New England Society of American Foresters

News Quarterly

Volume 82, Issue 1 January 2021

Special Interest!

- *Advertising Opportunities..p2*
- *Nominate a colleague!.....p5*
- *Fabulous items needed.....p13*
- *this out!*

Inside this issue:

FEMC forest health interns measure canopy condition, seedling abundance, sapling survivorship, invasive species, and damage agents on a network of 69 long-term forest health monitoring plots across Vermont and Massachusetts.

Leveraging regional and national long-term inventory programs to understand the attributes and dynamics of New England forests

News Quarterly Science Theme – Dr. Anthony D'Amato, Theme Editor

The ability to quantify current forest conditions and monitor and document long-term forest dynamics is central to forest management planning and the adaptation of practices over time. As with other regions of the US, New England benefits from the long-term, federal support for the US Forest Service Forest Inventory and Analysis (FIA) program, including its extensive plot network and the many US Forest Service FIA scientists and analysts that serve our region. In addition, state and ownership-level investments in continuous forest inventory and monitoring networks over the past several decades have served to increase the spatial and temporal resolution at which forests are monitored, allowing for documentation of the impacts of changing forest health and disturbance regimes on regional forest structure and composition. This theme highlights research and monitoring being led in New England by the US Forest Service FIA program, the University of Vermont, and the Forest Ecosystem Monitoring Cooperative to advance our understanding of how regional forest conditions, including forest ownerships, are changing in response to shifts in land-use patterns, increasing prevalence of invasive species, and changing disturbance regimes. Such work is critical for informing policies and management strategies that are responsive to long-term changes in the region's forest resources and shifting landowner demographics and management objectives.

(Articles begin on page 6)

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Greetings from the Bay State ~ William Hill

Greetings from the Bay State and a very Happy 2021 to my NESAF forester friends and colleagues!

The year of 2020 will go down in history as extraordinary. To rehash many of these events that affected our world, country and professional society would be a tad redundant for most so, I won't. But, I will note that 2020 has undoubtedly taught most of us to be resilient, to adjust, to contemplate what is important in life and to listen to our fellow human beings.

The previous year was additionally remarkable for me as I became a grandfather in March and retired from a 40+ year in forestry in August. During my career I have done a myriad of things from tree planting and logging, to managing thousands of acres of public land. Throughout that entire time I have been a member of SAF. I was trained and worked as a professional forester and have always believed that being a member and participating in SAF was vitally important. It has been a blessing to me and I encourage those of you on the sidelines to join us in advocating on behalf of the forestry profession.

For those of you who don't know me I am a New England native, raised in western Massachusetts. I attended Paul Smith's College, graduating in 1978 with a degree in Forestry and Land Surveying. After a summer of work in the Adirondacks I headed west and graduated in 1981 from the University of Idaho with a degree in Forest Management. I worked in Idaho and the Black Hills of South Dakota before finding myself back in New England for the last 12 years before retiring as the State Forest Lands Manager in Massachusetts.

In 2020 we saw our annual winter meeting and the celebration of our 100th year as the New England SAF scuttled due to the pandemic. Many thanks to all those in the Yankee Division, especially **Adam Moore**, General Chair, **Jeff Ward**, Program Chair and **Jake Metzler**, Immediate Past Chair of NESAF who dealt with the logistics of cancelling the meeting. The great news is that Adam and Jeff and many others are planning a virtual annual meeting with the much of 2020 program intact - see this issue for details on the 2021 NESAF Annual meeting, to be held March 22-24.

On top of cancelling our annual meeting, the 2020 SAF National Convention, to be hosted by NESAF (for the first time since 1995) in Providence, shifted to a virtual format. The 2020 SAF first (and hopefully last) Virtual National Convention was a success due to the hard work of those NESAF volunteers who adapted in the face of adversity. **Fred Borman**, **Ken Lausten**, and **Bob Richard**, the Tri-General Chairs of the convention were dealt a tough hand and deserve extra kudos for seeing the convention through to its completion. Additional NESAF members contributing to convention planning were **Maggie Mansfield**, **Paul Catanzaro**, **Si Balch**, **Rob McMillan**, and **Jake Metzler**. I personally attended most of the convention and was very, very impressed with how well it went given the inherent issues. Thank you to all who contributed!

As 2021 unfolds I'd like to extend thanks to outgoing NESAF Executive Committee Officers: **Julie Evans**, Immediate Past Chair, **Ed O'Leary**, VT State Rep, and **Mike Fleming** Massachusetts State Rep. Also, a welcome aboard to incoming NESAF leaders **Diana Frederick**, Chair Elect, and **Joelle Vautour**, Massachusetts State Rep. Your service is appreciated! I am especially grateful for the leadership of outgoing Chair Jake Metzler during 2020. Please take a moment to look at the full 2021 leadership roster here in the Quarterly and perhaps consider filling one of those roles sometime in the future.

As Chair this year I am looking forward to focusing NESAF on some important tasks and challenges: being a leader in the conversation on climate, carbon, forests and forestry; completing an updated NESAF Operations Manual which was begun by Jake Metzler, conducting a beneficial and successful annual meeting, and promoting our message of sustainable forests through social media. If there are issues that NESAF should be on top of do not hesitate to call or write to let me know. I would be glad to attend any virtual meetings or in-person meetings, should that become appropriate again. The Executive Committee is here to serve the membership. Like everyone, I am hopeful for a 2021 that will be a bit more normal. We'll see you in the woods!

Article Withdrawn: I would like to advise NQ readers that we are withdrawing the article by myself and Maggie Baker in the October issue, "*Forest owners as carbon growers...*" It is embarrassing to say that we misunderstood terminology in the data bases used to produce the summaries. A previous piece we did in *Forestry Source* was checked with an expert and pronounced sound. But for the voluntary market, the databases are not as straightforward, and we did not realize this. After the fact an expert let us know. I allowed myself to be rushed by a deadline and an eagerness to supply up-to-date information in a rapidly changing field. Lesson learned. We hope to supply a correct version with information for full - year 2020 for a future issue. Sorry for any inconvenience. Lloyd C. Irland, The Irland Group.

Council Update ~ Mariann Johnston

Happy winter to all, as we move into a new season and approach the start of a new calendar year. As of this writing, SAF's National Staff has moved into the new office space at 2121 K ST NW, Washington, DC. Some move-in work continues to be done, but the move has gone relatively well and service to SAF members continues. Many may remember the engraved pavers from the Grosvenor headquarters; these were power-washed, photographed, and transferred to the Forest History Society in North Carolina, where they will be installed in a dedicated landscaped area. The photographs are being incorporated into a wall covering that will be displayed in the new headquarters space.

The first virtual National Convention was successful with 1,388 registrants. Registration was still available through December 4, and a few dozen additional registrants did come in to take advantage of the meeting content, which will be available to all registrants through the end of the year. Approximately $3,800 was raised through the Forester's Fund (thanks Ron Lemin for coordinating). It is anticipated that the NESAF region will be considered for another convention opportunity as soon as feasible. On a related note, the Professional Development staff have produced guidance materials for local unit leaders on virtual delivery of meetings and other continuing education opportunities. Please reach out to Lori Rasor for assistance in locating these resources.

All units are reminded that they should be thinking of nominees for Fellow and for National Awards, with nominations for both due by March 15. There is also a new award recognizing an outstanding local unit, which includes a complimentary national convention registration and up to $500 in travel assistance for the unit's representative to attend the national convention. Please consider nominating deserving individuals for national awards in categories including Forest Science and Technology, Communications, Leadership, and Professional Development. A full description of the awards and criteria may be found on the SAF website: https://www.eforester.org/Main/Community/Awards___Fellows/awards.aspx

The Board of Directors continues to meet virtually to conduct business. The Board recently completed the annual December meeting, where new Board members are introduced and provided with an orientation, and we say a fond farewell to departing members. Every year approximately 3-4 Board members are replaced, on a staggered 3 -year cycle amongst the eleven districts. A new Director will be sought for District 6 in the upcoming election cycle, to serve the 2022-24 term. Anyone interested should contact me (mjohnston@esf.edu) or refer to the web-site to learn more about the position and process (https://www.eforester.org/Main/Community/National_Elections.aspx).

Student Executive Committee Update ~ Skylar Roach

This year, I attended the 2020 SAF National convention for the first time. As the District 6 student representative I was fortunate to be able to both moderate and attend the many, many events happening throughout the three days. This year's convention was virtual and while there were some brief issues the overall experience was overwhelmingly positive.

On the first day I attended the student meet up put on by the Student Executive Committee (SEC) where I was able to connect with a handful of professionals such as Tammy Cushing, Bev Yelczyn, and many others. They answered questions from students using breakout rooms and passed on words of wisdom and advice. I am a senior at UMass Amherst studying forestry and I felt very fortunate to be able to personally interact with such wonderful people who had so many varied experiences. Next, I attended and spoke at the World Café event. With Jamie Dahl as our fearless leader we discussed diversity, equity, and advocacy, generating ideas and asking great questions. This is an issue close to my heart and to see so many people engaging with it was lovely.

I greatly enjoyed being able to attend sessions such as the ones above where I was able to engage with profession-als and with new ideas on Diversity, Equity, and Inclusion topics. However, the technical sessions were particular-ly interesting to me. Due to the virtual setting I was able to hop in and out of zoom to attend the specific talks I was interested in, such as talk on forest health related to pine beetles in the southeastern US. On the second day I attended a grouping of talks on Forest Health and genetics. I am currently applying to graduate programs in forest pathology so getting to hear from both researchers and PhD students from around the country was wonderful. It opened my eyes to the sheer variation in research that happens every day.

Overall, I had an entirely positive experience at the convention. The virtual setting was fun in many ways and certainly afforded me more chances to attend a wider variety of sessions. I am keeping my fingers crossed for NESAF this spring, but either way I am looking forward to attending my next convention. I would like to thank the New England sector of SAF for supporting me in both attending the national convention and in my role as the student representative of our district.

National Award Nominations ~ Ken Laustsen

There are a total of 16 potential National Awards available for nomination starting in mid-January to a submission deadline of March 15, 2021. Several of these have a nearly identical recognition as the annual NESAF Awards.

