



**AFHC**

Allegheny  
Forest Health  
Collaborative

# Annual Report • 2020



When we embarked on this Collaborative journey in 2017, our focus was on listening, sharing information and strengthening relationships. What began with the assistance of professional facilitation has since grown into a shared leadership structure, with actively engaged Working Groups focused on developing solutions to collective challenges and in taking advantage of opportunities to partner in improving forest health across the High Allegheny Unglaciated Plateau. New faces have stepped into leadership roles of the AFHC, and hearing positive news of our efforts, new partners have joined us along the way. It is truly fulfilling to look back and to reflect on the progress we have made in just a few years.

This past year brought its share of challenges - a pandemic that impacted society, industry, and economic well-being across the country and around the globe. Despite this, we journeyed forward, using virtual technology to remain engaged and moving forward. We held one carefully planned and socially distanced in-person meeting for elected officials in 2020, which is shared in detail in the full report. We particularly appreciate that private industry remained engaged in the Collaborative as they navigated the challenges of this extraordinary circumstance.

Wayne Bender, Executive Director of the PA Hardwoods Development Council, retired in 2020. Wayne was a passionate advocate of the AFHC and while he will be missed, we feel fortunate to have Jonathan Geyer, Acting Executive Director of the HDC, stepping into those shoes and voicing his commitment to our efforts.

The Collaborative also lost a significant member and friend in Sue Swanson, former Executive Director of the Allegheny Hardwood Utilization Group, who passed away in December. Sue was a tireless advocate for the companies, agencies, individuals, and natural resources of the Allegheny region. She had been involved with the Collaborative from its inception, serving on several working groups, assisting in the creation of the shared leadership model, and working to bring Chief Christiansen to the ANF region in 2018. Sue will be missed by all who were privileged to know and work with her. AHUG continues their commitment to the AFHC through their current Executive Director, Amy Shields, who stepped into the Collaborative's co-lead role following Sue's retirement in 2019.

As we move into 2021, we look forward to a return to gathering in person once again - to sharing ideas and information, learning from one another, and most importantly to furthering the relationships that have developed and that continue to be our greatest asset in the ongoing success of the Allegheny Forest Health Collaborative.

We hope you enjoy this AFHC Annual Report for 2020!

*Andrea Hille*

*Amy Shields*

## **AFHC Leadership**

### **Co-Leads**

Andrea Hille  
Allegheny National Forest

Amy Shields  
Allegheny Hardwood Utilization Group

### **Steering Committee**

Cecile Stelter (Communications Chair)  
Pennsylvania Bureau of Forestry

Susan Stout (Silviculture Chair)  
Forest Service, Northern Research Station, emerita

Todd Ristau (Research Chair)  
Forest Service, Northern Research Station

Tamara Gagnolet (Monitoring Chair)  
The Nature Conservancy

Jody Groshek (Non-Native Invasive Plants Chair)  
McKean County Conservation District

Amanda Hetrick (Aesthetics and Safety Chair)  
Forest Area School District

Cliff Lane (representing local elected officials)  
McKean County Commissioner

Mike McEntire (representing forest industry)  
Forest Investment Associates

**Front cover:** Mike Hovatter (LandVest) talks about the glossy buckthorn treatment and prevention on the legislative/media field day tour (Forest Service photo)



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## AFHC Strategy Updates

*In 2017, the AFHC identified strategies on which we would collaborate and communicate to continue shared learning and stewardship. We made progress on many of these strategies in 2020.*

*Most of the collaborative leadership and working groups participated in virtual meetings and conference calls throughout the year to maintain their momentum and the spirit of collaboration.*

### Silviculture Working Group

This Working Group was slowed but not stopped by COVID-19. We were just putting the finishing touches on a presentation about our work – the Treatment Priority Index and our Silvicultural Decision Charts for Unhealthy Stands – when in-person meetings were canceled. Ultimately, bringing that PowerPoint back out for a very well-received presentation to more than 400 people at the February 2021 Insect and Disease Briefing was a great way to restart our work.

During 2020, we made progress on better guidelines for assessing the adequacy of seed source in stands with unhealthy overstory. In fact, we recognized that what really matters for regeneration is not seed production, but the establishment of viable seedlings from that seed. So, we've turned our attention to a seedling production index. This is still a work-in-progress, but we've agreed that the health of tree crowns should be used to reduce the weight of their basal area in terms of seed production.

