilderness of Idaho and Montana. The many opportunities to explore the human history of this place through photos, diaries, memos and letters are protected, as well as oral histories of people associated with this place through work and recreation. And stories are even more interesting if they blend together several concepts or historical events. In 2014 it is easy for us to look back to see the effects of storytellers on our own past decisions, particularly those of Dr. Ian Player of South Africa, who recently passed away. Dr. Player was a powerful influence on many of us as an outstanding example of conservation policy formulation and as the storyteller we all wish we could be. But the Buffalo Soldiers attending the Conference in Albuquerque also had a strong story to tell about the role of African American Buffalo Soldiers in the American frontier and in conservation. Serving as mappers, rangers and firefighters, these African Americans contributed substantially to our national story of first resource extraction and then resource protection.

MARINE WILDERNESS. Sometimes identified as the single largest future challenge for Wilderness stewardship is ocean Wilderness. A topic of discussion for years at the international level, it was great to find out the current status of public, federal agency and non-governmental organization attitudes toward protecting the Wilderness characteristics of marine environments. While it has been the intent in the US to designate marine Wilderness for many years, it has only recently become a reality, and agency intent seems to be toward designating more ocean areas as Wilderness, under legislation or through policy protection. Interest in designating marine Wilderness under the Wilderness Act remains high, however. Wilderness reviews of submerged properties managed by US federal agencies are being conducted right now. More permanent protection, such as provided by the Wilderness Act, is desired for many marine protected areas. Many challenges remain, including convincing a public that Wilderness designation is the correct way to protect these areas and that while permanent protection is desirable, existing uses may be mostly accommodated after designation.

WILDERNESS PHOTOGRAPHY. Landscape paintings, and later photography, have allowed a much larger percentage of the public to appreciate the value of national parks, Wilderness, and other wild places than would ever personally visit the areas. Howard Zahniser recognized these benefits to vicarious Wilderness users as illustrated in several of his quotes from the 1940s. These vicarious users in turn have become major advocates for land conservation. With the advent of social media and other web-based communications, the public interest in, and availability of access to inspiration and vicarious use of Wilderness has increased exponentially. Furthermore, Wilderness managers and other advocates do not have to be accomplished artists to share inspiring photographs and messages to the public – social media has opened communications to the masses instead of a few select public affairs officials. One session, presented by Bob Wick of the Bureau of Land Management, was designed to give these individuals improved skills to enable them to improve their Wilderness/conservation photography to share these messages and inspiration. These skills are in high demand and taking time to work on them should be a priority for all Wilderness stewards.

CONCLUSIONS. Wilderness facilitates receipt of a broad range of experiences. Presentations in this track remind us that we can both value the solitude of Wilderness recreation visits and look beyond the commodity metaphor to deeply ingrained cultural experiences and appreciative benefits of artistic expression and creativity. Wilderness can hold relevancy to different people in different ways, and this fact should be celebrated, as it was throughout this Track at the 50th Anniversary Conference in Albuquerque. We hope these positive aspects of Wilderness will continue to be experienced by the American people for many generations into the future.

Seeing Green: The Economic Benefits of Wilderness

Andrew Pike, *The Pew Charitable Trusts*

Ben Alexander, *Headwaters Economics*

Gil Sorg, *Las Cruces City Councilor*

Adam Andis, *Sitka Conservation Society*

The body of literature, science, and experience around the field of Wilderness and economics during the fifty years since the passage of the Wilderness Act has expanded greatly. Much of the dialogue around Wilderness and economics in the early years focused on the adverse impacts that Wilderness designation would have on the extractive use industries and local economies. Beginning in the 1990s, however, economists began taking a fresh look at this issue and new trends began to emerge, namely that Wilderness and protected areas could buoy local economies that had traditionally been subject to the boom-bust cycles of the extractive industries.

This panel examined the evolution of Wilderness economics. Panelists included economic practitioners and individuals who can draw on their experiences as locally elected officials and local industries affected by proposed Wilderness designations.

Led and moderated by Andrew Pike, this panel, including three other speakers, encompassed 60-90 minutes of presentations and a question and answer session. Mr. Pike will introduce the topic and each speaker, setting the framework for a discussion of the evolution of the science and literature in the field of Wilderness economics to be led by Ben Alexander of Headwaters Economics – an independent, nonprofit research group providing original and effective research to people and organizations that make a difference in the West. Mr. Alexander will detail current thinking in Wilderness economics, with particular emphasis on the benefits of protected areas to local economies in terms of quality of life and job creation.

Following this foundational discussion of Wilderness economics, Bill Sorg will present case studies of two Wilderness designation efforts near Index, Washington, (the Wild Sky Wilderness) and on the Olympic Peninsula, respectively. Lastly, Adam Andis will discuss the benefits of Wilderness to the regional economy of southeast Alaska from the perspectives and real-life examples of outfitters and guides, cruise operators, agency managers, and non-profit stewardship groups in the Wilderness areas of the Tongass National Forest and Glacier Bay National Park. These three case studies will examine economic arguments made during the campaigns to designate Wilderness in different regions and compare and contrast those arguments to the on-the-ground economic reality in those same areas after designation, with special emphasis on the particular economic sectors that are positively influenced by such designation and contrasting those benefits with the relatively diminutive impacts such designations will have on resource extraction.

The Digital Wilderness Frontier: Innovative Outreach for the Next 50 Years

Erin Drake, *National Park Service*

Lindsay Ries, *National Park Service*

Sarah Gulick, *Wilderness Film Fellow – American University*

The past 50 years of Wilderness preservation have yielded excellent strides in management and advocacy for our Wilderness landscape. As we consider what the next 50 years of Wilderness preservation have in store, it is important to consider how we will engage an ever diversifying and highly dynamic American and global public. How does the concept of a “Wilderness experience” change to reflect societal changes and increased technological advancements? How do we ensure that Wilderness remains relevant while still upholding and preserving the qualities of Wilderness character?

With the goal of balancing more inclusive, accessible outreach strategies with Wilderness preservation priorities rooted in Wilderness character, the National Park Service (NPS) partnered with American University’s Center for Environmental Filmmaking. Through the vision and creative force of MFA students, this partnership has produced the *America’s Wilderness* series, a collection of innovative and visually enticing webisodes that feature unique (and sometimes unconventional) stories between people and Wilderness.

With a value set often perceived as limited to appreciation derived through physical Wilderness visits – backpacking, hiking, etc. – the traditional Wilderness community may be overlooking a substantial group of potential Wilderness supporters, simply because they may never physically visit a Wilderness area. From experiences shared by photographers, to first-time hikers, and nature-inspired songwriters and musicians, *America’s Wilderness* brings visceral Wilderness experiences to viewers digitally.

The series highlights the range and richness of Wilderness experiences available in this country, embracing the idea that the value of Wilderness differs for each of us depending on the experiences and personal associations we attribute to it. Each of the 16+ videos is unique, but when combined into a collective series, the

perspectives embodied within *America's Wilderness* cohere to enhance our understanding of the underlying value and contribution of Wilderness to the cultural make-up of this country.

Protected Areas on Tribal Lands and Historical Ties with the Wilderness Movement

Diane L. Krahe, *Environmental History Workshop*

Ute Mountain Tribal Park on the Ute Mountain Reservation in Colorado. Mt. Adams Recreation Area on the Yakama Reservation in Washington. The Wind River Roadless Area on the Wind River Reservation in Wyoming. The Mission Mountains Tribal Wilderness on the Flathead Reservation in Montana. These are but a few examples of tracts of tribally owned land that Indian nations have chosen to protect from extractive use. Both within the boundaries of Indian reservations and on lands beyond reservation boundaries that tribes have recently acquired, these types of tribally designated natural areas are growing in number. Although carrying the moniker “Wilderness” in only a few instances to date, these lands are being managed by tribes to retain or restore traditional Native values that overlap considerably with contemporary Wilderness values: the protection of fish and wildlife, the protection of vegetation and water, the protection of cultural heritage.

Within this expanding lot of protected areas across Indian Country, the aforementioned tribal park, recreation area, roadless area, and tribal Wilderness share a common history. These areas were once part of a federally mandated network of Indian “roadless” and “wild” designations that predated federal Wilderness. While serving as chief forester of the Indian Office in the 1930s, Bob Marshall designed a federal policy to preserve the Wilderness character of 16 scenic areas on a dozen Indian reservations without tribal consultation or consent. The policy kept nearly five million acres of Indian lands free from roads and motorized vehicles for two decades. In the late 1950s and early 1960s, the Bureau of Indian Affairs declassified all but one of these areas because Indian nations did not want their *tribal* lands included in a *federal* Wilderness system, which early Wilderness bills proposed. Reservation lands were dropped from intermediate versions of what became the Wilderness Act of 1964. Later, some tribes elected to protect the natural conditions of portions of their defunct roadless areas on their own terms. The Eastern Shoshone and Northern Arapaho tribes have chosen to retain their Wind River Roadless Area all along.

In addition, off-reservation tribal preserves today include the Intertribal Sinkyone Wilderness on the California coast and the Nez Perce's Precious Lands Wildlife Area in eastern Oregon. Tribal sovereignty is the unifying theme of the stories behind all these contemporary designations. Otherwise, the origin story of each is unique, dependent on economic conditions and the cultural values of the tribal communities involved. Ongoing management of each of these areas is also unique, usually combining traditional methods of landscape preservation with borrowings from federal models. All Indian nations currently managing protected areas on their lands or pondering the designation of new areas of this sort could benefit from learning more about these and other examples of native innovations in landscape protection today.

Protecting Relationships with Wilderness as a Cultural Landscape

Roian Matt, *Confederated Salish & Kootenai Tribes*

Alan Watson, *Aldo Leopold Wilderness Research Institute*

Interviews of tribal and nontribal Indian Reservation residents in Montana, U.S., were conducted to contrast the meanings that different cultures attach to a Tribal Wilderness. Legislation that created a national system of Wilderness areas (in 1964 and still growing) was conceived, supported, and enacted by a fairly distinct social group generally residing in urban areas and schooled in modern civilization's scientific model and relationship with nature. The places this legislation protects, however, provide many other poorly recognized and little understood meanings to other parts of society. There is a link between indigenous people and nature that is not described well in this legislation or management policy in most places. The Wilderness Act suggests that these protected areas should be “untrammelled,” or unmanipulated, unfettered, when in fact it is common knowledge that, for most areas in North America, indigenous people have intervened, with respect, for generations. The Mission Mountains Tribal Wilderness in Montana, though not part of the National Wilderness Preservation System, was designated to protect many of these same values but also extend to protect important cultural meanings assigned to this wild landscape. Protecting the relationship between indigenous people and relatively intact, complex systems, which we commonly refer to as Wilderness in North America, can be an important contributor to sustainability of the landscape and cultural heritage. The meanings tribal members attached to the Wilderness are described here as (1) protecting nature and culture; (2) functional, emotional, and symbolic attachments; (3) wildlife and watershed protection; and (4) access, beauty, privacy, and recreation. The mean-

ings nontribal members attached to the Wilderness are summarized here very similarly to the classification of meanings reported for tribal members to facilitate emphasis on contrasts: (1) environmental protection; (2) functional, emotional, and symbolic attachments; (3) wildlife and watershed protection; and (4) access, beauty, privacy, and recreation. Non-tribal residents of the reservation seem to conform well to the Eurocentric perspective largely represented in the U.S. Wilderness Act. Recreation, exercise, and exploration in a relatively pristine and uncrowded environment, along with some acknowledgment of ecosystem services provided to wildlife and off-site watershed values are common. Among tribal members, however, the additional cultural significance of this protection, the deep personal and cultural attachments described, and the importance of free-flowing water and free-ranging wildlife contribute to a contrasting set of cultural landscape meanings.

Wilderness & International Indigenous & Community Lands & Seas, Toward 21st Century Wilderness Conservation

Sharon Shay Sloan, *WILD Foundation*

This interactive panel presentation explored cross-cultural notions of “nature” and “Wilderness,” and the implications to Indigenous Peoples (IP) and local communities (LC) and their ancestral lands and waters. While some IP have celebrated, influenced and enhanced “Wilderness,” others have rejected, been challenged by – and in some cases harmed – through various forms of Wilderness and protected areas policies, and their applications. Session highlighted examples of challenges and benefits of the Wilderness concept, and concluded with suggestions for a concept for 21st Century conservation and generating a new legacy for Wilderness, including redressing past and current injustices, engaging processes of dialogue, reconciliation and trust building, and re-defining Wilderness as “*well-conserved nature that intrinsically includes people*” (WILD10).

Indigenous Peoples and local communities traditional knowledge systems, customary rights, governance and practices have sustained “Wilderness” for thousands of years. Currently, IP total 5% of the world population, have traditional land claims to 24% of the Earth’s lands and seas—containing 80% of the planet’s biodiversity – and inhabit 80% of Protected Areas. Their lands and seas are some of the best protected on the planet. That said, in the majority of cases, conservation schemes have been developed and superimposed on their territories, without consultation or inclusion of these long-time caretakers. Colonialism generally, and this process specifically have resulted in gross violations of rights. Further, the majority of the conservation priorities for this century are on IP lands. IP are currently the stewards of at least the same amount of wild nature as all regional and national governments and conservation organizations combined (11%).

Key findings: The future of Wilderness and Protected Areas in part depends on the ability to bridge the priorities of conservation and Indigenous Peoples. A new legacy for Wilderness is paramount. 21st Century Wilderness conservation must be rooted in the best practices of Indigenous Peoples *and* institutional and contemporary conservation. These can be defined as enhancing the protection of all life—wild nature and human communities, cultural and biological diversity.

Findings suggest:

- Processes of reconciliation, trust building, and explicit dialogue between IP and conservation leaders are paramount
- Conservation stakeholders need to redress and remedy past injustices, affirm IP sovereignty and rights, implement Free Prior and Informed Consent and other measures in accordance with international instruments, including the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP; 2007)
- Multiple, cross-cultural notions of Wilderness, nature and culture need to be included in a redefinition of Wilderness, and strengthened through a collaborative, global Wilderness movement and community.

It Was Awe Inspiring: Transformative Experiences in Sequoia & Kings Canyon National Park

Laurie K. Harmon, *University of Wisconsin – La Crosse*

Roger Paden, *George Mason University*

CENTRAL THEME. The ability of Wilderness spaces to transform visitors through sublime experiences was integral to the initial development of the U.S. National Park system. Some environmental ethicists, however, suggest today's Wilderness visitors are transformed not through sublime experiences, but rather through assessing nature from an aesthetic perspective.

METHOD. 172 visitors to 3 campgrounds in Sequoia & Kings Canyon National Park (SKCNP) during summer 2011 completed written questionnaires assessing trip characteristics and demographics. However, the primary focus was on the "significant experiences or objects" they had or encountered during their visit. Specifically, visitors were asked to aesthetically value each significant experience or object and to react to each experience or object using key words representing the domains of beauty, the picturesque, and the sublime. 11 of these participants further participated in a simultaneous study in which they were given disposable cameras to capture images of their significant experiences or objects while visiting SKCNP. They were subsequently asked to reflect on multiple facets of each significant experience or object in a written journal. Accompanying narratives were collected documenting reactions to these experiences in the words of the participants. Confirmatory factor analyses were conducted on the nine aesthetic judgment items predicted to represent the domains of beauty, the picturesque and the sublime as well as nine aesthetic reaction items which were also predicted to align with those same domains. Thematic analysis was used to examine the photographic and narrative results.

RESULTS. On a 3-point Likert-type scale, respondents were most likely to identify their significant experiences or objects as beautiful and sublime, but not picturesque. However, their aesthetic reactions to the significant experiences or objects did not reflect the three domains (i.e. beauty, picturesque and the sublime). Instead, they were most likely to react to the experiences/objects with delight, awe, and stimulation, words which were predicted to assess reactions to beauty, the sublime, and picturesque, respectively. Thus, though the predicted domains were confirmed for aesthetic judgments, they did not hold for the aesthetic reactions. Among the 11 participants who engaged in the photo-elicitation and journaling portion of the study, thematic analysis revealed the use of phrases and words suggesting beauty, picturesque and sublime assessments of their photographed places and accompanying experiences. However, the language used was, frequently, more contemporary, e.g. "Very cool and interesting" rather than picturesque.

CONCLUSIONS. While visitors' aesthetic judgments differentiated their significant experiences/objects visitors encountered in their SKCNP visit, their aesthetic reactions to these places did not. Therefore, it could be difficult to accurately determine a visitor's valuation of a particular experience based solely on his or her reaction to that experience. Additionally, although visitors appear to use more contemporary expressions when sharing their experience, and may be engaging in fewer deeply contemplative moments, their narratives and images illustrated the importance of the park experience as both sublime and transformative.

"The love of wilderness is more than a hunger for what is always beyond reach; it is also an expression of loyalty to the earth ... the only home we shall ever know, the only paradise we ever need – if only we had the eyes to see."

- EDWARD ABBEY, *Author*

Rediscovering Human Wildness: Backcountry Hunting as a Gateway to Passionate Advocacy for Wilderness

Karl D. Malcolm, *US Forest Service*

The modern Wilderness movement as we know it germinated in the fertile glow of a hunter's campfire a century ago. Humankind stalked the animals sharing their habitats when "Wilderness" would have described all corners of our planet during the Pleistocene. More now than ever Wilderness provides sanctuary for wildlife and humans alike, a cherished holdout offering reconnection to land, nature, family, food, and our past.

Personal connections to wild places inspire hunters to be among the most devoted advocates for Wilderness yet there is a perceived division between hunters and other backcountry aficionados. The degree of future success in conserving, promoting, expanding, and stewarding Wilderness will depend on how well various stakeholders find common ground and present a cohesive front on behalf of wild places. Securing acres in the public domain and ensuring public access to those lands, including Wilderness, should be a paramount goal to all conservationists and all conservation organizations, regardless of any other differences that might exist.

During the latter half of the 20th Century the admirable identity of hunting has been eroded by warped branding which has occurred in the hunting industry, in segments of the hunting and non-hunting media, and due to representation by a vocal minority of hunters who have failed to adequately represent the values, motivations, and character of their peers. Although hunting does violate the "take only pictures, leave only footprints" mantra espoused by other Wilderness user groups, the potency of this primitive human experience in fostering deep, personal connections to and reverence for natural wildness must not be overlooked.

An exploration into the identity of backcountry hunters will expose the simple fact that similarities shared with their non-consumptive conservationist counterparts far outweigh any differences. A stronger union between these groups would promote enhanced stewardship of the wildness cherished by both.

The Wilderness Experience: Its Phenomenology and Importance for Conservation

Kirk Robinson, *Western Wildlife Conservancy*

A Wilderness experience is not just any experience that takes place in Wilderness, such as camping or hiking. Activities that don't require Wilderness can't amount to a Wilderness experience without something additional. It is this essential additional something that interests me. My thesis is that a Wilderness experience is an *encounter with wildness*.

Wilderness is often defined as self-willed land. Self-willed land is wild land. Wild land is land untrampled and untamed by humans – land left to itself.

An encounter is more than casual contact; it is a kind of confrontation. It involves attention focused on the object of the encounter: wildness in this case. But since wildness is not a concrete something, this point will require explication by means of phenomenological description and conceptual analysis.

There are essential features of Wilderness experiences and typical features of Wilderness experiences. There are also typical consequences of Wilderness experiences. I discussed each of these.

Wilderness experiences vary in duration and intensity. A full-blown Wilderness experience requires contemplation and a sense of wonder. It is a kind of entrancement. An encounter with wildness is often a momentous formative experience with ethical ramifications, like Leopold's experience of seeing the "fierce green fire" in an old wolf's eyes, which eventually led to his advocacy for Wilderness preservation and his formulation of the Land Ethic.

Implicit in this thesis is the idea that facts are not necessarily value-neutral. They can have real implications for how we ought to act. This is what is meant by intrinsic value. These value implications are neither deductive nor inductive in kind. Value assessments are not arrived at through linear chains of reasoning at all. Rather, they are intuitive assessments of what is good or best given the facts. The intrinsic value of Wilderness is a singular and important reason for preserving Wilderness.

Wilderness experiences are a kind of religio-aesthetic experience in which human beings intuit wildness and are both humbled and strengthened by the encounter, which is perhaps why we find so many accounts of the founders of religions sojourning in the Wilderness prior to their ministries. Jesus comes to mind as a prime example. The vision quests of Native Americans are of a kind.

Encounters with wildness are personal and intimate, in which the subject of the experience is entranced by the object of the experience. Unnatural distractions preclude such experiences or shatter them. Thus, Wilderness experiences occur most naturally, and almost of necessity, in solitude. Such experiences enrich our lives and help make us more fully human.

Sawtooth Project: Art, Wilderness and the Human Connection

Caty Solace, *Trey McIntyre Project*

Liese Dean, *US Forest Service*

We are challenged to connect with generations, often not our own, who may never step foot in Wilderness. The partnership between the US Forest Service, Trey McIntyre Project (TMP) an internationally renowned dance company, and the Society for Wilderness Stewardship, explores the idea of using art as a means to connect people to wild places in today's society. Inspired by the strength and grace of dancers juxtaposed with the raw beauty of Wilderness, the result is a powerful statement on the relationship between the human spirit and the core elements of nature.

Today our society is technologically dependent, attention spans are short, expectations are immediate, people are less connected with nature, and our traditional ways of communicating are limited in their reach. TMP uses the art of dance and images to break cultural boundaries and connect audiences on a basic, yet decidedly profound, human level. This partnership engages the language of an artist, his art and his innovative promotion strategy to bridge this gap.

Trey McIntyre states that he “uses dance to explore what it means to be part of the human experience”. As such, when approached by the Forest Service, he intuitively understood the connection to Wilderness as core to that experience and embraced this project. The collaboration that resulted is a visually stunning celebration of people, their need for Wilderness and the places in which they intersect. TMP worked closely with the Forest Service to ensure that the core values of Wilderness are communicated through the sharing of images and film taken in and around the Sawtooth Wilderness, creating a dialogue with the active national audience that TMP possesses.

Trey McIntyre's refreshingly relevant, massively appealing and emotionally evocative work connects with followers across the nation and maintains relationships with them via the web, email, and mail. The core of their 15,000 social media connection is largely urban, 25-34 years of age and hails from all over the world. The Forest Service used non-traditional methods to reach over 60,000 people spanning the entire spectrum of the population, sharing an awareness of Wilderness and the deep connection that humans experience. The human soul is not complete without wild places, nor is it whole without art. This intersection that results can be a powerful tool to engage non-traditional audiences in a dialogue about Wilderness.

As an artist, I am perpetually striving to uncover what is, meaning: what is the plainest essence of a thing, the small, specific truth of an existence or idea that uncovers a larger truth about what it means to be alive on this planet. I have set out on this journey to explore the human form and how it relates to nature as a way of uncovering just those such truths. We are, as a culture, most wholly cut off from nature. It is our source and primal essence, yet we live in a world of construct and artifice. An illusion of dominance over the natural order that surrounds us. Returning the human to nature, we begin to uncover our truer selves and discover our scale in relation to the wonder of the Earth we thought we owned.

- Trey McIntyre

“En Plein Air”: The Friends of Scotchman Peaks Wilderness Extreme Plein Air Art Program

Phil Hough, *Friends of Scotchman Peaks Wilderness*

Art and Wilderness have long been involved in an intimate dance, inspiring each to their highest levels. From the Hudson River School of artists, with luminaries such as Albert Bierstadt who went on to paint iconic Rocky Mountain Landscapes; to Thomas Moran, who travelled with early expeditions to Yellowstone and the Grand Canyon, bringing paintings of those wild western landscapes to the attention of gawking easterners; to the photography used by John Muir to convince a president and congress to preserve Yosemite; to the modern day work of film makers like Ken Burns, our wild lands inspire artists and viewers of art alike.

Art can bring a place to life, elevating the sense of “place”, conveying a feeling of the remoteness, ruggedness and the challenges inherent in the Wilderness journey. Experiencing Wilderness through art can move others, in ways that words simply can't.

Art plays a role in which places we choose to protect and preserve. Arguably, it was the art of the Grand Canyon and Yellowstone, not the official reports and surveys which led to their protection and to the birth of the national park system and conservation movement.

If the evolution of art leads to photography and then to movie pictures, filmmakers must be in many ways the most evolved of artists. Yet those who study a subject slowly and patiently paint a canvass still capture something very profound and unique.

Plein Air art, literally art created in the open air, is a school of art which takes as its subject the natural world, capturing the changing light and other elements. Artists paint not in the studio, but outside in the open air, capturing the natural light and the poignant moments before they change.

The pinnacle of Art and Wilderness then surely must be when filmmakers turn their camera to Plein Air artists in the Wilderness and make them the subject of their film; especially if these Plein Air artists are on a multi-day hike into the remote back country!

In 2008, the Friends of Scotchman Peaks held our first Plein Air Paint out, inviting a couple of dozen regional artists to spend a weekend painting the Scotchman Peaks. Some created panoramic landscapes, other ventured more personally into the forest on short day hikes. As we wrapped up the weekend, two artists wanted more. They wanted to venture into the heart of the Scotchman Peaks. The idea of an extreme art expedition was born!

The following summer, the Extreme Plein Air art program took off and two artists and several Wilderness lovers ventured into remote basins and ridges bringing back a body of artwork which warranted its own show.

In 2010, three young film makers from Muhlenberg College came west to film our conservation efforts. We choose as a subject our second annual Extreme Plein Air art hike. The resulting film is "En Plein Air". It runs 23 minutes in length and can be viewed at: <http://vimeo.com/46852120>

Art of Wilderness

Joanie Hoffmann, Artist, Painter

The wilds of public lands, national parks and our free spirit go hand in hand. It is the culture, history and context of Wilderness. Joan's individual power point and discussion included her original landscape paintings which were created over a forty year career living in the wilds of Routt County, Colorado, below the Sarvice Creek Wilderness area and near enough to Arthur Carhart's spirit that she understands and brings to light the story of Wilderness.

She began her conversation at Trappeur's Lake in the Flattops Wilderness Area: identified by the USFS as the Cradle of the Wilderness concept. And she offered a visual understanding, vocabulary and context about advocacy, a rigor for wild lands protection, and its presence and need to exist. In art is the meaning of experience.

The *Art of Wilderness*, is a compelling visual account and witness to the history, culture and power of landscape. Joan has walked the talk for forty years of the fifty years of the Wilderness Act. In 1963 she was thirteen years old and joined a Sierra Club backpacking trip and heard firsthand accounts of the *Place No One knew-Glen Canyon*.

All age groups with or without Wilderness experience will benefit from *The Art of Wilderness*. Computers dictate a visual literacy and is the world our children grow up in. The language of Art will drive our computer presentations and a lack of visual knowledge and of ecology, will displace meaning. Joan included not only the beauty but the distraction and misinformation that poorly photo-shopped images present. Leading national organizations require visual literacy and *The Art of Wilderness* shows us why.

Land managers, Wilderness advocates and public officials saw their jobs in a whole new light! Experiences in the wilds or cultural encounters are visual and are ways we learn and translate and bring harmony to our daily jobs, public discourse and is the joy of living: health and humanity arise from landscape and connections.

The Spiritual Dimension of Wilderness

Roger Kaye, US Fish and Wildlife Service

Historically, spirituality was a central underpinning of the Wilderness concept. For Henry Thoreau, John Muir, Olaus Murie, Sigurd Olson, and other early Wilderness proponents, Wilderness was the tangible expression of a system of belief and feeling relating our species to the larger community of life. A Wilderness ethos emerged, assuming the character and function of a spiritual tradition. It became a new manifestation of an ancient human striving – found across cultures and throughout time – to place one's self in the context of relationship, connection, and obligation to a larger reality, an ultimate value that outlives the self. As Wilderness Act author Howard Zahniser summarized, "to know the Wilderness is to know a profound humility, to recognize one's littleness, to sense dependence and interdependence, indebtedness, and responsibility."

This spiritual perspective continues to be a powerful motivation of preservation efforts. For many visitors, it enlarges the meaning of their Wilderness experience. Many others find inspiration and hope in just knowing that Wilderness is there, as a sacred place, set apart from the consuming quest for an ever-higher material

standard of living that threatens this shared planet. It's a symbol of our capacity for reverence for something beyond human utility, revealing that better part of ourselves willing to subordinate our immediate interests for the benefit of other species and future generations of our own.

Yet despite its significance, the spiritual dimension of Wilderness is seldom more than tacitly recognized by the agencies charged with its stewardship. Managers are squeamish about spirituality, citing uncomfortable associations with religious doctrine or a mystical, supernatural realm. But research in the fields of history, comparative religion, psychology, and neurophysiology provide a secular, functional understanding of spirituality, making it a legitimate concern of public resource agencies. It enables understanding of the spiritual impulse as a psychological and biological phenomenon, as an inherited, entirely natural, and beneficial component of our humanity.

Science provides empirical evidence for what the early Wilderness proponents knew intuitively – the great importance of sacred places as mediums for opening us to the humbling message of all spiritual traditions: only through acceptance of our embedded and obligate membership in the larger community can we live in peace with this conflicted world. This is the spiritual function, of a church, temple, shrine – and Wilderness.

The manifestation of spirituality in the Wilderness concept both reflects the unmet needs of our modern, commodity-driven culture, and reveals an archetypal part of us that this culture obscures. An adaptive mechanism, the spiritual dimension of Wilderness has evolved and continues evolving to serve ultimate human needs. It reminds us of what's ultimately needed if we are to temper our environmental behavior and attain a sustainable future: a change in the way we see ourselves and our relationship with the biosphere we jointly inhabit.

Wilderness, Meditation and the Wild Mind: A Buddhist Practice

Charles Wolf Drimal, *Absaroka Institute*

Mountains, deserts, and rivers have been places for healing and sources of inspiration for the human psyche since time immemorial. Removed from the cultural conditioning of their respective societies, spiritual masters from various ancient lineages, as well as enlightened priests, shamans and saints trace events of their awakening to prolonged sojourns in wild country. Reclusive hermits of Asian high peaks and plateaus, Native Americans seeking visions on hilltops, Australian Aborigines on walkabouts, and modern-day urbanites flocking to national parks and remote Wilderness areas, all recognize the power of pilgrimage in a wildland setting.

Beyond serving as a beneficiary to mental and physical health, wild places may also catalyze a transformative experience that Buddhists refer to as *nonduality*. With attention to the combined practices of Wilderness travel and meditation, this presentation explores the experience of nonduality within the Wilderness landscape. The background and theory of both meditation practice and nonduality are explained through the teachings of Zen Buddhism and ecopsychology. Once a thorough intellectual understanding of meditation and nonduality were fleshed out, the presentation investigated how deliberate contact with wild landscapes may catalyze a person's opportunity for the realization of nonduality in the natural world. A central theme was considered within this investigation: Does the Wilderness experience awaken an authentic and liberated, wild mind? By approaching the topic of nonduality from the epistemologies of Zen Buddhism and ecopsychology, this presentation paid particular attention to the concepts of the self, emptiness, nonduality and the wild mind. Research, theory and realizations from the fields of Buddhism and ecopsychology were integrated in order to collectively deepen the understanding of the confluence of Wilderness travel, meditation practice and the transformative potential of the human mind.

Wilderness for a Song: Using the Arts to Raise Awareness and Connect People to Wilderness

Jane Leche, *US Forest Service*

It is believed the original concept of Wilderness began during the Tang Dynasty period of China (618-906) through captivating paintings of beautiful, natural places. *Landscape art*, illustrating wild places in their raw, natural state became a significant source of influence in many creative works throughout the centuries. In the nineteenth century, Western culture and the concept of Wilderness having *intrinsic value* began to emerge through visual arts, poetry and song. During this period Romantic era writers, composers, painters and poets began to glorify what remained of wild, untamed natural places by capturing their beauty and enchantment in their works or describing them as places of splendor, wonder, and discovery. Through these works of art, wild lands emerged as places of significance and a vital part of Western culture to enjoy and protect.

Humans gravitate toward nature and Wilderness to meet basic needs for relaxation and restoration of the body, mind and spirit. Music is known to have the same effect. For example, Aaron Copland, well-known composer of the mid-20th century, claimed that as a composer he was “occupied each day with music as a basic need of the human spirit”. In the 1970’s, Folk singer John Denver moved a whole generation of environmental enthusiasts with hit songs such as *Rocky Mountain High*, *Sunshine On My Shoulders*, and *Annie’s Song*, to name a few, and many of his songs regarding the natural world remain just as popular today.

Using the arts can also motivate and inspire people to do something. For me, using the arts to get messages across has been through music, story and song. From 1994 – 2012 I had the privilege of being the rhythm guitar player and lead vocalist for the Fiddlin’ Foresters, the Official Old-time String Band of the US Forest Service. We played for diverse audiences throughout the United States communicating conservation messages through musical performances. The Fiddlin’ Foresters had three clear objectives – to get natural and cultural resource messages across and relate the challenges facing those resources today; to put a “face on a faceless bureaucrat” (meaning government employees are just regular folks and a part of a community like anyone else); and to boost agency employee morale. Many times after a performance an audience member would say how their negative perception of the Forest Service had changed or an employee who was thinking of leaving the agency decided to go back and give it another try. They had *felt something* that had been conveyed through the music and stories. Others were inspired to learn to play an instrument or dust off one that they had left alone for years. Still others were inspired to write meaningful songs or poems about the natural world, historic events or people, or simply their own experiences in the outdoors. And some even admitted they had taken natural resources for granted and were inspired to become better stewards of those resources.

Communicating the message of the intrinsic values of Wilderness and the importance of preserving wild places forever can be done by using the arts to either motivate someone to venture out and experience these special places for themselves or to support stewardship efforts that will sustain them for future generations – and that’s something worth singing about.

Wilderness and Mountain Running

Jedediah Rogers, *Utah Historical Quarterly*

Jimmy Grant, *Historical Research Associates*

When Congress passed the Wilderness Act in 1964, it deliberately defined Wilderness as places “untrammelled by man, where man himself is a visitor who does not remain.” Howard Zahniser, an architect of the Wilderness Act, selected the term *untrammelled* deliberately: a trammel is a net used to catch birds and fish, so untrammelled, as Zahniser understood it, meant free, unbounded, and unchecked. We can imagine few outdoor activities better suited to this Wilderness definition than mountain running. The freedom of the runner is unmatched: she glides effortlessly on her own two feet, carrying the bare minimum, free to scan the terrain in front of her and to venture to places that might be more difficult to reach for someone on a mule or carrying a large backpack. Runners enter wild places for a short time until beckoned back to the society from which they came. The runner’s encounter with Wilderness is brief, as it should be, reflecting the idea that Wilderness welcomes our arrival but will be grateful for our departure.

Running in wild lands is deeply rooted in our history as a species. Runners know intuitively that they are not mere foreigners in Wilderness. Humans thrived in the wild for generations. And we did so, in part, by running. Increasingly, runners today are drawn to wild lands and to Wilderness areas for renewal, for solitude, for recreation, and even for competition. These places appeal to the runner eager to escape modern life and return to the embrace of the natural world. Running in Wilderness satisfies the impulse to reach, quickly and on one’s own two feet, some of the most spectacular places in the country. Although official trail or ultra running races are not generally permitted in Wilderness areas, many runners compete against themselves or against those

who passed before them in pursuit of “Fastest Known Times,” or FKTs, to the top of mountain peaks, across canyons, and other wild places. Solo and group expeditions in Wilderness are common. Go-pros and other new video devices enable runners to document their experiences, producing in the process some remarkable films and capturing spectacular moments in the backcountry.

In our presentation, we reflected on mountain running in Wilderness areas. As historians, we provided historical context to what is a growing form of outdoor recreation. We argued that mountain running profoundly reflects Wilderness “values,” beats to the impulse that prompted conservation forebears to value Wilderness and protect wild lands, and proudly belongs to a storied tradition of people venturing into the backcountry. Our presentation included photos and a brief film.

Artists, Space, and Nature: The Role of Artist-in-Residence Programs in Wilderness Preservation

Rita Alves, *US Forest Service*

Beginning as early as 1900, Artist-in-Residence programs have been established outside of metropolitan areas as communities to foster creativity without the distractions of urban life. These programs have grown to encompass a variety of models today, ranging from week-long artists retreats in the woods to year-long expense-free lodging and work space. Some residencies host one artist to work in solitude, while others provide an entire art-focused community, complete with critiques and lectures by prestigious individuals in the field. This presentation gave a brief history of nature-based Artist-in-Residence programs, followed by an overview of such programs currently available to artists. Though not all-inclusive, several residencies currently available to artists and some open to both artists and scientists were described in detail, giving their histories, descriptions and images of the sites and accommodations, notable past residents, and application requirements. Residencies discussed ranged from Yaddo, an artist retreat founded in 1900 on a 400 acre estate in upstate New York which has grown to become one of the most competitive programs in the country, to National Park Artist-in-Residence programs and private nature-based residencies such as Sitka Center for Art and Ecology, Caldera, and A Studio in the Woods.

The question of what role these programs play in preserving Wilderness was addressed throughout. How does being surrounded by a natural environment influence the quality of artwork created in a place? Without the existence of land “untrammled by man,” could great art be made? How have works of art created in these communities affected preservation and public awareness of Wilderness? The settings of Artist-in-Residence programs often reflect qualities of Wilderness such as solitude and primitive character, but they are rarely held in actual Wilderness areas. Studios and accommodations are typically historic barns and rustic cabins complete with electricity, plumbing and vehicle access. Nevertheless, the concept of the Wilderness experience is central to their purpose.

The objective of the presentation was to familiarize a broad audience with Artist-in-Residence programs and their role in Wilderness preservation and awareness. Resources were provided for interested artists to become involved in these programs. The ideal outcome is that some of the audience members will, as a result of the presentation, apply for and participate in the programs described and use the time in residence to create works of art which may increase public awareness or change dominant perceptions of the Wilderness concept. In conclusion, it was shown that some of these programs have influenced Wilderness preservation and will continue to do so indirectly through cultural dialogue and resident experience.

“If you know wilderness in the way that you know love, you would be unwilling to let it go. ... This is the story of our past and it will be the story of our future.”

- TERRY TEMPEST WILLIAMS, *Writer*

Artist Residencies on a Budget: Getting Creative with Volunteers

Barbara Lydon, *US Forest Service*

Artists have long contributed to the preservation and interpretation of our public lands. Nineteenth-century painters such as George Catlin, Albert Bierstadt and Thomas Moran inspired pride in America's wild landscapes and influenced designation of our first parks. Recognizing that artistic expression plays a vital role in connecting people to the natural world, agencies have continued this strong tradition of hosting artists. However, during a budget crisis, it's programs such as the *Voices of the Wilderness* artist residencies that are the first things to be cut. However, with creative people in the office thinking about how to bring creative people out into the field, we were able to initiate and generate momentum for a unique art residency, and to build a program that would become a multi-agency partnership. Barbara Lydon presented the challenges we've faced through the years, and how we've overcome these obstacles in a time of decreasing budgets.

During the last five years, artists from across the country participated in *Voices of the Wilderness* artist residencies, a program where artists have not just viewed Alaskan Wilderness, but they've gotten their hands dirty to participate in Wilderness stewardship. They have worked alongside rangers, biologists and other specialists in some of Alaska's wildest and most celebrated lands, including the Tongass National Forest and Glacier Bay National Park. Through projects such as air quality work, wildlife studies, youth education, marine debris clean up, and other hands-on work, artists have been inspired in new ways and have enlisted in celebrating Alaska's wild places. These experiences continue to affect how artists view their public lands and the people who manage them.

We've worked to develop ways of how artists can save the federal government money—even get agencies ahead a little bit. We've signed our artists up as volunteers and partnered them with rangers. Artists are provided with field trip food and gear, as well as transportation to and from the field, though they are responsible for getting themselves to the departing Alaskan city. In exchange for their opportunity, selected artists donate a piece of artwork to the hosting agency and give a public presentation of their choice, highlighting the Wilderness area. Slideshows, lectures, workshops and discussions have occurred throughout the lower 48 and throughout Alaska from artists who bring their experiences home and share them with diverse audiences.

Through the years, Wilderness managers of the *Voices of the Wilderness* residencies have been getting creative with their artists. Feds are gearing their artist selections towards applicants that can help them accomplish existing goals in the Wilderness programs—goals that might not be getting met due to budget constraints. Artists have been assisting in creating colorful, animated adventure guides for children, interpretive signs for visitors, educational films and websites, and promotional posters. More people started noticing these resource materials once they had an artistic touch, while carrying messages from our federal agencies and the inspiration of our wild public lands.

A Journey towards Wilderness

Debra Bloomfield, *San Francisco Art Institute*

Terry Tempest Williams, *Dartmouth College*

Lauren E. Oakes, *Stanford University*

In this session, Photographer Debra Bloomfield presented her book *Wilderness*, published by University of New Mexico Press in 2014. This five-year journey into the experience of Wilderness in Southeast Alaska is dedicated to the memory of Mardy Murie and includes Bloomfield's large-scale photographs and soundscapes. *Wilderness* is Bloomfield's third photographic landscape project.

In 2007, Debra Bloomfield began incorporating field recordings into her working methodology. Turning to an unknown terrain, she immersed herself in the landscape, purposely repeating her movement through the seasons with a contemplative stance. *Wilderness* combines images, sound, politics and the suggestion of public-personal responsibility.

The remote landscapes of Southeast Alaska are markers or templates for all places wild; their mystery, sadness, complexity, and promise of refuge can be experienced in the contemplative images of *Wilderness*. The photographs are not driven solely by personal experience, but rather draw directly from the land and the persistent crisis of land misuse. Informed by the Wilderness Act of 1964, the images explore the contemporary preservation of wild areas and question what Wilderness will mean to all of us in the future.

The purpose of this book is to promote Wilderness stewardship through art and to cross-pollinate art and science. In her presentation of photos and audio recordings, Bloomfield illustrated how creative collaboration is a powerful tool for the continuation and strengthening of Wilderness protection. She will spoke about her

creative process in her journey towards *Wilderness*, in which artists, scientists, researchers, and literary contributors participated.

Ecologist Lauren Oakes followed the visual presentation with a discussion of her essay “Where we draw lines: Policy and Wilderness,” which is a part of the book. Oakes also presented her current research and recent fieldwork in the Wilderness of Southeast Alaska.

With New Eyes: Photography and a Wilderness Sense of Place

Jeff Rennie, *Conserve School*

“The real journey of discovery,” wrote Marcel Proust “consists not in seeking new landscapes but in having new eyes.” For decades, Jeff Rennie has traveled to the world’s wildest places – Antarctica, Kamchatka, the Amazon River basin, Africa’s Mount Kilimanjaro, Alaska and the Arctic – skipping like a stone across the continents. But such a lifestyle raises important questions. In this age of jetset Wilderness, when you can wave a credit card and in hours be in a wild place half the world away, what does it mean to truly know a Wilderness? Can we develop a meaningful “sense of place” on a trip of just a few days? How important is sense of place for sustaining the energy to fight the extended battles to protect wild places? How does a person develop it? Through the practice of staying in one place, Rennie has used photography as his “new eyes” and worked to develop a keen sense of place with the Wilderness of the northwoods – the Boundary Waters, Sylvania, Isle Royale, and the Apostle Islands.

Developing a sense of place with a Wilderness requires at least three elements. First, it requires time. We have the idea that we can “do” nature the way we do yoga or lunch, rushing to squeeze it in. To sink deeply into a place requires a commitment. The beauty of committing to wild places close to home means that you can return time and time again, seeing the same lake, the same bog, even the same individual tree, over and over in different light, different weather, different seasons. Unlike a one-time postcard view, revisiting the same area gives you the opportunity to see change over time, to watch a tree age, to see the same individual animals, to notice the influence of natural processes on the land. Time becomes a force and the snapshot view deepens into something more meaningful and complex. The camera gives you the ability to record the changes, a reason to look deeply, and then look again.

The second requirement is a commitment to studying. No longer is it enough to just read the brochure, to look at the surface of things. You must look deeply, peel back the layers of complexity and connections both to the place itself and to others who have looked at it and recorded their thoughts in journals, books, poems, or photographs.

Finally, you must keep your eyes fresh. You must learn to see the miraculous in the mundane and the incredible in the commonplace. To do this, Rennie has developed a series of “experiments in seeing” with the camera – oil and glass photography, light experiments, macro photography and motion work - that train the eye to keep seeing fresh and new things every time.

The result is an on-going, creative, deep, and constantly renewing sense of place that allows him to feel a real connection with these wild places, inspiring himself and others to help protect local Wilderness areas so that there will always be places we can go back to again and again to see with “new eyes.”

An Alternate Lens: Wilderness as Community

Eugenie Bostrom, *Conservation Legacy*

I was a “disconnected youth”... I was “at-risk” I suppose. These terms describe young people who society aims to fix. Many of those attempts are through Wilderness Therapy, or nature immersion. And while, exposure to green spaces, and time in nature is always beneficial to humans, the experience is not always what it could be. I want to share with you, how a youth’s experience in (not just exposure to) Wilderness can drastically change the trajectory of her life.

Though being in the outdoors may feel foreign to some initially, the inherent wild-ness of Wilderness, will speak to youth especially; once barriers are broken, Nature feels natural.

My youthful experiences in Wilderness changed my life, but not because of the reflection through solitude” that you might expect.

Wildhood: Incorporating Wilderness and Everyday Life

Mark L. Douglas, *University of Montana*

This concurrent presentation addressed the lived role of Wilderness with special attention to Wilderness understandings. Specifically, we are thinking about wildhood as a useful construct for exploring how folks affectively relate to and recall Wilderness areas and wildlands. Additionally, we consider Wilderness as a restorative and commanding presence for society. Our interpretive lens focuses more on understanding than abstraction in juxtaposition to strictly calculative thinking. Exploring wildhood can reveal the overlooked range and depth found in recollected wildness as a current of Wilderness. By closely exploring the world of Wilderness in terms of ordinary life, I offered an interpretation of wildhood, the practice of everyday wildness.

Wilderness preserves practices that once were ordinary activities for everybody. We collected water to drink and gratefully harvested plants and animals to eat. We walked, paddled, and saddled our way around. This way of life and its modality predate the rise of agricultural settlement and especially the industrial revolution, precursors to the Anthropocene. The moments pass. But Wilderness is not a living history museum and the Wilderness Act is no mere relic. Designated Wilderness helps forge an understanding of how everyday existence solicits openness to a sense of wildness.

Wildhood is a mode to which somebody becomes attuned. Modes open people to possibilities for what it makes since for anybody to do. Modes aren't beliefs or rules. Modes are not subjective states or representations in somebody's mind. Modes are becoming in the sense that a mode suits somebody. A mode becomes and follows somebody. Wildhood is a mode in the same way that childhood is a mode. Wildhood is a state in which certain possibilities present themselves while others simply don't show up for us. Practices (ways of abiding) gather in relation to our familiarity and conventions. Practices set the stage for intelligible activity. The Wilderness Act is an abiding invitation toward refocused and retrieved marginal practices that had fallen and out of phase with what was then and is now, fifty years later, the prevailing American culture. Some of the common elements of our society are characteristic of calculation, convenience, and control. And yet, there are glimmers of hope.

Evidence in their work shows how pioneers of the Wilderness movement intended the Wilderness idea and the practices gathering around it to counteract blind conformity and consumption. Wilderness areas are withdrawn from the world of technology. Wilderness embraces space for people to draft toward realizing an immediate engagement with the earthly community of life. Getting back to the earth engenders a sense of the premundane. Wilderness gives a glimpse of the premundane and equips us with perspective. The struggle to abide in Wilderness and our understanding of its presence can bring clarity to our ordinary lives. Wilderness grants clearance to the possibility of reevaluating how the world and contemporary culture is thrust upon us as a strictly pre-figured modality. Wilderness promotes a genuine experience of life that analogically subverts hyperreality. When we realize the gift of wildhood as a mode of being we withstand the spell of conformity and consumption with the composure of graceful restraint.

Giving Wilderness a Voice in the Digital Age: Lessons for New-Media Campaigns

Adam Andis, *Sitka Conservation Society*

Ben Hamilton, *Pioneer Videographer Filmmaker/Owner*

More often than not, the Wilderness experience and the online experience are viewed as mutually exclusive endeavors. Generally, Wilderness users, advocates, and managers blame the advent of online technology for the disconnect between society (especially the youth) and appreciation of nature and Wilderness. It is easy to point to video games and social media as distractions and even barriers to valuing wild landscapes through outdoor activity. The trend is clear that technology and online media will continue to play tremendously important roles in the modern world. Despite reservations, Wilderness advocates are not free from this trend. While it may be true that technology can detract from elements of Wilderness character, it may be a powerful tool for managers and stewards if used properly and creatively.

"New media" can be a powerful tool in shaping our perceptions, developing appreciation of Wilderness, and promoting effective Wilderness management. Using examples from over 6 years of successful projects, conservationist Adam Andis and filmmaker Ben Hamilton explored how new media can be used in conjunction with traditional media to engage and educate Wilderness users. The presentation explored, in depth, the lessons learned from producing *The Meaning of Wild*, an inspirational documentary film celebrating the 50th Anniversary of the Wilderness Act made in partnership with the Tongass National Forest.

The first portion of the presentation focused on creating effective media that is concise, compelling and current. The second portion focused on developing, funding, marketing, and managing a successful digital media campaign.

A Mosaic of Wilderness Storytelling

Debbie Lee, *Selway-Bitterroot Frank Church Foundation*

ISSUE. The human need for Wilderness is paralleled only by the need for stories. This presentation featured stories from the 1800s to present and come from the Selway-Bitterroot and Frank Church Wilderness complex. I explored different mediums of storytelling, including poems, oral histories, videos, blogs, travelogues, tapestries, and diaries, and examined how each is powerful in “creating” Wilderness as well as communicating its value.

METHOD. The Selway-Bitterroot Wilderness of Idaho and Montana, at 1.3 million acres, was part of the original land to be preserved under the 1964 Act. It is joined to the Frank Church River of No Return and the Gospel Hump to form the largest Wilderness complex outside of Alaska. Because the land that makes up these Wildernesses is rugged, steep, with poor soil and mostly devoid of minerals (the geology is Idaho Batholith), the human imprint on the land has been minimal. Still, humans have always used the land. The land was originally home to the Nez Perce and Salish Indians, and then a steady stream of explorers, fur traders, trappers, miners, homesteaders, hunters, and finally, in 1905, employees of the Forest Service, after which followed scientists and recreationalists.

As with the human presence in most Wildernesses, after the 1964 Act, managers began removing human structures, artifacts, and most signs of human impact. This process has made the human story of Wilderness invisible and also disposable, not just in the Wilderness itself, but in the archival record that survives.

In 2010, I received an NEH grant to preserve the human history of the Selway-Bitterroot Wilderness. I was joined by Dennis Baird of the University of Idaho. We recovered an extensive archival record, the first sustained effort in the country to preserve the paper, photo, and oral history of a single Wilderness area. We traveled far and wide to retrieve photos, diaries, Forest Service policy memos and letters, and handwritten personal reminiscences, which we deposited in a special Wilderness Archive at the University of Idaho. We also conducted and transcribed over fifty oral histories of people who had worked and lived in the Wilderness. In order to make the products of the grant available, we created a website to exhibit a fraction of our document and photo collection, and a series of podcasts from the oral history.

RESULTS. My presentation displayed the different forms of Wilderness storytelling we collected, with a focus on oral histories. I played several of these and discussed how they illuminate the significance of this particular Wilderness complex, and I explained applications to other wildlands.

CONCLUSION. However “untrammled” Wilderness landscapes appear to be, they are, in fact, trammled in fascinating narrative ways. Wilderness stories are told through a variety of mediums, each with unique impacts on the general public. However, oral history holds a special ability to preserve a sense of time and place, and sound is one of the fullest ways to transform real spaces into imaginary ones. Oral stories are vital to helping people understand the interconnectedness between cultural and natural Wilderness environments.

Gather Them Around Your Campfire: Find Your Voice, Share Your Adventures, Inspire Their Passion

Rick Potts, *Wildland Conservation & Outdoor Recreation Services, LLC*

I vividly recall the great international Wilderness icon Ian Player standing in front of our gathered group of Wilderness managers at the 8th World Wilderness Congress in 2005. It's not enough to do good work and talk about it only amongst our fellow Wilderness professionals, for the job of long-term Wilderness protection is too large and, alone, we are too few. Our job, our challenge from Dr. Player, is to convene a gathering around our campfires, and tell our stories. The Zulu people he works with in South Africa to protect Wilderness areas and wildlife call this “Ubuntu”- a “Great Gathering” of people from many walks of life coming together for the purpose of increased understanding and reconciliation. That day, Ian Player lit a fire in many of us who were in the room with his admonition: “Find your voices, tell your stories, share your passion!”

But telling stories requires that we speak from the heart, and many of us trained as scientists find that exceedingly difficult to do. We have been taught to think logically, analytically, objectively, leading with the left brain. This is proper and necessary for conducting research, where feelings have no place and only data matters. But it is woefully ineffective when it comes to inspiring others to care. Left brain recitation of a scholarly paper at a conference of like-minded colleagues is an efficient mechanism for delivering information and imparting knowledge. It is like distributing sheet music to the symphony orchestra. The orchestra members read the music, and they understand. But how effective would they be if they couldn't translate those notes from left brain to right brain, and deliver them to the audience as beautiful sounds? Wilderness is beautiful

music to those who have learned to “read” it, but to most people the sheets of music are unintelligible, and their passions are not stirred.

After listening to Ian Player, I reread Aldo Leopold’s “A Sand County Almanac”; and realized (belatedly) that Leopold had figured this out long ago. Here was one of the most eminent ecologists of all time, highly trained and well published, a well- respected professor who could easily have sought the sanctuary of the ivory tower and avoided the “touchy-feely” business of communicating to the masses. But Leopold recognized that the business of saving Wilderness, like saving wildlife, was far too big a job to be left to the few professionals laboring in the scientific fields. Bob Marshall called Leopold the “Commanding General of the Wilderness Movement”, and this I believe was in large part due to his ability and willingness to turn left brain data into right brain stories, and speak from the heart.

We, at this conference, have experienced the music of Wilderness. It’s up to us to carry on the work of translating the mysteries of Wilderness to inspire others to join us in the never-ending quest to protect these special places. Gather them around your campfire, tell your stories.

Re-creation in Recreation: The Value of Stories in the Wilderness Experience

Jesse Engebretson, *Oregon State University*

Dr. Troy E. Hall, *Oregon State University*

According to the Wilderness Act, Wildernesses may contain “other features of scientific, educational, scenic, or historical value.” Wilderness areas are filled with human stories. These stories can be physically embedded in the landscape, such as a pit house in the Frank Church – River of No Return Wilderness or a Civilian Conservation Corps structure in the Saguaro Wilderness. Alternatively, stories can exist in the popular imagination about historical human use and travel in Wilderness areas. In the years preceding the passage of the Wilderness Act, authors represented their personal Wilderness experiences in the form of recreational narratives in *The Living Wilderness*, *The Wilderness Society’s* famous periodical. These diverse narratives had many disparate themes while consistently focusing on the value of America’s dwindling Wilderness resource. One such theme, and the central focus of this presentation, is how these authors represented and attributed value to the imagined human history of the landscape in their narrative representations of Wilderness recreational experiences. Utilizing a qualitative content analysis approach, we showed that stories Wilderness recreationists constructed about the Wilderness landscape, and subsequently represented in *The Living Wilderness*, routinely evoked images of Wilderness places rich with human history and use. From purportedly spending the night at the same campsite as voyageurs in the Boundary Waters, to travelling via the same routes of Native Americans, to seeing the same Olympic Peninsula as Juan de Fuca, the Wilderness was often represented as a place in which recreationists found value in their own performance and embodiment of practices of their historical brethren. Given this, it is evident that the past historical use of Wilderness areas was a salient value of Wilderness for recreationists, as represented by *The Wilderness Society* in *The Living Wilderness*. Managers today must consider if and how they should manage for the historical value of stories for the contemporary Wilderness user. In other words, if stories of historical human use add value to the “other features” quality of Wilderness character, how active a role should the four agencies play in conveying the storied human history of these Wilderness landscapes? Further, what are the implications on the American concept of Wilderness itself if these stories play a more central role in Wilderness management?

Mappers, Rangers, and Forest Fighters: Buffalo Soldiers and the American Wilderness

Trooper Hardrick Crawford, Jr., *9th & 10th (Horse) Cavalry & Howard University*

Trooper Michael Theard, *Forest Service Project 9th & 10th (Horse) Cavalry Association*

Dr. Eleanor M. King, *Howard University*

The year 2014 marks the fiftieth anniversary of both the Wilderness Act and the Civil Rights Act, two very different milestones in American history. Their juxtaposition is nonetheless particularly apt because of the critical early role the African American Buffalo Soldiers played in charting and preserving our national Wilderness. From the days of the Indian Wars through the creation of the first national parks, the Buffalo Soldiers served loyally, bravely, and far away from America’s populated areas.

Following the last of the Indian Wars, Buffalo Soldiers assumed new duties in the West, including, prominently, patrolling and developing some of the first national parks before the National Park Service was created. The US Army was in charge of the Yosemite and Sequoia national parks from 1891 to 1913. They used troops stationed, during the winter, at Presidio San Francisco to patrol the parks in the summer. Their duties ranged

from suppressing poaching and illegal cattle grazing to putting out forest fires. They also worked on infrastructure, in particular road and trail building. Some of the earliest of these rangers were Buffalo Soldiers of the 9th Cavalry and 24th Infantry. In Sequoia, in 1903, under the command of one of the first African American officers to graduate from West Point, Captain Charles Young, they built more infrastructures in one summer than the three previous military commanders had been able to finish in three years. In Yosemite, in 1904, they are credited with building an arboretum with what some consider being the first marked nature trail in the US.

In 1910 Buffalo Soldiers toiled what is now known as the Big Burn, arguably the greatest forest fire in the nation's history. In 1905 President Theodore Roosevelt made pioneering forester Gifford Pinchot head of the newly created National Forest Service. However, Pinchot was fired by Roosevelt's successor, President William Howard Taft, leaving behind a few handpicked, well meaning but green forest rangers. In 1910, they were ill prepared for the monstrous conflagration that spread from Idaho through Montana and Washington to British Columbia. As the fire grew, elements of the 25th Infantry, stationed at nearby forts, were called into service. When the Bitterroot Range blew, threatening nearby Avery, Idaho, Buffalo Soldier Infantrymen risked their lives to save the women and children, evacuating them by train. Although they received little recognition for their efforts, their example and the lessons learned from the Big Burn helped to change the mindset of fire fighting, reframing it as a true war against fire.

Serving as mappers, rangers, and firefighters, Buffalo Soldiers helped establish both the parameters and the possibilities of the American Wilderness. This presentation focused on their enduring contributions to our shared national story.

Marine Wilderness: A New Baseline for Marine Conservation

Julie Anton Randall, *WILD Foundation*

Marine Wilderness is the concept of keeping marine environments in a wild state and restoring the structure and function of marine ecosystems under management plans designed to value Wilderness character and benefits. Applying 50 years worth of terrestrial Wilderness conservation ethics to oceans and freshwater areas – Wilderness which know no boundaries – can demonstrate global citizenship in a powerful new way. Today the thousands of marine protected areas (MPAs) vary widely by function and effectiveness, and fishing controls are not applicable ecosystem-wide. Applying a common vision of marine Wilderness to is a break-through means of forging stakeholder consensus and educating policy-makers and general public alike in what nature needs under human pressure.

At the 9th World Wilderness Congress (WILD9) in 2009, a marine Wilderness definition and management objectives generated by The WILD Foundation and US Fish & Wildlife Service served as a starting place for a *Conserving Marine Wilderness* (CMW) consensus vision ultimately adopted by the North American Committee on Cooperation for Wilderness and Protected Areas Conservation (NAWPA Committee). NAWPA is composed of the heads of six government agencies that oversee Wilderness and protected areas in Canada, the United States, and Mexico, and formed under a *Memorandum of Understanding* (MOU) signed at WILD9.

Wilderness values explained in the vision are analogous to terrestrial Wilderness, with certain exceptions – allowing for recreation, cultural, and artisanal livelihoods in some cases. MW applies to ecological features of oceans, coral reefs, sea grass meadows, kelp forests, inter-tidal zones, estuaries, glaciers and land-fast ice edges, lakes, rivers, and streams, and other waters.

At WILD10 in 2013, 20 sites were selected where the CMV could be applied to protect and restore MW in partnership with local people and with the commitment of stakeholders aligned by the common vision. Professional photographers and filmmakers joined the new project called the Marine Wilderness 10+10 and provide compelling visual imagery used in communications to bring to life for people what lies beneath the surface in a collaborate effort to change the baseline from impaired to thriving marine environments.

The *Marine Wilderness 10+10 Project* will make MW an effective conservation tool by making an irrefutable case for its protection and restoration economically, biologically, and socially –repairing and sustaining the food web and interconnections between species; providing habitat critical to reproduction; counteracting socio-economic impacts of the crash of fisheries and stripping local communities of their livelihoods; halting the permanent loss of species culturally important to many Indigenous People and livelihoods for coastal communities, including protein sources, medicinal cures, and other beneficial marine products; ensuring recreational opportunities in MW, including rewarding physical challenges and chance for spiritual renewal and solitude; offering a natural laboratory for studying climate change effects; valuing ecosystem services and the cost to restore or replace them. The 20 sites will evolve as a “sisterhood,” supporting each other on an international scale both technically and morally, and acting together to bring the project as a whole to bear upon existing and arising threats to any one site.

Including the Oceans as Wilderness

Robin Kundis Craig, *University of Utah*

Since at least the Pew Oceans Commission May 2003 report, *America's Living Oceans*, and the U.S. Commission on Ocean Policy's July 2004 report, *An Ocean Blueprint for the 21st Century*, it has been clear that the United States needs to revise its governance structure for the oceans to incorporate ecosystem-based management, better protections for marine biodiversity and habitat, and some form of marine spatial planning, including the increased use of marine protected areas and marine reserves. President Obama's June 2010 Ocean Stewardship Executive Order, which created the National Ocean Council and mandated marine spatial planning, was a step in the right direction, and eight regional coalitions are now beginning to pursue more comprehensive protections of and planning for the United States' ocean resources. Federal marine Wilderness designations are becoming, and should increasingly become, part of this new approach to ocean and coastal governance.

Marine Wilderness is not a new idea. In 1976, for example, Congress indicated that the Drake's Estero area of the Point Reyes National Seashore in northern California should be designated as marine Wilderness. Nevertheless, marine Wilderness designations have been slow in coming. Drake's Estero, for example, was held up for almost 40 years by an oyster farming lease. However, in late November 2012, Secretary of the Interior Ken Salazar refused to extend the oyster farming permit in order to facilitate the marine Wilderness designation, and the U.S. Court of Appeals for the Ninth Circuit confirmed this decision in September 2013. Drake's Estero is now a marine Wilderness.

Other, and often vast, stretches of biologically important areas of the ocean are unused or lightly used by humans, making them plausibly eligible for "Wilderness" status. Of course, there are other federal designations available for protecting the oceans. However, National Marine Sanctuaries are, by definition, multiple-use areas of the ocean. When Congress and the National Oceanic and Atmospheric Administration ("NOAA") have wanted to create true marine reserves within National Marine Sanctuaries—such as the Dry Tortugas areas within the Florida Keys National Marine Sanctuary—the process of excluding fishing and recreation interests has been long and contentious. The President can also establish Marine National Monuments through the Antiquities Act of 1906; again, however, Marine National Monument designation does not preclude continued human use and extraction of marine resources. Notably, the most protective Marine National Monuments, such as the Papah-naumoku-kea Marine National Monument in the Northwestern Hawaiian Islands (2006) and the Marianas Trench Marine National Monument (2009) in the Mariana Archipelago, promote fairly remote locations.

Wilderness Act designations of marine Wilderness, in contrast, legally recognize the importance of the natural characteristics of ocean areas and ecosystems and create by design an expectation of non-extractive use and minimal human intrusion. Marine Wilderness designations in effect celebrate the wildness of the oceans in creating marine reserves, rather than emphasizing the reduction in human use of the oceans, as other types of marine reserve designations (both federal and state) tend to do.

Ocean Wilderness: Benefits and Challenges

Nancy Roeper, *US Fish and Wildlife Service*

Molly McCarter, *former US Fish and Wildlife Service Wilderness Fellow*

Nothing in the Wilderness Act would preclude the designation of ocean Wilderness, and certain submerged lands in the national Wildlife Refuge System would qualify for such designation. The National Wildlife Refuge System contains about 54 million acres of submerged lands in four Marine National Monuments. Partial Wilderness reviews have been conducted for several refuges containing submerged lands and waters. These reviews followed Refuge System policy, which derives from the Wilderness Act. Lands and waters within refuge boundaries were inventoried for size, naturalness, opportunities for solitude or an unconfined type of recreation, and supplemental values. Areas that met the criteria were identified as Wilderness Study Areas (WSAs). These WSAs were then further analyzed for all values (e.g., ecological, recreational, cultural, economic, symbolic), resources (e.g., wildlife, water, vegetation, minerals, soils), public uses, and refuge management activities within the area. The analysis includes an evaluation of whether the areas can effectively be managed to preserve Wilderness character. The benefits and impacts of managing the areas as Wilderness as opposed to managing the areas under an alternate set of goals, objectives, and strategies that do not involve Wilderness designation were identified.

These reviews of several refuges resulted in the administrative establishment of eight Wilderness Study Areas. Completion of the Wilderness review process and development of a Legislative Environmental Impact Statement will be pursued. In the interim the WSAs are being managed to not detract from the Wilderness values identified in the Wilderness Inventory. Although these submerged lands and waters are protected to a large degree from incompatible uses by their refuge status, Wilderness designation could enhance their conservation. Wilderness designation confers statutory protection that could only be changed by an act of Congress. This would provide more permanent protection than an administrative management category prescribed in a comprehensive conservation plan. Wilderness designation would also require that administrative activities be the minimum requirement, thereby minimizing unintended consequences of overly manipulative management, but also present challenges relating to both administrative and public access, and appropriate recreational and other uses. These and other challenges contribute to the reluctance of some Wilderness advocates to accept the appropriateness of Wilderness designation for wild ocean.

What We Think It Is: A Survey Approach to Identifying and Managing Ocean Wilderness

Bradley W. Barr, *University of Alaska, Fairbanks*

“Wilderness” is identified and defined, in large part, as places perceived by people as possessing characteristic qualities and attributes such as remoteness, providing opportunities for solitude, and where the influence of man is not readily apparent. It has been suggested that “Wilderness is what people think it is.” Broadly held perceptions of places on the land as “Wilderness” have evolved over the 50 years since the passage of the Wilderness Act in 1964, and are used to help identify and designate Wilderness to be included in the National Wilderness Preservation System (NWPS). However, emerging interest in expanding Wilderness designations to include more places in ocean and coastal waters has been limited by the lack of a similar, more broadly accepted understanding of how such areas are perceived. Responding to this need, a survey was conducted in 2011, targeted at protected areas scientists and managers, to provide some insight into the spatial and cognitive dimensions of ocean Wilderness. This survey was part of a larger initiative to identify and describe how international Wilderness law and policy addresses and characterizes ocean Wilderness, as well as what, and how much, ocean Wilderness has already been formally designated and included in the NWPS. The overarching goal of this initiative was to guide and inform Wilderness management agencies in identifying and designating “Wilderness waters.” The survey results offer insights into values, qualities, and attributes attributed to places in ocean and coastal waters we believe to be “Wilderness.” The survey found that certain places in ocean and coastal waters are generally perceived as Wilderness, and that the spatial dimensions of this Wilderness included all place-specific components from the seabed to the overlying airspace. The primary elements of the perception of these places as Wilderness included opportunities to preserve biodiversity and solitude, numbers of human-made structures and people using the area, and the amount of noise and boat traffic encountered when visiting the area. These are largely elements similar to how terrestrial Wilderness is often characterized. Appropriate human uses of these waters also tracked with those similar to terrestrial Wilderness, including recreational activities involving non-motorized access; commercial activities were considered inconsistent with and contrary to preserving the area as Wilderness. Another element of the survey focused on reviewing fifteen images for their perceived Wilderness quality. The results suggest that images including land or islands, particularly coastal areas identified as designated Wilderness, were more often perceived as having “high ocean Wilderness quality.” The principal conclusions of the study were that the survey respondents perceived ocean Wilderness quite similarly to how we perceive land-based Wilderness, that waters adjacent to designated Wilderness should be prioritized for evaluation in future Wilderness suitability evaluations, and that, given that the larger study identified more than 100,000 acres of designated ocean Wilderness already included in the NWPS, the US Wilderness Act is an appropriate authority to formally designate these Wilderness waters in the future.