- **Award in Forest Science** – recognizes distinguished individual research in any branch of the quantitative, managerial, and/or social sciences that has resulted in substantial advances in forestry
- **Barrington Moore Memorial Award in Biological Science** – recognizes outstanding achievement in biological research leading to the advancement of forestry.
- **Technology Transfer Award** – recognizes outstanding performance in the areas of technology transfer, implementation, and extension.
- **Outstanding Forestry Journalism Award** – recognizes high quality journalistic coverage of topics that increase the American public's understanding of forestry and natural resources.
- **W. D. Hagenstein Communicator Award** – recognizes an SAF member who leads innovative and exemplary communication initiatives and programs that increase the general public's understanding of forestry and natural resources.
- **Diversity Leadership Award** – recognizes outstanding individual achievement leading to innovative and exemplary diversity and inclusion efforts.
- **Outstanding Local unit Achievement Award** – recognizes the outstanding achievement of a local unit for sustained leadership or a special project benefiting SAF, the forestry profession, and the practice of forestry.
- **Employer Leadership Award** – recognized an employer that demonstrates leadership through consistent support of employee participation in SAF and broad engagement in the profession.
- **Student Leadership Award** – Recognizes individual student achievement and leadership at the local, regional, or national level.
- **Carl Alwin Schenck Award** – recognizes devotion and demonstrated outstanding performance in the field of forestry education.
- **Gifford Pinchot Medal** – recognizes outstanding contributions by a forestry professional in the administration, practice, and professional development of North American Forestry.
- **John A. Beale Memorial Award** – recognizes outstanding efforts over a sustained period of time by a SAF member in the promotion of forestry through voluntary service to the Society.
- **Sir William Schlich Memorial Award** – recognizes broad and outstanding contributions to the field of forestry with emphasis on, but not limited to, policy and national or international activities.
- **Young Forester Award** – recognizes outstanding leadership by a young forestry professional in the development and promotion of an individual program or project, or for a sustained leadership role benefitting the practice of forestry and the Society
- **Presidential Field Forester A**ward – recognizes foresters who have dedicated their professional careers to the application of forestry on the ground using sound, scientific methods, and adaptive management strategies. The award is presented to individuals who have displayed uncommon talent, skill, and innovative methods to achieve a record of excellence in the application of forest management.
- **Outstanding SAF Student Chapter Award** – recognizes the outstanding SAF student chapter in the nation and its faculty representative during an academic year. Three student chapters are recognized annually during the SAF National Convention.

The Fellow Award is a prestigious award that recognizes an SAF member for long-standing service to forestry at the local, state, and national levels. An SAF Fellow is recognized as an ambassador for the advancement of forestry.

As the NESAF Awards Chair, I am willing to assist a member in compiling the necessary forms, endorsements, and a biographical sketch that constitute a complete nomination package.

Insights From Long-Term Inventory Data in the Northeast

Jen Pontius and James Duncan

University of Vermont and Forest Ecosystem Monitoring Cooperative

The Challenge of Long-Term Monitoring

The temperate forests of the northeastern US represent a complex history of management, conservation, natural disturbances, and site characteristics that make assessment of spatial patterns of forest metrics a challenge. Because of these spatial and structural complexities, forest inventory sampling intensity must be sufficient to capture the variation across the landscape. Forest ecosystems are also inherently dynamic in response to natural climate variability, succession, and disturbances, making the examination of temporal trends and drivers of change challenging to capture. The only way to distinguish normal year-to-year variability from emergent forest health issues or subtle changes indicative of chronic stress is through long-term monitoring.

Maintaining support for this type of spatially and temporally intensive forest inventory data is challenging for any organization. However, many state and federal agencies, academic and research institutions, non-profit organizations and industry professionals have been collecting a wealth of data over the decades. In aggregate, this data provides a much more informative picture of the characteristics of forests over time, allowing us to examine potential drivers of change and develop predictions of future forest structure and function.

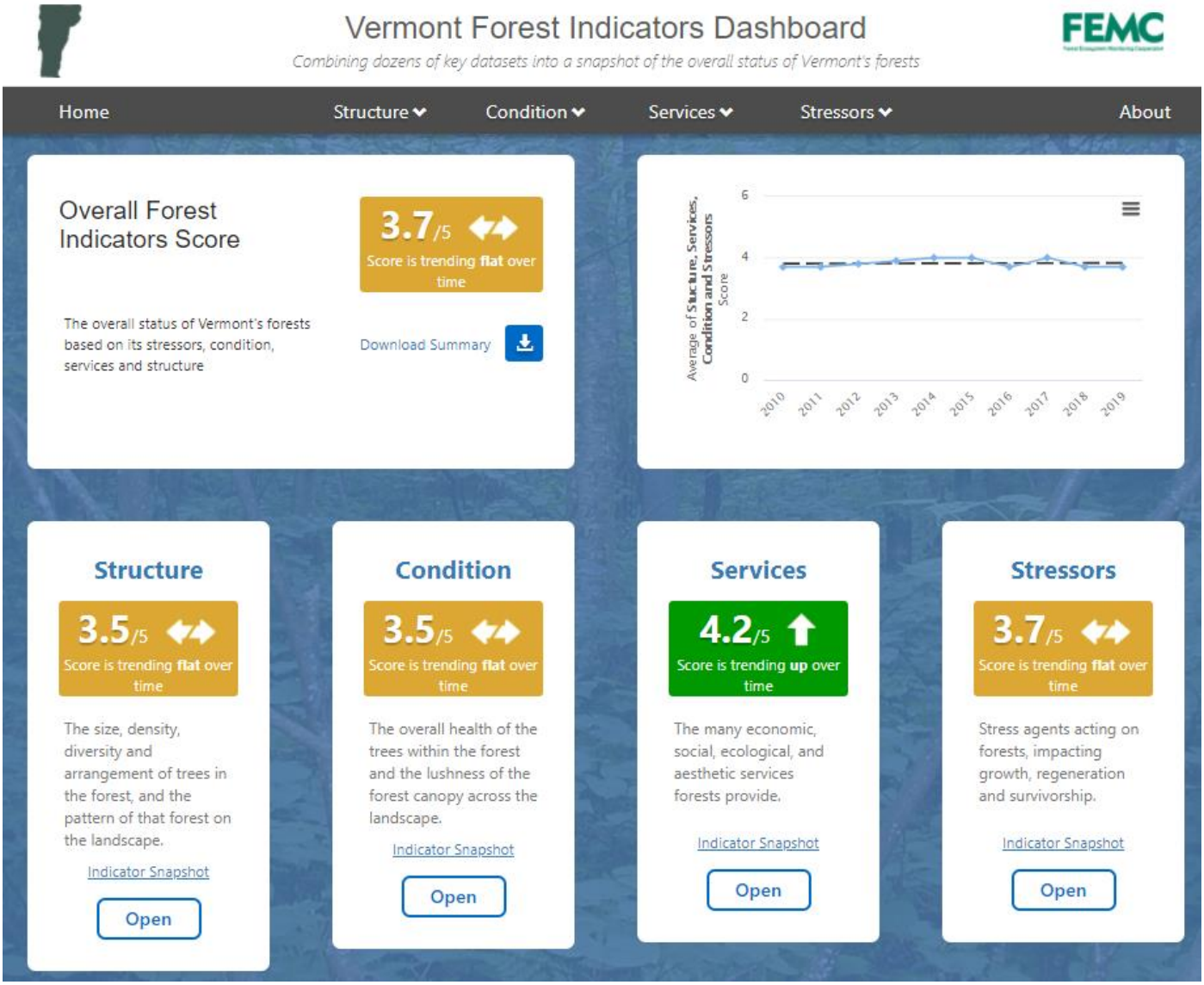

Figure 1. The FEMC Forest Indicators Dashboard for Vermont provides visualization and access to a wealth for forest metrics. This tool is currently being adapted for other states across the region.

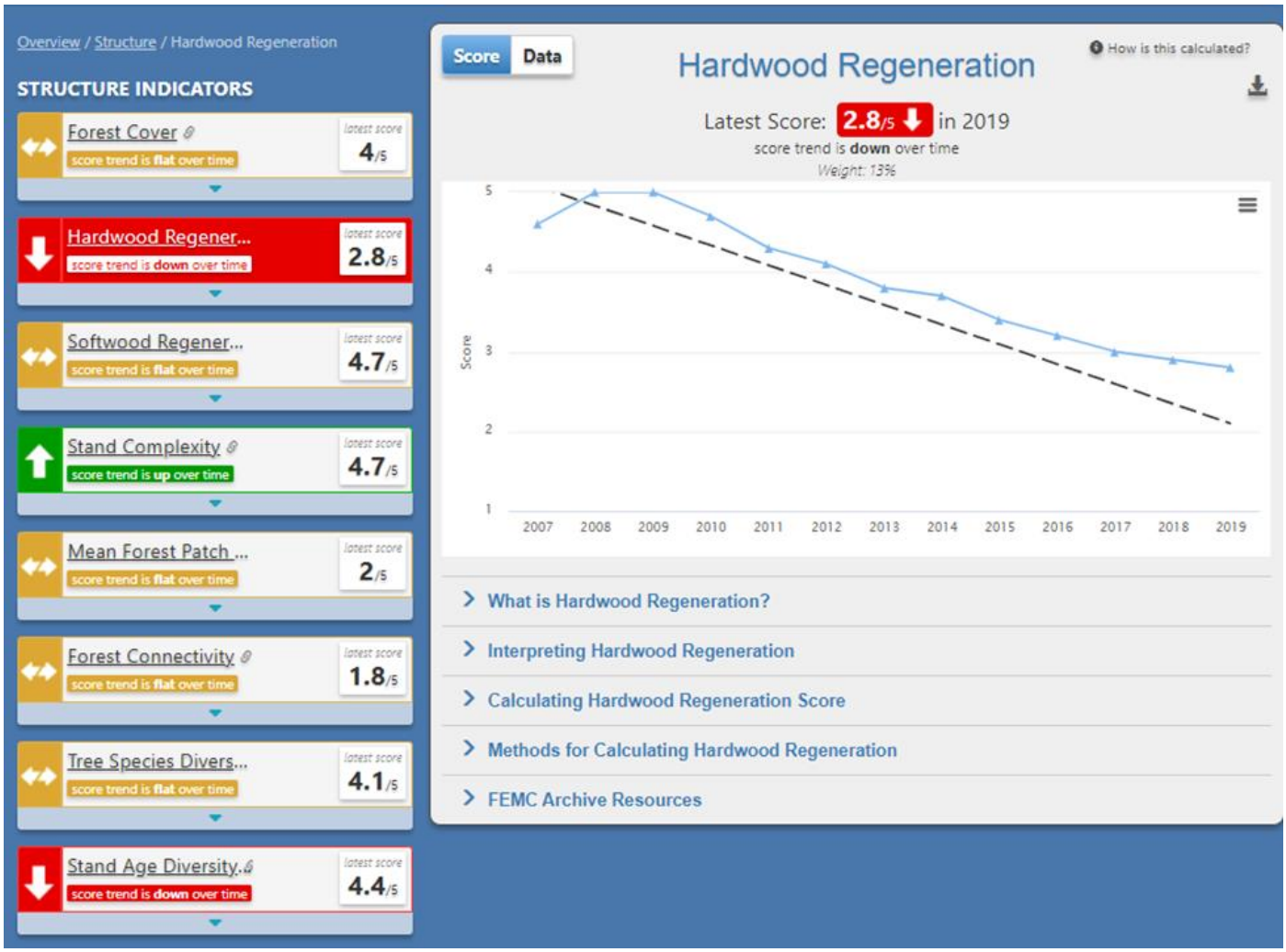

Figure 2. A summary of the forest structure indicators in the Forest Indicators Dashboard highlights the complexity of response across various metrics.