We've also agreed that regardless of the amount of black cherry basal area in a stand, no more than 20 square feet can be counted towards seedling production. This reflects the widespread observation that it is very difficult to establish black cherry seedlings in stands with a high proportion of overstory basal area in black cherry.

Goals for 2021 include:

- Working with the Research Working Group to improve our understanding of increases in birch competition in new stands – recognizing what locations are most vulnerable and which management strategies are most effective in limiting birch. We'll look at Pat Brose's (USFS) results and those from Lance Vickers of the University of Missouri working with FIA data.
- Better understanding of management of glossy buckthorn invasions
- Silvicultural strategies to manage species composition and diversity in young stands
- Silvicultural strategies for degraded stands – what does our work have in common with similar work going on elsewhere
- Understanding and managing soils impacts of intensive on-site chipping treatments
- Finishing our silvicultural decision charts and hopefully publishing them

We also want to recognize the terrific work of our colleagues at the USFS Forestry Sciences Laboratory and the University of Missouri in publishing an important paper synthesizing historical data and new analyses to document the state of knowledge about changes in black cherry. The study, "The Forest of Unintended Consequences: Anthropogenic Actions Trigger the Rise and Fall of Black Cherry," is available at: <https://www.nrs.fs.fed.us/pubs/62065>





## Research Working Group

The Research Working Group met three times in early 2020. The group partnered with the Allegheny Hardwood Utilization Group to submit a proposal to the Pennsylvania Department of Agriculture's Specialty Crops Block Grant program. The proposal was to partner with the University of Missouri (specifically Lance Vickers, a nationally recognized expert in analysis of FIA data) and the USFS Research Lab in Irvine, PA to better understand where and under what circumstances (site, overstory density, disturbance history, etc.) birch regeneration is increasing in dominance in our landscapes. We also tried to learn more about Research Cooperatives. We hosted a webinar with Rachel Cook of North Carolina State University and the Forest Productivity Cooperative that some of our members also belong to. At a later meeting, we discussed other models of smaller, lower capital cooperatives, but agreed that any discussion of a cooperative for our region would necessarily need to wait for post-COVID conditions and some positive stabilization of timber prices.

## Communication Working Group

While two AFHC events fell victim to COVID in early 2020, the pandemic did not stop the Communications Working Group. In addition to the successful "in-person" Legislative/Media Day on September 8th (see article on page 10), the Communications Committee published the 2019 Annual Report and a one page summary of the mission and vision of the AFHC in April of 2020.

Through our extensive email network and the AFHC Facebook page, the working group was able to disseminate information on a wide variety of topics including grant opportunities, APIPMA's invasive species and iMapInvasives training, PA's Spotted Lanternfly quarantine, carbon credit

initiatives for private forest landowners, and hemlock woolly adelgid training. Valuable opportunities to provide input to the Pennsylvania State Forest Action Plan and the Bureau of Forestry's strategic plan were shared. News items of interest to the region's forest community were shared, along with research articles and other documents published by partners of the AFHC. Daily postings celebrated National Forest Products week and promoted the virtual PA Farm Show.

In May, an article featuring the AFHC was published in the Society of American Foresters *Journal of Forestry*. "Managing Forest Health through Collaboration on the Allegheny High Unglaciaded Plateau" was written by Josh Hanson, Andrea Hille, Susan Stout, Maureen McDonough, and Bill Oldland.

On May 14, Andrea Hille and Amy Shields presented a summary of AFHC accomplishments to the Pennsylvania Hardwood Development Council. The 25-member Council represents the Governor's cabinet, the Pennsylvania General Assembly, industry, regional hardwood groups, academia, and other agencies. The summary highlighted accomplishments of each working group and provided website and Facebook links for additional information.

In September, the Pennsylvania Hardwoods Development Council published a report titled, "State of the Forest Products Industry in PA —2020," which featured a summary article on the AFHC.

The AFHC was featured in the May 2020 Journal of Forestry.



## Non-native Invasive Plant Working Group

The Allegheny Plateau Invasive Plant Management Area (APIPMA) serves as leadership for the AFHC Non-native Invasive Plant Working Group. The McKean County Conservation District has continued to steer APIPMA, housing coordinator Madeline Stanisch as a staff Resource Specialist. APIPMA covers five counties in north central Pennsylvania, including the Allegheny National Forest.