History Track Summary

From the Neolithic to the Anthropocene: A Short History and Speculative Future of Wilderness as a Human-Earth Relationship

HISTORY TRACK COMMITTEE

Roger Kaye, *US Fish and Wildlife Service, Chair*

Eugene Persha, *US Forest Service, retired, Chair*

Debra Mucklow, *US Forest Service*

Kevin Proescholdt, *Wilderness Watch*

Forty diverse Wilderness 50th history track presentations recalled, revised, interpreted, and celebrated our past. They told stories of our Wilderness ancestors, their ideas and ideals, their hopes and concerns for the future, and their strategies, campaigns, and victories. Presentations ranged widely – in place, they described designation efforts and stewardship issues from East to West and from Arctic Alaska to the Grand Canyon. In time, they traversed Max Oelschlaeger’s “deep, deep past” through Romanticism, Transcendentalism, the emergence of a Wilderness movement, then, in 1964, to the enshrinement of its values in federal law. Much was said about the last 50 years – about “Troubling Trends and Inspiring Visions” as one panel was titled, describing how both the Wilderness system and threats to it have grown. And much was also said about the next 50 years, and beyond to David Bengston’s scenario for a distant, perhaps scary, transformational future.

Several presentations challenged us to imagine the future of Wilderness and wildness in the Anthropocene, the era wherein humankind is becoming a major force transforming the Earth and Earth systems. They reminded us that while the broad social and environmental changes, and the actors and actions that led to today’s Wilderness are fascinating in themselves, we should remember that the real significance of history lies not in knowing about or appreciating what came before. More importantly, we draw upon the past to understand the present and to guide the future. So appropriately, one theme that resonated through the history sessions was that the Wilderness concept is not static. It evolved, is evolving, and will continue to evolve to respond to changing human needs in a rapidly changing world.

We heard how the early Wilderness proponents espoused the need for Wilderness as source of recreational, aesthetic, inspirational, heritage, and scientific values, and more recently, ecosystem services. And we were reminded of the spiritual grounding of the movement to preserve Wilderness, how its early leaders believed Wilderness might serve the human longing for connection to, relationship with, and sense of place within the larger world. In *The Need for Wilderness Areas*, a canonical article that became part of the Congressional Record, Wilderness Act author Howard Zahniser emphasized the Leopoldian idea of a human-Earth ethic based on our membership in the community of life. A scholar and skilled synthesizer, Zahniser (1956) drew upon the early nature writers and the pioneering conservationists and ecologists of his time to conclude that “THE MOST PROFOUND of all Wilderness values in our modern world is an educational value” (emphasis his). Zahniser’s point was that Wilderness is “essential to a true understanding of ourselves, our culture, our own natures, and our place in all nature.”

Herein we examine this bold assertion. We will consider the ideas that became incorporated into the movement to preserve Wilderness and why, as historian Roderick Nash (1982) documents, it became “an important symbol of a revolutionary new way of thinking about man’s relationship to the earth.” We will then consider how Wilderness might serve in the next century of the Anthropocene as nature, our nature, and our place in nature continue to evolve, perhaps far beyond our current imaginings.

We begin with the roots of the Wilderness concept. They reach deep into pre-history, to the nomadic hunters-gathers turned pastoralists of the Neolithic Revolution. Initially, the notion of Wilderness developed to differentiate between lands humans had begun manipulating through agriculture and those areas not subjected to human alteration, control, or domestication. In this place, they reasoned, our relationship to land and life is one of domination; they are subject to our will. But over in that wild area, they remain outside of our control; they are self-willed. (*Wil*, we should remember, is the root word of wild, the root word of Wilderness).

Thus, as they embarked on the Neolithic project of modifying and manipulating their environment, these distant ancestors unknowingly set us on the path to the Anthropocene. They set in motion forces that would fundamentally alter the entire Earth, and *Homo sapiens*’ relationship to it. A new sense that humanity and nature were separate arose. Reinforcing that dualism was the rise of Abrahamic religions with their premise that

divine will (a projection of human will) was for humans to fill the Earth, to take dominion over it and subdue it. The notion of humans as the purpose and pinnacle of creation reshaped our identity and came to dominate our relationship with the planet and all its inhabitants.

Next, let us briefly summarize conceptual developments that influenced the evolution of the Wilderness concept, developments that offer understandings of, as Zahniser said, nature, our nature, and our place in nature.

The Bible, with its 280 references to Wilderness, documents the early and varied perceptions of the human relationship to Wilderness. Many of its Hebrew and Greek words later translated as *Wilderness* refer to areas of desolation, danger, and fright. But the early Wilderness writers were influenced more by Biblical accounts such as the Exodus and the quests of Moses, Elijah, and Jesus. They established Wilderness as a place of escape from a suppressive society and a place of deliverance, renewal, and transformation. Prophets found the physical and psychological separation from repressive societal influences that Wilderness provided to be conducive to new insights. In monastic traditions, Wilderness became a place of solitude, introspection, and enlightenment wherein one could connect to the ultimate – whether conceived of as a personified God, pantheistic gods, animistic spirits, or nature.

Eighteenth-century Romanticism, a European import, drew upon such positive functions of Wilderness, the scientific rationalism of the Enlightenment, and a growing reaction to effects of the Industrial Revolution to establish a new appreciation for wild country. Romanticism extolled the aesthetic and psychological values of unaltered nature. In particular, wild places with monumental features and expansive vistas were characterized as sublime. Approached with receptivity, they could evoke awe and wonder, instill humility, provide therapeutic benefits, and inspire spiritual experience. Romanticism spawned a new literary genre that also introduced what we now call an ecological perspective – a holistic view that both emphasized human interdependence with the natural world and decried growing human alienation from it.

Transcendentalism expanded, popularized, and Americanized Romantic ideas about wildlands and furthered the ecological interpretation of the human-nature relationship. Its most influential spokesman was Henry David Thoreau. He described how wild nature, in providing physical and psychological distance from society's norms and pressures for conformity, enabled one to “cast off the baggage of civilization,” and come to the humbling recognition that he or she is “an inhabitant, or a part and parcel of nature” (1906). Wilderness was not only a source of cathartic, inspiring, and spiritual experiences, but a setting conducive to reflection upon one's place in time and role in the larger world. Thomas Cole (1836), the first major American landscape artist, extolled the scenic qualities of natural areas, but emphasized that their most distinctive characteristic is wildness, within which “the mind is cast into the contemplation of eternal things.”

After Thoreau, John Muir was the next generation's prolific publicizer of the emerging Wilderness idea. Muir was greatly influenced by Darwinian Theory, and its humbling implication of human relatedness to all life. “Why should man value himself as more than a small part of the one great unit of creation?” he asked.

Clearing Storm, Pemigewasset Wilderness, New Hampshire
By Harry Lichtman, www.harrylichtman.com



Muir's writings connected the Wilderness idea to the notion that modern civilization had distorted human's sense of place within the Earth community and beyond. "The universe would be incomplete without man," he wrote, "but it would also be incomplete without the smallest transmicroscopic creature that dwells beyond our conceitful eyes and knowledge" (1918). Muir's statement of human significance and pretentiousness reflects two important developments influencing the emerging Wilderness ethic. First, the insights of Darwinian evolution were increasingly influential in interpreting humankind's relationship to and appropriate behavior toward other species. Second, the insights of Copernican astronomy were expanding thinking beyond man's place in his immediate environment, to the entire planet, and beyond to the cosmos.

Romanticism and Transcendentalism provoked a new political movement in the 1920s: Wilderness preservation. Thus, the movement leading toward the Wilderness Act emerged from a set of beliefs that can be summarized as 1) the humbling notion of humans as interdependent members of a community of life, neither apart from nor above the rest of creation; 2) the idea that the natural world and all its inhabitants have intrinsic value, independent of human uses; 3) the idea that experiences in wild nature are conducive to transcending social conventions and expanding one's thinking about humans' role in the larger scheme of things; and 4) an emerging evolutionary-ecological-cosmological worldview.

Many of the Wilderness movement's early leaders were scientists who melded these philosophical/spiritual notions about humans' place in nature with advancing ecological and evolutionary insights. Transcendental ideas were being interpreted in the context of accelerating social, technological, and environmental changes. There was growing concern over the increasing loss of natural areas to urban, industrial, and resource extractive uses. Threats such as pollution and pesticides and, in the mid 1940s, the awesome power and fallout of the Bomb gave new urgency to the movement. Leaders were concerned with protecting a range of tangible qualities: wildlife, ecology, scenery, and recreational opportunities. They were concerned with growing alienation from the natural world. And they were becoming concerned with "the real problem," as Olaus Murie (1960 A) characterized it, "of what the human species is to do with this earth"

Among the most influential early Wilderness movement leaders was Robert Marshall. Marshall was a plant physiologist and forester, but his most significant contributions to Wilderness thinking resulted from his use of the emerging science of psychology to understand the mental and character-enhancing benefits associated with experiences in wild nature.

Marshall drew upon Freudian theory to promote the transcendental idea that the norms and roles that modern society imposed repressed innate human urges and desires. Adventure and challenge, physical and intellectual, were among them. Another was to think outside the dominant paradigm. "One of the greatest advantages of the Wilderness" he wrote, "is its incentive to independent cognition" (1930).

Marshall also extolled the aesthetic, recreational, and restorative values of Wilderness. But toward the end of his life he concluded that "they are blended with the dominant value of being part of an immensity so great that the human being who looks upon it vanishes into utter insignificance" (1954). Humility, Marshall came to believe, was the initial experience that opens one to the implicit message of Wilderness—that humankind remains embedded within an entity greater, more universal, and more lasting than modern society, with its inventions and conventions. He believed that in experiencing a landscape "with its entire freedom from the manifestations of human will," people could discover their relatedness to the world outside themselves, and in doing so, might recover something of what civilization had diminished within themselves.

Aldo Leopold was a scientist-philosopher whose persuasive arguments for Wilderness, according to Nash, (1982) "quickly became gospel among preservationists." He is best known for his "Land Ethic" that argued for the extension of ethics to the natural world. Ecological and evolutionary biology led to his belief that the appropriate human role in nature should not be as "conqueror of the land-community," but rather as a "plain member and citizen of it." Leopold's influential writings linked Wilderness with the concept of the Earth's "community of life." This evocative, often cited phrase connected humans to all life forms, soils, waters, and importantly, wildness: "the natural processes by which the land and the living things upon it have achieved their characteristic forms . . ."

Summarizing humans' place in nature, Leopold said that "men are only fellow-voyagers with other creatures in the odyssey of evolution" (Leopold 1949). Reflecting the reactionary aspect of the Wilderness concept, he declared that the Wilderness movement was "a disclaimer of the biotic arrogance of *Homo americanus*. It is one of the focal points of a new attitude – an intelligent humility toward man's place in nature" (Leopold 1935).

Though a biologist by training, Sigurd Olson's main contribution was promotion of the psychological, and particularly spiritual, benefits of the Wilderness experience. As a Wilderness guide, Olson had seen the restorative effects of immersion in wild country. In the parlance of Muir, he wrote of an innate human impulse to experience the wild. "Because man's subconscious is steeped in the primitive," he wrote, "looking to the Wil-

derness means coming home to him.” Olson’s writings brought to a wider audience the belief that Wilderness provides the distance necessary to see one’s life from a larger perspective: “the order and reason that governs [human] existence, the movement of the galaxies, as well as the minutest divisions of matter” (Olson 1966).

Olaus Murie was an acclaimed wildlife biologist who left fieldwork in 1945 to become director of the Wilderness Society. With Howard Zahniser, Murie led to victory the hard-fought campaign to enact the Wilderness Act. His wife Mardy, often his partner on the trail, was always with him in promoting the tangible and intangible values of Wilderness. The couple brought to the Wilderness movement a perspective Olaus described as “human ecology...the importance of nature by which we live—not only physically, but esthetically and spiritually” (1961). Evolution, his scientific story of creation, was the basis of a spirituality that connected all species to a common past and placed humanity within the timeless continuity of natural processes.

The Muries’ writings did much to establish Wilderness as a symbolic landscape, a point of reference for questioning the assumptions of an increasingly utilitarian, materialistic, and technological society. As “a place to contemplate and try to understand our place in the world,” Wilderness was, Olaus said, part of an effort “to try to improve our culture.” It was an antidote to “the confused state of mankind’s mind in this atomic age” (O. Murie 1959). The Muries’ writings helped extend the well-established Wilderness literary practice of disparaging technological trends of modern civilization toward the growing concern of nuclear Armageddon.

For the Muries, the Wilderness movement was part of a larger effort to expand thinking about conservation and to reorient it toward the new order of threat. In doing so, it might help establish a much needed legacy of humility and restraint that would serve beyond Wilderness boundaries. “This idealism, more than anything else,” Olaus would testify at a Senate hearing, “will set us apart as a nation striving for something worthwhile in the universe” (O. Murie 1960 B). Mardy was no less effective in contributing to the Wilderness movement’s idealism and Earth-scale focus. As she told readers

This attitude of consideration and reverence is an integral part of an attitude toward life, toward the unspoiled, still evocative places on our planet. If man does not destroy himself through his idolatry of the machine, he may learn one day to step lightly on his earth (M. Murie 1957).

Howard Zahniser, was chief author and lead lobbyist for the Wilderness Act. His orientation toward Wilderness, according to his son Edward, was grounded in a spirituality represented by his focus on “the wildness of the universe, of which we ourselves are a part” (Zahniser 1956). The eloquent definition he placed in the Act reads: “A Wilderness, in *contrast* with those areas where man and his works dominate the landscape, is hereby recognized as an area where the earth and its community of life are *untrammelled* by man...” (emphasis added). The Act’s key word, *untrammelled*, Zahniser said, refers to an area “not being subjected to human controls and manipulations that hamper the free play of natural forces...” (Zahniser 1959)

To Zahniser, the greatest value of this condition of ecological and evolutionary freedom, of wildness, was in that contrast it provides. Physically, Wilderness provides a contrast to areas that are altered and manipulated. Of greater concern was the contrast Wilderness provided between two ways of relating to – and knowing ourselves in relation to – the natural world. One way of relating to nature, as a conquering, dominating species, Zahniser said, led people to become “less and less aware of their dependence on other forms of life and more and more misled into a sense of self-sufficiency and into disregard of their interdependence with the other forms of life...”

In contrast was a way of relating grounded in “an awareness of our human existence as spiritual creatures nurtured and sustained by and from the great community of life.” It led one “to sense and see his own humble, dependent relationship to all life.” Thus in a seminal summary statement reflecting the spiritual origin of the Wilderness movement and its potential to enlarge thinking about humans’ role in the larger scheme of things, Zahniser declared that

We deeply need the humility to know ourselves as the dependent members of a great community of life...Without the gadgets, the inventions, the contrivances whereby men have seemed to establish among themselves an independence of nature, without these distractions, to know the Wilderness is to know a profound humility, to recognize one’s littleness, to sense dependence and interdependence, indebtedness and responsibility.

Clearly, Zahniser did not intend this potential for expanded awareness to be a secondary purpose of Wilderness. As he went on to emphasize, “Perhaps, indeed, this is the *distinctive* ministration of Wilderness to modern man, the characteristic effect of an area which we most deeply need to provide for in our preservation programs” (1956).

Zahniser's emphasis on *ministration*, meaning to minister to, to serve one's spiritual needs, reflects how the Wilderness movement leaders had integrated philosophical/spiritual values and ecological thinking into a coherent Wilderness philosophy. But in the mid-1950s, as the movement transitioned to contentious political advocacy for placing the Wilderness concept in legislation, focus on the deeper values Zahniser and others had emphasized began to recede in comparison to the more defensible tangible, pragmatic, and secular benefits Wilderness could provide. This political necessity established a trend that continues today. Rightfully, we recognize the important role of Wilderness in providing recreational opportunities and protecting some of the endangered species, biodiversity, and ecological integrity of this increasingly threatened planet. But might those underlying deeper values of Wilderness that Zahniser and others spoke to be of ever-greater importance to the future generations to whom we also pass on the underlying problem they warned of, that of the decreasing sustainability of human-Earth relations?

Let us now turn to those who will inhabit the next century of the Anthropocene. We can scarcely imagine the conditions of planetary civilization in the 2100s. But drawing upon current trends and prognostications of futurists, the following is how one of your distant descendants might describe his or her world and self:

The idea of nature as without human influence, having become anachronistic in the last century, is now a quixotic memory. Anthropogenic biomes are nearly everywhere. Many are the result of inadvertent human actions. Others are designer ecosystems, comprised of plant and animal assemblages of our choosing, or synthesized to yield needed ecosystem services. Through advances in geoengineering we alter solar radiation, atmospheric composition, ocean chemistry, and nutrient cycles. It wasn't so much because our ancestors thought it was a good idea; unable to restrain their impactful proclivities, they found interventions necessary to stay within sustainable planetary boundaries. Now, unintended consequences continually necessitate further manipulation of the Earth-system. But the planet, enveloped as it is in our will, is not the garden we'd wish. The rippling, globally-uneven effects of our interventions have decreased both the ecological and political stability of the new world order.

But our very different relationship to "nature" is but one factor in the epic change in *our nature*, our transhuman nature as some now call it. We are far removed from being Thoreau's "part and parcel of nature" or just one of Leopold's "fellow-voyagers with other creatures in the odyssey of evolution." Genetic engineering now supplements the chance processes of wild nature that had selected our genes. Rising above the process of our origins, our will increasingly directs our evolution. Biomedical engineering and cybernetic implants have changed our bodies. Neural engineering and brain-computer interface technologies have changed our minds. Augmented and virtual reality systems have changed our perception of reality. The bio-Luddites protested our advancing ascension from nature, but not wanting to be left behind, they got over it and joined the inevitable march of progress.

So finally, let us return to the question: How might Wilderness – both as a place left self-willed and as a concept – serve these descendants in this next century of the Anthropocene? What ideas and meanings embodied in these remnants of wildness might our progeny draw upon as they reflect on their nature and make their way in such a non-analogue world?

As Leopold (1949) had espoused, Wilderness can serve the future as a baseline for understanding how ecosystems function and transform when left alone, and how they respond to anthropogenic change. It can provide the contrast needed for assessing change and the effectiveness of interventions implemented elsewhere.

So too, Wilderness areas, left wild, can serve our descendants as a baselines for understanding their nature, and their role in the nature of their making. As places set apart from human willfulness and hubris, Wilderness areas can serve Zahniser's contrast value for understanding how these traits have distanced humanity from its sense of membership in the larger community of life. They can serve as reference points as humankind reshapes its world, and itself.

While Wilderness areas of this future will remain the landscapes least affected by human actions, global-scale stressors will have changed their composition and ecology. As all landscapes, they too will be hybridized products of human-nature-planetary coevolution. But if left free to adapt and evolve as they will, left free of human attempts to resist, remedy, or countervail such changes, their essential wildness will be perpetuated. And wildness, remember, refers to being self-willed, as opposed to human-willed. Thus, much more than a landscape condition, wildness is also a distinctive human-nature-world relationship. Since the time of Thoreau, Wilderness has been characterized as a relationship of respect for, and deference to, the evolutionary forces that formed and shaped – and connect – the human species, all life, and the universe.

Indeed, the chief motivation for those seeking the “Wilderness experience” in the 2100s may well lie in the rare opportunity it can provide for gaining an experiential glimpse, a feeling for what Olson (1966) described as that “sense of close relationship, belonging, and animal oneness with the earth.” While experiences in wild nature will have long ceased to be a factor in their evolution, those of the distant future may well value the chance for intimate association with the conditions that were central to their species ontogenetic developmental process. But providing for an atavistic, time-machine experience of the conditions of their origin as creatures of the wild wouldn’t be the most important function of Wilderness to those of the Anthropocene. That function will be found in Leopold’s (1949) often cited first precaution of intelligent tinkering: Save all the parts.

We know that when a language goes extinct, a unique way of knowing and relating to the world is also lost. As the one entity defined by its separation from human willfulness, Wilderness also embodies a formative way of knowing and relating to the world. Preserving Wilderness with its inherent message could help save this part of our genesis from being lost to the human experience.

We can well imagine that distant generations will be grateful for whatever remnant ecosystems and components their predecessors used Wilderness designation to save. But as humans tinker with the Earth-system, they are also, albeit less knowingly, tinkering with part of their humanity. As the Wilderness movement leaders warned, in its rush toward an ever higher standard of living, toward adopting technology wherever it leads, toward conversion and commodification of the globe, *Homo sapiens* is losing its sense of, as Zahniser (1956) said, “our human membership in the whole community of life on the Earth.” So perhaps we can also imagine why our descendants might be grateful to inherit areas whose function is also to embody and perpetuate such ideas about relating to the larger community.

Muir’s ideas of man as “a small part of the one great unit of creation” and respect for “the rights of all the rest of creation” (Muir 1918) may be difficult to fathom in an age when human prowess so dominates the planet – and, as Zahniser (1956) had said, “at the tragic expense of other life in this community.” But concepts are best understood in contrast to their antithesis, and the idea of the intrinsic value of self-willed lands and life will be most apprehensible to our descendants in the contrast they will be able to find in the sheer otherness of a place that, as Mardy Murie said, “is itself, for itself”

Since the transcendentalists, the Wilderness concept has perpetuated an alternative view of humans’ relationship to the world. If those of the distant future value Wilderness for the role it plays in perpetuating biodiversity, they may just as well value saving it as an anchor point for perpetuating the full diversity of ways the species has related to the world. Wilderness can be there as a reference point for those who might come to question the extreme anthropocentrism of their species. It can be there as a touchstone to that perhaps remnant part of themselves that can still feel reverence for something beyond their utility. As a stark contrast to artificialized and domesticated landscapes, Wilderness might move some to ask, as Mardy did, “Look, where are we going?” (M. Murie 1957)

If museums, memorials, and historic monuments continue to serve people as places to understand and connect to ways and values of their past that they don’t want to forget, in the 2100s we can expect Wilderness to serve a similar function. Today, the most recognized heritage value of Wilderness resides in the connection it provides to America’s frontier era. But in the distant tomorrow, that period of exploration and exploitation will be a short chapter in the more encompassing Wilderness narrative of the specie’s evolutionary history. As a living museum of wildness, Wilderness will be an archive of the process from which their species arose, and became what it is – at the moment. By the 2100s, of course, humans will have accepted the evolutionary reality that they are not human “beings,” nor have there ever been any beings, or any being in the universe. All is becoming. All is evolving, though on this planet, ever more rapidly.

Perhaps our descendants will find profound irony in the fact that the environmental transformations that had brought their species into the Anthropocene have returned it to the Paleolithic understanding that they are inseparably, inextricably part of a single nature, a nature evolving ever more synergistically with human will. As they move farther into the terra-incognita of an Earth increasingly permeated with their intentionality, perhaps they will also value Wilderness as a memorial to the self-willed world in which their evolutionary journey began.

And should the universal longing to connect to an ultimacy providing meaning outside and beyond themselves remain part of their humanity, perhaps they will also find Wilderness to serve as a cathedral of spirituality. It might function as a sort of geographical Sabbath, a reminder of why, across cultures and throughout time, great prophets and visionaries had gone to the wilds to penetrate the transcendent truth that the greater meaning of one’s life is only to be found in relation to the larger community.

All this is speculation, of course. Who knows, at some point humans may lose, or even decide not to retain that part of their genome that seeks connection to and relatedness with the larger world and its community of life.

But just maybe, should their predecessors not foreclose the option, Wilderness and its associations will be there to provide perspectives they consider in deciding what of their genome, culture, and world will be passed on to their children. Perhaps the worldview and ethic embodied in the Wilderness concept will influence how they adjust their ethics, as every generation of the Anthropocene will, to “the real problem,” as Olaus Murie (1960 A) characterized it, “of what the human species is to do with this earth.”

Looking back at establishment of the National Park System a century ago, it has become a cliché to describe it, as filmmaker Ken Burns did, as “America’s Best Idea.” The visionary, though ultimately unrealistic idea of perpetuating areas in their “natural” state, in perpetuity, has been a source of national pride and identity.

But looking to the next century, when parks are far from being the representations of “unimpaired” nature they were intended to be, the National Wilderness Preservation System will be recognized as an even better idea. Then, it will be ever more apparent that “the understandings which come in its surroundings,” as Zahniser said, “are those of true reality.” Perhaps that ultimate, encompassing, unifying reality will be the theme of the next century’s Wilderness Act anniversary, celebrating, as Zahniser (1956) and his compatriots would hope, “the wildness of the universe, of which we ourselves are a part.”

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Wilderness as a Cultural Force in American History

Brock Evans, *President Endangered Species Coalition*

This presentation postulated that the Wilderness *idea* – that is, a love for natural, wild, places and landscapes – is an innate feature of the American psyche, and has been such since before the foundation of the Republic. It is this psychological fact, so often emphasized in our art, literature and philosophical writings that led to its first political expression: the creation of our first National Park in the then-vast and remote Wilderness of the Yellowstone region (1872). The author showed, via an examination of early expressions of the beauty and value of the American Wilderness, that subsequent creation of even larger systems of protected wildlands – e.g., Parks Organic Act (1916), Wilderness Act (1964), Endangered Species Act (1973), and the Federal Lands Management and Policy Act (1976) – were not some strange anomalies of federal/state politics. Rather, they represented a natural organic maturing of a long and deep-rooted love for our land. Over two hundred million acres of Wilderness (and near-Wilderness) are protected by law at this time. The author believed that Wilderness advocates need not fear failure in future efforts to protect more; our history demonstrates that the movement has been very successful. How did all this come about, in a society considered by many as one of the most materialistic on earth? The author explained this seeming paradox by suggesting – based upon his participation in many Wilderness debates over the past fifty years – that there always have been two constant, if seemingly dichotomous, attitudes towards Wilderness and its protection as our country has evolved. One strain, heavily documented and obvious, is the material, expressed by a desire to exploit the natural world. This strain of our national life and outlook is very much with us today, articulated in nearly every battle with developers over land use, just as it was centuries ago, when the first European settlers sought to ‘tame’ the Wilderness. But that other strain – a love *for* nature, *for* wild places and wild animals – also has deep roots in our national psyche, stretching back to at least to the time of William Bartram, a botanist of the late 18th century. The author believed that since these two strains are each quite distinct, and fundamental, parts of our national “outlook” vis-à-vis wild nature, we as a people will be forever warring inside ourselves about what to do with a specific place. This means that there will always be political struggles whenever Wilderness protections are proposed. He further suggested that it was the sheer fact of our predecessors’ constant contact, sometimes conflict, with the American land, that has actually **transformed us as a people**. Over the previous centuries we have become no longer Europeans, Africans, or Asians, but something different: Americans, who had a higher regard for the Wilderness all around us. The result is that now we collectively tilt more and more towards the love of nature end of the political spectrum. In fact – as the loss of precious places becomes ever more apparent – the protection ‘side’ usually wins, whenever there is a specific political contest. The author concluded by expressing his belief that those who love nature and Wilderness should never despair. Our whole past history demonstrates that we can save the places we love, if we are willing to stand and fight for them.

Wild Security: Why the Wilderness Preservation Leaders Decided Statutory Protection is Essential

Doug Scott, *Wilderness Author and Historian*

THEME. Conservationists chose to make Congress the arbiter for Wilderness preservation with sole authority to choose areas and, most importantly, to set their boundaries in *statutory law*.

METHOD. Trace and explain the evolution of Wilderness preservation history and policy.

Aldo Leopold initiated protection of Wilderness areas in 1924. Forest Service leaders established some seventy others around the West with the leadership of Bob Marshall. But after Marshall’s death in 1939, this work all but stopped. Over the next 25 years *net* acres increased just two percent. Using its administrative discretion, the Forest Service slashed hundreds of thousands of acres of old-growth trees to log. To mask this, new Wilderness areas were established above timberline. Leopold called it “a paper gain and Wilderness loss.” Rather than limit use, the National Park Service fought to retain discretion to allow unlimited development.

This pattern of losing wild public land and ecological diversity was unacceptable for advocates. The only alternative was to turn the protection of these lands over to a stronger authority – *statutory* laws enacted by Congress.

Howard Zahniser and Dave Brower, of The Wilderness Society and Sierra Club, respectively, had to spend most of their time responding to this loss of national forest and national park system wild lands. Zahniser began thinking about a Wilderness law in 1947, developed the outline by 1951, discussed his ideas with a growing circle of leaders. His plans were diverted in 1955 by the need to defend Dinosaur National Monument from the proposed Echo Park Dam, a threat to the very idea Congress would stand behind decisions to protect any wild lands in perpetuity.

Zahniser foresaw that if they won the Echo Park Dam on grounds of its threat to the integrity of the entire National Park System and won, it would give them the perfect political springboard for the Wilderness law – and against all odds, they *did* win.

Leaders of the two agencies tried to stop the Wilderness bill; they did not want to yield their *administrative discretion*. President John F. Kennedy endorsed the bill which opened the way to success. Once the Wilderness Act became law on September 3, 1964, leaders of the two agencies used various excuses to oppose designation of new areas. Advocates and their congressional champions rallied Congress to overturn these anti-Wilderness policies. Congress continues to designate more Wilderness areas, fueled always by the enthusiasm of grassroots people to see places they love given this proven “gold standard” of protection – by statutory law. And that is why Congress will continue designating more Wilderness areas long into the future.

RESULTS AND CONCLUSIONS. Listeners gained an appreciation for the history of our Wilderness movement and why the roles of grassroots activism and of Congress are vital. This understanding is important for everyone – academics, advocates, agency personnel, stewards, and especially young people who are the hope for Wilderness forever.

Making Wilderness Work: The Essential Role of Frank Church in the American Wilderness Movement

Sara Dant, *Weber State University*

Idaho Senator Frank Church, who served from 1957 to 1981, is one of the most important and underappreciated participants in the history of the American Wilderness movement. Church had entered the U.S. Senate at a critical juncture, a time when the nation’s values began to shift decisively away from extraction and exploitation and toward environmental preservation. Church both shaped and was shaped by this national sentiment that increasingly counted a healthy environment as an integral part of the good life and a measure of a higher standard of living. The Senator also established a kind of symbiotic relationship with environmental organizations such as the Sierra Club: He needed their more radical positions to make him appear moderate in an increasingly conservative Idaho, while they needed him to craft the political compromises necessary to achieve environmental protection. In the end, however, Church did not embrace environmental concerns because they were fashionable, but because he genuinely believed they were right.

The essence of Church’s philosophy regarding the environment combined a willingness to negotiate with a determination to set aside some of the nation’s last best places. Nowhere was this influence more evident than in his career-long campaign for Wilderness. Frank Church did not originate the idea, and his words are not enshrined in the language of the original act, but Frank Church made Wilderness work. A somewhat reluctant but early convert to the Wilderness movement, he became one of its greatest champions. And while his compromises sometimes infuriated Wilderness purists, they were essential to passage of all three Wilderness bills: the Wilderness Act, Eastern Wilderness Areas Act, and Endangered American Wilderness Act.

Compromise in the best sense, cooperation, and pragmatic politics form the core of Church’s legislative legacy. Both the 1975 Eastern Wilderness Areas Act and the 1978 Endangered American Wilderness Act were representative of Church’s attacks on “purity” standards that left little room for the inclusion of any areas east of the Great Plains and excluded western sites under the so-called “sights and sounds” doctrine invoked for areas that were too close to major urban centers. Church argued that this “purity” ideal was a willful misinterpretation of the original Wilderness Act, which he believed fully allowed for the designation of lands “once abused by various disturbances decades ago.” Indeed, he argued, this was “one of the great promises” of the original bill. In the end, this “great promise” was fulfilled by passage of the two acts, which together designated 33 new Wilderness areas encompassing 1.5 million acres.

The genius of Church was his ability to craft consensus. As he conceded, “I work in a political forum, where success usually depends on some measure of accommodation. I try to be effective without compromising end objectives.” As Church’s legislative record demonstrates, the Idaho Senator was not only at the vanguard of the evolving definition of Wilderness in America, but he also established a viable process for designating Wilderness areas that worked then and continues to work today. In time, Church’s vision of Wilderness as a communally defined natural space, not necessarily “untrammelled by man,” became the standard for Wilderness designation.

A Vigorous Legacy: Wilderness in the Eastern United States

Daniel Nelson, *University of Akron*

The Eastern Wilderness Areas Act of 1975 played a major role in the expansion of the Wilderness preservation system and indirectly in the broader movement to preserve untrammelled lands in the eastern states. By rejecting the U.S. Forest Service's purity doctrine, the 1975 Act provided new impetus to the designation of Wilderness areas. From 1975 to the mid-1980's, Congress designated 129 Wilderness areas, embracing 2.8 million acres, in states east of the Mississippi, including 1.3 million acres in the Everglades and 750,000 in national forests. After the mid-1980's, the Wilderness movement largely stalled in the South and greatly slowed in the Midwest, and other approaches to land conservation initially made little progress. In the Northeast, on the other hand, environmentalists and their political allies embraced a hybrid system that combined Wilderness with other, public and private campaigns to preserve untrammelled lands that proved to be highly effective. In recent years this approach has resulted in legal protections for large areas outside national parks and forests that often have greater ecological significance than the federal holdings. The Northeast experience is an important, little noticed legacy of the Wilderness Act and a positive example for other regions. In areas where there are limited opportunities for additional Wilderness designations, the Wilderness preservation system still serves as a stimulus to conservation efforts.

The History, Significance, and Future of Department of Interior's First Wilderness: The Great Swamp National Wildlife Refuge Wilderness Area

Steve Henry, *US Fish and Wildlife Service*

On September 28, 1968 President Lyndon B. Johnson signed into law P.L. 90-532 establishing the "Great Swamp National Wildlife Refuge Wilderness Area", the very first Wilderness area within the Department of the Interior. At less than 4,000 acres in size, containing numerous large structures and a road, and surrounded by the suburbs of northern New Jersey, Great Swamp was far from what most would consider "Wilderness" at the time. The establishment of Great Swamp Wilderness, much like the creation of the refuge eight years earlier, is a fascinating tale of the commitment and determination of an unlikely coalition of neighbors and civic leaders in the face of powerful, well-funded opposition. Great Swamp Wilderness expanded the scope of what a Wilderness area could be and broadened the debate for proposals that followed, especially in the eastern United States. Now, nearly 50 years later, Great Swamp NWR Wilderness Area is more natural and wild than at the time of its establishment. Structures have been removed and the habitat restored. The area is carefully managed to preserve Wilderness character and promote natural processes while providing for compatible human use. As natural lands grow ever more scarce in the most densely populated and heavily developed state in the nation, the value of Great Swamp Wilderness becomes increasingly important to those seeking opportunities for solitude and primitive recreation. The value of the area as a natural classroom and environmental control is also increasingly recognized. The Wilderness area is not static, of course, and outside pressures ranging from invasive species and climate change to watershed development and Superfund remediation pose ongoing stewardship challenges. "Miniature Wildernesses a stone's throw from megalopolis – a Fire Island seashore, a Great Swamp of New Jersey – may be as important to the future as the preservation of Yellowstone Park", Stewart L. Udall, Secretary of the Interior (1961-69).

Wilderness East: Fifty Years of Controversy and Victory in the Southern Appalachians

Brent Martin, *The Wilderness Society*

This presentation focused on the origins of the Wilderness movement within the mountains of western North Carolina, Georgia, and Tennessee, and how those movements intersected with rural politics and perspectives following the passage of the Wilderness Act. It also explored current rural attitudes regarding Wilderness, and how current campaigns must navigate those attitudes and the political realities surrounding them. Where these misunderstandings originated, and how they have persisted is critical information for those working to protect Wilderness in these landscapes today. When the Wilderness Act was passed in 1964, only three areas were designated east of the Mississippi River. However, with the passage of the Eastern Wilderness Act in 1975, and the attendant controversies of RARE II, many easterners in rural areas galvanized in their opposition, painting proponents of Wilderness as urban elitists, and establishing a divide that exists to this day. Wilderness advocates have had little success in changing this dynamic, and there have only been a handful of bills passed in the southern Appalachians since omnibus legislation in 1984. Opposition has also continued to grow within

the hunting community, fostered in part by state game agencies, which have not only opposed Wilderness, but roadless policies and other designations as well. Anti-Wilderness resolutions are currently being passed in rural western North Carolina, which is a reaction to a new forest management plan being developed for the Nantahala-Pisgah National Forest. This is challenging Wilderness advocates to work in new ways. Collaborative efforts are one opportunity, and the creation of a Nantahala-Pisgah Forest Partnership is showing some promise. This collaborative, started by The Wilderness Society, is attempting to bring all interests to the table in order to find common ground, gain understanding, and collective solutions. A similar effort occurred in Virginia's George Washington National Forest, resulting in mutually agreed upon timber targets, recreation and scenic areas, and Wilderness recommendations. These two collaborative efforts are explored as potential solutions to the Wilderness controversy, as well as the current need for the Forest Service to have a broad based constituency to support its multiple use mission.

Untrammeled Wilderness

Kevin Proescholdt, *Wilderness Watch*

“Untrammeled” is the single most important word in the Wilderness Act.

What Does Untrammeled Mean?

- Howard Zahniser's definition – “Untrammeled – not untrampled – untrammeled, meaning free, unbound, unhampered, unchecked, having the freedom of the Wilderness.” (1957)
- In other words: unmanipulated, unconfined, uncontrolled, unrestrained
- Untrammeled = Wildness
- Howard Zahniser meant wildness to be primary and central to Wilderness character.

Three Zahniser quotes make this clear (all found in Mark Harvey's new book of Zahniser writings):

- 1949 – “In brief, one might define a Wilderness in the qualitative sense as an area with a quality of wildness so little modified by human action as to impress its visitors with their relationships to other forms of life rather than their human prowess resulting from inventions and contrivances.”
- 1953 – “We must remember always that the essential quality of the Wilderness is its wildness.”
- 1963 – “Wildness is the essence of Wilderness....”

How Howard Zahniser Chose Untrammeled

- Washington Wilderness activist Polly Dyer suggested it to Zahniser in 1956.
- Bob Marshall was also an inspiration for it (see “‘Untrammeled’ Wilderness”).
- Colleagues (incl. C. Edward Graves) unsuccessfully urged Zahniser to choose a different word – Zahniser replied, “The idea within the word ‘Untrammeled’ of...not being subjected to human controls and manipulations that hamper the free play of natural forces is the distinctive one that seems to make this word the most suitable one....”

How “Untrammeled” Should Help Guide Wilderness Stewardship

- Untrammeled embodies the values of humility and restraint that run throughout Zahniser's writings, values we need to continually use in Wilderness stewardship today.

Why “Keeping It Wild” Wilderness Character Monitoring Framework Diminishes Importance of Wildness

- Under the framework, untrammeled wildness constitutes only 20% of Wilderness character under KIW framework.
- “Keeping It Wild 2” revised framework should return untrammeled wildness to its original primary and central focus.

(See Kevin Proescholdt, “‘Untrammeled’ Wilderness,” *Minnesota History* 61(3), Fall 2008, pp. 114-123).

The Past Ain't What it Used to Be: An Examination of the Scientific and Cultural Premises of the Wilderness Act

Mark Fincher, *National Park Service*

Many modern critiques of the Wilderness Act claim that it is based on incorrect assumptions: 1) that ecosystems are stable and balanced, 2) that Native Americans had little effect on those ecosystems, 3) that modern anthropogenic influences on these ecosystems are inconsequential, and 4) that preserving the untrammelled quality of Wilderness ecosystems also preserves the natural quality. This assertion is usually presented with no references, simply as an obvious statement of the conventional wisdom of the time. “Conventional wisdom” is a hard thing to prove or disprove, but the discussions and documents that influenced the creation and passage of the Act are easy to assess. These tell a different story.

One such document is the Outdoor Recreation Resources Review Commission (ORRRC) Wilderness Study Report. A House report on the Wilderness bill in 1962 states that the findings and recommendations of this report were “referred to continuously and given careful consideration by the committee during its deliberations on this legislation.” Another series of documents are the proceedings of the Sierra Club Biennial Wilderness Conferences. These conferences, attended by Wilderness advocates, detractors, legislators, agency directors, and prominent authors, were in many ways the crucible in which ideas about Wilderness were formed, tested, and debated.

These sources unequivocally contradict the assertions noted above. They state in forceful, unqualified language that Wilderness ecosystems are in a state of constant change; shaped by disturbance events, and that anthropogenic influences, both historic and modern, significantly affect them. Indeed, the language used by critics to describe the modern, “correct” conception of ecosystems is nearly identical to that used in 1963 during discussions about the Wilderness Act.

Another modern critique contends that because the Wilderness Act’s authors believed in the assertions noted above, they mistakenly thought that protecting the untrammelled quality of Wilderness would automatically protect the natural quality. These same critics suggest that we should therefore abandon the mandate for untrammelled landscapes contained in the Act. There are two problems with this argument: 1) The Act’s authors acknowledged the anthropogenic forces in play and deliberately chose to protect the untrammelled quality anyway. They describe this concept at least twice; once in Howard Zahniser’s response to the Leopold Report (“Guardians not Gardeners”) and in Zahniser’s and David Brower’s discussion of these ideas in the proceedings of the 1963 Wilderness Conference. 2) The critique doesn’t take into account the primary reason for the untrammelled mandate: To correct modern society’s arrogance in playing God with nature. During the years the Act was being crafted, there was a growing, almost panicky sense that humans had flown too close to the sun and were paying the price: nuclear fallout, thalidomide, and Silent Spring were in the headlines. This emphasis on humility and restraint is a constant refrain in Zahniser’s writings (echoed and quoted by the congressional sponsors of the Act), Brower’s advocacy, and in the “Wilderness Letter”- Wallace Stegner’s plea to preserve a “geography of hope” that was written for the ORRRC Study Report.

Developing a Southern Appalachian Welcoming Wilderness in My Back Yard Response

Chris Bolgiano, *Freelance Nature Writer*

Mysterious clues to the past in my oak-hickory forest, on the border of the million-acre George Washington National Forest (GWNF), started me on a journey through Southern Appalachian history. Through archival images, my own photos, and illustrations from renowned Appalachian photographer James Valentine, I uncover the devastation that led to the formation of the Southern Appalachian national forests. Ironically the product of the very destruction that preceded it, this block of public lands now offers an unprecedented opportunity for Wilderness as local attitudes move away from the traditional Not-In-My-Back-Yard attitude.

Along the way I honored Ernie Dickerman, the Grandfather of Eastern Wilderness, for whom I volunteered in the 1980s. I defined old growth in the most biodiverse temperate forests in the world, referencing the All Taxa Biological Inventory at Great Smoky Mtns. National Park, the largest remaining area of undisturbed Southern Appalachian forest. Even more important than remnant old growth is the future forest, allowed to recover as undisturbed as possible in Wilderness Areas. Despite threats like exotic invasives that know no boundaries, here is where much of native biodiversity has the best chance for the future. I considered biodiversity from both ecological and spiritual perspectives, referencing pantheism as perhaps the first religion.

Clean drinking water, clean air, carbon sequestration, and environmental stability are more immediately practical products of the multi-million acre, almost contiguous complex of seven Southern Appalachian na-

tional forests. The GWNF alone provides the ultimate source of drinking water for millions in Richmond and Washington, D.C., not to mention a multi-million dollar recreation industry.

Because most of the GWNF lies over the Marcellus shale, the desire of the gas industry to frack it has brought increased attention to drinking watersheds and a growing appreciation of Wilderness designation as permanent protection. It has also delayed the GWNF land management plan for the past two years.

After Ernie's death in 1998, the organization he led, the Virginia Wilderness Committee, helped establish a group of traditional Wilderness opponents, including timber, game, mountain bikers, and landowners. This relationship-building has proven itself in collaborative recommendations for the GWNF plan, including a 90,000 acre National Scenic Area with four Wilderness Areas on historic Shenandoah Mountain, plus additional Wilderness acreage. Some of this acreage lies at my back door. My journey ends at a logical conclusion: we need all the Wilderness we can get, and I welcome it as not only the best scientific bet for the future, but also the best we can do to make amends for a shameful past.

The Arctic National Wildlife Refuge: A Symbol for a Time of Global Change

Roger Kaye, *US Fish and Wildlife Service*

The establishment of the Arctic National Wildlife Refuge was among the first unprecedented American conservation initiatives of the 1960s that came about in response to concern over the worsening environmental degradations accompanying the prosperous postwar march of progress. The rapid loss of natural landscapes, the destructive logging, mining, and agricultural practices, the spread of pollution and pesticides, and the awesome power and fallout of the bomb were among the many threats that awoke the nation to a new order of environmental threat, leading some to even question whether future generations would inherit the same Earth.

The contentious, seven-year campaign to establish the Refuge was one manifestation of the broader issue of how to respond to this new order. The struggle over this distant place became emblematic of the larger contest between competing views of the appropriate relationship between postwar American society and its rapidly changing environment. Which notion of progress should this landscape represent – that underlying the prevailing rush toward attaining an ever-higher material standard of living, or that underpinning the emerging ecology-based perspective that emphasized sustainability and called for restraint? The question of whether or not to preserve this preeminent Wilderness symbolized “the real problem,” as campaign leader Olaus Murie characterized it, “of what the human species is to do with this earth.”

Now again we face a new order of environmental threat, a convergence of global energy and resource scarcity, climate change, and widespread biospheric alterations. “The real problem” Olaus spoke to is upon us. And now the Arctic Refuge is at the center of one of the nation's longest and most contentious environmental debates. The question of oil development versus Wilderness preservation here transcends the issue of potential resource impacts within the Refuge's boundaries and has become symbolically intertwined with these larger, global issues.

Again, the Arctic Refuge stands as a national symbol of pivotal questions and decisions Americans face: How does our consumption and material standard of living affect the national and global environments, and what quality of them are we to leave to future generations?

The Tongass Wilderness and the Alaska National Interest Lands Conservation Act Campaign

Daniel Nelson, *University of Akron*

The Alaska National Interest Lands Conservation Act (ANILCA) campaign of the late 1970's was largely an effort to preserve one of the last large undeveloped and untrammelled areas of North America. Indeed, the environmental groups that drew up the original proposals made a point of emphasizing areas in Alaska that were aesthetically and/or ecologically valuable but had little immediate economic significance. There was one major exception, however. Since the early 1950's, the Tongass National Forest, the largest U.S. national forest, had been the subject of an ambitious experiment in social engineering that was converting it into a vast tree farm. Alaska environmentalists had fought the Forest Service effort for more than a decade and had hoped to use the Wilderness Act to preserve important old growth areas. They therefore insisted on including the Tongass in the larger effort to preserve Alaska lands. In the ensuing congressional campaigns of 1977-80, the Tongass Wilderness proposals became the single most important and persistent point of contention. At times they threatened to derail the entire legislative package. The ultimate result was a political standoff that had sweeping implications for the Tongass and its distinctive ecosystems. ANILCA included five million acres of Tongass Wilderness, a record amount that included “rock and ice” as well as invaluable old growth areas such

as Admiralty Island. Yet the Act also included provisions that increased the amount of logging in non-Wilderness areas and ensured that the controversy over the Tongass would continue for many years. Among Alaska environmentalists, this bittersweet conclusion led to a growing realization that the Wilderness Act was not necessarily an effective vehicle for restricting Forest Service or other agency operations.

The paper related the events of the late 1970's to more recent battles over the Tongass and to the role of Wilderness in preserving critical resources and biodiversity.

A Discussion of the History and Future of Alaska's BLM Wildlands

Rachel James, Wilderness Institute

The Bureau of Land Management (BLM) manages approximately 72 million acres of lands in Alaska, which is more acreage of land than any other land management agency the nation. These lands support an array of incredible natural and cultural resources: Alaska's longest river, the largest glacier in North America, habitat for thousands of migratory and resident bird populations in the Arctic, the National Petroleum Reserve, rare paleontological resources, North America's largest caribou herd as well as dozens of Alaska Native communities whose cultural and physical sustenance is based on a subsistence-way-of-life, harvested from the resources on BLM administered lands.

There is no doubt that these lands possess outstanding Wilderness characteristics. Why has a thorough Wilderness inventory never been completed or Wilderness designated? At the heart of the answers to these questions are three elements: the overlay of state-specific and national land management laws and policies, state politics, and the lack of wide-spread public engagement through the BLM Resource Management Planning process, until recent years.

This presentation examined the history of Alaska's BLM lands and the myriad of administrative acts, laws and policies that have influenced the fact that there is no Wilderness on BLM lands in Alaska today. The BLM RMP land management plans and processes are dictating the future of BLM wildlands and to conclude, we took a quick look into the future potential and challenges that face BLM wildlands.

A brief primer in the major administrative acts that have impacted BLM administered lands in Alaska is an appropriate place to start. The following acts have influenced both the acreage and direction BLM lands: Native Allotment Act of 1906, the Alaska State Hood Act of 1958, Alaska Native Claims Settlement Act of 1971, the Federal Lands Management and Policy Act of 1976, the Alaska National Interest Lands Conservation Act of 1980, and the Alaska Land Transfer Acceleration Act of 2004. Secretarial actions have also guided the direction of BLM wildland management: Secretary Watt's directive in 1981 that forbid the BLM from conducting Wilderness review, unless called for by Congress; in 2001 Secretary Babbitt rescinded Watt's directive, opening the door for Wilderness review on BLM lands in Alaska; Secretary Norton's reimplementation of the Watt directive through a memo in 2003 stating no BLM lands would be reviewed for Wilderness qualities, unless there was, "broad support among the state and federal officials representing Alaska"; and in 2010, Secretary Salazar's order that reviewed 'Lands With Wilderness Characteristics', and a reversal of that order four months later in 2011.

Nearly all the acres of BLM lands in Alaska are currently in the Resource Management Planning process. This is the first time in decades that public input, including stakeholders such as the federally recognized tribes through the government-to-government relationship with BLM, are raising important questions and suggestions about how BLM wildlands ought be managed. The variables that would have to change for Wilderness to be considered on BLM Alaska's lands, the 'teeth', or lack thereof, of the administrative tools that will serve to protect Wilderness qualities in the mean time, the conclusion of this examination is Alaska's BLM wildland's story.

Howard Zahniser: Humble Architect and Visionary of the Wilderness Act

Mark Harvey, North Dakota State University

Howard Zahniser was the most important figure in drafting the Wilderness bill and in publicizing and lobbying for the legislation between its first introduction in Congress in 1956 and its passage and signing into law in September, 1964. In contrast to many earlier Wilderness pioneers such as John Muir and Bob Marshall and to many of his own contemporaries including Sigurd Olson and Olaus Murie, Zahniser spent much of his time indoors and at a desk rather than in the Wilderness. He was an editor, a publicist, and the executive secretary of The Wilderness Society, and thus frequently involved with organizing, building membership, attending meetings, testifying, and in numerous other ways engaged in building national support for Wilderness and for legislation to safeguard it. His work during the eight years of lobbying for the Wilderness bill was laden with

political challenges, often grueling, and he was absorbed with numerous pressing tasks including attending hearings, conferring with lawmakers and their staff, testifying, speaking, and tending to all manner of chores centering on the legislative process. His role as “the constant advocate” as David Brower once called him is one that was crucial to the passage of the Wilderness Act in 1964, but was also one that in certain ways obscures the fuller significance of what he achieved.

In focusing on the legislative battle for the Wilderness Act, it is easy to overlook Zahniser’s skills as a writer and essayist and as a visionary of the national Wilderness system and eloquent purveyor of the values and ideals of Wilderness preservation. It is also easy to lose sight of his considerable skills bringing together diverse interests, of listening and carefully weighing opposing points of view, and of finding the elusive middle ground which enabled him and his fellow Wilderness advocates to achieve passage of the Wilderness Act in 1964.

He did so in part by the strength of his pen. In an age long before computers, email, or social networks, he and his contemporaries relied heavily on the written word – and particularly on long letters – to communicate with one another and with their allies and foes. Zahniser’s literary skills enabled him to publish the highly successful quarterly magazine, *The Living Wilderness*, as well as a number of his own eloquent essays and speeches, and to build a substantial network of Wilderness supporters throughout the country.

In his most famous speech delivered in 1961, he said that “we are not fighting a rear-guard action, we are facing a frontier. We are not slowing down a force that inevitably will destroy all the Wilderness there is. We are generating another force, never to be wholly spent, that, renewed generation after generation, will be always effective in preserving Wilderness. We are not fighting progress. We are making it. We are not dealing with a vanishing Wilderness. We are working for a Wilderness forever.”

The Environmental Justice: William O. Douglas Liberty and Wilderness

John Concillo, *Oregon Cultural Heritage Commission*

William O. Douglas was a beacon for the preservation of wild places and individual freedom, by word and by example. These were parallel rights to be defended without reservation. Douglas described the Wilderness not merely as an escape, but as a nurturing environment and source of strength, an affirmation of independence that empowers individuals and offers spiritual and physical salvation. He was a guardian against any boundary that restrained liberty and any new control that threatened individual freedom. The answer to society’s problems is more freedom, not less. This was the message he gave in countless speeches to citizens, not just the legal and academic world.

As a sitting Supreme Court Justice, no one in the nation brought such a high profile to these issues. His life stands as a record of courage to hold fast against the forces that would exploit or erode these precious American ideals. For Bill Douglas, personal freedom and solitude went hand in hand. These are vital and compelling issues for which his advocacy was prescient and far reaching.

“The right to be let alone is indeed the beginning of all freedom.” William O. Douglas, *The Right of the People*, (1958)

Douglas worked to codify the land ethic in our legal system. In his iconic dissenting opinion *Sierra Club v. Morton* (1972), he proposed pushing environmental law in new directions when he wrote, “The ordinary corporation is a “person” for purposes of the adjudicatory processes, whether it represents proprietary, spiritual, aesthetic, or charitable causes. So it should be as respects valleys, alpine meadows, rivers, lakes, estuaries, beaches, groves of trees, swampland, or even air that feels the destructive pressures of modern technology and modern life.”

Most likely, a young person today anywhere in the U.S. will finish high school and not know of William O. Douglas. For anyone familiar with the legacy of William O. Douglas this is insupportable. This film project is valuable not only as a vehicle to help secure his place in broadly understood history. More importantly, his ideas and philosophy are fundamental wellsprings in a genuine democratic society. Does a youth of today have to be on the school Constitution Team to study these ideas and understand the magnitude of these issues?

The thought and values expressed by Justice Douglas should be passed on to a new generation and reiterated for all U.S. and global citizens.

Alaska Wilderness: How Far We've Come

Adrienne Lindholm, *National Park Service*

The Alaska National Interest Lands Conservation Act (ANILCA), the legislation that designated almost all the Wilderness in Alaska, was passed in 1980. It assured that Wilderness in Alaska is unique within the National Wilderness Preservation System for two reasons. First, ANILCA reserved federal lands on an unprecedented scale. It designated approximately 100 million acres of national parks, forests, and wildlife refuges, and designated approximately 57 million acres of Wilderness. Second, it included similarly unprecedented special provisions to address Alaska's distinctive rural way of life and lack of infrastructure. ANILCA included provisions for motorized access and other activities not normally found in Lower 48 Wilderness areas.

Even though Congress and the Administration spent nearly 9 years, from 1971-1980, developing this legislation, ANILCA was passed in a rush, so some things were left unresolved: it deferred the decision on Wilderness designation for the Arctic National Wildlife Refuge, it created Wilderness Study Areas instead of making affirmative decisions about Wilderness designation, and it failed to define many important terms in the law. Beginning in 1980 and continuing to the present, Federal land managers in Alaska have been challenged with interpreting the many ambiguities Congress left to the agencies to sort out. They have also grappled with how to accommodate the provisions contained in ANILCA while still preserving Wilderness character.

All of those challenges continue today. However, we now have a much better understanding of the concept of Wilderness, the legal mandate for managing Wilderness, and the natural and cultural resources that occur within Wilderness in Alaska. This new understanding and many new tools allow us to improve Wilderness stewardship.

Today we are presented with two challenges that weren't as apparent in the 1980's. How we as land managers and as a society deal with them will determine the future integrity of Alaska Wilderness. Climate-induced changes to natural resources will tear at the fabric of the natural quality of our Wilderness areas. How the agencies respond to climate change will test our will to embrace restraint and humility, central tenets of Wilderness stewardship.

Equally insidious, omnipresent technology is making it harder for people to connect to the earth and its community of life, to be removed from reminders of modern human civilization. As a society we must be cognizant of technological encroachment in Wilderness and take action to preserve the undeveloped quality of these special places.

In the last 34 years we have come a long way in our understanding of Wilderness in Alaska and how to steward it. The challenges that lay ahead are the largest we've ever faced.

Characterization of the Murie Legacy: A Movement Built on the Intangible Qualities of 'Wilderness'

Kate Gersh, *The Murie Center*

Hailing from Minnesota, brothers Olaus and Adolph Murie began their distinguished careers as ecologists in frontier Alaska. There, at the beginning of the 20th Century, they met Alaska Territory pioneer women to whom they were married: Mardy to Olaus, Louise to Adolph. The work of the Muries is relevant still because of their personal integrity, their scientific wildlife and wild land studies, and their lifelong advocacy for conservation based on enduring ethical principles.

The nearly mythical Murie story began in 1924 when Mardy and Olaus were married at Anvik, Alaska on the Yukon River. For their honeymoon, they traveled over 550 miles by dogsled studying the Caribou and the Arctic Country, up the Kuyukuk River and into the Brooks Range.

Alaska would always be in their hearts and on their minds. But it was their work from Jackson Hole, joined at the Murie Ranch for more than 30 years by Adolph and Louise that thrust the Muries to the front-lines of the 20th Century conservation battles. As conservationists and advocates, the Muries were instrumental in the conception of the National Wilderness Preservation Act of 1964, the establishment of the Arctic National Wildlife Refuge in 1960, and the Alaska National Interest Land Conservation Act of 1980. Olaus played a pivotal role in Jackson Hole advocating for expansion of Grand Teton National Park in 1950 to include the sage brush and migration lands designated by President Franklin Delano Roosevelt in 1943 as the Jackson Hole National Monument. All of these conservation initiatives were controversial, but became landmark achievements for American Wilderness and Wildlife, gaining the Muries national and international admiration.

The passage of The Wilderness Act on September 3, 1964 is regarded as one of the Muries' crowning achievements. It is also a great example of what is missing from 21st century conservation. As we mark the

50th anniversary of passage of this Act, it provides a direct example of the effectiveness of compromise. At the time of its passage, there were over 570 million acres in the federal public land estate. Wilderness Act protection was afforded to only about 9 million acres, 1.5 per cent of the public lands, that qualified. Still, the Muries and others accepted this compromise, and an inclusive and deliberate process to evaluate and add land to the Wilderness system. Since passage of the Act, 100 million acres has been added to the system. Every President has signed legislation adding to the Wilderness preservation system, the most acres by President Ronald Reagan. In this era of gridlock, The Murie legacy is what is needed most in 21st century conservation. In a recent email from their son Donald, he said: “[Olaus] and Mardy won the respect of both allies and opponents by their calm, non-confrontational and reasoned approach. They never accused, never shouted, never insulted.” Their legacy is one of high aspirations for conservation, delivered by kindness, civility, inclusive engagement, transparency and compromise.

A History of Threats to Wilderness Resulting from Land Exchange Deals in Alaska

Fran Mauer, Wilderness Watch

Major events in Alaska’s history, such as Statehood (1959), oil discovery at Prudhoe Bay (1969), the Alaska Native Land Claims Settlement Act (1971), and passage of the Alaska National Interest Lands Conservation Act (1980), set the stage for five sweeping land exchange schemes that threatened both designated and potential Wilderness lands during 1981 to 2014. These proposals were negotiated between various Native corporations and officials of the Reagan and Bush administrations before informing the public. The aim was to enable oil and gas development and road access within National Wildlife Refuges.

The St. Matthew Island land exchange was finalized in 1983 by Deputy Under – Secretary of the Interior, William P. Horn, acting on the behalf of then Secretary James Watt. The deal transferred a portion of the island which had been designated as Wilderness in 1970 to three Native corporations for the purpose of construction and operation of oil developments in the Bering Sea. A U.S. District Court later invalidated this exchange, finding that it “suffers from serious errors of judgment and misapplication of law...”

Also in 1983, Secretary Watt exchanged surface estate within Gates of the Arctic National Park held by the Arctic Slope Regional Corporation (ASRC) for the subsurface estate of village corporation lands within the coastal plain of the Arctic Refuge. This led to the drilling of an exploratory well within the Refuge boundary during 1985-86. A General Accounting Office report outlined numerous flaws and inappropriate actions associated with this deal. The presence of ASRC holdings in the Refuge poses long term threats to its integrity and complicates any future designation of Wilderness on the coastal plain.

During 1985-88 a huge land exchange effort dubbed the “Mega-Trade” was promoted by Interior officials, inviting a host of Native corporations with lands in several Alaska Refuges to relinquish their holdings in exchange for oil and gas prospects in the Arctic Refuge. This constituted an obvious attempt to create pressure for Congress to formally open the Refuge for oil and gas leasing and development. It was ultimately shelved when Congress passed a prohibition on any further land exchange actions for the coastal plain.

In 2004, an agreement in principle was reached between Doyon Ltd and the Bush administration to exchange lands within the Yukon Flats National Wildlife Refuge to facilitate oil and gas development. Strong opposition by village residents in the Flats ultimately led to cancelation of the agreement by the Obama administration.

An amendment inserted into the Omnibus Public Lands Management Act set up a potential land exchange and authorized the Interior Secretary to make a final decision for a road to be built through designated Wilderness in the Izembek Refuge. This provision, which was not opposed by some conservation groups, would have traded lands already designated Wilderness in order to establish Wilderness elsewhere. Fortunately, Secretary of Interior, Sally Jewell, chose to not allow the road. In total over \$15 million was spent for these land exchange deals.

Shifting Conceptions of Wilderness in Alaskan Nature Writing: A Survey of Three Centuries

Adam Andis, *Sitka Conservation Society*

Throughout history, writers have used their works to shape the way we see the world. This is especially evident in the field of Alaskan nature writing as authors describe and interpret a place that most people will never experience first-hand. At the same time, authors themselves are products of society, influenced by historic events and pressure from societal movements, and this is reflected in their writing. From the earliest explorers' journals and logs to modern day Alaskan nature writing, our perceptions of Alaska's environment have radically shifted. Each narrative of place has been reinterpreted by successive generations of writers through the process of metaphoric reconstruction.

Using Alaskan nature writing as an example, this presentation traced the winding path of how we *think* about Alaska Wilderness. From the early explorers like Vitus Bering and Georg Steller to early nature writers like John Muir, Bob Marshall, and Mardy Murie to modern Alaskan authors and beyond, this presentation explored how our conceptions have changed over time. This literary survey is placed into context of historic events to show both the causes of specific perceptions and the resulting impact of shifting attitudes.

This historical survey sheds light onto how our perceptions of wild lands in Alaska still fluctuate today and how they will likely continue to shift in the future. Understanding these shifts will allow managers and advocates to react to and actively participate in developing attitudes toward Wilderness.

Wilderness and the Myths of American Environmentalism

James Morton Turner, *Wellesley College*

Many people have viewed the Wilderness Act of 1964 as the culminating event in a long history of American conservation and preservation. My presentation took the Wilderness Act as the starting point for a new history of American environmentalism. Drawing on my book, *The Promise of Wilderness: American Environmental Politics since 1964* (University of Washington Press 2012), I organized my presentation around three myths.

Myth #1: Wilderness is a timeless and transcendent ideal in American environmental thought. In response, I argued that Wilderness has been a pragmatic concept that has been adapted to meet changing scientific, political, and cultural imperatives since 1964. To demonstrate this point, I focused on the differing interpretations over how to implement the Wilderness Act, including the Forest Service's "purity" policy, eastern Wilderness, and subsistence in Alaska.

Myth #2: Wilderness was left behind by a modern environmental movement defined by air and water pollution and other threats to human health. In response, I argued that Wilderness, instead of being left behind by modern environmentalism, has played a pivotal role in shaping key moments in modern American environmental politics. As an example, I focused on the key role that Wilderness and public lands issues played in the increasingly polarized debates over environmental politics in the West during the 1980s and 1990s.

Myth #3: The driving force behind environmental activism is grassroots advocacy. In response, I argued that the Wilderness movement has been most successful when grassroots organizations and national groups have come together around major campaigns, such as the campaigns for Alaska, the California Desert Protection Act, or the national forest roadless rule.

I concluded my presentation with an argument that the Wilderness Act did more than protect places; it created a political process. As I write in my book, "Wilderness means more than pristine wild lands, backpacking adventures, or a stronghold for biodiversity; Wilderness also means engaging citizens – both for and against wild lands protections – in a sustained discussion toward the common interest. All of that is the promise of Wilderness."

Wilderness in the Anthropocene

Jason Mark, *Earth Island Journal*

We have, supposedly, entered a new epoch in Earth's history – the "Anthropocene," or age of man. All of the world is a garden, we are told. Our footprint is too big to keep any place wild. Our numbers have grown too large for solitude. "We've transformed the whole globe for good, every inch of it," writes one so-called neo-environmentalist.

The powerful new meme of the Anthropocene is forcing rethinking in a range of disciplines: ecosystem restoration, species conservation, wild lands protection, and design and technology. The Anthropocene has also fueled sharp criticisms of the Wilderness ideal.

“Conservationists will have to jettison their idealized notions of nature, parks, and Wilderness,” one group of conservation biologists argues.

Don’t start writing the obituaries yet. The reports of the demise of Wilderness have been greatly exaggerated. If anything, the Anthropocene gives new weight to the importance of wild places.

A careful examination of the assumptions embedded in the idea of the Anthropocene – combined with a review of current and historical Wilderness literature – reveals that Wilderness is more important than ever.

If the Anthropocene demands a reconsideration of long-held assumptions, it also calls for a rethinking of the earlier criticisms of Wilderness. A persistent critique of Wilderness is that it sets humans apart from wild nature. On an almost entirely domesticated Earth, the Otherness of Wilderness is now a virtue. For reasons both anthropocentric and biocentric, we need places free from human domination. As domestication spreads, this especially true. Wilderness’ value increases with scarcity.

With the Anthropocene comes a new popular understanding that every place on the planet has been touched by civilization. This new awareness opens the way for a long-overdue unhitching (in the popular mind) of Wilderness from the pristine. This will allow Wilderness advocates to put emphasis where it should be: ensuring that undomesticated lands are reservoirs of wildness, as opposed to trying to restore or sustain some historic baseline. When it comes to Wilderness preservation in the Anthropocene, non-management is the new stewardship.

In this brave new age, our chore, more than ever before, is to cultivate the characteristic of wildness.

Homecoming and the End of the Anthropocene

Max Oelschlaeger, Northern Arizona University

The presentation set and then discussed limiting boundary conditions between the conceptual extremes of Paul Shepard’s cynegetic culture and Will Wright’s conception of wild knowledge. The premise is that Wilderness is far, far more than the set asides and public policy of the last five decades. *Rather Wilderness is the living link to the deep, deep past and the sine qua non of a viable planetary future.*

Shepard’s argument is Darwinian, meaning that present industrial-material civilization has created conditions inimical to our *biophysically evolved human nature*. While the modern human has a recent history of perhaps 50,000 years, the roots of humanity stretch far, far back into the chaos of cosmic evolution. Apart from that natural history (now called “Big History”), there is no rationally comprehensible account of humanity. Shepard, thus viewed, envisions a future that has escaped the catastrophe of industrial-consumer civilization by going home, that is psychologically, economically and technologically embracing the natural world, the wild world.