Meeting the Challenge

Through its broad cooperative network, the Forest Ecosystem Monitoring Cooperative (FEMC) has been working for over two decades to facilitate collaboration and aggregation of long-term monitoring data across the region in order to improve our understanding of forest ecosystems in light of the many threats they face.

Analysis of current conditions and long-term trends were historically synthesized in yearly Long-Term Monitoring Updates. But the recent development of tools like the Vermont Forest Indicators Dashboard provides a more dynamic visualization of key forest metrics. This data-driven, ecological monitoring tool quantifies the condition of Vermont's forested ecosystems in simple terms that offers a more holistic view of the structure, function, and services the forests provide. Current conditions and long-term trends can be compared to threshold or baseline values to help inform management and decision making to sustain this critical resource. The Dashboard currently summarizes information about 34 different long-term datasets in four broad categories: Structure, Condition, Services, and Stressors. Using high-quality datasets collected by various collaborators, this tool calculates annual scores for each indicator, including a score depicting where it falls in relation to the desired value. The Dashboard also provides an assessment of the long-term trends in each indicator.

Considering all aggregated forest structure, condition, service and stressor metrics, the current condition of forests represented in the Forest Indicators Dashboard presents a relatively stable, slow changing system. However, closer examination of individual metrics indicate that there are some areas for concern. Hardwood regeneration falls well below the sustainable baseline with a score of only 2.8 out of 5 and a long-term decreasing trend that could indicate potential changes in the composition and structure of the region's future forests. One condition metric, crown dieback (which is aggregated from two separate monitoring programs), also shows a degrading trend that highlights the importance of monitoring more subtle canopy condition metrics, in addition to widespread mortality or defoliation events. While most of the ecosystem service indicator metrics were positive, forest bird diversity has been trending down over time, perhaps serving as a

(Article continues on next page)

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bellwether of broader landscape change. The Dashboard also reveals success stories and gains that should be preserved, such as the steady reduction in acid deposition and ground-level ozone concentrations following amendments to the Clean Air Act.

Other tools developed by the FEMC include the Northeastern Forest Health Atlas (NEFHA). The NEFHA interface provides maps of forest damage collected from state and federal aerial surveys for the northeastern US, spanning 100 years of mapped disturbance data. NEFHA users can filter by damage agent, damage type, state, and year, as well as view maps, graphs and tables of disturbance patterns over time and download maps and data.

Development of the NEFHA data portal enabled a comprehensive synthesis of mapped forest disturbance over the most recent 17 years of data (Kosiba et al. 2018). Results indicated that about 11.0 million ha of forestland (10% of the New England / New York region) experienced at least one damage event over the study period, averaging about 650,000 ha (3.5 % of the region's forestland) annually. While there were no detectable linear, long-term trends in annual extent or relative abundance of damage by agent category, disturbance was not distributed evenly across the region; some ecoregions experienced relatively higher damage rates (e.g., Acadian Plains and Hills, Atlantic Coastal Pine Barrens). Insects were the most extensive damage agent category mapped (8 million ha), with a relatively small number of invasive insects (19 species) accounting for half

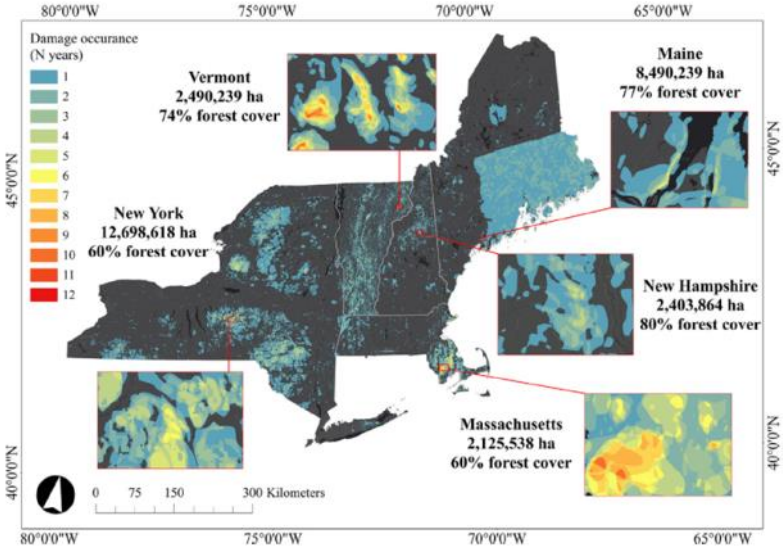

Figure 3. Locations of mapped forest damage polygons in the study region (MA, ME, NH, NY, VT) from 2000 to 2016 according to insect and disease surveys, including the total area (ha) and percent forest cover per state. Different colors indicate the number of years that damage was mapped over the 17-year record. Insets show examples of high damage occurrence in each state. From Kosiba et al. 2018

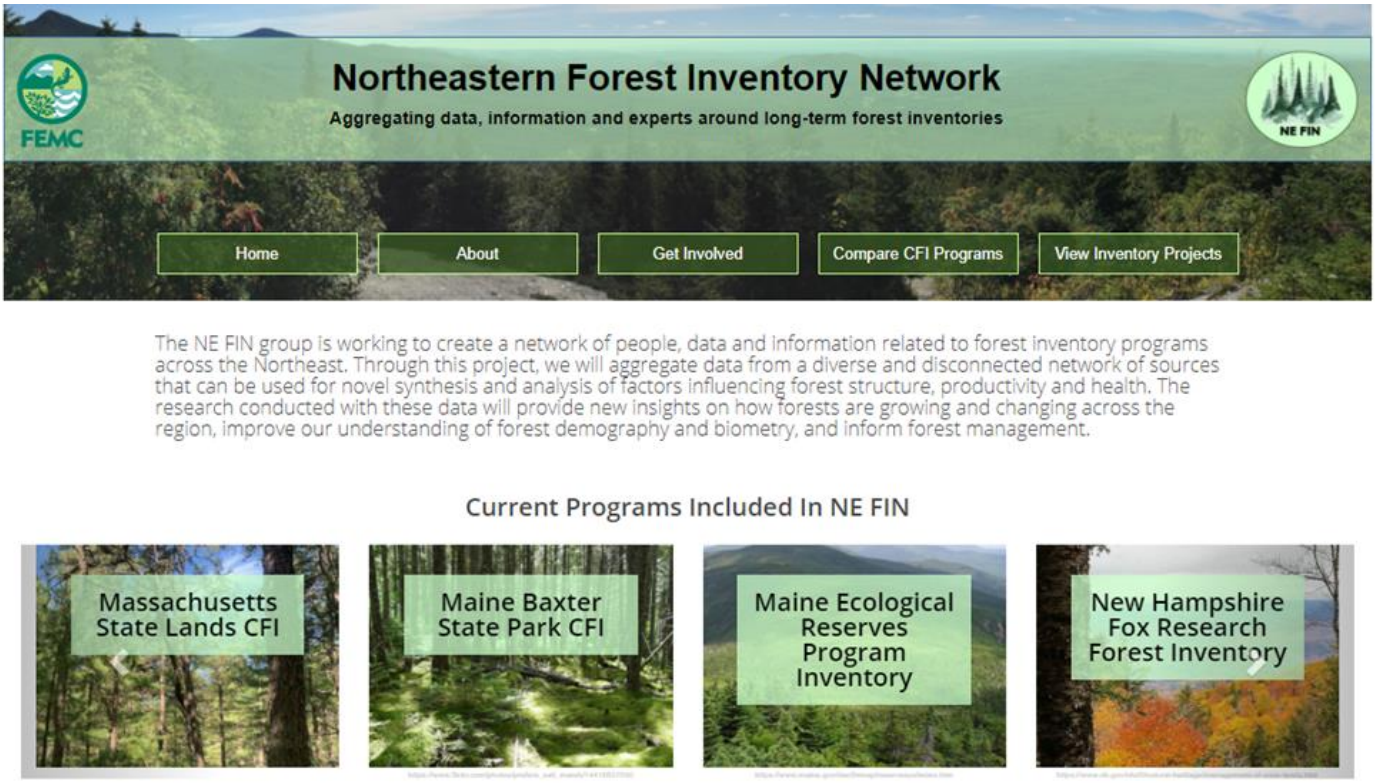

Figure 4. Visit the NEFIN web site to learn more about this new monitoring project and get involved.

of this damage. This study highlights the importance of ongoing detection and monitoring efforts to identify and rapidly respond to invasive pests, which will be complemented by a current FEMC effort to bring together even more data on other forest disturbances, from fire to extreme precipitation events, from both current and historical efforts.

Looking Ahead

Long-term forest monitoring has allowed us to detect subtle but steady changes in the condition, structure and function of our forests. Tools like the Northeastern Forest Health Atlas and Forest Indicators Dashboard show how these changes differ across species (some are faring better than others), across the landscape (some locations may be more or less resilient to stress agents) and across metrics (some indicate stable or improving conditions while others indicate deteriorating forest function). This highlights the importance of continued long-term, broad scale monitoring in order to provide the information we need to better understand the current patterns and future directions for the region's forests, and concerted effort to bring these varied data streams together at a scale that makes sense for the region.

Yet there is still opportunity for more integration to harmonize and link disparate forest datasets -- some of which have been collected for decades and could provide a longer, more comprehensive record of forest trends. Seeing this need, the FEMC recently developed a framework to crosswalk methodologies from various forest inventory efforts across the region, and has begun work with collaborators associated with the Northeastern Forest Inventory Network (NEFIN) to build a new data tool that will aggregate and synthesize continuous forest inventory data. NEFIN, recently funded through the USDA NIFA program, is currently focused on creating a network of people, data and information from forest inventory programs across New England and New York that can provide increased access to currently disconnected forest inventory efforts, providing an opportunity to enrich and expand upon the findings of the broader Forest Inventory and Analysis network.

Successful long-term monitoring requires that we pool our resources and collaborate more closely across traditional disciplinary silos, organizational boundaries and political borders. If you have long-term forest inventory data that you believe could contribute to this effort, are interested in utilizing the tool, or becoming a part of the collaborative network, visit the NEFIN web site or contact Jen Pontius at Jennifer.pontius@uvm.edu to get involved.

Our Changing New England Forests

Christopher W. Woodall,
Randall S. Morin,
Jesse Caputo, and
Rachel Riemann

From the outset of professional forestry in our Nation, quantification of forest attributes has been a yard stick by which we enact forest management actions, evaluate our successes/failures, and develop land use policies from communities to the Nation. From the earliest days at the Biltmore School, emerging forest assessment technologies (e.g., the Biltmore stick) were a topic of research and implementation across forest management enterprises. Today, we continue to find ourselves in the midst of new technologies after more than a century of forest data collection at various scales and for various purposes across New England. Today there is a laser on the space station with the purpose of refining forest attribute estimation. The United Nations is collectively trying to estimate the carbon balance of the world's forests. The condition and future of burning western US forests is a focal point of evening headlines. Perhaps never before have the attributes of forests been under such examination by a collection of humanity, and their future such a topic of important discussions from Washington to dinner tables. The same could be said for New England's forests. A recent survey of forest research needs across the region's stakeholders identified objective quantification of the current state of our forest against a backdrop of global change as a primary concern. Not only is there curiosity about the effect of invasive plants and insects/disease migrating into our forests, but also the potential for Covid-19-induced human migration to the northern forest. Stakeholders are concerned about the extent of such changes and how they will affect the rural communities and industries embedded in our forested landscape – a landscape where the health of forests and the vibrancy/health of communities are inextricably entwined. Informed forest management/policy decisions of the future seek a firm foundation of objective forest data on which to grow.