Priorities in 2020 included outreach, increasing public awareness, educational workshops, and a new invasive plant control program. Work included making landowner contacts for plant treatment, volunteer training, partner training with pesticide license update credits, and invasive plant population surveys. Over 50 partners received APIPMA newsletters and updates. In-person partner meetings were not held due to the pandemic, however three workshops were completed prior to March 2020.

### 2020 APIPMA Highlights:

- Three training workshops on invasive plants (two Japanese knotweed, one Goatsrue)
- Outreach article series during National Invasive Species Awareness Week
- New PA Department of Agriculture grant funds targeted invasive treatment which will continue in 2021
- Funding for 11 municipal staff to have pesticide license materials and testing
- Invasive plant populations mapping using iMapInvasives, Survey 123, and Collector tools (with volunteers)
- Work with landowners to prevent and treat goatsrue on 34 private properties and Japanese knotweed on 21 private properties (this treatment project is a prime example of working across land ownerships to benefit a larger landscape)

The McKean County Conservation District continues goatsrue and knotweed detection and treatment, funded through Pennsylvania Department of Agriculture Early Detection Rapid Response Grants. Forecon, Inc. implemented the herbicide treatments, which will be repeated in 2021. Efforts made to secure additional funding for Early Detection Rapid Response plant treatment, in particular glossy buckthorn, led to discussions with several timber management companies to identify satellite populations for treatment. This will help create a database of sites for treatment project implementation when funding is awarded.

A new project, spearheaded by professors Mary Mulcahy and Denise Piechnik at the University of Pittsburgh at Bradford (APIPMA partners), identified and mapped populations of invasive Japanese tree lilac on campus and in the nearby riparian areas. This work brought awareness of invasive plants to students and gave them real experience with a problem with potential impacts to the local ecosystem. This project was showcased the Winter 2020/2021 edition of the Pennsylvania iMapInvasives newsletter.

McKean County Conservation District continues to support APIPMA Resource Specialist staff salary, outreach, and projects through a U.S. Forest Service Challenge Fund Agreement and PDA Rapid Response funds. New funds are being sought. To date, APIPMA has brought together \$139,293 for non-native invasive plant work.

The PA Invasive Species Council is discussing additional regional invasive species management groups across the state. APIPMA is one model for the plan, and the APIPMA Strategic Plan will be utilized in the development of additional partnerships. APIPMA participates in PISC meetings and has been nominated as a voting member.





## Hemlock Conservation/Hemlock Woolly Adelgid

It's been an eventful year in the collaborative effort to monitor and protect hemlock across the High Allegheny Unglaciated Plateau (HAUP). Prior to the onset of the monitoring season, the Roger Tory Peterson Institute (RTPI) submitted a joint project proposal to the Evaluation Monitoring Program of the Eastern Region State and Private Forestry (S&PF) to expand the Allegheny Forest Health Collaborative partnership through implementation of an all-lands hemlock conservation and hemlock woolly adelgid (HWA) detection and suppression strategy. The Nature Conservancy (TNC) has been a partner in hemlock conservation efforts for many years now, and was a partner in developing this most recent proposal in support of hemlock conservation on the HAUP. Although the proposal was received with merit, it was deemed more appropriate for the Landscape Scale Restoration Program and thus not selected for funding.

Undeterred by the setback, members of the Hemlock Woolly Adelgid and Monitoring Working group forged ahead with the prioritization of hemlock for monitoring and coordination of HWA surveys. Building on the prioritized hemlock conservation area (HCA) work accomplished by members of the Collaborative in 2014, the Allegheny National Forest (ANF) and S&PF further prioritized a set of survey blocks totaling 7,200 acres for HWA surveys. The newly prioritized survey blocks – located within Focal Hemlock Conservation (HCAs) and/or high use developed recreation sites – are scheduled to be surveyed in 2021 to establish a monitoring baseline. Moving forward, the ANF has established annual monitoring goals that ensure survey block revisitation once every three years.