Wright’s wild epistemology can be partially captured within the notion that the paradigmatic structure underlying the acquisition and dissemination of knowledge is antithetical to survival: meaning, ill suited to the task of the sustainability transition. Wright’s thinking finds realization in the paradigm busting heresies of radical thinkers such as Nicholas Georgescu-Roegen, who argues that the necessary conditions for a sustainable economy hinge on the second law of thermodynamics, and Ilya Prigogine, who argues that science itself can only be rationally grasped from inside the natural world. Contextualized within these end points, Wilderness assumes new biophysical and conceptual dimensions. *Biophysically*, large scale, land-based projects such as the Wildlands Project, smaller scale projects such as the Chicago Wilderness, and envisioned projects such as the Buffalo Commons, are not constrained by anthropocentric ideas of us doing something to the surround, the living, evolving world, but of the wild earth doing something to us. *Conceptually*, Wilderness engenders a paradigmatic shift from the culturally dominant and ecologically malignant notion of sustainable development to the idea of sustainable cultural mimesis.

Genuinely adaptive knowledge depends on wild knowledge, knowledge that escapes the shackles of the domestication of the knowledge industry (from the kindergarten class room to the labs of higher education and the NSF), embraces the wild chaos, and repositions the human drama on the stage of natural history. Thoreau, anticipated these remarks more than 150 years ago in “Walking.” He writes “I WISH TO SPEAK a word for nature, for absolute Freedom and Wildness, as contrasted with a freedom and Culture merely civil, – to regard man as an inhabitant, or a part and parcel of Nature, rather than a member of society.”

If humankind is not to “be broken on the wheel of its own deeds” (cf. Allen and Hoekstra,

Toward a Unified Ecology), then the immediate future will take place between the extremes of Shepard and Wright. Ironically, although pristine Wilderness simply does exist in the Age of the Anthropocene, Wilderness is the key to any sustainable future.

The Last Frontier: Looking Back, Looking Forward

Mike Matz, *The Pew Charitable Trusts*

Doug Scott, *Wilderness Author and Historian*

Kristen Miller, *Alaska Wilderness League*

John Sisk, *University of Alaska*

When President Jimmy Carter signed the Alaska National Interest Lands Conservation Act (Alaska Lands Act or ANILCA) into law on December 2, 1980, this country achieved in one fell swoop something never before accomplished for conservation. Around 103 million acres of Alaska – more than a quarter of the last frontier’s total 365-million-acre landmass and an area larger than the size of California – gained permanent protection through designation as national parks, national monuments, national wildlife refuges, national conservation and recreation areas, or wild and scenic rivers. More than 56 million acres of these conservation units had bestowed upon them the overlay of Wilderness designation, adding the gold standard of land protection to these iconic landscapes, such as Gates of the Arctic, Misty Fjords, and Lake Clark. The Wilderness designations in this signature conservation achievement doubled the size of the National Wilderness Preservation System at the time.

The Alaska Lands Act is the culmination of one of the most expansive, most inclusive, and most successful public education and advocacy campaigns ever mounted. It began at its source, the 1971 Alaska Native Claims Settlement Act, in an innocuous-enough provision in Section 17(d)(2), coursed through a 1978 proclamation issued by President Carter under the Antiquities Act to set aside more than 56 million acres of federal public land, and ultimately reached its outlet in congressional passage of the Alaska Lands Act and post-election signing in 1980.

It was also a new generation’s attempt to deal squarely with the state’s Native population and allowed for uses by indigenous people that were and are unique by setting up a separate regime for hunting and fishing and for providing access into parks and Wilderness. The Alaska Lands Act also represented a series of compromises, especially in the bill signed by President Carter, which was the Senate-passed version, not the stronger – from a conservation perspective – House-passed package. With President-elect Ronald Reagan set to move into the White House, the strategic decision made by congressional champions and leaders in the Alaska Coalition was to accept the Senate version with its flaws. That has meant a continuing tug-of-war between conservationists and development interests over the future of the Arctic National Wildlife Refuge, the fate of the Tongass National Forest, and the prospects for additional land protections.

Looking back at this signature accomplishment, cleaning up one of those items of left-over business, dealing with the subsequent strategic theory of the conservation community, and looking forward to what is being proactively assembled to protect more of Alaska and how these campaigns may differ from the original Alaska Lands Act campaign will provide a clear sense of the success of the Act and its long-lasting ramifications as well as provide a framework within which to view current protection efforts.

William Bartram and the Origins of Wilderness as Sublime

Brent Martin, *The Wilderness Society*

This presentation explored the 18th century botanist William Bartram’s unique contribution to the Wilderness idea in America and the influence that his 1791 publication, *Travels*, had upon late 18th and early 19th century Wilderness romantics both in America and abroad. Situated at the end of the Enlightenment era and the beginning of the Romantic, Bartram’s *Travels* is a unique representation of both periods, along with being one of the most invaluable portrayals of the southeastern Native Americans from that time. Its descriptions of the natural world are unparalleled for the late 18th century, describing a wide spectrum plants unknown to the European gardeners of the time, and providing us with one of the most vivid portraits available of the southern landscape on the eve of the American Revolution (*Travels* was published sixteen years after Bartram’s journey throughout the southern landscape). Though *Travels* employed Linnaean nomenclature heavily throughout his description, it also employed the language of romantic poetry, and underscored the shift in European thought towards emotional truth, as perhaps best represented by British philosopher Edmund Burke’s *A Philosophical Inquiry into the Origin of our Ideas of the Sublime and Beautiful* (1757).

The often rapturous language of *Travels* is at odds with the more scientific descriptions of the plant world in the book, with Bartram portraying the southern landscape with romantic and effusive terms, transporting the reader to what he considers the more divine reality of nature. It was also largely at odds with American sentiments at the time. Much of the landscape Bartram travelled through had seen various campaigns of the French and Indian War, and there were strong feelings among colonials against Native Americans, along with the belief that tribes such as the Cherokees would ally with the British in the American Revolution. Bartram

was not only sympathetic to the plight of the tribes he encountered, but exalted their virtues, and challenged popular notions of their backwardness and barbarism. This too would soon be part of the nineteenth century romantic notion of the noble savage and his simple and nature based lifestyle.

Travels also became a sensation abroad, influential in the writings of British Romantic poets such as Samuel Taylor Coleridge and William Wordsworth. Coleridge's utopian vision of Xanadu in the epic poem *Kubla Khan* was influenced by his reading of *Travels*. His writings and explorations during this particular period in American history provide valuable insight into the birth of the conservation movement, and the Wilderness Idea. However, he is generally overlooked in the early American conservation movement, overshadowed by the likes of Henry David Thoreau, Ralph Waldo Emerson, John Muir, the Hudson River Valley School of painters, and others.

The Two Johnnies: Muir and Burroughs and Wilderness Literature

Jeff Rennicke, *Conserve School*

At precisely 6:00 pm on May 31, 1899, the *George W. Elder* gave a blast of her whistles and slipped the hold of a Seattle dock. Music played. Hats were tossed. Crowds cheered. Among her 51 passengers that day, the Elder held an array of the county's brightest physical scientists, most inspiring artists, and leading Wilderness voices. Two writers were among the company – John Burroughs and John Muir. Each would have enormous influence on nonfiction yet their unique literary views could hardly have been more different. These differences represent both the power and potential of modern American nature literature.

John Burroughs was a self-described “home-body and lover of the cozy.” Born in a New York farmhouse in 1837, the cross-country trip on Harriman's private train to Seattle was his first west of the Mississippi. His horizons were detailed by the pine-robed Catskills and etched by the bends and curves of the Hudson River. Burroughs believed that the true art comes from the Wilderness within. Burroughs life was a practicum of the pastoral, an ode to the simple art of observation. His genius lay in turning himself into a light sensitive plate exposed to the shining world around him. “Success in observing nature,” he wrote, “depends upon alertness of mind and quickness to take a hint. One's perception must be like a trap lightly and delicately set; a touch must suffice to spring it.” Nothing was too light a touch to spring the mind of John Burroughs. Look, John Burroughs seems to say, look closer, look quietly. The possibility of art lies in the familiar, if you keep looking.

John Muir was cut from wilder cloth. If Burroughs' art seeped from quiet observation, Muir's sprang from the full-throated roar of a windstorm screaming through a mountain pass. Here was Whitman's “barbaric yawp” come to life wearing hiking boots. Those boots took Muir to globe-trotting Wilderness – Cuba, Japan, the Philippines, Panama, California, New York City, Finland, Russia, Egypt, Australia, New Zealand, Brazil, and the Himalayas, Alaska, and his famous Yosemite. Muir wrote the same way he climbed mountains, his prose rushing off the page. He wrote rhapsodies on cascading streams, on mountain snows. His favorite punctuation mark was the exclamation point urging all to the fight to save the wild.

Both viewpoints have their literary practitioners today – the local, quiet observation style of Burroughs and the globe-trotting, boots-on-fire style of John Muir. And, we need both. If literature is going to continue to address the great questions of our time, the human relationship to the Wilderness, both near and far, will necessarily be among our literary inquiries. To truly understand the role of Wilderness in our lives, we need writers and storytellers to show us both the wonders of the exotic and the marvels of the close at hand. Burroughs found nature in a bird's nest: Muir found Wilderness in a mountain range. It turns out both were right.

“The control of nature is a phrase conceived in arrogance, born of the Neanderthal age of biology and philosophy, when it was supposed that nature exists for the convenience of man.”

-RACHEL CARSON, *Marine biologist and author*

John Muir's Continuing Inspiration

Harold Wood, *Sierra Club*

100 years after his death, John Muir is still regularly celebrated in culture, arts, and conservation efforts, from depictions on coins and stamps to newly-published books and televised documentaries. His life and writings continue to be an inspiration and role model for youth and adults. With Muir, we're talking about ultimate meanings: Wilderness and the place of humankind in the Universe. For Muir, enjoyment of nature is founded equally on scientific understanding *and* poetic sensibility, and is inextricable from the responsibility of citizens to encourage public decision-makers to value Wilderness and a healthy natural environment.

Muir has been celebrated and honored in dozens of ways in a myriad of categories – everything from astronomy to zoology - including music, holidays, buildings, lakes, mountains, stamps, coins, sculptures, institutions, trails, highways, flowers, animals, fine wine, and even fabric! This presentation depicts many of these amazing tributes to John Muir. John Muir believed that there should never be complacency about Wilderness preservation and protection, and ultimately about living in harmony with the Earth. Muir helped found the Sierra Club to ensure that there would be an ongoing, persistent education enterprise to keep the public informed, active, aroused, and effective.

To this end, we must talk about more than merely Wilderness designation or management issues, but also educate the public about the philosophies behind environmental protection, as so well exemplified in Muir's inspirational life. To learn about John Muir is to understand how one person who cares about the environment can make a difference for public values and policy, and local, state, and national legislation. His life commitments and energies reveal his revelation that it is not enough to enjoy Wilderness and nature if one wants it to be preserved; one must actively express one's appreciation and concern about it.

One component of John Muir's continuing inspiration is expanding the upcoming generation's knowledge of public policy – we cannot deal effectively with our current pressing issues if we do not understand something about conservation and environmental history – including the formation of the national parks and Wilderness preservation systems, and other efforts ranging from protecting endangered species to protecting the global climate from greenhouse gas emissions.

The Future is a Braided River: Scenarios of the Future of Wilderness

David N. Bengston, *US Forest Service*

The future is like a braided river with many twisting and shifting channels, each channel representing a possibility branching out from the present. Uncertainties and surprises lie in wait around every bend. Foresight is needed to navigate this river and arrive at a desirable destination. The need for foresight to guide Wilderness management and policy has increased in recent decades as the pace and complexity of change has increased and the frequency of surprise has grown. Successfully dealing with the accelerating impacts of change on Wilderness – including social, cultural, economic, political, technological, and anthropogenic environmental change – depends on our ability to anticipate and prepare for change. But the prevalence of surprise in social-ecological systems implies that some important uncertainties are irreducible and that traditional scientific tools are blunt instruments for studying a future that does not exist. Managing Wilderness today in the context of an uncertain and turbulent future requires exploring the implications of alternative futures and considering possible “wild cards” – low probability, high impact events that could be game changers.

Scenarios are an effective way to explore plausible alternative futures for Wilderness. Business futurist Peter Schwartz describes scenario planning as a tool for helping us take a long view in a world of great uncertainty. Scenarios are stories with plausible cause and effect links that connect a future condition with the present, while illustrating key decisions, events, and consequences throughout the narrative. Scenarios can help us identify, interpret, and navigate the trends, driving forces, predetermined elements and major uncertainties that will likely shape the future context for Wilderness management and policy. Four major archetypal scenarios that could describe the future setting for Wilderness are (1) a “business as usual” future or continuation of current trends that many people see as the most likely future but may be the least likely; (2) a collapse or unravelling future in which something important went wrong, resulting in a breakdown of social, economic and ecological systems; (3) a disciplined, authoritarian or managed society in which society is organized around a set of overarching values and is highly managed and controlled; and (4) a transformational future which sees the end of many current beliefs, behaviors and organizations and the emergence of new ones, such as the rise of a stewardship ethic and ecological decentralization. Each of these scenarios has roots in our present-day world and could emerge from it, and each can be used as a tool for exploring the implications of very different future contexts for Wilderness and Wilderness management.

Robert Sterling Yard: Unsung Early Wilderness Advocate

John C. Miles, *Western Washington University*

When historic figures of the story of American Wilderness are described, Robert Sterling Yard is usually only mentioned in passing. He is eclipsed by John Muir, Aldo Leopold, Bob Marshall, and Howard Zahniser, among others, yet over a 25-year career as a conservation leader from 1919 to 1944 he wrote about and advocated for Wilderness preservation. His body of work was a significant contribution to what would become the Wilderness preservation movement and ultimately result in passage of the Wilderness Act in 1964. I described and examined what he did and why it was important. The first fourteen years of his conservation leadership was as leader of the National Parks Association, today's NPCA. At the helm of this group, which focused its attention on the emerging national park system, Yard often found himself disagreeing with a National Park Service that seemed bent on expansion regardless of ideals and standards that he thought were in its enabling legislation and its mission. Sometimes he controversially concluded that no park was better than a substandard park. At other times he thought there should be a separate system of Wilderness parks, which he called "national primeval parks." At still other times he wondered if the keeper of Wilderness on public lands should be the Forest Service rather than the Park Service. During the 1920s the Forest Service tried to slow expansion of the Park Service claiming it could more effectively manage and preserve wild nature. The Park Service could not embrace Wilderness and seemed at times more into outdoor entertainment than preservation of nature. Ultimately Yard decided he could not make much progress in his Wilderness advocacy with the National Parks Association and joined Bob Marshall and other founders of The Wilderness Society to create that organization. He became its "permanent general secretary" and from that post wrote extensively, edited its *Living Wilderness* magazine, and lobbied for Wilderness in both national parks and forests. He believed he could do more in an organization focused on Wilderness that would work to protect America's wild heritage, regardless of which agency managed it. "Bob" Yard was not the inspirational leader of The Wilderness Society, as he had been of the National Parks Association, but he was the "old pro," a hard worker even at an advanced age, and a true believer in the cause. During his tenure with the National Parks Association and The Wilderness Society, Yard was always "in the fight." While he could be cranky and, according to some, difficult to work with, he was a skillful writer and editor (he had been a journalist until recruited in the mid-teens to the national park cause by his friend Stephen Mather). An experienced advocate and lobbyist, he was also a workhorse willing to do what he could to build an organization for Wilderness preservation. How significant was he to the Wilderness cause during the decades prior to WWII when the idea of Wilderness was emerging as a core issue of conservation? My goal was to shed light on this question by examining what Yard did and wrote during his long career.

Sigurd F. Olson and the Wilderness Movement

Kevin Proescholdt, *Wilderness Watch*

Minnesota's Sigurd F. Olson played a prominent role in the national Wilderness movement. A charter member of the Wilderness Society in 1935, he gave up his teaching career in the mid-1940s to work for Wilderness conservation for the international Quetico-Superior region that includes the Boundary Waters Canoe Area Wilderness. Olson joined and later chaired the boards of directors of the National Parks Association and the Wilderness Society, and regularly presented at the Sierra Club's biennial Wilderness conferences. He advised Howard Zahniser on the drafting and promotion of the Wilderness Act, and testified in favor of the Wilderness Act at several of the hearings. He played a significant role in the passage of the 1978 BWCAW Act. Olson was also a gifted Wilderness writer. His nine evocative books on Wilderness themes remain in print today, and he was awarded the John Burroughs Medal in 1974, the highest award for nature writing.

Quid Pro Quo and the Devolution of Wilderness

Janine Blaeloch, *Western Lands Project*

Beginning in the late 1990s, a notable change materialized in Wilderness campaigns and legislation. While past Wilderness bills had often entailed compromises, including “release” language that dropped other nearby areas from protection, a new breed of compromise emerged, with Wilderness designations tied to complex land-use legislation addressing issues that went far beyond the Wilderness boundaries.

These deals create a *quid pro quo* situation wherein Wilderness protection is essentially bought with provisions in the same legislation that facilitate development, privatization, and intensified land use on other public lands. For example:

The *Steens Mountain [Oregon] Cooperative Management and Protection Act of 2000 (Public Law 106-399)* was prompted by a Clinton Administration proposal for a national monument at southeast Oregon’s Steens Mountain, in response to which anti-monument interests, including Steens ranchers, entered into negotiations with conservationists over alternative approaches to protecting the area. In the legislation that resulted, a Wilderness Area of about 170,000 acres was created—of which 97,000 acres are “cow-free.” On the other side of the table, ranchers with Steens inholdings who grazed their cattle on adjacent public lands were bought out with land trades netting them more than five times the amount of land the public gained. The legislation also offered \$5 million in cash payments to the ranchers to make them “economically whole.”

The *Lincoln County [Nevada] Conservation, Recreation, and Development Act of 2004 (Public Law 108-424)* designated 768,000 acres of Wilderness in a rural county north of Las Vegas. The tradeoffs for Wilderness protection included: the release of 245,000 acres of Wilderness Study Areas; the granting, for free, of 448 miles of water pipeline rights-of-way on federal land to the Southern Nevada Water and a for-profit water company; the conveyance of over 18,000 acres of federal land, for free, to Lincoln County for open space and to the State of Nevada to expand state parks; and the disposal of 100,000 acres of federal land, to be auctioned off to the highest bidder.

Both local and national Wilderness and conservation organizations supported these and many other *quid pro quo* bills, and negotiated the giveaways that would “balance out” the Wilderness protections they sought. In doing so, the author believes they seriously undermined both public-land and Wilderness protection and laid the groundwork for politicians to demand similar deals whenever Wilderness and other land protections are sought.

Many grassroots public-land and Wilderness advocates have strongly opposed *quid pro quo* Wilderness, succeeding in fending off some of the worst provisions, and even some entire proposals. Now, the conservation and Wilderness communities should join in rejecting, and refrain from participating in, such deals in the future if the integrity of public lands and the spirit of the Wilderness Act are to be preserved.

The Status of Cave Wilderness

Patricia E. Seiser, *National Speleological Society*

The 1963 Congressional hearings for Wilderness testimony included that of the National Speleological Society and the Cave Research Foundation. The resulting report concluded that caves needed further investigation. However, despite four attempts to create a Cave Wilderness designation no Wilderness designation has been made for a specific cave or region within a cave.

The lack of understanding of caves as significant environments, the reluctance of caving organizations to bring caves and cave locations to the public’s attention, as well as the inability to view the cave resources without entering them have all contributed to the lack of understanding for designating Cave Wilderness.

One of the greatest achievements of exploration is to bring to the public’s attention the extraordinary variety of environments that exist in our world. Cave exploration into the unknown maps and brings to light some of the finest and last true Wilderness areas on earth. There is a small number of people who have the skills and knowledge to explore, map, inventory, photo-document and conduct scientific activities within caves in a manner that protects and conserves these often fragile environments. Few caves are large enough and robust enough to withstand development and visitation by the general public. Without documentation discovery is meaningless; without visual evidence of vistas unseen there is lack of understanding.

Wilderness caves and other significant wild caves exist and are protected to preserve their recreational and educational values for the perpetual use, enjoyment, and benefit of all people. Yet, there exist some caves and cave passages that are repositories of scientific and cultural resources of extraordinary value, known and unknown. These same caves and cave passages exhibit high degrees of wildness and naturalness (the physical reality of Wilderness) and the intangible essence of Wilderness (solitude, self-sufficiency, and sense of remote-

ness) such that visitation evokes a Wilderness experience. In order to protect these scientific and cultural resources, Wilderness qualities, and opportunities for discovery, it is proposed that the designation of cave Wilderness be established.

The real question is why do we need a Federal Designation for cave Wilderness? Our forefathers understood that our nation's national treasures are our extraordinary landscapes and thus began protecting them in various land designations. Wilderness Status is our highest honor that we can give to the land. Most Americans understand what Wilderness is and understand the protection of similar lands to differing degrees. If we, as a nation, are unwilling to convey Wilderness status to a cave (or portions thereof) how can we know that we are protecting, conserving, utilizing, other caves in a responsible manner? Cave Wilderness designation will aid in the public's understanding of the need to protect cave environments in a way that will have a lasting impact.

Criteria used in defining Cave Wilderness and values associated with a Cave Wilderness designation, is used to evaluate the 2009 federal legislation creating the Fort Stanton – Snow River Cave National Conservation Area as a potential step in the eventual creation of a designated Cave Wilderness.

Wildlife Habitat Connectivity: Essential for Wilderness Survival

Kim Vacariu, *Wildlands Network*

Passage of the Wilderness Act in 1964 set admirable conservation goals that have protected more than 100 million acres of wild lands over the past 50 years. However, designating disconnected islands as Wilderness Areas is not enough to sustain wide-ranging native wildlife into the distant future. Emerging science has confirmed that large landscape connectivity between protected areas is essential to halting the extinction crisis and permanently saving Wilderness itself.

The effort to protect habitat linkages between existing protected areas is now well underway. One of the most notable of those protection efforts is being lead by Wildlands Network (WN) and its 23 conservation partners in the Western Wildway Network (see westernwildway.org). Founded in 2006 as a means to accelerate partner capacity and wildlife habitat corridor protection and connection activities throughout the Western Wildway (aka "Spine of the Continent"), stretching 6,000 miles from Alaska's Brooks Range south through the Canadian and U.S. Rockies and associated ranges to northern Mexico's Sierra Madre Occidental. This collaborative includes organizations dedicated to the full range of conservation biology tools necessary to provide permanent security for priority connected habitats within this dynamic, large landscape wildway.

Not only do the member groups of the Western Wildway Network provide general cooperative resources to one another, the specific expertise of each organization addresses substantive and often different parts of the overall strategy needed to fully protect wildlands connections between Wilderness and other existing protected areas. Together, the Western Wildway Network works to abate threats posed by fragmented habitats, climate change, wildlife-vehicle collisions, overgrazing, using various approaches ranging from support for species reintroductions, to promotion and locating of Wildlife Bridges over highways, to habitat designation initiatives, to citizen science programs, to policy development, influencing forest planning, litigation and large-scale public outreach campaigns.

While all of these efforts are combining to ensure on-the-ground habitat connectivity across the Western Wildway, the most recent successes are beginning to evolve around large-scale public outreach campaigns designed to embrace non-traditional audiences. Of note have been the network's outdoor "Say Yes to Wildlife Corridors" treks by noted wildway scout, John Davis.

One of the key messages delivered during associated media events is the need for state and federal mechanism that can permanently protect the large landscape wildlife corridors that provide essential connections between protected areas in the Western Wildway.

If Wilderness itself is to survive climate change and a multitude of other threats, there can be no better time to urgently inspire citizens and voters to support candidates and policies that will result in real habitat corridor protection. But time is short and innovative communications approaches are a must if our Wilderness lands are to retain the diversity and ecological strength they have today. Therefore, promoting enactment of legal mechanisms that can designate habitat corridors between existing protected areas should be a priority goal for us all.

The Next Chapter in Wilderness Designation, Politics, and Management

Martin Nie, *University of Montana*

Christopher Barns, *Arthur Carhart National Wilderness Training Center.*

(His contribution to this paper should not be taken as an official position of the Department of the Interior or BLM.)

In commemorating the fiftieth anniversary of the Wilderness Act, we examined what might be the next chapter in Wilderness politics, designation, and management. Parts I and II of the Article reviewed the base of Wilderness-eligible lands managed by the U.S. Forest Service and Bureau of Land Management. Inventoried roadless areas (managed in accordance with national and state-level roadless rules), lands with Wilderness characteristics, Wilderness study areas, and recommended Wilderness areas are reviewed in these sections. These are the lands from which future Wilderness and other protected land designations may come, and we review the interim management measures, planning processes, and politics that will determine whether or not these lands are protected in the future. In Part III, we examined three interrelated factors that will largely shape future Wilderness politics: extreme political polarization, the use of collaboration, and increasing demands for the manipulation of Wilderness areas. Congressional polarization may push Wilderness politics onto different political pathways, including executive branch actions that could be used to protect Wilderness-eligible lands. Collaboration will also continue to shape Wilderness politics in the future, with questions focused on the appropriate scope of compromise. There will also be increasing demands to control and manipulate Wilderness in the future. These three factors will complicate the politics surrounding future Wilderness designations and influence how these lands are managed in the future. Yet despite these challenges, the reasons for adding to the Wilderness Preservation System are stronger in 2014 than they were fifty years ago.

Brower vs. Dominy: The Battle over the Grand Canyon and the Public Perception of Wilderness

Dr. Michaelann Nelson, *Western New Mexico University*

January 21, 1963, one year prior to the passage of the Wilderness Act, inaugurated one of the most significant public debates regarding the meaning and idea of Wilderness in our country. On this day, Floyd Dominy, Bureau of Reclamation Director, announced plans to build two dams on the Colorado River in the Grand Canyon. After just having lost an exhausting battle to save Glen Canyon from being dammed, Executive Director of the Sierra Club, David Brower, vowed that no more dams would be built on the Colorado River under his watch. To this end, he launched the largest publicity campaign in service to the idea of Wilderness in the United States in an effort to garner support from the public to stop the dams from being built. However, he didn't just want to stop the dams from being built, he wanted to change the public's perception regarding Wilderness so that support for these environmentally damaging projects would cease and support for Wilderness would increase.

This presentation examined the influential publicity techniques that Brower used in his campaign to raise awareness about the value of Wilderness in this country. Some of these techniques are ubiquitous in our time, but had never been used before. He took out full-page ads in major newspapers in the country. He staged screenings of documentaries about the Colorado River. Most importantly, he used coffee table books full of beautiful photos of our Wilderness areas to raise awareness about the significance of wild places. His philosophy was that if the public couldn't visualize a threatened place, why would they try to save it? He used "coffee table rhetoric" as his most important tool for raising awareness about the Colorado River and Wilderness values. His publication of *The Place No One Knew* became the most significant tool in teaching the public about the value of Wilderness and what would be lost if we didn't save it. He sent a copy to every member of Congress, every person of influence within the government, and every major newspaper in America.

In response, Floyd Dominy published his own coffee-table book titled *Lake Powell: Jewell of the Colorado*, and also sent it to Congress and other influential individuals. These two men were fighting a battle over public perception of Wilderness and trying to gain hearts, minds, and votes. In the end, Wilderness prevailed. No dams were ever built in the Grand Canyon. Sierra Club membership soared, the Wilderness Act was passed, and public support for Wilderness was at an all-time high. The battle to save the Grand Canyon was a critical moment in the history of the environmental movement as a whole, but even more critical to the passage of the Wilderness Act, as it provided a concrete test of the idea and a place for the people to rally around right at the zenith of its final passage. This presentation details this exciting history, as well as highlights the rhetorical strategies Wilderness advocates used to successfully influence public opinion regarding Wilderness. In fact, these strategies were so successful that today almost every middle-class household in America probably owns a coffee-table book that highlights a natural place.

The Role of Citizen Advocacy in Securing Colorado's Wild Landscapes: A View from the Ground

Mark Pearson, *Conservation Consultant*

Colorado's wild landscape today is the beneficiary of citizen-led efforts to secure protection under the Wilderness Act in the face of competing resource allocations. Several representative case studies describe the tactics, strategies, and political alliances that resulted in legal protection for wild valleys, forests, and mountains in lieu of highways, dams, clearcuts, and mines.

Immediately upon passage of the 1964 Wilderness Act, debate erupted over the proposed route of I-70 through Colorado's central mountains. A provision in the Act accommodated the desire by highway officials to route the interstate over Red Buffalo Pass in the Gore Range Primitive Area. In what was characterized as a battle of "efficiency vs. beauty," highway officials argued for cutting 10 miles off the travel distance by dropping the southern lobe of the primitive area. An aggressive citizen-mobilized campaign rallied state wildlife officials, outdoor recreationists, and local businesses to the cause and argued that Colorado had already lost too much Wilderness, even in the 1960s. Combined with rigorous economic and risk analysis offered by volunteer economists and engineers about the elevated avalanche danger, opponents succeeded in abandonment of the Red Buffalo route in favor of using the existing path of Highway 6 over Vail Pass, securing Red Buffalo's inclusion within the Eagles Nest Wilderness a decade later.

Disputes over dams and transbasin water diversions played a central role in Wilderness designation battles. The Flat Tops hosts Colorado's longest Wilderness river, 20 miles of the South Fork of the White River. Water users offered competing plans for three reservoirs on the South Fork. One dam proponent characterized it as a choice between prompt development of a "very fine hydroelectric power project" or preservation of an ordinary few acres with no special environmental characteristics. Citizen advocates mobilized opposition among anglers, outfitters and guides, and state wildlife managers in a successful campaign that persuaded Colorado's congressional delegation to prefer Wilderness over dams for the South Fork in 1975 legislation.

In the debate over Flat Tops Wilderness boundaries, the Forest Service objected to including the forested valleys below the Flat Tops rim in its 1966 proposal, cited by Wilderness advocates as evidence of the agency's "rock and ice" Wilderness bias. For decades, the Forest Service had eyed the Flat Tops for intensive logging proposals, even selling logging rights in 1950 to salvage log 67,000 acres of beetle-killed spruce in the Primitive Area in a plan that failed only over the buyer's inability to obtain financing for its pulp mill. An advocacy campaign among wildlife managers, outfitters, and recreationists almost doubled the agency's Wilderness acreage with 100,000 acres of forested additions in the 1975 designation.

The Needle Mountains near Durango were the focus of Wilderness debate in 1969, when the Forest Service omitted from its Weminuche Wilderness proposal Chicago Basin and its three "fourteeners" because of century-old mining debris and ongoing exploration interest by Climax Molybdenum. Schoolteachers, newspaper editors, college professors, and mountaineers argued on behalf of the area's classic alpine features, and successfully persuaded Colorado's senators to include the high peaks of the Needle Mountains in the 1975 Wilderness designation.

Wildlife, Wilderness and a Way of Life: The Grassroots Campaign in the Northern Rockies

Frederick H. Swanson, *Freelance Writer*

The concept of a federal Wilderness law arose from an elite group of professionals affiliated with the Wilderness Society, but it took citizens at the grass roots to generate the political will to pass the Wilderness Act and extend its protections beyond the 9.1 million acres it initially designated. Nowhere was this movement more active than in the Northern Rockies of Idaho and Montana, where hunters, anglers, outfitters and horse packers challenged the federal resource bureaucracy's plans to dam free-flowing rivers and open remote back-country areas to intensive forest management. By highlighting the importance of unmanaged rivers and forests to free-roaming wildlife populations, they situated Wilderness preservation within mainstream American values and helped gain political support for their cause. Citizen efforts to protect wild lands surrounding the Bob Marshall Wilderness led in 1972 to the classification of the Scapegoat Wilderness, the first "de facto" area protected as a result of citizen initiative. This was followed in 1978 by the Great Bear Wilderness, a crucial link between the "Bob" and Glacier National Park, and in 1980 by the Central Idaho Wilderness Act, comprising some of the Gem State's finest wildlife habitats.

During the 1930s the Forest Service classified a dozen primitive areas within the national forests of Idaho and Montana and in 1940 joined three of these into the Bob Marshall Wilderness under its administrative regulations. Yet many outfitters and sportsmen understood that these were merely the centerpieces of larger wild regions stretching from Idaho's Clearwater River to the Sawtooth Range and from Montana's Glacier

National Park to the Blackfoot River. In the late 1940s, after the Army Corps of Engineers and Bureau of Reclamation sought to dam headwater streams within the Bob Marshall Wilderness and the Selway-Bitterroot Primitive Area, local wildlife and sporting clubs joined national conservation organizations in protesting the loss of salmon runs, native trout habitat and big game winter ranges and calving grounds. They turned these same arguments against the Forest Service after it announced plans to manage timber stands throughout the wild lands adjoining the Selway-Bitterroot and Bob Marshall areas.

Wildlife groups played a key role in these early campaigns. Their members insisted that large expanses of wild country were necessary for native species such as elk, mountain goat and grizzly bear to thrive. Their support was essential in persuading political leaders such as Idaho's Frank Church and Montana's Lee Metcalf to work for passage of the Wilderness Act and later to extend its protections to millions of acres of "de facto" Wilderness in the national forests of the region. These citizen advocates regarded rivers, forests and mountains populated with wild creatures as indispensable to their way of life. Their efforts provided a template for later grassroots political action that substantially expanded the Wilderness preservation system in this biologically important region.

Aurora Borealis over Honeymoon Rock,
Apostle Islands National Lakeshore,
Gaylord Nelson Wilderness, Wisconsin
By Jeff Rennie, www.jeffrennie.com



Science Track Summary

Science in the First 50 Years, Science in the Second 50 Years

SCIENCE TRACK CHAIR

Susan Fox, *Aldo Leopold Wilderness Research Center, Chair*

Greg Aplet, *The Wilderness Society*

David Cole, *Aldo Leopold Wilderness Research Institute*

Ken Cordell, *US Forest Service*

Chad Dawson, *Society for Wilderness Stewardship*

Beth Hahn, *Aldo Leopold Wilderness Research Institute*

Evan Hjerpe, *Conservation Economics Institute*

Tom Holmes, *US Forest Service*

Jeff Marion, *US Geological Survey*

Carol Miller, *Aldo Leopold Wilderness Research Institute*

Alan Watson, *Aldo Leopold Wilderness Research Institute*

There were many more science topics to address than time permitted at the National Wilderness Conference. A committee was convened to determine what topics to cover at the conference, how to organize the sessions in the track, and whether to solicit presentations or to allow interested participants to submit candidate presentations. The science track planning committee was selected from a variety of scientists from federal agencies, universities, and organizations. The Aldo Leopold Wilderness Research Institute was well represented on the committee as reflects our function as the primary research organization of the National Wilderness Preservation System. Committee members included Chad Dawson (emeritus) with the State University of New York, Greg Aplet with The Wilderness Society, Evan Hjerpe with Conservation Economics Institute, Tom Holmes with Forest Service Research, Jeff Marion with the US Geological Survey, and David Cole, Alan Watson, Beth Hahn and Ken Cordell all with the Aldo Leopold Wilderness Research Institute. The committee decided that in addition to several general sessions on a variety of Wilderness science topics, to have sessions focused on wildlife, fire, recreation, other social issues, economics, and climate change. We reviewed all submissions to determine if presentations addressed Wilderness science and priority science track topics, and we considered the quality of the proposals and the diversity of the presenters so that we could be as inclusive as possible.

KEYNOTE PRESENTATION. The Science Track, unlike the other tracks, had a Keynote Speaker. Perry Brown, Provost of the University of Montana, longtime scholar of Wilderness science and stewardship, and supporter of America's wild lands set the stage for the whole track with his presentation looking back at how science and management issues developed in the past 50 years. He also and looking to the future, forecasting some of the biggest challenges Wilderness managers will face. It was particularly meaningful to have Provost Brown as our keynote speaker because of his role advising the Wilderness agencies. In 1999 and 2000 he was the chair of the blue ribbon panel commissioned by the four NWPS agencies to examine the management of Wilderness over the previous 35 years and to recommend how we might be better stewards in the 21st century. The report identified the need to forge an integrated and collaborative system across the four Wilderness management agencies as its fundamental conclusion. It offered a challenging agenda with specific recommendations to the secretaries of agriculture and the interior to ensure an enduring resource of Wilderness. In the intervening years the agencies worked to overcome the inertia inherent in bureaucracies to follow the recommendations of the "Brown" Report, with little progress. But real progress was promised at the conference. The four agencies announced the release of a new strategic plan for the NWPS that may indeed address a number of the recommendations of Provost Brown and his blue ribbon panel. It was a special occasion to have him initiate our Science Track.

GENERAL SESSIONS. An overview of Wilderness science, and especially the science conducted by the Aldo Leopold Wilderness Research Institute, was the focus of another presentation in the opening general session. Early Wilderness science focused on studies of Wilderness visitors, the impact of recreation on the environment, and fire ecology. Slowly this research agenda expanded to include science on how individuals and society value these unique lands, and on how a variety of threats including air pollution, invasive species, grazing of domestic livestock, wildlife management and climate change affect Wilderness in the larger landscape. The role of how protected wild lands help us understand all ecosystems, not just Wilderness, was another theme of the general science session. It is in Wilderness where the effects of changing environments

on unmanipulated landscapes advances ecological science by offering natural laboratories to understand fundamental rules governing landscape patterns and processes. A main emphasis of this overview was on how stagnant funding limits the scope of research conducted by the federally funded Leopold Institute but also the eroding of Wilderness science in higher education. The confluence of increasingly complex stewardship issues and decreasing research puts the long term viability of our Wilderness lands in question.

Other general presentations challenged the audience with questions about how to evaluate the cumulative effects of restoration activities, visitor use impacts, and research that, when together, show Wilderness is being degraded and can no longer provide the benefits it was designated for. Talk turned to how, even with the clear charge of the Wilderness Act not to trammel, Wilderness managers and scientists continue with research practices that run counter to the law, such as capturing wildlife and setting up exclosures or enclosures. And when faced with decisions about restoration actions and other interventions in Wilderness, there is a great deal of inconsistency in how these decisions are made and whether they are transparently evaluating the impacts to Wilderness character.

CLIMATE CHANGE. Though climate change issues were discussed in several sessions, one session was devoted to climate change and the major impacts it is having and will continue to have on ecosystem composition and function. Wilderness is an important benchmark for scientists because these lands are relatively unimpacted by other management activities (although smaller Wilderness areas may be affected by adjacent management). Presentations addressed the dilemma managers and agencies face in maintaining Wilderness character or adapting to climate change by intervening and trammeling. To further complicate the protection of these unique areas, only 19% of the 762 designated Wilderness areas have completed baseline assessments of threats to the five characteristics of Wilderness described in the Wilderness Act. But, the debate over what components of the ecosystem to preserve or how to continue to provide habitat for keystone and listed species are somewhat irrelevant until we understand how climate has already changed and to what extent it will change in the future. The scientists in this session acknowledged that understanding the Wilderness system is an important first step. A new system of using “climate space” to classify environmental conditions across the National Wilderness Preservation System was presented that could be used to show how that space will change in the decades to come.

WILDLIFE. Wildlife issues were addressed in three sessions because wildlife is such a prominent Wilderness resource. Federal and state natural resource management agencies share common interests to preserve, protect, perpetuate, and manage fish and wildlife populations. Survey research investigating public opinions on the value of Wilderness have repeatedly found strong support for the preservation of wildlife and their habitats. For the NWPS agencies, wildlife management within Wilderness presents a variety of challenges, including questions about law, policy, administrative jurisdiction, and evolving scientific understandings. However, a full synthesis of wildlife research – including information gaps – remains to be completed. The science track organizers believed these issues should feature prominently in this conference. We worked to insure that wildlife issues from each of the Wilderness agencies were a part of these sessions. A variety of issues around specific species were discussed, including bighorn sheep, caribou, grey wolves, red-cockaded woodpeckers, trout, marine turtles, and amphibians. The critical role that Wilderness lands play in providing habitat for these species was discussed, as well as the uncertainties that climate change poses for protecting these species into the future, was featured prominently in the talks.

FIRE. The role of disturbances in Wilderness is a huge topic, too broad and complex to address with the limited number of science sessions available at this event. We decided to focus on one disturbance, fire, because what has been learned about Wilderness fire over the past 40 years has not only greatly advancing fire science in general, but it has important applications to non-Wilderness lands too. Wilderness fires have been allowed to burn in some areas for many decades with many ecological benefits. Tracking these fires demonstrates that letting fires burn naturally can reduce the frequency, size, and severity of future fires, which could reduce the cost of firefighting. But there are many Wilderness areas where fire has been put out or excluded for a long time, creating vegetation conditions and fuel loads that pose a concern for managers when fire does occur. In such cases, Wilderness managers debate whether to use prescribed fire to restore natural fire regimes, but many oppose prescribed burning projects because they trammel Wilderness. Aside from a handful of Wilderness areas that have been able to restore and maintain the ecological role of fire, wildfire suppression remains the dominant form of fire or fuels management in Wilderness areas.

The National Park Service organized one of the three fire sessions as a panel discussion about their wildland fire and Wilderness programs. Over 80 percent of all NPS lands are managed as Wilderness and a

mix of fire management tactics are implemented, including “let burn”, prescribed fire, and suppression. With this in mind, the panelists discussed the question, “Is the NPS wildland fire program fulfilling its mission in Wilderness parks and is Wilderness character being preserved or degraded by contemporary fire management planning and operations?” They debated how these mixed management practices impair or enhance the integrity of NPS natural resources and Wilderness character, highlighting case studies from Everglades, Grand Canyon, and Sequoia-Kings Canyon National Parks.

ECONOMICS. The economic benefits that Wilderness areas and the whole Wilderness system provide have not been well defined, therefore one session focused on the economics of Wilderness. These areas have positive and negative economic impacts on jobs, income, revenue and real estate value at the local, regional, and national scale. Beyond monetary impacts, Wilderness areas provide important ecosystem services such as clean water, carbon sequestration, and wildlife habitat that are poorly assessed and so not widely understood or appreciated. While more than half of all American’s value Wilderness and want to see more land protected as Wilderness, American society is changing rapidly and becoming more urban and, in some cases, more disconnected with nature. This could mean that Americans are losing interest in the designation and management of protected areas like Wilderness, particularly if they do not understand why these areas are important. If we want Americans to continue and even increase their support for these areas, we need to understand what they value and help them understand the benefits. In addition to discussing monetary and non-monetary valuation of Wilderness, speakers discussed trends in Wilderness use and value as evidenced by visits to designated Wilderness areas.

SOCIAL SCIENCE. Scientists have worked with managers to address the shifting research needs and the changing relationships between the US population and Wilderness. While at first a great deal of effort was aimed at understanding the role of Wilderness protection and possibly new designations to help mitigate climate change, today the central role of Wilderness is as a baseline of relatively low human influence to understand climate change impacts on natural systems. The role of Wilderness in providing ecosystem services and restoring natural fire processes will change as America’s population grows and becomes more urban. The relevance and value of Wilderness to the American people must be central to the science we do. This session addressed how Wilderness areas provide a variety of benefits and also contribute significantly to maintain the Nation’s health and well-being. It provided an overview of the value of Wilderness to Americans using data from the National Survey on Recreation and the Environment conducted in 2008. This study showed how the value of Wilderness differs among people of different social strata and among outdoor recreationists in the United States.

Recreation science was the focus of early research on Wilderness after the establishment of the Wilderness Act. There is a large body of research that has been very important to Wilderness managers by providing effective strategies to monitor, measure, and mitigate visitor impacts. Recreation science evolved to cover a wide variety of topics including the provisioning of ecosystem services, society’s acceptance (or not) of the natural role of fire and other disturbances on these lands, conflict management among Wilderness users, and the changing value of Wilderness to American’s. One presentation discussed the challenge Wilderness manager’s face in providing high quality Wilderness experiences emphasizing solitude while the numbers of visitors increased steadily. Techniques were presented in a model developed to assess visitor flow dynamics in the Boundary Waters Canoe Area Wilderness. The impacts of increased day use visitors versus overnight visitors to Wilderness were addressed for the Grand Canyon. And another presentation discussed what has been learned from fifteen years of monitoring visitor demographics, trip profiles, expenditures, and importance/performance preferences on Forest Service Wilderness areas. Another presentation focused on climbing in Wilderness. Technical climbing occurs in approximately half of all Wilderness areas yet the agencies responsible for managing the National Wilderness Preservation System have been slow to issue comprehensive and holistic policy to manage this activity. The impacts of climbing and the risks of failing to develop a comprehensive national policy were discussed.

THE WAY FORWARD. We had excellent speakers, covering important topics but there is still much to do. We want to work with scientists to develop a comprehensive conference to provide a state of Wilderness science in the not too distant future. Once we again describe what we know and what we need to know, then we can use this information to seek support from the Wilderness agencies and we can use this information to develop a comprehensive agenda for research on Wilderness for the next decade.



Perry Brown – Keynote Speaker
University of Montana

Dr. Brown is Provost and Vice President for Academic Affairs at the University of Montana-Missoula. From 2008-2010 he served as Associate Provost for Graduate Education, and from 1994-2010 he was Dean and Professor, College of Forestry and Conservation, and Director of the Montana Forest and Conservation Experiment Station. He has considerable expertise in natural resource social science, policy and planning, recreation behavior and planning, and Wilderness studies. His Ph.D. is from Utah State University and emphasized outdoor recreation and social psychology.

Dr. Brown has served in formal advisory appointments with both the USDA Forest Service and the USDI Bureau of Land Management, including a 2004 leave assignment with the International Programs Office of the USDA Forest Service. He served as a member of the National Research Council's Committee on Forestry Research Capacity and Chair of the Pinchot Institute's National Panel on Wilderness Stewardship. He has been a member of the executive/advisory boards of NAUFRP, the International Union for Forest Research Organizations, the Ecosystem Management Research Institute (a private non-profit research institute), the National Forest Foundation, the National Forest Service Historical Museum, and for ten years he chaired the Executive Committee of the Rocky Mountains Cooperative Ecosystem Studies Unit.

Wilderness, Science, and Management: Looking Back, Looking Forward

Perry Brown, University of Montana

As we celebrate the 50th Anniversary of the Wilderness Act we will examine the relationship between science and management over this time period. The past informs our present and future. It seems that Wilderness is more valued than ever before as our society grows and becomes increasingly business and commerce-oriented. If this is the case, we will increasingly need science in order to understand why Wilderness is more valued and to inform management practices to ensure its preservation. Science offers a useful framework for evaluating the effects of Wilderness management as we strive to maintain this cherished resource.

Wilderness Science: Celebrating its Development and Maturation

David N. Cole, Aldo Leopold Wilderness Research Institute

Although systematic Wilderness science, like the Wilderness Act itself, is only about 50 years old, Wilderness science had important antecedents. In the biological sciences, there has long been a tradition of research into the ecology of natural systems and landscapes, often using study sites that were eventually designated as Wilderness. To a substantial degree the catalyst for systematic Wilderness science came from within Forest Service recreation research. In the late 1950s, the Lake States Forest Experiment Station cosponsored research in the Boundary Water Canoe Area, Minnesota, including that of Bob Lucas, a graduate student in geography at the University of Minnesota, who did a dissertation on visitors, their perceptions of Wilderness and carrying capacity of the area. Initially, this research focused on the Boundary Waters Canoe Area, not because it was Wilderness but because it was among the most unique and valued recreation resources in the forests of the north central United States. With passage of the Wilderness Act, in 1964, however, interest in studying Wilderness because it was Wilderness increased. Again, leadership came from Forest Service Research, which decided to charter, in 1967, a Wilderness Management Research Unit. The unit was located in Missoula, Montana, as a field office of the Intermountain Forest and Range Experiment Station, with Bob Lucas as project leader.

The three most prominent themes of early Wilderness science involved research on Wilderness visitors, recreational impacts on the environment, and fire ecology. Early research developed methods for estimating Wilderness use and provided foundational information about who Wilderness visitors were, as well as the type, timing and areal distribution of use, how visitors use Wilderness, their motivations for visiting, etc. This led to important recommendations about how best to manage recreation in Wilderness. Ecological research, parallel to the visitor research, identified factors that influence the amount of ecological impact caused by recreation, such as amount and type of use and environmental durability, providing further insight into the effectiveness of Wilderness management techniques. Fire research explored the natural role of fire in Wilderness and sought to find ways to restore fire to its natural role. More recently, studies have explored a diverse array of threats, including air pollution, invasive species, grazing of domestic livestock, wildlife management and climate change.

In addition to studying threats to Wilderness as a basis for more effective Wilderness stewardship, science has also explored the values associated with Wilderness and the connections between Wilderness and surrounding lands, linkages to social and ecological systems at regional, national and international scales.

We can celebrate the significant contributions that science has made to improved Wilderness stewardship. This work has impacted stewardship of Wilderness around the world and even of non-Wilderness lands. Wilderness science has increased in breadth, examining diverse threats to Wilderness values, as well as understanding those values and the place of Wilderness in society and the world. As Wilderness science has expanded it has lost, perhaps necessarily, some of the focus and collaborative spirit that existed in its first few decades. Even those few scientific disciplines that considered Wilderness to be an important category of research, primarily recreation and fire, no longer do so. This suggests the need to reinvigorate Wilderness as an organizing subject of study as we move forward after the 50th.

Ecological Inference from Wildlands: What has Wilderness Taught Us about Ecosystems?

Travis Belote, *The Wilderness Society*

CENTRAL THEME. In wildland ecosystems where the dynamics in structure and function are untrammelled, species find their own solutions to environmental changes caused by disturbance, altered physical processes, population fluctuations, and shifts in climate. We recognized the 50th anniversary of the Wilderness Act by taking inventory of the many ways wildlands have advanced our understanding of the dynamics of nature through ecological research.

METHOD. In August 2014, we organized a special session at the annual meeting of the Ecological Society of America celebrating the 50th anniversary of the Wilderness Act and highlighted the role Wilderness areas play in advancing ecological science. We focused on research that benefits from using Wilderness areas as sources of inference and highlighted a diverse array of ecosystems, geographies, and ecological theories. Themes covered by our speakers included: (1) disturbance dynamics in maintaining landscape composition and structure; (2) movement and stability of populations of animals across large landscapes; and (3) spatial structure and persistence of populations and ecosystem services at local, landscape, and regional scales.

RESULTS. A major theme emerging from multiple speakers was that the complexity of self-willed nature provides the required landscape diversity that sustains species and the services upon which we depend. Ecological complexity often generated through disturbance gives rise to the opportunities for a diverse array of species to coexist. Fire creates diverse conditions where alternative successional trajectories create fine-scale biodiversity in forests of the Bob Marshall Wilderness, and small landslides can create stream conditions where salmon build redds for spawning. Wildlands that host large predators can also create trophic cascades which govern the composition of predator assemblages and ecosystem functions. The other emerging lesson learned through ecological research of wildlands is that wildlife and ecological processes within Wilderness can be strongly negatively impacted by human impacts outside of wildlands. This was best exemplified by research on salmon migrations from the Pacific Ocean to the Frank Church Wilderness in central Idaho and caribou migrations across the arctic. Populations of wildlife in Wilderness can be impacted by development outside of Wilderness. The flipside is that people outside of Wilderness also benefit from the complexity of nature inside of Wilderness. The reliability of salmon stocks and harvests in Bristol Bay is directly related to the high degree complexity in wildland watersheds where salmon breed.

CONCLUSION. Wild lands where nature is allowed to find its own solutions to changing environments has advanced ecological science by offering natural laboratories to understand fundamental rules governing landscape patterns and processes. Complexity of nature gives rise to biodiversity and reliability of resource upon which we depend. The importance of Wilderness as untreated experimental controls will continue to increase as managers actively manipulate systems in response to an onslaught altered climate, invasive species, and atmospheric pollution. As we are increasingly called to manipulate systems in response to global change, maintaining Wilderness across diverse ecosystems will continue to offer inferences into nature's own solutions to Earth's biophysical dynamism.

The Continued Importance of Wilderness as a Viable Conservation Strategy in a Changing Climate

Anne A. Carlson, *The Wilderness Society*

Greg Aplet, R. Travis Belote, Peter McKinley, *The Wilderness Society*

In recent years, the viability of Wilderness as a conservation strategy has come under fire as a multitude of stressors (including climate change, invasive species, and altered nutrient loads) have impacted ecosystems once considered pristine. Here, using evidence-based conservation, we argue that Wilderness (and protected lands) still constitute an important conservation strategy in an age of shifting climate. First, we describe the function of unmanaged wild lands in continuing to serve many ecological, social, cultural, and economic purposes in rapidly changing conditions. Second, we consider the ways in which managers could more effectively contend with the significant amounts of uncertainty associated with climate change through a portfolio approach that creates zones of different management strategies (*sensu* Aplet and Gallo, 2012). For example, “observation zones” – lands where the impacts of climate change and other stressors are expected to be low to moderate – could comprise areas where managers both accept and learn from climate-induced changes. “Restoration zones” – lands where the impacts of climate change and other stressors are expected to be moderate to high – could include areas where managers actively resist climate-induced changes by working to restore resilience to degraded lands. “Innovation zones” – lands where the impacts of climate change and other stressors are expected to be extremely high – could comprise areas where managers choose to facilitate transition to novel ecosystems given expected ecosystem transformation. Wilderness plays an important role within the “observation zones” of this framework, but one that is unique to each landscape and its particular values, history of land use, level of ecological integrity, and suite of stressors. Rather than just affirming or rejecting the concept of Wilderness outright, the application of a risk management approach to large landscapes develops a socio-economic and ecological framework for understanding the ways in which Wilderness may (or may not) help managers sustain key values in the face of numerous stressors (including climate change) in each locale. By combining the best available science with consensus-building discussions with stakeholders about values, risk, and active adaptive management strategies to address these risks, we suggest that the concept of Wilderness and its value to both rural and urban stakeholders could continue to evolve in coming decades. Third, we test this approach in three large landscapes, including the Crown of the Continent (an 18-million acre ecosystem spanning 25 degrees of latitude from Northwestern Montana to Southern Alberta and British Columbia), the High Peaks Refuge Project in Maine; and the Sierra Nevada Mountains of California. In these examples, a portfolio approach facilitates critically important planning to maintain connectivity for threatened, endangered, and big game wildlife species under different future climate scenarios – both in existing Wilderness and in discussions about possible future Wilderness designations. This approach also allows for the consideration of values unique to urban and rural communities in these landscapes; e.g. headwaters sources for drinking water (urban) and agricultural use (rural), favored hunting and fishing sites (rural), and sources of income for outfitters (rural businesses with many urban clients). Finally, integrated portfolio approaches in all three landscapes highlight additional ways in which Wilderness may continue to play a critically-important role as a conservation strategy over the course of the next several decades.

50 Years of Progress in Wilderness Fire Science

Carol Miller, *Aldo Leopold Wilderness Research Institute*

Recognizing the role of natural disturbance processes in shaping primitive Wilderness landscapes, the federal agencies established policies in the late 1960s and early 1970s to allow the use of natural fires in Wilderness. By allowing fires to burn in Wilderness on their own terms, Wilderness managers launched a large scale experiment that would greatly advance our scientific understanding of fire.

Much of what we understand about fire ecology comes from observations of natural fires in several Wilderness areas that have been allowed to burn under a wide range of physical and biological conditions since the 1970s. Wilderness fires have provided valuable datasets for improving fire history methods and understanding of the drivers of fire. It is inside Wilderness where enough data have accumulated from multiple repeated fires at natural fire intervals to see how forests respond to fire. As a result of the Wilderness fire management experiment we can better anticipate the consequences of reintroducing fire and whether restoration with natural fire might be feasible.

The experience of allowing fires to burn in Wilderness has also contributed to social science knowledge. Studies have examined how public support for the use of fire in Wilderness can change over time. Studies of the institutional factors that influence the use of fire in Wilderness have pointed to difficulties with implementing Wilderness fire policy. One important study revealed that the belief and commitment of an individual line officer is essential for overcoming obstacles and for carrying out a Wilderness fire program.

Over the next several decades, a changing climate along with a changing human footprint will affect Wilderness fire regimes and their management. Increasing fire danger could narrow the prescriptive windows for allowing Wilderness fires to burn in the near future. This situation will be exacerbated by land use changes and development patterns and the feasibility of allowing Wilderness fires to burn unimpeded may decline or vanish altogether, particularly in smaller Wilderness areas that simply are not big enough for long-duration fires to spread naturally without threatening adjacent values-at-risk. In the future, making the decision to allow fire to burn in Wilderness will increasingly demand scientific information and will likely require an even more firm belief in the value of natural fire.

The best way to learn about fire is to observe fires burning in the natural environment under a diversity of conditions and then to observe and evaluate their effects over time. However, the decision to allow a fire to burn has always been difficult to make, and is unlikely to get easier. The future of Wilderness fire management programs will depend upon using what we've learned from these valuable case studies over the past 50 years.

The History and Effects of Restoring Fire at Two Southwest Wilderness Areas

Jose Iniguez, *US Forest Service*

Molly Hunter, *Northern Arizona University*

Calvin Farris, *National Park Service*

Ellis Margolis, *University of Arizona*

Southwestern forests evolved under various fire regimes, including frequent low severity fires and infrequent high severity fires depending on elevation and forest type. Across the Southwest, most of these original forests have been significantly altered by logging, fire suppression or both. There is a clear need to restore these forests, but how to restore them is still unclear. One option fire alone, however has both benefits and draw backs many of which are unknown given its limited application. The objective of this study was to evaluate the ecological impacts of using fire alone to restore forested landscapes within two Wilderness areas in the Southwest.

The Gila and Saguaro Wilderness areas are isolated landscapes that were never logged. More importantly, both of these landscapes have also experienced a restoration of the historical fire regimes following the passage of the Wilderness Act in 1964 and the increased emphasis on returning the natural fire process to Wilderness areas. The unique history of these two areas provides a natural experiment to study forest structures and fire processes. Over the last several years we have initiated a series of ecological studies to determine the impact of managed fires both at the landscape and stand levels.

At the landscape level, our results show that the recent rate of burning steadily increased since the 1970 in both Wilderness areas. Fires have continued to increase in size in the last decade, but only in the Gila Wilderness, culminating in series of mega fires (>80,000) in the last three years. In the Gila this has resulted in a rate of burning similar to the tree-ring reconstructed historical rate. The severity of these recent fires has varied, and so have their impacts the forests structure. At the stand level we found that moderate severity fires are optimal at restoring forest structure in pine forests, because they result is some live trees but are severe enough to reduce tree densities to historical levels. Although low severity fires are less effective at reducing tree densities, we found that multiple fires can also be effective at restoring forest structure. Recent fires during historic droughts have also burned higher elevation mixed conifer forests. The high severity patches created by these fires however are larger than those estimated in historical reconstructed fires. Based on our results we conclude that these two Wilderness areas show that restoration of both forest and landscape structure can be achieved using wildfire alone.

Wildland Fires Limit the Occurrence, Severity, and Size of Subsequent Fires

Sean Parks, *Aldo Leopold Wilderness Research Institute*

Carol Miller, *Aldo Leopold Wilderness Research Institute*

Lisa Holsinger, *Aldo Leopold Wilderness Research Institute*.

Wilderness areas are a valuable reference for understanding natural disturbance processes relative to more managed or manipulated lands, and as such, are appropriate natural laboratories for studying wildfire. Recently, there has been particular interest in gaining a better understanding of how wildfires modify subsequent fire behavior. Though there is ample anecdotal and theoretical evidence to suggest that past burn scars moderate subsequent fire activity, there has been little quantitative evidence indicating the existence of this effect, how it may vary by ecosystem type, and how it decays over time. Because some Wilderness areas have experienced substantial wildfire in recent decades, there is now an opportunity to quantitatively evaluate feedbacks between past wildfire and subsequent fire.

We conducted this work within four large study areas in the western US primarily composed of Wilderness, ranging from relatively warm and dry ecosystems (Gila/Aldo Leopold Wilderness) to cool and wet ecosystems (Selway-Bitterroot Wilderness). As a first step, we augmented existing fire atlases by mapping fire perimeters and burn severity of all fires ≥ 20 ha using satellite imagery spanning 1972-2012. We then evaluated if wildfires 1) reduced the probability of subsequent fires from occurring, 2) limited the size of subsequent fires by acting as fuel breaks, and 3) limited the severity of subsequent fires.

Results suggest that wildfires indeed limit the occurrence, size, and severity of subsequent fires. The strength and decay rate of the moderating effect vary by study area, which suggests fire regime characteristics and ecosystem-level processes controlling regrowth of vegetation – or productivity – are responsible for these differences. The moderating effect is weakest and decays fastest in the warm and dry study area primarily representing low- and mixed-severity fire regimes, whereas the effect is strongest and decays slowest in the cool and wet study areas primarily representing mixed- and high-severity fire regimes.

Our results will be useful to Wilderness fire managers who seek to restore natural fire regimes. Our findings should also prove valuable to non-Wilderness managers who wish to manage fires for their resource benefits or exploit recent burns when managing future fire. Given that fire will inevitably occur within most vegetated areas at some point in the future, our findings will allow land managers to weigh the short-term “costs” of wildfires (i.e. smoke, blackened trees, risk to infrastructure) against its longer-term benefits (i.e. future reduction in fire occurrence, size, and severity). Ultimately, our results provide land managers a longer timeframe in which to view the benefits and costs of an individual fire.

Fire Keeps the Wild in Wilderness: Ecological Fire Use for Wilderness Fire Management

Timothy Ingalsbee, *Firefighters United for Safety, Ethics, and Ecology*

Despite widespread perceptions that we are experiencing an overabundance of wildfire, most of the North American continent has been altered by past fire exclusion policies and ongoing fire suppression actions that have created an historic fire deficit. This fire deficit has led to significant changes in fuel loads, and vegetation structure and composition that are causing uncharacteristic wildfire behavior and effects, and are potentially leading to novel fire regimes. These fire-related biophysical changes across many (but not all) landscapes may also be altering Wilderness areas and degrading some of the social and natural values they were established to protect. In order to compensate for the historic fire deficit, mitigate uncharacteristic fire severity of future wildfires, and enhance ecological resiliency of native biodiversity in the face of changing climatic and fire regimes, active fire management is proposed in Wilderness.

Many of the traditional mechanical, chemical, or biological methods that agencies prefer to use to manage fire and fuels such as commercial thinning, herbicide spraying, or livestock grazing are not legally allowed in Wilderness. This leaves some kind of fire treatment, either through prescribed burning where managers intentionally start fires, or using lightning-caused wildfires, commonly referred to as “let it burn.” However, many Wilderness advocates oppose prescribed burning projects in Wilderness, viewing them as unnatural human interventions, while much of the public, politicians, and agency officials oppose allowing wildfires to burn uncontrolled. The result of constraining opportunities for using fire to manage fuels in Wilderness is that aggressive wildfire suppression is the dominant form of fire or fuels management in Wilderness areas.

The Wilderness Act allows fire control actions to occur in Wilderness, but fire suppression adversely impacts the wildness and naturalness of Wilderness. In keeping with its minimum-tool ethic, the Forest Service has traditionally rarely authorized the use of mechanized vehicles and equipment in Wilderness, but there is evidence that this policy is changing, intensifying the short-term intrusiveness and long-term adverse impacts of suppression. With each successful fire suppression incident the fire deficit grows, further altering native biodiversity and natural fire regimes in Wilderness.

We believe that fire helps keep the wild in Wilderness. We propose Ecological Fire Use, a new kind of active management of wildfires, as the most natural, practical, and philosophically acceptable means of reintroducing fire in Wilderness. Our vision of Ecological Fire Use avoids past dichotomies between passive “let burn” and aggressive fire “fighting” responses to wildfire, while upholding the Wilderness values of naturalness and wildness. A new corps of Fire Rangers trained in ecological fire use techniques would function as “fire guiders” rather than fire fighters, carefully starting and steering fires rather than trying to stop them. Support for Ecological Fire Use will require an attitudinal shift among Wilderness advocates to view active fire management as a natural *interaction* rather than artificial intervention in Wilderness, thereby resurrecting our species’ ecological role as torchbearers stewarding fire-adapted ecosystems.

We've Got One Foot in the Frying Pan and the Other in the Pressure Cooker

Susan Fox, *Aldo Leopold Wilderness Research Institute*

Beth Hahn, *Aldo Leopold Wilderness Research Institute*

Funding for Wilderness has always been inadequate. Some say that this is because Congress and federal Wilderness agencies assume that once land is designated as Wilderness that it does not need to be managed. Funding for Wilderness research is a fraction of that available for addressing research needs on other lands and yet Wilderness lands are increasingly at the center of conflict and litigation. Similarly, although the law requires us to protect Wilderness character, we have only established baseline monitoring data on Wilderness character for less than 20 percent of the Wilderness areas in America. Are not doing a good job of describing the important research questions that face Wilderness managers? Why have we not gotten funding for baseline monitoring in Wilderness when inventory and monitoring programs have existed on other lands for over 70 years? A new paradigm for getting support for Wilderness research and monitoring was described.

The Aldo Leopold Wilderness Research Institute was established to conduct science for the four National Wilderness Preservation System (NWPS) agencies. The natural resource agencies conduct some science on these lands themselves, and a number of universities address a wide range of Wilderness research topics, as do some Wilderness organizations. The Wilderness Society in particular, has had a significant number of scientists studying a variety of ecological and economic topics. All of these organizations have had to reduce funding for research in the past decade due to the national recession in 2008 and federal budget cuts. But the number of issues that Wilderness managers have to deal with are increasing rapidly and becoming more complex. A strong science program is needed to support effective management. Science should inform managers about the state of the Wilderness ecosystem and options available to managers.

Funding provided through Congressional appropriations will continue to serve as important base fiscal support for federal Wilderness science. But other strategies will have to be developed to raise funding to address the many science needs of the NWPS. One approach that we are developing at the Aldo Leopold Wilderness Research Institute is foster a public/private partnership. This would bring the outdoor industry into partnership with the federal agencies that manage Wilderness. Given the significant income that the outdoor industry derives from recreation and recreation related industries on public lands, we expect they will be motivated to show consumers who purchase their products that they care enough about lands, Wilderness lands in particular, that they want to invest some of their profits on addressing important science questions. The Leopold Institute is also seeking to develop an endowment for the Institute. An endowment would provide annual funding stability that would allow the Institute to develop and then maintain a program of research to address the most pressing question facing Wilderness managers.

Scientific Restraint Protects Wilderness Values

Kevin Hood, *US Forest Service*

Fran Mauer, *US Fish and Wildlife Service, retired*

The panel posited that scientific research practices increasingly rely on mechanized access, in-situ structures, and hands-on handling of wildlife in designated Wilderness Areas in direct conflict with the legal requirements of the Wilderness Act to protect and maintain Wilderness values and character. The panel examined the purpose of science in Wilderness, illustrated specific examples of conflict, considered key questions and explored alternative non-invasive approaches to science in Wilderness. We concluded that there is a need for greater restraint such that we do not degrade Wilderness in our efforts to better understand and manage it.

How Much is Too Much? Evaluating Cumulative Impacts of Visitor, Administrative, Commercial and Science Uses

Peter Landres, *Aldo Leopold Wilderness Research Institute*

This presentation explored a fundamental question in Wilderness stewardship and planning that has been all but ignored: how much is too much? Wilderness is now at a particular juncture in time with increasing ecological impacts from surrounding development and climate change, and increasing demand as a source of ecosystem services and as a baseline to understand the functioning of ecological systems as well as our human place in nature. As Wilderness stewardship continues to mature and evolve, a crucial emerging issue is how to evaluate and apportion the various uses and demands on Wilderness from the combination of visitor, administrative, commercial, and scientific uses. Of primary concern is how to evaluate the accumulation of seemingly small actions that,

only when added up, show that Wilderness has been degraded and can no longer provide the benefits it was designated for. This presentation built on a workshop that was held in 2012 at the National Park Service's Western Arctic Parklands to explore these issues and develop a preliminary framework to guide Wilderness planning and stewardship across millions of acres of arctic Wilderness to maximize the preservation of Wilderness character.

