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Welcome

Bringing Non-Profits,
Communities, and Federal
Agencies Together for
Restoration and Monitoring

Audio: 1-888-844-9904
Access Code: 315-8323

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your computer speakers



*This meeting is being recorded

May 10, 2019

AGENDA

- **Remarks from Leadership**
- **Trout Unlimited + Forest Service Partnership Tools and Case Studies**
- **Resources for getting started with citizen science**
- **Questions and Discussion**

REMARKS

Tina Terrell
Associate Deputy Chief for
National Forest System
USDA Forest Service

FOREST SERVICE NATIONAL PRIORITY #3



**Promoting shared stewardship
by increasing partnerships
and volunteerism.**



REMARKS

**Helen Neville
Senior Scientist
Trout Unlimited**

US Forest Service and TU Partnership



- 134 active grants nationally
- 1 – 5 year timeframe
- Total amount awarded \$10.7 million

Partnerships allow us to do more effective work with less resources.



Tools for Bringing Together Non-Profits, Communities, and Federal Agencies for Restoration and Monitoring

The Trout Unlimited and Forest Service Model



www.tu.org

Aquatic Organism Passage



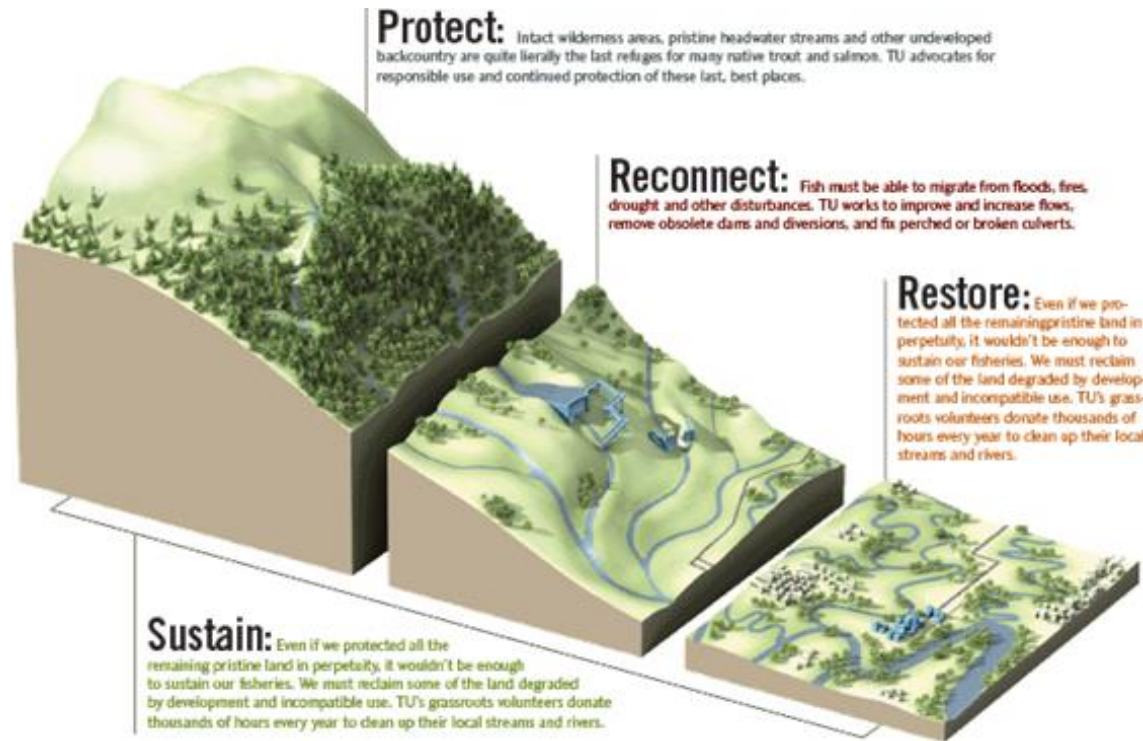
Stream Restoration



Monongahela National Forest Partnership



Anglers gathering scientific information about the fish and the places they love.



Trout Unlimited's watershed approach to coldwater fisheries management includes Protect, Reconnect, Restore and Sustain elements, providing an important approach to climate change adaptation and many other complex problems affecting stream systems. Illustration by Bryan Christie Design for TU.





TU areas of scientific expertise:

- Fisheries and aquatic/hydrological research
- Monitoring and evaluation
- Conservation planning and spatial analysis
- Science communication and technology transfer



Resources for programs and partners:

- Coordinating angler scientists
- Tool development (e.g., data collection apps, data visualization)
- Monitoring and study design

Prioritization and Effectiveness Monitoring

- Where will we get the most “bang” for our conservation “buck”?
- Are our projects meeting their objectives?