The official inventory of US forests, as conducted by the USDA Forest Service's Research and Development's Forest Inventory and Analysis program (FIA), has evolved from region-specific, periodic and timber-focused inventories throughout the twentieth century to a nationally consistent, annual, digital inventory that estimates a host of forest ecosystem attributes beyond that of merchantable volume. Attributes such as soils, dead wood, invasive plants, urban forests, timber products, landscape context, and landowner characteristics provide an increasingly rich picture of our forested landscapes. From this empirical basis we can evaluate themes of change across New England's forests for all of us to ponder…where are we headed? We will focus on 4 themes of change for this piece: maturing forests, ownership trends, fragmentation/urbanization, and tree regeneration.

Using FIA's periodic inventories (1983 through 1995) compared to 2019 annual inventories, we estimate a somewhat static area of timberland across CT, ME, ME, NH, NY, RI, and VT of 45.8 million acres (sampling error [SE] < 1%) (a decrease of 0.9 million acres since the '80s and '90s). We note that the contemporary maximum extent of forestland appears to have peaked in New England states over the past 10 years with slight declines starting to be seen across most states. Forests across much of New England and New York continue to grow and shift from small and medium diameter stands into the large diameter stand-sizes. In turn, the diverse array of goods, services, and wildlife habitat available from young forest habitat (i.e., small diameter) is lacking in many parts of the region. More than 57 percent of forest land across the region is in large diameter stands which varies considerably by state (33 percent in Maine to 85 percent in Connecticut). Trends in inventory volume in some states (NH and VT) indicate that the rate of growth is slowing as the proportion of large diameter trees continues to increase. States with a higher proportion of large diameter stands tend to have higher relative percentage of trees observed with damage.

There are also substantial variations in stand-size distribution among the major forest-type groups across New England and New York. For example, forest land in both the oak and pine types are dominated by large diameter stands (>75 percent). By contrast, less than 30 percent of forest land in the spruce/fir type are in large diameter stands. Additionally, the stand-size distribution is skewed towards large diameter stands to a greater extent on public lands when compared to private lands (70 and 54 percent, respectively). The largest difference in this proportion is in Maine where only 33 percent of private forest land is classified as large diameter compared to 48 percent for public. This difference is also considerable in New York where private forest land has a higher proportion in large diameter conditions (74 to 64 percent). Surprisingly, the proportion of forest land in large diameter stands is higher on privately owned land in Connecticut, Massachusetts, New Hampshire, and Rhode Island. Although these shifts suggest maturing forests, they do not necessarily indicate a lack of regeneration. Large diameter stands include trees of a full range of sizes and the large number of saplings across all stand-size classes suggests that recruitment is occurring in the understory resulting in dynamic, multi-aged and multi-sized stands. However, a variety of stand-sizes across the forest land base is important for composition, health, and biodiversity.

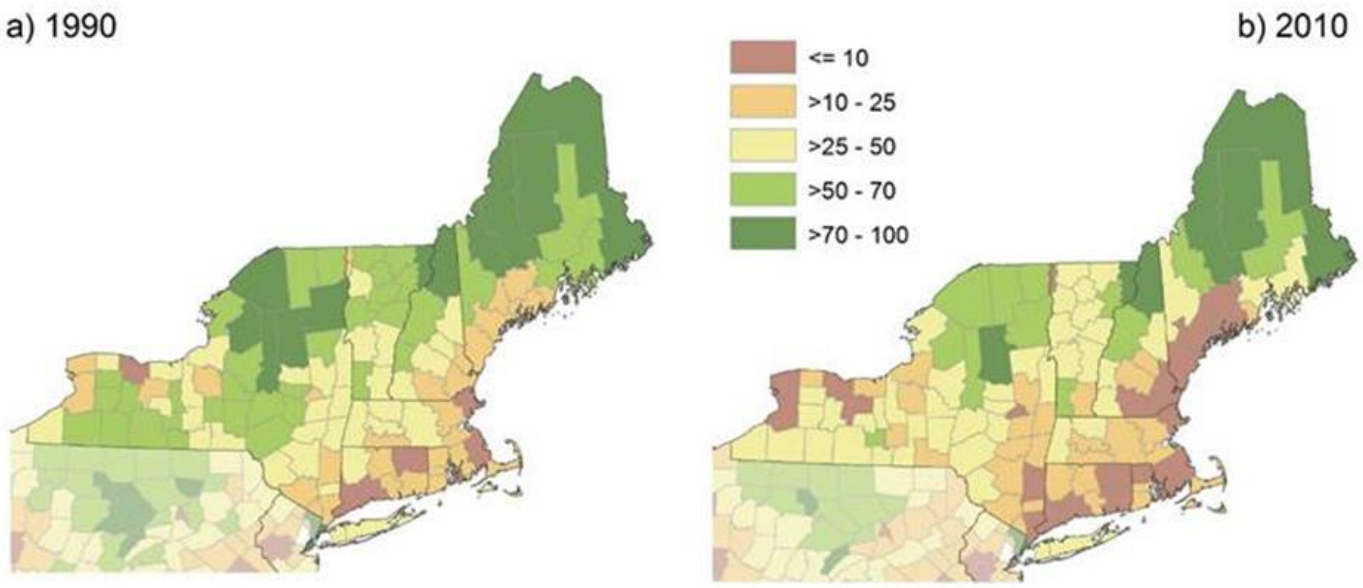

Figure 1. The proportion of forest remaining non-WUI, by census year and county.

Not unlike the generally maturing forests across New England, forest owners themselves are disproportionately older than the general populace. In the U.S. Northeast, 2.6 million (SE = 0.09) unique ownerships collectively own 39.5 (SE = 0.3) million acres of family forest land – making family forest ownership the most common type of forest ownership in the region (~47% of forested land). Whereas a little over 17% of the US population is over the age of 65 in New England, the proportions of these family forest owners who are greater than 65 years of age ranges from 21% (SE = 5%) in Connecticut to 44% (SE = 5%) in Massachusetts. Such a dynamic strongly suggests that substantial land transfers will occur in the short- to medium-term. In many cases; however, these transfers may remain within the same families. In almost all New England states, a majority of ownerships expect their children will be the ones to receive their land.

Most family forest ownerships in the region own less than 10 acres of forest land (74%, SE = 1%), with the mean size of holdings being 15.1 acres (SE = 0.6, median = 3). Eighty-seven percent (SE = 1%) of these ownerships own only a single parcel of land. Size of forested holdings is an important landowner attribute, as many activities become more or less likely as land holdings increase. For instance, timber management and timber harvesting increase with larger land holdings, whereas the probability of a landowner living on their land declines.

Although families own the largest share of the forest in New England, they are not the only significant ownership category. Corporate ownerships own an additional 22.3 (SE = 0.3) million acres (~27%) and public entities own and manage 19.1 (SE = 0.2) million acres (~23%). These values vary across the region; however, with corporate land being substantially more common in Maine (~57% of forested land), for example.

Individual state-level and region-wide statistics on forest owners and their motivations, objectives, and activities are tabulated as part of FIA's National Woodland Owner Survey (NWOS). The most recent results from the NWOS are available through recently published tables and as dynamic content through the National Woodland Owner Survey Dashboard (NWOS-DASH). Changing demographics is only one factor changing the intentions, behaviors, and attributes of forest landowners in New England – along with changes in technology, climate, and development, as well as ever-evolving discourse on what benefits we expect from forests and woodlands. Preliminary analyses have shown a net loss of family forests, consolidation of land in larger holdings, more absentee owners, fewer farmer owners, more management plans, and a reduced emphasis on legacy and timber objectives over the past decade, nationally. Future NWOS research will focus on better characterizing rates of change for these and other variables across the nation, as well as in New England.

Across this "rural fabric" of forest ownerships there is a well-documented advance of urbanization and forest fragmentation that some fear could be exacerbated by the future consequences of COVID-19. One important metric of land use-change with the potential to substantially impact forests is that of the Wildland Urban Interface (WUI). The WUI is the zone where human development meets or intermingles with undeveloped wildland vegetation, and it is the fastest-growing land use type in the conterminous United States (Radeloff et al. 2017, Mockrin et al. 2019). Although originally created to identify the area where wildfires pose the greatest risk to people, the WUI (>=6 houses/sq. km) is associated with a variety of consequential human-environment conflicts. The 2018 report from the New England

(Article continues on next page)