Framework to Evaluate Proposal Ecological Restoration Treatments in Wilderness

Beth Hahn, *Aldo Leopold Wilderness Research Institute*

Peter Landres, *Aldo Leopold Wilderness Research Institute*

Every year, the four agencies that manage Wilderness – the BLM, FWS, FS, and NPS – receive hundreds of proposals to implement ecological restoration actions within the National Wilderness Preservation System (NWPS), a network of 757 units across more than 109 million acres of public land. Ecological restoration treatments that are currently implemented within the NWPS include: actions that manage vegetation (e.g., chemical and mechanical removal of invasive plants, planting trees); actions that manage fish, wildlife, insects and disease (e.g., introducing biological control agents, fish stocking, animal removal); actions that manage soil and water (e.g., mine site reclamation, spreading lime to buffer acid deposition); and, actions that manage fire (e.g., suppressing human-caused fire, mechanical fuels reduction treatment, prescribed fire).

On the 50th anniversary of the Wilderness Act, the combination of climate change with other landscape stressors is driving ecological restoration to be one of the single most important, challenging, and potentially litigious Wilderness stewardship issues because decisions need to incorporate diverse legal, scientific and ethical considerations. Wilderness managers must evaluate whether restoration actions are needed and their effect on Wilderness character, in the context of great uncertainty. Agencies charged with managing Wilderness need transparent, defensible criteria to evaluate proposed ecological restoration activities within the NWPS. Current law and policies do not provide explicit support for decision-making, and management decisions often reflect views based on varying philosophical, cultural, and ethical beliefs about the fundamental values of Wilderness.

In this presentation, we described a framework to evaluate proposed ecological restoration in Wilderness, including our methods and pilot testing. The framework was developed to be: comprehensive and systematic, providing a structured basis to evaluate criteria involving law and policy, ecological understandings, and ethical considerations; broadly applicable, by being relevant across the country to all NWPS units and agencies; and, flexible, to allow for modification to reflect local thinking and values regarding Wilderness and restoration.

Status of Ecosystem Representation and Ecological Integrity within the National Preservation System

James Tricker, *Aldo Leopold Wilderness Research Institute*

Peter Landres, *Aldo Leopold Wilderness Research Institute*

This presentation examined the current status of ecosystem representation and ecological integrity within the National Wilderness Preservation System. Even though the concepts of ecosystem representation and ecological integrity are not mentioned in the 1964 Wilderness Act or in subsequent Wilderness legislation, Wilderness forms the cornerstone of most regional scale as well as local conservation plans. In addition, Wilderness is typically assumed to provide adequate protection of the ecosystems within the area designated, yet this assumption has never been tested. Using recently published, yet separate analyses of ecosystem representation within all types of protected areas and of ecological integrity, we showed how ecosystems are represented in the National Wilderness Preservation System and, for the first time, the ecological integrity of the ecosystems that are represented. This analysis showed that even though ecosystems may be represented in Wilderness, it is just as or even more important to understand the ecological integrity of the areas that are represented.

The Complexity of Restoring Fire-Dependent Ecosystems in Wilderness Settings

Robert E. Keane, *US Forest Service*

Many western US Wilderness ecosystems have a long history of wildland fires that sculpted the picturesque and diverse landscapes that are so highly prized by society. However, decades of fire exclusion in many Wilderness settings have resulted in declines of fire-adapted species and ecosystems. Efforts to return fire to Wilderness ecosystems had mixed success because of the great organizational, philosophical, logistical, and ecological complexity involved in restoring fire-excluded ecosystems that exist in Wilderness areas. This presentation described the complexities of Wilderness ecosystem restoration using two iconic ecosystems in the Bob Marshall Wilderness Complex (BMWC) of western Montana, USA as examples. The relict ponderosa pine communities along the South Fork of the Flathead River in the BMWC were frequently burned by Native Americans as they traveled to bison hunting grounds in the Great Plains. Over the last 50 years, these stands have experienced successional replacement by Douglas-fir and lodgepole pine following decades due to fire exclusion. Recent fires have burned these stands and the high fire intensities in some fire-excluded areas with heavy canopy fuels killed relic large pine trees, some having scars from Native American back-peeling. The whitebark pine ecosystem of the BMWC has been declining for over 50 years due to the combined effects of fire exclusion, the exotic white pine blister rust, and outbreaks of mountain pine beetle. Whitebark pine forests are considered foundation and keystone ecosystems because of the great number of faunal species that depend on their seeds and the plant species that only occur in these ecosystems. Successional replacement of the pine with subalpine fire has created landscapes that foster high intensity crown fires that burn in spatial patterns that were historically rare. Recent fires in both ecosystems have had benefits (reduced competition, consumed fuels, improved regeneration) and damages (high mortality, loss of important relicts, rare landscape structures) to these important ecosystems. The science and technology is readily available to restore these ecosystems but there are many organizational, social, and political barriers that preclude effective restoration activities. The use of prescribed fire technologies, such as heli-torches, drip torches, and firelines are critical for returning fire-exclude pine ecosystems but they are considered undesirable in most Wilderness settings. Planting rust-resistant seedlings in high elevation Wilderness burns is a critical activity in restoring whitebark pine ecosystems, yet this activity is against Wilderness policy for US Forest Service Wilderness areas. This presentation explored the challenges, strategies and barriers to restoration of deteriorating ecosystems in Wilderness and discussed the complexity of managing fire-dependent ecosystems in Wilderness settings by asking some important questions: should these ecosystems be restored? What restoration activities are possible? Are unhealthy ecosystems Wilderness ecosystems? In the end, the decision on whether or not to restore declining Wilderness ecosystems will be based on whether the restoration action fits under the Wilderness Act further highlighting the clash between ecosystem management and Wilderness management in Wilderness settings.

Forest Dynamics in Stand-Replacing Fire Patches within a Long-Established Managed Wildland Fire Area

Brandon Collins, *US Forest Service*

Scott Stephens, *UC Berkeley*

Managing forest stands following high severity, or stand replacing, fire is an issue of great concern in federal forest management. This concern is largely focused on forest types that were historically associated with fairly frequent, low- to moderate-severity fires. In these forest types dominant tree species generally do not have direct mechanisms to establish immediately following stand-replacing fire (e.g., serotinous cones, re-sprouting), which leads to uncertainty in the timing and patterns of forest stand development. As such, managers are unsure what, if any, intervention should be done to help these forests recover from stand-replacing fire. In this study we investigated change in vegetation and fuels following stand-replacing fire. We did this by comparing initial (2002) and 10-yr re-measurements (2012) of standing trees (live and dead), tree regeneration, surface fuels, and understory vegetation from the same plot. These plots are within a long-term wildland fire use area (Illilouette Creek basin, Yosemite National Park), and were initially installed to characterize forest and fuel structure under more 'natural' modern fire regimes. This information can be used by managers to assess whether recovery for particular stand-replacing fire areas in similar forest types is within the 'natural' range of variability. If such areas are not within the 'natural' range of variability managers may choose to prescribe treatments to more closely approximate the vegetation and fuel characteristics reported in this study.

More Intervention in Wilderness?: The Case of Forests, Fire and Climate in the Northern Rockies

Eric G. Keeling, *State University of New York*

Cameron E. Naficy, *University of Colorado, Boulder*

An important question currently being debated is how to manage Wilderness areas under increasing human influence. Some have proposed that fewer restrictions may be necessary in protected areas to permit management interventions designed to maintain ecological function and resilience of natural communities. However, increasing direct management interventions in Wilderness may be antithetical to the purpose of the Wilderness Act and degrade Wilderness character. A scientific evaluation of the ecological basis for intervention is therefore vitally important for Wilderness areas.

The Northern Rockies includes some of the largest Wilderness areas outside of Alaska and management of low- to mid-elevation forests in this region is complex and controversial. Following decades of fire-suppression policies, some of these forests are now considered to be in an “unnatural” condition due to higher densities and changes in species composition. These structural changes coupled with a projected hotter and drier climate have raised concerns that aberrant high-severity wildfire and reduced physiological performance threatens the future of these forests. Restoration projects to thin forest stands and reintroduce fire are seen as one possible solution to reduce these threats. However, there are uncertainties about the necessity and efficacy of active restoration strategies in protected areas. We investigated effects of prior logging, fire history, and climate-fire relationships on the density, species composition, and physiological status of ponderosa pine forests inside and outside Wilderness areas in Idaho and Montana. Consistent with previous studies, we document that, on average, fire exclusion has resulted in increased forest density and shifts towards more shade tolerant species. However, this effect is highly variable, with many fire-excluded stands still within the historical range of variability (HRV) of frequently burned stands. Importantly, we found no evidence that structural changes associated with fire exclusion have resulted in reduced physiological performance of old, fire tolerant trees compared with trees in frequently burned stands. Moreover, historical logging practices have greatly exacerbated structural changes, with significantly greater magnitude of departure from the HRV and lower variability between sites, beyond that caused by fire exclusion alone. These results suggest that unlogged, fire excluded forests, such as those predominantly found in protected areas, may not be in dire need of restoration, especially if mechanical treatments result in counterproductive long-term positive feedbacks on tree density and composition changes. This notion is also supported by evidence from numerous studies in unlogged, fire-excluded ponderosa pine forests across the western U.S. which document low relatively low incidence of high severity fire in modern fires. Finally, we note increasing support in the literature for mixed-severity fire regimes in many ponderosa pine forests, where even large areas of high severity fire may be common. Our results and analyses suggest that justifications for increased intervention should be tested before new, less restrictive management paradigms are embraced in Wilderness areas.

Achieving Resilient Landscapes through Expanded Use of Wilderness Fire

Greg Aplet, *The Wilderness Society*

Since the 1960s, managers have been restoring fire as an ecological process to remote Wilderness landscapes. In areas like the Gila Wilderness in New Mexico, Yosemite and Sequoia-Kings Canyon National Parks in California, the Selway-Bitterroot Wilderness in Idaho, and the Bob Marshall Wilderness in Montana, decades of Wilderness fire management have produced resilient forest landscapes with reduced fuels and more moderate fire behavior than observed elsewhere. In these landscapes, managers have achieved open forests of large trees, abundant snags, forest regeneration, and low fuel loads through decades of careful use of wildfire and are now comfortable letting wildfires burn because they are confident of the behavior they will get, the benefits they will achieve, and the savings they will realize.

Unfortunately, despite these gains, the benefits of Wilderness fire are largely limited to a handful of remote locations. On the majority of landscapes, suppression remains the dominant response such that the only fires that occur are those that burn under extreme conditions – with extreme results. Spreading the benefits of Wilderness fire will require a different approach to wildfire – one that embraces fire under less-than-extreme conditions. This shift in practice will become even more important as the climate warms, making fire more likely and suppression less effective.

Fortunately, federal fire policy is flexible enough to allow this shift. The problem is that there are few incentives for managers to take advantage of that flexibility. Land management plans need to acknowledge the benefits of fire to ecosystems so that firefighters can manage for them, and those firefighters need to know

that they will be rewarded for their actions. Those same personnel need training in the management of fire for resource benefit, perhaps including the maintenance of elite crews dedicated to restoring fire to the landscape. Air quality regulators must have a positive role to play in the restoration of fire, and research must continue to be funded to continually improve our understanding of fire behavior and its management. The past half-century has amply demonstrated the benefits of Wilderness fire. Achieving resilient landscapes in the future will require a new commitment to ensure that these benefits spread beyond a handful of sites.

The Role of Scientific Research in Wilderness Stewardship: Past, Present and Future

G. Sam Foster, *US Forest Service*

John Dennis, *National Park Service*

Nancy Roeper, *US Fish and Wildlife Service*

Peter Mali, *Bureau of Land Management*

Liz Close, *US Forest Service*

This presentation focuses on the major contributions of science to the management of Wilderness lands and where Wilderness science needs to focus its efforts in the future. Sound management decisions are based on robust science. Wilderness science, as a discipline, grew initially out of recreation science and drew on expertise from other disciplines as the Nation's Wilderness system expanded. Over the past 40 years, much research on these protected lands has focused on the following topics: recreation, social science, wildlife, fire, ecology, restoration, and invasive species. The research conducted in Wilderness, i.e. fire behavior, can be, and often is, applied to other lands and vice versa. Today, research is directed towards many needs identified by Wilderness managers and the legal dictates of Wilderness, for example clean air, endangered species and other legislation.

Effective stewardship entails the preservation of Wilderness character. In recent years, scientists have been working closely with Wilderness managers to develop important assessment and monitoring tools. This assessment in Wilderness areas across the nation provides a baseline to track changes in Wilderness character over time and to determine the best management strategies to protect Wilderness character.

Now Wilderness managers and scientists are developing research to address four emerging and important issues: (1) the effects of our rapidly changing climate and other disturbance regimes; (2) introduced plant and animal species; (3) the impacts of recreation from our growing population; and (4) the influence of surrounding lands on Wilderness. Since this system is managed by four agencies, these organizations must work together to develop priority lines of research to consistently manage across the whole National Wilderness Preservation System.

This presentation, (1) described how research has helped management of Wilderness lands in each of the four agencies, (2) described where there has been conflict between research results and management goals, and (3) described what gaps managers have that they need research to address and what new challenges they are facing.

Wilderness on Fire: Examining the Interplay between Policy, Planning & Management

Erin Drake, Tim Devine, Tom Nichols, Bill Kaage, Darlene Koontz, Rich Anderson, Jay Lusher, Gregg

Fauth, *National Park Service*

Stu Hoyt, *US Forest Service*

Central to the National Park Service's (NPS) wildland fire program mission is the presence of wildfire on the landscape in park units across the country. This is especially resonant in park units that have Wilderness and are mandated to preserve Wilderness character. Over 80 percent of all NPS lands are managed as Wilderness, including nearly 44 million acres of designated Wilderness in 50 units. Reflecting on the past 50 years of fire management in Wilderness areas, the NPS's Wilderness Stewardship Division and Division of Fire and Aviation Management asked, "Is the NPS wildland fire program fulfilling its mission in Wilderness parks *and* is Wilderness character being preserved or degraded by contemporary fire management planning and operations?"

An initial analysis was completed on 17 "Wilderness fire" park units – a sampling of Wilderness parks with fire management plans that allow fires to burn in their Wilderness areas. This coarse analysis used data from two periods: (1) prior to 2009 and (2) 2010 to present. Prior to 2009, unplanned fires were categorized as either wildfires ("bad" fires which were suppressed) or Wildland Fires Used for Resource Benefits ("good" fires which were allowed to burn within defined areas). After 2009, wildfire was the sole category for unplanned fires, although a range of management actions from full suppression to monitoring can be used on all or parts of the fire. In both data periods, the analysis included: (1) the total number and acres of natural

ignitions in Wilderness allowed to burn within defined areas versus the number of natural ignitions which were fully suppressed and (2) ecological system indicators – like fire return intervals indicating if management actions resulted in an improved or deteriorated condition of the fire dependent Wilderness ecosystems. This initial analysis exposed a significant gap between the stated objectives of many of the parks' fire management plans (i.e. maintenance of a natural fire regime in Wilderness) and the actual management actions taken. For example, seven parks suppressed at least 50 percent of all natural ignitions in their Wilderness areas. While this may not be significant in parks with long fire return intervals (i.e. the northern Rockies), it is significant in the Sierras where ecosystems are adapted to much shorter natural fire cycles.

The results of this analysis indicate that further, more in-depth analysis of complex ecological factors, adjacent land ownership, and other metrics are needed to holistically assess reasons for continued suppression of many Wilderness fires. Wilderness fire suppression impairs both the integrity of NPS natural resources and Wilderness character. This initial analysis demonstrates the need for honest and focused dialogue about the nexus between Wilderness and fire management both internally and with our neighbors - engaging staff from fire, Wilderness, and resource management at the park, regional, and national, and interagency levels.

Wilderness and Wildlife

Michael K. Schwartz, *US Forest Service*

Beth A. Hahn, *Aldo Leopold Wilderness Research Institute*

Blake Hossack, *Aldo Leopold Wilderness Research Institute*

Wildlife is one of the biggest draws to our nation's Wilderness areas. Yet the relationship between Wilderness and wildlife is not simple, nor is it well studied. There are very few published papers that explicitly examine wildlife in Wilderness areas, and even fewer that compare demographics, genetics, or abundance of wildlife between Wilderness and non-Wilderness areas. In this talk, we reviewed several studies that explicitly use Wilderness as a variable to understand wildlife. We then called for the enhanced cooperation between those studying recreation, Wilderness, and wildlife to increase our knowledge of how federal Wilderness designation can effect wildlife populations.

The Value of Wilderness to Wolf Research

L. David Mech, *US Geological Survey*

When wolves (*Canis lupus*) in the contiguous 48 United States were placed on the Endangered Species List in 1967, the only remaining population was in and around the Boundary Waters Canoe Area Wilderness (BWCAW) of Minnesota and in Isle Royale National Park, Michigan. Wolves were a Wilderness species. Thus any research done on wolves had to be conducted in Wilderness.

This presentation provided an overview of research on basic wolf ecology, behavior and interactions with prey such as moose, deer, caribou, elk and muskoxen, over 55 years in several Wilderness areas: Isle Royale National Park, Minnesota; Denali National Park, Alaska; Ellesmere Island, Canada; and Yellowstone National Park, Wyoming. The Isle Royale studies focused on wolf hunting of moose from 1958 to 1962. Studies of wolves and white-tailed deer in and around the BWCAW in the Superior National Forest of northeastern Minnesota began in 1966 and continue through the present, based on radio-tracking more than 900 wolves and 1,000 white-tailed deer. Research on wolves and caribou was carried out in Denali National Park, Alaska, from 1986 through 1994. Studies of the wolves and muskoxen on Ellesmere Island in Canada's High Arctic also began during summer 1986 and have continued through summer 2010, with peripheral involvement in 2014. In 1995, the author also participated in reintroducing wolves to Yellowstone National Park and has been studying them and their main prey, elk, since then. Based on these studies, wolf packs have been found to be territorial families with a high annual turnover rate due to dispersal and mortality. They tend to prey primarily on hoofed mammals in poor condition, which minimizes danger to themselves. Thus wolves make many attempts to kill prey and have a low success rate. As wolf populations in the contiguous 48 United States recovered, they also began recolonizing non-Wilderness and became increasingly controversial because they also prey on livestock and occasionally on humans. Thus much misinformation about wolves is disseminated by both wolf advocates and wolf enemies, and the author founded the International Wolf Center (www.wolf.org) in Minnesota to help promote accurate, science-based information about wolves.

The Importance of Wilderness and Other Refugia in the Recovery of Grey Wolves in the Northern Rocky Mountains

Kent Laudon, *Montana Fish, Wildlife and Parks*

The Northern Rocky Mountain grey wolf recovery effort is one of the best examples of endangered species restoration and occurred faster than predicted. Wilderness and other refugia were integral in that success. Anthropogenic factors are the leading cause of wolf mortality, and as a result, areas buffering human impacts had lower wolf mortality rates. Differences in land ownership and management schemes in Northwest Montana, Central Idaho, and Greater Yellowstone Recovery Areas directly affected human interactions with local wolf populations. This pattern will remain important as wildlife professionals transition from species recovery to population management.

Challenges in Managing Cruise Ship Impacts to Marine Wilderness Resources in Glacier Bay National Park

Scott M. Gende, *National Park Service*

Glacier Bay National Park encompasses more than 2.7 million acres of pristine, glacial ecosystems in Alaska, including one of the few marine Wilderness units in the national Wilderness preservation system. However, over 95% of all visitors to the park arrive aboard cruise ships. We addressed some challenges to managing cruise ship visitation by highlighting the tradeoffs between visitor access and resource impacts, including results from case studies examining the extent and severity of impacts of ship visitation to marine mammals and air quality. We considered these challenges relative to Wilderness attributes, and in the context of park values and mandates.

Balancing the Mandates of Science, Visitation and Wilderness in Glacier Bay National Park.

Scott M. Gende, *National Park Service*

Glacier Bay National Park encompasses more than 2.7 million acres of pristine, glacial ecosystems in Alaska, including one of the few marine Wilderness units in the national Wilderness preservation system. While the purpose of the park is guided by the Organic Act (1916) and the Alaska National Interest Lands Conservation Act (ANILCA; 1980), Glacier Bay was initially set aside for protection as a national monument in 1925 by Presidential Proclamation owing to the unique scientific opportunity to study the impacts of glacial dynamics and resulting changes in landscapes, ecosystems, and movements of flora and fauna. These same dynamic, landscape attributes contribute to the desire by visitors to see Glacier Bay. Nearly all visitors (~95%) experience the park aboard large cruise ships, and ship routes run adjacent to both marine and terrestrial Wilderness areas. Cruise ships can affect a suite of park resources including, but not limited to, marine wildlife, air quality, underwater soundscapes, visitor experience, and Wilderness. While cruise ships are not allowed to enter any designated marine Wilderness areas, they can negatively impact attributes of Wilderness. I used a case study to highlight the challenges to balancing the mandates of science, visitor use, and conservation of park resources and values, including Wilderness.

Harbor seals aggregate (haul out on ice reefs, beaches, and ice bergs) in large numbers in Glacier Bay to rest, nurse, and molt. Seal numbers have been declining in Glacier Bay by nearly 10% per year since 1992, and disturbance from cruise ships was hypothesized to be contributing to this decline. A number of scientific studies were proposed to identify causal factors of the decline, which would include capturing, handling, and affixing transmitters or data loggers to seals. While this research would not occur in Wilderness, there was significant concern about the impacts of these methods to Wilderness values, including the issue of having tagged animals swimming into and out of marine Wilderness and consequent experience affected by visitors. Ultimately, the project was approved, and a large number of seals were captured and biological samples taken including whiskers and hair (genetics), fat (body condition), and blood and feces (disease). A subset of seals was also affixed with radio- and satellite-linked transmitters. These methods reflected different lines on inquiry on factors contributing to the decline. While some methods failed and some results were inconclusive, data acquired from the satellite tags demonstrated that seals often traveled large distances out of Glacier Bay during the fall and winter. However, nearly all seals exhibited a strong fidelity to the park, returning the following spring. This philopatry, coupled with the genetic data also collected as part of the study, ultimately resulted in the population of harbor seals in Glacier Bay (and adjacent Icy Strait) being designated as a separate stock by the National Marine Fisheries Service. This afforded a much higher level of protection from threats including

hunting and by-catch in fisheries during the non-summer months when ‘Glacier Bay’ seals move out of the park. While Wilderness is an important resource in Glacier Bay, science is a foundational value and represents one of the qualities of the Wilderness character, which must be considered in the context of research and Wilderness impacts. Science can also contribute to the conservation of important Wilderness attributes, such as a healthy harbor seal population, furthering the importance of science to Wilderness.

The Porcupine Caribou Herd: Denizens of an Arctic Wilderness

David C. Payer, *Arctic National Wildlife Refuge*

Eric J. Wald, *Arctic National Wildlife Refuge*

The Porcupine Caribou Herd (PCH) is the second largest barren-ground caribou herd in the Alaskan Arctic, numbering approximately 200,000 individuals. The multi-year range of the PCH comprises 29 million ha in northwest Canada and northeast Alaska. This range includes multiple protected areas in Yukon, Canada and the Arctic and Yukon Flats National Wildlife Refuges in Alaska. The herd travels approximately 1,000 km annually between winter ranges in the boreal forest and calving grounds on the Arctic coastal plain, representing one of the longest documented migrations of a terrestrial mammal. The 3.2 million-ha Arctic National Wildlife Refuge Wilderness Area is located entirely within the annual range of the PCH, and includes calving habitats, migration routes, and overwintering areas.

Although Porcupine caribou wander widely throughout the year, they return annually to the coastal plain of the Arctic NWR and adjacent areas in Canada during the vulnerable and energetically demanding calving and post-calving periods. Much debate and research has focused on how current and proposed resource development within calving and post-calving habitats might affect the PCH. Climate change may also affect the herd through changes in forage quantity, quality and accessibility throughout its range. Potential climate-change effects include icing events, deeper snowpack, mismatch between herd migrations and vegetation phenology, altered fire regime, introduction of novel disease organisms, and increased insect harassment.

The PCH is jointly managed by state, territorial, and federal agencies in Alaska and Canada, Alaskan Native groups, and Canadian First Nations peoples. Caribou of the PCH are a “priority species” for the U.S. Fish and Wildlife Service (FWS) because of the complexity of their management, importance for cultural identity and subsistence harvest, potential vulnerability to disturbance and landscape-scale stressors, and their iconic status. The overarching conservation goal is to minimize risks of adverse effects associated with use of caribou or their habitat, consistent with the 1987 “Agreement between the Government of Canada and the Government of the United States of America on the Conservation of the Porcupine Caribou Herd”. To gauge effectiveness of conservation actions, population size and other demographic indices will be monitored and compared to historical estimates of these parameters.

In this presentation we discussed status and trends of the PCH and its habitats, including the importance of Wilderness and other protective land designations for maintaining traditional seasonal movements and human uses of the herd. We also explored current and potential future threats, knowledge gaps, and conservation strategies for this iconic Arctic caribou herd.

Testing Windfalls for Wilderness: Do Land Prices Really Reflect Wildland Protection?

Spencer Phillips, *Key-Log Economic and University of Virginia*

Seldom do environmental and resource economists get the chance to check our predictions against real world experience. Phillips’ estimates of the impact of existing Wilderness on nearby land values and forecast of impacts on the same of additional Wilderness protection (2004) combined with the implementation of a subset of those additions in 2006 provides just such a natural experiment. In this paper, I compared those ex ante predictions to ex post experience afforded by passage of the New England Wilderness Act of 2006, which added nearly 40,000 acres of Wilderness within the Green Mountain National Forest to the National Wilderness Preservation System. Thus, I addressed the key question of how well benefit estimates based on with- versus without-Wilderness comparisons serve as indicators of before-versus-after-Wilderness outcomes that are much more relevant to communities and policymakers considering enhanced land conservation. These stakeholders want to know just how robust are claims that wildland conservation produces a windfall for existing property owners?

In the original study (Phillips 2004) hedonic price analysis revealed that properties closer to designated Wilderness areas command higher market prices than those farther away. Applying the model’s estimates in a simulation of the then-proposed addition of 60,000 acres of Wilderness, I projected an annual “windfall for Wilderness” of between \$1.1 and \$2.2 million for the region’s property sellers. By virtue of the Vermont’s state-

wide land transfer tax, a portion of this windfall would then accrue to the beneficiaries of the State's affordable housing and conservation programs.

The New England Wilderness Act of 2006 did protect approximately 40,000 of those proposed acres, and in the years since, some portion of that windfall has presumably been realized. The present investigation will determine whether that presumption is correct and, if so, to what degree the simulated / predicted outcomes match actual market experience. [Note that this study is in process, but final results reflecting a full seven years of post-New England Wilderness Act experience, were in hand well before the conference.]

Phillips, S. 2004. *Windfalls for Wilderness: Land Protection and Land Value in the Green Mountains*. Ph.D. Dissertation. Virginia Polytechnic Institute and State University, Blacksburg, VA.

Economic Contributions of Wilderness Areas

Evan E. Hjerpe, *Conservation Economics Institute*

Wilderness areas in the U.S. have a cascading economic impact on surrounding regional economies. While commercialization and industrial activities are inherently outside and even antithetical to the intended role of Wilderness, the facilitation of Wilderness visitors nonetheless generates numerous annual economic contributions to gateway communities and residents. The contributions to regional economies are significant and should be examined.

In this study, we estimated annual economic contributions of Wilderness areas. Input-output analysis is conducted utilizing IMPLAN impact analysis software. Economic contribution analysis measures the annual direct effects of Wilderness visitor expenditures and quantifies the economic linkages of these final demands to other sectors of the economy. These backward linkages are known as multiplier effects, where indirect effects are a measure of the impacts on industries and services needed to support the guides, outfitters, and lodges that facilitate visitation. Induced effects trace the re-circulation of the wages earned by employees assisting visitors within the regional economy.

As economic contributions of Wilderness visitation have not yet been analyzed, we constructed an NAICS sectoring scheme that captures the industrial sectors affected by visitor expenditures. Visitor expenditure data were collected as part of a greater national data collection effort. Expenditure data were regionally coded and applied to the constructed sectoring scheme for surrounding regional economies. Annual contributions are reported in terms of output, income, employment, and taxes. Multiplier effects for Wilderness visitor expenditures are also reported.

The results indicate that Wilderness areas play a substantial role in rural economies. While these market indicators of Wilderness contributions are just one component of the total economic value provided by Wilderness, the jobs and income afforded to regional residents are an important segment of these economies. Illustration of these economic contributions can be incorporated into regional planning processes.

Trends in Wilderness Recreation Demand and Value

Tom Holmes, *US Forest Service*

Jeff Englin, *Arizona State University*

Soon after the passage of the Wilderness Act of 1964, Roderick Nash published *Wilderness and the American Mind* (1967) in which he speculated that, as society develops economically, the relative value of wild nature will increase (due to increasing scarcity) while the relative value of civilization will decrease (due to increasing abundance). At that time, it is doubtful that Nash could have foreseen the biophysical changes to Wilderness character that have occurred since publication of his book due to factors such as the increasing prevalence of wildfires, invasive species, and degradation by humans. Also of consequence, several authors have recently expressed concern that modern culture may in fact be eroding the demand for direct contact with wild nature, as evidenced by declines in per capita visitation rates to nature-based recreation areas. This trend, if in fact it exists, may be worrisome because enduring support for laws and regulations that protect wild nature depends upon broad-based advocacy by an informed public who appreciate the values provided by Wilderness landscapes.

In this paper, we evaluated the trends in Wilderness use and value as evidenced by visits to federally designated Wilderness areas. Economic demand functions are estimated using the travel cost method, and are used to compute economic measures of value. Changes in the parameters of estimated demand functions are then used to identify trends. Our analysis is based upon a very large data set that combines Wilderness permit and voluntary registration data with data on user demographics, ecosystem characteristics and travel costs. These data span roughly two decades of Wilderness use across the major ecoregions in the United States, allowing us to identify

trends both across time and space. The results of our analysis, presented at the Wild 50 Conference, allowed us to test various hypotheses related to Nash's assertion that the value of wild nature generally increases over time.

Economic Benefits of Wilderness: Transforming the Debate

Robert B. Richardson, *Michigan State University*

Economic benefits associated with Wilderness protection are well documented. The decision to designate Wilderness or protect natural areas sometimes involves economic tradeoffs between alternative uses, and recreation spending by visitors to Wilderness areas often has an impact on the economies of nearby communities that can be measured by estimating the effect on jobs and income. Wilderness areas provide numerous economic benefits to society beyond the regional impact of recreation spending, including the benefits of ecosystem services. However, recent Wilderness legislation has been narrowly framed in terms of the economic impacts of recreation spending, the impact of Wilderness designation on adjacent property values, and the income and jobs associated with economic development. The imbalance in the contemporary Wilderness debate seems to overlook other benefits – ecological or scientific – that seemingly should be emphasized as well. The Wilderness Act of 1964 specifies that Wilderness areas provide opportunities for a “primitive and unconfined type of recreation” as a defining characteristic, and it also indicates that they “...may also contain ecological, geological, or other features of scientific, educational, scenic, or historical value”. The Act does not mention economic values, yet estimates of economic impacts increasingly define the terms of the debate.

The language of economics has become almost ubiquitous in the environmental movement, in part, as a defensive reaction to opponents to preservation who use economic arguments against Wilderness designation. Arguments supporting Wilderness designation on economic grounds may find themselves on a slippery slope, where Wilderness is reduced to a commodity that can be bought and sold in markets, and its value varying with recreation trends and preferences. A comprehensive Wilderness policy would be more effective by focusing on the values of ecosystem services provided by Wilderness areas and other protected areas. Ecosystem services are the conditions and processes through which natural ecosystems sustain and fulfill human life, and there is a growing interest in the development of quantitative and qualitative methods to estimate their values. Wilderness and other natural areas play an important role in sustaining natural resources and providing ecosystem services that support human life on Earth. However, most ecosystem services are not recognized in markets, and their values are often ignored or underestimated in environmental management alternatives and decisions. Unfortunately, the values of ecosystem services are just beginning to be accepted and appreciated by policy makers at the very time that these services are declining more rapidly than ever before. The world's protected areas provide the largest source of secure ecosystem services alongside their more recognized role as recreation destinations. Numerous assessments have shown that designation of protected areas is more effective than other land and water conservation approaches in ensuring that ecosystems remain intact and functioning. Natural resource managers, conservationists, and even some business leaders acknowledge that reversing the loss of ecosystem services is a vital step in mitigating climate change and conserving biodiversity, but advocates on all sides of policy debates still use narrow arguments about the economic impacts of recreation spending and jobs. Achieving the complex goal of protecting ecosystem services will require a fundamental transformation in our attitudes toward the management and valuation of natural areas such as Wilderness beyond their capacity to generate jobs from tourist spending. Wilderness need not be justified solely by its economic impact.



Griff Creek, Olympic Wilderness, Washington

By Joe LeFevre, www.joelefevrephoto.com

Rewilding Aquatic Systems: Native Trout as Tools in Conservation Planning and Stronghold Development

Jack E. Williams, *Trout Unlimited*

Amy L. Haak, *Trout Unlimited*

Conservation planning for stronghold populations and core habitats has primarily focused on terrestrial species and their habitats. Aquatic systems present some unique challenges compared to their terrestrial counterparts. For instance, the dendritic nature of river systems and the nested pattern of watersheds require that both the upstream and downstream influences of land use and surface and groundwater conditions be considered when developing conservation strategies. One upshot of the lack of comprehensive aquatic conservation planning is that fish, amphibians, freshwater mussels, and crayfish all have levels of rarity and threats that typically exceed those of terrestrial animal groups. We use native trout in the Inland West as indicators of opportunities to develop larger stronghold habitats in aquatic systems. Native trout function as keystone species, serving as both the top predator in the aquatic system as well as prey for a range of terrestrial species, which lends itself well to a rewilding approach. Native western trout have declined in their distribution and abundance. Some taxa are listed pursuant to the Endangered Species Act and others are candidates under consideration for listing. Populations of these rarer taxa are not only smaller because of habitat fragmentation but also because managers have isolated native trout above instream barriers in order to protect them from invading non-native fish. Therefore, most remaining populations are low in resilience and life history diversity. Recovery plans for listed trout focus future recovery on creation of additional small, isolated populations. Unfortunately, these isolated populations are becoming increasingly vulnerable to climate change induced disturbances such as floods, droughts, and wildfires. The purpose of our report is to examine the existing portfolio of populations in terms of their genetic, life history and geographic diversity and to compare results to historic conditions as a way to prioritize future recovery efforts. We also examined the extent to which the existing Wilderness system contributes to trout conservation. We showed that the portfolio of existing populations should be rebalanced by restoring interconnected populations and migratory life histories, which are important in the long-term persistence of the native trout. As these portfolios are rebalanced, the native trout are rewilded as their broader ecological functions are restored. Rewilding native trout favors a reversal of the trend from more fragmented habitats and isolated populations towards a more interconnected stream network and larger populations, which also helps restore a wide range of native species. From an angler perspective, larger habitats and migratory life histories mean larger trout, which are not only valuable from a recreational perspective but have ecological value in increased fecundity and increased resistance to non-native predators. Larger, interconnected populations also are important for increasing resilience to climate change. While existing Wilderness areas are important for many native trout in the West, especially in terms of providing consistent supplies of cold and clean water, the existing protected areas are insufficient to provide for most future recovery efforts. This is especially true for development of larger, interconnected stronghold populations, which require larger stream systems that often are beyond Wilderness boundaries.

The Value of Wilderness Habitat for Native Trout Preservation: A History of Gila Trout Restoration

Yvette Paroz, *US Forest Service*

David Propst, *New Mexico Game and Fish, retired*

Jerry Monzingo, *US Forest Service*

Diane Taliaferro, *US Forest Service*

Much of the land that has been designated as Wilderness in the Western United States contains stream segments that are less disturbed by human activities. Throughout the nation, most species of native trout have been impacted by human activities such as overharvest, stocking of non-native species, and land management activities that have degraded habitat. For several species of native trout, the Wilderness lands contain the last remnants of genetically pure populations.

The extent of the historical distribution of Gila trout is not known with certainty. It is thought to be native to higher elevation streams in portions of the Gila River drainage, in New Mexico and Arizona. There are many anecdotal reports from the late 1800's describing fish similar to Gila trout being caught within the main stem of the Gila River and several streams in Arizona. By 1915, the downstream distribution of Gila trout in the Gila River had significantly receded. By 1950, water temperature in the lower portions of the Gila River

was considered too warm to support any trout species. This was likely due to unregulated livestock grazing and timber activities in the area.

The last few streams containing Gila Trout were located in the Gila and Aldo Leopold Wilderness areas. On June 3, 1924, the Gila became the world's first designated Wilderness area while the Aldo Leopold area was managed as a primitive area until official designation in 1980. The earliest documented collections of Gila trout in the upper Gila River drainage were in 1939, from Main Diamond Creek. New populations were sporadically found until 1992 when Gila trout were discovered in Whiskey Creek, a tributary to the upper West Fork Gila River.

Concern for the preservation of this species led to special management by the State of New Mexico as early as 1923 when a hatchery was built within the current area of the Gila Wilderness to propagate Gila trout. The state also had a policy about not stocking non-native trout within tributaries that contained Gila trout. The species was officially recognized and described in 1939 by Robert Rush Miller at the request of Elliott S. Barker, State Game Warden of New Mexico. When the Gila trout was listed as endangered, it was thought that its range had been reduced to five streams within the Gila National Forest, New Mexico.

The Gila trout was originally recognized as endangered under the Federal Endangered Species Preservation Act of 1966, and Federal designation of the species as endangered continued under the Act in 1973. Efforts to repatriate Gila trout within its historic range in New Mexico and Arizona by removing the non-native trout began in 1970. In the last few decades, ash flows from large wildfires have hampered recovery efforts in many areas that were previously repatriated with Gila trout but may also provide opportunities to expand the species.

Management in Pristine Areas to Address Amphibian Declines

Erin Muths, *US Geological Survey*

Blake Hossack, *Aldo Leopold Wilderness Research Institute*

Larissa L. Bailey, *Colorado State University*

Mary Kay Watry, *National Park Service*

Wilderness alone is not always adequate for the preservation of species. For example, even in Wilderness and other protected areas, “enigmatic” declines are challenging the persistence of amphibian populations. As species continue to go extinct or require extraordinary measures from managers to remain viable, demands for targeted, cost effective and likely-to-succeed techniques will increase. The conservation toolbox already holds a variety of techniques. Available tools vary in their efficacy with the species they are applied to; they have different track records and supporters, and go in and out of fashion depending on the threat-flavor of the moment. Protected areas, perhaps especially Wilderness, have the complication of inaccessibility to contend with when considering tools, although Wilderness may be especially suitable for the same reasons. We presented the issue of amphibian decline, stressing how Wilderness does not guarantee stability, then provided an example of a conservation effort in a semi-Wilderness area.

Reintroduction of animals is one conservation tool that has been used for a variety of taxa, in Wilderness and non-Wilderness locations. There have been some successes and many failures and many efforts that have never been quantified. Quantitative evaluations of reintroductions are infrequent and assessments of milestones reached before a project is completed, or abandoned due to lack of funding, are rare. However, such assessments, which are promoted in adaptive management frameworks, are critical. It is the quantification of such efforts that can provide the support needed, especially in inaccessible and thus costly areas, to continue successful programs and the information necessary to shift resources or alter methods to achieve success. Quantification can provide defensible estimates of biological success, such as the number of survivors from a released cohort, with associated cost per animal. It is unlikely that the global issues of endangered wildlife and population declines will abate, therefore, assurance colonies and reintroductions are likely to become more common. If such endeavors are to be successful biologically or achieve adequate funding, implementation must be more rigorous and accountable. We use a novel application of a multistate, robust design capture-recapture model to estimate survival of reintroduced tadpoles through metamorphosis (i.e., the number of individuals emerging from the pond) and thereby provide a quantitative measure of effort and success for an “in progress” reintroduction of toads. Our data also suggest that tadpoles released at later developmental stages have an increased probability of survival and that eggs laid in the wild hatched at higher rates than eggs laid by captive toads. We illustrated how an interim assessment can identify problems, highlight successes, and provide information for use in adjusting the effort or implementing a Decision-Theoretic adaptive management strategy.

Model Validation for Social and Visitor Flow Conditions in the Boundary Waters Canoe Area Wilderness

Mark L. Douglas, *University of Montana*

Ann Schwaller, *US Forest Service*

William T. Borrie, *University of Montana*

Robert G. Dvorak, *Central Michigan University*

Alan E. Watson, *Aldo Leopold Wilderness Research Institute*

Wilderness managers seek to provide high quality Wilderness experiences while visitors desire remoteness and solitude. Increased visitation and competition for opportunities can threaten social condition quality. We addressed quantitative techniques employed in the development of a Wilderness travel simulation model of visitor flow dynamics in the Boundary Waters Canoe Area Wilderness (BWCAW). Specifically, we looked at multiple validation techniques and options. Ultimately, the presentation revealed how the latest Wilderness computer simulation model, VisSim 3.0, is being used by Wilderness managers to protect the quality of social conditions and Wilderness experiences in the BWCAW.

This study addressed the question of whether the output generated by VisSim 3.0 and travel zone occupancy observations recorded in 2010 could come from similar parent distributions. The three hypotheses are that for each of three observed travel zones there is no significant difference between the observed and simulated distributions of occupancy rates. Three travel zones (221, 411, and 412) were selected for variation across high and low campsite occupancy levels, high and low encounter rates, representation in both the eastern and western areas of the BWCAW, as well as for a range of proximity to regional population centers (Ely, Duluth, Grand Marais, and travel routes from Minneapolis-St. Paul, Minnesota) and to guest lodges and resorts.

The purpose of the BWCAW visitor simulation model is to predict the number of occupied campsites within each travel zone. The VisSim 3.0 model estimates the number of groups occupying campsites on a given night dependent on the capacity of the travel zone, the capacities of adjacent zones, the number of groups allowed through each entry point each day, the itinerary that each travel group is randomly assigned by the model, and the number of days over which the simulation is run prior to the estimate. In 2011, itinerary data were collected by census from the leaders of trips that began from May 1 through September 30. A total of 11,673 itineraries were collected (55% of trips taken during the 2011 permit season). Statistical tests for nonresponse bias suggested no significant or practical differences between respondents and nonrespondents. To validate model output, a sample of travel zone campsite occupancy rates was observed in 2010. Kolmogorov-Smirnov (K-S) tests were used to evaluate the goodness of fit of the model by determining if the distributions of model percent occupancies differ significantly from the 2010 observed percent occupancies. Significant differences were set to be associated with p values less than .01. We found no statistically significant difference between the observed and simulated distributions of overnight campsite occupancy rates in two of the three studied Wilderness travel zones and this provides evidence that VisSim 3.0 can be a valid management tool for Wilderness stewardship. VisSim 3.0 will be useful for planners and decision makers on the Superior National Forest as they are tasked with providing social conditions that maintain outstanding opportunities for Wilderness recreation.

The Day Use Dilemma at Grand Canyon

Peter Pettengill, *National Park Service*

Studies conducted for nearly 40 years illustrate that solitude is important to visitors in Grand Canyon's backcountry. With increasing trends in the popularity of endurance day hiking and trail running, opportunities for visitors to experience solitude along the park's classic rim-to-rim trails may be becoming scarcer. This study assessed visitor perceptions of what travel conditions along trails *should be* and compared them with what conditions *actually are*. Results from the normative and objective approaches demonstrate how often visitors may be experiencing unacceptable conditions.

To assess visitor perceptions of recreational quality, this study engaged respondents through a questionnaire. The questionnaire investigated visitor attitudes towards access, support for potential management actions, perceptions of crowding and solitude, and assessments of potential problems; including conflict among users and impacts to park facilities and resources. The survey was also designed to measure normative standards for respondents for encounters with others while traveling along specific trail segments. Encounters with others is a salient indicator of recreational quality widely used in outdoor recreation management, and normative methods help define the acceptability of various use levels visitors may experience.

A second component of the study used automated trail counters and monitoring protocols to estimate visitor use levels along trail segments. Park staff and volunteers were given monitoring forms, hand counters were made available, and participants were asked to count the number of other people they encountered while traveling trail segments. Dates and times of travel periods were also recorded. Automated trail counter data helped provide general estimates of use along each trail segment.

A total of 483 questionnaires were administered from the end of April through May 2013. Questionnaires were administered along three trails that comprise the park's most developed backcountry opportunities (the Bright Angel, South and North Kaibab). Sampling sites were located approximately 4-5 miles beyond trailheads, depending on the trail. Respondents included day hikers, backpackers, trail runners, and stock users. Encounter rate monitoring forms collected by park staff (N=98) demonstrate that visitors may be encountering anywhere from 0 to 428 other people while hiking along trail segments. These trail segments range from approximately 2 to 9 miles long. Automated trail counter data reveal that peak use occurred on weekends in May.

The results of the questionnaire combined with visitor use monitoring, illustrate that opportunities for solitude still exist along Grand Canyon's most popular backcountry trails. However, during peak use weekends many visitors are experiencing unacceptable conditions due to high levels of visitor use and their commensurate impacts to visitor experience.

A State-of-Knowledge Review of 50 years of Wilderness Recreation Ecology Research: Past, Present, and Future

Jeff Marion, *US Geological Survey*

Yu-fai Leung, *North Carolina State University*

Holly Eagleston, *Virginia Tech Chelsey Walden-Schreiner*

Recreation ecology is a scientific field of study that evaluates environmental impacts resulting from recreational activities in protected natural areas. This presentation reviewed the last 50 years of recreation ecology research to highlight the most important findings and how they have been applied to benefit Wilderness management. We reviewed impacts to vegetation, soils, water, and wildlife, and described key relationships with use-related, environmental, and managerial factors. For example, the curvilinear use-impact relationship has significant implications for carrying capacity decision-making.

Recreation ecology knowledge has benefited Wilderness managers through the development of an extensive "toolbox" of impact management strategies and tactics. We reviewed these options and showed how recreation ecology research has aided managers in evaluating impacts and how they are influenced by causal and non-causal factors. Some key findings from campsite, trail, and experimental trampling studies have more thoroughly described the use-impact relationship and the influence of type and season of use, group size, and visitor behavior.

Recreation ecology research on resistance and resilience of vegetation and soils has improved our ability to effectively avoid or minimize impacts by selecting more resistant campsites and applying visitor dispersal and containment strategies. Research on trails has yielded new information on the primary factors affecting soil loss, muddiness, and trail widening. These studies are contributing to the development of more effective guidance for designing and managing sustainable trails that can accommodate higher traffic with less impact. Many Leave No Trace practices have been directly derived from recreation ecology research.

Recreation ecology studies have also developed improved impact measurement and monitoring protocols that have been applied to evaluate the efficacy of alternative management actions in reducing visitor impacts. For example:

Which educational message or trail maintenance action is most effective in discouraging off-trail hiking in areas with rare plants or sensitive cryptobiotic soils?

How effective are educational courses in teaching Leave No Trace practices and reducing resource impacts to Wilderness resources?

How did recreation ecology research lead to the development of side-hill campsites and how effective are they in reducing the aggregate area of camping disturbance?

Recreation ecology research has addressed these and numerous other questions of importance to Wilderness managers. The result has been improved Wilderness management planning and decision-making that has greatly assisted managers in avoiding or minimizing the impacts of Wilderness visitation.

Profiling Wilderness Visitors on National Forests

J.M. Bowker, *US Forest Service*

Donald B.K. English, *Ashley E. Askew, Neelam C. Poudyal*

The USDA Forest Service (FS) manages 439 of the National Wilderness Preservation System's (NWPS) 758 distinct areas, accounting for about 32% of the total the 109.5 million acres. The preponderance of FS Wilderness was designated before 1984. The Forest Service's National Visitor Use Monitoring (NVUM) project collects data on visitor volume and characteristics at all National Forests. NVUM has operated in 5-year cycles since 2000 wherein all forests are sampled within each cycle. One of the sample strata is designated Wilderness. In this paper we examined FS Wilderness visitors' demographics, trip profiles, expenditures, and importance/performance preferences at the macro level, for the first time using data collected following accepted statistical procedures (Cochran 1977, English et al. 2002).

Cole (1996) was the first to assess Wilderness use trends, focusing on the period up to 1994. By 1996, the original 54 FS areas and about 9 million acres had been expanded to 630 areas and over 103 million acres. Cole, piecing together initial data primarily the FS and the National Park Service (NPS), found that in general, recreation use of Wilderness was increasing and calculated that 26% of "back country" use was day-use, implying that over-night visits accounted for 74% of use. However, Cole pointed out that day-use of Wilderness appeared to be increasing and should be a concern for researchers and managers.

Currently FS Wilderness accounts for 8.1 million annual "visits," 59% of which are by males, 6% are Hispanic, with 13% of visits made by those under 16 and 16% by those over 60. Visits are equally split between primary purpose local (42%) and non-locals (44%), with 14% of visits being side or ancillary trips. Parties of two or less account for more than 65% of all visits.

Following Cole's suspicions, more than 70% of visits are less than 6 hours duration with only about 10% exceeding 36 hours. With such distribution in visit duration, it follows that most visits include low spending with an average per individual of about \$50/visit, totaling about \$400 million annually.

Comparing the periods of 2005-2008 to 2010-2013 on like FS Wilderness, mean visit duration, proportion of visits greater than 36 hours, and median distance traveled are in decline, while average visits per year have increased along with a greater presence of minorities, particularly Hispanics. A noticeable decline has also occurred among the percentage of groups with children, the number of children per group, and the percentage of males. For primary activities, there appear to be small declines in wildlife-related use, while hiking continues to be the dominant single main activity increasing by almost 10% over the period.

At FS Wildernesses, it appears that a number of changes, first recognized by Cole about 20 years ago, are continuing. The changes strongly point to growing dominance of day use for the purpose of short duration walks or hikes. There is no doubt that Cole's observation of day-use increasing more rapidly than overnight use has both come to pass and continues. Thus, managers will be increasingly called upon to give attention to "the particular problems that day users cause and the particular recreation opportunities they seek."

Estimating Rocky Mountain Bighorn Sheep (*Ovis canadensis canadensis*)

Abundance in a National Park Wilderness Using Fecal DNA and Mark-Resight Models

Kathryn A. Schoenecker, *US Geological Survey*

Mary Kay Watry, *National Park Service*

Laura E. Ellison, *US Geological Survey*

Michael K. Schwartz, *US Forest Service*

Gordon L. Luikart, *University of Montana*

Conservation of species requires accurate population estimates. We used genetic markers from feces to determine bighorn sheep abundance for a herd that was hypothesized to be declining and in need of population status monitoring. We sampled from a small but accessible portion of the population's range where animals naturally congregate at a natural mineral lick to test whether we could accurately estimate population size by sampling from an area where animals concentrate. We used mark-recapture analysis to derive population estimates, and compared estimates from this smaller spatial sampling to sampling of the entire bighorn sheep range. We found that estimates were somewhat comparable; in 2009, the mineral lick sample and entire range sample differed by 20 individuals, and in 2010 they differed by only 1 individual. However, we captured 13 individuals in the entire range sample that were not captured at the mineral lick, and thus broke a model assumption that all individuals had an equal opportunity of being captured. This eliminated the possibility of inferring a total population estimate from just animals visiting the mineral lick, but because estimates were relatively similar, monitoring at the mineral lick can provide a useful index for management and conservation.

We compared our results to a radio collar study conducted in 2003-2004 and confirmed that the population remained stable since 2004. Our population estimates were 78 (CI= 62–114) in 2009 and 95 (CI= 77–131) in 2010. Between 7 and 11 sampling dates were needed to achieve a CV of 20% for population estimates, assuming a capture probability of between 0.09 and 0.13. We relied on citizen science volunteers to maximize data collection and reduce costs; 71% of all fecal samples were collected by volunteers, compared to 29% collected by paid staff. We conclude our technique provides a useful tool to managers for monitoring, and could be tested and applied in similar populations where animals congregate with high fidelity at a mineral lick or other area.

Schoenecker, Kathryn et al, (2015). Estimating Bighorn Sheep (*Ovis canadensis*) Abundance Using Noninvasive Sampling at a Mineral Lick within a National Park Wilderness Area. *Western North American Naturalist*. 75(2):in press

Desert Wilderness Areas as Species Migration Corridors in Response to Climate Change and Other Disturbances

Todd C. Esque, *US Geological Survey*

Kenneth E. Nussear, *University of Nevada, Reno*

Richard D. Inman, Amy G. Vandergast, *US Geological Survey*

While the Mojave Desert has the greatest amount of open area among southwestern landscapes, increases in energy development in concert with large-scale disturbances such as roads, recreation, biotic invasions, and fire continually impinge on desert landscapes. Species facing such large-scale disturbances must adapt to climate change *in situ*, migrate (avoidance), or they may perish. Intact corridors will be essential for some species to respond to climate change. While natural vicariance features, such as mountain ranges, rivers, or severe desert basins have always formed obstacles to species migrations. The deserts now have additional barriers including vast expanses of concrete and asphalt in urban areas, travel and utility corridors, and fence lines. We explored the role of Wilderness and Other Protected Areas (OPAs) as hypothetical corridors for select desert species in response to climate change and other disturbances. Our study area includes parts of California, Nevada, Arizona, and Utah. There are 314 separate Wilderness Areas covering 14,467 km² in the study region. Due to the requirements of Wilderness Act designation there is inherent bias in the physiographic qualities and distribution of Wilderness Areas across the landscape, thus species requiring the habitat qualities found in valley bottoms (e.g. relatively fine-textured or saline soils and the plants that grow on them) are less well represented among Wilderness Areas. Because Wilderness Areas comprise a small proportion of the entire landscape, we also evaluated OPAs in combination with Wilderness Areas including National Monuments, National Conservation Areas, National Wildlife Refuges, Wilderness Areas, National Parks, and Critical Habitats. The combined area of all protected areas was 95,624 km².

To analyze the role of Wilderness and OPAs in species migrations we established habitat suitability models for the Mohave Ground Squirrel (MGS, *Xerospermophilus mohavensis*), the Agassizi's Desert Tortoise (*Gopherus agassizii*) and Morafka's Desert Tortoise (*G. morafkai*). Habitat Suitability Models illustrate the relative likelihood of species occupying a given parcel of land, but do not indicate habitat quality. We incorporated climate scenarios from the International Panel on Climate Change (2013) for their A2 ('Prius scenario'), and B1 ('Hummer scenario') climate change scenarios. Current (2010) and future (2095) predictions were used to predict these models. By definition Wilderness designation requires expansive roadless landscape. Much of the Wilderness in the Great American Deserts occurs on rocky montane islands surrounded by desert valleys where less Wilderness occurs. This is because the flat areas are conducive to road construction, thus there are many more roads in tortoise habitat in valleys than there are in mountain areas. Wilderness will be one important component of landscape conservation for many desert species and more so for *G. agassizii* than *G. morafkai* due to their respective habitat preferences. Wilderness Areas will be most effective in combination with other protected areas. This inherently requires much greater cooperation and planning among land and resource stewards. While Wilderness Areas are widely regarded as the gold standard for habitat quality, quantifying that standard can be challenging for researchers due to restrictions on the use of technologies that are currently used to measure habitat use by plants and animals.

Managing the Endangered Red-cockaded Woodpecker within the Okefenokee Wilderness Area, Georgia

Sara Aicher, *US Fish and Wildlife Service*

The red-cockaded woodpecker (*Picoides borealis*) found suitable habitat on the Wilderness islands within the Okefenokee Swamp as the longleaf pine surrounding the Swamp disappeared in the mid 1900's. Although this population in the Wilderness is not significant in the recovery of these birds, it remains stable and gives valuable insight into the effects of fire, drought, and other natural events on this species. With landscape changes, prescribed fire is the primary tool to maintain conditions between wildfire occurrences. Access to the islands, protection of the vulnerable trees from fire, methods of igniting, and monitoring of the birds demand challenging Wilderness decisions.

The endangered red-cockaded woodpecker (RCW) is a year-round resident at Okefenokee National Wildlife Refuge (NWR) that utilizes the 60+ year-old pine habitat. Nineteen out of 47 active tree clusters are located on five upland pine islands in the Wilderness. Over the past 15 years, the RCW in the Wilderness have made up 40-60% of the total refuge population. Habitat management is minimal but does exist to protect the birds' cavity trees that they rely on for shelter and reproduction. Upland islands are prescribed burned every 3-5 years. The vegetation within 20 ft of a cavity tree is reduced prior to burn operations and in anticipation of an active wildfire season. Monitoring the cavity trees for suitability and activity occurs every other year. Since access to four out of five islands can only be accessed via helicopter, on the ground activity requires a helicopter landing area that is cleared each year. No banding of birds, translocating birds, installing artificial cavities or removal of competitive species occurs within the Wilderness. Timber harvesting to enhance the habitat for RCW is not conducted either.

Extensive manipulation of RCW habitat and populations has increased the number of these woodpeckers throughout the southeast. Populations with limited manipulation like those occurring within the Okefenokee Wilderness are few and provide insight into the natural dynamics of the population and the importance of landscape level management. Natural forces will cause fluctuations in the population spatially as well as over time. Over the past 15 years, the RCW on the interior islands have remained fairly constant despite some large fires killing a number of cavity trees. Considering it takes a bird two years to construct a cavity, there is an expected delayed comeback for a population. The number of active trees increased on three islands three years after the large wildfire of 2007. We are currently seeing a drop in the number of active trees on two islands after the 2011 wildfire. If fuels on the uplands and around cavity trees are not periodically reduced, wildfires would have a greater negative impact on the RCW population in the Okefenokee Wilderness. The RCW Recovery Plan includes the birds within the Wilderness as contributing to the refuge's recovery goal despite limited management. In support of this, maintaining healthy populations of native species is one of the essential characteristics of the Okefenokee Wilderness.

Results from Conducting Wilderness Reviews for National Wildlife Refuges in the US Fish and Wildlife Service Pacific Region

Charles J. Houghten, *US Fish and Wildlife Service*

Kevin O'Hara, *US Fish and Wildlife Service*

Aaron Collins, *US Fish and Wildlife Service*

For units of the National Wildlife Refuge System (Refuge System), Wilderness reviews are required by the Wilderness Act of 1964, and Department of the Interior and U.S. Fish and Wildlife Service (Service) policies. Most Refuge System Wilderness reviews are conducted during a refuge's comprehensive conservation planning (CCP) process. Since 1998, the Service's Pacific Region has conducted Wilderness reviews on more than 60 refuges in the Pacific Northwest, Hawai'i, and the Pacific Island Territories, and seven additional reviews are underway or planned. During each Wilderness review we analyzed a subject refuge for:

- Potential roadless areas and roadless islands of sufficient size and character for possible Wilderness considerations;
- Opportunities for solitude;
- The relationship of refuge lands primarily effected by the forces of nature, versus the imprint of man and/or refuge operations; and
- Overall Wilderness characteristics.

We have identified and delineated new Wilderness Study Areas (WSAs) at six refuges in the region, and recommended revising a previously proposed Wilderness area. Currently, a total of 12 refuges in the region contain Wilderness values and character sufficient to be considered further for Wilderness designation, and six refuges have designated Wilderness. The other refuges we reviewed were not suitable for further Wilderness consideration.

Because Wilderness reviews are part of our planning and public involvement process, we welcomed interest in and addressed concerns about Wilderness, including other agencies questioning our jurisdiction and authority to establish marine Wilderness areas around refuge islands and atolls in Hawai'i and the Pacific Islands. In general, however, the public and other agencies remain engaged in our planning and Wilderness review processes.

We recently conducted one of our most complex Wilderness reviews during the CCP process at Sheldon National Wildlife Refuge in northern Nevada. It was complicated because the Service proposed 341,500 acres for Wilderness designation at the Refuge in 1974. That proposal has not been acted upon by Congress. The new review resulted in adding and deleting areas from the 1974 proposal for a Wilderness new proposal of 341,495 acres. Both proposals contain some lands in common, but not all, therefore, the total area now in WSA status is 424,360 acres.

Refuge System policy commits us to managing all of our WSAs for their Wilderness character and values, unless the Service's directorate changes or withdraws a WSA's status. Our next step is to determine which WSAs are priorities for Wilderness recommendations.

Quantifying and Mapping the Climatic Diversity of the National Wilderness Preservation System: A Framework for Strategic Planning in a Changing World

Carol Miller, Aldo Leopold Wilderness Research Institute

Eric Batllori-Presas, University of California, Berkeley

Max Moritz, University of California, Berkeley

Marc Parisien, Canadian Forest Service

Sean Parks, Aldo Leopold Wilderness Research Institute

Four federal agencies are tasked with stewardship of a National Wilderness Preservation System (NWPS) that currently includes over 109 million acres across 757 units. These areas play a critical role as ecological benchmarks in the context of global change (e.g., land-use and climate changes). But what exactly comprises those areas? What is it we are stewarding? To date, no comprehensive environmental description exists of what comprises the NWPS or of what comprises the distinct jurisdictions of each of the four agencies. Without this understanding, coordination and planning toward any kind of strategic vision for the future of the NWPS will be very difficult. In this era of rapid change, developing such a strategic vision will be increasingly important if the benefits of Wilderness are to endure for future generations.

As a crucial first step to understanding what the NWPS contains, we use a new environmental classification framework to define the current environmental space of the US and the NWPS as independent from their geographic space. Ordination techniques were used to create a reduced set of three axes of variation on the basis of multiple climatic factors. These axes delineated the climate space that was used to assess the climatic diversity of the US that is represented by Wilderness areas within each of the four agencies and across the NWPS as whole. This framework allows Wilderness program managers to see, for the first time, what niches in the climatic environment their agency is uniquely responsible for and where that responsibility might be shared with another agency, thus unveiling potential opportunities for coordinated planning.

Our environmental framework is especially relevant in the climate change context; we are currently incorporating climate change effects and associated shifts in this environmental space to evaluate how well the NWPS will represent environments in the future and expected trajectories of change. Additionally, the inclusion of non-climatic variables (e.g., remoteness, topography) into our classification provides the opportunity to evaluate effects of projected land use changes on the representativeness of the protected area network. While our approach can be used to identify common vulnerabilities among Wilderness areas, this framework can also be used to conduct gap analyses and identify conservation priorities.

Considering Wilderness as a Place for Climate Change Research: Lessons from a Case Study in Southeast Alaska

Lauren E. Oakes, *Stanford University*

Addressing global climate change, resource managers increasingly recognize the need to understand the vulnerabilities and resiliencies of species within ecosystems. Knowing the ways in which ecological communities change is important to decision-making regarding the use and management of natural resources, as these changes can have cascading effects on a suite of ecosystem services from direct provisioning services like food and water to non-material cultural services like spiritual connections. As the effects of climate change become increasingly apparent, scientists turn to Wilderness lands to study complex ecological interactions and impacts. These protected lands remain relatively free from many direct anthropogenic impacts experienced in other areas, yet they still experience the far-reaching effects of climate change. The Wilderness Act recognizes scientific research as a public use. However, research in Wilderness must be considered alongside other uses and Wilderness character preservation. This social-ecological study on yellow-cedar mortality associated with climate change in Alaska illuminates how research conducted on Wilderness lands can produce information valuable to protecting Wilderness character, while improving knowledge of ecological processes relevant to managing populations on non-Wilderness lands. It highlights key questions for Wilderness managers to consider as climate change impacts continue to occur.

Extending north from British Columbia through Southeast Alaska's Alexander Archipelago, yellow-cedar (*Callitropsis nootkatensis*), a species of high cultural, economic, and ecologic value, has been dying off since the late 1800s, with intensifying rates observed in the latter part of the 20th century. Much research has focused on understanding climatic drivers of this species mortality, as reduced snow-pack makes these vulnerable trees susceptible to sudden freeze-thaw events. In the Tongass National Forest, yellow-cedar mortality covers nearly 500,000 acres on lands managed for timber in addition to designated Wilderness. This study couples ecological examination of the process of forest development in forests affected by yellow-cedar dieoff with an examination of how forest users and managers' respond to these changes. We found that a species dieback can dynamically rearrange the overstory and understory plant communities over time, emphasizing the importance of understanding community interactions when assessing the impacts of climate change on biodiversity and other ecosystem services and adapting forest management to a changing climate. We then conducted 44 semi-structured interviews with forest users and managers to understand knowledge of these ecological changes, use values of these forests, and how those use values may be impacted by yellow-cedar mortality. Preliminary findings indicate that an individual's knowledge, personal connection (at various ecological scales: to a species, forest, or larger landscape), and use values of these forests interact together to shape attitudes about change and adaptive practices to change. This research underscores the need to examine ecological changes in the context of valued services and management priorities for Wilderness and non-Wilderness lands in a changing climate.

Do Climate Change-Wildfire Interactions Perturb Ecosystems Past the Point of No Return?

Rachel A. Loehman, *US Forest Service*

Climate changes are profoundly influencing landscape patterns, ecosystem functions, and biotic community compositions either directly through increased species mortality, extinctions and extirpations, and shifts in species distributions; or indirectly from amplified disturbance processes (e.g., wildfire, pests and pathogens, and invasive species) that serve as additional ecosystem stressors. Landscapes affected by multiple disturbances and their interactions present unprecedented challenges for managing ecosystems, habitats, species, and ecosystem services. Climate changes and disturbance interactions are particularly important in fire- and drought-prone ecosystems, where shifts in vegetation composition and distribution due to climate alone may occur over decades or centuries, but disturbance events such as wildfires can temporarily or persistently reorganize landscapes over a period of days. In addition, many plants and animals in these systems live near their physiological limits for water and temperature stress, and even small changes in climate are likely to dramatically and negatively influence habitats and species. Because future environmental conditions are very likely to depart from historical ranges, it is possible that no analog from current or recent past conditions can serve as a guide for successful management treatments; hence, new tools, methods, and approaches for landscape management are necessary.

Three critical tiers of information are needed to meet 21st century management challenges for landscape conservation, under changing climates: First, *What is the range of variability and uncertainty in future climate?* Second, *What are the direct and indirect effects of changing climate on ecosystem patterns and*

processes, and ecosystem components? Third, *What are the most effective, achievable management strategies to mitigate unwanted climate change effects?* Major challenges for adaptation and mitigation planning are the uncertainty surrounding future climate changes (e.g., magnitude of change, rate of change), and the effects of climate changes and other interacting stressors on species, communities, and the habitats in which they reside. Models are valuable tools for addressing 21st century information needs, because they provide inference where no primary data are available – for example, under a changing climate that is likely to trigger major shifts in ecosystems, species, and ecological relationships. With a few notable exceptions, most models fail to account for spatially and temporally dynamic climate-landscape interactions that arise from rapid and unprecedented changes in climate, although these interactions are likely to result in significant shifts in species composition, fire regimes, and wildlife habitat. Results from a series of simulation modeling projects from landscapes spanning the northern Rocky Mountains, southwestern United States, and interior northwestern United States suggest that landscapes are highly sensitive to disturbance processes, especially under novel, warmer climates, and that novel approaches to land management may be required to promote desired conditions.

Expanding Wilderness and Reducing Human Demands on Nature: A Superior Alternative to Embracing the Anthropocene Era

Philip Cafaro, *Colorado State University*

Recently the claim has been made that Earth has entered a new geological era. The Holocene has ended and the Anthropocene has begun, in which humans have become an important global geochemical and ecological force. Moreover, conservationists are advised to *embrace* the Anthropocene era, in which humanity not only dominates but *rightfully* dominates the biosphere.