Next, ANF, RTPI and the PA Bureau of Forestry (BOF) refocused on coordinating the 2021 HWA survey effort and standardizing the data collection and management methodologies. In addition to borrowing heavily from BOF when crafting its General Hemlock Survey Protocol, the ANF also modeled its data schema on that used by BOF and developed a set of mobile data collection and storage tools to streamline the workflow. So, although challenges remain – e.g. proprietary barriers to interagency data exchange – the data collected by the ANF, RTPI and BOF are now being more efficiently collected and stored in formats that are conducive to the maintenance of a unified dataset.

The coordinated HWA monitoring effort is progressing, with the ANF having completed roughly one-third of the prioritized survey blocks, while the BOF and RTPI continue to complete complementary surveys on non-federal lands. To date, no new HWA infestations have been reported as a result of the concerted monitoring effort. Meanwhile, preexisting HWA infestations on the ANF continue to be dealt with through a combination of chemical and biological control.

Unfortunately, in 2020, HWA was found at the Handsome Lake Campground on the ANF, and ANF staff hope to chemically treat this infestation in 2021.

S&PF and BOF also confirmed the successful establishment of the predatory HWA beetles *Laricobius oskakensis* on the ANF, following biocontrol releases from previous years.

## Monitoring Working Group

In addition to the work described under the hemlock conservation/hemlock woolly adelgid section, the monitoring group has been wrangling with protocols and data management platforms to share information across ownerships and landscapes. Tamara Gagnolet is leading this effort.

The original intent of mapping was to identify areas where members of the collaborative could work together on future activities. But there are other advantages. Mapping across ownerships could help AFHC report accomplishments and identify new patterns and research questions across the landscape. Privacy concerns are an issue, however.

In the past, AFHC used the old-school system of marking spring treatment areas on a map of the region and talking out opportunities to collaborate on treatments.

The monitoring group is discussing whether there is a mapping software that would work for all partners; whether partners will have the technology, interest, and time in uploading their information; and if it's worth developing one shared database for future work. These are important questions and the work continues.



## Special Topic:

### National Environmental Policy Act

The Forest Service updated its National Environmental Planning Act (NEPA) planning regulations in November 2020. The update, among other things, created several new categories for federal actions that may be excluded from needing environmental assessments, including one that allows for up to 2,800 acres of restoration and resilience activities. Projects using this category must be developed through a collaborative process, and are subject to restrictions on road construction and reconstruction. This new category may be used for a large variety of activities, including stream restoration, invasive species control, prescribed fire, reforestation, thinning, timber harvesting, and other treatments proposed for the primary purpose of restoration or resilience. The regulations also include several other changes that may help us develop projects more efficiently in the future. Additional information is available online at [https://www.fs.fed.us/emc/nepa/nepa\\_procedures/index.shtml](https://www.fs.fed.us/emc/nepa/nepa_procedures/index.shtml).

In addition, government-wide NEPA regulations were also updated in 2020. The updated regulations, among other things, provide new direction for analysis of environmental effects from federal actions, clarify when NEPA applies, and establish new time and page limits for environmental assessments and impact statements. The first vegetation management environmental assessments prepared by the Allegheny National Forest under these new regulations are Pleasant and Deadman's Corners. Additional information is available online at <https://ceq.doe.gov/>.

*University of Pittsburgh at Bradford professors Denise Piechnik and Mary Mulcahy identified and mapped populations of invasive Japanese lilac on campus in 2020*





## Special Topic: Good Neighbor Authority Update

Allegheny National Forest and Pennsylvania Department of Conservation and Natural Resources, Bureau of Forestry (BOF) staff continued cooperative work through the Good Neighbor Authority in 2020. Following signature of the Master Good Neighbor Agreement (GNA) in March 2018, two Supplemental Project Agreements have been signed:

Supplemental Project Agreement (SPA)—  
Ecological Surveys signed April 2018,  
modified January 2020.

- Ecological surveys in areas proposed for timber management in future years—increases ANF planning/survey capacity.
- Over 1,300 acres of surveys in about 60 stands accomplished by BOF staff in 2019 field season.
- Completed over 30 fire monitoring plots across 5 management units in 2020 field season

Supplemental Project Agreement (SPA)—  
Church Run Forest Product Removal  
(timber sale- signed January 2020)

- SPA forest product removal (via BOF timber sale) will allow for addition of timber harvest units with increasing complexity over time (e.g. pre-road reconstruction, access issues, etc.)
- Phase 1 Church Run Timber Sale prepped by BOF staff and awarded in September 2020- includes 56 acres; 852 MBF valued at \$288,915. Harvest operations ongoing in 2021.
- Phase 2 includes 15 acres; estimated volume of 173 MBF to be prepped and offered in 2021.
- Future Phases extending this SPA into 2022 and 2023 are under discussion

In December 2020, staff from both agencies reconvened to share accomplishments to date and discuss ideas for Good Neighbor Authority cooperative work moving forward. Exploration into other program areas with mutual goals and objectives are under review and consideration.