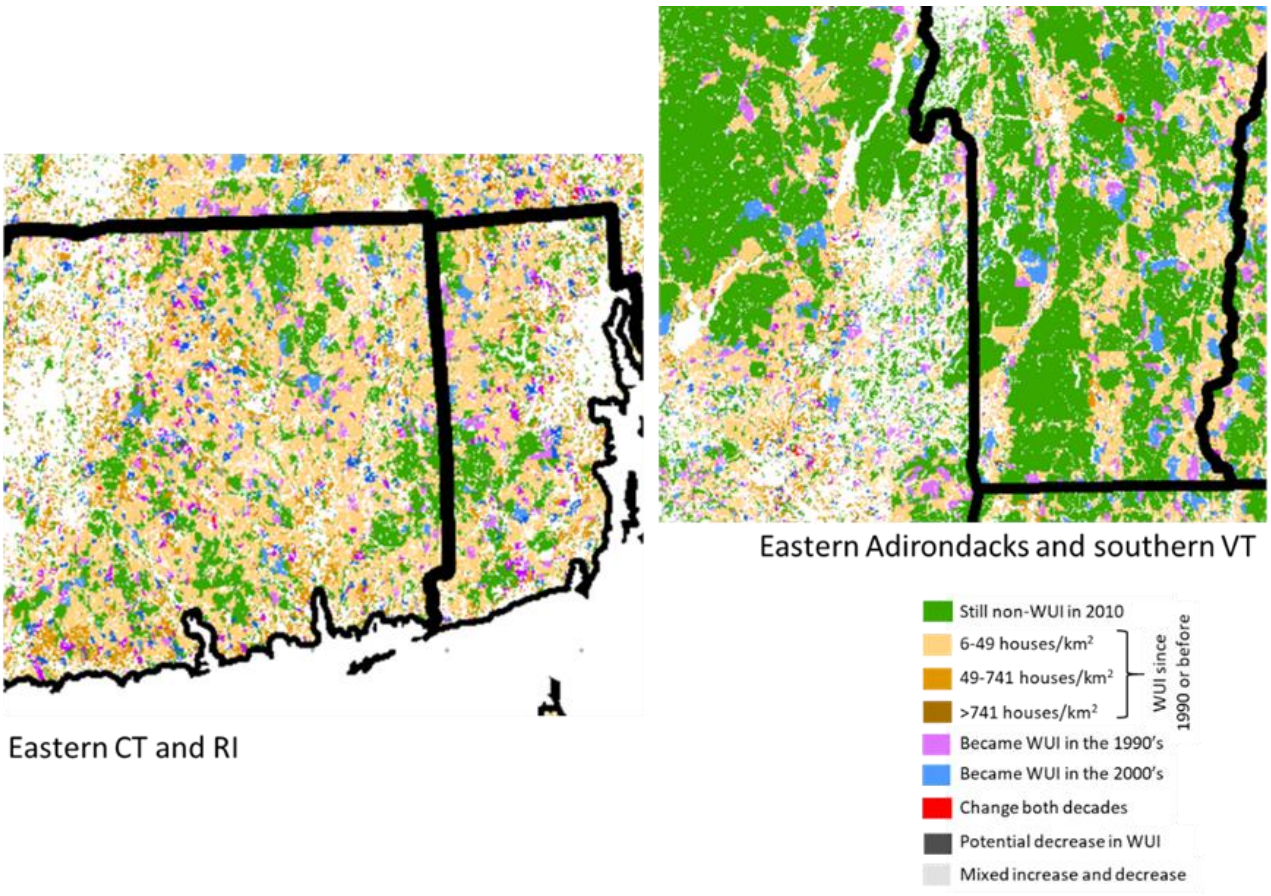

Figure 2. Forest land WUI status and change from 1990 to 2010, by census block and National Land Cover Dataset defined forest.

Climate Change Response Framework on New England and New York forest ecosystem vulnerability (Janowiak et al. 2018) identified fragmentation and land-use change as one of the top six current major stressors and threats to forest ecosystems, and two of the other threats – invasion by non-native species, and forest diseases and insect pests –are themselves heavily influenced by forest fragmentation and urbanization.

With the completion of a temporally consistent census block-level dataset capable of accurately comparing block-level change in housing densities from 1990-2010 (Radeloff et al. 2018, Mockrin et al. 2019), we are now able to analyze changes in housing density and forest land at a finer spatial resolution and with more accuracy than was previously possible. FIA is using this data and the published WUI housing density thresholds (>=6 houses/sq. km) to identify the status of forest land with respect to changes in housing density using the following categories: forest land in census blocks that have had housing densities above established Wildland Urban Intermix (WUI) thresholds for 30+ years (from 1990 or before), forest that became WUI in the 1990's, forest that became WUI in the 2000's, forest that experienced change in WUI density both decades, and forest land that still remained in non-WUI census blocks in 2010 (Figure 1). Some emerging results of note are that the percentage of the region's forests in WUI increased to 31% in 2010 compared to 24% in 1990 with rates of forest land movement into WUI status increasing in recent decades. There is a disparity in forest types affected by WUI with 67% of the forest area in the chestnut "oak/black oak/scarlet and oak" forest type in the WUI compared to 1% of the black spruce forest type. Southern and coastal New England has had more of its forest in WUI since 1990 or before, roughly twice or more of that of the northern New England states; however, NH, NY, and especially VT experienced the greatest increase in WUI between 1990 and 2010 (for examples see eastern CT/RI in addition to Eastern Adirondacks and southern VT; Figure 2). Large diameter stands occur disproportionately in WUI areas. Twenty eight percent of large diameter stands were in WUI in 2010, compared to 13% of small diameter stands and 24% of stands overall.

Forest spatial integrity is a useful metric of fragmentation that combines forest connectivity, patch size, and local forest density into a single metric. When WUI areas are overlaid on the forest spatial integrity map, it is apparent that WUI house densities are not only occurring in already fragmented forestland, but also in forest that would otherwise be considered core or high spatial integrity forest (Figure 3). Between 1990-2010 core and high

integrity forest was still being converted to WUI conditions at rates between 3 (Maine) to 5.5 (Vermont) percentage points per decade. As we are nearing completion of the 2020 US Census, future analyses integrating the human census and tree inventories will continue to track and dig further into the effects of human population expansion across New England's forests.

This cursory overview of a maturing forest resource increasingly owned by an aging populace that is buffeted by the continued expansion of urban areas and development brings us to the question as to what lies ahead? Unique to FIA in northern states, a more detailed inventory of tree regeneration has been occurring since 2012 with results starting to emerge. We know that almost all the smallest tree seedlings (2 to 6 inches in height) won't make it to sawtimber-sized trees but they certainly are indicators of what lies ahead. New England's smallest seedlings are dominated by red and sugar maple followed by white ash, balsam fir, striped maple, and American beech (1,192, 673, 374, 316, 155, and 95 seedlings/acre, respectively [SE's < 10%]). By the time we reach seedlings with a length between 5 and 10 feet our forests are occupied by American beech, balsam fir, red maple, and red spruce (103, 90, 37, and 34 seedlings/acre, respectively [SE's < 15%]). Does the story change for saplings (DBH 1-5 inches)? Not really. Balsam fir, red maple, and American beech lead the way at 184, 80, and 75 per acre, respectively (SE's <3%). For contrast, the number one tree species with a diameter at 14 inches or greater is eastern white pine (3.2 per acre, SE=4%). We know that stand development and disturbances (whether natural or management actions) will alter the course of recruitment into larger tree size classes, but at face value a future of red maple, beech, and ash dominating our forests should get our attention. It is not a far-fetched hypothesis that the external forces that shaped New England's forests (settlement/deforestation, agricultural abandonment, and etc.) over the past centuries will be far different from the forces we have now which should give rise to different forests of the future built upon the regeneration beneath our knees now.

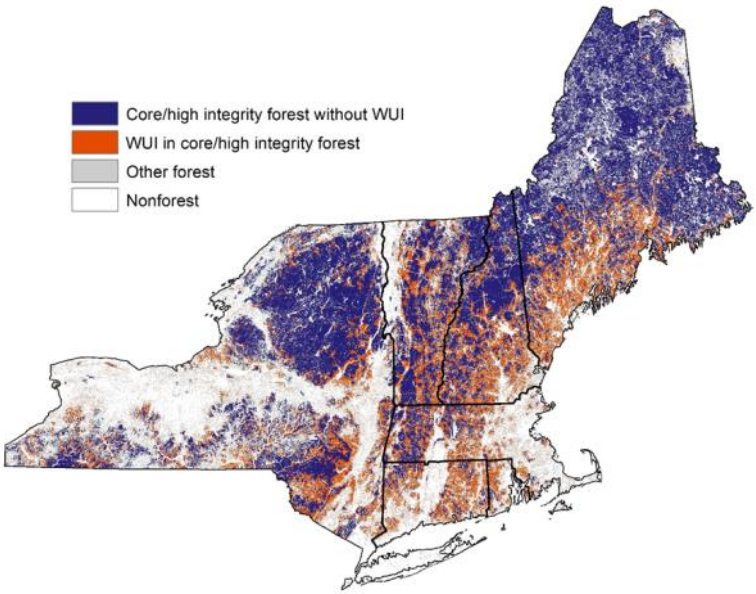

Figure 3. Where WUI areas intersect with forests of core or high spatial integrity, by National Land Cover Dataset defined forest.

In summary, FIA has been counting trees in concert with our partners, stakeholders, and states for decades because forests count. This has never been truer than now, where the vitality of our rural communities and the future of our planet's climate depends so much on the current condition of our forests, how humans are interacting with them, and where they are headed. New England may be the most forested region in the US but with that statistic in hand perhaps comes the future need to ingest even more forest statistics to guide our future paths.

FABULOUS PRIZES HELPS NESAF GRANTS PROGRAM!

The New England Society of American Foresters is having the annual winter meeting this year virtually this year. The program is March 22nd thru the 24th.

The intent of the letter is to ask if you would be interested in donating some form of a gift to our silent auction. The funds from this program support our grants programs.

If you are able to give anything it would be greatly appreciated. Gifts etc. can be sent via a photograph with a description and value of item. We will put these on a site for people to bid on. Successful bidders would get the article mailed to them. Donors assume shipping costs/postage or other arrangements.

If possible, items should be easy to package and ship.

Any questions? I can be reached 401-500-0399 or at pcdolan1@verizon.net. Thanks! Paul C. Dolan

New England Family Forest Owners – Results from the National Woodland Owner Survey

Emma Sass (University of Massachusetts, Family Forest Research Center),

Brett Butler (Forest Service Northern Research Station, Family Forest Research Center), and

Jesse Caputo (Forest Service Northern Research Station, Family Forest Research Center)

Families and individuals own more wooded land than any other group in the U.S., and their decisions about how to manage and care for their land have broad impacts. To better understand family forest owners, the USDA Forest Service, Forest Inventory and Analysis program, through the Family Forest Research Center, conducts the National Woodland Owner Survey (NWOS). Below we present results from 556 randomly selected New England forest ownerships with 10+ acres who responded to the survey in 2017 and 2018.

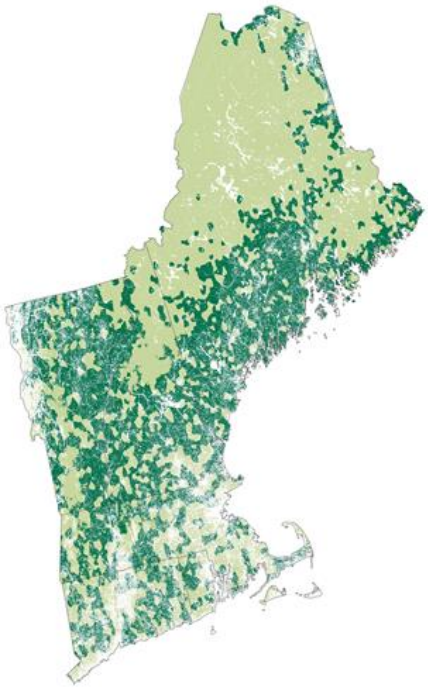

Figure 1. Family forest land (■), other forest (□), and non-forest (□) in New England. Data source: USDA Forest Service

Across New England, family forest owners hold 39.5% of wooded land (Fig. 1). There are an estimated 187,000 (SD = 6,700) ownerships with 10+ acres, who hold 10 million (SD = 230,000) acres across New England. For ownerships that are 10+ acres in size, average holdings size is 56 acres (SD = 2 acres). In southern New England (MA, CT, and RI), average size is 35 acres (SD = 3 acres), and in northern New England (VT, NH, and ME), average size is 61 acres (SD = 3 acres).