Now that we have entered the Anthropocene, according to prophets of this new dispensation, conservationists should give up outmoded goals like trying to protect all Earth's species from extinction, or designating Wilderness areas or parks that are off limits to most human economic activities. Truly wild nature is over, we are told, if it ever existed at all. Besides, such goals reflect a foolish desire to keep nature "pure," a misanthropic dislike of humanity, and an outmoded metaphysics that sees a sharp line between humanity and the rest of nature.

So conservationists need new goals. According to many Anthropocene proponents, conservationists' main goals should be to protect ecosystem services for a growing human population, and to do our part to accelerate economic development in a world where so many people are poor. We should avoid "fencing people out" of wildlands; that is old school. Instead, we must find creative "win/win solutions" where people use resources while preserving nature. We should also make our peace with the extinction of species that are maladapted to the new conditions of the Anthropocene, contenting ourselves with preserving whatever biodiversity ten or twelve billion people find useful or interesting.

I believe that conservationists should reject this bold call to selfishness and human racism. Preserving wild nature is still the heart of conservation. Sharing the landscape generously with other species and allowing them to evolve freely remains a necessary part of any morally justifiable land ethic. But that necessarily involves setting *limits* to human demands on nature, not endlessly accommodating them. It involves setting *limits* to the degree of human influence that is acceptable in our national parks and Wilderness areas. This, in turn, limits the degree to which real conservationists can accept the dominant trends of the Anthropocene.

Rather than embrace the Anthropocene era, conservationists should act to rein in its excesses. Among our key goals, we should work to expand parks and protected areas; work to increase the acreage kept free from intensive human resource extraction; and work to lessen human impacts that degrade wildlife habitat, such as air and water pollution. Conservationists should advocate for humane measures to reduce human numbers, gradually and non-coercively. Recognizing that humanity is bumping up against ecological limits to economic growth, conservationists should avoid any temptation to make our peace with the current endless growth economy. Instead a central part of our agenda should involve creating a truly sustainable economy: one that recognizes limits to growth. Above all, conservationists should affirm the many enduring values of Wilderness and work to create more Wilderness on the ground in the 21st century. I believe such a course is both more prudent and morally superior to embracing the Anthropocene era.

The Evolution of Wilderness Social Science: From Carrying Capacity to Climate Change Research

Alan Watson, *Aldo Leopold Wilderness Research Institute*

Ken Cordell, *Aldo Leopold Wilderness Research Institute*

Wilderness social science research in the US has migrated from a fairly narrow start in recreation research in the 1960s to broad social science issues in the 21st Century. This research program, primarily with funding, housing and administrative direction from the Forest Service, has been driven by an effort to implement vague directions in the Wilderness Act and then emerging questions asked by managers due to the changing role of Wilderness in US society. This science is easy to track over the 50 years since the US Congress legislated a National Wilderness Preservation System and the history is helped by presence of only a small number of Forest Service scientists and academics who have focused on defining and addressing research questions. These scientists have collaborated with managers to navigate through changing science needs and changing relationships between the US population and Wilderness. Today there is extreme interest in removing social barriers to restoration of fire and other natural ecological process to Wilderness and how climate change will affect our lives in the future. While at first a great deal of effort was aimed at understanding the role of Wilderness protection and possibly new designations in climate change mitigation, today there is no question that a previously under recognized value of Wilderness is as a baseline of relatively low human influence to understand climate change impacts on natural systems. The role of Wilderness (and appropriate management intervention) in providing water-based ecosystem services and restoring natural fire processes will take on new challenges and significance in America's rural and urban communities. As technology changes and visitor use patterns change, many questions will arise about how to appeal to a society with rapidly changing expectations and interests. The role of Wilderness in human well-being has changed and will continue to change as society, the environment and official policy changes.

American's Perceived Values of Wilderness: Results from Value Based Audience Segmentation

Ramesh Ghimire, *University of Georgia*

Gary Green, *University of Georgia*

Neelam Poudyal, *University of Tennessee*

H. Ken Cordell, *US Forest Service*

Wilderness areas provide a variety of benefits and also contribute significantly to maintain nation's health and well-being. Studies have shown that Americans value Wilderness and want to preserve it. However, little is known about differences in people's perceived values of Wilderness. Further, limited research has analyzed how different outdoor recreationists value Wilderness. Hence, using data from the National Survey on Recreation and the Environment (NSRE) conducted in 2008, this study analyzes Wilderness value differences among social strata and among outdoor recreationists in the United States. In the 2008 NSRE, respondents were asked a set of 13 questions concerning their perceived values of Wilderness and were asked to rate these values from not important at all to extremely important. Based on their responses, respondents were first segmented into different groups, and then analyzed by their socioeconomic and demographic characteristics, outdoor recreation participation, and opinions on federal lands and Wilderness.

A K-mean cluster analysis revealed a three-clustering solution that was deemed to provide the clearest divisions between clusters. Respondents in the first group ranked Wilderness values as "slightly important" while respondents in the second group ranked them as "very important." Finally, respondents in the third group ranked them as "extremely important." Although, respondents did not differ dramatically in their income, residency, job status or ethnicity across groups, there were differences in their age, gender, and education backgrounds. Relatively younger people fell into the second and third groups. In terms of gender, the first group was dominated by males, while the second and third groups were dominated by females. A majority of respondents in the second and third groups were college graduates, while a majority of respondents in the first group did not complete a college degree.

A majority of respondents in second and third groups participated in non-consumptive recreations. A majority of respondents in first group believed that the current amount of land designated as Wilderness was "about the right amount," while a majority in second and third groups believed that "it was not enough." Finally, a majority of respondents in first group were indifferent to designating more federal lands as Wilderness, while a majority of respondents in second and third groups strongly favored designating additional federal lands as Wilderness.

Since higher educated people perceived greater values from Wilderness, education and outreach service may help to increase people's awareness of the values of Wilderness, and, thus, help to conserve wildlands from being developed. That is, people's attitudes towards Wilderness protection are likely to change in future, along with the changing structure of demographics. Since people participated in non-consumptive recreations perceive greater values from Wilderness, agencies may see some benefit in expanding outdoor recreation opportunities to help improve people's health, and to also increase people's appreciation and understanding of the values of Wilderness.

Technical Climbing's Effects on Wilderness Ecosystems: Applied Research for Enhanced Management

Justin J. Preisendorfer, *US Forest Service*

Technical climbing occurs in approximately half of the nation's congressionally designated Wilderness areas yet the agencies responsible for managing the National Wilderness Preservation System (NWPS) have been slow to issue comprehensive and holistic policy to manage the activity. The limited amount of management attention climbing has been afforded thus far has focused primarily on fixed anchors and their impact on the undeveloped qualities of Wilderness.

While the management discussion focuses largely on the undeveloped quality of Wilderness a growing body of research details climbing's impacts on the natural qualities of Wilderness character. This nascent field of research has already produced findings that can be of high value to land managers operating on inchoate policy or nonexistent direction. These findings have not been widely circulated among land managers responsible for Wilderness areas with significant amounts of climbing nor have they been applied to create policy that adequately protects natural qualities across the NWPS.

Technical climbing generally occurs on a durable surface that shows few conspicuous signs of human passage however the impacts to an area's natural qualities extend out from the cliff face and may not always be readily perceivable to the untrained eye. The wealth of existing research regarding climbing's impact on natural qualities has focused on the unique assemblage of species that inhabit the cliff face. This work is difficult at best and the proven research methods employed when investigating other forms of recreation have not always been applicable when concerned with climbing. While most early studies showed a negative correlation between climbing and vegetative cover recent research has shown that these early studies may not have always adequately accounted for the natural features that factor predominately in the abundance of cliff-face vegetation. As such, some of the early research may be invalid and causing managers to act on bad science.

Trails, campsites and the staging areas beneath climbing routes often display the same types of impacts as those associated with backpacking and some prior research is applicable. While the impacts attributed to the activities may appear similar the management strategies employed to address them must be different because there are dissimilar objectives and use patterns between the types of visitor. As an example, while a longer, gradual descent trail may be appropriate for hikers battling a steep eroded trail, climbing-related impacts may be minimized and better managed by the installation of fixed anchors for rappelling where impacts can be concentrated on a durable surface and travel on soil minimized.

This presentation summarized existing research related to the impacts of climbing on the natural qualities of Wilderness and made recommendations for how this research can contribute to more robust Wilderness management.

Notes from Across the Pond: Shared Approaches to Wilderness between the US and Europe

Steve Carver, *Wildland Research Institute*

In February 2009, the European Parliament passed a resolution on Wilderness in Europe by an overwhelming majority of 538 votes in favour to just 19 votes against. The resolution “*emphasises the importance of protecting Europe’s last remaining Wilderness areas and that calls on the European Institutions to develop appropriate guidance to EU Member States on the best approaches to ensure the protection of these natural habitats as an important contribution to halting the loss of biodiversity.*”

By any yardstick, Europe is now re-focusing its attention on recognising its own Wilderness resource. As Europe looks inward to its own remaining wild landscapes, so we re-import the Wilderness ideal; learning from developments in Wilderness protection and legislation in North America, Africa and former colonies elsewhere in the world including South Africa, Canada, New Zealand and Australia, many of which have their own Wilderness definitions, and all of which owe much to the original wording penned by Howard Zahniser in the 1964 US Wilderness Act. It comes as a surprise to many Europeans, who are long used to living in heavily modified landscapes, that significant Wilderness landscapes still remain within their otherwise crowded continent. Nonetheless, in looking to our own lands we can find many of the ideals and values of Wilderness normally recognised elsewhere in the world.

This paper looks at the reasons why Europe has begun to take this more inward perspective including: the desire to explore and experience Wilderness first seen in the New World, recognising the primeval need within even the most modern societies to experience and be part of nature; and the rising interest in saving our own backyard Wildernesses (and so lead by example), (re)creating new Wilderness areas, reintroducing lost species, and helping preserve and maintain natural processes that provide valuable ecosystem services to society. The paper then looks closely at the scientific and policy framework for Wilderness in Europe and summarises the progress made to date. All the objectives of the 2009 European resolution have largely been met. We now have a recognised definition of European Wilderness, we have successfully mapped the remaining Wilderness areas at a European scale (and national projects are underway to map Wilderness using higher resolution data for local decision support and policy making), studies of the wider value and benefits of Wilderness protection are being carried out, and management guidelines for Wilderness have been developed for use within the Natura 2000 network. However, less than 1% of European territory has been designated as Wilderness, yet there are many larger areas which possess the essential qualities of Wilderness are still without formal protection and therefore remain at risk from threats such as forestry, farming, mining and energy developments. It is a question of decency, moral obligation, heritage, history, identity and both economic and emotional value that we ensure the strongest levels of protection of these areas using legal instruments at a national and international level. This paper examines in detail, therefore, the opportunities for developing a European Convention on Wilderness and with it increased commitment from member states for the protection of Wilderness landscapes, trans-boundary cooperation, and strengthening links to the Convention on Biodiversity. While this might not be fully its equivalent, it will move us closer down the road towards a Wilderness Act for Europe and thereby realising “A Vision for a Wilder Europe”.



Glacial Stream, Tracy Arm - Ford's Terror Wilderness, Alaska

By Irene Owsley, www.ireneowsley.com

Stewardship Track Summary

STEWARDSHIP TRACK CHAIR

Kevin Proescholdt, *Wilderness Watch Conservation Director, Chair*

Roger Kaye, *US Fish and Wildlife Service, Chair*

Ron Brinkley, *Film Festival Organizer*

Aaron Collins, *US Fish and Wildlife Service*

Steve Henry, *US Fish and Wildlife Service*

Gary Macfarlane, *Friends of the Clearwater*

Elwood York, *US Forest Service*

INTRODUCTION. The Stewardship Track at the W50 National Wilderness Conference was the largest of the six topic tracks in the gathering. More than 125 submissions for presentations came in for topics in the Stewardship Track, the most of any of the tracks. And the Stewardship Track conducted 19 separate 1.5-hour concurrent sessions at the conference with multiple speakers in each session, the most of any of the tracks. The topics covered were rich and varied, further evincing widespread interest in Wilderness stewardship.

It was heartening to see that nearly all of the submissions focused on the administration of existing Wilderness. Some parts of the Wilderness community believe that the only important work in the Wilderness field is designating new Wildernesses, and that bias has been reflected in most Wilderness conferences to date. That work of designating new Wildernesses is certainly important, and it should continue. But over the past 50 years the protection and stewardship of our existing 110-million-acre National Wilderness Preservation System have risen to at least equal importance with designating new areas.

Howard Zahniser, the author of the Wilderness Act, also provided prescient guidance for Wilderness stewardship even before the Wilderness Act became law. In one of his more well-known articles, “The Need for Wilderness Areas,” he wrote, “It behooves us then to do two things: First we must see that an adequate system of Wilderness areas is designed for preservation, and then we must allow nothing to alter the Wilderness character of the preserves.”¹

Zahniser also recognized the essential character of Wilderness, as well as the potential we humans hold to damage these areas through our own Wilderness administration. In 1953, he addressed a committee of the New York state legislature, and told them, “We must remember always that the essential quality of the Wilderness is its wildness.” He also told the committee, “We must also see that we do not ourselves destroy its Wilderness character in our own management programs.”²

Zahniser captured these themes deftly when he drafted the Wilderness Act. Despite opposition from friends and colleagues, Zahniser carefully chose the word “untrammeled” to help define Wilderness. Untrammeled, according to Zahniser, meant “free, unbound, unhampered, unchecked, having the freedom of the Wilderness.”³ He did not mean it to imply pristine or untouched by humans, as some critics often assume. In perhaps more modern terms, it means unmanipulated, unconfined, uncontrolled, or unrestrained. In other words, wild. The word embodies the humility and restraint that Zahniser knew we humans needed to use as we both encountered and protected Wilderness.⁴ And that is why the Wilderness Act, with Zahniser’s carefully drafting, directs us today, in the ‘prime directive’ of the Wilderness Act, to preserve the Wilderness character of these areas, and to boldly protect “an enduring resource of Wilderness” for current and future generations.

The conference included numerous presentations that addressed many of the challenges facing Wilderness stewardship:

THE CHALLENGES OF THE PREVIOUS AND NEXT 50 YEARS. Milestones like the 50th anniversary of the Wilderness Act provide opportunities both to look back on the previous 50 years, as well as to look ahead into the next 50 years. We had speakers who looked in both directions.

Wilderness attorney Jon Dettmann of Minnesota reminded us of the Pinchot Institute for Conservation’s assessment of the National Wilderness Preservation System more than 10 years ago. The Pinchot Institute painted a grim picture: “The four Wilderness agencies and their leaders must make a strong commitment to Wilderness stewardship before the Wilderness System is lost.”⁵ Little has changed substantively since then, he continued, but there is hope in reinvesting ourselves not only to the terms of the Wilderness Act, but the purpose and ethics behind it.

George Nickas of Wilderness Watch shared six lessons from the past 50 years of Wilderness stewardship, including, “Wilderness is easier to designate than to protect,” “Relying on agencies that opposed the Wilderness bill was destined to fail,” and “Our movement is largely responsible for Wilderness’ tenuous hold,” mean-

ing that the conservation community has often been complicit in the degradation of the Wilderness resource.

Steve Boutcher and Adam Barnett of the Forest Service described the creation and application of the Chief's 10-Year Wilderness Stewardship Challenge to improve stewardship of Wildernesses under their agency's care. The Challenge set up a grading system for each Wilderness based on 10 factors. It has now concluded, and brought significant increases in the scores on the Challenge over the decade.

A full panel from the Society for Wilderness Stewardship (SWS) provided a look ahead through the next 50 years. The panelists included Stephen McCool of the University of Montana, Connie Myers of the Arthur Carhart National Wilderness Training Center, Robert Dvorak of Central Michigan University, and Maura Longden, the board chair of the SWS. They concluded that because the next 50 years are likely to be much different than the last 50, Wilderness stewards will need to manage adaptively, engage double-loop learning, and provide new sets of skills to stewards in areas such as public engagement and problem-solving.⁶

THE CHALLENGES OF WILDNESS. – As mentioned in the introduction, Howard Zahniser and the other architects of the Wilderness Act believed that wildness was the essential quality of Wilderness. Yet wildness – best articulated in the Wilderness Act by the word “untrammeled” – is often under threat in many units of the National Wilderness Preservation System.

Some of the threats to wildness come from reactions to the changing climate and the manipulations of Wilderness that are proposed. Prescribed burning plans, lake poisonings and fish stocking, driving bulldozers or backhoes into Wilderness to construct large concrete water catchment devices, even the potential supplementing of the wolf population on Isle Royale – these and many others are some of the proposals that have come forward because of the changing climate.

Sometimes the threats to wildness come from the actions of the federal Wilderness-administering agency, despite Zahniser's admonition that “We must also see that we do not ourselves destroy its Wilderness character in our own management programs.” Jack Oelfke of the North Cascades National Park (and its Stephen Mather Wilderness) discussed his experiences with ecological restoration in the North Cascades by asking the question, “Is it worth the cost of trammeling?”

Part of the challenge comes from the inter-agency Wilderness character monitoring framework entitled *Keeping It Wild*. This framework identifies four tangible characteristics of Wilderness (Untrammeled, Naturalness, Solitude or Primitive and Unconfined Recreation, and Undeveloped) that can be measured, plus a fifth catch-all category for special features. The framework also treats all five categories as equal, something Gary Macfarlane of Friends of the Clearwater noted is at odds with Zahniser's admonition that wildness is the essential and central quality of Wilderness. As the framework has been used in the field, it can appear to set up a conflict between wildness (untrammeled) and naturalness. Macfarlane concluded that wildness and naturalness do not really conflict, but that naturalness flows from wildness.

The threats to wildness sometimes come from the conservation organizations within the Wilderness movement. Howie Wolke of Big Wild Adventures and Wilderness Watch took the Wilderness Society, Pew's Campaign for America's Wilderness, and others to task for undercutting Wilderness protections and grassroots Wilderness activists in order to make political deals with those in Washington, DC.

THE CHALLENGES OF WILDERNESS CHARACTER MONITORING. The single mandate of the Wilderness Act is to preserve Wilderness character. In order to determine whether the federal Wilderness-administering agencies are preserving Wilderness character, monitoring must be done.

In the past, the agencies did not consistently monitor Wilderness character. Even when some monitoring was done, the data from that monitoring were often incomplete, improperly stored, or impossible to retrieve. In one study of campsite impact monitoring in the Bob Marshall Wilderness Complex from 1987 to 2004, for example, the authors concluded that change was impossible to assess from the existing data: “we have concluded that very little can be learned.”⁷

The agencies have improved their efforts to monitor Wilderness character since then. In 2008, an inter-agency team published *Keeping It Wild: An Interagency Strategy for Monitoring Wilderness Character across the National Wilderness Preservation System*, and all four federal agencies have increased their efforts to monitor Wilderness character.⁸

A panel of agency leaders, led by Peter Landres of the Aldo Leopold Wilderness Research Institute, addressed where we are at with Wilderness character monitoring today and what might be happening in the future. He reported that an updated iteration of the interagency monitoring framework, *Keeping It Wild 2: An Updated Interagency Strategy for Monitoring Wilderness Character across the National Wilderness Preservation System*, is likely to be published in 2015.

Emily Simpson of the Bureau of Land Management reported that her agency has completed baseline assessments of 50% of the 221 BLM-administered Wildernesses. Nancy Roeper reported that Wilderness character baseline assessments for all 63 Wildernesses administered by the U.S. Fish and Wildlife Service have been completed. The National Park Service's Tim Devine reported that 20+ NPS Wildernesses have integrated Wilderness character monitoring into their stewardship responsibilities. And Steve Boutcher of the U.S. Forest Service discussed his agency's progress on implementing the Wilderness character monitoring in the 439 Wildernesses in its care.

THE CHALLENGES OF CLIMATE CHANGE AND THE ANTHROPOCENE. Some Wilderness critics contend that Wilderness no longer exists in the world, with human impacts like climate change felt throughout the globe. (These critics fundamentally misunderstand Zahniser's choice of "untrammelled" to help define Wilderness; untrammelled does not mean pristine or untouched by humankind, but rather unmanipulated or unconfined by humankind.) Typical of this viewpoint was a recent commentary in the *New York Times* that repeated this fallacy. Other critics claim that we have now entered the age of the Anthropocene, or an era where humans can and should manipulate the entire globe for human purposes.⁹

Wilderness supporters, of course, strongly oppose the Wilderness critics. Many Wilderness supporters, including Kenneth Brower, one of the plenary speakers at the conference, have responded to the claims of the critics.¹⁰ But the Wilderness critics have helped raise a fundamental question: Can wilderness continue in an era of anthropogenically-caused climate change?

The opening stewardship panel explored the future of wilderness in Wilderness in the Anthropocene with three leading scholars, thinkers, and activists for Wilderness. Dr. Roger Kaye of the U.S. Fish and Wildlife Service in Alaska discussed the emerging conflict between wilderness and naturalness that climate change, among other factors, has heightened. He urged us not to sacrifice the full range of values and benefits that wilderness embodies. Dr. Peter Landres of the Aldo Leopold Wilderness Research Institute concluded that Wilderness is more relevant and important than ever before, and that Wilderness is the best and most important place to establish and nurture the ethical foundation for the future, a place of humility and restraint. Dave Foreman of the Rewilding Institute urged us that despite the extinction crisis that climate change is exacerbating, in Wilderness lies not only the hope for the natural world but for the human species as well.

Nicole Whittington-Evans of the Wilderness Society gave a presentation later in the conference on Wilderness and climate change. She stated that Wilderness provides species with large, unfragmented habitat that allows for migration and refuge from areas that have burned, are experiencing drought or floods, or from the effects of climate-related disturbances. **She concluded that it will become increasingly important to protect new Wilderness areas as well as properly steward the Wildernesses already designated to facilitate greater resiliency and adaptation to climate change.**

THE CHALLENGES OF CULTURAL RESOURCES. Four recent court cases have clarified the nexus between the preservation of cultural resources in Wilderness and the mandate of the Wilderness Act to preserve Wilderness character. In 2004, the 11th U.S. Circuit Court of Appeals ruled against the National Park Service's practice of conducting motor vehicle tours through the Cumberland Island Wilderness in Georgia as part of its administration of historic structures. While ruling that the motor vehicle tours violated the Wilderness Act, the appeals court also held that the maintenance or preservation of historic structures in Wilderness is subordinate to the Wilderness Act's mandate to preserve Wilderness character. "The need to preserve historical structures may not be inferred from the Wilderness Act nor grafted onto its general purpose," the court ruled. "Any obligation the agency has under the NHPA to preserve these historical structures must be carried out so as to preserve the 'Wilderness character' of the area."¹¹

In 2005, a federal court in Washington ruled in another case dealing with historic structures. The National Park Service proposed to replace two collapsed historic trail shelters with pre-fabricated replica shelters hauled in by helicopter in the Olympic Wilderness. The federal court ruled that this plan, too, violated the Wilderness Act.¹²

The following year, a court in California blocked the U.S. Forest Service from repairing and maintaining 11 historic dams in the Emigrant Wilderness. The agency claimed that the so-called "public purposes" of the Wilderness Act (recreation, scenery, education, conservation, and historic uses) allowed it to do so. The court disagreed: "[T]he plain and unambiguous text of the Wilderness Act speaks directly to the activity at issue in this case – repairing, maintaining and operating dam 'structures' – and prohibits that activity."¹³

And in 2012, a federal court in Washington ordered the U.S. Forest Service to remove a replica lookout building atop Green Mountain in the Glacier Peak Wilderness that had been built anew in 2009. "The court... agrees that the NHPA does not compel particular preservation-oriented outcomes. Accordingly, the Court re-

jects the notion that the Forest Service had any affirmative obligation to preserve the Green Mountain lookout pursuant to...NHPA that must be balanced against its obligations under the Wilderness Act. In fact, there is no conflict between the Wilderness Act and the NHPA here since neither action nor inaction toward the Green Mountain lookout would have placed the Forest Service in violation of the NHPA, for the very reason that the NHPA itself does not compel any particular outcome....Furthermore, the Wilderness Act specifically establishes the preeminence of its requirements over other laws that may affect Wilderness areas.”¹⁴

With this background context, a session at the conference addressed the issue of cultural resources in Wilderness, hearing from Thomas Banks of the U.S. Forest Service, Bob Krumenaker of the National Park Service, and attorney Jonathan Dettmann of Minnesota, who handled the Cumberland Island litigation for Wilderness Watch. While the preservation of cultural resources or historic resources is not prohibited in Wilderness, when that preservation conflicts with the Wilderness Act’s mandate to preserve Wilderness character, then Wilderness character must be preserved. Bob Krumenaker also shared examples from the Gaylord Nelson Wilderness at the Apostle Islands National Lakeshore where cultural resources preservation and Wilderness character preservation co-exist.

THE CHALLENGES OF RECREATION IMPACTS. Many people think of recreation as the primary use or purpose of Wilderness. Recreation has always been a popular use of Wilderness, but it is not the main purpose of the Wilderness Act (preserving Wilderness character is). Recreation is an important use, but it can have many negative impacts. These impacts can range from excessive recreational packstock use, which can damage trails, meadows, and campsites and disperse weeds; to over-developed or over-engineered trails; to managing human waste at Mount Whitney in California’s John Muir Wilderness; to managing high levels of visitor numbers at the Boundary Waters Canoe Area Wilderness (BWCAW) in Minnesota, where visitors are required to camp at designated campsites that have anchored steel fire grates and latrines back in the woods.

Two sessions dealt with recreation impacts. A panel consisting of Karl Forsgaard of the Sierra Club, North Cascades Conservation Council, and the Alpine Lakes Protection Society; Sarah Peters of WildEarth Guardians; and Terry Weiner of the Sierra Club and Desert Protective Council discussed the negative impacts of illegal motorized trespass into designated Wildernesses in the Pacific Northwest and the Mojave and Sonoran desert ecosystem.

Attendees at the second recreation impacts session heard Mark Kolinski of Wild South describe meeting the challenges of recreation impacts in the Sipsy Wilderness in Alabama. Jeff Marion of the U.S. Geological Survey and Heather Eagleston of Virginia Tech discussed the changed conditions they documented from a 32-year study of campsites in the BWCAW, and Carl Skustad of the Forest Service described the use of dogsled teams in the winter as the minimum tool for hauling materials into and out of the BWCAW.

THE CHALLENGES OF ADMINISTRATIVE MOTOR USE AND GROWING MECHANIZATION. The Wilderness Act generally prohibits motor use in Wilderness and was passed in part to thwart the “growing mechanization” that was then occurring and still occurs.¹⁵ Yet today, in far too many Wildernesses and across all four Wilderness-administering agencies, administrative motor use continues to occur and may be growing as the agencies lose their previous skills with and commitment to traditional skills and methods that don’t rely on motor use.

The National Park Service routinely approves extensive helicopter use in the Sequoia-Kings Canyon Wilderness rather than using packstock to supply administrative cabins and trail crews, the Forest Service authorized 93 helicopter flights and the use of heavy equipment for the Tin Cup Lake Dam repair project in the Selway-Bitterroot Wilderness, and the Bureau of Land Management approved helicopter transport into the Chemehuevi Mountains Wilderness of California for a visiting geology class.

Elsewhere, the federal agencies have authorized the use of bulldozers in Wilderness to build concrete wildlife water containment structures (“guzzlers”), and extensive helicopter flights and motorized equipment to build a replica lookout on Green Mountain in the Glacier Peak Wilderness.

Gary Macfarlane of Friends of the Clearwater and Wilderness Watch spoke on the challenges of administrative motor use and growing mechanization. Among other suggestions, he proposed that the Minimum Requirements Decision Guide (MRDG)/Minimum Requirements Analysis (MRA) analyses be amended or scrapped, since they seem to have become a way to rationalize motor use rather than minimize motor use.

THE CHALLENGES OF WILDLIFE MANAGEMENT. Wildlife and fisheries management within federally designated Wildernesses continues to pose challenges. While the Wilderness Act expressly recognizes the states’ traditional role in managing fish and wildlife within federal Wildernesses¹⁶, the federal agencies retain ultimate authority for managing Wildernesses and their wildlife, even over state agencies seeking to exercise

state authorities but in ways that harm Wilderness character.¹⁷ This nexus between federal and state authorities for fish and wildlife, and how those authorities are exercised, creates many of the challenges regarding wildlife management in Wilderness today.

The expectations of the framers of the Wilderness Act were that little active wildlife management within Wilderness would occur. The final Senate Report on the Wilderness Act, for example, highlighted language from a Wildlife Society resolution regarding Wilderness that “the science of wildlife management is peculiarly concerned with the perpetuation of primeval areas as check areas against which the practices in game production on lands under management can be measured.”¹⁸ There was a general consensus at the time, state fish and game agencies included, that wildlife in Wilderness would be kept wild and little managed. The Wilderness Act also does not grant special exceptions for state fish and game agencies to use motorized equipment or manipulate habitat, even though some state agencies believe they can.

One recent federal court case shed some light on this often-contentious issue. In Arizona, the U.S. Fish and Wildlife Service allowed the Arizona Game and Fish Department to drive bulldozers, backhoes, and other motor vehicles into the Kofa Wilderness to build permanent concrete 13,000-gallon water containment structures (“guzzlers”) to provide supplemental water for bighorn sheep. The U.S. 9th Circuit Court of Appeals ruled that this action violated the Wilderness Act, blocked Arizona Game and Fish from continuing the project, and ordered the Fish and Wildlife Service to justify the guzzlers’ existence if they are to remain.¹⁹

The conference saw many speakers on the topic of fisheries and wildlife management in Wilderness. Ann Schwaller and Tim Engrav of the Forest Service described the fisheries management situation in the Boundary Waters Canoe Area Wilderness of Minnesota. Fran Mauer of Wilderness Watch, a retired U.S. Fish and Wildlife Service biologist from Alaska, talked primarily about wildlife management in Alaskan Wildernesses, and the National Park Service’s preemption of state wildlife harvest regulations in National Park Preserves in that state.

Another full panel had a quite lively discussion on wildlife management as well. Attorney Lowell Baier discussed the historic growth of the federal government’s authority over wildlife on public lands. Attorney Christopher Segal provided an overview of federal laws like the Wilderness Act, ANILCA, and the Endangered Species Act and particularly some of the special provisions related to wildlife. Law professor Peter Appel, a former Department of Justice attorney, gave an overview of the current state of wildlife management in Wilderness from a legal perspective. Andy Loranger of the U.S. Fish and Wildlife Service discussed the evolving case study of state and federal wildlife management on Refuge Wildernesses in Alaska. Doug Vincent-Lang, the director of the Division of Wildlife Conservation for the Alaska Department of Fish and Game, provided a state agency perspective on the challenges of working with federal agencies on wildlife issues in Alaskan Wilderness. John Kennedy of the Wyoming Game and Fish Department focused on the importance of involving state wildlife agencies early in Wilderness designation proposals, and his hope that federal Wilderness management would support the state wildlife agencies’ wildlife management goals. And Elaine Johnson of the Fish and Wildlife Service offered a case study of federal and state cooperation for wildlife management in the Kofa Wilderness in Arizona.

THE CHALLENGES OF SPECIAL PROVISIONS. Special provisions in Wilderness bills are measures that weaken the protection and management for the new Wilderness beyond what the already-compromised 1964 Wilderness Act would allow. Special provisions are sometimes also referred to as non-conforming uses. Typically, special provisions allow motorized uses; increased commercialization; increased manipulation of habitat, natural process, or wildlife; or changing the types or levels of recreational uses.

While special provisions usually deal only with the Wilderness being designated by that particular bill, the history of Wilderness bills shows that special provisions are often replicated and expanded in subsequent Wilderness legislation, leading to a pernicious corrosion of standards for the entire National Wilderness Preservation System and a weakening of the very idea of Wilderness.²⁰

Once established, special provisions in Wilderness legislation prove terribly difficult politically to later remove. The only example of the successful removal of special provisions for a Wilderness came with the passage of the 1978 Boundary Waters Canoe Area Wilderness Act in Minnesota, which removed special provisions from the 1964 Wilderness Act that allowed logging and motorboat use in the BWCAW. But this removal came only after a very bitter and divisive political fight.²¹

The Wilderness community, and the nonprofit conservation organization component in particular, has been slow to recognize the dangers of special provisions and to fight against them wherever they may appear in new Wilderness designation legislation. We need to do much better in fighting special provisions and halting the corrosion that they have caused to the standards of the National Wilderness Preservation System.

One session focused on the challenges of special provisions. Dr. Peter Landres of the Aldo Leopold Wilderness Research Institute provided an overview of the prevalence of special provisions, Kevin Proescholdt of Wilderness Watch discussed the problems that special provisions generate, and a panel of Dan Millis (Sierra Club), Krysta Schlyer (author and photographer), and Kevin Dahl (National Parks and Conservation Association) discussed the problems that special provisions (and in particular the waiver of federal laws like the Wilderness Act along the international border with Mexico) have had on Wildernesses like Organ Pipe Cactus Wilderness, Cabeza Prieta Wilderness, and Otay Mountain Wilderness.

THE CHALLENGES OF COMMERCIAL ENTERPRISES AND COMMERCIAL SERVICES. The Wilderness Act prohibits commercial enterprises and commercialization within designated Wildernesses.²² A narrow exception to this prohibition on commercial enterprises is allowed in the Wilderness Act as well. “Commercial services *may be performed* within the Wilderness areas designated by this Act *to the extent necessary* for activities which are proper for realizing the recreational or other Wilderness purposes of the areas.” (italics added).²³ This narrow exception does not *guarantee* or *require* that commercial services occur in Wilderness, but only allows for that possibility; even then, such commercial services can occur only to the extent necessary to help achieve the recreational or other purposes of Wilderness.

In practice, this narrow exception has usually allowed for commercial guiding and commercial outfitting services in Wilderness. But the federal Wilderness-administering agencies retain the ability to regulate, limit, or curtail those services in order to preserve the area’s Wilderness character.

Two related recent court cases dealing with the Ansel Adams and John Muir Wildernesses in California have helped define the limits of these commercial services, both dealing with excessive commercial packstock use in these two Sierra Nevada Wildernesses.

In the first case, in 2004, the 9th Circuit Court of Appeals ruled that the U.S. Forest Service violated both the Wilderness Act and the National Environmental Policy Act in allowing commercial packstock outfitter operations to degrade the two Wildernesses. The court ruled “that the Wilderness Act imposes substantive requirements on an administering agency...to protect the Wilderness.” The court also stated: “The Forest Service decision to grant permits at their pre-existing levels in the face of documented damage resulting from overuse does not have rational validity.”²⁴

Three years later, in a follow-up lawsuit challenging the agency’s decision to *increase* commercial packstock use even in light of the damage that lower levels of use had caused, the federal district court was even more specific. The court determined it is unlawful to allow Wilderness conditions to be harmed in order to maintain or increase current levels of commercial use. The court also found that the Wilderness Act’s “to the extent necessary” provision does in fact preclude commercially supported activities that are not Wilderness-dependent, or that exceed what is necessary (e.g., commercial day rides are not necessary where non-Wilderness national forest lands could serve the purpose). The court further found that the use of commercial packstock for carrying gear that is not necessary in Wilderness, such as large radios, heavy floats, and bulky furniture “that are unnecessary for Wilderness travel and, indeed, incompatible with the Wilderness experience of other people...” is not a lawful use of commercial services in Wilderness. Finally, the court ruled that a “desire” or “preference” to use commercial services does not equate to a “need” to use those services.²⁵

Currently controversy surrounds the Forest Service’s proposal regarding commercial filming in Wilderness. The Wilderness Act bans such commercial filming, but the agency’s proposal elicited opposition from news organizations and first amendment supporters, who believed that the Forest Service was attempting to ban filming for news coverage.²⁶

With this background as context, the conference heard three speakers discuss the challenges of commercial services in Wilderness: Mary Emerick from the U.S. Forest Service, Gary Macfarlane of Friends of the Clearwater, and Pat Tabor of Swan Mountain Outfitters. Pat Tabor described the services provided by outfitters like himself. Mary Emerick discussed the process that the Forest Service has developed for determining “to the extent necessary.” And Gary Macfarlane cautioned that Congress wanted to protect Wilderness from commercialization, that outfitting is not mandated, that outfitting must provide a benefit and be limited, and that outfitting must be done in a way that protects both the tangible and intangible aspects of Wilderness character.

THE CHALLENGES OF CITIZEN INVOLVEMENT. Citizens have always been involved in Wilderness stewardship, even though the federal Wilderness-administering agencies have always exercised the primary authority for stewardship. Two different models of citizen stewardship organizations were present at the conference.

As federal budgets for Wilderness have declined, and as the workforce of professional Wilderness rangers within the agencies has unfortunately shrunk, the agencies have come to increasingly rely on local citizen

stewardship organizations who provide volunteers with boots on the ground to assist the federal agencies with projects like trail clearing or trail maintenance. This type of organization is the first model.

At the conference, we heard from many representatives from organizations like the Southern Appalachian Wilderness Stewards, the Selway-Bitterroot Frank Church Foundation, Friends of Nevada Wilderness, and the National Forest Foundation. They described some of the challenges of organizing their local organizations, recruiting and training volunteers, and working with the federal agencies. Many of these local organizations have joined together to form a national umbrella organization, the National Wilderness Stewardship Alliance.²⁷

Dawn Serra of Wilderness Watch described her organization as an example of the second model of citizen organizations. Wilderness Watch is the only national conservation organization focused solely on the protection and proper stewardship of the National Wilderness Preservation System. Wilderness Watch is an advocacy organization that educates and engages the public to become involved in stewardship issues, analyzes Wilderness plans, files administrative appeals, and takes the agencies to court when they violate the Wilderness Act.²⁸

THE CHALLENGES OF FIRE. The challenges of fire in Wilderness are legion. After decades of fire suppression, we have come to realize that there were many unintended consequences from excluding fire from Wilderness landscapes that had adapted to the presence of fire. Restoring fire to its natural role in Wilderness has proven to be enormously difficult and challenging. Some fires are still suppressed.

Allowing all naturally-ignited fires to burn inside Wilderness has been challenging, particularly during extreme weather conditions. Some naturally-ignited Wilderness fires have burned outside the Wilderness boundaries to damage private property. Some attempts to start intentionally-lit human-ignited fires in Wilderness to restore fire's role in the Wilderness have turned out badly. And human-ignited fire inside Wilderness is itself a form of manipulation, of the trammeling that the Wilderness Act argues against.

As the climate continues to change, concern about fire in Wilderness continues to rise, and some agencies have proposed extensive burning in Wilderness to reduce future fire threats from a warmer drier climate. There have been proposals for extensive burning across the National Wilderness Preservation System, from a proposal to repeatedly burn the entire Linville Gorge Wilderness in North Carolina over a ten-year period, to extensive burning of the Palisades Wilderness Study Area in Wyoming, to massive burning proposed for the Ventana Wilderness in California.

Dave Campbell, a retired Forest Service District Ranger, assembled an expert panel to examine these and other challenges of fire in Wilderness. Tom Nichols, a retired National Park Service expert, participated on the panel, along with two Forest Service experts, Charles Mack and Laurie Kurth. Also joining the panel was Joe Saenz of Wolfhorse Outfitters and a member of the Red Paint Tribal Council of the Chiricahua Apache Nation.

THE CHALLENGES OF ADMINISTERING WILDERNESS LANDS IN CONTEXT. A designated Wilderness does not exist in isolation. Wilderness stewards need to be aware of the larger landscape in which their Wilderness lies, and to be able to administer their Wildernesses in context with that broader region.

Karen Taylor-Goodrich of North Cascades National Park in Washington described how she administers the Stephen Mather Wilderness in her park as part of an international complex of Wilderness lands. Reid Haughty of the Wilderness Land Trust explained the problems that privately owned lands inside designated Wilderness (inholdings) can bring to the detriment of Wilderness character, and how his organization works to purchase inholdings for eventual transfer to the federal government. Lindsay Reis of the National Park Service described the breach caused by Hurricane Sandy in New York's Otis Pike Fire Island High Dune Wilderness. And David Karplus from the National Park Service described the National Park Service's approach to visitor management for the Sequoia-Kings Canyon Wilderness.

HOPE FOR FUTURE. Despite these extensive and enormous challenges to Wilderness stewardship, there is still much hope for the future. Some of that hope is found in the Wilderness Fellows program, and the engagement of younger people in the substantive issues of Wilderness stewardship.

A panel headed by Peter Dratch of the U.S. Fish and Wildlife Service described the Wilderness Fellows program with the Fish and Wildlife Service and National Park Service. The intent of the program was to develop baseline measures on all of the 63 designated Wildernesses in the National Wildlife Refuge System. They selected generally younger people, trained them in the principles of the Wilderness Act and Wilderness character monitoring, and sent them out for about 10 weeks to work with local staff. Not only were baseline data collected, but the program trained some talented and enthusiastic Wilderness Fellows who can help lead the way on Wilderness stewardship in the future. Several Wilderness Fellows participated in the session as well, including Nyssa Landres, Molly McCarter, Christine Mills, and Monica Patel.²⁹

FOOTNOTES

- ¹ Howard Zahniser, “The Need for Wilderness Areas,” *The Living Wilderness* 59, Winter-Spring 1956-57, p. 42. This article was reprinted recently in Mark Harvey, ed., *The Wilderness Writings of Howard Zahniser* (Seattle: University of Washington Press, 2014), pp. 127-137.
- ² Ed Zahniser, *Where Wilderness Preservation Began: Adirondack Writings of Howard Zahniser*. (Utica, NY: North Country Books, 1992), p. 52.
- ³ Howard Zahniser, “The Wilderness Bill and Foresters,” 1957, found in Harvey, *Wilderness Writings*, p. 151.
- ⁴ Kevin Proescholdt, “‘Untrammelled’ Wilderness,” *Minnesota History* 61(3), 2008, pp. 114-123.
- ⁵ Pinchot Institute for Conservation, *Ensuring the Stewardship of the National Wilderness Preservation System: A Report to the USDA Forest Service, Bureau of Land Management, US Fish and Wildlife Service, National Park Service, and US Geological Survey*, Sept. 2001, p. ii; found at: http://www.Wilderness.net/NWPS/documents/brown_report_full.pdf.
- ⁶ See <http://www.Wildernessstewardship.org/index.php>.
- ⁷ Randy Tanner and George Nickas, “Evaluation of Campsite Impact Monitoring from 1987 to 2004 in the Bob Marshall Wilderness Complex,” *International Journal of Wilderness* 13(1), Apr. 2007, pp. 24-29.
- ⁸ Peter Landres et al., *Keeping It Wild: An Interagency Strategy for Monitoring Wilderness Character across the National Wilderness Preservation System*, USDA Forest Service, Gen. Tech. Rpt. RMRS-GTR-212, July 2008, 77 pp.
- ⁹ Christopher Solomon, “Rethinking the Wild: The Wilderness Act is Facing a Midlife Crisis,” *New York Times*, 6 July 2014.
- ¹⁰ Kenneth Brower, “Reclaiming Wilderness: It Tells Us Who We are, and We Lose it at Our Peril,” *Sierra Magazine*, July/August 2014; <http://www.sierraclub.org/sierra/2014-4-july-august/feature/reclaiming-Wilderness>. See also Kevin Proescholdt and Howie Wolke, “Wilderness More Important than Ever,” *Keeping Wilderness WILD!*, 23 July 2014, at <http://Wildernesswatch.wordpress.com/2014/07/> and Daily Astorian, 21 July 2014, at <http://www.northwestopinions.com/author/by-kevin-proescholdt-and-howie-wokefor-the-daily-a/>.
- ¹¹ *Wilderness Watch v. Mainella*, 375 F.3d 1085.
- ¹² *Olympic Park Associates v. Mainella*, 2005 U.S. Dist. LEXIS 44230.
- ¹³ *High Sierra Hikers Ass’n v. U.S. Forest Service*, 436 F.Supp. 2d 1117.
- ¹⁴ *Wilderness Watch v. Iwamoto*, 853 F.Supp. 2d 1063.
- ¹⁵ 1964 Wilderness Act, Sec. 2(a).
- ¹⁶ “Nothing in this Act shall be construed as affecting the jurisdiction or responsibilities of the several States with respect to wildlife and fish in the national forests.” Wilderness Act, Sec. 4(d)(7). This citation refers to the re-numbered subsection after the 1978 Boundary Waters Canoe Area Wilderness Act (P.L. 95-495) removed the original subsection 4(d)(5) and re-numbered the remaining three subsections.
- ¹⁷ *Kleppe v. New Mexico*, 426 US 529. In this case the U.S. Supreme Court ruled, “We hold today that the property clause gives Congress the power to protect wildlife on the public lands, state law notwithstanding.” The Endangered Species Act itself is proof that state jurisdiction of wildlife and fish is subservient to federal authority, even on private land.
- ¹⁸ Senate Report 109, 88th Cong., 1st Sess., Apr. 3, 1963, p. 18.
- ¹⁹ *Wilderness Watch, Inc. v. U.S. Fish and Wildlife Service*, 629 F.3d 1024.
- ²⁰ George Nickas and Kevin Proescholdt, “Keeping the Wild in Wilderness: Minimizing Nonconforming Uses in the National Wilderness Preservation System,” *International Journal of Wilderness* 11(3), Dec. 2005, pp. 13-18. See also Chad Dawson, Blake Probst, and John Hendee, “Special Provisions of Wilderness Legislation in the United States, 1964 to 2009,” *International Journal of Wilderness* 16(2), Aug. 2010, pp. 32-34.
- ²¹ The special provisions that were removed were found in section 4(d)(5) of the original Wilderness Act, the only time to date that the Wilderness Act has been directly amended. See Kevin Proescholdt, Rip Rapsom, and Miron L. Heinselman, *Troubled Waters: The Fight for the Boundary Waters Canoe Area Wilderness*. (St. Cloud, MN: North Star Press of St. Cloud, 1995).
- ²² 1964 Wilderness Act, Sec. 4(c), “...there shall be no commercial enterprise...”
- ²³ 1964 Wilderness Act, Sec. 4(d)(5). This citation refers to the re-numbered subsection after the 1978 Boundary Waters Canoe Area Wilderness Act (P.L. 95-495) removed the original subsection 4(d)(5) and re-numbered the remaining three subsections.

²⁴*High Sierra Hikers Ass'n v. Blackwell*, 390 F.3d 630.

²⁵*High Sierra Hikers Ass'n v. Bernie Weingardt*, 521 F.Supp. 2d 1065.

²⁶See <https://www.federalregister.gov/articles/2014/09/04/2014-21093/proposed-directive-for-commercial-filming-in-Wilderness-special-uses-administration>; and Tom Tidwell to Regional Foresters et al., “Commercial Filming and Photography Permits, Nov. 4, 2014, at <http://www.sej.org/publications/watchdog-tipsheet/chief-tidwell-directs-forest-service-no-permits-fees-journos>.

²⁷For more on the National Wilderness Stewardship Alliance, see <http://www.Wildernessalliance.org/>.

²⁸For more on Wilderness Watch, see www.Wildernesswatch.org.

²⁹For more on the Wilderness Fellows Program, see http://www.Wilderness.net/toolboxes/documents/WC/2014%20WF%20flyer_NWRS_NPS.pdf and <http://www.fws.gov/refuges/whm/pdfs/2014MeetTheFellows.pdf>

Wildness, Wilderness, and the Anthropocene

Roger Kaye, *US Fish and Wildlife Service*

Wildness – that primal and evocative, elusive and unquantifiable core of Wilderness – is threatened as never before and in need of better understanding and new stewardship strategies to ensure its perpetuation. Drawing on Neolithic roots of the concept and writings of the framers of the Wilderness Act, wildness is defined as “a condition of a landscape characterized by its freedom from the human intent to alter, control, or manipulate its components and ecological and evolutionary processes.” Thus, as an ecological condition dependent on the intent to leave an area’s functioning outside the realm of human volition, wildness also embodies a distinctive human-landscape relationship. This relationship is in part a cultural construct, but the intrigue of wildness may well be rooted in some part of us older and deeper than culture, in some ancestral resonance with our own origins as creatures of the wild.

With this understanding of wildness, this presentation explored the emerging conflict between the Wilderness Act’s two primary mandates: to perpetuate a designated area’s wild, untrammled condition and to also preserve its “natural” condition. Increasingly, climate change will confront us with situations where maintaining one would compromise the other. As well, many Wilderness units also have mandates to protect current conditions or preferred species that would require wildness-compromising management interventions to enable them to resist or adapt to climate change. It is argued that agencies will need to develop procedures for deciding where, or to what degree each area’s wildness purpose or its other designated purposes will have primacy. At least some Wilderness areas should be declared true hands-off, non-intervention areas within which ecological systems will be allowed to adapt and evolve as they will—and we accept that some preferred species and current conditions will be replaced by others more suited to the changing climate.

To ensure appropriate consideration of wildness in the course of the difficult decisions and trade-offs that lie ahead, Wilderness stewards and stakeholders will need to better understand the range of benefits wildness provides and values it embodies. These include ecological functions, scientific uses, and experiential and aesthetic benefits. There is also an intrinsic, existence value of an area that we allow to be free, for itself, and a symbolic value as a touchstone to our capacity for humility and restraint in relating to the larger biosphere we jointly inhabit. If wildness is to be perpetuated, the culture of the agencies that manage Wilderness will need to evolve to enable appreciation of the unquantifiable character of wildness, the mystique that makes this resource unique. We all must accept the irony that self-willed places will continue only through our will – that to have areas free of human purpose must itself be a human purpose.

Letting Wilderness be in the Anthropocene

Peter Landres, *Aldo Leopold Wilderness Research Institute*

Is Wilderness different from other areas that are affected by the Anthropocene? Wilderness is no different than any other area that is affected by climate change and other anthropogenic impacts. How Wilderness is radically different from all other types of land is the legal mandate is for Wilderness to be essentially untrammelled, to let nature play out how nature wills, even when it is under the pervasive influence of the Anthropocene.

How is Wilderness affected by the Anthropocene? Climate change and the Anthropocene directly degrade the natural quality of Wilderness and all the other qualities of Wilderness character. The undeveloped quality is degraded by installations and structures and there will be increasing calls for the instrumentation of Wilderness because it's the best natural laboratory we have. The solitude quality is degraded by increasing numbers of people in areas close to roads and trails, the impacts of these people, and consequent management restrictions to control these impacts. Last, the untrammelled quality is degraded by what we do to restore species or other interventions we take to preserve aspects of the ecological system.

Does the Anthropocene mean that Wilderness no longer exists? No, climate change degrades Wilderness character but it does not alter the existence of Wilderness. We now have the opportunity to show humility and restraint in the face of incredibly complex and chaotic forces that we have little understanding about. The goal of Wilderness is not to maintain any particular species and there is no target set of conditions; the essential goal is to "let nature be" and watch, and learn, what happens in systems that are not intentionally modified or manipulated by human desires and whims.

Is Wilderness an anachronism in the Anthropocene? No, Wilderness is more relevant and important than ever before, and we have an increased responsibility to protect Wilderness and the values and benefits that are derived from Wilderness. The first sentence of the Wilderness Act states that Wilderness is needed as an antidote to counter "increasing population," "expanding settlement," "growing mechanization," and the "occupation and modification" of the United States. This wording is even more relevant today than when the Wilderness Act was enacted in 1964. At its root, Wilderness is about the connection and relationship between people and the land. Wilderness has always been fundamentally about ethics: about who we are and our place in nature, about caring for others, about accepting the consequences of our actions, about taking the long view. Because of climate change and the Anthropocene, we now have an ethical imperative to preserve, honor, and learn from Wilderness.

Wilderness is the best and most important place to establish and nurture the ethical foundation our culture desperately needs for the future, a place for developing and nurturing humility and restraint, a place to be guardians and not gardeners, a place to accept the moral responsibility for the havoc we're wreaking on nature. Is Wilderness relevant and important in the Anthropocene and to our future? Absolutely!

An Enduring Resource of Wilderness

Dave Foreman, *Rewilding Institute*

Aldo Leopold wrote that the important time for Wilderness was not in his day or even that of Daniel Boone, but rather in the future. Howard Zahniser bade us to have the boldness to pass on the Wilderness we had inherited from the past into the eternity of the future. Leopold also saw Wilderness as the theater for evolution. If the past is our guide, today's great disruption of Nature by Man (the Anthropocene), while dreadful, is temporary as is our species. How do we insure that Wilderness will outlive us?

Growing a Partnership: Rewards, Challenges and Lessons Learned

Sally Ferguson, *Selway Bitterroot Frank Church Foundation*

Clare O'Connell, *Selway Bitterroot Frank Church Foundation*

National Forests around the country have increasingly felt the pressure of declining federal budgets and a decreased field presence over the past decade. Through this challenge, managers and Wilderness users are coming together to answer the question: how will we care for Wilderness? Non-profit partner organizations have become one answer to meet the need.

The Selway-Bitterroot Foundation (SBF) was created in 2005 as a response to the need for on-the-ground work in the Selway-Bitterroot Wilderness. In 2008, SBF became a 501(c)(3) nonprofit. In 2011, the organiza-

tion expanded to include the Frank Church River of No Return Wilderness and became the Selway-Bitterroot Frank Church Foundation (SBFC) to reflect both geographic regions. In 2012 the organization was awarded the Bob Marshall Award for Partnership Champion of Wilderness Stewardship. In 2013, the organization did over \$800,000.00 worth of stewardship work on the ground, ran two full trail crews, hired eight seasonal staff, ten interns and engaged more than fifty volunteers.

In this session, presenters from the Selway-Bitterroot Frank Church Foundation (SBFC) shared the story of how managers and Wilderness users came together to create the Selway-Bitterroot Frank Church Foundation. The presenters spoke to the decisions leading up to the development of a partner organization, successes, challenges and where the partnership is now. The presentation included visuals and examples of non-profit organizational development, how the SBFC and Forest Service support one another and meet the political, geographic and financial challenges of taking a fledgling organization to an established stewardship foundation.

SESSION OUTCOMES. An understanding of the current rewards and challenges in partnerships; an overview of strategic planning process and insight on navigating complimentary and contradictory outcomes of the agency-partner relationship.

Laying the Foundation for the Next 50 Years of Wilderness Stewardship

Stephen F. McCool, *University of Montana*

Connie G. Myers, *Arthur Carhart National Wilderness Training Center*

Robert G. Dvorak, *Central Michigan University*

Maura J. Longden, *Society for Wilderness Stewardship*

ISSUE. The next 50 years of Wilderness stewardship will be much different than the first 50: Change, uncertainty, complexity and contentiousness will likely serve as the context for what managers do to sustain the values for which Wilderness was established. Global level pressures and processes, such as spreading democracy, accelerating technology, human population dynamics, economic restructuring and climate change, will converge to increase the stakes and diversify social expectations for what functions Wilderness will serve. These next 50 years thus will change expectations for Wilderness stewardship, how it is carried out and how Wilderness stewards interact with larger society. These expanding roles for Wilderness stewards will thus require new competencies to function effectively in meeting these diversifying expectations and protecting Wilderness values. We can expect to have deeper community engagement with Wilderness in a variety of dimensions as well.

APPROACH. The session had four speakers that: (1) identified and discussed global level forces that converge synergistically to make stewardship more complex and contentious yet providing opportunities as well as challenges; (2) suggested the implications for stewardship in this new era and the professional competencies needed; and (3) described the role of the Society for Wilderness Stewardship in helping build the needed foundation.

RESULTS. Because the next 50 years are likely to be much different than the last 50, we suspect that Wilderness Stewardship organizations will need to manage adaptively, engage double-loop learning, and provide new sets of skills to stewards. Stewards will most likely need much more in the arena of public engagement and problem-solving skills than in the past, and as a result will require new initiatives in building competency and developing confidence. The Society for Wilderness Stewardship will engage these new challenges by facilitating a community of practice.

CONCLUSION. Agencies, Wilderness support organizations, training programs and higher education will need to develop new expertise and approaches to communicating Wilderness stewardship skills.

Wilderness and the Courts

Peter Appel, *University of Georgia School of Law*

George Nickas, *Wilderness Watch*

Since Congress passed the Wilderness Act the federal courts have had numerous opportunities to interpret this statute in a variety of court cases brought under the Wilderness Act. In recent years, the courts have addressed topics such as historic structures, fish and game management, commercial services, motor vehicle use, and many more. This session described the decisions and any recent trends in Wilderness Act litigation, and what it may bode for Wilderness protection and administration going forward.

Improving Wilderness Stewardship in the Forest Service: The 10-Year Wilderness Stewardship Challenge

Steve Boucher, *US Forest Service*

Adam Barnett, *US Forest Service*

As Peter Drucker famously said “what gets measured gets managed.” At the start of the millennium, the Forest Service’s Wilderness program relied on two outdated and meaningless performance measures that were impossible to report. The program was having a difficult time building the case with agency leadership that additional funding was needed to adequately manage the Wilderness resource.

In 2002, the Forest Service embarked on an ambitious program to fully define what was required to manage all Wildernesses to a suitable level of stewardship. The performance measure “Wildernesses managed to a minimum stewardship level” was created, consisting of ten elements, such as managing for opportunities for solitude and allowing for the natural role of fire. Created initially for the Government Performance Results Act (GPRA), this measure was then rolled into the “10-Year Wilderness Stewardship Challenge.” The Challenge was approved by the Chief in FY 2003, with the goal of having 100% of Wildernesses managed by the Forest Service up to the baseline level, scoring 60-points on the 100-point scale, by 2014 to coincide with the 50th anniversary of the Wilderness Act.

Since the first year of the Challenge, national accomplishment has improved steadily from 10.8% of Wildernesses managed to standard in FY 2005 to 84.5% to standard in FY 2013. Key to this progress has been the infusion of almost \$10 million in national funding (FY 2011-2014) to fund forest grant proposals, regional strike teams and to supplement the National Forest Foundation grant program.

The benefits of a meaningful, multi-disciplinary performance measure supported by agency leadership are many and varied:

- A national standard to guide Wilderness stewardship actions in the agency to a consistent level across the nation, from Alaska to Florida.
- Funding to provide “boots on the ground” to implement basic Wilderness stewardship tasks such as monitoring opportunities for solitude and managing invasive plants.
- The development of important, foundational plans to guide and prioritize future management activities, such as air quality and education plans.
- Multidisciplinary engagement in Wilderness stewardship activities.
- Leveraging substantial new contributions from partner organizations and volunteers.
- Numerous opportunities for Wilderness staff and line officers to discuss priorities for Wilderness stewardship.

Out of the Woods: How Wilderness Got Lost and How We Find It Again

Jon Dettmann, *Wilderness Attorney*

Over ten years ago, the four land management agencies responsible for the National Wilderness Preservation System commissioned the Pinchot Institute for Conservation to assess the status of the Wilderness system. After conducting an extensive inquiry, the panel came to the stunning conclusion that if the same four agencies did not commit to Wilderness, the system would be “lost.” Equally as stunning, even in the face of that stark conclusion, the four agencies failed to take any meaningful action in the aftermath of the report. Since written, it has largely gathered dust.

The Wilderness Act provides the agencies clear and precise instructions regarding the Wilderness system. Why then, fifty years into the Act, is the system in danger of being lost?

The sad fact is that the agencies’ resistance to the Wilderness system – and to the Wilderness Act – have existed since the beginning. The agencies lobbied against the Act, for among other reasons that it deprived them of much of the discretion they normally enjoy. Even after the Act passed, the agencies continued to resist Wilderness during the designation process, offering increasingly bizarre reasons as to why areas should not be designated. With regards to stewardship, time and time again the agencies have recognized that they were failing in their responsibilities, but they never took action to correct their ways.

Congress has done no better. The last meaningful Congressional oversight of the agencies dates back to 1989, when the GAO issued a report concluding that the Forest Service was devoting only minimal attention to Wilderness stewardship. At the same time, Congress continues to pass designation bills that include new

exceptions found nowhere in the Act, which itself was a political compromise. As a result, Congress is itself purposefully degrading the integrity of the system.

There is no silver-bullet solution. But an important first step is to reinvest ourselves not just in the terms of the law, but in the purpose behind it. The Act was the ultimate combination of a strong preservation ethic with a strong individualistic ethic. The terms of the law itself are not enough. Only by instilling the ethic behind the act, and making the tough moral choices, can we fully realize the system that the law intended.

The Wilderness Act at 100: Lessons from the 1st 50 years of Stewardship of the National Wilderness Preservation System

George Nickas, *Wilderness Watch*

The Wilderness Act remains largely unchanged since it was passed in 1964. Yet subsequent congressional actions, court cases, and administrative actions and issues suggest the National Wilderness Preservation System of the future may not be at all like the framers and advocates of the original Wilderness law had in mind. What have we learned, and what, if anything needs to change to ensure a wild, enduring Wilderness in America? Is the Wilderness Act up to the task? Are we?

Rewilding the North Cascades: Is it Worth the Cost of Trammeling?

Jack Oelfke, *National Park Service*

A significant number of wildlife and ecological restoration efforts are converging in the North Cascades ecosystem of northwestern Washington and southern British Columbia, all of them centered in the designated Wildernesses of national park and forest lands on the US side of the border (but involving international partnerships). Planning for active restoration of grizzly bears and fisher is underway for the ecosystem; active restoration of high elevation mountain lakes (through non-native fish removal) is already underway at North Cascades National Park; passive restoration of wolverine is occurring and being actively monitored; and passive wolf re-colonization is occurring on national forest lands east of the park. In short, a considerable number of long-missing wildlife species could once again occupy this Wilderness landscape within a handful of years; severely degraded aquatic systems within Wilderness are being restored; and the research and monitoring support to inform both the restoration efforts and the curious public is in part underway.

But are the costs of such restoration efforts that enhance the Natural quality of Wilderness character worth the potentially significant impacts to the Untrammeled, Undeveloped, and Opportunity for Solitude qualities that accompany such efforts? All of the active restoration efforts noted above, as well as the monitoring programs associated with them, require some elements of motorized use, capture of animals for radio-collaring, or active manipulation of the ecosystem (such as to remove fish from a subalpine lake). That so many high profile, potentially controversial restoration efforts are converging at this time in this Wilderness ecosystem is somewhat remarkable, and perhaps represents the evolution of ecosystem management and ecological restoration needs that now inevitably are coming together within designated Wilderness. The predicted effects of climate change may only exacerbate this tension between these qualities of Wilderness character, and it can be instructive to consider case examples such as these as we move forward with Wilderness management.

This presentation discussed the benefits of ecological restoration, particularly in the context of the Natural quality of Wilderness character, as weighed against the impacts to the other qualities of Wilderness character (Untrammeled, Undeveloped, Opportunities for Solitude), and the critical thinking involved when considering such efforts. A clear, transparent evaluation of the benefits and impacts to all Wilderness character qualities needs to be a critical part of ecological restoration projects that occur in designated Wilderness; how that process has played out in the North Cascades was discussed in this presentation.

Four Decades of Wilderness Guiding: Perspectives on Wilderness in 2014

Howie Wolke, *Big Wild Adventures*

A deep malaise afflicts wildland conservation. Certainly, there are some really great activist groups out there, such as Friends of the Clearwater, Wilderness Watch, Western Watersheds Project, Friends of the Bitterroot, Alliance for the Wild Rockies, New Mexico Wilderness Alliance, Swan View Coalition, and many more. But these outfits are routinely undercut by a relatively small cadre of big national and regional groups with big budgets. Real activism that highlights education and organizing Wilderness defenders has been swept aside, replaced by collaborative efforts to designate watered-down Wilderness. That's where the money is, so the PEW Foundation and other funders who defend the status quo dictate strategy, favoring radical compromise and collaboratives where everyone holds hands and sings Kumbaya. These outfits work for legislative notches in their Beltway belts, at any cost – the costs often being special provisions in Wilderness bills and radically truncated Wilderness boundaries.

The Wilderness Society has fallen far. Here are just a few examples why: TWS has opposed the efforts of Wilderness Watch to keep Georgia's Cumberland Island wild, by supporting the National Park Services' running motor tours through this designated Wilderness. TWS has also encouraged the BLM to allow ranchers to use ATVs in the Owyhee Canyons Wilderness in Idaho. Of equal shock value, TWS staffer Paul Spittler produced a paper entitled *Managing Wildfires in Wilderness*. That paper supported logging, road-building and bulldozing pre-emptive fire-breaks in designated Wilderness. I quote from this TWS paper: "In short, any fire suppression activities that are allowed outside of Wilderness are allowed within Wilderness as well". That interpretation of the Wilderness Act is arguable, but why is TWS working to promote rather than restrain heavy-handed management in Wilderness? Do they not recall Howard Zahniser's poignant reminder that in Wilderness "we must be guardians, not gardeners"?

There's Green Mountain, in Washington's Glacier Peak Wilderness, where the Forest Service illegally replaced a dilapidated fire lookout with a brand-spanking new lookout/visitor center under the phony guise of historic preservation. Wilderness Watch sued the Forest Service and won a legal slam-dunk victory for Wilderness. The FS was ordered to remove the structure. But TWS again undercut conservation by working to exempt Green Mountain from the requirements of the Wilderness Act. And Congress did exactly that. Obviously, TWS has abandoned its mission, with zeal.

Ed Abbey once wrote that "the idea of Wilderness needs no defense, only more defenders". That's true today, more than ever. Wilderness is about restraint and humility. And one thing it tells me is to heed the wisdom of the Wilderness movement's early visionaries. Let's quit playing "Let's Make A Deal" and other political games and get on with the real job of really defending what remains wild.

Are Wildness and Naturalness Really in Conflict?

Gary Macfarlane, *Friends of the Clearwater*

Some conclude that, because of anthropogenic changes like global warming, that naturalness is in conflict with wildness or that wildness must be sacrificed in order to maintain Wilderness in a condition in which it now appears. While the founders of the Wilderness Act rejected this view, it has been gaining ground in recent years so that it has become part of agency policy. I suggest the two do not conflict.

For example, the Forest Service recently proposed to plant rust-resistant whitebark pines in the Pasayten Wilderness where the pines were recently killed by a natural fire, claiming this was necessary to combat global warming, blister rust, fire suppression, and possibly pine beetles. Wilderness Watch countered by saying that fire is natural in the area; that whitebark pines still live nearby in the Wilderness; that it was premature to consider this idea; and that above all this was antithetical to Wilderness, or as Zahniser stated we should be "Guardians not Gardeners."

It is not about a conflict between wildness and naturalness. It's that naturalness flows from wildness, it's about process. The laws of statutory construction are clear that reading a law should not put portions of the law in conflict. McCloskey (McCloskey, 1999, cited in Nickas and Macfarlane, 2001) notes: *The section referring to natural conditions follows the key initial point about it being untrammelled....Any meaning given to the phrase "natural conditions" should be consistent with the key idea of not "trammeling" these areas.*

Further, wildness is the essence of Wilderness character. Numerous Wilderness scholars have reached the same conclusion. The Pinchot Institute's task force, which included a broad mix of legal, academic, and conservation professionals with decades of Wilderness Act experience, also recognized the preeminence of "wildness" in preserving Wilderness character.

The problem has arisen because some “managers” and even Wilderness advocates desire, “to manage” because the conclusion is we must. Fundamentally and ironically, this is a lack of trust that Nature can perpetuate and preserve Wilderness. Some fear the outcomes of wildness.

All of this makes the prospect of a wild Wilderness in the future very tenuous. Unless citizen conservationists and the agencies recognize that wildness and naturalness are not in conflict, and then make the necessary policy changes, there will be very little wildness and not that much naturalness either in the National Wilderness Preservation System in 2064. Wilderness should be an enduring idea and place, where Nature plays the cards she’s dealt. As Howard Zahniser, the Wilderness Act’s author, said, “We must remember always that the essential quality of the Wilderness is wildness.”

Wilderness Character Monitoring: Where are we Today and What can we Expect in the Future?