The long term vision for both agencies is to develop a Good Neighbor Program that is self-sustaining (through program revenue from the sale of ANF forest products in GNA timber sales), that is mutually beneficial, increases effectiveness for both agencies, and enhances landscape level restoration efforts.



*The Pennsylvania Hardwoods Development Council leads a bi-monthly dialog between members of the AFHC and state officials from the Department of Agriculture, Department of Conservation and Natural Resources, and Game Commission.*

## Special Topic: Pennsylvania Society of American Foresters Deer Committee

The Pennsylvania Society of American Foresters Deer-Forest Committee reconvened in January 2018 when members realized that deer populations and healthy forest habitat were once again out of balance.

AFHC members may remember all of the efforts this group made in the 1990s to advocate for science-based management of white-tailed deer populations in Pennsylvania. The introduction of a concurrent rifle season for antlered and antlerless deer in 2002, increase in allocations of antlerless tags, and creation of the DMAP program all resulted in lower deer populations across the state.

Public pressure to increase deer populations over the past ten years have reversed many of the gains that were made, however. At the most recent meeting in January 2021 nearly every participant from across the state agreed that the deer population in their area was out of balance with the habitat conditions.

Over the past four years, the Committee has advocated for a variety of measures, including but not limited to:

- More opportunities for adult and youth hunters through season extensions and Saturday/Sunday hunting
- A return to the two-week concurrent rifle season statewide for antlered/antlerless deer
- Relaxation of some restrictions of the DMAP program
- A commitment by Commissioners to follow the recommendations of the PGC biologists when setting antlerless allocations and seasons across the state, and their recommendations for battling the spread of Chronic Wasting Disease

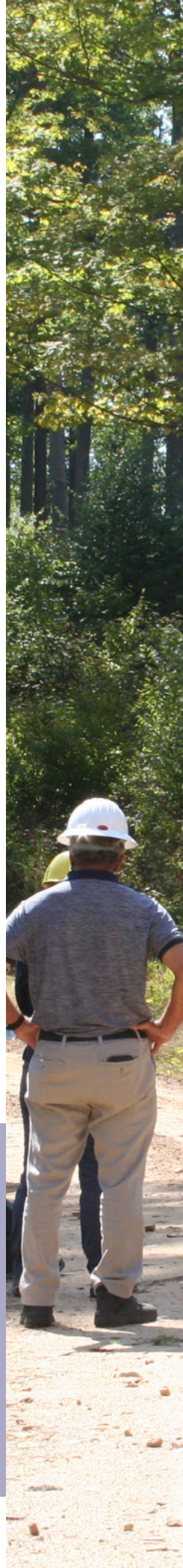
Nearly all the recommendations have been realized. This is very encouraging, but the committee intends to remain vigilant because they now know how fragile such victories can be.

New challenges include hunter recruitment and retention, a preference for harvesting antlered deer over antlerless, and the lack of hunters who want to take more than one deer. All these shifts in the hunting culture will make our goals more difficult to attain.

## What to watch for in 2021

Our spring collaborators meeting will be held April 21, 2021, using Zoom. Working group chairs will report out on progress and upcoming work, and we'll have special reports on Good Neighbor Authority and NEPA, along with a hardwood industry update from Jonathan Geyer, Pennsylvania Hardwoods Development Council.

Immediately following the full collaborator's meeting, AFHC forest landowners will meet to share planned activities for 2021 and 2022.





## Report from the Field: 2020 AFHC Legislative/Media Day

On a sunny September day in 2020, 16 federal and state legislators, and leadership from the Allegheny National Forest, state natural resource agencies, regional economic development, and Penn State met at Evergreen Park in Kane to learn about the Allegheny Forest Health Collaborative. An additional 30 volunteers from industry and various public agencies provided presentations at four field stops and an afternoon luncheon.