Among family forest owners land in New England, the most important reasons for owning forest land are the aesthetic and cultural benefits they provide, including beauty/scenery, privacy, and nature protection (Fig. 2). Despite this strong emphasis on passive values, active use of the resource is very common. In the past five years, 14% (SD = 2%) of family forest owners in southern New England (MA, CT, and RI) have cut trees for sale, more than half (55%, SD = 4%) have cut trees for personal use, 32% (SD = 3%) have reduced invasive plants, and 27% (SD = 4%) have created or improved wildlife habitat. In northern New England (ME, NH, and VT), 24% (SD = 3%) have cut trees for sale, 52% (SD = 3%) have cut trees for their own use, 13% (SD = 2%) have reduced invasive plants, and 22% (SD = 2%) have improved wildlife habitat in the last five years. Although a minority of landowners have formal management plans, the proportion is greater than elsewhere in the country. Whereas, nationally, 11% (SD = 0.4%) of ownerships have management plans, 29% (SD = 2%) of ownerships in New England have a written management plan. 30% (SD = 4%) of ownerships in southern New England and 23% (SD = 2%) of ownerships in northern New England have received advice about their wooded land in the past five years.

Family forest owners in New England have strong connections to their wooded land. The vast majority want their wooded land to stay wooded (southern = 79%, SD = 6%; northern = 90%, SD = 4%). A high percentage agree that they have a strong connection to their wooded land (southern = 79%, SD = 6%; northern = 76%, SD = 4%) and that they know their wooded land well (southern = 74%, SD = 6%; northern = 78%, SD = 5%).

The average age of primary decision makers for family-owned forest land in New England is 66 years (SD = 0.5 year). 19% (SD = 2%) of acres are owned by people who plan to transfer some or all of their wooded land in the next five years, and a majority of ownerships (southern = 69%, SD = 7%; northern = 75%, SD = 4%) are worried about keeping the land intact for future generations. About three quarters of primary decision makers are male (southern = 73%, SD = 4%; northern = 77%, SD = 2%).

Forest management and conservation depend on the people who own it – in New England, many of these acres are held by individuals and families. We hope additional information about America's forest owners will lead to more recognition of the roles these people play and will further enhance programs and policies that help the owners, the land, and society. For more results, visit the USDA Forest Service's National Woodland Owner Survey website at www.fia.fs.fed.us/nwos.

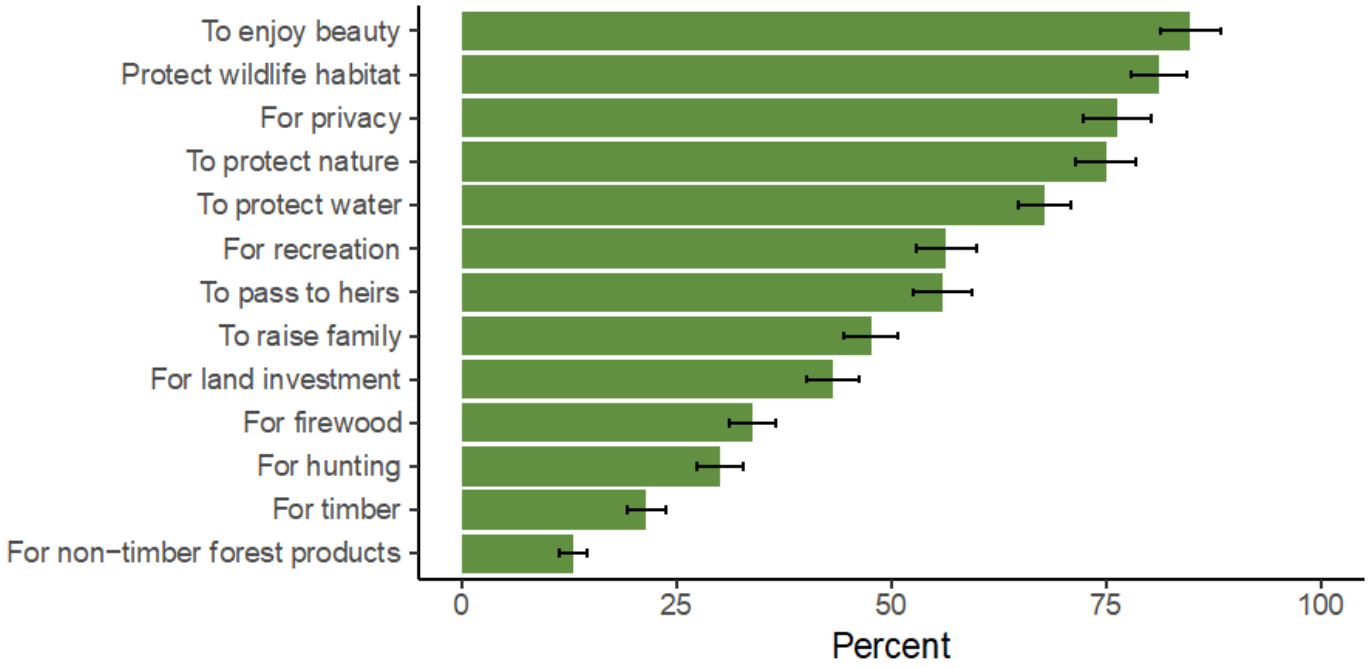

Figure 2. Reasons for owning wooded land for family forest owners in New England (with 10+ acres). Error bars represent 1 standard deviation.

The Pooled Timber Income Fund: A New Conservation Tool

Sophie Traficonte,

New England Forestry Foundation

New England Forestry Foundation has created a new land conservation option called the Pooled Timber Income Fund (PTIF) that offers landowners the opportunity to permanently protect their forest lands and receive tax benefits and lifetime income. It accelerates the protection of working woodlands in the region, and it provides short and long-term security to woodland owners.

Since its conception in 1944, the New England Forestry Foundation has pursued innovative programs to advance conservation and forestry throughout New England. NEFF continues this conservation work through new tools like the PTIF, which is a new application of the well -established planned giving tool, the pooled income fund. In a traditional pooled income fund, donors contribute cash or other assets to a charity, the charity invests the assets, and the income after expenses is distributed to the donors until their death, at which point the assets belong to the charity. In this planned giving vehicle, donors receive both lifetime income and a charitable tax deduction at the time of the initial donation. In the PTIF, landowners donate their land to NEFF, and the timber on that land to a pooled income fund set up and run by NEFF. The landowners receive units in the fund proportional to the value of their timber donation and the fund manages the timber in accord with NEFF's green-certified, exemplary forestry practices.

This type of forestry balances income generation with the long-term health of forests. As with any traditional pooled income fund, donors receive both an initial charitable tax deduction and lifetime income. However, with the PTIF, fund participants have the significant added benefit of participating in an investment that actively combats climate change. The PTIF uses Exemplary Forestry management on all of its properties, which leads to older, more diverse forests with a mix of tree age classes. Research suggests that this type of forest management makes the forests more resilient to climate change impacts and better able to adapt to them. The forest also grows faster, and has a higher volume of wood than a typical forest at any point in time, which increases the benefit to society due to the forests' action in removing damaging carbon dioxide pollution from the atmosphere.

Along with these climate benefits, the donor receives lifetime annual income, which is distributed to the donor and is generated from timber harvests on all of the land in the PTIF. The income is allocated based on units assigned at the time of donation. Using data from Massachusetts-based forests owned by NEFF, the projected rate of return before expenses on timber donations to the PTIF should range between 1.5% and 2.5% of the timber value per year. Distributions are based on revenues minus expenses of running the fund, and so are likely to be lower than these percentages. If the Pooled Timber Income Fund operates at a loss, there will be no distributions to beneficiaries, but also no liability to cover those losses on the part of beneficiaries. Shares cannot be sold or transferred other than to successor beneficiaries named at the time of the donation. Because timber is harvested in most years from one or more of the pooled properties, each member of the fund receives a more even stream of funding than they would if they managed their own land. There is also a reduced risk of loss from weather, insects, or other hazards, and reduced risk regarding timber prices due to the greater diversity of timber types and stand ages likely to be present in the fund.

Participants in the PTIF are eligible for a number of potential tax benefits (i.e., income, property and estate taxes), the value of which will depend on personal circumstances. Landowners donating to the PTIF may be able to claim a charitable tax deduction on their federal income tax returns for both the donation of the land to NEFF and the donation of the timber to the PTIF. The value of the donation to the PTIF is calculated from the timber value reduced by the expected income stream until the land passes on to NEFF. After enrolling in the PTIF, the landowner is also not responsible for further property taxes on the woodland because NEFF will pay property taxes on the property while it is enrolled in the PTIF.

On the death of the landowner's beneficiaries, the landowner's shares are transferred to NEFF. Over time, NEFF may extinguish shares to move timber rights out of the fund. The associated lands at that time would merge back with the woodlands in NEFF's portfolio of Community Forests. NEFF owns and manages 150 properties totaling more than 38,000 acres across New England for the benefit of all New Englanders. These permanently protected Community Forests are managed under contract with consulting foresters around New England to provide wildlife habitat and sustainably harvested wood for centuries to come. Since they are also free and open to the public, local residents of all ages can visit them to enjoy and explore the natural world.

The PTIF is a great tool to help with future planning and advancing Exemplary Forestry throughout New England. This tool is unique in its ability to provide donors with both financial benefits and conservation benefits. By supporting this tool we can further help the people of New England to sustain their way of life, protect forest wildlife habitat and ecosystem services, and mitigate and adapt to climate change.

For more information please contact Conservation Project Manager, Sophie Traficonte at straficonte@newenglandforestry.org or 978-952-6856 x122.

Society of American Foresters
Growing better all the time

Maine Division News ~ Maggie Mansfield

Chief Kirk Francis and the Penobscot people received 735 acres of land returned to Penobscot stewardship, creating a contiguous block of over 5,000 acres between the Penobscot River and Katahdin. In returning the land to Penobscot stewardship, the Elliotsville Foundation acknowledged 350 years of violence and colonization that have left the Wabanaki in Maine with access to less than 1% of the land that once supported them. Representatives of the Elliotsville Foundation learned this history of land loss after joining First Light, a group serving as a bridge between conservation organizations and Wabanaki people. First Light is working to expand Wabanaki access to land, tailoring their approach to Maine, where 90% of land is privately owned. In a statement announcing the return of the land, both First Light and the Elliotsville Foundation expressed that this is just one step in making amends.

Pixelle Specialty Solutions, the Pennsylvania-based owners of the Jay paper mill, will not rebuild the pulp digester that ruptured in April. Paper manufacturing will continue using pulp bought from both out of state and within Maine. Though the full economic impact remains to be seen, more than one third of the Mill's 500 employees have been laid off and softwood and pine pulpwood prices have plummeted in the region.

Sebago Clean Waters, a partnership between the Portland Water District and eight conservation organizations, received an $8 million grant from the USDA Natural Resources Conservation Service (NRCS) to protect water quality in the Sebago region. Sebago Lake provides drinking water to over 200,000 people in Greater Portland, yet only 11% of the surrounding forests responsible for maintaining water quality are conserved, according to a recent press release. Sebago Clean Waters aims to protect 25% of the land in the watershed in the next 15 years, and thus ensure water quality, intact forests, and vibrant local and regional economies into the future.