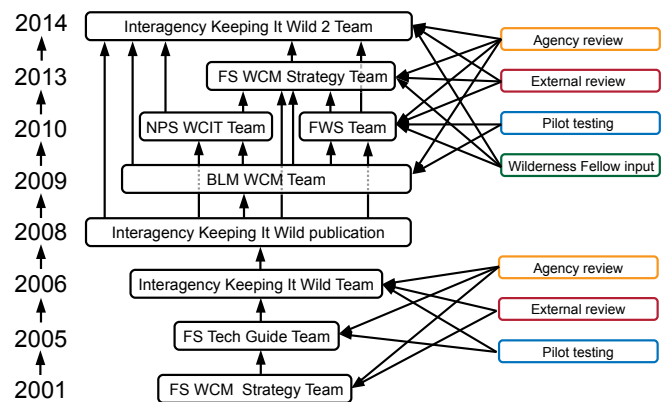
Peter Landres, Aldo Leopold Wilderness Research Institute

The single administrative mandate of the 1964 Wilderness Act to the four federal agencies that manage our nation’s Wildernesses is that they preserve the Wilderness character of all areas designated as Wilderness. This legislative mandate and pursuant agency policy mandates raise a simple question: How do the agencies know if they are preserving Wilderness character? The simple answer is that monitoring is the only way to know if agency Wilderness stewardship programs are preserving Wilderness character.

Beginning in 2001 with the Forest Service’s effort to develop a national Wilderness monitoring strategy, the four agencies have been working to establish a comprehensive and systematic strategy for monitoring Wilderness character that is both nationally consistent (so it applies to all agencies and all Wildernesses) while being locally flexible (so it is relevant to the individual Wilderness). This panel session presented a timeline and overview of how all four agencies worked together to create a national Wilderness monitoring strategy (presented by Peter Landres), followed by presentations on what the Bureau of Land Management (presented by Emily Simpson), US Fish and Wildlife Service (Nancy Roeper), National Park Service (Tim Devine), and US Forest Service (Steve Boutcher) have accomplished to date and their approach for Wilderness character monitoring in the future.

The figure at right shows the timeline and major interactions among the teams that have been directly involved in developing Wilderness character monitoring. Once the initial conceptual framework and operational steps had been developed by the Forest Service from 2001 to 2005, and the interagency team published *Keeping It Wild: An Interagency Strategy for Monitoring Wilderness Character across the National Wilderness Preservation* in 2008, every subsequent effort built on the previous work, knowledge, and experience of earlier efforts. To date, 100 agency staff have been directly involved building agency-specific Wilderness character monitoring approaches, 150 agency and external reviewers have provided over 1,000 review comments, and these monitoring approaches have been formally pilot tested in 44 Wildernesses. In short, building a national and interagency Wilderness character monitoring program that has then been modified to fit the needs and circumstances of four different federal agencies has been highly interactive and iterative.

The next (and newest) iteration is an interagency effort drawing on the accumulated experience of agency staff who have been conducting Wilderness character monitoring for the last five years to refine, revise, and publish *Keeping It Wild 2: An Updated Interagency Strategy for Monitoring Wilderness Character across the National Wilderness Preservation System*. This interagency team expects to publish this updated monitoring strategy in the spring of 2015.



Timeline of Wilderness Character Monitoring in the BLM

Emily Simpson, *Bureau of Land Management*

In 2002, the BLM approved an employee to work with the Forest Service team developing the Wilderness character monitoring framework. After *Keeping It Wild* (2008) was published, the BLM chartered a team to develop guidance on Wilderness character monitoring. This small interdisciplinary team created the measures, developed the techniques needed to generate data for each measure, and conducted field pilot tests in several Wilderness areas.

In April 2010, the BLM issued *Measuring Attributes of Wilderness Character: BLM Implementation Guide (version 1.0)* describing specific monitoring protocols. In August 2010, the Director of the BLM issued an Instruction Memorandum (2010-190) requiring that baseline Wilderness character monitoring be completed in all BLM-administered Wildernesses by September 2014.

In 2012, the BLM released the most recent version (1.5) of the *Implementation Guide*. Finally, the requirement for Wilderness character monitoring was included in the 2012 BLM policy revision of Manual 6340, Wilderness Management.

Overview of the *Implementation Guide*. In the first version of the *Implementation Guide*, the BLM included a fifth quality of Wilderness character: the Unique/Supplemental Quality, in addition to the other four qualities. This fifth quality was taken from Section 2(c) of the Wilderness Act, which states: “an area may also contain ecological, geological, or other features of scientific, educational, scenic or historic value.” Within the five qualities, the BLM identifies 23 measures to be collected every five years. Four of the measures are collected at the State or National levels (e.g. visible air quality). A subset of nine measures is reported annually (e.g. AUMs of livestock in Wilderness, visitor use numbers). The *Implementation Guide* establishes measures that would be applied the same from Wilderness to Wilderness, rather than an “a la carte” method. In developing the *Guide*, the BLM decided to utilize existing data sets to the maximum extent possible. The one allowance for a Wilderness to diverge from the prescribed measures is under the Natural Quality for the measure “Status of native biological communities” (no office has yet). Given the BLM’s poor existing data sets that could be applied to this measure, a Wilderness has the option to select an existing data set (Indicator Species, or Range-land Health Standards), which have protocols identified in the *Guide*, or develop an alternative measure.

BLM Accomplishments. Currently, the BLM has completed baseline assessments in 111 areas (of 221), or 50% of BLM-managed Wildernesses. There are several reasons the BLM was unable to meet the Director’s deadline. The BLM decided to lean on existing staff to implement Wilderness character monitoring, rather than to hire seasonal staff or a team to collect the baseline monitoring. In several districts with Wilderness programs, there have been long term vacancies in the Wilderness specialist positions. Therefore, there hasn’t been an individual in the office to lead the effort. Finally, concurrent national priorities in the Wilderness program for the BLM (Wilderness Character Monitoring and Lands with Wilderness Characteristics Inventories) have resulted in delays.

Wilderness Character Monitoring: US Fish and Wildlife Service

Nancy Roeper, *US Fish and Wildlife Service*

In 2011, the National Wildlife Refuge System established a Wilderness Character Monitoring Initiative through a partnership of its Natural Resources Program Center and Branch of Wildlife Resources with the Aldo Leopold Wilderness Research Institute. Working with American Conservation Experience as our partnership organization, we hired an average of 6 college graduates (Wilderness Fellows) per year between 2011 and 2014. The Fellows were responsible for completing Wilderness character baseline assessments for 2 refuges each during a 6-month period. This entailed working closely with refuge staff to define refuge-relevant measures of Wilderness character, locating data for those measures, entering the data values into the interagency database, and producing a final report for the refuge that included this information and protocols for each measure to ensure repeatability. The Fellows also spent about half of their time assisting refuges in refuge management activities, such as surveying plant and animal species, bird banding, mapping invasive species, and conducting environmental education for visiting schoolchildren. In this way, Fellows built rapport with refuge staff and could better understand their concerns about Wilderness stewardship, and staff gained an appreciation for the talents and dedication of the Fellows.

ACCOMPLISHMENTS. At the end of the 4-year period, the National Wildlife Refuge System 1) has Wilderness character baseline assessments for all 63 designated Wildernesses and about half of the Refuge System’s proposed Wildernesses; 2) more than two dozen budding conservation professionals have gained an under-

standing of and hands-on experience with refuge management; and 3) refuge staff can better understand how their decisions and actions affect Wilderness, what holes exist in their data collection, and whether or not they are meeting management standards for Wilderness.

THE FUTURE. Looking to the future, Wilderness character monitoring has been incorporated into the National Wildlife Refuge System Inventory and Monitoring Policy, ensuring that refuges will continue to monitor WC over time. However, we still need to do several things, including 1) train staff in Wilderness character monitoring; 2) revisit early adopter refuges to adjust the assessments based on updated protocols; 3) complete assessments for all proposed Wilderness; 4) incorporate this information into minimum requirements decisions; and 5) integrate Wilderness preservation into all aspects of Refuge System wildlife and habitat conservation.

Wilderness Character Monitoring: National Park Service

Tim Devine, *National Park Service*

Wilderness character monitoring is addressed in National Park Service Policy. Director's Order 41: Wilderness Stewardship (<http://www.nps.gov/policy/DOrders/DO-41>) states that "Wilderness parks will conduct a Wilderness character assessment, which includes identifying what should be measured, establishing baseline data, and conducting ongoing monitoring of trends. Once a baseline is established, tracking change and reporting on the trend in Wilderness character should generally occur every five years."

In order to provide the field with more detailed guidance on how this is to be accomplished, the NPS convened a Wilderness Character Integration Team (WCIT) in 2010. Over the next two years, this team developed *Keeping it Wild in the National Park Service: A User Guide to Integrating Wilderness Character into Park Planning, Management and Monitoring*. The *User Guide* went through extensive review and pilot testing. It was published and released in January 2014 (<http://www.nps.gov/policy/DOrders/ReferenceManual41>).

The *User Guide* is made up of six sections: Introduction, Building Blocks, Planning, Management and Operations, Monitoring Change, and Emerging Tool and Topics. Two of these sections pertain specifically to Wilderness character monitoring. The Building Blocks section identifies the development of indicators and measures, identification of data sources, collection of baseline data, and entering the data into the national database as critical elements Wilderness parks need to establish. The Monitoring Change section gives specific details on how to complete each of these elements.

To date, there are 20+ park Wilderness areas integrating Wilderness character monitoring into their stewardship responsibilities (see figure below with red stars showing parks that are integrating Wilderness character monitoring). This is being accomplished by park staff and recent college graduates in the Wilderness Fellows Program. There is a national funding proposal for Fiscal Year 2015 and Fiscal Year 2016 for the Wilderness Fellows Program to assist additional parks in completing their Building Blocks and collecting baseline Wilderness character data. The Intermountain Region has included collecting baseline Wilderness character data into the 2014 Wilderness park superintendent performance appraisals, which serves as an example to other regions. All Wilderness parks are required to include Wilderness character condition and trend as one of the primary elements in their State of the Park Report. Completion of Wilderness character inventories for all Wilderness parks is a Tier 1: Significant Priority for the National Wilderness Stewardship Division.



Wilderness Character Monitoring: US Forest Service

Steve Boucher, *US Forest Service*

The Forest Service has been very involved with Wilderness character monitoring since its inception over a decade ago. The Wilderness Monitoring Committee – composed of field Wilderness managers, along with representatives from the other federal Wilderness agencies – was formed in 2002, and developed and published the foundational *Monitoring Selected Conditions Related to Wilderness Character: A National Framework* in 2004. The agency then proceeded to develop a detailed *Technical Guide for Monitoring Selected Conditions Related to Wilderness Character* in 2006 with specific protocols for each of the component measures. Following pilot testing in all nine Forest Service Regions and the development of a proposal for nationwide implementation, the agency effort to implement Wilderness character was suspended when the commitment of the personnel and funding needed for a decade of monitoring could not be secured.

Several lessons, both good and bad, were learned during this first attempt. The protocol was well received by the agency leadership because it was integrated across many different resource areas and it relied exclusively on data already in existence. Unfortunately, two large issues could not be overcome: the need to add staff in a time of a shrinking workforce and the need to commit funding over a long time horizon to both establish a Wilderness character baseline in the 439 Wildernesses managed by the agency, and revisit all these areas a second time to evaluate trends.

In the absence of a national top-down approach, a number of national forests moved forward with the establishment of Wilderness character baselines, including: Mission Mountains Wilderness, Selway-Bitterroot Wilderness, and the Hyalite Porcupine Buffalo Horn Wilderness Study Area (MT); Black Elk Wilderness, Holy Cross Wilderness, and Mount Massive Wilderness (CO); and the development of a regional protocol for monitoring Wilderness character in Alaska.

The Forest Service is currently in the process of completing *Keeping It Wild in the Forest Service: A Strategy to Monitor Wilderness Character* to be consistent with the recommendations stemming from *Keeping it Wild 2: An Updated Interagency Strategy to Monitor Trends in Wilderness Character Across the National Wilderness Preservation System* which is also currently under development. Plans are actively underway to revise the detailed technical guide for Wilderness character monitoring, beginning in FY 2015, with the goal of having the protocol completed by the following fiscal year.

Based on a number of factors, agency staff are optimistic they will secure the needed resources in this second attempt at nationwide implementation, including: (1) the momentum generated by the progress made by the other agencies and the development of a consistent approach across the NWPS; (2) the enthusiasm engendered by the 50th anniversary of the Wilderness Act and the interest in charting the course for the next 50-years; and (3) the implementation of a new performance measure titled “Wilderness Stewardship Performance”, beginning in FY 2015. This new measure tracks various elements related to Wilderness character and also directly tracks the agency’s progress at establishing a Wilderness character baseline across the Wilderness they manage.

Fisheries Management in the BWCAW:

Application of the Minimum Requirements Decision Guide Process

Ann Schwaller, *US Forest Service*

Tim Engrav, *US Forest Service*

The Boundary Waters Canoe Area Wilderness (BWCAW) is a unique federal Wilderness area located in the northern third of the Superior National Forest in northeastern Minnesota. At over one million acres in size, the BWCAW contains over 1200 miles of canoe routes and approximately 1300 lakes that are visited by a quarter of a million visitors each year. The BWCAW was made a part of the National Wilderness Preservation System in the Wilderness Act of 1964 and to a further extent designated in the 1978 BWCAW Act. Since a large number of lakes are contained within the BWCAW they must be managed consistent with both of these Wilderness Acts. However, evaluating the effects to Wilderness character wasn’t necessarily emphasized in the past when the state fisheries division planned for their fish stocking and fish assessment methods. Superior National Forest staff and Minnesota Department of Natural Resources-Fisheries staff began working through these challenges and different management approaches in early 2013 beginning with an updated Memorandum of Understanding. As the new draft MOU was being developed a small team of DNR and Forest Service staff also worked through the Minimum Requirements Decision Guide (MRDG) process to analyze several fisheries management activities currently being conducted and proposed for the future by the state. Several meetings were held during which the small team worked through every section and sentence of the MRDGs based on the most recent MRDG forms. State and Federal policy and regulations were reviewed,

referenced, and considered as each alternative was developed. Three complex draft MRDGs were written and are currently under review by each agency's leadership. The MRDGs provide an analysis and explanation of fisheries stocking, fisheries assessment, and spawn take management work necessary to adequately monitor fish population and community changes, environmental changes, invasive species concerns, and the efficacy of various fisheries management actions in the BWCAW. The MRDGs also disclose and quantify the effects on Wilderness character when primitive non-motorized means of travel are used and when motorized methods of travel are used in specific situations. The MRDGs that were developed are complex yet represent a positive collaborative effort between the State of Minnesota DNR-Fisheries and Forest Service staffs. The results of the MRDGs are still pending review and approval at the time of publication so we couldn't include the conclusion of the work performed or MRDG alternatives selected.

Wildlife Management Conflicts in Wilderness: A Need for Federal Preemption

Fran Mauer, Wilderness Watch

Management of sport hunting and fishing in most designated Wilderness areas is usually a State function. However, State wildlife management goals are sometimes at odds with Wilderness Act requirements as well as purposes for which Federal conservation areas are established. For example, State mandates often focus on managing for maximum sustained yield of game species, and State game department funding depends on revenue from hunting licenses and harvest tag fees, creating an emphasis on maximum harvests that may conflict with Federal laws. Wilderness must remain untrammelled or not controlled by humans. It requires Federal agencies to protect Wilderness character. Furthermore, the establishment purposes for many National conservation areas are to protect natural diversity, predator/prey dynamics and other ecological processes.

Conflicts between State management and Federal requirements have arisen in Alaska during the past 20 years, partly due to the State's "Intensive Management" law which mandates the Game Department to reduce predators with the intent to increase game abundance. Alaska has liberalized seasons, methods of take and increased bag limits for predator species within National Park Preserves, Wildlife Refuges and Wilderness areas. For example, the State's current bag limit for wolves in portions of Lake Clark and Katmai National Preserves is 10 wolves per day over a 297-day season, which includes the denning period when wolves are especially vulnerable. In 2010 the State proposed a wolf control program in the Unimak Wilderness, a part of the Alaska Maritime National Wildlife Refuge. The program called for shooting wolves from a helicopter during the May denning season and gassing any wolf pups that might be orphaned in their dens.

For several years, the National Park Service has preempted State harvest regulations that are deemed inconsistent with Preserve purposes and NPS policy through its annual compendium regulation process. Recently the NPS has proposed to promulgate permanent regulations that would prohibit any State harvest rules having the intent to manipulate predators to increase game populations within the Preserves. The U.S. Fish and Wildlife Service preempted the proposed wolf control program for Unimak Island in 2011, and for two years it has preempted State brown bear hunting seasons in the Kenai National Wildlife Refuge due to excessive take of bears.

Similar conflicts have recently occurred in Idaho where the Game Department was authorized by the Forest Service to kill wolves within the Frank Church River of No Return Wilderness. Recently the state of Arizona proposed a program to boost big horn sheep populations in six Wilderness areas of two National Forests. It would involve many hundreds of helicopter landings in Wilderness and possibly predator control actions. Several U.S. Supreme Court rulings have affirmed that the Federal government has the authority to preempt State management of wildlife on Federal lands and has the responsibility to do so when State programs conflict with Federal laws such as the Wilderness Act and purposes of conservation units.

National Historic Preservation Act vs. the Wilderness Act

Thomas W. Banks, US Forest Service

The relationship between the Wilderness Act of 1964 and the National Historic Preservation Act of 1966 (NHPA) is characterized by dynamic tension. Court cases, including a significant federal decision in California (*High Sierra Hikers Association and Wilderness Watch. v. U.S. Forest Service et al., 2006*), have ruled against certain instances of maintenance or replacement of man-made structures in Wilderness, ruling these maintenance actions illegal if the structures are unnecessary for the administration of the area as Wilderness or not covered by enabling legislation or by other exceptions granted in the Wilderness Act. This has held even for structures that are eligible for listing on the National Register of Historic Places. While acknowledging the

procedural requirements imposed by NHPA, the courts have concluded that the substantive, specific language of the Wilderness Act takes precedence over the general direction for preservation in NHPA. Several controversial cases were described. Statutory law, agency policies, and recent case law affecting the National Park Service and Forest Service's management of historic and recreation structures in Wilderness were examined.

We're Still Responsible: Wilderness Cultural Resource Management Consistent with the Federal Courts

Bob Krumenaker, *National Park Service*

While the Wilderness Act defines, in §2c, a Wilderness as “an area where the earth and its community of life is “untrammeled by man,” and “undeveloped federal land retaining its primeval character and influence, without permanent improvements,” the truth is that most Wildernesses have a long and storied human history.

Wilderness icon Sigurd Olson said “[t]he real significance of Wilderness is a cultural matter. It is far more than hunting, fishing, hiking, camping, or canoeing; it has to do with the human spirit.” (*The Spiritual Aspects of Wilderness*, 1956)

Wilderness advocates and managers are often conflicted with competing management philosophies, understandings of their legal mandates regarding cultural resources, and often agendas. Should they remove, or deny the existence of all remaining traces of human development to be as consistent as possible with the lofty words quoted above from §2c? Or should they apply the full suite of cultural resource preservation tools and technologies to comply with the 1966 National Historic Preservation Act (NHPA) and the Secretary of the Interior's Standards for the Treatment of Historic Properties? Those who ascribe to the latter view often cite another, less quoted, phrase from §2c: that the area “may also contain ecological, geological, or other features of scientific, educational, scenic, or *historical* value.”

The answer to both questions is NO. These are not the only choices. Yet time and again, one or the other of these polar opposite strategies has been employed in Wilderness. Lawsuits sometimes follow, forcing federal judges to forcefully remind agencies of their mandates, which are complex. Unfortunately, bad management decisions can lead to bad case law and a lot of confusion and frustration in the Wilderness community.

Laws clearly protect both Wilderness AND cultural resources and require federal agencies to manage both. It is NOT a zero sum game. In short: the laws pertaining to historic preservation also remain applicable within Wilderness but must be administered to preserve the area's Wilderness character and values, i.e. using the minimum requirement analysis to guide how agencies preserve historic fabric. But those same laws stop short of mandating particular historic preservation outcomes, and cannot be used to subvert Wilderness character. On the other side, the presence of historic structures does not make an area ineligible for Wilderness, nor does the Wilderness Act compel them to be removed.

The 10-year old Gaylord Nelson Wilderness, in the Apostle Islands National Lakeshore, provides a valuable case study where Wilderness and culture are both embraced, and (so far) have stayed out of court. Gaylord and Sigurd would both be pleased, we hope.

Getting the Language Right: Understanding Litigation Dealing with Cultural Resources in Wilderness

Jon Dettmann, *Wilderness Attorney*

In recent years, Wilderness-advocacy groups have successfully challenged agency actions dealing with cultural resources in Wilderness. These cases range from motorized van tours to visit historic structures through the Cumberland Island Wilderness in Georgia, to maintaining dams in the Emigrant Wilderness in California, to pre-fab trail shelters in the Olympic Wilderness in Washington, to a replica lookout in the Glacier Peak Wilderness in Washington. In each case, the courts found that the federal agencies improperly gave deference to historic preservation at the expense of the mandates of the Wilderness Act.

At the same time, when historic preservation groups challenge agency actions that harm historic resources, the agencies are quick to point out – and the courts uniformly agree – that the National Historic Preservation Act is a purely procedural statute and contains no substantive requirements to preserve historic resources. In this manner, the Wilderness Act and the NHPA are not in conflict when issues of historic preservation in Wilderness arise. The agencies can (and must) fulfill the procedural requirements of the NHPA, and at the same time can (and must) preserve Wilderness character by letting nature take its course. Simply put, the law mandates the demise, not the preservation or reconstruction, of historic resources in Wilderness.

Wilderness Watch: Watchdog for Wilderness

Dawn Serra, *Wilderness Watch*

Unlike stewardship groups that work with agencies on trail projects or boots-on-the-ground work, Wilderness Watch fills the role of watchdog for Wilderness by defending and keeping wild America's National Wilderness Preservation System (NWPS). Wilderness is threatened by administrative actions, by Congress, and by others who seek to exploit it. The visionary 1964 Wilderness Act guides our work.

Wilderness Watch was founded in 1989 by retired US Forest Service (FS) Wilderness leader Bill Worf and his two colleagues to address, and ultimately win in the courts against, unlawful actions in the Frank Church-River of No Return Wilderness that were degrading the area's Wilderness character. None of the other Wilderness organizations at the time would take on these issues, so Wilderness Watch formed to protect this Wilderness as well as the NWPS.

Wilderness Watch is a citizens organization based in Missoula, Montana. We are five staff members in MT, MN, and ID. We have chapters in AK, WY, CA, and GA. We have members in every state and more than 100,000 online supporters. We educate and engage citizens through our online communication tools such as our monthly e-newsletter, the *Guardian*, action alerts, our website and blog, social media sites; by giving public presentations and participating in public events; through conferences and agency trainings, and by holding membership-recruiting events.

Through the NEPA process, we work with the federal land agencies that administer Wilderness. We review, analyze, and comment on EISs and EAs. We meet with the agencies and occasionally go on field visits. We communicate with our members who work for the agencies and let us know what's happening in Wilderness.

We challenge actions that would harm Wilderness by filing administrative appeals and litigation when all else fails. We are involved with litigation to prevent the FS from building a snowmobile trail at the edge of the Boundary Waters Canoe Area Wilderness in MN; with litigation appealing a decision by the FS which allowed a private company to use helicopters to maintain a simple catwalk at a dam in the Selway-Bitterroot Wilderness in MT; and we are intervening on behalf of the US Fish & Wildlife Service (FWS) in a lawsuit challenging the Interior Department's decision to reject a land exchange and road through the Izembek Wilderness in AK. We lobby Congress to better protect the NWPS, meeting with members of Congress on specific bills and testifying at hearings. We also track the bills in Congress that will harm Wilderness and encourage our people to take action. We focus on policy work and we work with other conservation groups and professional societies to better protect Wilderness.

Citizen Engagement & Wilderness Stewardship Partnerships: Models and Methods for Long-term Success

Adam Liljeblad, *National Forest Foundation*

Bill Hodge, *The Wilderness Society*

Eric Melson, *Selway-Bitterroot Frank Church Foundation*

Shaaron Netherton, *Friends of Nevada Wilderness*

A portion of the work of stewarding America's Wilderness is falling increasingly to external non-profit partner organizations that work with agency representatives to ensure that each Wilderness area is cared for at the appropriate degree. Utilizing their own staffing and volunteers, partner organizations leverage additional resources to help managing agencies maintain trails, monitor, and protect Wilderness character. This panel discussion with leaders in the field of partner-based stewardship 1) highlighted the work type and variety of work that can be accomplished through partner based-stewardship and citizen engagement projects; 2) detailed different models of effective partner-based stewardship organizations, including different organizational arrangements and spatial scales of work; and 3) described how an organization's effectiveness is shaped by the natural, social, economic, and management resources around a particular locale.

Partner organizations have been helping agencies extensively with Wilderness stewardship and the work they help accomplish goes well beyond simply brushing-out trails. Non-profits across the country assist managing agencies map and treat weeds, collect data on threatened and endangered species, assess recreational use, implement Wilderness education plans, restore recreational impacts or Wilderness intrusions, monitor air quality, and much more. The limits of the work they can potentially do are only bounded by the type of assistance that is needed.

The spectrum of Wilderness stewardship organizations covers a broad range. A small stewardship organization may be a cohesive groups of engaged retirees who come together to work with an agency to collect data on weed infestations in a portion of a Wilderness. A large stewardship organization may be a sophisticated,

highly-staffed non-profit that runs multiple simultaneous paid crews and has a vigorous volunteer stewardship program, and completes many types of on-the-ground and monitoring projects throughout many states.

Wilderness stewardship organizations tend to be highly resource-adapted, meaning that each organization is the unique product of the combined social, economic and natural resources available. Understandably, partnerships need to be established with those resources in mind. In highly populated areas, an organization may be able to rely heavily on volunteers to help agencies accomplish work. Conversely, in areas far away from population centers or with a disengaged population, a critical number of volunteers might be more difficult to come by and paid crews are utilized to accomplish the same task. By thoughtfully mapping out potential partnerships, organizations can help maximize their stewardship outcomes as well as the impacts that they have on the communities they work in.

The panel presented examples from their experiences on these topics and engaged in a spirited discussion with attendees about challenges and opportunities for increasing the measurable impact of the work they do.

Special Provisions in Wilderness Legislation 1964 to 2014: Number, Types, and Impacts on Wilderness

Peter Landres, Aldo Leopold Wilderness Research Institute

Special provisions are unique pieces of text in Wilderness legislation that direct the administering agencies to do or allow certain things in the Wilderness. Because they are included in federal legislation, special provisions are legal requirements to the administering agencies. Often, but not always, special provisions allow activities that are prohibited by the 1964 Wilderness Act, especially activities that are prohibited in Section 4(c) of the Wilderness Act. While these activities are legally allowed, they nonetheless may degrade Wilderness character and are therefore often referred to as “nonconforming uses.” The purpose of this presentation was to summarize the number and types of special provisions and their allowed nonconforming from the time the Wilderness Act was passed in 1964 to this 50th anniversary of the Wilderness Act. In addition, this presentation briefly summarized the impacts of these special provisions on Wilderness character and Wilderness stewardship.

A total of 179 Wilderness laws have been passed by Congress, establishing 758 Wildernesses. Of these laws, nearly half (86 laws, or 48% of all the laws passed) contain one or more special provisions. Within these 86 laws there are a total of 851 separate special provisions, and a graph plotting the cumulative number of special provisions shows a steady and fairly steep increase in this number beginning from about 1975. In addition, every Wilderness law passed since 2007 contains one or more special provisions.

From the perspective of the agencies with management responsibility, there are 792 Wilderness “units” because several Wildernesses are managed by more than one agency. Of these 792 Wilderness units, 646 or 82% are affected by one or more special provisions. The four federal agencies with Wilderness management responsibility are affected quite differently by special provisions. Nearly all Bureau of Land Management Wilderness units (92%) are affected by special provisions, while merely most US Forest Service and National Park Service Wilderness units (85% and 84%, respectively) are affected. In contrast, only 27% of US Fish and Wildlife Service Wilderness units are affected by special provisions.

Special provisions allow a wide variety of nonconforming uses in Wilderness, and once a special provision is included in one Wilderness law it tends to be included in subsequent Wilderness laws. The top ten categories of special provisions are, in decreasing frequency: structures and roads, agency jurisdiction, acquisition and exchange of lands, wildlife management, buffer zones, grazing, water facilities, access, water rights, and scientific uses. A small sample of other nonconforming uses include landing of aircraft, use of motorboats, use of cabins, a variety of military uses, maintenance of dams, and use of a cemetery.

Special provisions create several problems for preserving Wilderness character and Wilderness stewardship. Nonconforming uses typically degrade one or more of the qualities of Wilderness character, and thereby diminish public understanding about Wilderness. The wording of special provisions is often vague, resulting in confusion, appeals, and sometimes litigation, and may consume a significant proportion of a Wilderness manager’s time.

The Challenges of Special Provisions

Kevin Proescholdt, *Wilderness Watch*

Special provisions, or nonconforming uses, degrade Wilderness character. They often involve 1) increased motorized use, 2) increased commercialization, 3) manipulation of habitat or natural processes, or 4) changing types and levels of recreational use.

Specific Problems with Special Provisions: They often get replicated in subsequent Wilderness bills, such as buffer zone language, military overflights – now common with most Wilderness bills. They also often get expanded in subsequent Wilderness bills, e.g., motor vehicles for wildlife provision in 1984 Wyoming Wilderness Act – limited to 1 small area in addition to Fitzpatrick Wilderness for capturing/transporting bighorn sheep; then replicated in 1990 AZ Wilderness Act (39 Wildernesses), greatly expanded: refers to MOU that allows motor vehicles and equipment, predator control, constructing artificial water catchment basins (guzzlers), poisoning streams, stocking non-native fish; now found in nearly every new Wilderness bill. Once established it proves terribly difficult politically to later remove special provisions, e.g., BWCAW special provisions in 1964 WA [sec. 4(d)(5)] that was removed by Congress in 1978, but only after bitter divisive political fight.

Collectively, special provisions undermine the core values and very meaning of Wilderness, what Wilderness is supposed to be, and corrode the very underpinnings of the National Wilderness Preservation System.

The pending Nevada Land bill (HR 5205) (Northern Nevada Land Conservation and Economic Development Act) passed the House Sept. 15 - loaded with terrible special provisions – guzzlers, buffer zones, military overflights, motor vehicles and helicopters for wildlife. Plus three unprecedented special provisions:

1. **Motor Vehicle Access for Hunting** – anyone claiming any sort of disability could drive trucks or tanks into the Wilderness for hunting, fishing
2. **Logging for Wildfire Pre-suppression**, and devolvement of Wilderness administration to county or state
3. **Livestock Grazing** – declares grazing is compatible with Wilderness – for 50 years it's been incompatible under WA, but allowed in some places under certain conditions and where it previously existed.

Solutions:

- A. **Recognize** the dangers of special provisions.
- B. **Avoid** the use of special provisions in Wilderness bills – just say the area is to be managed under the Wilderness Act.
- C. **Minimize** the dangers of their use – use phase-outs, re-draw Wilderness boundaries, etc
- D. **Be strong, united, and patient** to work for Wilderness bills without them.

Continental Divide: Wildlife, People, and the Border Wall in Designated Wilderness

Dan Millis, *Sierra Club*

Krysta Schlyer, *Photographer and Author*

Kevin Dahl, *National Parks Conservation Association*

The topic of the border wall between the United States and Mexico continues to be hotly debated, but what about the wall's effect on Wilderness? 652 miles of border barriers now slice across huge swathes of terrain, much of it designated Wilderness or Wilderness study areas. The Wilderness Act and 36 other protections have been waived along the border. It is the largest waiver of law in U.S. history.

California's Otay Mountain Wilderness Area stands as a disturbing example of a decimated border Wilderness. In 2008, the Otay Mountain Wilderness Act was waived, and protections for the land no longer apply to the Department of Homeland Security. Otay is home to rare species such as the Thorne's hairstreak butterfly, which depends on another rare species, the Tecate cypress, for reproduction. Hundreds of thousands of cubic yards of rock were blasted from the steep slopes of the Otay Wilderness during border wall construction there, even though Border Patrol spokespeople had previously claimed no barriers were needed Otay's rugged terrain. Border walls and roads now slice across the southern boundary and into the Otay Wilderness area itself, at a cost of \$16 million per mile to construct.

Other examples of Wilderness impacts were discussed, such as Border Patrol off-roading, responsible for nearly 8,000 miles of renegade roads and vehicle tracks in the Cabeza Prieta National Wildlife Refuge, most of which is designated Wilderness (over 803,000 acres of designated Wilderness). Organ Pipe Cactus National Monument, adjacent to Cabeza Prieta along the border with Mexico, contains 312,000 acres of designated Wilderness and has also seen extensive damage from unofficial roads and vehicle tracks.

Wildlife Management in Wilderness: Its Roots, Challenges, and Future

Lowell E. Baier, *Attorney*

Christopher E. Segal, *Attorney*

Peter A. Appel, *University of Georgia School of Law*

Andy Loranger, *US Fish and Wildlife Service*

Doug Vincent-Lang, *Alaska Department of Fish and Game*

John Kennedy, *Wyoming Game and Fish Department*

Elaine Johnson, *US Fish and Wildlife Service*

This panel presentation considered the challenges of wildlife management within units of the National Wilderness Preservation System. Wildlife management on public lands presents challenges due to the nature of dual sovereignty – while the federal government owns and manages public land, states manage the wildlife within their borders, including on public land. This can lead to state-federal conflicts on a range of issues, including access to land, impact of wildlife management on the land, and impact of wildlife on adjacent private property.

These challenges are exacerbated in designated Wilderness areas because of the strict legal restrictions that govern Wilderness. Restrictions such as those on mechanized vehicles and permanent structures create additional burdens for state agencies, and thus additional points of conflict between state and federal agencies. These issues are further complicated by the broadness of the federal mandate to maintain the “Wilderness character” of designated areas and by the ability of federal agencies to make exceptions to Wilderness restrictions under certain circumstances, sometimes inconsistently.

One principle of federalism is that local governance is more efficient, more responsive, and better than distant governance. This principle has been adopted by federal land management agencies, which vest considerable power in their field offices. Although this is an efficient use of public resources, it means that the poorly defined issues of Wilderness character and regulatory exceptions to the Wilderness Act are further subject to varying interpretations across agencies and different units of the same agency.

These challenges are the consequence of the decisions that we have collectively made to adopt a federalist system, manage wildlife as a public trust, and preserve “untrammelled” land for future generations. This panel session brought together scholars, federal land managers, and state wildlife managers to discuss historical, contemporary, and future answers to these challenges. It aimed to facilitate discussion among attendees by providing historical context, past and present examples, and ideas for future improvements in wildlife management within Wilderness areas.

Topics covered included the historical, philosophical, and legal history of state wildlife management and federal public land management; relevant legislative developments in the 50 years since passage of the Wilderness Act; legal authority for federal management and its benefits; issues in the Alaska Maritime National Wildlife Refuge and Kenai National Wildlife Refuge, Alaska; state perspectives on wildlife management in Alaska Wildernesses; the work of state wildlife agencies and the value of cooperation; and collaboration on predator control in Arizona National Wildlife Refuges.

A Geography of Conflict: Growth of Federal Power over Wildlife on Public Lands

Lowell E. Baier, *Attorney*

Wildlife in America is a public trust, managed by state governments for the benefit of all the people. As early as 1694 colonies managed this resource by establishing hunting seasons and bag limits on both game and non-game animals, birds and fish. The 10th Amendment to the U.S. Constitution provides that “the powers not delegated to the United States by the Constitution, nor prohibited by it to the States, are reserved to the States respectively, or to the people.”

This constitutional statement of federalism was affirmed with respect to fish and wildlife by the Supreme Court in the 1896 in *Geer v. Connecticut*, a narrow opinion that recognized absolute state control and management of wildlife without preempting the federal prerogative over interstate commerce in game animals. This case was followed by the Lacey Act in 1900, the federal government’s first major wildlife law. In 1902 Congress enacted the Alaska Game Law, which became a model game law but was yet another step in federal wildlife control.

The *Geer* case truly began to be narrowed by the enactment of the Migratory Bird Act in 1913 and the corresponding treaty with Canada in 1916, which established the treaty power as a source of Congressional authority over wildlife. In *Hunt v. United States*, a 1928 case dealing with federal removal of deer from Kaibab National Forest, the Supreme Court held that the federal government had the authority to protect its lands and property notwithstanding state authority, based on the property clause of the U.S. Constitution. This was later broadened in the 1976 decision *Kleppe v. New Mexico*.

The slow unraveling of *Geer* was nearly complete. As the Supreme Court noted in 1978, the doctrine of State ownership of wildlife suffered a “lingering death.” One year later, it added that the *Geer* state sovereignty and ownership principal had “been eroded to the point of virtual extinction” calling it a “19th century legal fiction” and a “legal anachronism,” putting wildlife in the 20th century on the same plane as any other natural resource within a state’s boundary.

The Supreme Court’s interpretation of the Property Clause opened up a gaping chasm in the states’ right to control wildlife. The immense federal estate spans 700 million acres, 35% of the entire United States, and its 757 Wilderness areas cover 109.5 million acres, 5% of the United States. In addition, millions of acres of land have been designated as critical habitat for 1,560 endangered species. This vast land is governed by a myriad of laws, including 22 environmental statutes enacted during the 1960s and 1970s that provide a rich platform for litigation.

Yet the Department of the Interior has repeatedly issued regulations that reaffirm state sovereignty over wildlife. Notwithstanding the Supreme Court, state wildlife management officials continue to exercise sovereignty and control over wildlife, and it is they who carry the burdens of developing and implementing endangered species recovery plans and planning the conservation of species such as sage-grouse. We can all readily see the geography of conflict. The question is not how can conflict be avoided since conflict is inevitable, but rather how can conflict be peacefully resolved. How do we move from tension and contention to cooperative conservation and productive resolution?

New Legislation, New Conflicts: 50 Years of Wilderness Management

Christopher E. Segal, *Attorney*

Legislative developments in the 50 years since passage of the Wilderness Act have led not only to an expansion of the National Wilderness Preservation System, but also to an expansion of special management provisions within Wilderness legislation. At the same time, an overall expansion of environmental law has increased the public scrutiny of land management agencies and led to an increase in litigation.

The Wilderness Act of 1964 is explicitly neutral as to the management of wildlife. Section 4(d)(8) states that “nothing in this Act shall be construed as affecting the jurisdiction or responsibilities of the several States with respect to wildlife and fish in the national forests.” The legislative history of this provision indicates that several Senators felt the need to explicitly protect hunting, angling, and wildlife management from possible restrictions.

Subsequent legislation designating Wilderness rarely addressed wildlife management, but when it did it usually created special management provisions. Foremost in both acreage designated and special provisions created was the Alaska National Interests Lands Conservation Act of 1980. This Act responded to the unique circumstances of Alaska by allowing, among other exceptions, non-commercial aquaculture and seasonal hunting and fishing camps within Wilderness areas. It also created a subsistence program and authorized the use of aircraft, motorboats, and snowmachines for subsistence activities and travel by native and rural residents. It allowed subsistence hunting inside the National Park System, and recognized subsistence as the highest consumptive use of fish and wildlife resources. Other, less sweeping, legislation has allowed the use of motor vehicles in Wilderness for state management of wildlife, reiterated that wildlife management is compatible with Wilderness, and endorsed agency Wilderness management guidelines.

In the same period, environmental law as a whole has grown and changed. Agency planning has become more formal, as exemplified by the National Forest Management Act of 1976 and the Federal Land Policy and Management Act of 1976. These laws governing the Forest Service and Bureau of Land Management, respectively, affirm the agencies’ multiple-use missions, including fish and wildlife as one of the multiple uses, but they constrain the agencies’ discretion to favor certain uses over others. They involve the public in agency planning processes through public comment, and their provisions are enforceable by the public through lawsuits brought under the Administrative Procedure Act.

Environmental law in general also affects the management of wildlife on public lands. The two most significant statutes in this respect are the National Environmental Policy Act of 1969, which like NFMA and FLMPA creates a judicially-enforceable planning framework, and the Endangered Species Act of 1973. The ESA is at its most powerful on public lands because it creates a duty for all federal agencies to protect endangered species and it involves the Fish and Wildlife Service in land use planning within critical habitat, creating an additional layer of regulation and its accompanying litigation.

An Evolving Case Study of State and Federal Wildlife Management Responsibilities on Refuges and Refuge Wilderness Areas in Alaska

Andy Loranger, *US Fish and Wildlife Service*

Over the last few years, the U.S. Fish and Wildlife Service has used its legal authority to not allow wolf control on Unimak Island, part of the Alaska Maritime National Wildlife Refuge, and on the Kenai National Wildlife Refuge, and has implemented emergency and temporary closures on the sport hunting of brown bears on the Kenai Refuge. These decisions have been controversial in that they have conflicted with management direction and/or regulations adopted by the State of Alaska related to management and use of these species.

The Service recognizes the State's authority to manage wildlife on refuges in Alaska, but it must exercise its responsibilities such that management of refuges and refuge Wilderness areas is consistent with federal mandates and policy. The Alaska National Interest Lands Conservation Act provides that the primary statutory purpose for all refuges in Alaska is to "conserve fish and wildlife populations and habitats in their natural diversity." The Service must also take numerous other laws, regulations, and policies into consideration when making management decisions.

These two refuges contain designated Wilderness, where the Service may not interfere with ecosystem processes, including predator/prey fluctuations, unless necessary to accomplish refuge purposes. The Wilderness Act requires federal Wilderness managers to preserve both "untrammled" and "natural" qualities of Wilderness, which can involve difficult trade-offs. The recent decisions to not approve wolf control and restrict sport hunting of brown bears, however, involved no such trade-offs. Because there is no information indicating a need to manipulate wolf or brown bear populations downward on these refuges in order to restore natural conditions, declining to do so advances both the untrammled and natural qualities of these Wilderness areas.

These closures were not undertaken lightly. One statutory purpose of all refuges in Alaska except the Kenai is to provide for continued subsistence uses by local residents. The Kenai has a unique purpose to provide opportunities for fish and wildlife-oriented recreation. The Service must administer all activities on refuges, including hunting, in a manner compatible with refuge purposes and the Refuge System mission, which include conserving fish, wildlife and habitats in their natural diversity and meeting treaty obligations. Within these constraints, hunting is one of six priority general public uses of the Refuge System, and it receives enhanced consideration over nonpriority uses.

Administering these refuges requires consideration of many factors, including species distributions, movements, population cycles, and complex trophic interactions within ecosystems. Achieving the purposes of the Refuge System and the Wilderness Act in the future will require respectful and constructive dialog, collaboration, effective leveraging of limited resources, improved scientific information, public transparency, and, to take inspiration from the Wilderness Act, humility and restraint. Successfully preserving Wilderness resources and values in Alaska is of national, even global, significance – a daunting challenge no doubt, but also a truly remarkable opportunity.

Wildlife Management in Alaskan Wilderness: A Story of Inconsistencies and the Need for Meaningful Metrics

Doug Vincent-Lang, *Alaska Department of Fish and Game*

The question of how much management should be allowed in Wilderness to sustain wildlife and its use is increasingly being asked. This is particularly important given specific Congressional allowances in Wilderness areas for consumptive use of wildlife, including general hunting under the Wilderness Act, and subsistence use under the Alaska National Interest Lands Conservation Act. These are very important considerations in rural Alaska where many people continue to live a traditional lifestyle dependent on wild foods to sustain themselves and their culture.

In Alaska, where most of America's remaining true Wilderness exists, federal agencies are increasingly mandating that wildlife on federal lands in general, and in Wilderness areas in particular, be managed within the context of their "natural diversity" or based on "conservation ethics." Yet the federal land managers are reluctant to define what is meant by managing for these standards or how they should be assessed, providing no assessment metrics. The failure to provide assessment metrics is leading to confusion and disagreement between federal and state managers and a lack of understanding of what is meant by the goal of managing for "natural diversity" or "conservation ethics," particularly within Wilderness areas. It is also opening the door to opinion and interpretation and also paving the way for federal land managers to put their personal perspectives into regulation.

Another inconsistency involves research. Nearly every federal land management agency is calling for research to better understand the impacts of a changing climate on wildlife, both within and outside of Wilderness. Yet, these same federal agencies are making it nearly impossible to conduct much needed research, requiring each research effort prepare a minimum requirements analysis, and then adding on stipulations that can make it nearly impossible to conduct meaningful research.

We need to carefully consider metrics and guidelines that will frame decisions regarding wildlife management in Wilderness areas. Failure to provide these will lead to additional confusion and conflict.

The State Wildlife Agency Role in Wildlife Management in Wilderness

John Kennedy, Wyoming Game and Fish Department

State wildlife agencies value the need to conserve landscapes for fish and wildlife populations; however, there are challenges related to the state wildlife agencies' role in Wilderness proposals and management. These comments were presented with the intent to make our work with the federal land management agencies and Wilderness groups less contentious and more productive.

I discussed what's behind some of the immediate push-back from some state wildlife agencies and some hunters and anglers with respect to Wilderness. Respectful dialogue regarding these issues could lead to more meaningful, collaborative work on future Wilderness proposals and management plans. The state wildlife agencies are responsible for wildlife management within their borders, even on most federal public lands, including federal lands designated as Wilderness. This responsibility is reflected in several federal statutes and policies concerning fish and wildlife conservation and federal public land management.

There are 2 issues that I focused on: 1) The importance of involving the state wildlife agencies early in the process of developing Wilderness designation proposals and 2) The importance of Wilderness management planning processes that support the state wildlife agencies and their wildlife management goals. Wilderness designation and management in some states have prohibited or restricted wildlife management actions, including wildlife population management and research; release of wildlife into currently unoccupied habitats; fish stockings and stream renovations; habitat improvement projects; maintenance of existing wildlife water developments; construction of new wildlife water developments; and fish and wildlife law enforcement actions. Wilderness designations can restrict public access, diminish hunting opportunities, and limit the states' abilities to accomplish big game harvest objectives. Wilderness designations and management plans in some western states have further decreased hunting opportunities due to opposition of hunting and restrictions on motorized access and mechanical transport (e.g., game carriers) for the retrieval of downed big game.

These impacts to public access and hunting opportunities have the potential to be inconsistent with the North American Model of Wildlife Conservation. Hunting and angling are the cornerstones of the model and hunters and anglers continue to be the primary source of funding for conservation efforts in North America, including the conservation of fish and wildlife species that many Wilderness designations seek to protect. Fish and wildlife populations are very important components of Wilderness areas, and many state wildlife agencies believe that wildlife management can continue to fulfill specific wildlife conservation purposes while also maintaining other "Wilderness" values and purposes. Wildlife management and Wilderness management do not have to be incompatible with one another. National and state guidance and state-federal agency cooperative work should emphasize the importance of wildlife management in Wilderness. Without that emphasis, wildlife will be prioritized at a lower level than other Wilderness values.

Case Study: Federal and State Cooperation for Wildlife Management in Wilderness

Elaine Johnson, US Fish and Wildlife Service,

In Arizona, at Kofa National Wildlife Refuge, the U.S. Fish and Wildlife Service has worked cooperatively with the State regarding wildlife management in Wilderness and jointly came to a decision to conduct selective reduction of mountain lions to increase the number of bighorn sheep. Kofa is the major portion of the last contiguous habitat for bighorn in the SW, and bighorn conservation was the primary purpose for its establishment in 1939. Its bighorn population served as a source for transplants to other areas in support of landscape level conservation until the population dropped from a 20-year average of about 800 animals to less than 400 animals.

In 1990, about 82% of Kofa's 665,500 acres were designated as Wilderness. Biodiversity and genetic diversity on a landscape level have long been considerations when managing Kofa, but fragmentation of the landscape has altered bighorn movement between mountain ranges and affected recolonizing habitats and genetic exchange.

In response to the bighorn population decline, transplants were suspended and in coordination with the State, a comprehensive investigation was conducted that looked at a number of factors. Research, monitoring, and modeling suggested that mountain lion predation was the primary cause of the decline. Prior to mountain lions documented in 2001 and seen in 2003, there had been only one confirmed animal in 1944. An environmental assessment was completed in 2010. An alternative to conduct selective mountain lion control, with flexibility depending on the bighorn population, was considered necessary to accomplish the purpose of the refuge, bighorn conservation, and to meet the minimum requirement for administering the area as Wilderness.

Service policies allow for predator control when the actions will alleviate impacts on native wildlife and the control is aimed at the individual animal causing the problem. Refuges may compromise elements of biological integrity and diversity at the refuge level in support of ecosystem objectives, and at Kofa, population objectives and management direction were developed specifically to support landscape level conservation efforts through transplants.

Action taken at Kofa may seem inconsistent with approaches taken elsewhere. However this was a site specific action based on larger landscape level conservation efforts. Information indicated that predation by mountain lions was having a significant impact on the bighorn herd, and the continued presence of the herd is essential to meeting the purpose for which the refuge was established, and for meeting its Wilderness purpose.

While managing predation in Wilderness is introducing human control, it is in response to human disruption of the ecosystem. There is a trade-off of impacts to one aspect of Wilderness character locally to restore Wilderness resources for broader purposes. It's a tough balancing act especially in respect to varying ideals about how to implement the Wilderness Act and having harmony with refuge purposes. The Service had a common goal with the State, and we worked cooperatively towards a solution to a wildlife management in Wilderness issue through open communication and collaboration.

Bighorn Sheep, Mount Timpanogos Wilderness, Utah
By Howie Garber, www.wanderlustimages.com



Helicopters, Backhoes, and Chainsaws: Whatever Happened to Limiting ‘Growing Mechanization’?

Gary Macfarlane, *Friends of the Clearwater*

Are agency-authorized motorized and mechanized use increasing, decreasing, or staying steady in Wilderness? Are there data that would help us make this determination? What can be done to minimize and limit motorization/mechanization?

The Pinchot report notes regarding motorized equipment use the *agencies visualize the minimum requirements and tools necessary quite differently ... One result is that it appears that we do not have a national Wilderness preservation system and that degradation of Wilderness character in all its social, physical, and biological aspects is not as important as management efficiency. This seems counter to the language and spirit of the Wilderness Act.*

The Forest Service recently completed the first baseline report for Wilderness character monitoring in the Selway-Bitterroot Wilderness. While one instance of chainsaw use for fire control was noted in that year, what stands out is this statement: *Three dam maintenance projects were authorized, with helicopter use. It is important to note that the Tin Cup Lake Dam project required 93 helicopter flights and the use of heavy equipment.* In 1963, the Secretary of Agriculture directly addressed the dams in the Selway-Bitterroot in the hearing before the Senate by noting these dams would be maintained, *by means which would not involve motorized transportation as in the past.*

Recently, we have seen bulldozers working in Wilderness to build guzzlers, dozens of helicopters flights and motorized equipment to construct a “replica” lookout no longer used for that purpose on national forest, routine helicopter flights to supply administrative cabins instead of packstock, and helicopter transport for a geology class! In addition state wildlife agencies wanting carte blanche access to use motorized equipment whenever they feel like it. In some instances, legislation allows, promotes or evens mandates motorized use. It seems the Wilderness Act is an afterthought. These suggestions may help in dealing with this issue

- Adopt Wilderness performance evaluations that are inversely tied to the number of administrative motorized authorizations.
- Amend or scrap the MRDG/MRA analyses because it seems to have become a way to rationalize motorized use rather than minimize it.
- Establish traditional skills training not just at national but more localized levels of the four federal agencies with Wilderness administration responsibilities.
- Wilderness advocates, conservation organizations, and the agencies need to resist the temptation to trade acres for integrity when new legislation establishing Wilderness is being considered.
- The agencies need to make data available from when the Wilderness was established to help determine trends in motorized use.

Monitoring of the Breach caused by Hurricane Sandy in Fire Island’s Wilderness

Lindsay Ries, *National Park Service*

Patricia Rafferty, *National Park Service*

Jordan Raphael, *National Park Service*

Kaetlyn Kerr, *National Park Service*

The force of the wind and storm surge from Hurricane Sandy on October 29, 2012 caused numerous over-washes on the barrier islands along the south shore of Long Island, New York. A breach – where water freely flows between the ocean and the bay – formed on Fire Island within the Otis Pike Fire Island High Dune Wilderness. This Wilderness area is the smallest unit managed by the National Park Service (NPS) at approximately 1,380 acres. Storm events and breaches are a part of a barrier island’s natural processes and are integral to the long-term sustainability of this system. Breaches provide ecological benefits such as improving water quality through water exchange, increasing elevation within the interior of the island to keep up with sea-level rise, and contribute to the development of diverse habitats such as salt marshes. However, because barrier islands also provide storm damage reduction benefits for mainland development, breaks in the barrier may leave mainland communities at greater risk for future storm damage. After Hurricane Sandy, immediate political pressure was placed on the NPS and cooperating agencies to close the Wilderness breach because of exacerbating flooding concerns in adjacent communities of Long Island’s south shore. Monitoring of the Wilderness breach began within 48 hours of Hurricane Sandy in accordance with a 1997 multi-agency Breach Contin-

gency Plan. The NPS, State University of New York at Stony Brook, U.S. Geological Survey, U.S. Army Corp of Engineers, and other coastal experts have continued to monitor the Wilderness breach conditions (breach position, depth, and tidal exchange), and water levels and water quality in the Great South Bay. Monitoring of water levels throughout the Great South Bay showed that the Wilderness breach did not contribute to continuous elevated water levels or flooding observed on the south shore of Long Island following Hurricane Sandy. To date the Wilderness breach remains open and dynamic, with major changes in shoreline position coinciding with storm events. NPS and federal Wilderness regulations and policies now require careful evaluation of the potential benefits and the potential consequences of allowing the breach to remain open or allowing the breach to be closed through a NEPA process. Therefore, the NPS is in the beginning stages of developing an Environmental Impact Statement for the Wilderness breach, as well as for future breaches within the Otis Pike Fire Island High Dune Wilderness. Although small in size, sixty miles from New York City, and one of the most dynamic habitat types in the world - the Otis Pike Fire Island High Dune Wilderness remains wild another day because of the immediate scientific monitoring of the breach post Hurricane Sandy.

“You and the horse you rode in on!” How many is that, exactly?

David Karplus, *National Park Service*

Among the topics examined in drafting alternatives for the Sequoia and Kings Canyon National Parks (SEKI) Wilderness Stewardship Plan (WSP) is that of how to set party size limits for stock-supported groups visiting SEKI Wilderness. A survey of other large national parks and forests in California, Oregon, and Washington showed two main approaches in use: the “separate limits” approach whereby two numbers define the maximum number of people and the maximum number of stock allowed in a party and the “beating hearts” approach whereby a maximum total number for the party may include any mix of people and stock. Some objections received in public scoping for the WSP are paraphrased: “It’s unfair that hikers can only take 15 people **and not a single one more**, but stock users can bring 15 people and another 20 animals;” “If you limit stock parties to 15 “beating hearts” stock users won’t be able to have more than 5 or 6 people in a group;” “You are crazy to say that one person is the same as one horse – the impacts are different.”

Before choosing one of these approaches, the WSP Interdisciplinary Team analyzed the impacts of stock parties on the four main qualities of Wilderness character outlined in *Keeping it Wild*: natural, undeveloped, untrammled, and providing opportunities for solitude or primitive and unconfined recreation (O-SPUR). Relatively few impacts were strongly party-size dependent: O-SPUR quality impacts during travel and at campsites, natural quality impacts at campsites, and natural quality impacts of parties traveling off maintained trails. Further, a recent local study indicated that in terms of solitude impacts, even though a mounted party was perceived as larger than the number of people in the party, it was perceived as smaller than the total number of stock and people combined.

After taking into consideration other factors such as simplicity, anticipated perceived fairness, consistency with neighboring land management, the existence of other means of controlling total use, existing and projected use patterns, and the effects of party size restrictions on the unconfined part of O-SPUR, the Interdisciplinary Team proposed a new approach for setting party size limits.

This new approach sets party size limits based on three numbers: the total number of people (15), the total number of stock (20), and the combined total of people and stock (28). Lower party size limits are set for off-trail travel. The number of people is limited primarily to protect O-SPUR. The number of stock is limited primarily to protect the natural quality of Wilderness in campsites and tie areas and during off-trail travel. The combined total of people and stock is limited primarily to protect O-SPUR and to control natural quality impacts at camps from very large groups.

Analyzing the impacts of party size using the framework from *Keeping it Wild* was very useful in articulating why limits are imposed, and in avoiding existing mutually incompatible positions on the topic. Explicitly stating and including other constraints and goals was also a necessary step in creating a Wilderness management solution able to accommodate diverse recreational desires while still protecting Wilderness character.

Motorized Recreation: Threats and Opportunities in the Wilderness Context

Karl Forsgaard, *North Cascades Conservation Council*

Sarah Peters, *Wild Earth Guardians*

Wilderness values include the absence of mechanized travel, but motorized off-road vehicles often illegally trespass into Wilderness. When off-road vehicles, including motorcycles, all-terrain vehicles (ATVs) and 4x4s intrude into designated Wilderness, they cause both ecological and social impacts – degrading the quality of the Wilderness landscape for wildlife and people. Motorized encroachment reduces both Wilderness character and the Wilderness experience, directly challenging the original intent for protecting lands as Wilderness. While designated Wilderness areas suffer many different and complex threats, from grazing to unnatural fire regimes to drought and climate change, off-road vehicles trespass threatens the very concept of Wilderness as a place free from motorized use.

Motorized trespass occurs on Wilderness lands throughout the public lands system, from wheeled off-road vehicle abuse on trails in our National Forest Wilderness, to snowmobiles traveling cross-country through high mountain Wilderness in national parks and forests, to dune buggies in our desert and Bureau of Land Management Wilderness areas. Many Wilderness ecosystems are fragile and slow to recover from the ecological damage caused by these machines. Off-road vehicles are also a primary mechanism for the spread of non-native, invasive weeds. The machines' noise affects the natural soundscape and the experience of those seeking quiet recreation in Wilderness, and that noise can impact wildlife in winter, when they are most stressed, as they leave important winter habitat to avoid encounters with motorized vehicles.

Though Wilderness should be held to the highest standards of protection, land managers rarely have the enforcement capacity to ensure off-road vehicle users respect Wilderness boundaries. Land managers have successfully tested numerous strategies to increase enforceability, however, with important examples from around the country. As land managers complete new land management plans, which designate where off-road vehicle use is allowed, citizen advocates can press to ensure that motor-free buffers are designated adjacent to Wilderness. Several current nationwide federal land planning processes can provide venues for such advocacy, while also creating opportunities to increase potential Wilderness acreage, especially adjacent to existing designated Wilderness. For example, the Mount Hood National Forest recently decommissioned a road that accessed a roaded/logged area fully surrounded by designated Wilderness (locally known as the “keyhole”). That cherry-stem road and keyhole provided the access point for significant off-road vehicle trespass into the designated Wilderness. Now that the road is decommissioned, trespass has largely disappeared. The land is no longer considered viable for logging, it is on the road to recovery and the keyhole is now a top priority for Wilderness designation.

This panel addressed the ecological and social impacts of motorized trespass into Wilderness, while also offering opportunities and examples about how land managers, conservation organizations and volunteers can successfully engage on these issues in the future. These issues apply to prospective, proposed Wilderness as well as designated Wilderness.

When Restoration Alone Is Not Enough

Marty Dickes, *Bureau of Land Management*

It's the California Desert where more than 3 million people in off-highway vehicles recreate each year; approximately 500,000 of them within the Ridgecrest BLM Field Office Area alone. The Ridgecrest BLM Field Office now manages 17 Wilderness areas of more than ½ million acres. Many of these Wildernesses are encircled by popular OHV riding areas. What *can* be done when the motoring public does not differentiate between “open” desert and designated Wilderness?

An effective restoration strategy has at least 5 major components:

A reliable, long term funding stream. OHV use requires continual management by many hands on the ground, particularly in sensitive areas and around Wilderness boundaries.

An effective, overall strategy. We are learning from past experience. In 1994, the California Desert Protection Act created 69 new BLM Wilderness areas in the California Desert. A CA State Parks Off-Highway Vehicle Division grant funded a roving 8-month Student Conservation Association (SCA) crew to restore vehicle incursions in Wilderness. Over the next 5 years, crews developed highly effective techniques to disguise incursions, using hand tools and natural materials found on-site. When the grant ended, these techniques proved largely ineffective without perpetual maintenance and additional fortification *in heavily-used OHV areas*. We

now incorporate hard vehicle barriers into restoration sites and work on one Wilderness area at a time. Crews monitor, repair, and expand on the previous years' work before starting new project work.

A Wilderness-specific restoration plan. A good plan starts with identifying the sources of the problem. Where is the Wilderness located? What is its proximity to OHV Areas? What are the patterns of historical (vehicle) use in these Wilderness areas? Where are the attractive nuisances and how do they contribute to OHV trespass? Where is the terrain most vulnerable? Where does it provide the best opportunities for successful restoration and/or hard vehicle barriers? *What is the history of restoration efforts in the area?*

Use of the best site and Wilderness appropriate techniques. A restoration site is not working if it is not re-vegetating and/or has to be perpetually restored. A Wilderness-wide restoration effort is not successful if vehicle use of the Wilderness area is not significantly diminishing over time. We examined three successful case histories with Wilderness-specific restoration plans employing a wide range of site-specific and Wilderness appropriate techniques. Our examples were drawn from the El Paso Mountains, Golden Valley and Grass Valley Wildernesses.

Requires building to change behaviors and expand recreational opportunities. Wilderness designation does not shrink recreational opportunities; it expands them, by carving out a place for something other than vehicle use to occur. We can incorporate step-overs into fence lines, establish pullouts along open vehicle corridors and parking areas at trailheads, delineate appropriate campsites, and turn jeep trails to worthwhile destinations into foot and equestrian trails wherever it makes sense to do so. Wilderness designation puts agencies in the business of changing human behaviors and building new constituencies for areas, as much as it puts them in the business protecting these areas in-and-for themselves.

Determining Wilderness “Extent Necessary” for Outfitter-Guides in National Forest Service Wilderness Areas

Mary Ellen Emerick, *US Forest Service.*

Jim Absher, *US Forest Service*

The Wilderness Act directs managers to allow commercial services to the “extent necessary for realizing the public purposes of Wilderness.” The Act does not define extent necessary, and managers have struggled to decide how many and what type of outfitter-guides to allow to operate in Wilderness areas. There have been legal challenges to agency decisions of what constitutes “extent necessary.” Many forests are either not permitting any new outfitters or permitting every applicant, which in some cases has led to conflicts and impacts to Wilderness character.

This presentation discussed the history and relevance of recent court decisions on determining the appropriate level and type of outfitter-guide services in Wilderness. We discussed a framework for addressing extent necessary which has been pioneered in several National Forest Wilderness areas. This process, part of an outfitter-guide program analysis, first determines public and agency need for outfitted services by analyzing trends, outfitter-guide actual use, demand and an evaluation ranking of potential and existing recreation activities using a set of defined criteria. Next, these activities are examined using Wilderness-specific criteria including Wilderness dependency, impacts to Wilderness character and specific categories of need.

The next step of the process is to analyze Wilderness capacity by looking at limiting factors, issues and threats with an interdisciplinary team. This results in a numerical outfitter-guide allocation by service day for each Wilderness. The end product is a comprehensive, defensible framework that agency administrators can use to prioritize whether or not to authorize new or expanded commercial services within Wilderness. It is flexible and can be adapted to specific situations relevant to each forest Wilderness.

Conclusions. Eight national forests have either completed or are completing this process. Several of these forests are using these determinations of extent necessary to inform subsequent NEPA decisions and to move forward in authorizing appropriate outfitter-guide use in their Wilderness areas. We concluded with a discussion about how this process has been, or will be, used to address the “extent necessary” requirement for commercial services in Wilderness.

Commercial Services in Wilderness: What is and isn't allowed and what should be?

Gary Macfarlane, *Friends of the Clearwater*

Congress recognized that Wilderness could easily be damaged by commercialization. The Wilderness Act's section 4(c) provides that except as specifically provided otherwise, "there shall be no commercial enterprise... within any Wilderness area." A narrow exception was made in section 4(d) for activities like outfitting, but only "to the extent necessary for activities which are proper for realizing the recreational or other Wilderness purposes of the areas."

The examples given in the last Senate Report on the Wilderness Act before passage of allowable commercial services was limited to guiding/outfitting activities including the possibility that outfitters may aid in scientific research. This comports with a statement by the leading House advocate for Wilderness, Representative John Saylor, near passage of the bill. It seems that the language that finally passed was very narrow by intent, as this issue had been extensively discussed by Congress.

Three key words in the Wilderness Act emerge: 1) "May": outfitting is not mandated. 2) "Necessary": suggesting it needs to provide a benefit and be limited. 3) "Proper": it needs to be done in a way that protects Wilderness character, the tangible and intangible aspects.

In practice, however, commercial service administration seems to be inconsistent and often more than what is necessary and proper. In addition, two recent threats could further open the Wilderness System to commercialization. The first is the misapplication of the commercial filming act, PL 106-206. The draft regulations of the Forest Service try to shoehorn in commercial filming in Wilderness under the Wilderness Act's narrow provision that, as noted, only applies to outfitting. As Andy Stahl of Forest Service Employees for Environmental Ethics has pointed out, that law does not apply in Wilderness. The 2000 law exempts areas where resource damage is likely. In Wilderness, resource damage means anything, including commercial enterprises like filmmaking, because, by definition, the resource of Wilderness is harmed by commercial enterprises.

The second comes from congressional attempts, some successful, to weaken Wilderness Act protections. For example, a congressional rider a few years ago allowed three illegally built lodges on the Main Salmon River to remain. At times some conservation organizations have supported efforts to weaken the prohibitions on most commercial enterprises. Trading integrity for acres in the designation process is a problem. Even selling Wilderness on economic grounds, in the market of public opinion, puns and double-meanings intended, can send the wrong message of commercializing Wilderness.

Wilderness isn't wild if it is constrained and controlled by commercial enterprises. The unfortunate trend, driven in part by technological changes, and driven in part from ignorance, is threatening the Wilderness System.

The Role of Outfitters in Developing Supportive Constituencies for Wilderness

Patrick M. Tabor, *Swan Mountain Outfitters*

Outfitters have been in partnership with land management agencies providing commercial services to visitors of the Wilderness since the inception of the 1964 Act. In many parts of the country, this partnership is often challenged due to the sometimes-conflicting interpretation of "extent necessary". Over the years, the nature and abilities of citizens accessing the Wilderness has changed dramatically. The role has evolved that outfitters provide to meet the differing needs of that constituency. The nature of the traveler, decline in their physical abilities, and lack of ease to transport the equipment needed to access certain areas in Wilderness have all materially changed over the years. Most visitors acquiring the services of a commercial outfitter to access the Wilderness do so because they lack the knowledge, resources or confidence to attempt it alone.

Very quietly two additional critical roles for commercial service providers have emerged due to the dynamic changes in public land management and overall awareness citizens seem to lack understanding the importance of preservation of the Wilderness. Firstly, throughout the country outfitters have taken on the task of uncompensated stewards of the resource. The severe lack of budget funding of the management agencies has necessitated outfitters to become a major contributor in keeping trails clear and accessible not only for their own commercial use but for the benefit and enjoyment of all who travel into the Wilderness. Secondly, outfitters have been providing a significant interpretive service for visitor/guests focusing on the importance of the Wilderness and the critical need to continue to support the congressional designation and uphold the principles and application of the Act. This educational oriented service emphasis helps each new visitor learn to appreciate how special the Wilderness is, and why all citizens including those not inclined to visit a Wilderness should provide ongoing support.

One might ask why that type of influence on visitors has significance? If the trend of ambivalence towards the importance of Wilderness protection continues, there may come a point in time where most citizens deem

designation and ongoing protection irrelevant. Outfitters work hard at conveying the need and specialness of Wilderness and guests seem to appreciate the message coming from a different voice than the typical advocate groups. Outfitters have been and will continue to be a positive contributor in that regard. So important is the mission and effectiveness of interpretation, that most outfitters and the associations they belong to would support an interpretation requirement connected to their special land use permits.