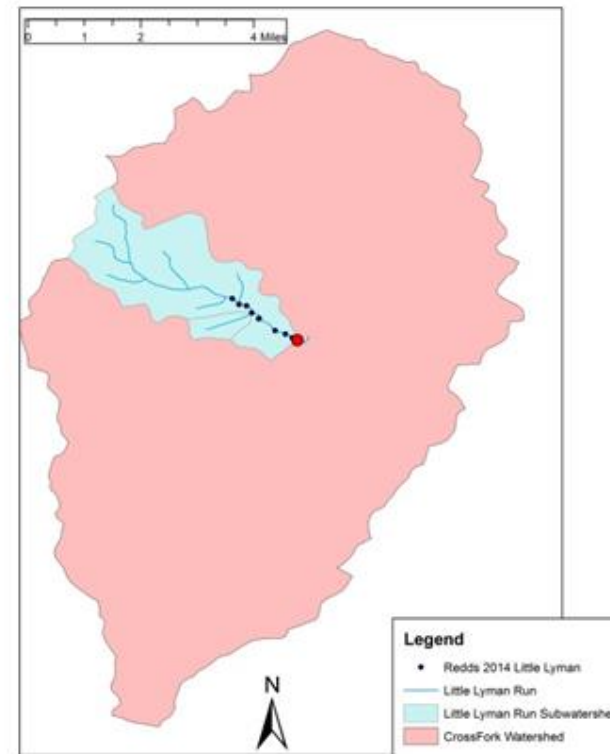


Effectiveness Monitoring

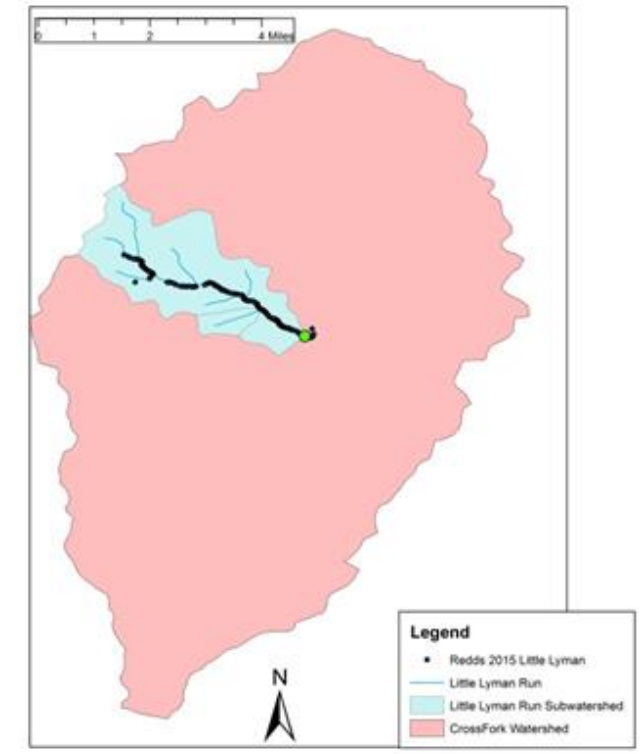
Redd surveys for effectiveness monitoring after passage restoration



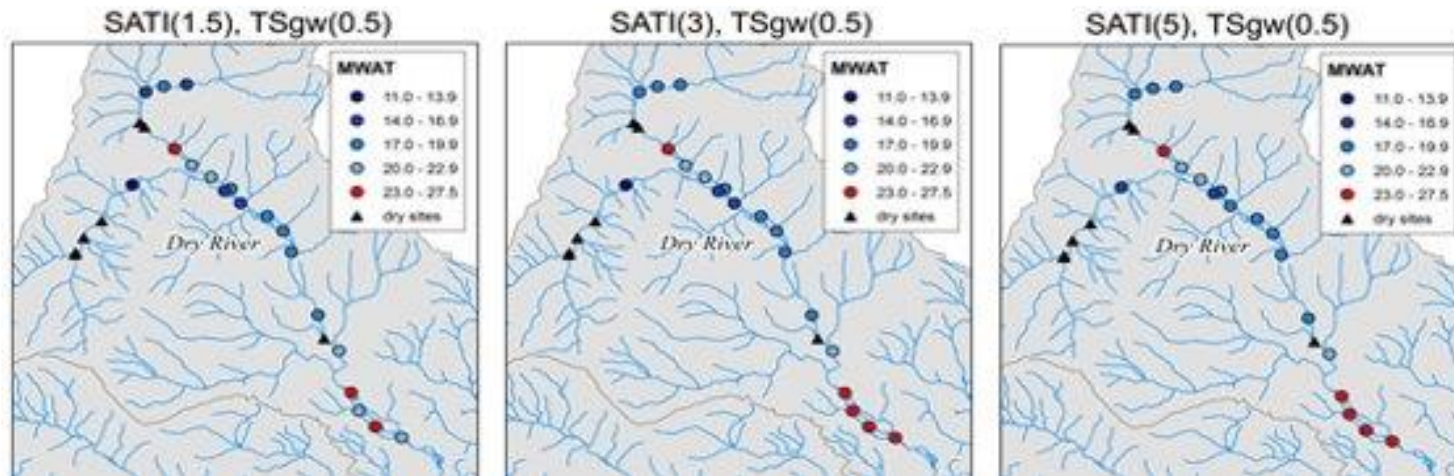
Before



After



Temperature Monitoring to Project Climate Change Impacts



- 51 volunteers deployed 91 sensors in 5 target watersheds
- Partnered with USGS for data analysis and visualization of forecasted future conditions
- Used by TU chapters and staff to prioritize restoration and protection efforts
- Baseline data for monitoring

Water Quality Snapshot Day event in the Allegheny National Forest

- TU, USFS and Penn State University and Western PA Conservancy involved citizen scientists in assessing water quality conditions throughout the forest and establishing a baseline for future comparison.
- Redd Surveys on streams slated for restoration



TU's Citizen Science Framework (Tool 3)



- Science Team
- Volunteer Operations
- Angler Science Coordinator
- Project Staff
- TU Grassroots

TU's Science Network
Introducing TU's core science team and network of scientifically-focused program staff

Core Science Team Embedded Program Staff

The screenshot displays a grid of staff members and a map. The staff grid includes:

1 Jason Barnes, Lahontan Cutthroat Trout...	2 Christine Brissette, Special Projects...	3 Paul Burnett, Utah Water and Habitat...
4 Seth Coffman, Fisheries Sciences Director	5 Warren Colyer, Director, Western Water and...	6 Jim DeRito, Fisheries Restoration Coordinator

The map shows the western United States with 20 numbered green location markers (1-20) indicating project sites. A sidebar on the left of the map contains navigation icons: a plus sign, a home icon, and a minus sign.