Granite State Division News ~ Stephen Eisenhaure

The Granite State Division's annual meeting will be held via Zoom this year on February 12th from 3-5 pm. The meeting will be abbreviated, but it will still have the key content that we all look forward to every year. Patrick Hackley, New Hampshire's new State Forester, will give an update for State Lands. There will be a business meeting and an update from incoming NESAF representative Bill Hill. Division bylaw changes will be covered by the current Chair Matt Chagnon. A number of awards will be presented including Forestry Students of the Year, NH Tree Farm inspector awards, and the NH Tree Farmer of the Year award. The Forester of the Year award will not be given this year at the meeting, but our Executive Committee reserves the right to present the award if conditions change that allow in person meetings later in the year.

NH's 2021 Outstanding Tree Farmer of the Year is Charles and Mabel Niebling of Boscawen. Charlie and his family do all the timber harvesting and stewardship work, save trucking of forest products, on the 67+ acre property. Charlie is a well-known and highly respected NH licensed forester and Principal and Partner of Innovative Natural Resource Solutions.

This year will serve as a transition year for NH Tree Farm Inspectors due to a number of changes. From Greg Jordan: All Tree Farm Inspectors will need to be retrained to the new, 2020-2025 Standards of Sustainability that were officially approved by the AFF Board of Trustees in November 2020 before they can do inspections.

The NH Tree Farm Committee will begin holding (virtual) trainings in March. National will also offer online trainings. The good news: (1) all training *can* be done online (we will offer in-person training when we are able) and (2) once retrained, inspector credentials will remain active for the life of the standards (no need for retraining every 2 years if an inspector isn't active).

Some other changes are the inspection form will be called the "021" instead of the "004"; optional inspections will now be called "monitoring inspections"; the ability to complete monitoring inspections remotely if no management activities have occurred since the last inspection (still require full management plan review and email/call to landowner).

There are other changes that will make the program easier for inspectors – we will discuss these at our training.

In terms of Continuing Education Credits there are still a number of classes available online to fulfill those requirements. Go to : https://extension.unh.edu/blog/forestry-webinar-series. Webinars are available for Forest Carbon and Health as well as Modelling Rehabilitative Silviculture. As always, thanks to Extension for adapting and filling needs for all of us. It's my understanding that given that we will continue to trend away from in-person learning, Cooperative Extension plans to produce additional classes this Spring. These will likely be found on their website at a later date. Webinars from other sources:

New England Region Council on Forest Engineering has posted 5 webinars with CEUs available – online
The Northern Institute of Applied Climate Science and USDA Northern Forests Climate Hub are offering the Adaptation Planning and Practices Online - Winter 2021 – Webinars, starting January 25, 2021

Lastly, a heartfelt congratulations to Steve Roberge, UNH Extension's Forestry Specialist, who was named Cheshire County Conservation District's Educator of the Year in 2020. It is always great to see deserving foresters from NH recognized for their work.

Connecticut Chapter News ~ Emery Gluck

Numerous Connecticut SAF members and the Yankee Division SAF Working Group on Forest Management in an Era of Climate Change commented on the Governor's Council on Climate Change (GC3) Forest Sub-group draft report and were successful on having the term "Proforestation" removed from the Mitigation section. Additional changes include:

"Although establishing forest 'reserves' or 'wildlands' continues to be an important consideration in the report, we recognize that the specific acreage goals for reserves on state lands are arbitrary and have been removed."

At press time, the Science and Technology Sub-group still has "Proforestation" and phasing out forest management on state lands in their report.

Michael Ferrucci, Yankee Division SAF Chair of Working Group on Forest Management in an Era of Climate Change, sent communication signed by 21 members of the Working Group to DEEP Commissioner Dyke and Dr. French, Director, DEEP's Office of Climate Planning, and asked it to be forwarded to the members of the Governor's Council on Climate Change.

The following are excerpts of the letter: "The Yankee Division strongly urge the members of the Adaptation & Resilience and Mitigation Subcommittees, and the full **Governor's Council on Climate Change,** to adopt the recommendations of the Forests Sub-Group of the Working and Natural Lands Working Group.

The Yankee Division strongly stated its disappointment with the forest recommendations issued by the Science & Technology Working Group as they do not include consultation with a full range of forest experts and reflect an incomplete understanding of the science of forests and forest carbon dynamics.

The reports states, "Proforestation can maximize carbon storage and ecological and structural complexity over time" [page 21], but no evidence is presented that supports this claim for Connecticut's forest types.

It is a concept that requires more study, evaluation and comparison with other management alternatives over the wide variety of forest types and conditions found across our state, and the nation, before it is recommended for adoption as the sole management strategy of pubic forest resources.

It is deeply disappointing that the Science & Technology Working Group report states, "There is mixed support/opposition to proforestation (growing suitable existing forests)" [page 28] without observing that those opposing the concept of proforestation include the Yale University Forest School faculty, national wildlife and conservation organizations, and many natural resource professionals having considerable local experience; while those supporting the proforestation concept in the public comments appear to be non-specialists, many of whom are on the record with passionate statements in opposition to recognized forest management practices.

The Science & Technology Working Group report does not mention the potential of increased use of wood products, including remarkable recent advances in engineered wood products, instead of concrete and steel. Their manufacture uses far less energy than the non-renewable alternatives and engineered wood products store carbon for long periods of time, perhaps centuries.

It is appropriate that carbon be added as a multiple-use pillar along with wildlife, water, recreation, and timber - but that no one use is focused on to the complete exclusion of the others. Further, management of state forest land and other important forests should be based on a complete understanding of the full range of scientific literature surrounding forests, climate change, and carbon, not on a single, unproven theory."

Jerry Milne reported that the December 18th meeting of the Science & Technology Working Group did not address forestry though Connor Rockett from New England Forestry Foundation recommended that the State adopt the latest building codes that allow mass wood construction, as several other states have already done.

The GC3 reports can be found at :https://portal.ct.gov/DEEP/Climate-Change/GC3/GC3-Working-group-reports

Mike also gave a tour of the forest management at Deer Lake Scout Camp to his state representatives. "And, both have agreed to help promote one or more field events so that interested legislators and selected staff can visit managed forests with foresters and forest scientists!" Mike proposed a Zoom meeting early next year with field meetings later in the year.

Thank you Mike, the other members of the SAF Working Group and all the members who commented for your advocacy and perseverance.

New CT News Correspondent needed!

Emery Gluck promised to serve as CT News Correspondent for the 2020 calendar year. As his term has expired, the CT Chapter is looking for a new individual for this role. Interested individuals should contact J.P. Barsky, Nick Zito, Alex Amendola, Dan Lawrence or Joe Orefice for details.

Rhode Island Chapter News ~ Chris Modisette

This is a list of the forest-related activities that occurred in Rhode Island during 2020 in which RI SAF Chapter members were involved.

Marc Tremblay receives **SAF Presidential Field Forester Award** for Region Six.

RISAF and RIFCO Summer Meeting on the use of Slash Walls

On August 6th, 2020 RIFCO conducted its Summer Twilight Walk at the site, and the RI Chapter of the Society of American Foresters (RI SAF) held a workshop for foresters and Woods Operators. Dr Jeff Ward from the CT Ag. Experiment Station (CAES) and Dr. Peter Smallidge of Cornell University were on-hand to provide an overview of the future of our oak forests and how these slash walls can help with its regeneration.

The Value of Rhode Island Forests

A 138-page study produced by the RI Tree Council and the RI Forest Conservation Advisory Committee, outlines the benefits provided by forestland and recommends a suite of potential strategies to encourage conservation. It was funded through the Department of Environmental Management (DEM) with a grant from the RI Tree Council.

The Economic Impact of Rhode Island's Forestry and Wood Products Sector

In collaboration with the Rhode Island Forest Conservators Organization, other RI forestry-focused non-profits, and the RI Department of Environmental Management, the University of Rhode Island (URI) produced the first report of its kind for the RI Forestry and Wood Products Sector, in which economic impacts are estimated by hand-counting the gross sales and jobs estimates of individual businesses. URI estimates that these 513 firms were responsible for over $400 million of gross sales and almost 2,500 jobs in 2016. Including economic impacts across the state economy, we estimate the RI Forestry and Wood Products Sector is responsible for $716.4 million of economic output and 4,844 jobs throughout Rhode Island.

Forest Legacy Grant

The Rhode Island Department of Environmental Management has received a $2,905,000 grant from the USDA, Forest Service to protect 716 acres of forest in the Scituate Reservoir Watershed from conversion to other uses by a grant through the Forest Legacy Program.

Doris Duke Charitable Foundation, American Forests

Urban Forests for Climate and Health partnership Rhode Island, working alongside the nation's oldest conservation organization, American Forests, has received a $650,000 grant from the Doris Duke Charitable Foundation to increase urban forests statewide. This initiative brings the State of Rhode Island, American Forests, and both the Environment and Child Well-being programs of the Doris Duke Charitable Foundation (DDCF) together. Working through the state's Health Equity Zones, this initiative has the potential to elevate urban forests to the mainstage in fighting climate change globally while utilizing their unique position in people's lives to reduce the negative health impacts of a heating climate, such as respiratory, extreme heat, and cardiovascular illnesses.

Other highlights include:

- New Forest Health Issues with American Beech discovered in Hopkinton, RI.
- "Increasing Resiliency in Southern New England Oak Forests" LSR grant project.
- Forest Climate Adaptation Network - Southern New England Work Group.
- Regional Conservation Partnership (RCP) Network Steering Committee (RI representative).
- Rhode Island Woodland Partnership.
- Southern New England Heritage Forest NRCS RCPP Project.
- NRCS Cooperative Forestry Agreement with RIRC&D and URI.
- NRCS Forestry for the Birds with the RI Woodland Partnership and the RIRC&D Council.
- RI Coverts Project.
- RI Forest Action Plan Update.
- RI Forest Legacy Assessment of Need Update.
- Pawtucket-Central Falls Health Equity Zone tree planting grant project.
- RIDEM hires Robert Allard as its new **Urban & Community Program Coordinator.**

NESAF Annual Winter Meeting
NESAF Turns 101! Celebrating the Past, Looking to the Future
Monday, March 22 - Wednesday, March 24, 2021
Live on your computer screen through ForestED!

The Yankee Division is excited to host the 101th Annual NESAF Winter Meeting! NESAF is leading the nation by being the first SAF State Society to host it's Annual Meeting through the ForestED platform! The first two days will be technical sessions & the third day will include workshops. Please be sure to visit the NESAF Website for up-to-date registration information, and schedule changes. We look forward to seeing you there!

Registration and CFE Information

Online registration will be available through the ForestEd platform on the National SAF Website, beginning February 10th, 2021. Individuals will need to use their SAF Account Credentials in order to login. Nonmembers may need to create an account to register. The winter meeting program is being evaluated for Continuing Forestry Education (CFE) Units. The program will also be archived on the ForestED platform for individuals unable to attend the live event, however, prior registration will still be required. In addition, the first 200 SAF registrants will receive a commemorative NESAF mug!