Over time it has been proven in many applications of public involvement on sensitive issues where there are diverse philosophical views that a collaborative model that is inclusive in nature will succeed and sustain. It is the sincere hope and belief of the Outfitting Industry that as we look to the next 50 years of Wilderness management in this country, that all constituencies will embrace and avail themselves of the value that can continue to be added by commercial service providers.

The Values of Wilderness in a Changing Climate

Nicole Whittington-Evans, *The Wilderness Society*

It is important to account for the value of wild lands and designated Wilderness in promoting ecosystem resiliency and species adaptation in the face of climate change. Wilderness provides species with large, unfragmented and wild landscapes that will play an increasingly significant role in providing species the time and space to adapt to climate change. Wilderness provides essential sanctuaries for imperiled plants and animals, clean air and water, baselines for scientific research. Other Wilderness values, such as soil retention, water and climate regulation, subsistence resources and wild foods will likely become increasingly important as the climate warms. Some components of our natural systems are changing at rates that are out of sync with the species that depend on them, such as in the case of Arctic sea ice formation and walrus and polar bears. This presentation highlighted the real time examples of polar bears, walrus and Pacific black brant in Alaska's Arctic, all of which require wild habitat and are demonstrating shifts in their cycles as a result of habitat changes due to climate change. Polar bears are waiting longer onshore in the fall for pack ice to form up to be able to travel over the frozen sea in search of seals, their primary food source, and/or are swimming in search of food. In northwestern Alaska, wildlands along the Arctic Ocean coast are providing areas for walrus to haul-out when ice is not available. They are also providing habitat for increasing numbers of Pacific black Brant during molting season around Teshekpuk Lake. With large protected wildlands, the results suggest greater chances that these and other species will find conditions that will allow them the time and space necessary to adapt. Wild ecosystems have demonstrated resiliency through constant environmental changes associated with natural forces such as fire, water and draught. The conclusions drawn in this presentation are that Wilderness provides species with large, unfragmented habitat that allow for migration and refuge from areas that have burned, are experiencing drought or floods, or from the effects of climate-related disturbances. Wilderness protects diversity on many different scales. Looking forward, we will need to ensure that full spectrums of species habitat ranges and food webs are protected in order to achieve the resiliency needed for most, if not all, species to adapt to climate change. While wild ecosystems are inherently complex and variable, it is already evident in Alaska's Arctic that wildland protection will play a key role in helping inhabitants of our planet adapt to climate change. It will become increasingly important to protect new Wilderness areas as well as properly steward the Wilderness areas already designated to facilitate greater resiliency and adaptation to climate change.

Managing in Context: An International Case Study

Karen Taylor-Goodrich, *National Park Service*

Effective Wilderness stewardship transcends international boundaries in the North Cascades. Local land managers work within the context of a unique international arrangement between the public and non-profit entities on both sides of the U.S.-Canada border to address common management issues and opportunities together. A key facilitator in this arrangement is the Skagit Environmental Endowment Commission, whose purpose is "to conserve and protect Wilderness and wildlife habitat..." in the Upper Skagit River watershed. The watershed covers approximately 145,000 hectares spanning the international border including the area shared by the North Cascades National Park and Ross Lake National Area – managed by the U.S. National Park Service in Washington State, and the Skagit Valley and Manning Provincial Parks – managed by the Ministry of Environment in British Columbia. The Commission was established by treaty in 1984 as mitigation for Seattle City Light hydroelectric development activities on the Upper Skagit River, and is composed of equal numbers of commissioners appointed by the U.S. and Canada. Its mission is to facilitate collaboration among stake-

holders in the watershed, and invest proceeds from the endowment in cooperative projects conducted through strategic partnerships. The partners and the Commission together create ongoing 5-year strategic plans with the goal of fostering a greater understanding and appreciation of the watershed in its entirety, including the protection of its vast biodiversity and remote Wilderness areas. As a result, the Commission provides significant funding to the border partners for both short-term and long-term natural resource management and monitoring projects, specialized research, and environmental education activities in Wilderness. Projects proposals are evaluated by the Commission's International Technical Committee consisting of agency and non-profit subject matter specialists. Over the past 5 years the Commission has invested almost \$600,000 in the partners' work in the watershed. The current 2014-2018 work plan provides a similar level of funding for a diverse range of projects including water quality monitoring, wildlife restoration, aquatic species assessment and monitoring, vegetation management, environmental education programs, and student volunteer trail projects. The projects help leverage existing agency funding for this type of work, and in many cases, without this support, the work would not get done. Public land managers on the border recognize that it's essential to work closely with their international counterparts and the other partners to plan for, and address common immediate and long-term stewardship needs. In this case, the Commission plays an important role in helping both the National Park Service and B.C. Ministry meet their Wilderness stewardship goals on the ground. As land managers facing an increasingly changing environment and social landscape in both countries, the strength of working across boundaries is highly valued as a critical tool in the stewardship toolbox. In the North Cascades, land managers are taking full advantage of this tool to enhance Wilderness stewardship - including its relevancy to the public, through this unique partnership arrangement on the border.

Designated Wilderness Lands: The Challenge of Wilderness Inholdings

Reid Haughey, *Wilderness Land Trust*

The designation of Wilderness does not complete the preservation of Wilderness values. Wilderness inholdings can be mined, timbered, farmed, built upon and require the development of roads and utilities through Wilderness. The ecological and recreational degradation from these developments can extend well into cherished Wilderness. Conversely, convoluted boundaries reduce the integrity of designation efforts by leaving critical integral lands unprotected. Tools that address inholdings and boundary issues are as unique as the problem, but build upon accepted practice. Solving the preservation puzzle of Wilderness inholdings requires an understanding of proper and well-developed conservation techniques, including land evaluation, acquisition, ownership and designation for these non-standard properties. The Wilderness Land Trust (WLT) helps private landowners receive a fair price for their property, and facilitates the lengthy and complex process of transferring that land to federal ownership to be included in the surrounding Wilderness Area. Our projects address a spectrum of resource management issues from recreation access to wildlife habitat fragmentation, wildfire mitigation and abandoned mine cleanup.

We gave an overview of facts critical to the understanding of Wilderness inholdings, not limited to legal foundation, limitations, title issues, and relevant portions of the 1964 Wilderness Act. WLT, in conjunction with Colorado State University in 1994, developed an innovative and unique process for prioritizing the acquisition of Wilderness inholdings. Using this as our foundation, we provided a description of the preservation tools and limitations. Purchase options and pre-purchases were discussed, as well as issues in federal acquisition and appraisal problems within Wilderness areas. We created a basic understanding of the issues and risks from the inholdings that remain within Wilderness and on the Wilderness boundaries. From there, the audience developed baseline knowledge of the designation tools available to avoid the creation of inholdings and inefficient boundaries with long-term management issues.

Wilderness Fellows Develop Monitoring Measures for National Wildlife Refuges

Peter Dratch, *US Fish & Wildlife Service*,

Nancy Roeper, *US Fish & Wildlife Service*

Peter Landres, *Aldo Leopold Wilderness Research Institute*

Mark Chase, *US Fish & Wildlife Service*

Our goal was to develop in four years baseline measures on all of the designated Wilderness areas in the National Wildlife Refuge System. These measures would be developed by refuge staff and used to monitor the Wilderness character of the 63 sites over time. To accomplish this, we selected Wilderness Fellows, trained them in the principles of the Wilderness Act and the methods of *Keeping It Wild*, and sent them to work with

staff on refuges for about 10 weeks. They worked closely with staff at all levels to develop measures appropriate to the refuge that would not require additional fieldwork to monitor. The Wilderness Fellows brought with them a desktop database originally developed by the National Park Service to store the information on the measures from each refuge. As they described in their presentation, the process of bringing Wilderness Fellows to wildlife refuges has been very successful, both in providing young people with professional experience, and focusing staff on their Wilderness areas, often the least utilized and understood part of the refuge. The Wilderness character database has gone through several iterations, each time with suggestions from the Wilderness Fellows, and has moved from a desktop to a web-based application. We expect to complete a Wilderness character baseline for each designated and proposed Wilderness on refuges managed by the U.S. Fish & Wilderness Service. Continued monitoring of Wilderness character on these refuges is now mandated in the policy of the National Wildlife Refuge System. The training in Colorado brought together young professionals who with the experience gained, have gone on to work in several land management agencies.

Wilderness Fire Management: Successes, Challenges and Concerns - a panel review

Dave Campbell, *US Forest Service (retired)*

A review of the past 50 years of Wilderness fire management across the NWPS by panel members (government and non-government) preceded a moderated discussion with audience participation and questions encouraged.

Wilderness managers, fire managers, decision makers, members of NGOs and others (e.g. tribal members, county commissioners, outfitters, Wilderness recreationists) have an interest in how fire is managed in Wilderness. This panel explored challenges, opportunities and concerns related to managing fire in Wilderness. Panel members presented their own perspectives and ideas for the future. Panelists: 1) reviewed law and policy relating to managing fire in Wilderness focusing on decisions whether or not to suppress fires and effects to Wilderness character from fire suppression; 2) explored the successes that Wilderness management agencies have had in reducing risk and preserving Wilderness character; 3) discussed ways to increase the Wilderness fire program.

As a result of this panel it is expected that the audience gained an understanding of the successes and failures of Wilderness fire management as well as suggested paths forward for the future of Wilderness fire management including increased use of prescribed fire and increased engagement of Wilderness management professionals.

Presenters. This session was comprised of a panel of government and non-government experts and other informed and interested people. Panel members included Wilderness and fire managers, local government officials, outfitters and guides.

Meeting the Challenges of Recreation Impacts: Wild South and the Sipsey Wilderness

Mark Kolinski, *Wild South*

Eastern Wilderness Areas are characteristically smaller than their western counterparts and tend to be located in close proximity to major population centers to be accessible for day-use recreational activities by large numbers of people. These two facts commonly lead to recreational impacts that significantly threaten Wilderness character.

The Sipsey Wilderness in the Bankhead National Forest in northwest Alabama, containing 25,000 acres, is the second largest Forest Service managed Wilderness area east of the Mississippi River and is a perfect example of a Wilderness area where the Wilderness experience and the Wilderness resource are significantly impacted by a high level of recreational use, which continues to grow annually.

Wild South, a 501(c)(3) non-profit organization, has been actively engaged in stewardship activities in the Sipsey Wilderness since 2009 and in partnership with National Forests in Alabama established a volunteer Wilderness ranger program in 2011. Wild South volunteers experience and do their best to mitigate recreational impacts on a regular basis. As the eyes and ears of the Forest Service in the field, they can provide a more current and comprehensive picture of constantly changing recreational use levels and impacts than the management agency would otherwise have. This informs management decisions important to mitigating these impacts.

Wild South's volunteer Wilderness rangers are trained to essentially fulfill all the functions of an agency Wilderness ranger except for law enforcement. Volunteer activities mitigate recreational impacts in 3 distinct ways:

- First and foremost, the volunteers provide an educational service to Wilderness visitors, promoting Leave No Trace (LNT) principles and practice, as well as sharing information about the NWPS and the management agency's responsibility to preserve Wilderness character. Using the Authority of the Resource approach to communicate with Wilderness visitors, the volunteer rangers encourage visitors to partner with Wild South and the Forest Service to protect and preserve the qualities of Wilderness character.
- The volunteer rangers perform trail maintenance and other recreational resource maintenance, such as trash removal, which encourages visitors to treat the resource with respect.
- Impacts and violations of Wilderness regulations (designed to protect the resource) are documented and reported to the management agency, which can then make informed decisions about initiating possible management actions to mitigate the impacts of overuse, such as through issuing Occupancy and Use Orders.

Sustainable Camping Management: Implications from a 32-Year Study in the Boundary Waters Canoe Area Wilderness

Jeff Marion, *US Geological Survey*

Holly Eagleston, *Virginia Tech*

The Forest Service manages over 2000 campsites in the Boundary Waters Canoe Area Wilderness. The BWCAW has long served as an important “outdoor laboratory” for pioneering campsite monitoring and management research. This study reassesses campsites conditions from a 1982 PhD dissertation. In the summer of 2014, we re-measured 81 campsites and their paired control that were in the original 1982 study, evaluating how vegetation and soil conditions have changed in 32 years of use. Long-term investigations of visitor impacts to protected natural areas are rare, yet knowledge of long-term changes is important for managers to consider given the need to make recreational visitation truly sustainable.

Our findings show a dramatic change in the number of satellite areas, vegetation cover on the campsites, and a significant amount of soil erosion. Average soil loss on campsites was 26.5 yd³. For all 81 sites, this totaled 194 dump trucks of soil being lost into the lakes. Of the 81 sites measured, the average number of satellite sites per campsites doubled from 0.6 in 1982 to 1.4 in 2014. The size of those satellite areas also increased from 13 m² to 44m². The number of trees on campsites decreased by 34% on campsites from 1982 to 2014. Loss of tree regeneration is also occurring on campsites, in 2014 the average number of seedlings was less than half the number of seedlings in 1982. Visitors are harvesting young trees for firewood, and young seedlings are not able to establish with high trampling pressure. Looking to the future, campsites will continue to lose tree cover as older trees die and there is no younger succession to follow them.

The ecology of the campsites compared to the nearby controls is a stark contrast. Campsites had 42% less tree cover than the control in 2014, opening up the canopy and allowing more sunlight to reach the ground. The campsites have 45% grass cover while control sites have 3%. Camping pressure has completely changed the plant composition. Non-native species such as *Trifolium repens*, *Taraxacum officinale* and *Plantago major*, common backyard weeds, are prevalent but restricted to the campsites. The change from tree to grass cover and establishment of non-natives has changed the sites' character.

Best Management Practices to reduce these impacts include selecting resistant sites for campsites such as those with a bedrock canoe landing and approach to the campsite core. Choosing campsites that are topographically constrained is critical to decrease likelihood of visitor-created site expansion. Continual maintenance of campsite tent pads will help keep people using those tent pads and not create their own, expanding the campsite footprint. Many campsites had more than one landing, closing unnecessary landings will keep shorelines intact and reduce soil erosion. Using stone work or downed trees will help close these areas and maintain soils. Managers should consider prohibiting the use of woods tools (axes, hatchets, saws) to stop the harvesting of trees. Leave No Trace education describing how to collect firewood through the use of dead and down wood is promoted at BWCAW but our data shows that is ineffective at curbing tree damage. Stricter regulations should be considered.

Barking, Cold, Snow: The Minimum Tool for Managing Resource Impacts to Wilderness

Carl Skustad, *US Forest Service*

Steve Cochran, *US Forest Service*

Ann Schwaller, *US Forest Service*

Situated on the 48th parallel in Northern MN is the largest Wilderness east of the Mississippi, the Boundary Waters Canoe Area Wilderness (BWCAW) on the Superior National Forest (SNF). The vast acreage of water covering this boreal Wilderness is connected by nearly 200 miles of portage trails and is traveled by boat, canoe, foot, skis, snowshoes, and dog teams. This area is enjoyed by approximately a quarter million visitors per year resulting in heavy resource impacts.

The BWCAW was designated in the Wilderness Act of 1964. In 1978 with subsequent legislation, the Boundary Waters Canoe Area Wilderness Act added additional acreage to the Wilderness, prohibited logging, created a mining protection area, and eliminated much of the motorized use. Management of the BWCAW has many challenges and thus has different requirements of managers and visitors. Stipulations on entry points (76), numbers per group (9), and the requirement to camp in one of 2000 designated campsites all create a complex management situation.

Minimum tools have been the way of Wilderness for thousands of years. As a way of necessity, these tools are adjustable, and work in a wide spectrum of applications. The SNF has long used minimum tools, just as those that came before us. Canoes, skis, and dog teams have carried millions of pounds of gear, freight, and materials over this wild landscape on countless journeys. One of the largest challenges we face is the concentrated use of summer visitors to the portages and campsites. Overnight visitors are required to camp at a designated campsite and some campsites receive heavy use. A latrine and a fire grate are present at every campsite, and must be maintained every year.

Dog teams have been used in snowy climates for countless years. The Superior NF saw the advantages of utilizing dogs to move freight for Wilderness management in the 1990s. Since 1995 the Superior NF has successfully hauled latrines, boardwalk materials, fire grates, construction material, and assisted with law enforcement. Large Komatek sleds were built in house to accommodate large and bulky loads. Freight style dogs can haul approximately 150 pounds per dog or 1700 pounds per sled. Pairing FS teams with volunteer dog teams in the area provides the ability to move large quantities of project materials over long distances very efficiently. The SNF has moved approximately 20,000 pounds of concrete for historic structures, hundreds of latrines and fire grates for sites, and hundreds of feet of board walk material. Outward Bound, outfitter guides, and race teams in training have all been great volunteer partners.

“I held a blue flower in my hand, probably a wild aster, wondering what its name was, and then thought that human names for natural things are superfluous. Nature herself does not name them. The important thing is to know this flower, look at its color until the blends becomes as real as a keynote of music. Look at the exquisite yellow flowerettes at the center, become very small with them. Be the flower, be the trees, the blowing grasses. Fly with the birds, jump with a squirrel!”

- SALLY CARRIGHAR, *American nature writer*



Fading Sunset over the Watchman, Zion Wilderness, Utah
By Greg Tucker, www.dphotographer.co.uk/user/GT203

Wilderness Celebration Exhibition

Wilderness Interpretive Trail

The Wilderness Interpretive Trail was the centerpiece of the Wilderness Celebration Exhibition. The trail was produced with specific photographic backdrop images, props and signage to create five distinct and realistic interpretive stations as follows:

- **Wilderness History and Philosophy** – Addressed the philosophy and history of Wilderness and the Wilderness Act from 1964 through the present; led by Aldo Leopold impersonator and interpreter Joe Flood.
- **Wilderness Stewardship** – Addressed the complexities and most compelling issues currently facing wilderness managers; led by National Park Service, Wilderness Ranger, Ken Watson.
- **Leave No Trace** – Presented Leave No Trace ethics in all places not just wilderness; led by Nick and Courtney Bierschbach, traveling trainers for Leave No Trace, Center for Outdoor Ethics.
- **Public Involvement/Civic Engagement** – Highlighted the importance of public involvement and information on how to get involved; led by Steve Archibald, Education & Outreach Specialist, Arthur Carhart National Wilderness Training Center
- **Benefits and Values of Wilderness** – Imprinted realistic/relatable values of Wilderness, specifically emphasizing the diversity found in Wilderness and of the people working in Wilderness. Led by Glenda Franich, Visual Information Specialist, US Fish and Wildlife Service and Sarah Naranjo, Bureau of Land Management, New Mexico State Office, Realty Specialist.

On Friday morning, October 17th 350 school children, grades 4 – 8 from the Albuquerque School District in classes of 20 each spent up to 1½ hours walking the trail. Interpretive education was age-dependent with the groups of students guided through the trail by youth scholar winners.

At the close of the Wilderness Celebration Exhibition, elements of the trail, as appropriate, were moved from the Exhibition hall across the street to the Get Wild! Festival where members of the New Mexico public experienced and learned the key components of the interpretive trail.

50th Anniversary National Wilderness Conference Exhibitors

Access Fund
Aldo Leopold Wilderness Research Institute
American Conservation Experience
Americorps National Civilian Community Corps
Arthur Carhart National Wilderness Training Center
Aspect Solar - Aspect Technologies, Inc.
Backcountry Horsemen of New Mexico
Bureau of Land Management
Conservation Lands Foundation
Conserve America
Cottonwood Gulch Foundation
Department of Interior Federal Credit Union
Eagle River Designs, Inc.
Environmental Systems Research Institute, Inc.
Firefighter's United for Safety, Ethics and Ecology
Fish and Wildlife Service
Flow397
Forest Service
Glorieta Camps
Great Basin Institute
Great Old Broads for Wilderness
Greater Canyonlands Coalition
If You Care
International League of Conservation Photographers
International League of Conservation Writers
Kelly Adirondack Center at Union College
Leave No Trace Center for Outdoor Ethics
Mexicanwolves.org
Mojave Desert Land Trust
Montana Wilderness Associatio
National Outdoor Leadership School
National Park Service
National Parks Conservation Association
National Wilderness Stewardship Alliance
New Mexico Wilderness Alliance
New Mexico Wildlife Federatio
Northern Minnesotans for Wilderness
Open Space Alliance - Albuquerque
Orion Magazine
Pacific Crest Trail Association
Pew Charitable Trusts
Poudre Wilderness Volunteers
Recreation.gov
Rewilding institute
Sierra Club
Sierra Club - Borderlands Team
Sierra Club - Grand Canyon & Rio Grande Chapters
Society for American Foresters
Society for Wilderness Stewardship
State of Alaska
Student Conservation Association
University of New Mexico Press
WILD Foundation
Wild South
WildEarth Guardians
Wilderness Institute
Wilderness Land Trust
Wilderness Society
Wilderness Volunteers
Wilderness Watch
Wildland Trekking Company

Special Exhibits

Witness for Wilderness: Proclaiming the 50th Anniversary
Internet Café and Silent Auction
Wilderness Quilts
Wilderness Interpretive Trail
Smithsonian "Wilderness Forever" Photography Contest Winners
Sierra Club "Creativity Tree"
Sanctuary-Pueblo III Period— Taking Refuge among the Red Rocks, Paintings by Peter Kola
Participatory earth art depicting endangered species with Daniel Richmond

Youth Scholars, Youth Speakers, and the Youth Summit

Overall, Wilderness50 and youth sponsors Ahnu, Osprey, the Forest Service and the Sierra Club provided scholarships to 24 youth and diversity participants. Twenty-one of the sponsored participants qualified as youth (age 16 to 26). All scholarship recipients were asked to self-identify their race and gender.

Self-Identified Characteristics	Female	Male	White	Latino or Hispanic	Wish not to Identify	Asian	2 or More Races	Africa-American or Black	American Indian	Other
Breakdown of the 24 Awardees	14	10	9	7	3	1	1	1	1	1
	58%	42%	37%	29%	13%	4%	4%	4%	4%	4%

Nine youth presenters were sponsored in part or in full to attend the conference, and led two well-attended presentations, Future Stewards and Listening to Youth. The youth presenters shared their stories and provided tangible advice for current managers on how to reach younger audiences and make Wilderness relevant to them.

In addition to financial assistance for youth presenters, 14 youth scholars were selected from a nationwide search for young people advocating for Wilderness. Scholarships were awarded to youth who demonstrated leadership or were working towards a leadership role in Wilderness education efforts, advocacy and community awareness. Scholars were awarded travel costs, registration fees, an Osprey day pack and a pair of Ahnu hiking boots.

At the conference, these scholars networked and served in valuable educational roles. Along with about 80 additional youth, including youth corps members, agency seasonal staff, and college groups, the scholars attended a special Youth Summit, provided to connect them with peers prior to conference sessions. Conference breaks allowed youth to meet current Wilderness professionals, and ten specially-designed break-out sessions offered youth the opportunity to meet current Wilderness leaders in a small-group, question-and-answer setting. The 14 scholars also served as instructors on the Wilderness Awareness Trail, a six-station living display where topics such as Wilderness history and philosophy, Wilderness benefits and values, and Leave No Trace techniques were taught and demonstrated to 350 local school children and members of the Albuquerque public.

Part of the scholarship commitment intended to extend scholar experiences at the conference into the future was for scholars to complete their Wilderness Ambassador Projects. During the year following the conference, each scholar will plan and conduct at least two Wilderness Ambassador Projects in their home community. Example projects include: 1) developing an interpretive walk in an area with Wilderness qualities to develop grassroots support to seek Wilderness designation for that particular locale 2) creating videos and audio podcasts in conjunction with other existing national or regional Wilderness programs to achieve national reach and educational exposure.

Overall, the scholarship effort was a huge success, and we wish to acknowledge all of the talented and enthusiastic youth scholars for demonstrating, at the highest level possible, that Wilderness and wildlands are indeed in good hands as we move into the next century of Wilderness protection.



Crestone Needle, Sangre de Cristo Wilderness, Colorado
By Kimo Boeche, www.kimoboeche.zenfolio.com

Civic Engagement

Wilderness Stewardship: Sustaining a Nonprofit Friends Group through Changing Times

Dana Howlett, *Friends of the Sandia Mountains*

CENTRAL THEME. This poster session highlighted the successes and challenges of Wilderness stewardship experienced by the Friends of the Sandia Mountains (FOSM). This non-profit organization was formed in 1997, and has been active for nearly 17 years. FOSM partners primarily with the Sandia Ranger District, Cibola National Forest, adjacent to Albuquerque, New Mexico. The Sandia Mountain Wilderness Area covers 27,800 acres of the Sandia Ranger District and is one of the most heavily used Wilderness areas in the United States.

METHOD. Informal interviews were conducted with founding members, active members, officers and board members of the Friends of the Sandia Mountains. Through the interviews a historical review of projects, programs, and operating processes was conducted. Individuals interviewed were given the opportunity to express their insights based on first-hand experiences of successes and challenges in sustaining the organization since 1997 up to the present.

RESULTS

SUCCESS AND SUSTAINABILITY. Two recurring themes that reflect FOSM's success and sustainability were expressed by interviewees: 1) The first theme is related to the early history of FOSM, and the establishment of strong foundational by-laws which are flexible enough to allow for operational adjustments and change (including a name change!) through time. 2) The second theme relates to the ability of the organization to work closely with the U.S. Forest Service to successfully define and implement yearly and multi-year Wilderness stewardship project goals. Much of this ability derives from FOSM's skill in setting goals which call for a broad spectrum of skills and abilities to complete. This enables the organization to provide a variety of opportunities for its members, from using professional skills and life experience to teaching field-going tasks that require planning, engineering skills and skilled or unskilled labor. Finally, in working with the Forest Service, FOSM has learned to coordinate the necessary skills training and safety training to meet Forest Service standards. The poster session provided examples of successes, from Wilderness trail hazard tree removal to writing and publishing the *Field Guide to the Sandia Mountains*.

PRIMARY CHALLENGES. Interviewees expressed 1) Difficulty in attracting members from younger and more diverse backgrounds; since most active members are retired. 2) Challenges related to shrinking Forest Service budgets.

CONCLUSION. FOSM has demonstrated long term success in Wilderness stewardship. Their success is tied to the organization's ability to sustain a foundation for long term stability and maintain a resilient approach to operating in changing times. Working closely with the U.S. Forest Service, FOSM provides a variety of projects and programs that engage members. For this poster session, interviews with FOSM members helped the organization to identify ongoing challenges, with the goal that exchange with conference attendees will help FOSM and other nonprofits discover new solutions to Wilderness stewardship challenges.

Engaging the Next Generation of Conservation Leaders

Catherine Irwin, *Bureau of Land Management*

Patrick Gallo, *Student Conservation Association*

For the past ten years, the Ridgecrest Field Office of the Bureau of Land Management (BLM) and the Student Conservation Association (SCA) have partnered to engage young adults (ages 18-25) in Wilderness issues throughout the California Desert District. Modeled off of the Civilian Conservation Corps of the 1930s, they created the Desert Restoration Corps (DRC), whose primary objective is to assist the BLM in its Wilderness restoration efforts, particularly responding to intrusions into Wilderness areas by Off Highway Vehicle travel. Over the past ten years DRC crews have restored vehicle incursions into Wildernesses, improved signage

demarking Wilderness areas, monitored Wilderness areas, built fences along Wilderness boundaries, and educated the public throughout Wilderness areas in southern California.

While the success and sustainability of this program lies greatly with quality and quantity of the work performed by its members, there are several elements to the program that set it up for success: clearly defined roles between partners; a focus on corps member development; an emphasis on completing meaningful work; and facilitating connections between corps members and agency partners.

Clearly defined roles between partners: For the success of any multi-partner relationship, defining what each partner is responsible for is essential to the smooth operation of the program.

A Focus on Member Development: With this being a corps of largely AmeriCorps volunteers, focusing on the members' experience is paramount to the success of the crew throughout the difficult ten month season. This is accomplished by providing members with an intensive training program of both hard skills and soft skills.

Placing an Emphasis on Completing Meaningful Work: All of the work that the DRC crews complete over the course of a season is recorded and tracked by the BLM. This information helps the BLM make management decisions on how to best protect and restore Wilderness areas.

Facilitating connections between Corps Members and Agency Partners: Networking and job opportunities are created when members develop relationships with agency partners and are exposed to the variety of careers associated with Wilderness and conservation work.

Inspiring life-long stewardship for our public lands and Wilderness areas among the next generation is essential to protecting Wilderness for the future. It is through programs like this that we inspire, connect, and develop future conservation leaders.

Conservation Crossroads: Will Poor Planning Pockmark the Wild Mojave

David Lamfrom, National Parks Conservation Association

The California desert represents one of the few remaining ecologically intact and biologically connected landscapes in North America. This rugged landscape bears the scars of geology. Witness sands dunes formed from Pleistocene Dry Lakebeds. Climb volcanoes, and explore lava tubes and limestone caverns. Here you find dinosaur footprints, uncover Miocene fossils of the mammoth and dire wolf, find unique flora like the Joshua tree and the ocotillo, and identify endemic fauna like the Devil's Hole Pupfish and the Amargosa Vole. These species are found nowhere on Earth, grabbing a precarious foothold on existence in a changing world.

The California desert is an American treasure. It has been the backdrop for our Western films and our car commercials. Evocative of Wilderness and the West, landscapes like Alabama Hills as a foreground to Mount Whitney; the sculpted rocks of Joshua Tree National Park; and Death Valley's sand dunes are the images we conjure of the West itself.

The wild legacy of the California desert includes powerful work done for decades to protect nearly 6 million acres of National Parklands and over 3 million acres of BLM Wilderness. The wilder and more remote areas of the California desert have enjoyed benign neglect from industrialization pressures in comparison to many areas in the US, but that changed in 2008 with the advent of renewable energy on public lands.

In 2008, over 1.3 million acres of BLM lands were proposed for renewable energy development and the bureau did not have sufficient rule sets in place to deal with that massive shift in land use. Unfortunately, poorly-sited projects were approved and constructed in close proximity to National Parks and BLM Wilderness Areas, to the detriment of the public and wildlife. Thankfully, over the following years, the Department of Interior has refined the rules governing renewable energy development in the Southwest. The Department is currently planning for a more resource protective plan, the Desert Renewable Energy Conservation Plan.

This improvement is good news indeed, but several projects remain that continue forward under antiquated rule sets that could severely harm important places in the California desert. The Soda Mountain Solar project is proposed less than a half-mile from Mojave National Preserve and would disconnect the most restorable desert bighorn sheep linkage in the Southeastern Mojave desert. The Silurian Valley Solar and Wind project is proposed in one of the most remote and pristine areas in the California desert and would disconnect desert tortoise linkages, bighorn sheep linkages, and industrialize an area surrounded 360 degrees by National Parks and Wilderness Areas. We have a choice to make about what our conservation priorities are in the California desert. At the time of writing, the Silurian Valley Solar project was denied by BLM.

Bureau of Land Management Map of Federal Wilderness within California

Lee Neher, *Bureau of Land Management*

The map is a new, classic statewide map of California showing not only Federal Wilderness, but also BLM Wilderness Study Areas, Wild & Scenic Rivers, BLM National Monuments, CA State Parks, US Fish & Wildlife Refuges, and other features. The map was constructed using 24 GIS layers and 16 GIS annotation layers. The original printed map is 54x62 inches, generated from BLM ESRI Geographic Information System software as a TIFF image. There is a smaller 42x48 printed version. Copies of the map are available through the BLM California state office.

Student Burquena Seeks to Change the World: Perspectives from a College-Age Conservationist

Endion Schichtel, *US Forest Service and Bureau of Land Management*

I have lived in New Mexico my whole life. I am a “burqueno”, as it has been popularly termed, a person who is from or has lived a long time in Albuquerque. In March 2013, I started an internship with the Forest Service’s Southwestern Regional Office Recreation and Wilderness staff area. I didn’t know what a Wilderness area...a designated, federally acknowledged; published Wilderness area...was until after I started. New Mexico alone has 25 federally designated Wilderness areas, many of which are less than a day drive from the house where I grew up in Albuquerque. I honestly didn’t even hear the term “Wilderness area” until I was in the Forest Service Southwestern Regional Office, surrounded by decades of experience and abbreviations I had to quickly learn to keep up a conversation.

Accessible programs and opportunities that encourage students to explore different career paths and experiences are vital for environmental stewardship to be continued in future generations. While I was an intern, I also was a full time Conservation Biology student at the University of New Mexico and worked part time as a manager of a clothing shop. Many students, like myself, work while going to school. It is difficult to find time devoted specifically in exploring work and real hands on experience in a potential field of interest. Through my experience and listening to my colleagues at school, I have learned a few key things that any organization should consider as it seeks the next generation of passionate, dedicated and skilled employees. Being flexible with a schedule is vital, as well as being realistic about how much time can be committed, especially if the position is unpaid. An influential mentor is equally as important. It can make or break a volunteer or intern position. Having a supervisor that is passionate and supportive of seeing you move forward confirms that the rare extra time spent is worth it. Also, recruitment starts with connecting. If you can’t relate the position to the person’s interests or end goals, they will not be motivated to give their time. Many of the projects that I have accomplished during my internship incorporate and build on strengths I have already acquired. For example, for several years before starting my degree, I made costumes for various theatre companies and productions. Now, to help celebrate the 50th Anniversary of the Wilderness Act, I created a forest themed birthday cake mascot to promote community events. Bringing in new skills creates a more dynamic and diverse perspectives to enrich an already well-established organization.

The partnership between the Student Conservation Association and the Forest Service gave me the opportunity to continue my internship in a paid capacity. Now, I have a unique position with the Bureau of Land Management partnering with the Forest Service as a seasonal employee, moving more and more forward with my career. Ever grateful to have been able to continue the work I am passionate about while being able to pay my bills, I point to collaborations that encourage students to pursue professional avenues of personal development. Through these adaptable and versatile models for providing budding professionals with relevant and rewarding experience, student employees like me can continue contributing alongside agency colleagues to a future of successful Wilderness stewardship.

Can Collaboration Win the Day? Wilderness Politics in a Polarized World

Benjamin Steen Smith, *Energy Solutions*

Across the West, former adversaries are finding common ground on public land issues (and Wilderness designation) and developing collaborative solutions. Numerous stories of cooperation and compromise (and success) offer an inspiring ideal for resolving public land conflicts. On the face of it, proposals developed through collaboration should be politically popular; however, the Congressional outlook for many such proposals is unclear. Progress has been hindered by the rise in political efforts in some Western states to wrest control of public lands from the Federal Government and by certain political factions taking an aggressive ideological approach on public land issues, leaving little room for compromise. The threat to public lands and Wilderness should not be underestimated even though most discount the legal validity of State claims to Federal lands and polls consistently show majority public support for public lands. A multi-pronged strategy will be needed to preserve past victories and for collaboration to win the day in the future. This presentation explored recent and on-going collaborative efforts and strategies for future political success.

The Owyhee Initiative (Idaho), the Beaverhead/Deerlodge Partnership (Montana), and the Eastern Utah Collaborative provide examples of the challenges, potential successes, and risks of cooperation and compromise. Collaboration can lead to positive outcomes including: on-the-ground conservation successes, the moral and political high ground in the public lands debate, and development of a middle ground political constituency as a fire wall against extreme proposals.

Media and general public education are additional areas of opportunity. Mainstream media coverage of various efforts to shift control of public lands to other entities has lacked substantial, in-depth reporting... and rarely highlights alternative approaches (such as collaboration). On this issue, it appears political action is out front of the media, laying the groundwork for legislative actions that may negatively impact public land management. The subject is rich with investigation and reporting opportunities, including topics such as:

- Whether the public interest is served by state and/or private control of public land
- The successes and challenges of public lands collaboration and cooperation
- The values provided by and history of the public land estate

Finally, activists need to consider new electoral strategies, including greater involvement in primaries and state-level elections. Strategy should reflect the political realities within individual districts and states, and not undervalue elected officials that are supportive of collaborative land conservation efforts (but possibly not the larger environmental agenda) and do not champion radical anti-conservation measures. Long term success requires continued efforts to collaborate, better engagement of the media and public, and enhanced electoral strategies.

“To the extent that we hyper-separate ourselves from nature and reduce it conceptually in order to justify domination, we not only lose the ability to empathize and to see the non-human sphere in ethical terms, but also get a false sense of our own character and location that includes an illusory sense of autonomy.”

- VALERIE PLUMWOOD, *Ecofeminist philosopher and activist*

Education

Wilderness in a Sea of Human Activity

Roy W. Lowe, *US Fish and Wildlife Service*

The U.S. Fish and Wildlife Service administers Oregon Islands Wilderness and Three Arch Rocks Wilderness, which provide spectacular scenery spanning 320 miles of the publicly accessible Oregon coast. While small in acreage, these two National Wildlife Refuge Wilderness areas encompass 1,862 rocks, reefs and islands supporting more than one million nesting seabirds and more than 25,000 seals and sea lions. These marine wildlife species are very sensitive to human disturbance. Even close approach by people can cause seabirds and marine mammals to flee the sanctuary of the rocks and islands, resulting in the loss of eggs and/or young and in some cases complete colony abandonment. Many of the vegetated rocks and islands are riddled with burrows used for nesting by seabirds such as Leach's storm-petrels and tufted puffins. On islands such as these, even the most gentle of human footsteps can lead to burrow collapse, bird mortality, and habitat destruction. In addition, many of the rocks and islands are accessible to foot traffic from the beach during low tides. Further complicating management is a refuge/Wilderness boundary that only extends down to the mean high tide line on the rocks and islands where state jurisdiction then takes over. To protect sensitive wildlife and habitats these Wilderness areas are closed to public access at all time.

U.S. Highway 101, a nationally designated Scenic Byway and All American Road, parallels the Oregon coast and is travelled by millions of visitors annually. The scenery is a magnet for pleasure boaters, anglers, and aircraft pilots from across the West. In order to get better views of the scenic islands with their abundant wildlife, boaters routinely venture too close to the shores of the islands and pilots often fly at extremely low altitudes. Future nearshore wind and wave energy projects and commercial and residential development along the shoreline will negatively impact Wilderness character by degrading the viewshed and increasing light pollution and sound.

The U.S. Fish and Wildlife Service has employed a variety of educational, interpretive, and management techniques to preserve and protect the wildlife populations and Wilderness character of Oregon Islands and Three Arch Rocks. One of the measures includes working with Friends Groups at strategic locations to educate the public and keep them from trespassing into the closed Wilderness areas. Other measures include the construction of observation decks and overlooks on mainland areas, and development of interpretive panels, brochures, and posters. Volunteers are recruited and stationed at locations that receive high visitation and are located near visible seabird colonies or marine mammal haulouts where they provide interpretation and resource protection information. We work with local, regional, and national film crews and reporters to educate the public through various media. Our intention is to provide high quality opportunities to view the refuge/Wilderness areas and associated wildlife from a safe distance. Visitors gain an understanding of the wildlife's life history, sensitivity and habitats while learning about measures to promote their conservation.



Contemplating in the Oregon shore,
Oregon Islands Wilderness, Oregon
By Arnab Banerjee,
www.arnabbanerjee.com

The Farallon Wilderness Area: A Historical and Biodiversity Experience

Jonathon A. Shore, *US Fish and Wildlife Service*

Jose Garcia, *US Fish and Wildlife Service*

Nyssa Landres, *National Park Service*

The Wilderness Act celebrates its 50th anniversary in September 3, 2014. Moreover, 2014 also marks the 40th anniversary of Farallon National Wildlife Refuge being designated as Wilderness. Rocky islands rising vertically out of the ocean do not usually come to mind when we think of Wilderness. Yet, the Farallon Islands are congressionally designated as “Wilderness,” giving the islands the highest level of protection from human impacts and effects of modern civilization. The entire Farallon National Wildlife Refuge, with the exception of Southeast Farallon Island, is designated Wilderness. There is no doubt that the ecosystems of the Farallon Islands are intact and thriving with Common murre, Brandt’s cormorants, Northern fur seals, and Steller sea lions. Another aspect of the Farallons’ Wilderness is the lack of development and human presence on the islands. Even the resident biologists only visit one Wilderness island, West End Island, a few times per year. The islands are practically untouched by human influence, and most of the previous impacts have been completely reclaimed by the islands.

Our poster provided an interpretation of the Wilderness character of the Farallon Wilderness Area. Since the Farallon Wilderness Area and indeed the entire Farallon National Wildlife Refuge is closed to public access, and it is often difficult to even approach the islands given the distance off shore (30 miles) and wide variation of sea conditions; we thought it worthwhile to attempt to bring the experience of being on and near the Farallon Islands to the general public. This poster provided a visual representation of certain aspects of Wilderness character; such as its natural, untrammled, and undeveloped scenic beauty, as well as the diversity and abundance of wildlife of the Farallon Islands. Photographs and computer graphics were used in a way that can show the diversity of the natural resources that are present on the Farallon Islands. Also, computer graphic technology allowed the superposition of historical elements into imagery, such as the depiction of Spanish discovery of the islands, or the presence of 19th century clipper ships that brought eggers and seal hunters that plundered the islands of such natural resources which are considered cherished and thus are being protected and restored for future generations. Also of significance is the fact that the Farallon Islands are within the city and county of San Francisco, a major metropolitan area and perhaps the only designated Wilderness within the limits of a major city. However, despite the proximity of these islands to such a city, there is still limited knowledge of the history and general stewardship of this national wildlife refuge and Wilderness area. This poster sought to remedy misconceptions and lack of knowledge of the Farallon Islands and expose this natural wonder to the general public. Elements of this poster were developed for outreach events celebrating the 40th anniversary of the designation of the Farallon Wilderness Area and have been useful for informing and educating the public at these events. We intended to combine these individual elements into a single poster presentation and share it at the 50th anniversary celebration at the National Wilderness Conference.

Students Helping Students Learn About Wilderness

Trace Douglas, Northern Arizona University

Andrew Thibodeau, Northern Arizona University

Quinn Kawamoto, Northern Arizona University

Brittany Larzalere, Northern Arizona University

Casey Niggemyer, Northern Arizona University

Marty Lee, Northern Arizona University

Educating young people about Wilderness is critical at a time when evidence suggests that children are becoming more and more disconnected from nature. Young people are the future stewards and supporters of Wilderness whose voices may be needed as pressure on Wilderness from increasing recreation use and threats from outside Wilderness continue to grow. Introducing young people to the concept of Wilderness and what makes it unique and special through education programs that are part of elementary school curriculum is one way of fostering an appreciation for Wilderness.

Students in a Wilderness Management class at Northern Arizona University partnered with local elementary school teachers and Forest Service managers to develop and present an activity highlighting Wilderness concepts and Leave No Trace principles to two classes of 5th graders and a group of 9-11 year students in an after school program. The inter-active presentation lasted between 45 minutes and 1 hour. The student presenters administered a short pre-test to the young students to test their knowledge of Wilderness prior to the program. They re-administered the test following the presentation. Many of the students increased their knowledge of Wilderness and leave no trace concepts, specifically what activities are and are not allowed in designated Wilderness areas. Feedback from the teachers was very positive.

Utilizing university classes as partners is another way land management agencies can teach young learners about Wilderness and recruit future Wilderness stewards. The Wilderness Management class is an upper-division class designed to allow university students to partner with the U.S. Forest Service and other local land management agencies to design and carry out Wilderness-related projects. Over the past 13 years the class has worked on Wilderness planning, management, and education projects. Each year the course instructor and Forest Service Wilderness managers select needed Wilderness projects. Student teams select projects based on their interests and relevant experience and present results in a report and presentation to agency personnel at the end of the semester.

'Point of Sale' Wilderness Education: How Garbage Bags and Videos Changed The Boundary Waters

Steve Robertsen, US Forest Service

Encouraging Leave No Trace behavior in Wilderness area is a matter of providing the right message at the right time. For visitors to the Boundary Waters Canoe Area Wilderness in Minnesota, the right message at the right time has turned out to be a short video and a garbage bag given when they pick up permits to enter the Wilderness.

The Boundary Waters, like many Wilderness areas, had a problem with visitors not packing out garbage. Often they attempted to burn garbage in fire grates, or use latrines as garbage cans. With 200,000 annual visitors to the Wilderness at that time, even small amounts of garbage turned into canoes full being packed out by our Wilderness rangers.

In 1995, a quota system was initiated to better regulate visitation of the Wilderness and preserve the Wilderness character of the Boundary Waters. As part of the implementation of this system, a point of sale education program was also begun. To receive a permit, parties entering the BWCAW received a short course in Leave No Trace and had to answer a short quiz. Originally, the course was in the form of a flip book, but as technology progressed, it became video tape and then a DVD. The LNT education is provided everywhere visitors receive permits, both at Forest Service ranger stations and at cooperating businesses that issue permits. A few of these businesses still use an updated flip book as they don't have access to AV equipment. In addition to the LNT course, each group receives a garbage bag with their permit with LNT instruction printed on the side. These have also evolved over the years, both in message and material.

The result has been obvious. The amount of garbage packed out by our Wilderness rangers has dropped significantly during a period when visitation has actually increased. The combination of education and an actual physical aid to doing LNT has worked very well. While there is no way to fully attribute the drop in litter to the video program, it seems that it has at least been a major contributor to the decrease.

Experience

Art Meets Science in the Monomoy Wilderness: Aldo, Leonardo, and the Fish and Wildlife Service

David J. Brownlie, *US Fish and Wildlife Service*

During 2013, the US Fish and Wildlife Service hosted three visiting artists for 1 month, as part of the Aldo and Leonardo (A&L) initiative, sponsored by the Aldo Leopold Wilderness Research Institute. The objectives for the A&L initiative, the unique Atlantic coastal barrier setting the Monomoy Wilderness, contributes to the NWPS and as a creative field laboratory, and participant profiles are summarized. An un-trammeling of relationships and un-confining of creativity took place, and continues over a year later. The A&L art-science collaboration offers a model for broadening appreciation for the NWPS and Wilderness stewardship to our sense of well-being.

Wilderness Experienced Through Image and Word: Haiku inspired by Pacific Northwest Wild Places

Amanda Hardman, *US Forest Service*

Haiku, a Japanese form of poetry, is around 800 years old. Three lines of verse having 5, 7, 5 syllables are written to quickly describe an image from nature. This engaging form of writing is used to express one's perception of nature. Wilderness images provide the ideal inspiration for haiku. Haiku is an easy, accessible, and relaxed way to encapsulate a Wilderness experience.

For many Wilderness experiences only come from images and fostering concern for wild places generally starts with photographs. Haiku can provide a Wilderness experience for almost anyone. Photography grants passage to deep canyons, tall cliffs, and waterfalls. Images help us remember Wilderness experiences from decades past. Haiku gives us a tool to interact with those inaccessible places and create new experiences out of old ones. This poster showcased photographs and unique Wilderness experiences expressed through haiku. The collection of photographs and poems presented highlighted the Pacific Northwest Wilderness areas. This interactive presentation also engaged and encouraged conference participants to spontaneously create their own haikus from provided photographs.

“In wildness is the preservation of the World.”

- HENRY DAVID THOREAU, *Walking*

Trekking in the Frank Church-River of No Return Wilderness and Idaho News and Testimony on Wolves

Ron Marquart, *retired volunteer conservationist defending public wildlands and wildlife*

Cay Marquart

Jesse Marquart

A DVD with audio sounds of wild things showing 60 images in continuous rotation from the Frank Church-River of No Return Wilderness was set up on a laptop computer on the poster table. These were slide film images in various areas of this Wilderness: Big Creek, Pistol Creek and Elk Meadows Trailheads. There are images of plants (flowers, trees, burnt trees, snags and fungi); animals (elk, ground squirrel, Red Squirrel, Western Toad, butterflies, moths, spiders and scat); trailhead markers; informational plaques; printed educational material; and scenic views. All native wild things big and small have intrinsic value for their own sake and play key roles in the natural-functioning, self-willed wild nature of Wilderness ecosystems.

Backpacking provides an experience of interacting with the land, of interconnecting with the wildlife of natural-functioning ecosystems, of appreciating the beauty of landscape and waterscape, and an overall inspirational sense of connection to wild nature in wildlands.

Copies of Idaho Statesman newspaper articles from three months of coverage on wolf and wildlands issues, and copies of my testimonies defending Wilderness and wolves at public hearings were available as free handouts on the poster table. Copies of my signed co-plaintiff declaratory were available for reading. The co-plaintiffs' lawsuit and injunction order resulted in Idaho Fish and Game pulling out their hired hunter/trapper who was attempting to exterminate two wolf packs in the Frank Church-River of No Return Wilderness. Copies of my position statement against killing wildlife in Wilderness areas that were mailed to all Idaho Fish and Game commissioners and Gov. Otter were available as free handouts on the poster table.

I also had two large color 18x24 inch wrapped canvas images of favorite photos from the Frank Church-River of No Return Wilderness that were displayed on tall easels beside the poster table. A large, long banner taped around the edges of the poster table with extra-large printed words, "**THE FRANK CHURCH-RIVER OF NO RETURN WILDERNESS**" was attractive and drew peoples' attention to the poster presentation.

I have concluded that the most important, primary, core-value theme for conservationists is to advocate for the intrinsic value of Wilderness and wildlife for their own sake in and of itself. All other values (extrinsic) and worth (money) must be considered as secondary values. Moreover, we need to raise awareness beyond the physical nature of Wilderness, that Wilderness is a concept of the mind, fostering a vision of hope with a mission and a plan to keep the intrinsic value of Wilderness forever for its own sake.



Smokejumpers,
Frank Church-River of No Return
Wilderness, Idaho
By Thomas Haney,
www.thaney.com

History

Stringing Together the Past with the Present: The US Forest Service Region 5 Pack Stock Center of Excellence

Christina Boston, *US Forest Service*

Michael Morse, *US Forest Service*

Ken Graves, *US Forest Service*

While the use of pack stock boasts a long history within the Forest Service, it is fast becoming a vanishing skill and lost art. In the early 1900s, the USFS Pacific Southwest Region (R5) had a flourishing stock program. At that time, approximately 2,000 head of stock and more than 100 packers comprised a program that regularly supported crews in both front and backcountry settings. Today, however, the R5 program has shrunk to only 120 animals and seven permanent packers. And conversely, while pack stock resources have declined, the amount of designated Wilderness in R5 has steadily increased from approximately 1.2 million acres in 1964 to 5.5 million acres at present; there is ongoing active legislation to designate additional Wilderness areas in the future.

This noticeable decline in the stock program and the unique Wilderness management capacity it affords is being felt by Wilderness managers tasked by the agency with overseeing more and more acres of Wilderness with fewer resources and dwindling internal expertise. The fast shrinking stock program will likely not be replaced with a new generation of packers and pack stock unless action is taken to ensure the program's survival. Acknowledging the significant contributions pack stock lends to Wilderness management objectives and recognizing its importance as a unique cultural resource within the agency's Wilderness program, R5 has established a Pack Stock Centers of Excellence (COE) to preserve and perpetuate the use of pack stock as a primitive tool in Wilderness settings while safeguarding Wilderness character.

The vision of the Pack Stock COE Provide is to provide regional coordination for the efficient utilization of pack stock program resources to support the efforts of Wilderness managers in preserving Wilderness character, and to ensure ongoing capability for use of primitive skills and tools, by offering high quality, hands-on pack stock and primitive skills education, practical experience, community outreach, and field-going services in support of fire, ecosystem, and Wilderness management.

The COE operates at a regional level under the guidance of the regional Wilderness program leader, a steering committee consisting, and two co-directors. The COE staff also includes 4 interns each year who receive on-the-job training in pack stock, primitive and Wilderness skills. The COE now successfully serves as a one-stop shop for education, training, and operational stock and traditional tool-related needs. By capitalizing on the strengths and abilities of the eight remaining forest-level stock programs the R5 COE functions as a networking system to which managers can turn for assistance. This approach has not only increased the R5's ability to mobilize stock resources quickly and efficiently, but also adds capacity to the agency's ability to accomplish a wide variety of projects using primitive, low-impact methods, and is cultivating skills in the next generation to endure that pack stock services continue to be available in the region in the future.

Wilderness: An Unexpected Second Chance

Jerry Magee, *Bureau of Land Management*

The Bureau of Land Management (BLM), which administers 245 million acres of federal surface and 700 million acres of subsurface mineral estate in the United States, was belatedly added to the list of agencies authorized, through the 1964 Wilderness Act, to inventory, study and manage Wilderness areas. The Federal Land Policy & Management Act of 1976 (FLPMA), which charged the BLM with managing lands "in perpetuity," included a provision to inventory the public lands for areas possessing Wilderness characteristics and to manage such "Wilderness study areas" (WSAs) to preserve those values until Congress either designates them as Wilderness or releases them from further Wilderness study. Areas with Wilderness characteristics must meet the minimum Wilderness Act criteria of (1) Size – roadless areas of at least 5,000 acres or of a manageable size, (2) Naturalness – generally appears to have been affected primarily by the forces of nature, and (3) Outstanding Opportunities –for solitude or primitive and unconfined types of recreation. BLM conducted these inventories between 1976 and 1991, finding nearly 800 WSAs totaling 24 million acres. Since areas lacking Wilderness characteristics were released from "interim management" protection, it was presumed that they would be further degraded by uses not allowed within WSAs. In the 20-30 years that have elapsed since those inventories, circumstances have, in a surprising number of areas, combined to reverse factors that formerly precluded them from meeting minimum Wilderness criteria.

Among the many factors causing areas to revert to more wild conditions, three predominate. First, on large swaths of lands that were mechanically treated over 50 years ago to restore productivity, disked and drill-seeded rows of non-native grasses are no longer evident due to infilling of sagebrush and other native shrubs. Human imprints need only be “substantially unnoticeable” for an area to be considered “natural” for Wilderness inventory purposes. Second, some land uses no longer occur on formerly occupied lands (e.g., abandoned, reclaimed mining operations). The third factor involves acquisition of non-federal lands, blocking up formerly scattered lands to now meet the size criterion. BLM is now updating its original inventories to support project analyses and land use planning efforts. In Oregon and Washington, we have so far discovered over 1.5 million acres of additional lands with Wilderness characteristics.

In general, population growth in the U.S. has been greatest in the 11 western states that include most BLM-managed lands. We are finding that use pressures increase with proximity to growing population centers, while “wildness” has increased in the remotest areas. But circumstances are rapidly changing as the U.S. embraces renewable energy. Wind and solar energy proposals are multiplying in areas not previously subjected to energy development. BLM’s stewardship responsibilities require careful consideration of multiple-use proposals in light of the multiple values existing on the public lands. Accordingly, we maintain current inventories of resource values (as per FLPMA, Sec. 201), we analyze and publicly disclose environmental impacts of land use proposals on affected resource values (as per the National Environmental Policy Act), and we plan for the protection and use of natural resources (as per FLPMA, Sec. 202). Through our inventory, analysis, and planning processes, these newly recognized Wilderness resources can be considered for protection through land use plans. Whether expected or not, these areas may become candidates for future addition to the National Wilderness Preservation System.

50 Years of Wilderness in the United States of America: Federal Agency Perspective

Bunny Sterin, *Bureau of Land Management*

The United States celebrated the 50th anniversary of the Wilderness Act of 1964 in 2014. Wilderness in the United States is managed to preserve and protect federal lands in their natural condition. The term Wilderness is defined in the Wilderness Act as “an area where the earth and community of life are untrammelled by man, where man himself is a visitor who does not remain” and “an area of undeveloped Federal land retaining its primeval character and influence, without permanent improvements or human habitation, which is protected and managed so as to preserve its natural conditions.”

Currently, nearly five percent of the US is protected as Wilderness. The United States Forest Service, National Park Service and Fish and Wildlife Service began managing Wilderness Areas in 1964. In 1976, with the passage of the Federal Land Policy and Management Act, the Bureau of Land Management was also authorized to administer designated lands within their boundaries.

The population has more than doubled since the Wilderness Act was passed. The increased population has continued to put additional pressures on managing Wilderness Areas. Each agency has its own challenges and successes with management of these areas and each agency manages Wilderness slightly differently. This poster presented a subjective viewpoint from representatives from each agency on the challenges and successes of managing designated Wilderness within their boundaries.

Science

Managing Wildfires in the Okefenokee Wilderness Area, Okefenokee National Wildlife Refuge, Georgia

Sara Aicher, *US Fish and Wildlife Service*

Michael Lusk, *US Fish and Wildlife Service*

Drought and fire govern the Okefenokee Swamp and Wilderness Area. Fire has played a significant role in the formation and maintenance of the Okefenokee Swamp. Several large fires over the past 12 years have resulted in significant vegetation changes to the landscape. As former Refuge Biologist Eugene Cypert said “Serious consideration must be given as to what control measures should and should not be taken to prevent or to permit fires in Okefenokee Swamp during periods of extreme drought.”

The refuge staff recognizes the importance of fire within the swamp and at the same time is keenly aware of the changes that have occurred surrounding the refuge and the landowners’ objectives. Commercial forests with tree species less tolerant of fire encircle the swamp. This generates concern when a wildfire becomes established in the area. Understanding everyone’s interests has led to cooperative efforts and the establishment of the Greater Okefenokee Association of Landowners (GOAL).

The mission of GOAL is to serve as a unified team managing, protecting, and promoting forest resources in and around the Okefenokee Swamp through a stewardship ethic to assure these resources will be available for future generations.

GOAL recognizes that:

1. Forest resources are the major industries in the area.
2. The Okefenokee Swamp is a national treasure and economically and biologically beneficial to the local communities and the states of Georgia and Florida.
3. It is essential to have a coordinating committee for the fire protection of public and private resources.
4. A formal organization of landowners will provide an avenue for communications and develop strength in dealing with area issues.

Accepting fires within the swamp and gaining the trust of surrounding landowners over the past 20 years has been significant in the success of corralling fires in the Okefenokee Wilderness. In the 1990’s, the creation of the Swamps Edge Break, a disked line between the swamp and the uplands, gave the surrounding landowners some confidence that fires may be kept within the swamp. But high winds during fires proved that this was not enough. The understory fuels between the Swamps Edge Break and the Swamp Perimeter Road need to be maintained. For increased insurance of reduced timber loss, landowners would benefit by planting fire-tolerant species within this zone.

Although the Okefenokee Swamp/Wilderness Area is large enough to make it feasible to allow large wildfires to burn over the landscape, managing fires requires an understanding of the landscape and its fire barriers, the objectives of surrounding landowners and the continued promotion of forest resources instead of development.

Vegetation and Breeding Birds in a 450+ Year Fire Sere in a Minnesota Wilderness

Steven Apfelbaum, *Applied Ecological Services Inc.*

We sampled breeding birds and vascular vegetation of upland communities, representing a 450+ year fire sere, in the Boundary Waters Canoe Area Wilderness, Minnesota. Breeding bird territories were plotted in and adjacent to a 6.25 ha plot. Vascular vegetation within the plot was sampled along ten 50 m transects. Cover of all species in the tree, shrub, and ground-layer, and bryophyte cover was visually estimated by line intercept (tree and shrub) and 1 m² quadrats (ground layer and bryophytes). Tree and shrub densities were estimated in 50 x 2 and 50 x 1 m plots, respectively. From these data, we obtained functional-group estimates for density of dead trees, total evergreen and deciduous tree cover and shrub cover, variance in tree, shrub, and ground layer cover. Breeding bird diversity peaked in the first three years after stand-replacing fires then begin declining as jack pine cover increased, first in the shrub, then tree layers. Lowest breeding bird and vegetation diversity occurred at about 65 to 75 years, when jack pine tree cover was maximum, then begin a slow recovery as

spruce and fir replaced jack pine, reaching a second peak at about 225-250 years. Bird diversity then slowly decreased into old-growth. Total bird density throughout the sere was strongly correlated with species richness, and richness was strongly correlated to the structural diversity of vegetation. Both bird density and vegetation diversity were correlated with territory size of birds, although at different scales for different species. Data suggested that intraspecific competition increased with the quality of habitat, and competition offset habitat as primary limitation of density of territories in prime habitat. Thickness and variation in canopy and shrub layers were primary factors in structural diversity, although individual density of species often were related to specific structural characteristics such as percent deciduous tree layer. Through the sere, there is a nearly complete change in bird species, which tend to fall into four community age-related groups. Peak development of the four types are: early communities (1-5 years after fire); intermediate communities (10-75 years after fire); mature communities (125-250 years after fire); and old-growth communities (350+ years after fire), with intermediate compositions between. Ground-layer vegetation and snags dominate early communities with a peak in woodpecker and ground-foraging bird species. Delayed mortality in the tree layer results in scattered tree-foliage searchers adding to overall bird diversity for the first three years. A dense shrub-layer of young jack pine and black spruce develops by year ten and grows into the tree layer with density slowly decreasing. Ground-foraging birds decrease and tree-foliage searchers increase during this period of community development, and ground-layer vegetation is largely replaced by bryophytes. The tree canopy breaks up as communities mature, and the shrub and ground layers increase, with much variation in both species and cover, leading to peak structural diversity. Ground-foraging bird species again increase and complement the diversity of tree-foliage searchers. Over-mature jack pine and aspen also provide increased habitat for woodpeckers. Fire usually interrupts succession resulting in few large blocks of old-growth. Old-growth communities have high structural diversity, but lower bird density and diversity than mature communities. Most species of birds have a clear preference for a particular community age-class, although some generalists were found throughout the sere. Long-term studies of birds is complicated by trends in abundance, and data should be compiled within time periods of no more than five years.

Using the Framework to Evaluate Proposals for Scientific Activities in Wilderness:

A Case Study

Edward “Tyson” Cross, *US Forest Service*

Determining the suitability of a scientific research proposal in Wilderness is often a difficult task. Guided by the Wilderness Act, applicable handbooks, and planning documents, the process for deciding if a research project is appropriate for a Wilderness setting is still vague and frequently subject to interpretation. Projects involving prohibitions found in section 4 (c) of the Wilderness Act such as structures and installations, the use of motorized equipment, etc., present unique challenges to decision makers who must determine if the actions meet the minimum requirements for the administration of the area as Wilderness. Furthermore, decision makers need to ensure that the research requires a Wilderness setting. In an effort to create consistency and help guide Wilderness managers to make sound decisions, Peter Landres, from the Aldo Leopold Wilderness Research Institute, developed the Framework to Evaluate Proposals for Scientific Activities in Wilderness. This poster presented a case study involving the installation of research equipment in a Wilderness to illustrate how the Framework is used. On April 25th 2012 the United States Environmental Protection Agency (EPA) proposed to install an automated weather station and take tree core samples in the heart of the Three Sisters Wilderness as part of an effort to study the effects of Global Climate Change (GCC) on temperate forests. The objectives of the research are to; (1) identify the significant seasonal climate factors for growth of forests, (2) evaluate how the factors will change with GCC, and (3) assess the effects of changes on ecosystem services in Western Oregon. Though the research is potentially beneficial to our understanding of how GCC relates to the grander ecological communities of the earth, the station itself is alien to the landscape, presenting a visually obtrusive reminder to anyone visiting the area that, despite being in the ‘middle of nowhere’, the world around them is no longer truly wild. This poster used this case to explore the nuances of making a complex decision where Wilderness values may be compromised in the face of scientific progress. The poster guided the audience through some of the tools utilized by the framework, demonstrating the utility of the instrument while clarifying the various steps in making a final decision.

Influences of Information and Communication Technology on Risk Behavior in Wilderness

Steven R. Martin, *Humboldt State University*,

Jessica Blackwell, *Humboldt State University*

As more people have access to hand-held information and communication technology such as Smartphones, satellite phones, personal locator beacons and GPS units, more visitors may bring this technology into the Wilderness. These devices may influence visitors' decisions and risk-taking behaviors, such as deciding to travel alone, to travel cross-country, or to venture into more remote areas. Understanding how hand-held information and communication technology influences the behaviors and decision-making of Wilderness visitors is important for managing Wilderness search and rescue operations, managing Wilderness resource conditions, developing visitor management guidelines, and educating visitors in appropriate use of technology in the Wilderness.

Our study collected quantitative and qualitative data about these issues from overnight visitors to the Sequoia-Kings Canyon (SEKI) Wilderness. A sample of 635 completed a mail-back questionnaire shortly after their trip into the SEKI Wilderness in 2011. Then, of those respondents willing to participate, 33 randomly chosen respondents whose group had carried a Personal Locator Beacon (PLB) with them on their SEKI Wilderness trip were interviewed by telephone, as were 32 respondents whose group had not carried a PLB with them on their trip.

Results from the mail-back sample of 635: 16% of groups reported following a cross-country route, while 42% reported doing at least some hiking in trailless areas; 29% reported carrying a Smartphone, 26% a GPS, 19% a cell phone, 15% a PLB, and 3% a satellite phone. Of those who carried a GPS, 14% used it to follow a described or downloaded cross-country route.

Five of the 33 PLB interviewees said that having a PLB "influenced what you did or where you went" on their trip, with two specifically mentioning off-trail travel and two mentioning solo travel. Likewise, three of the 33 PLB users said that having a PLB "influenced your decision to travel in certain environmental or terrain conditions that you wouldn't have otherwise," with two specifically mentioning off-trail travel and one mentioning travel on high-angle terrain. When asked if they would be more likely to travel alone because they had a PLB, 18 of 33 PLB users said Yes, and two said Maybe. In a separate question, however, none (0) of the 33 PLB users said that having a PLB led them to do anything on their trip that might have increased their risk.

Conclusion: We may see an increase in both solo travel and cross-country travel in Wilderness as a result of the availability of technology such as GPS and Personal Locator Beacons. This could in turn lead to an increase in SAR events, and increased resource impacts in trailless areas that are currently pristine or near-pristine.

Identifying Refugia from High Severity Fires in Wilderness

Carol Miller, *Aldo Leopold Wilderness Research Institute*

Geneva Chong, *US Geological Survey*

Jonathan Coop, *Western State Colorado University*

Sandra Haire, *Haire Laboratory for Landscape Ecology*

Marc-Andre Parisien, *Canadian Forest Service*

Meg Krawchuk, **Ellen Whitman**, *Simon Fraser University*

Managing Wilderness as a place where natural processes dominate requires that lightning-caused wildfires be allowed to burn. Furthermore, the practice of natural Wilderness fire management may help create and maintain resilient ecosystems where fire functions as a natural self-regulating process. However, many landscapes are currently experiencing dramatic effects from rapid alterations in fire regimes induced by ongoing changes in climate. In the western United States, for example, warmer and drier conditions are leading toward more, large fires and these fires may be increasing in severity, resulting in burns with larger patches of high severity and higher rates of tree mortality. An emerging concern of Wilderness managers and for conservation in general is whether and how these post-fire forested landscapes will recover.

Post-fire forest recovery depends on a mix of biotic and abiotic factors, including the proximity of seed sources, the presence of dispersal agents, and the presence of suitable site conditions during the period of time (years) needed for seedling establishment and recruitment. Places where trees survive severe fire are particularly important for post-fire recovery of vegetation, especially if these places persist through repeated fires, as they may serve as long-term refugia with high conservation value in a changing climate.

We define refugia following Keppel et al. (2012) as “habitats that components of biodiversity retreat to, persist in and can potentially expand from under changing environmental conditions.” This poster described a conceptual model of the creation and persistence of refugia and present preliminary results from analyses that predict the location and likelihood of refugial habitats. In analyses, we used remotely sensed burn severity data to identify areas that remain relatively unchanged after wildfires and multivariate framework to develop models to explain why.

Ultimately, we plan to use the models we develop to map refugia under possible future climates and fire regimes to test their persistence. A crucial next step in our test of the refugium concept is to determine if specific areas identified as refugia actually do function as such. For example, are fire sensitive species present, and does species age structure indicate long-term protection from fire? The ability to predict the location and likelihood of these refugial habitats will help Wilderness managers anticipate the consequences of allowing natural fires to burn. It will provide a powerful tool for climate change management, enabling conservation and monitoring of these places and their protection from anthropogenic or natural disturbance, including future fires.