The tour showcased three themes:

- Action is needed now to ensure healthy forests
- Sharing techniques with public and private land managers across the landscape produces valuable feedback and success in addressing critical forest health issues across the region
- AFHC is actively exploring ways to increase reinvestment into the region's forests and communities

The field sites, detailed on the next few pages, provide insight into the depth and breath of AFHC partnerships.

### Stop 1: Landscape-level treatment of Japanese Knotweed in the Tionesta watershed

West Hemlock Avenue, Kane

*AFHC partnerships make landscape-level management of invasive species more effective  
Early treatment is crucial*

The first stop, on West Hemlock Avenue in Kane, highlighted the importance of landscape-level management of non-native invasive plants. The group discussed a project designed to develop and implement a treatment and control strategy for Japanese knotweed in the Tionesta watershed. With assistance from the Kane Parks Commission, Kane Area High School Students, and community volunteers, Japanese knotweed and other invasive plants have been inventoried at multiple sites in Kane since 2019 using the iMapInvasives mobile app. Knotweed treatments were conducted in the summers of 2019 and 2020. Follow up monitoring and treatments will continue through 2022 as funding allows.

The Japanese knotweed project is being implemented by the McKean County Conservation District and the Allegheny Plateau Invasive Plant Management Area, with funding from a Rapid Response Grant provided by the Pennsylvania Department of Agriculture.



*West Hemlock Avenue site before and after treatment for Japanese knotweed.*

## Stop 2: Whole-tree chipping for forest restoration demonstration area Kane Experimental Forest

*When wood chip markets are strong, this treatment allows for restoration on a break-even basis, with no chemical or mechanical treatments*

*This treatment led to the first weight-scaled sale on the Allegheny National Forest, strengthening markets for low-value wood*

The second and third stops on the tour demonstrated the benefits of on-site whole-tree chipping for removing interfering understory vegetation to promote diverse, desired regeneration. When markets for wood chips are strong, this treatment allows landowners to create restoration conditions on a near break-even basis, rather than paying for chemical or mechanical treatments of the interfering vegetation.

Before lunch, participants visited a stand on the Kane Experimental Forest that had a very dense American beech understory and a declining black cherry overstory. With no treatment this stand was set for a permanent cycle of overstory mortality, beech growth, and beech death. The stand was selected to be a demonstration site for whole-tree chipping. The sale was cut in September 2019. Trees 1" – 4" were left on the forest floor, sawtimber trees were marketed as sawtimber, and the remaining stems were chipped on site and sold by weight. The interior 27 acres of the sale will test three post-harvest approaches: no supplementary regeneration treatments, standard ANF treatment of broadcast herbicide of beech root suckers, and immediate post-harvest herbicide on stumps of beech trees 5" diameter and larger.

Although the first formal tally of regeneration development isn't scheduled until the summer of 2021, regeneration today is abundant and healthy, consisting of pin cherry, yellow poplar, red maple, cucumber, and an occasional black

cherry. The Forestry Lab will monitor regeneration development as affected by the treatments, and the ANF is monitoring soil disturbance and recovery.

Many AFHC members participated in designing and implementing this demonstration. Pre-treatment inventory was conducted by a mix of ANF personnel and Forestry Sciences Lab volunteers. ANF personnel developed a new kind of contract and worked with Domtar to certify scales in Johnsonburg to US Forest Service standards so that the chips could be sold by weight. This project was among the first weight-scale sales in the entire Eastern Region of the Forest Service. Generations Forestry marked the sawtimber to ensure adequate light reached the forest floor. Domtar previewed the site to be sure that it met their standards for providing enough material operationally, and Cochran & Zandi Lumber Company altered their schedule so that harvesting could occur at an optimum time.

*Ken Kane, president and owner of Generations Forestry (center), discusses whole-tree chipping for forest restoration.*



## Lunch... and networking

In effort to further emphasize the collaborative nature of the AFHC initiative, members of the region's hardwood industry were invited to join the tour group and presenters as they returned to Evergreen Park for a socially distanced mid-day lunch, hosted by AHUG and the North Central Regional Planning and Development Commission. Seventeen individuals representing twelve hardwood companies from the landowner, logging, forestry, sawmill, secondary manufacturing and paper/fiber sectors participated in this portion of the day's activities, along with representatives from a regional school board and a wildlife conservation organization.