<https://www.tu.org/science/science-engagement/angler-science/>

Education and Outreach

- Better understanding of our home waters
- Expand and diversify organization activities
- Collaboration between volunteers, TU staff and agencies

Conservation Outcomes

- Early identification and tracking of emerging threats
- Monitor effectiveness of restoration and management
- Project prioritization



Angler Science Barriers



 Funding

 Staff Capacity

 Expertise

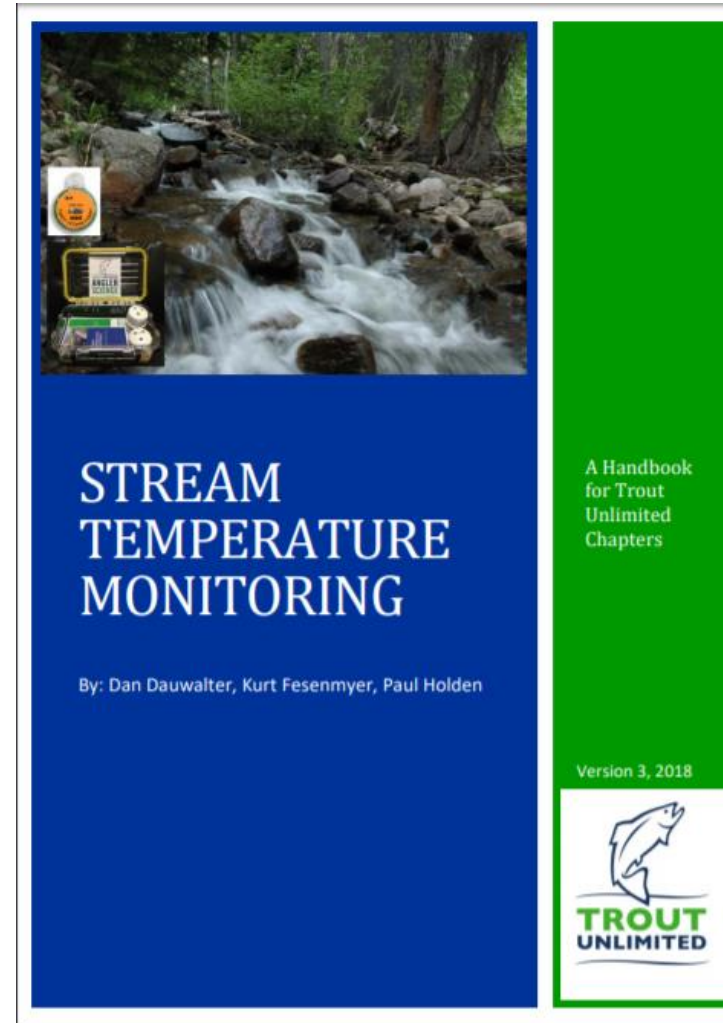
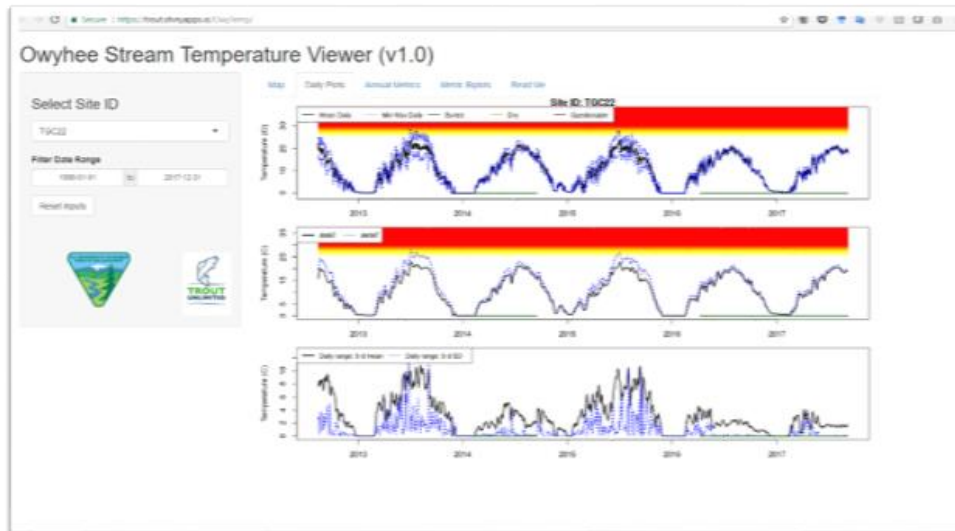
- Volunteer Engagement and Support
- Study Design
- Data Management



Citizen Science Tool Development (Tool 4)



- 🐟 Mobile applications
- 🐟 Data Management and Visualization
- 🐟 Methods Manuals



RIVERS app (map problem areas)