Keppel, G., Van Niel, K. P., Wardell-Johnson, G. W., Yates, C. J., Byrne, M., Mucina, L., Schut, A. G. T., Hopper, S. D., Franklin, S. E. (2012). Refugia: identifying and understanding safe havens for biodiversity under climate change. *Global Ecology and Biogeography*, 21(4), 393–404. doi:10.1111/j.1466-8238.2011.00686.x

Monitoring Air Quality and Nutrient Deposition in the Forest Service Class I Wilderness Areas

Pamela E. Padgett, *US Forest Service*

Poor air quality and deposition of pollution compounds have serious detrimental effects on native ecosystems. Air pollution and deposition are known to contribute to invasion of weedy exotic plant species, decline in native shrub populations, and poor growth in many tree species. Class I Wilderness areas are one of the few landscapes where land managers have some control over factors influencing air quality. Through the Clean Air Act, land managers have the responsibility for “Prevention of Significant Deterioration” of natural resources by new pollution sources. However, determination of significant deterioration requires monitoring data, especially information on the existing condition and current air quality parameters within the Wilderness boundaries.

The National Atmospheric Deposition Program (NADP) has coordinated wet deposition monitoring for more than 35 years. NADP is the “go-to” resource for measurements of the acid and nutrient content in the nation’s rain. With over 250 locations in rural and remote locations across the country, data from the NADP networks is widely used by researchers, land managers, and policy makers to understand the effects of air pollution on native ecosystems and natural resources, and to establish goals for emission restrictions. Many of the NADP sites were established and are operated by the Forest Service, National Parks Service, Bureau of Land Management, Fish and Wildlife, among other state and federal land managers. The Forest Service frequently relies on NADP data for natural resource assessments. The question arose: Which specific monitoring locations were most appropriate for assessing air quality and deposition at a specific Class I Wilderness area?

A GIS-based study was conducted to identify the proximity of NADP monitoring stations to each of the 88 Class I areas managed by the Forest Service. The results demonstrated that 17 Class I areas have adequate monitoring within the recommended 20km distance from the boundary. An additional 36 Class I areas have data available from NADP stations between 20km to 50km from the boundaries, but because most Wilderness areas are located in mountains with complex terrain, monitoring data from locations greater than 20km may not reflect the conditions within the Wilderness boundaries. The results of this study highlighted a serious lack of deposition data for most Class I Wilderness areas managed by the Forest Service.

From Science to Policy: The White Cap Wilderness Fire Management Plan

Diane Smith, *US Forest Service*

In 1970, a small group of Forest Service administrators, foresters, and researchers, encouraged by the language of the 1964 Wilderness Act, set out to reintroduce fire into Wilderness. The Act called for select federal lands to be managed to “leave them unimpaired for future use and enjoyment as Wilderness,” and to protect “their Wilderness character.” While the Wilderness Act made exceptions for the control of fire, these Wilderness advocates believed the Forest Service policy of controlling all wildland fires conflicted with the Act’s intent.

After a national fire policy meeting in 1970 recommended allowing some fires to burn in Wilderness areas, Region 1 hired Dave Aldrich and Bob Mutch to develop a fire management plan for the White Cap drainage of the Selway-Bitterroot Wilderness. After extensive on-the-ground data collection and analysis, their proposed fire management plan – the first of its kind in the Forest Service – was presented to Chief John McGuire, who approved it on August 17, 1972.

The very next day, lightning ignited the Bad Luck Creek fire. Following the plan’s prescriptions, the fire was observed and allowed to burn naturally, extinguishing itself after four days. It burned only 24 x 24 feet. The Bad Luck Fire proved to be good luck for the reintroduction of fire into Wilderness areas. Because the next year was unusually dry, however, many fire control specialists recommended that the project team postpone implementation of the plan until conditions improved. But Orville Daniels, Supervisor of the Bitterroot National Forest at the time and ultimately responsible for the plan’s outcome, decided to proceed.

On August 10, 1973, a fire started on Fitz Creek, south of the Bad Luck fire from the year before. It, too, was allowed to burn, but the fire spotted across White Cap Creek into a non-approved area. Firefighters found themselves in the unprecedented situation of attempting to suppress a blaze on one side of a drainage, while allowing an approved fire on the opposite side to burn. In spite of aggressive suppression efforts, it took rain on August 31 to extinguish the blaze outside the fire management area, after it burned through 1600 acres.

After the 1973 fires, Bob Mutch and other researchers at the Northern Forest Fire Laboratory (now the Missoula Fire Sciences Laboratory) re-measured many of the original fire management sites and established permanent plots for study. These in-depth field evaluations, followed by inventories of conditions on the ground, provided researchers with some of the earliest detailed documentation of the effects of wildland fires in fire-dependent Wilderness ecosystems. Fires burned both in and out of the approved area and the Wilderness survived. The White Cap Wilderness Fire Management Plan also affected Forest Service fire policy. In 1974, Chief McGuire officially changed the name of the agency’s Division of Fire Control to the Division of Fire Management. This allowed managers to develop fire management plans for approval and, ultimately, to reintroduce fire back into Wilderness landscapes.

Big Salmon Falls,
Bob Marshall Wilderness,
Montana

By Gordon Dimmig,
www.gwd-photography.com



Stewardship

Wilderness Parks Need a Dedicated Wilderness Manager

Charlie Callagan, *National Park Service*

Nearly 50 national park units have designated Wilderness, but very few have a full-time position dedicated to Wilderness Management or Stewardship. At many of these park units, the Wilderness Coordinator position is a collateral duty assigned to a permanent staff member with a full time job not related to Wilderness management. Consequently, these park units often lack an approved Wilderness Stewardship Plan and are unable to actively support Wilderness restoration projects. This was the situation in Death Valley National Park from 1994 thru 2010. The Environmental Compliance Officer, and then the Park Pilot, were assigned collateral duties as the park's Wilderness Coordinator. Both individuals were dedicated supporters of Wilderness protection and spent as much time as possible engaged in Wilderness issues, but had only limited time to pursue Wilderness Restoration projects or work on a Wilderness Stewardship Plan.

In recognition of Death Valley Wilderness being the largest NPS Wilderness outside of Alaska, the park Superintendent assigned a 20-year park employee with a strong Wilderness background, as the park's first full time Wilderness Coordinator in the fall of 2010. Although the park now had a Wilderness manager, it still lacked a budget for additional staff. With no funding available, the Wilderness manager determined he would need to depend on donated funds and volunteers to accomplish anything substantial. A Wilderness donation account was set up with the Death Valley Natural History Association and volunteer work crews were recruited from the local organizations such as the Sierra Club, Friends of Inyo, and Friends of Nevada Wilderness. Alternative Spring Break college groups, Boy Scout groups, and AmeriCorps volunteer crews were also utilized. Wilderness Interns to assist in supervising these volunteer work crews were recruited using Volunteer.gov and paid a stipend from the Wilderness donation account.

Over the last four years, these volunteer work crews have carried out of the Wilderness a total of more than twelve tons of debris from a distance of as far as 5 miles. USGS debris from 102 peaks was removed, five non-historic military plane wrecks, three non-functioning big game guzzlers, and three abandoned metal and wire fence lines were dismantled and recycled or properly disposed, improving the Wilderness qualities of more than 50 acres of Wilderness. Fifteen miles of old roads have been rehabilitated and converted to hiking trails. With the leadership of an outside park planner and an interdisciplinary team of park staff, a Wilderness and Backcountry Stewardship Plan was completed in 2012 using Wilderness Character mapping as part of the process.

Building Stewardship Capacity and Citizen Engagement through Partnerships

Aaron P. Collins, *US Fish and Wildlife Service*

Shaaron Netherton, *Friends of Nevada Wilderness*

Sheldon National Wildlife Refuge (NWR) encompasses over 572,000 acres of sagebrush steppe habitat in a remote region of northwestern Nevada. More than 70% of Sheldon NWR has either been proposed for Wilderness designation, and is currently managed as Wilderness or has been designated as Wilderness Study Area.

The U.S. Fish and Wildlife Service (Service) has traditionally partnered with refuge-specific non-profit "Friends" groups to engage local communities, recruit volunteers, and to build support for refuge activities. However, due to its remote location and relatively small staff, the Service has instead chosen to work with a small number of non-profit organizations in a loose "Friends Coalition" for Sheldon NWR.

Friends of Nevada Wilderness is a well-established non-profit organization dedicated to preserving and protecting Wilderness throughout the state of Nevada. The group has a strong track record working with various land management agencies to further mutual goals for Wilderness management. The relationship between the Friends of Nevada Wilderness and Sheldon NWR has grown to become instrumental in accomplishing a variety of Wilderness stewardship projects, in supporting refuge management decisions, and furthering public involvement and civic engagement in Wilderness management at Sheldon NWR.

Friends of Nevada Wilderness continues to host volunteer projects at the refuge each year, but in recent years the group has increased its capacity to include a full-time four person work crew stationed at Sheldon Refuge throughout the summer season. The summer crew is supported in part by housing, vehicles, and equipment from the Service, but also annual grants from other sources, and a dedicated staff. In three seasons, the crew has accomplished what would have taken Refuge staff 10 years or more. These accomplishments include removal of hundreds of miles of obsolete and abandoned barbed wire fencing, several tons of abandoned livestock troughs and water pipe in various states of disrepair, and the collection of valuable monitoring data relating to the condition of water sources and riparian habitats throughout the Refuge.

As Friends of Nevada Wilderness has increased its presence at Sheldon NWR, it has also increased support for actions by the Service to improve and restore Wilderness character through removal of feral animals, and planning efforts to rehabilitate spring and playa habitats previously developed for livestock grazing.

Wilderness Restoration: A Holistic Approach

David L Curtis, *National Park Service*

April Johnson, *National Park Service*

ISSUE. Yosemite National Park (California) receives an overwhelming four million visitors per year, many of whom venture forth into the 704,556-acre Wilderness area for recreation and solitude. Unlike other national parks, or Wilderness areas, Yosemite allows overnight camping in any location within its Wilderness, with some restrictions in high-use or ecologically sensitive areas. This freedom of choice coupled with the sheer frequency of visitation leads to resource impacts unprecedented in many other Wildernesses. These impacts occur on both ecological and cultural resources, as Yosemite is home to over 1,300 known archeological sites in its Wilderness area alone, many of which coincide with attractive campsite locations.

METHOD. Following the findings in the mid-1980s that many campsites had severe resource impacts, park managers made a decision against increasing Wilderness camping restrictions. Instead, they developed the “Wilderness Restoration Program,” designed to directly mitigate and alleviate the on-going damages incurred by high-volume, heavy-frequency visitation and use in Wilderness. The program utilizes an interdisciplinary approach to focus on issues of ecological restoration in cooperation with cultural resource preservation and employs a process of shared scheduling, field collaboration, crew education, data sharing and review, and project reporting. In the field, six distinct work groups spend the snow-free seasons roving across the Wilderness landscape to remove or relocate inappropriately placed campsites and clean out or reduce other campsites that comply with Yosemite’s Wilderness regulations. In order to ensure the preservation of the many archeological sites, ecology staff work directly with archeologists in and out of the field.

RESULTS. Since its implementation in 1987, the Wilderness Restoration Program has resulted in a tremendous amount of archeological site inventory and ecological restoration. Park archeologists have documented over 600 archeological sites within approximately 20,000 acres of reconnaissance survey; while ecological restoration staffs have treated thousands of campsites within an overwhelming amount of survey. Long-term data suggest that not only have campsite impacts lessened over the years, but archeological site protection has increased.

CONCLUSION. The unique partnership between Yosemite’s ecological and cultural staff serves as a model of a successful program that transcends the common stigma of “natural vs. cultural” resource conflicts in order to nurture a more comprehensive stewardship of Wilderness character. The Wilderness Restoration Program has successfully ensured a pristine natural environment while simultaneously protecting and preserving the rich cultural history of Yosemite’s first inhabitants.

“Thousands of tired, nerve-shaken, over-civilized people are beginning to find out that going to the mountains is going home; that wildness is a necessity”

- JOHN MUIR, *Our National Parks*

Ecological and Social Characteristics of the National Wilderness Preservation System

Lisa Duarte, Boise State University

Jocelyn Aycrigg, University of Idaho

Anne Davidson, University of Idaho,

Thomas Laxson, University of Idaho

Leah Dunn, US Geological Survey

Mason Croft, Boise State University

CENTRAL THEME. To describe the current representation of ecological systems, bird species, and urban access of the National Wilderness Preservation System (NWPS) for the contiguous U.S.

METHODS. We overlaid spatial data developed by the USGS Gap Analysis Program (USGS-GAP) including ecological systems, bird distribution models, and the Protected Areas Database of the U.S. (PAD-US), to assess the total number, diversity, and uniqueness of ecological systems and bird species within the NWPS. Additionally, we calculated the accessibility of the NWPS to people in urban areas by calculating the total area of the NWPS within 100 miles of the 50 most populated U.S. cities.

RESULTS. There are 370 ecological systems within the NWPS, which represents 65% of the total number of ecological systems within the contiguous U.S. Eleven ecological systems have >70% of their total distribution within NWPS with the North Pacific Montane Massive Bedrock, Cliff and Talus and Mediterranean California Alpine Bedrock and Scree, which occurs at high elevations, having the highest percentage (88%). The NWPS contains 88% of the bird distributions modeled for the contiguous U.S. including 10 threatened and endangered bird species and 17 bird species that are unique to the NWPS (e.g., American Flamingo; *Phoenicopterus ruber* and Arctic Tern; *Sterna paradiseaea*). There are also several bird species that are predicted to occur mainly within the NWPS, including White-crowned Pigeon (*Patagioenas leucocephala*) and Mangrove Cuckoo (*Coccyzus minor*). Of the 50 most populated U.S. cities, Las Vegas, Nevada; Seattle, Washington; and Phoenix, Arizona have the largest amount of Wilderness accessible within 100 miles. However, there are 12 of the 50 most populated cities that do not have access to Wilderness within 100 miles, including Austin, Texas; and Chicago, Illinois.

CONCLUSION. Ecologically, the NWPS represents a diversity of ecological systems and bird species within the U.S., with greater representation at high elevations. Socially, the NWPS provides access to Wilderness for many people living in populated areas. However, if greater biodiversity representation is desired then including other categories of Wilderness (i.e., proposed or recommended Wilderness areas) would increase the number of ecological systems and bird species within the NWPS and provide greater access to Wilderness for more people in urban areas.

Tracing the Impact of Leave No Trace in Southwest Wilderness

Briget Eastep, Southern Utah University

Emily Dean, Southern Utah University

Visitors to Wilderness and wild lands create recreation impacts. To combat these impacts public land agencies, non-profit organizations, and Wilderness educators have adopted and teach Leave No Trace (LNT) Principles. "Minimum impact" and "Leave No Trace" emerged in the U.S.A. in the 1970s. By 1990 the United States Forest Service and the National Outdoor Leadership School had created a national education program promoting the principal tenets of LNT which include plan ahead and prepare, camp and travel on durable surfaces, dispose of waste properly, leave what you find, minimize campfire impacts, respect wildlife, and respect other visitors. Since the 1990's this system of ethics has become widespread throughout the United States with a clear mission to teach "people how to enjoy the outdoors responsibly (LNT, 2013)." LNT principles are taught in scouting troops, outdoor recreation classes, posted on trailhead signs, and printed in federal publications and brochures.

Since the 1980's there has been research assessing the different LNT principles (see LNT.org for a bibliography), yet few, if any articles, have asked the question, are LNT practices making a difference? Using archaeology survey methods to catalog and identify recreation impact remains dating back to the 1960s, our research aims to create a timeline of recreation impacts in an area and assess if LNT practices are effective. Our thought is if LNT practices are effective there will be more remains from earlier backpackers than from modern backpackers.

In the summers of 2013 and 2014, we conducted archaeological surveys on federal lands in Utah and Nevada, focusing on backpacking routes and campsites with varying amounts of use and management strategies: does the area require a permit, is the area remote or close to an urban center, has the area been a backpacking destination since before LNT was implemented, are there LNT messages at the trailhead, etc.

Initial results support common sense showing backpacking activities do leave an impact. The most common historic remains were tin cans, the most common modern remains were from campfires. The same sites have been used consistently over time with historic and modern evidence present. Areas that are more remote have less historic and modern impacts. The closer to the trailhead, the more impacts there are. Permitting focuses the impacts to designated zones and campsites.

Creating a timeline of recreation impacts tells a unique story of Leave No Trace. In southwest Utah Wilderness there are remains from historic and modern backpackers. In historic times backpackers left physical remains while modern backpackers leave evidence of their use in campfires and tent footprints.

Wilderness Stewardship by the US Fish and Wildlife Service on National Wildlife Refuges within the Southwest Region

Thomas E. Harvey, US Fish and Wildlife Service

About 1.7 million acres of Wilderness lie in US Fish and Wildlife Service National Wildlife Refuges in Oklahoma, New Mexico, and Arizona. In New Mexico, Bosque del Apache National Wildlife Refuge has 30,000 Wilderness acres and the 9,621-acre Bitter Lake National Wildlife Refuge Salt Creek unit supports river bottomlands and wintering waterbirds. Four Wilderness units lie in Arizona; Imperial, Kofa, and Havasu National Wildlife Refuges and 860,000-acre Cabeza Prieta National Wildlife Refuge; the largest Wilderness area of the National Wildlife Refuge System in the lower 48 states. In Oklahoma, Wichita Mountains Wildlife Refuge has 8,570 acres of Wilderness in its rugged Charons Garden and North Mountain units.

The Inyo Mountains Wilderness: Wilderness Character and the Complicated Wilderness

Kirstin Heins, Bureau of Land Management

The Inyo Mountains Wilderness is a 198,375 acre Wilderness area located in Eastern California above the Owens Valley. The Wilderness is managed by the Inyo National Forest, the Bureau of Land Management (BLM)'s Ridgecrest Field Office and the BLM's Bishop Field Office. It is one of sixty-nine Wilderness areas established or expanded as part of the California Desert Protection Act (CDPA) of 1994.

Humans have had direct and indirect effects on the ecological and cultural landscape of land for thousands of years. In the Inyo Mountains Wilderness the effects of humans on the landscape remain conspicuous today. By the 1860's the Inyo Mountains were the focus of intense prospecting and mining activity. The BLM-managed portion of the Inyo Mountains Wilderness alone contains several hundred mines and prospects as well as associated artifacts, structures and access trails/roads. In addition to the remnants of the mining era, the Wilderness also contains the remains of a 14-mile electric aerial tram that was constructed in the early 20th century to carry salt across the mountains from Saline Valley, Death Valley National Park (1100 feet) over the summit (8500 feet) and down to the Owens Valley (3300 feet). It was the steepest tram in the US. The entire length of the tram was placed on the National Register of Historic Places in 1973. The remnants of the unique structure are located almost entirely within the Wilderness.

When the area was designated in 1994, these existing "unnatural" features were included in it. The tram was in fact inventoried as one of the values of the Cerro Gordo Wilderness Study Area, most of which was incorporated into the Wilderness. The CDPA in fact acknowledged the historical, archaeological and cultural values of "these desert wildlands". Federal land managers today are tasked with the challenge of protecting unique human developments, under the guidance of laws like the National Historic Preservation Act, as well as protecting the natural, undeveloped and untrammeled qualities of Wilderness character. It's nearly impossible to take an action that won't impact one of those qualities.

Some of the unique salt tram structures have long been identified as vulnerable to an unplanned wildfire. The BLM is working through minimum requirements processes to identify strategies to protect these structures with minimal negative impact on Wilderness character. These include the summit cabin, summit control station and several towers. The dense pinyon and mahogany around the structure is in a human-altered landscape. Portions of the forest have been cut historically. Effective protection of the structure from fire

necessitates some amount of vegetation removal. The BLM is working through the process of the minimum requirements decision guide, to determine the best way to balance Wilderness and cultural values.

Wilderness areas not only protect important natural areas and provide opportunities for primitive recreation and solitude, but in many areas they also protect well-preserved vestiges of human history and prehistory. The BLM in California is working to demonstrate that it is both possible and important to honor the values of the Wilderness Act and appropriately protect the unique human stories preserved within Wilderness.

Preserving Wilderness Character through Planning and Implementation

Steven A. Hicks, *US Fish and Wildlife Service*

The Niobrara River runs through the middle of the Fort Niobrara National Wildlife Refuge and the Fort Niobrara Wilderness Area. This river is also designated as a National Scenic River and National Recreation Trail. The number of people canoeing, kayaking, and tubing the Niobrara River within Fort Niobrara National Wildlife Refuge and Wilderness Area steadily increased from several hundred people in the early 1970s to a peak of over 31,000 people in 1997. This rate of use raised concerns about Wilderness character preservation, disturbance to wildlife, impact on vegetation, and compatibility with the purposes of Fort Niobrara NWR.

The river/Wilderness/refuge use was examined through a Refuge Comprehensive Conservation Plan (CCP) completed in 1999. This plan included a compatibility determination with stipulations to ensure compatibility with the purpose of the Refuge and Wilderness Area. A River Recreation Management Plan was finalized in 2005, as a step down plan from the CCP. The River Recreation Management Plan more specifically addressed the compatibility stipulations laid out in the CCP and designated a path toward implementation of the management plan.

Implementation of the plans required changes in how the river was used. A limit on the total number of users was established. New rules and recommendations were put in place to regulate the use of alcohol, loud radios, vessel type and group size, squirt guns, time of use, and access. Commercial river outfitters were not limited but were required to obtain a special use permit and meet standards of operation.

Through implementation of these plans the use of the Niobrara River within the Refuge and Wilderness Area is now compatible with standards for all of its designations.

From Act to Action: Establishing Bureau of Land Management Wilderness Boundaries in Arizona

Ken Mahoney, *Bureau of Land Management*

Ann Marie O'Sullivan, *O'Sullivan Resources, LLC*

Under the Arizona Wilderness Act of 1984 and the Arizona Desert Wilderness Act of 1990, the Bureau of Land Management (BLM) has a legal requirement to provide Congress with maps and legal description for each Wilderness boundary. Once designated, individual Field Offices began to translate the legislative intent to "on the ground" boundaries so that they could be signed, posted and managed. In the early 1990s, a program of full survey and setting monuments along the boundaries was started. To date, twelve of the forty-seven Arizona BLM Wilderness Area boundaries were completely surveyed. However, due to the remote and roadless nature of Wilderness areas this approach was difficult, time consuming and became prohibitively costly. This poster detailed the process Arizona BLM has developed to produce the required congressional boundary maps and legal description, using mapping technology to reduce the amount of cadastral survey field work needed.

In March 2010, BLM released guidance titled *Congressionally Required Maps and Legal Boundary Description for National Landscape Conservation System Designation, Manual 6120*. In response, Arizona BLM formed an interdisciplinary team involving Wilderness Specialists, Cadastral Surveyors, GIS Specialists and Data Analysts to work on the Wilderness boundary project. The key is to interpret the intent of legislative maps produced just prior to designation and referenced in the laws. Understanding what features the boundary actually follows can be difficult because of the nature of the hand-drawn boundary on small scale USGS quad maps. A variety of additional data is also considered ranging from management maps produced by the Field Offices; boundary description in Wilderness Management Plans; to right-of way information from serialized case files.

Geographic Information System (GIS) is used to construct the boundary. During the review process, Google Earth allows effective visualization of the boundary from different angles, in relation to "on the ground" features and compared against different data backgrounds. Subsequently, coded maps are prepared which show the relationship of the boundary line to the feature, e.g. "On township line" or "30 foot setback

from road center”. Coded maps, GIS data and images are sent to the Field Offices for comment on appropriate boundary placement.

After Field Office review, any necessary updates to the boundary and maps are made. Using the coded maps, the cadastral surveyors determine what additional information is needed for the legal descriptions. This may include recovering and setting some monuments. The legal description is written with a minimum of field survey, but in such a way, that the boundaries could be surveyed if required in the future. All supportive documentation is compiled in serialized case files and the congressional maps and legal descriptions are submitted to the appropriate Congressional Committees. The team approach has ensured consistency in preparing maps and legal description to comply with BLM guidance and represent the original legislative intent.

The Waterman Fund: Promoting Wilderness Ethics and Stewardship in the Mountains of the Northeast

Rick Paradis, *The Waterman Fund, University of Vermont Natural Areas*

The Waterman Fund was established in 2000 in honor of the late Guy Waterman, noted mountaineer, Wilderness advocate, prolific writer, musician, and homesteader. Our mission is to foster a sense of Wilderness ethics and conservation in the mountain ecosystems of Northeastern North America. The Fund advances its mission through a variety of programs.

We offer a competitive grants program. Grants are awarded to support alpine research, public education, site stewardship and trail work projects. To date, over 50 grants have been awarded totaling nearly \$135,000. Recipients include hiking organizations and outing clubs, universities, government agencies, museums, other non-governmental organizations and individual researchers.

The Fund sponsors an annual essay contest encouraging emerging writers to share their experiences of wild places and the spirit of Wilderness. Each year, a specific theme is selected. This year’s theme asks writers to explore the meaning and relevance of a Wilderness ethic in the 21st Century. Winners receive generous cash prizes and their essays are published on our website and in *Appalachia* Journal, published by the Appalachian Mountain Club.

Each year, we recognize an individual who has demonstrated a long-term commitment to protecting alpine Wilderness by honoring them with the Guy Waterman Alpine Stewardship Award. Recipients have included academics, field researchers, land stewards, and others who have committed themselves to a lifetime of dedicated service on behalf of alpine ecosystems in the Northeast.

Autumn Colors, Dolly Sods Wilderness, West Virginia

By Kenneth Greenwood, www.augenphotographicstudios.com



The Fund underwrites the biennial Northeastern Alpine Stewardship Gathering. The Gathering brings together regional alpine managers and researchers who share their expertise and knowledge about alpine ecology and stewardship. In November 2013, over 100 participants from the northeastern United States and Canada gathered in southwestern New Hampshire for several days of presentations, workshops, networking opportunities and field trips. The Gathering was hosted by Antioch University New England.

The Fund also publishes an annual newsletter “The Alpine Steward” and distributes copies of other publications including the books “Wilderness Ethics: Preserving the Ethics of Wilderness”, and “Backwoods Ethics: A Guide to Low-Impact Camping and Hiking” by Laura and Guy Waterman. These books are made available to alpine and backcountry site stewards throughout the Northeast at no charge.

The Waterman Fund has no paid staff and is administered by an all-volunteer board of enthusiastic and committed individuals engaged either professionally or personally in alpine research, education and stewardship. More information about the Fund can be obtained at our website: www.watermanfund.org

Keeping the ‘Wild’ in ‘Wilderness’: Lostwood National Wildlife Refuge Wilderness Area

Melissa Tracy, US Fish and Wildlife Service

Sarah Shpak, Wilderness Fellow

Preserving Wilderness Character in the Lostwood Wilderness area is a large part of the Lostwood National Wildlife Refuge’s Wilderness Plan (LNWR-WP). After conducting an assessment for the current status of Wilderness Character at the Lostwood Refuge, the biggest threat for the refuge is the decline in native mixed grass prairie and an increase in density of invasive grasses. Before the 1870s, prairies covered more than a third of the United States and almost all of North Dakota. With the arrival and increase in settlers in the late 1880s, the landscape started to change, leaving only one half of a percent of prairies in the United States. Today, management staff continues to conduct prairie assessments through the Native Prairie Adaptive Management (NPAM) program with the use of belt transects. NPAM identifies what sort of management actions are needed for prairie restoration. Management efforts utilized to restore Lostwood’s prairie are increasing cattle grazing pressure and establishing a prescribed long-term burn plan.

Another factor affecting the Wilderness and the Lostwood Refuge as a whole are the threats caused by the oil and gas industry, due to the recent increase in production seen in western North Dakota. It is understood that this industry will only continue to increase in oil exploration and new developmental infrastructure for the long term. Because these developments are outside the boundaries of Lostwood NWR, no refuge management efforts can be performed to lessen the impacts of this industry. Oil production developments have all occurred outside and directly adjacent to the Wilderness. This additional energy development hinders the opportunities for solitude or primitive and unconfined recreation. The Wilderness Act states the importance for visitors to experience Wilderness without any outside disturbances. Settings that reduce these above mentioned opportunities degrade this quality, including modern industrialized civilization adjacent to the Wilderness.

The Wilderness Character monitoring protocol established from the 2013 report will be a useful tool for acknowledging other trends in Wilderness Character of the Lostwood NWR. The plan consists of 23 measures in total (4 Untrammelled, 10 Natural, 4 Undeveloped, and 5 Solitude or Primitive and Unconfined Recreation), developed from data that’s collected by refuge staff. Although this list is not exhaustive, the measures selected represent the most significant and measurable features of Wilderness in Lostwood NWR and adequately represent the qualities of Wilderness character. As additional or more precise information becomes regularly available to refuge staff, it can be incorporated into the Wilderness Character monitoring protocol. The current LNWR-WP will promote Wilderness stewardship and support future management decisions in the Lostwood Wilderness.

Bridging the Gap: Stewardship and Advocacy

Andrew Schurr, *Friends of the Inyo*

Laura Beardsley, *Friends of the Inyo*

Paul McFarland, *Friends of the Inyo*

As we move into the next 50 years of Wilderness, the role of partner groups and NGO's in stewardship will only continue to grow. The traditional role of the conservation community as an advocacy-focused watchdog is shifting more and more to that of a resource and active partner. Bridging the gap between traditional conservation objectives to incorporate the increased need for on-the-ground work and engagement will be one of the largest challenges facing the conservation world. As congressional budget allocations shrink and land management staff and capacity follow suit, the importance of meaningful partnerships grows ever greater. To build strong, effective partnerships, the traditional non-profit conservation community must adjust their priorities and strategies at the same time that federal, state, and local land management agencies adapt to working with a broader range of organizations. Through stewardship, the conservation community can enhance their role as advocates while establishing a balance that serves the needs of the resource and conservation while supplementing managers' ability to complete work on the ground. Participating in the ongoing work that keeps Wilderness healthy and viable creates leverage and legitimacy that aids in preservation efforts undertaken by conservation organizations. By introducing volunteers and the general public to the wonders of Wilderness through hands-on experience, partners help create a sense of place and ownership that broadens the constituency for Wilderness, wild places, and public lands. Active partnerships help develop a trained volunteer and partner work force that can, in conjunction with agency staff, help fill the growing capacity gap. By working with partners, land management agencies can help them share the skills needed for modern Wilderness management while improving the ability of agency staff meet their management goals. At the same time, hands on work with volunteers and the public develops a commitment to the stewardship and care of their public lands. In turn, this constituency provides much-needed support to the agencies and partners that work to care for them.

By engaging in functional, collaborative partnerships with land managers, groups who may have once focused solely on advocacy are able to get their boots on the ground to support protections and conservation while assisting in the implementing the management designations. Initially a local watchdog, Friends of the Inyo has worked closely with the US Forest Service and the BLM since 2005 to provide stewardship and public engagement to care for and protect public lands in the Eastern Sierra. By working together, we are helping to address growing capacity shortfalls with both volunteers and professional staff. While this relationship may be challenging at times, our experience highlights that strong partnerships yield amazing successes.

As we move into the future this new model of partnership, built on trust and understanding, will benefit both land managers and partners ensuring the resilience and longevity of public lands and wild places for future generations.

Mapping Wilderness Character in the National Wilderness Preservation

James Tricker Aldo Leopold Wilderness Research Institute

Peter Landres, *Aldo Leopold Wilderness Research Institute*

The 1964 Wilderness Act established the National Wilderness Preservation System "for the protection of these areas, the preservation of their Wilderness character". The recent development of an interagency strategy to monitor Wilderness character allows on-the-ground managers and decision makers to assess whether stewardship actions for an individual Wilderness are fulfilling this mandate. By using credible data that are consistently collected, we have developed new methods to track where and how Wilderness character is changing over time, allowing management staff to evaluate how stewardship actions affect Wilderness character.

An initial case study for the Death Valley Wilderness produced a series of maps that can identify areas in the Wilderness which are vulnerable to impairment, track changes and trends over time, and evaluate how different planning alternatives will affect Wilderness character. Further studies at three other Wilderness parks and forests are underway to refine the methods used to map Wilderness character, and to evaluate whether this approach can be applied to a variety of Wildernesses, large and small, urban approximate and remote.

This poster provided an overview of the methods used to develop the Wilderness character map, summarized the pros and cons of this approach, and provided examples of this work from 4 case studies.

Fire Keeps the Wild in Wilderness: Ecological Fire Use for Wilderness Fire Management

Timothy Ingalsbee, *Firefighters United for Safety*

Firefighters United for Safety, Ethics, and Ecology (FUSEE) is a national nonprofit organization promoting safe, ethical, ecological wildland fire management. FUSEE members include current, former, and retired wildland firefighters; fire managers, scientists, and educators; forest conservationists; and other interested citizens who support FUSEE's holistic fire management vision. FUSEE's primary mission is to provide public education and policy advocacy in support of a new, emerging paradigm that seeks to work with wildland fire for social and ecological benefits instead of fighting against it all across the landscape. Our long-term goal is the creation of fire-compatible communities able to live safely and sustainably within fire-adapted ecosystems. Inspired by Aldo Leopold's "Land Ethic," FUSEE advocates for a new "Fire Ethic" in wildland fire management policies and practices: A thing is right when it contributes to the safety of firefighters and the public, ethical use of public resources, environmental protection of fire-affected landscapes, and ecological restoration of fire-dependent ecosystems. It is wrong when it tends otherwise.

Fire exclusion policies and fire suppression actions have impacted most of the continental U.S. including designated and de facto Wilderness areas. Combined with climate change, this fire deficit is leading to changing fire regimes characterized by uncharacteristic fire behavior and effects that are further altering ecosystems and native biodiversity. But, we believe that fire helps keep the wild in Wilderness, and a conscious program of fire reintroduction is needed to compensate for the fire deficit. We propose Ecological Fire Use, a new kind of active management of wildfires, as the most natural, practical, and philosophically acceptable means of reintroducing fire in Wilderness. We envision the creation of a corps of Fire Rangers to be trained in ecological fire use techniques who would function as "fire guiders" rather than fire fighters, carefully starting and steering fires rather than trying to stop them as they burn across Wilderness and other wildlands restoring fire-dependent ecosystems, preserving fire-dependent species, and preparing landscapes for future climate change. Our vision of Ecological Fire Use avoids past dichotomies between passive "let burn" and aggressive fire "fighting" responses to wildfire, while upholding the Wilderness values of naturalness and wildness. Support for Ecological Fire Use will require an attitudinal shift among Wilderness advocates to view active fire management as a natural *interaction* rather than artificial intervention in Wilderness, thereby resurrecting our species' ecological role as torchbearers stewarding fire-adapted ecosystems.

"But love of the wilderness is more than a hunger for what is always beyond reach; it is also an expression of loyalty to the earth which bore us and sustains us, the only home we shall ever know, the only paradise we ever need - if only we had eyes to see."

- EDWARD ABBEY



Lava Factory, Hawaii Volcanoes Wilderness, Hawaii
By Samuel Feron, www.feronum-photo.com

Get Wild! Festival

October 18th 2014 Get Wild! Festival

Butch Blazer, *Deputy Under Secretary for Natural Resources & Environment*

Rue Mapp, *Outdoor Afro Founder*

Juan Martinez, *Children & Nature Network*

In conjunction with the conference, the Get Wild! Festival was held outdoors in Civic Plaza in downtown Albuquerque. This collaboration of agency partners and local groups attracted roughly 1,500 people (300+ were children) from Albuquerque and surrounding communities in addition to conference attendees. This free festival hosted a wide variety of performers and exhibitors including crosscut demonstrations and pack animals from the Santa Fe National Forest, a backcountry cooking demonstration featuring recipes from the Wilderness Ranger Cookbook, various historic encampments, participatory earth art depicting endangered species and campfire sing-alongs and story-telling circles. Attendees participated in numerous activities that promoted responsible outdoor recreation and Wilderness stewardship, including a Wilderness passport scavenger hunt, Leave No Trace skills, wildlife identification, survival skills and much more. A Wilderness Ranger Station was manned by the National Park Service to provide prizes for completing the Wilderness scavenger hunt. USDA Deputy Under Secretary Arthur “Butch” Blazer gave introductions to the keynote speakers Rue Mapp (founder of Outdoor Afro) and Juan Martinez (National Geographic Explorer and director of the Natural Leaders Network). Musical and dance performances included: Contemporary Dineh (Navajo Nation) flute player, Andrew Thomas; Forever Wild by Susan Grace; Trio Los Amigos, Authentic Mexican Guitar; Jicarilla Apache Butterfly Dancers; Toya Pueblo Dancers; AKU-MATU, Inupiaq Rap Artist; Breakdancing by UHF, Zia Queens and Versatile Styles Studio and local bands, Animal Opera, Le Chat Lunatique and Let it Grow. Campfire Stories were hosted by Bob Kanegis, Tales & Trails Storytelling; Campfire Wilderness Song Shares were hosted by Susan Grace and Bart Koehler, of the Coyote Angel Band.

Butch Blazer

Deputy Under Secretary for Natural Resources & Environment

ARTHUR “BUTCH” BLAZER serves as USDA Deputy Under Secretary for Natural Resources and Environment. In 2003, Governor Bill Richardson appointed Butch as “State Forester” of New Mexico, the first Native American to hold that position. During his tenure as State Forester, Butch was also named as Chair of the Council of Western State Foresters and Co-Chair for the Western Forestry Leadership Coalition. A member of the Mescalero Apache Tribe, Butch has been intimately involved in Tribal issues throughout his life.

Prior to his service as State Forester, he served 27 years in the department of Interior’s Bureau of Indian Affairs as a Range Management Specialist, Natural Resources Manager, and Agency Superintendent. Blazer is the former owner of Blazer Conservation Connections, a natural resources based consulting company that specialized in connecting clients with the resources needed to enhance and protect the environment. He was also a co-founder of the Native American Fish & Wildlife Society, and has served on their Board of Directors and as the organization’s National President. In 1998 Butch was elected, and served two consecutive terms, to the Mescalero Apache Tribal Council. An avid outdoors man when he can get to it, Blazer enjoys hunting, skiing and just “hiding-out” in the vast Wilderness of his beautiful Mescalero Apache Reservation.



Plenary Speech by Butch Blazer

Good afternoon, everyone. It's a great pleasure for me to have been asked to provide some introductory remarks and to introduce two very fine people here in a second that I'm wanting to get to meet and get to know. But hearing their bios, you're going to be quite pleased with what they have to share with you this afternoon.

Before I make those introductions of these two individuals, though, I want to thank those who have been working hard over the last two years putting this fine 50th anniversary celebration of the Wilderness Act together.

As those of you that have been attending the conference know, the agenda is just incredible. It's very, very diverse. There's a lot of inclusion of many different interesting topics.

I'm here today representing USDA, representing Secretary of Agriculture Vilsack. Again, I'm honored to make these introductions this afternoon. Because being a Mescalero tribal member, being a part of the minority population of this country, I know it's extremely important that all of us work hard to ensure that we have that inclusion in the work that we do.

Not only in the Wilderness area, but in many other natural resource and conservation areas that we're all involved with. I think that's what we're going to be hearing from these speakers, these two speakers that we have this afternoon – that I'm, again, extremely pleased to introduce.

Today one of our speakers is a proud product of southcentral Los Angeles. Juan Martinez is director of leadership development and natural resources network for the Children and Nature Network there in Los Angeles.

His passion to empower individuals and youth led him to direct the Sierra Club's first environmental justice youth leadership academy in Los Angeles.

He is tremendously accomplished. In 2006 he was a delegate to the Latino Congreso, the largest gathering of key Latino figures in the United States. He later received former Secretary of Labor and Congresswoman Hilda Solis' environmental youth leadership award.

In 2011 he was named a National Geographic emerging explorer. In 2012 he became the youngest member in the history of the Sierra Club Foundation Board of Trustees.

That same year he served as explorer in residence at the Murie Center in Jackson, Wyoming. Juan dedicates his energy to connect all people with nature and the great outdoors.

First up, though, I would like to have you meet Rue Mapp. She was recently named a hero in "Backpacker Magazine" as well as being honored as part of the Route 100 of top black achievers and influencers for 2012.

This year Rue was nominated as a White House champion of change and received the National Wildlife Federation award for communications, along with President Clinton.

You might ask, what did she do that has gained her this fame? Rue spent her childhood in the Girl Scouts and in Upward Bound. She reveled in the outdoor experience--camping, mountaineering, rock climbing, and road bicycling.

But as an AfricanAmerican woman, she noticed that sometimes she'd look around and she didn't see people like herself. Twenty years ago, she took to using digital media, reaching out to people of color who share her outdoor interests.

In 2009 she decided to devote herself fulltime to connect people of color to the outdoors. She founded Outdoor Afro, and now has 5,000 Twitter followers and a strong Facebook following of more than 9,000 likes.

I am honored to introduce to you Rue Mapp from Outdoor Afro.

Rue Mapp

Outdoor Afro Founder

RUE MAPP is the founder of Outdoor Afro, a community that reconnects African-Americans with natural spaces and one another through recreational activities such as camping, hiking, biking, fishing, gardening, and skiing, using social media to create interest and to partner with regional and national organizations that support diverse participation in the great outdoors.

Growing up in Oakland, California, Mapp knows first-hand how repeated outdoor engagement can have a profound effect on a young person's life. During her childhood, Mapp split her time between urban Oakland, California and her families' working ranch in the Northern woodlands, where she cultivated a passion for natural spaces, farming, and learned how to hunt and fish. Her exposure to outdoor youth programs in regional and National Parks, and local conservation job opportunities as a teen developed in her a lifelong passion for the outdoors that is now a motivating example for others in her family and community.

Mapp is a successful entrepreneur whose game and hobby store, It's Your Move, is an important part of the Oakland community. In 2010 she was invited to President Obama's historical White House Conference on America's Great Outdoors, and received a subsequent invitation to take part in a White House think tank for Michelle Obama's Let's Move campaign. In August of 2010, she was appointed the Youth Investment Program Officer at the Stewardship Council, where she oversaw its grantmaking program that funds programs to connect underserved California youth to the outdoors. She serves on the Board of Advisors for the Children and Nature Network, and is a fellow with the Center for Whole Communities. She was also distinguished as one of five "Faces of Conservation" by the Wilderness Society. In 2011 she was appointed to a two-year term to advise the National Parks Advisory Board Committee on Relevancy. Recently, she was honored as part of Backpacker Magazine's Root 100 of the top black achievers and influencers for 2012.

In the two years since Outdoor Afro was founded, the website has grown tremendously in popularity. It won a 2011 Black Weblog Award for Best Green/Nature Blog, and is now an official partner of the American Camp Association to support their national camp diversity initiatives. Additionally, Mapp is sought out frequently for speaking, guest blogs, and media interviews, to provide insight and expertise on how to connect African-Americans of all ages to the outdoors.



Plenary Speech by Rue Mapp

Thank you so much for such a wonderful and generous introduction. Thank you for this. I appreciate it. I have been on a stage before, and my papers have blown away. We don't want that to happen.

We like to start off Outdoor Afro events with a little chant, just because sometimes there's a lull in the energy. There's a lot of things going on. I'd like to get some more people over here. When I say "Outdoor," you say "Afro!"
Outdoor.

Audience: Afro!

Rue: Outdoor.

Audience: Afro!

Rue: Yeah. Great. I have so much thanks and gratitude right now. I want to thank Lisa Ronald, Steve Archibald, two people who have been in conversation with me for probably the last year or so, about the Wilderness Act, and who invited me here to Albuquerque previously to talk about the experience of Outdoor Afro and how we were celebrating Wilderness.

I have to say that on my way here, on my United flight, I had a seatmate. She asked me why I was going to be in Albuquerque. I told her, "Hey, I'm going to the Wilderness 50 celebration." She was like, "OK. That's a thing."

I realized, in that moment, we have a lot more work to do to get this conversation and this celebration in a mainstream view so that everyone, no matter if you're working for the parks or our natural spaces or not, you know about the celebration of the Wilderness Act, and this is just the beginning.

Yes, I came from the San Francisco Bay area, specifically Oakland, home of the redwoods and rolling oak woodlands. I came to this work because of my parents, my mother and father, AC and Ella Mae Levias. As you heard in the introduction, we had a ranch about a hundred miles north of where we lived in Oakland.

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My family was from the South. They were from the Jim Crowera South. They were one of millions of African Americans who migrated from the Southern states northward, westward, eastward in search of the warmth of other suns.

These are people who not only sought new economic opportunities, but they were trying to get away from the stranglehold of Jim Crow. They brought with them their love and their knowledge of the outdoors.

I had the privilege to be raised in an environment where we had cows. We had pigs. We hunted. We fished. I was a part of the process, the harvest, and appreciation of where our food comes from. I learned about the life cycle of a tadpole to a frog by observing the creek and its changes over many seasons.

The other thing that was special about that place was that my parents always brought folks from our community in Oakland with us. So many times, people came to that ranch never before having left their neighborhood, never having left Oakland, and never seeing the stars in their abundance at night.

From a young age, I not only connected deeply with nature, but I connected deeply with what it meant to connect other people to nature and to see that wonder firsthand. Yes, as you heard, I was a Girl Scout. I did a lot of rec and park experiences growing up, in addition to being at the ranch.

I also wrote about my experiences. I had a Hello Kitty diary. I would write, in big, loopy detail, all of my adventures in the outdoors. I found that writing about them helped me to revisit those experiences that I held dear.

I also had a love of technology. My first computer was...You'll date yourself if you know what I'm talking about...a Commodore VIC20. Can I get a shout out for Commodore? Great.

It wasn't until I was 20 years old and I went on a mountaineering course on the Pacific Crest Trail, in the Sierra, in California...A few people familiar with that. Shout out for Pacific Crest Trail.

I went there not having any experience with Wild with a capital W. We had been in the countryside. We'd done lots of urban parks, some national parks, but never in the backcountry for several days at a time.

I found myself testing myself physically, emotionally, going to places I had never been before. As I'm on the side of this mountain trying to climb up to the top, I got stuck. I didn't have a head lamp. I couldn't see where I was going. I couldn't see below me because it was nearly dusk.

We were going to camp at the top of the summit that night. Just when I thought that I couldn't go any further...I'm starfished on the side of this mountain...my instructor...I'll never forget him. His name is Marty. He says, "Rue, trust your feet." Something clicked. I scrambled up to the top.

That lesson, trusting your feet, is one that continues to serve me today. It's one of the many lessons that the Wilderness has to offer us. At 20 years old, at the precipice of adulthood, being on my own, learning how to trust my feet was exactly what I needed to know I could do.

I was pretty hooked at that time. I really understood that. I get why nature and the Wilderness is an amazing thing for all people to experience. I want to keep experiencing it over and over. I was on the World Wide Web looking for groups, looking for people in the various Usenet groups.

This is before social media. I found some groups. I found the Sierra Club and others, people who really shared my outdoor interests. I really wanted to get out, also, with people who look like me.

In 2009, there were a lot things happening with our economy. I was at a professional crossroads. I had a mentor. It is so important to have a mentor in your life, be it a family member or a colleague. This mentor asked me the question that I believe everyone should ask themselves at some point in time.

That is "What is it that you would rather be doing with your time if money and time were no obstacle, plentiful?" I just said, "I'd probably start a website to reconnect African Americans to the outdoors." In that moment, that was the key in the door that unlocked this possibility, this truth of who I was, these stories that you just heard. Outdoor Afro was born just the next week.

It began with just me sharing my story, but quickly, it became a national conversation. People from around the country said, "Hey. I like nature too. You're not the only one." I realized that when you put all those who thought they were the only ones together, we're actually quite numerous. We've learned lots of things along the way.

One of the things that was really important is that nobody had really been talking to my demographic before. No one had been talking about the possibility of African American women as leaders, about how to take care of our hair in the backcountry, things that have just not been on the mainstream conservation radar.

I was having this forum to talk about those things, and it really resonated with people. I found that Outdoor Afro was not an exclusive conversation, but rather a focused one and one patch in this quilt where we all share the common value of loving our wild.

Five years in, we're now more than a blog. We have partners such as the Sierra Club, REI, Keen Shoes, Klean Kanteen, and many others. Outdoor Afro has been very fortunate to attract men and women from around the country to be leaders.

Continued

They come from a wide variety of professions. Some are architects, accountants, lawyers. Some are also from our field, but what they all have in common is this fire in their belly that we have in common, together, here, for connecting people to our natural spaces.

They have been wildly successful in getting thousands of people, across generations, out into the wild each year. One of those leaders is here. Could you raise your hand? Yay. That's Mashawn. She hails from Austin, Texas.

We're helping, with the support of people like Mashawn, get several thousands of people out to not only engage with the outdoors from a recreational perspective, but to move along a spectrum to love, care, and stewardship.

We find that we have to overcome some barriers to get there. We know that having the right gear, getting there, the transportation piece, and an overwhelming sense of lack of time are known issues we are helping to address in every experience.

Today, as a mom of three, while I'm instigating the path of an organization, my Wilderness experiences are not anymore, just about me. It's important for me to practice what I preach and continuously learn.

Just over two months ago, the Sierra Club hosted Paul Miller, aka DJ Spooky, Michael Brune, the Sierra Club Executive Director, and myself on a journey into one of the most remote and beautiful places on Earth, Alaska's Arctic National Wildlife Refuge.

We were led by a team of Dan Ritzman, who leads the Sierra Club in Alaska. Just after landing in the tundra of the Mollie Beattie Wilderness Area, we had a bear in camp. That may not impress a lot of people here, but this, for me, was a very terrifying moment.

There were no physical barriers between us and that bear. For what seemed like several minutes, it curiously observed us and then with a whiff of Northern air, disappeared off into the Brooks Range.

I realize now that that experience was not about the bear or our fear of it, but rather the acute awareness of our humanity in its presence, in its wild. No, we were not at the top of the food chain. We were part of an unpredictable climate that cared not that we were there or if we were comfortable.

This wild would continue to roll on and thrive without regard for its human passengers. The Wilderness, as I experienced it in the Arctic, is a system of immeasurable strength and resiliency. It was an honor, as a human, to get out of the illusion of control and to remember a type of dependence and fragility only found in the remote wild. I know I am better for it.

In the weeks following our Arctic experience, I often thought about how we might better relate Wilderness to folks living in urban areas, like in East Oakland, where I live, where people are rightly concerned with issues such as food security, public safety.

I have to admit that even with the background I have, before probably a year ago, I did not know much about the signing of the Wilderness Act. I have to also admit that I did not grow up with the legacies of Rachel Carson or John Muir, but we had Harriett Tubman, who understood the wild so well that she was able to lead hundreds to freedom.

We also had George Washington Carver, who took recycling and innovation to new intellectual heights. It was Marvin Gaye, in the year of my birth, who sang about oil wasted on the oceans and upon our seas. Mercy, mercy me. As many of you know, this year also marks the 50th anniversary of the Civil Rights Act.

While it does not appear that the Wilderness Act and the Civil Rights Act shared a common public forum when they were signed, we have a chance, perhaps, to make those connections today.

While it is true, for some, that Wilderness has not always represented safety or inclusion, fears about the Wilderness are not only about the potential contact with wildlife, but there are still perceptions among some black folks that one might be susceptible to human violence in the cover of the wild.

Because of this pervasive thinking, some of the sturdiest brothers and sisters I know are less likely to warm to the idea of wandering alone in the woods.

Within the memory of a living generation, many recall the world in which the plaintive refrain of Billie Holiday sang, "Southern trees bear a strange fruit. Blood on the leaves and blood on the root. Black bodies swinging in the Southern breeze. Strange fruit hanging from the poplar trees."

While Jim Crowstyle terror in nature is no longer a common occurrence, the legacy of institutionalized exclusion of some people from recreation areas exists. A result of the years of discrimination is that for many, the experience of being outdoors feels more like a conquering of a fear than for enjoyment for its own sake.

Still too often, many black and brown folks face unwelcoming or sometimes unwelcoming stares, questions, and attitudes while recreating in wild spaces. I believe that today we have a chance to heal.

We have a chance to heal and atone for encroachment on places and the people who have lived and depended on the wild for thousands of years. That includes also celebrating the recent designation of the San Gabriel Mountains National Monument as an important gateway for diverse community access and inclusion in our wild.

Continued

Today, we can generate a new narrative about the Wilderness experience that promotes a vision of healing and participation. We might also learn something about neutrality from our wild, through that Arctic grizzly that did not likely see color, class, or gender.

We can learn about resiliency through the lives of the Gwich'in people in Arctic Village and communities like them in the Lower 48, who continue to harness and pass on their legacy through song, dance, and story while also fighting to protect their sacred lands from exploration.

Therefore, I view this 50th celebration of Wilderness as a call to action, a call to action to share your resources in innovative ways. Let's be bold and courageous in our partnerships. You can champion the work of Outdoor Afro and many others that are around this plaza. They're each changing the landscape of Wilderness engagement.

Together, we can replace old fears and reservations about the Wilderness with joy, curiosity, empathy for everyone. Today, let's tap into the spirit of a 1964 America that came together, across its differences, to protect vulnerable people and places, an America that dreamt big and had every reason to hope.

I hope you'll go forth in your communities and link arms with someone new, as we once did during that famous march nearly 50 years ago, but this time to celebrate and protect connections between all people and our precious wild. Thank you very much.



Juan Martinez

Children & Nature Network

A proud product of south central Los Angeles, **JUAN D. MARTINEZ** is Director of Leadership Development and Natural Leaders Network for the Children & Nature Network. His passion to empower individuals and youth led him to direct Sierra Club's first environmental justice youth leadership academy in Los Angeles.

In 2011, Juan was named a National Geographic Emerging Explorer. The series of National Geographic promotional video's highlighting Juan and his work won an Emmy in 2011. His TED talk is featured on the curated educational videos, TEDEd. He represents The North Face as an ambassador for outdoor engagement.

In 2012 he became the youngest member in history of the Sierra Club Foundation Board of Trustees. He reached the Summit of the Grand Teton in 2010 with legendary alpinist, Conrad Anker. In 2009 he introduced Department of Interior's Ken Salazar at Powershift in Washington, DC, the largest youth gathering on climate change, and he was invited by the White House to attend the National Forum on Clean Energy Economy. A keynote speaker at the 2010 Outdoor Retailers Winter Show in Salt Lake City, Utah, Juan received a standing ovation following his presentation. He also gave a presentation at the Western Wilderness Conference 2010 in Berkeley, California.

In 2006, Juan was a delegate to the Latino Congreso, the largest gathering of Latino key figures in the U.S. and he is included in "Hispanics Living Green." Publication of the book was celebrated in March 2010 with a Congressional reception in Washington, DC. Featured in BlindFold Magazine's Fall 2013 edition.

He is a recipient of former Secretary of Labor and then Congresswoman Hilda Solis' Environmental Youth Leadership Award and "Looking to the Future" award from the Breaking the Color Barriers conference, the largest conference on people of color in the great outdoors. Juan received a "Green for All" 2009 fellowship.

Juan served as Explorer In Residence at The Murie Center in 2012. He dedicates his energy to connecting all people with nearby nature and the great outdoors.

Plenary Speech by Juan Martinez

I'm much shorter than the last couple of speakers, so I'm going to work this...In working with the same spirit of Rue, I like chants too and I like activity. If you ever marched, if you have ever been out to a rally, you know what the unity clap is. We're going to do the unity clap, and then you're going to, when I say, "Get," you guys say, "Wild." Got it? Get wild. All right. Here we go.

Juan: Get!

Audience: Wild!

Juan: Get!

Audience: Wild!

Juan: Get!

Audience: Wild!

Juan: Yeah! What's up Nuevo Mexico? I just want to thank you all for coming out here today and being a part of this celebration of 50 years of Wilderness. Like Rue has mentioned already -- and give Rue another round of a hand.

I mean, Rue does it, and she does it well. 50 years of Wilderness and 50 years of Civil Rights. I really want to start off there by thanking those of you over the age of 45. Raise your hand real quick.

Who's over 45 here? Your generation is the generation that fought for the right of young men dying overseas in Vietnam to have the right to vote. Your generation is the generation that gave my generation the right to believe that yes we could place a president of color in the White House.

Your generation is the generation that stood sidebyside with Dr. King, John Lewis, Cesar Chavez, Dolores Huerta, and fought for the rights of farm workers, of sanitation workers, and churches to be able to assemble.

It is because of you that I stand here on this stage today and that we can sit together and celebrate 50 years, regardless of what religion we believe in or the color of our skin or the language from which our native tongue comes from. That's your generation.

My generation, those of us under the age of 45 within that generation, you find the X generation, you find the millennial generation. You find what's now being called the thumb generation. That generation has the highest rate of educated college graduates.

It is the education with the highest middle income bracket in the United States. It is the generation that is most diverse, most open to change, and most eager to serve their community. Those are the generations you find under the age of 45.

But this is also the generation that has been given a stern warning by the US Surgeon General that if we do not curb our habits, we will be the first generation to successfully reduce life expectancy.

Our generation has a challenge before us to carry forward the legacy of the last 50 years. Now I'm a National Geographic explorer. I'm a Sierra Club Foundation board member, the youngest one in history, and I'm a proud product of southcentral LA.

I can't tell you how much it means for me to be able to say that. That regardless of where I came from, I still have the audacity and the hope to believe that I can do the things that I can do today. That I can stand on this stage before you and celebrate the 50 years of legacy of the Wilderness.

The last 50 years have given us a lot to think about. The last 50 years have given us a lot to celebrate. The last 50 years will continue to propel us into the future of what is to come. New Mexico has led the way by establishing new monuments. Just a couple weeks ago we established the newest monument, in LA, the San Gabriel Mountains, and there's many people in this crowd today who celebrated that, who were a part of that.

My first internship was working with the Sierra Club and putting the architecture behind the San Gabriel Forever campaign. That was seven, eight years ago, and I can't go on without saying thank you to Juana Torres, thank you to John Monsen, and thank you to Bill Corcoran, who were there when this was nothing but a dream.

In those seven years of campaigning and working for the San Gabriel Monument establishment, it was an uphill battle. It was never easy, it was never a for granted thing that we could do this.

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But what came through that campaign was the focus that we had to do longterm investment in communities. That it could just not be about turning out votes, it cannot just be turning out social media imprints. We had to invest in communities for there to be trust. That's the secret sauce, if you want to talk about it.

As I've gone on and ventured into where I am today, I can't help but think about the next generation. For me there's nothing as powerful as an opportunity. I was given an opportunity, when I was 15, to stop going down the path of a gang membership and join another path which led me to where I stand today of conservation, outdoor recreation, and standing for what is right.

At the end of the day I love nature not for the trees, not for the birds, not for the rivers, but I love nature because of what it does to people. We can't forget that people are at the center of this campaign.

It is the people who will turn out the vote, it is people who will put the taxes in place, it is people who own this land, have fought for it, and will continue to fight for it into the future. It is the new generation that is more diverse. It is a new generation that is more urban. It is a new and higher generation that is constantly becoming more reflective of American society. We need to do that in this movement.

That's my challenge to you today. That after this, before the year is out, you go back to your community and identify a leader within that community and connect them. Let them know about the resources that are out there.

But before you even think about doing that, listen. Listen to what matters to them and their community. Listen to why they can't easily hop on this train. Not everybody's ready to do that.

As much as we love nature, as much as we love Wilderness and we want to share it with everybody, what we have to learn as a movement first to do is to listen. Listen to the community pastor. Listen to the young teenage mother. Listen to the single mother who's trying to make ends meet by paying rent and can hardly afford a carton of milk.

Those are the people that at the end of the day we're going to rely on to carry on the next 50 years of the Wilderness Act. We have to break down the silos. Just because we care about Wilderness does not mean we do not care about civil rights, does not mean we do not care about LGBT rights, does not mean we do not fight voter suppression.

Once we can break down those silos and come together as a people, as a community, and as the dream that we know we can draw for our future, Dr. King did not say, "I have a nightmare." He said, "I have a dream." With Wilderness on our side we can draw a much better picture of what that dream looks like for tomorrow, for the generations to come.

At the end of the day I do what I do not for the paycheck, because trust me, it's not that great. It's not for the accolades, it's not for the awards. I do it because of my family. Because of my mom, my dad, my two younger sisters who sacrificed so much so that I could be here today.

What I've come to learn through this movement is that family is very much relative. That if you're willing to stand sidebyside with me and fight for what is right, fight for justice, fight for the things that matter to our communities, fight for what you stand on, then you have a family member in me. Then you are my brother or my sister.

The dark times will come. Dark times will always be there. They don't go anywhere. But trust me that when the dawn comes, we will rise as a movement and we will be able to call this a movement of our generation.

When I got to shake Mardy Murie's hand, I did not know whose hand I was shaking. Yet I think about her legacy and what I've been able to carry here forward. To travel through the BridgerTeton forest and Wilderness. To travel through the San Gabriel Wilderness. To see every corner of the United States – because I've been able to have those opportunities. There's something that's as powerful as an idea worth fighting for.

That's what the Wilderness Act was 50 years ago, an idea worth fighting for.

I can't tell you how grateful I am to have you to call on and be able to put that challenge forward. That we can go back in the next three months and listen to our communities, listen to what matters to them, and invite them to bring Wilderness into their lives. Thank you.

Get Wild! Festival Performers

Contemporary Dineh (Navajo Nation) flute player, Andrew Thomas
Forest Service crosscut saw and pack animal demonstrations
Wilderness Passport Scavenger Hunt
Forever Wild by Susan Grace
Trio Los Amigos: Authentic Mexican guitar
Wilderness Awards (the Fish and Wildlife Service recognizes excellent agency Wilderness stewards)
Jicarilla Apache Butterfly Dancers
Keynote Speaker Introductions: Arthur “Butch” Blazer, Department of Agriculture Under Secretary
Keynote Speaker: Rue Mapp, Founder of Outdoor Afro
Keynote Speaker: Juan Martinez, National Geographic Explorer and Director of the Natural Leaders Network
Toya Pueblo Dancers
AKU-MATU, Inupiaq Rap Artist
Breakdancing by UHF, Zia Queens and Versatile Styles Studio
Wilderness Ranger Cookbook backcountry cook-off
Animal Opera: African dance music
Share a Campfire Story, hosted by Bob Kanegis, Tales & Trails Storytelling
Song, Dance and Stories hosted by Steve Toya and Clyde Vicenti
Wilderness Song Share hosted by Susan Grace
Le Chat Lunatique: Mangy jazz band
WILDHEART: Songs for the wild and her people Bart Koehler, of the Coyote Angel Band
Let it Grow: Grateful Dead tribute band

Exhibitors at the Get Wild! Festival

Exhibitors housed at tables and under tent tarps during the festival included:

Albuquerque Biopark	Kleen Kanteen
Animal Protection of New Mexico	Leave No Trace
Back Country Horsemen of America	National Cave and Karst Research Institute
Boyscouts of America	National Outdoor Leadership School
Philmont Scout Ranch	National Park Service
Bureau of Land Management	New Mexico Herpetological Society
City ABQ Climbing wall	New Mexico Volunteers for the Outdoors
Conserve America	New Mexico Wilderness Alliance
Daniel Richmond-Endangered Species Sand Art	New Mexico Wildlife Federation
Eagle River Designs, Inc.	UNM Art and Ecology Program
Earth Force	Public Lands Foundation
US Fish and Wildlife Service Southwest Region	Recreation One Stop
National Wildlife Refuges	Shadows of the Oldwest Encampment
Flow 397	Sierra Club, New Mexico
Free to Breathe	Society for Wilderness Stewardship
Ft. Union National Monument Encampment	Southwest Environmental Center
Glorieta Camps	The Jicarilla Apache Nation
Great Old Broads for Wilderness -	The North Face
Rio Grande Valley Broadband	The Wild Flame Project
Hawks Aloft	UNM LoboSEEDS
If You Care	Wild Spirit Wolf Sanctuary
Free Tibet	WorthWild



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The National Wilderness Conference was hosted by *Wilderness50*, a coalition of government, non-profit, university, and business partners, to celebrate the 50th anniversary of the Wilderness Act and envision the next 50 years.

Conference Committees

National Wilderness Planning Team Leaders in Celebration of the 50th Anniversary of the Wilderness Act

Greg Hansen, *Society for Wilderness Stewardship*

Vicky Hoover, *Sierra Club*

National Wilderness Conference Executive Planning Team

Tisha Broska, *New Mexico Wilderness Alliance*

Mark Conley, *Bureau of Land Management*

Greg Hansen, *Society for Wilderness Stewardship*

Vicky Hoover, *Sierra Club*

Lee Lambert, *Society for Wilderness Stewardship*

Lisa Ronald, *University of Montana, Wilderness Institute*

Keynote & Plenary Speaker Committee

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Erin Drake, *National Park Service*

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Beth Hahn, *Aldo Leopold Wilderness Research Institute*

Vicky Hoover, *Sierra Club*

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Lisa Ronald, *University of Montana, Wilderness Institute*

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Elwood York, *US Forest Service, Chair*

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Randy Gimblett, *University of Arizona*

Roger Kaye, *US Fish & Wildlife Service*

Rebecca Oreskes, *International Journal of Wilderness*

Alan Watson, *Aldo Leopold Wilderness Research Institute, Chair*

Recognition

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Kevin Proescholdt, *Wilderness Watch*

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People's Wilderness Film Gala Organizer

Ron Brinkley, *Film Festival Organizer*

Get Wild! Festival Organizers

Tisha Broska, *New Mexico Wilderness Alliance and Local New Mexico Committee*

Wilderness Celebration Exhibition Organizer

Lee Lambert, *Society for Wilderness Stewardship*

Conference Program Designer

Paula Eastwood, *Eastwood Design*

Conference Proceedings Organizers

Susan Fox, *Aldo Leopold Wilderness Research Institute*

Chelsea Phillippe, *Aldo Leopold Wilderness Research Institute*



“If future generations are to remember us with gratitude rather than contempt, we must leave them something more than the miracles of technology. We must leave them a glimpse of the world as it was in the beginning...”

- PRESIDENT LYNDON BAINES JOHNSON -

IN 2014, WILDERNESS ADVOCATES around the nation celebrated the 50th anniversary of the Wilderness Act. Throughout the year, Wilderness50—a coalition of Wilderness non-profits, federal agencies, universities, and businesses—hosted more than 850 local community events across America, debuted a Wilderness photography exhibit in the Smithsonian Institution’s renowned National Museum of Natural History, convened advocates during the Washington D.C. Wilderness Week, launched a national media campaign, and hosted the first National Wilderness Conference in 25 years.

Although many organizations participated in the anniversary events, 30 primary partners formally agreed to the interagency 50th anniversary Memorandum of Understanding, signed in 2012 by the four federal Wilderness management agencies and, on behalf of the non-agency partners, the Society for Wilderness Stewardship, Wilderness50’s fiscal sponsor. Ultimately, 115 organizations directly sponsored the Wilderness anniversary and its associated events through monetary donations.

The highest profile Wilderness-related event of 2014 was the National Wilderness Conference in Albuquerque, NM. This gathering, October 15 to 19, included sessions and plenary programs, a poster session, a two-day certified pre-conference training, various field trips to New Mexico Wilderness areas and cultural sites, a two-night Wilderness film gala, an exhibit hall, a youth summit, and an outdoor public festival. The collective goals of Wilderness50 guided conference planning:

- Engage the public to better understand and appreciate the many benefits and values of Wilderness, ultimately resulting in more people supporting responsible wildlands stewardship;
- Bring the Wilderness community together to efficiently and consistently steward Wilderness for the use, enjoyment, and benefit of the American people;
- Connect with today’s youth and with non-Wilderness using groups to find the thread that ties their lives to wild places so they can more directly relate to, understand, and value, Wilderness.

Overall, more than 75 volunteers from Wilderness50 non-profit and agency partners helped plan the anniversary conference. These Proceedings serve as an archive of the knowledge and experiences shared during the conference, as well as recognition of the tremendous efforts of volunteers, partners, and sponsors.