With a variety of Federal and State legislators and staff members on hand, as well as executives of the PA DCNR, PA Department of Agriculture and the PA Game Commission, industry appreciated the personal networking opportunity, which had been largely elusive during the COVID pandemic.

After lunch, legislators and agency heads addressed the group, thanking all those who had assembled for the taking the time to participate and share their experiences and concerns, in both landscape management and in manufacturing. Many reiterated their appreciation for the tremendous collaborative efforts being undertaken in the region, and also thanked the AFHC for choosing demonstration sites that not only highlighted areas where the threats to forest health are of great concern, but also those areas where the efforts of the AFHC initiative have been successful in addressing those threats.

Wayne Bender was presented with several gifts in recognition of his longtime service to the hardwood industry and to the forests of Pennsylvania. Wayne commented that he had been honored to serve, and thanked the assembled group for their many years of professionalism, friendship and commitment to the advancement of the industry and our forests. Wayne was an early and passionate advocate of the Allegheny Forest Health Collaborative and will be missed.



*From top left: Wayne Bender is recognized for his years of service; social distancing and masks were the order of the day; Representative Martin Causer was one of many who recognized the efforts of the Collaborative.*



## Stop 3: Longer-Term Results of Whole-Tree Chipping for Restoration, Forest Investment Associates Restoration Management Site

Whole-tree chipping of dense beech/birch understory allowed FIA to match annual road upgrade costs against annual sale revenue.

A large-acreage, multi-year approach increased seedling diversity while simultaneously reducing deer impacts across the landscape.

After lunch, Forest Investment Associates (FIA) and Generations Forestry showed participants the longer-term results of whole tree chipping as a forest restoration tool on FIA lands.

Between November 2014 and June 2018, FIA and Generations Forestry worked with Cochran & Zandi Lumber Company, a local mechanized-logging contractor, to whole-tree chip all of the beech and birch understory on six blocks, which allowed them to match annual road upgrade costs against annual sale revenue. Domtar, the local paper mill, was instrumental in providing an outlet for all of the in-woods chips from all of the harvest blocks.

The tour site had a history of wind damage and tree salvaging from storms in 1985 and 2003, aggressive timber harvesting by the previous landowner, and insect and disease problems, resulting in several hundred acres of poorly stocked stands with some of the overstory trees in obvious decline. Overstory trees consisted of black cherry, red maple, sugar maple, beech, birch, tulip poplar, and cucumber. Although the stocking was not ideal, many of trees were healthy and still had the ability to produce seed. The understory consisted of a heavy stocking of beech and birch poles.

AFHC's legislative/media day was featured in Representative Marty Causer's Sportsmen's Report, and also written up in area newspapers, including the Kane Republican and the Bradford Era.

Post-treatment results at the site are very promising. A majority of the project area contains advanced desirable regeneration. During the tour stop, more than 16 different woody tree species were noted in the understory. From an economic perspective, FIA has been able to realize income from a regeneration harvest on a portion of the project area in 2020 and plan to harvest another area in 2021. An understory herbicide treatment was applied on about one-third of the area, mostly on the earliest blocks which experienced more deer browse impacts. They found that as they increased the chipping acres each year, the deer impacts declined. The large-acreage approach was a key factor in the success of the project.



## Stop 4: Glossy Buckthorn, a problem in search of an effective solution

Private property in Elk County, managed by LandVest

*Participation in AFHC improves information sharing, brings awareness to a regional concerns, creates a space to explore funding opportunities to offset the high cost of treatment options, and to explore new options for invasive species treatments.*

The final stop on the tour was located on private property in Elk County, managed by LandVest. The property is part of the 32,598 acre “Clarion Junction Forest”, purchased by the Conservation Fund in 2018, creating a bridge between Pennsylvania Game Commission lands and the Allegheny National Forest.

This site was chosen to provide participants with an opportunity to view a relative newcomer to the non-native invasive plant arena within the Allegheny region – glossy buckthorn. Native to Eurasia, glossy buckthorn was commonly recommended for conservation plantings in the Midwest until its invasive tendencies became apparent. Buckthorn changes forest ecology by creating dense thickets that out-compete natural regeneration of native plants for sunlight, water and nutrients. Buckthorn changes soil chemistry, creating a monoculture that destroys the surrounding biodiversity of plant life, and it’s also a prolific seeder. The thickets are close to 20 feet tall and create a dense understory that is nearly void of any other plant life and impossible to navigate.