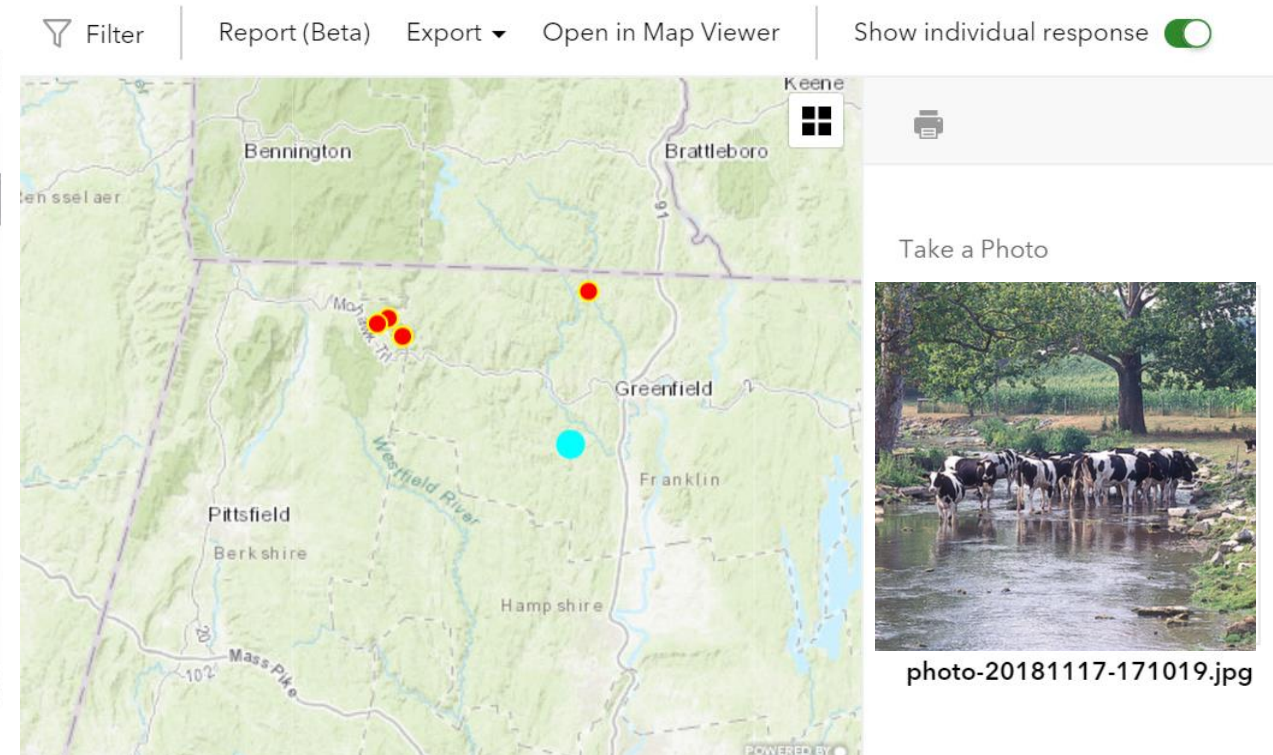
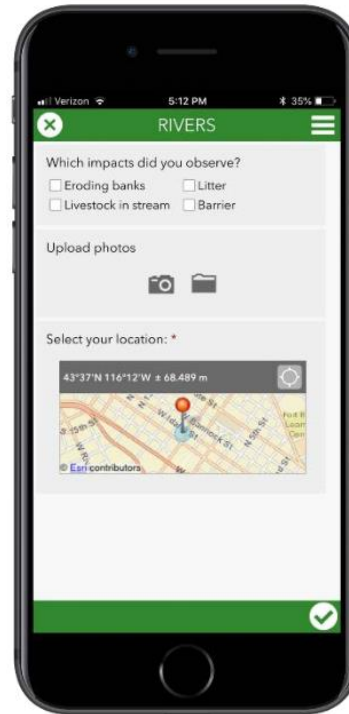
River Inventory by **V**olunteers for **E**fficient **R**estoration **S**trategies (**RIVERS**)

Anglers Identify Habitat Issues:

- Cows in stream
- Eroding banks
- Point source pollutants
- Barriers

Database:

- Potential projects
- Better react to funding opportunities



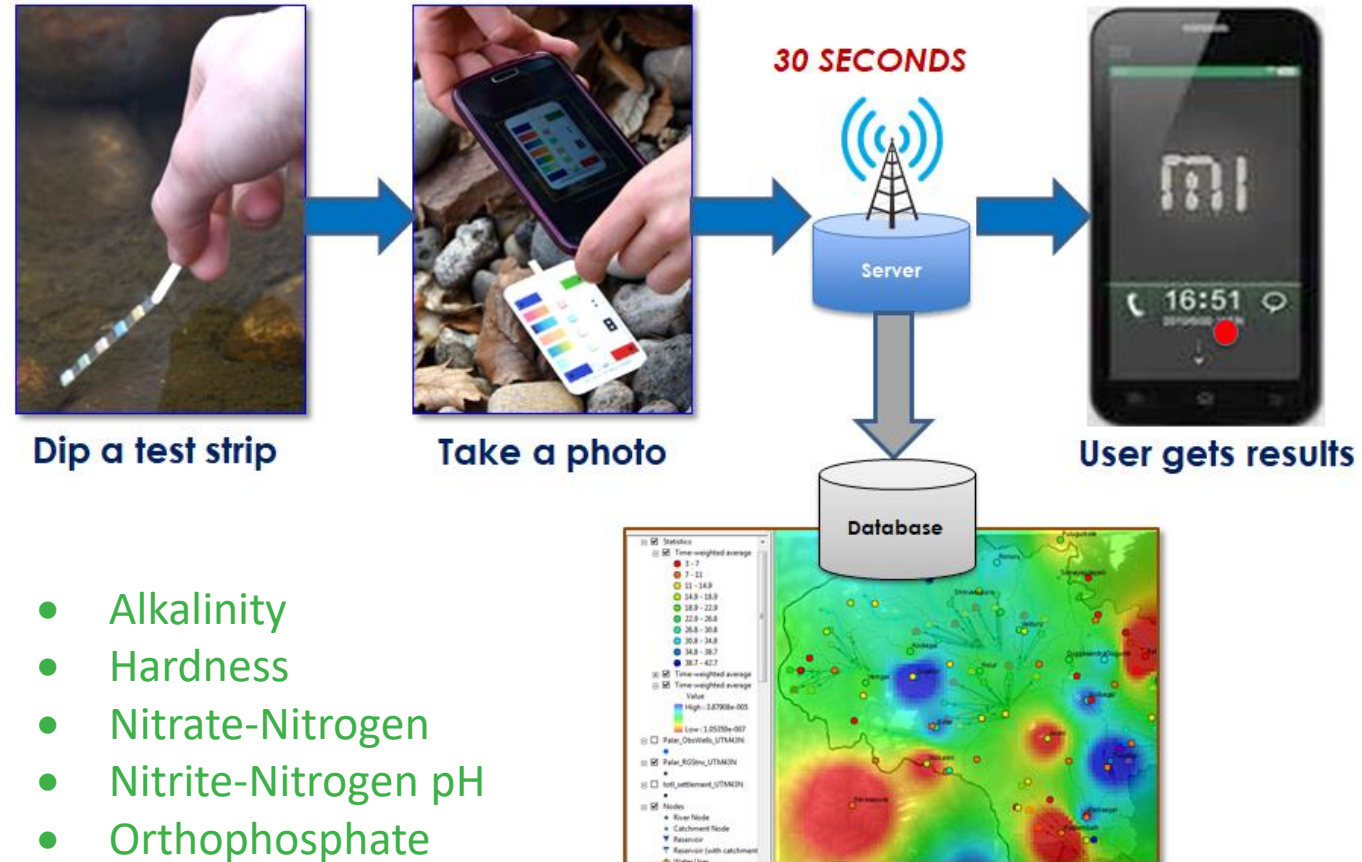
In Development: Water Quality mApp

Water Management Agency:

- Logs results, locations, metadata to database
- Trigger alerts
- Scientific studies on water quality conditions

Pilot Study:

- Driftless Area
- Proof-of-concept



TU/USFS Master Agreement (Tool 5)



GROWING NEEDS, LESS CAPACITY



Fire in the Pacific Northwest Region.

FOREST SERVICE MANDATE

- Foster resilient, adaptive ecosystems
- Deliver benefits to the public
- Connect people to the outdoors
- Advance knowledge

CITSCI FUND (TOOL 6)

GOALS

- Data to advance science and land management.
- Meaningful public participation.
- Strengthen partnerships.
- Share what was learned.



Volunteers with CitSci Fund project, *Engaging citizen scientists in field research on American pika, an indicator species for alpine ecosystem integrity*

APPLICATION

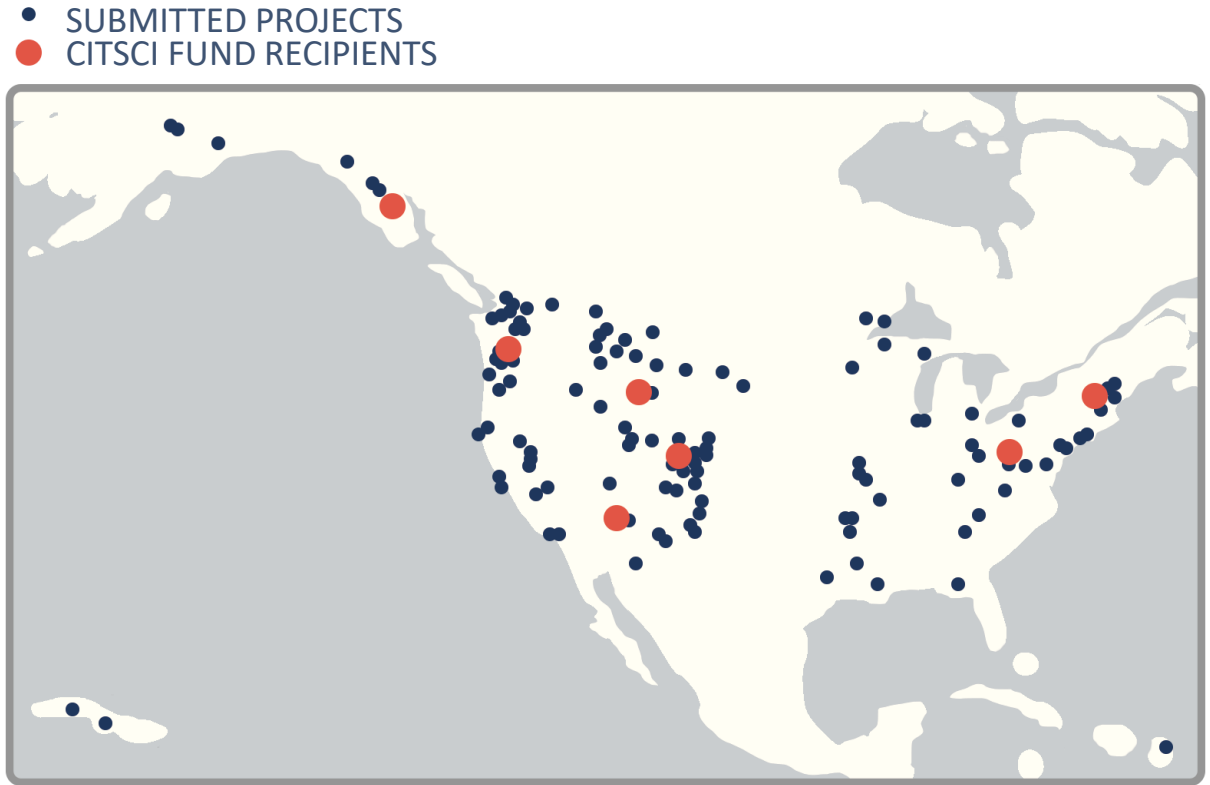
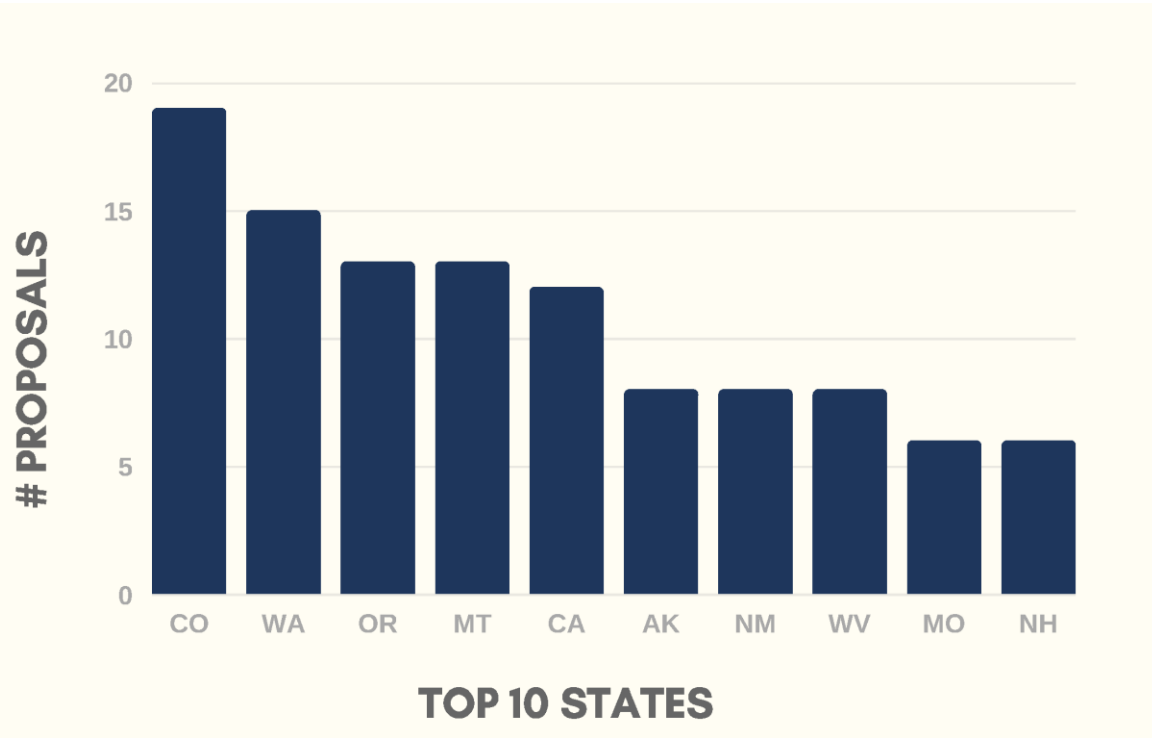
- Request for proposals in early fall
- FS Partner Lead and a Partner Project Lead with an agreement in place
- Any subject area
- Demonstrate meaningful volunteer engagement/collaboration
- Take place on NFS lands or data used to meet an FS Information need
- Have a genuine scientific and/or management outcome
- Duration of 6 months or longer

<https://www.fs.fed.us/working-with-us/citizen-science/competitive-funding-program>

PROJECT INCUBATOR

Level	Funding Limit	Duration	Description	Expected Outcomes
1 – Project Ideation	Up to \$10,000	Single year funding – Dollars must be spent and final report completed by May 15, 2020.	Initial idea or brainstorming between the Forest Service and a partner for a project that will meet a Forest Service information need but requires more time and testing to be able to complete a Project Plan . Volunteers have not yet been on the ground at the start of the project.	<ul style="list-style-type: none"> Completed Project Plan Completed field test (does not necessarily have to be with volunteers) Project evaluation and final report / database reporting of project Active participation in Cohort calls At least one webinar and one blog post on project
2 – Project Development and Implementation	Up to \$25,000	1.5 years funding – Dollars must be spent and final report completed by November 15, 2020.	<p>All the information is available to complete a Project Plan and implementation (active participation by citizen scientists) has not yet begun or citizen scientists have participated in field testing and pilots.</p> <p>OR</p> <p>Project is part of an established program but is adding a new component that requires testing such as a new research or monitoring question and methodology or expansion to new locations. Implementation on the new component (active participation by citizen scientists) has not yet begun or citizen scientists have participated in field testing and pilots.</p>	<ul style="list-style-type: none"> Completed Project Plan Citizen scientist participation in the project for at least one field season Project evaluation and final report / database reporting of project Active participation in Cohort calls At least one blog post/month describing project’s journey and one webinar to the national Community of Practice
3 – Ongoing Project	Up to \$10,000	1.5 years funding – Dollars must be spent and final report completed by November 15, 2020.	<p>For projects that have had active citizen scientists on the ground for more than one year and that have demonstrated results or shown success in meeting their objectives. These are projects that plan to continue into the future (demonstrate a funding sustainability model and a plan to continue after this year of funding).</p> <p>OR</p> <p>Level 2 CitSci Fund awardees. Eligibility for the 2018 Cohort begins in the 2020 funding year.</p>	<ul style="list-style-type: none"> All items from Level 2 Share Project Plan on website Development of a succinct guidance document for the project that includes protocols, best practices and other relevant materials Agreement to be a leader, trainer, and/or help other interested Forest Service units to implement the same or similar project