LandVest has been working to control the spread of glossy buckthorn on this property but acknowledged that it is an uphill battle. Herbicide application has produced limited results. Cutting, mowing and other forms of manual removal require multiple entries to a property within a single season. Controlled burns also require entry every year for 5-6 years or more. All of these options are extremely expensive, highly labor intensive and limited in effectiveness.

LandVest continues to employ careful decision making in their silvicultural practices on the property, especially in those areas occupied by both established hardwood species regeneration and buckthorn. Since plants on neighboring properties can quickly repopulate treated areas, starting the cycle all over again, the opportunities for partnering and information sharing that arise through participation in the Allegheny Forest Health Collaborative have been extremely important.

Unlike the other stops on the tour – this site was chosen to demonstrate a problem that is still in search of an effective solution. Research on buckthorn mitigation continues, but much more needs to be done. Safe biological and site-specific controls (i.e. wetlands) are needed to allow for effective removal without detrimental side effects. Funding opportunities are necessary to offset the high cost of currently available treatment options, encouraging forestland owners to continue efforts to promote forest sustainability and to restore wildlife habitat. The AFHC has been a valuable asset in bringing awareness to this significant regional forest health concern.

Overall, the media and legislative field tour allowed AFHC to demonstrate one of the most important aspects of the Collaborative: sharing techniques with public and private land managers across the landscape produces valuable feedback and success in addressing critical forest health issues across the region.

## Agencies, organizations, and companies that participated in AFHC Meetings in 2020

Allegheny State Park	Pennsylvania Bureau of Forestry
Allegheny Forest Alliance	Pennsylvania Bureau of State Parks
Allegheny Hardwood Utilization Group	Pennsylvania Department of Agriculture
Allegheny National Forest Visitors Bureau (McKean County)	Pennsylvania Department of Conservation and Natural Resources
Allegheny Outdoor Club	Pennsylvania Department of Environmental Protection Northwest Regional Office
Audubon Community Nature Center	Pennsylvania Federation of Sportsmen and Conservationists
Audubon Society	Pennsylvania Fish and Boat Commission
Chapman State Park	Pennsylvania Forest Products Association
Collins —Kane Hardwood	Pennsylvania Forestry Association
Cook Forest Conservancy	Pennsylvania Game Commission
Domtar	Pennsylvania Governor's Advisory Council on Hunting, Fishing and Conservation
Ed Kocjancic Inc.	Pennsylvania Governor's Advisory Council on Invasive Species
Forecon, Inc.	Pennsylvania Grade Crude Coalition
Forest Area School District	Pennsylvania Great Outdoors Visitors Bureau
Forest County Board of County Commissioners	Pennsylvania Hardwoods Development Council
Forest County Economic Development Corporation	Pennsylvania Independent Oil and Gas Association
Forest Investments Associates	Pennsylvania State Snowmobile Association
Friends of the Allegheny Wilderness	Roger Tory Peterson Institute of Natural History
Generations Forestry	Ruffed Grouse Society
Greenwood Resources Global	Seneca Nation of Indians
Hancock Forest Management	The Nature Conservancy
Kane Area School District	Tionesta Valley Snowmobile Club
Kinzua Quality Deer Cooperative	USDA Natural Resources Conservation Service
LandVest	USFS Allegheny National Forest
McKean County Commissioners	USFS Northern Research Station
McKean County Conservation District	USFS State & Private Forestry, Forest Health Protection
National Wild Turkey Federation	Warren County Chamber of Business and Industry
North Country Trail Association Allegheny National Forest Chapter	Warren County Commissioners
PennDot District 1 (Forest & Warren Counties)	Warren County Visitor's Bureau
PennDot District 2 (Elk & McKean Counties)	Western Pennsylvania Conservancy Allegheny Region
Penn Soil RC&D (Forest & Warren Counties)	
Penn State University	
Penn State Center for Private Forests	
Penn State Cooperative Extension	

**Follow the collaborative on Facebook for updates throughout the year (@AlleghenyForestHealthCollaborative) or better yet, join the group! Email [andrea.hille@usda.gov](mailto:andrea.hille@usda.gov) if you'd like to join.**