2018 BY LOCATION

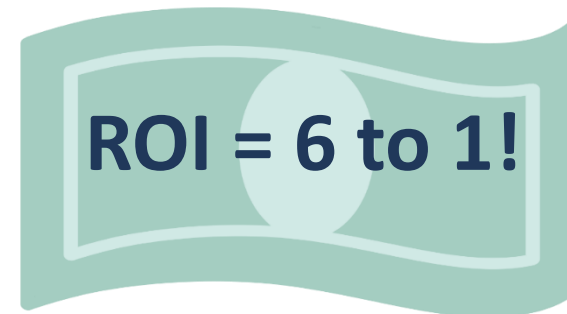


2018 POTENTIAL RETURN ON INVESTMENT

7 Projects funded by FS..... **\$152,216**

Partner match.....**\$106,896**

1,300 volunteers, 20hrs each***\$641,940**

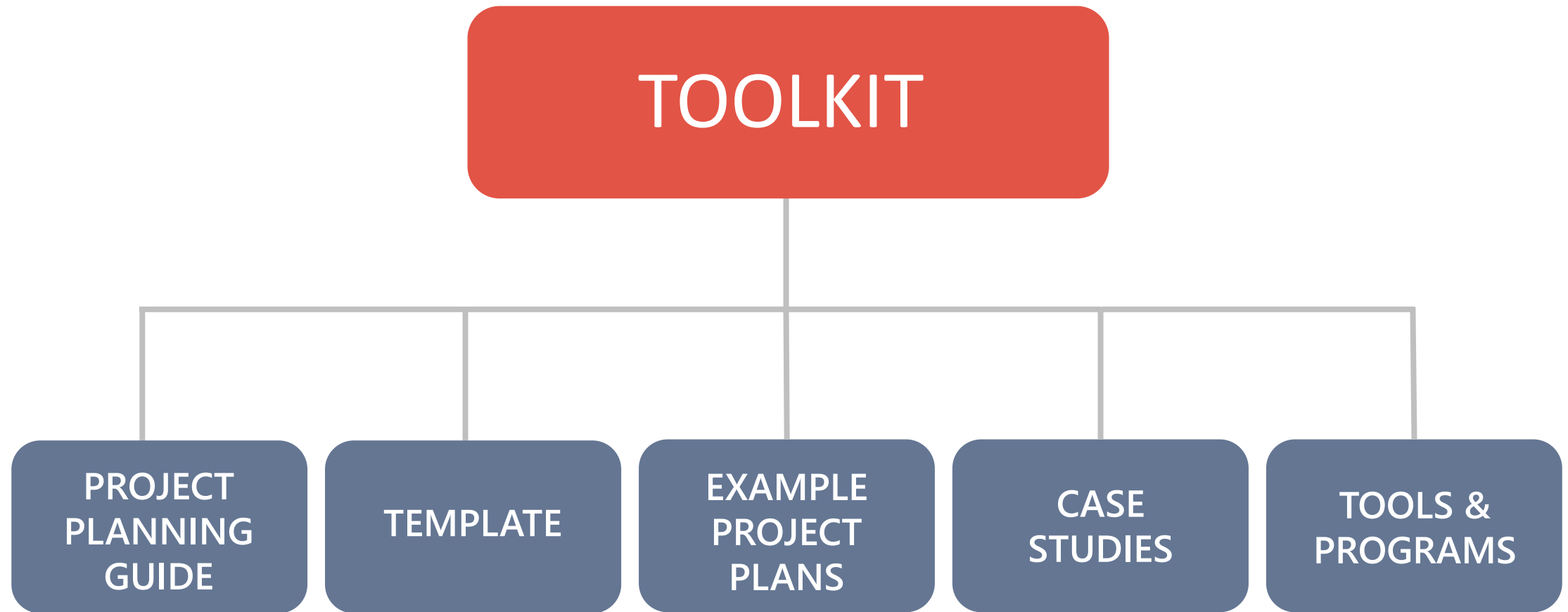


*Estimated number of volunteers in proposals combined with an estimated volunteer time per individual participant. Value of volunteer time calculated using [Independent Sector Estimated National Value of Each Volunteer Hour](#). These are estimates, not final values.

TOOL 6

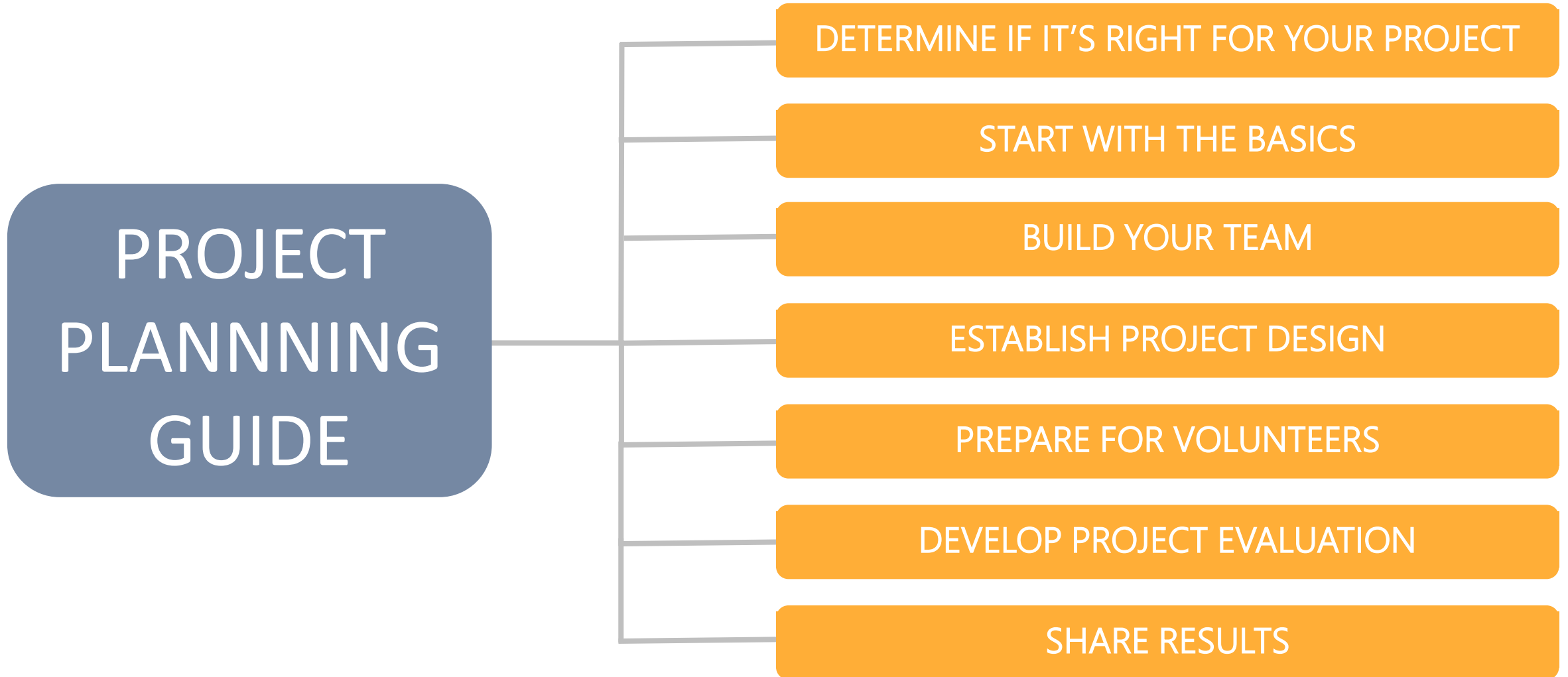


PARTS OF THE TOOLKIT



<https://www.fs.fed.us/working-with-us/citizen-science/citizen-science-toolkit>

PARTS OF THE GUIDE



PROJECT PLANNING GUIDE

APPENDIX A

TERMS RELATED TO CITIZEN SCIENCE

APPENDIX B

LAW, POLICY AND LEGAL CONSIDERATIONS

CHAPTER 3

BUILD YOUR TEAM



PERSONNEL

STAFF POSITIONS

LEAD SCIENTIST
PARTNERSHIP COORDINATOR
VOLUNTEER COORDINATOR
GIS SPECIALIST
DATA MANAGER
RESOURCE SPECIALIST
TEAM LEADERS
GRANTS & AGREEMENTS SPECIALIST
PUBLIC AFFAIRS OFFICER
LINE OFFICER

IN THE TOOLKIT:

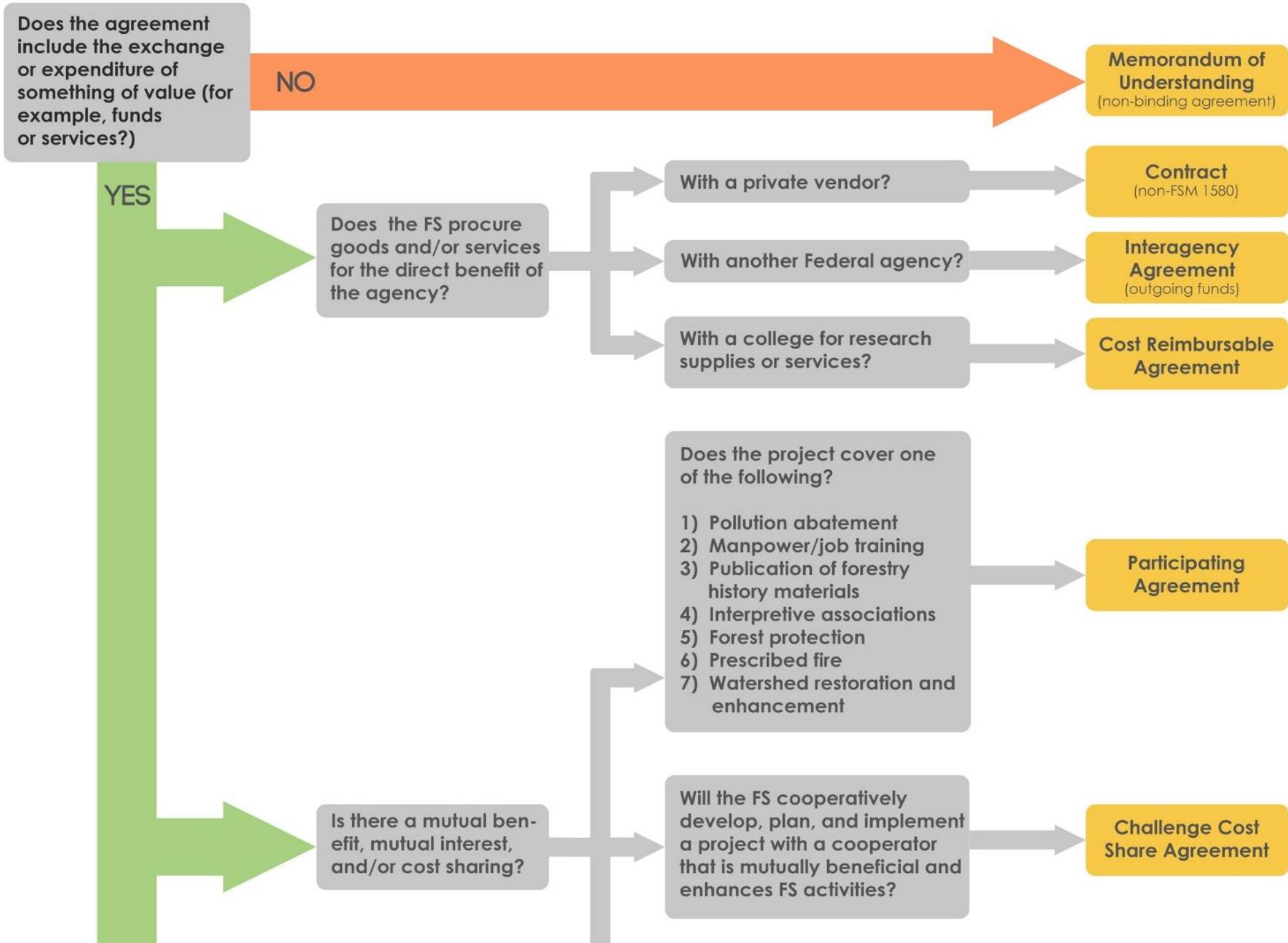
VOLUNTEER COORDINATOR

A key position for large or lengthy projects, a *Volunteer Coordinator*, recruits and communicates with volunteers, manages their schedules and training, updates volunteer resources and information to the website, and recommends volunteers for awards or other recognitions. This could be a staff member from the Forest Service or a partner organization. Coordinators and others should utilize the "[Volunteers in the Forest Service: A Guide for Coordinators](#)" as additional guidance.

PARTNERS & TRIBES

HOW TO FIND A PARTNERSHIP

- [Partnership contacts in regional offices & research stations](#)
- [Tribal points of contact](#)
- [List of non-governmental organizations](#)





What is working
for your
partnership?

What's
holding you
back?

What new
ideas do you
have?

What
partnership
tools are you
using?

What are some
opportunities?