NESAF would also like to encourage attendance by younger professionals. If your most recent forestry degree was awarded within the last five years, contact Jennifer Shakun for information on how to receive $10 off your registration. Registration cost information can be found at the bottom of the page.

Sponsors and Raffle Items Needed

For information on sponsorships, please contact Marc Tremblay mstremb@cox.net,

For information regarding the auction, please contact Paul Dolan pcdolan1@verizon.net

Flash Talks

To engage all members, we are seeking flash talks. Researchers, field foresters, and other land managers are encouraged to participate, as sharing your experiences will benefit the entire membership.

An abstract is required for a flash talk. The abstract includes a title and each author's full name, affiliations, and locations, lead author's contact information. The body of the abstract (not including names, etc.) is limited to 300 words. The deadline for submission is February 21st.

Flash talk sessions will be on March 22th from 2:00PM to 3:20PM, and on March 23 from 10:30AM to 11:30AM. Up to 24 presentations will be selected from submitted abstracts. The 10-minute timeframe is strictly enforced with 7 minutes for presentation and 3 minutes for questions.

Flash talks accepted for presentation will be notified by email by March 8th and accepted abstracts will be included in the Spring *NESAF News Quarterly*.

To submit your flash talk abstract for consideration, contact Tony D'Amato, awdamato@uvm.edu by February 21st.

Alumni Socials

Alumni Socials will be hosted by each university.

NESAF Annual Winter Meeting Registration Information:

Member Rates	Non-SAF Member Rates
Early Bird (Before March 1, 2021): $75	Non-SAF Member Early Bird (Before March 1, 2021): $125
Regular Rate (March 1– March 22, 2021): $125	Non-SAF Member Regular Rate (March 1-March 22, 2021): $175
Post Meeting (After March 24, 2021): $125	Post Meeting Non-SAF Member (After March 24, 2021): $175
Student Rate: $25	

NESAF Annual Winter Meeting

NESAF Turns 101! Celebrating the Past, Looking to the Future

March 22-24, 2021 ~ Live On Your Screen!

Monday, March 22, 2021

9:50 AM 9:50 AM	(Access to Session Opens)	
10:00 AM 10:30 AM	**Welcome and Call to Order**	**William Hill, NESAF Chair** **Larry Rousseau, Yankee Division Chair** **Adam Moore, General Meeting Chair**
10:30 AM 11:15 AM	**Plenary I- The NESAF Forestry Profession, 100 Years**	**Ken Laustsen, New England Society of American Foresters Historian/Archivist**
11:15 AM 12:00 PM	**Plenary II- History of Forest Science - New England Roots**	**Mark Ashton, Morris K. Jesup Professor of Silviculture and Forest Ecology, The Forest School at the Yale School of Environment**
12:00 PM 12:45 PM	Lunch Break	
12:45 PM 1:30 PM	**NESAF Business Meeting- NESAF Members Only**	**Hosted by NESAF officers**
1:30 PM 2:00 PM	Break, Session opens at 1:50 PM	
2:00 PM 3:30 PM	**Concurrent Technical Sessions 1-3**	
Technical Session 1	***Flashtalks 1***	**Anthony D'Amato (Univ. Vermont),** **Paul Catanzaro (Univ. Massachusetts)**
Technical Session 2	***Check your Compass: Forestry Ethics in Practice***	**Amanda Mahaffey (Forest Stewards Guild)** **Lloyd Irland (The Irland Group)**
Technical Session 3	***Agroforestry and Non-Timber Forest Products***	**Joseph Orefice and Karam Sheban** **(The Forest School at the Yale School of Environment)**
	How Environmental Factors Affect Plantings of Wild-Simulated Ginseng	**Karam Sheban (Yale Univ.)**
	Distribution, Presence, and Tree Health Impacts of the Chaga Fungus in Northeastern Hardwood Forests	**Rhys Brydon-Williams (Univ. New Hampshire)**
	Silvopasture Regeneration Methods	**Joseph Orefice (Yale Univ.)**
3:30 PM 4:00 PM	Break, Session reopens at 3:50 PM	
4:00 PM 5:30 PM	**Concurrent Technical Sessions 4-6**	
Technical Session 4	***Relationships Between Logger Demographics and Feasibility of Silviculture***	**Nicole Rogers (Univ. Maine Fort Kent)**
	Workforce Research and Observations From Maine: Will We Have a Future Workforce Able to Prescribe and Implement Silviculture	**Jessica Leahy (Univ. Maine SFR)**
	34 Years of Silviculture and Workforce Development at Baskahegan Company	**Kyle Burdick (Baskahegans Comp.)**
	Changes in Workforce and Silviculture in Massachusetts: 20 years of Observation	**Jennifer Fish (MA DCR)**
Technical Session 5	***Walking in Our Boots: Gender Equality in Forestry***	**Nancy Patch (VT DFPR)** **Lynn Levine (Nature Connect) and members of the Women Foresters Collaborative**
Technical Session 6	***Forest Carbon and Forest Management in Southern New England***	**Mike Ferrucci (Interforest, LLC)**
	How two Connecticut Foresters Got Unexpected Roles as "Carbon-and-Forest Management" Activists	**Mike Ferrucci and Eric Hansen (Ferrucci and Walicki, LLC)**
	Developing an SAF Position Statement	**Tim Hawley (Regional Water Authority, retired)**
	The Intersection of Carbon Science and Forest Management in Southern New England	**Andrea Urbano (CT DEEP) and Amanda Bunce (UConn)**
6:00 PM 8:00 PM	**Alumni Socials in School Sponsored Zoom links**	

Tuesday, March 23, 2021

8:00 AM 8:45 AM	Plenary III- Current State of New England Forestry	Karen Bennett, Extension Forester Emeritus, and Steven Roberge, Extension Forester, University of New Hampshire Cooperative Extension
8:45 AM 9:30 AM	Plenary IV- Future of Forests and Forestry	Anthony D'Amato, Professor and Director Forestry Program, Rubenstein School of Environment and Natural Resources, University of Vermont
9:30 AM 10:00 AM	Plenary V- A Call to Action	Paul Dolan, Area Director - Rhode Island RC&D Council Adam Moore, Executive Director, Sheriff's Meadow Foundation Terry Baker, Chief Executive Officer, SAF
10:00 AM 10:30 AM	Break, Sessions Reopen at 10:20 AM	
10:30 AM 11:30 AM	Concurrent Technical Sessions 7-9	
Technical Session 7	*Flashtalks 2*	Anthony D'Amato (Univ. Vermont)
Technical Session 8	*Flashtalks 3*	Paul Catanzaro (Univ. Massachusetts)
Technical Session 9	*Flashtalks 4*	Jeffrey Ward (CAES)
11:30 AM 12:00 PM	Break, Session reopens at 11:50 AM	
12:00 PM 1:00 PM	NESAF Award Ceremony	Ken Laustsen, NESAF Awards Chair
1:00 PM 1:30 PM	Break, Session reopens at 1:20 PM	
1:30 PM 3:00 PM	Concurrent Technical Sessions 10-12	
Technical Session 10	*Long-term Research on the Dynamics of Southern New England Oak-Hardwood Forests*	Mark Ashton (The Forest School at the Yale School of Environment)
	Legacy Forest Structures Differentially Affect Regeneration in a 25-Year Chronosequence of Oak-Hardwood Shelterwoods	Jessica Wikle (Univ. Vermont)
	The David M. Smith plots: Sixty Years of Monitoring the Regeneration Dynamics Across Forest Openings of a Mixed-Hardwood Forest	David Woodbury (Yale Univ.)
	Black Swans and Stand Dynamics	Jeffrey Ward (CAES)
Technical Session 11	*Open Call Presentations*	Ward/D'Amato/Rogers/Catanzaro
	Quantifying and Mapping the Risk of Forest Conversion in Vermont to Support Planning and Conservation	A. Adams, J. Duncan, J. Pontius
	Economic and Ecological Outcomes of Timber Stand Improvement: A Case Study	M. Kalp and T. Howard
	Dynamics of Large, Private Forest Ownerships in the U.S. The Family Forest Owners of New England: A Look at the Newest Results from the National Woodland Owner Survey	E.M. Sass, M. Markowski-Lindsay, B.J. Butler J. Caputo, B.J. Butler, S.M. Butler, J. Dias, A. Robillard, E.M. Sass
Technical Session 12	*Forest Speed Networking: Connecting Forestry's Future With its Present*	Anthony D'Amato (Univ. Vermont), Eric Hansen (Ferrucci & Walicki, LLC), Emma Sass (UMass), Wendy Weisiger (SPNHF), Helen Johnson (MA DCR), Joan Nichols (Timpro, CT Farm Bureau, Nichols), Grahm Leitner (VT GreenWood), Christopher Reily (Sweet Birch Consulting)
3:00 PM 3:30 PM	Break, Session opens at 3:20 PM	
3:30 PM 5:00 PM	Concurrent Technical Sessions 13-15	
Technical Session 13	*Urban Forests: The Role of People, Planting, and Management in Maintaining Healthy Urban Forests for the Future*	Colleen Murphy Dunning, Director of the Urban Resources Initiative, Yale Univ.
	Thinking Beyond the Backyard: How Local Planting Palettes are Steering Species Composition in the Northeastern USA	Danica Doroski (Yale Univ.)
	Forested Natural Areas in Cities: Vegetation Patterns and Governance over Temporal and Spatial Scales	Clara Pregitzer, Natural Areas Conservancy in New York City
	Urban Resources Initiative: a University Model for Clinical Urban Forestry Education	Caroline Scanlan (URI - Yale Univ.)
Technical Session 14	*Open call presentations*	Ward/D'Amato/Rogers/Catanzaro
	Silviculture in the Northern Conifer Forest: How Many Decades are Needed to Evaluate Outcomes?	M. Granstrom, L. Kenefic, M. Crandall, N. Rogers, A. Weiskittel, A. D'Amato
	Semantic Segmentation and Deep Learning for Invasive Species Detection in the Deciduous Forest Understory Using RGB Aerial Imagery	N. Marek, C. Witharana, Z. Zhu, J. Volin
	Structural and Compositional Outcomes of Adaptive Silvicultural Systems on Northern New England Forests	J. Santoro, A. D'Amato, J. Foster, K. Evans, C. Woodall
Technical Session 15	*Restoration of fire influenced landscapes*	Fletcher Clark (MA DFW)
	Significance of Inland Sand Barrens	Chris Buelow (MA DFW)
	Operational Forestry Aspect of Restoration	Benjamin Mazzei (MA DFW)
	Role of Prescribed Fire in Restoration	Caren Caljouw (MA DFW)

Wednesday, March 24, 2021

8:00 AM 12:00 PM	Concurrent Workshops	
Workshop 1	*Practical Ethics*	Marianne Patinelli-Dubay (SUNY ESF)
Workshop 2	*Web-Based Soil Tools and Apps*	Jacob Isleib (CT NRCS)

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New England Society of American Foresters

forests. resources. communities.

Our mission as foresters is to be responsible stewards of the earth's forests while meeting society's vital needs. The challenge of our mission lies in keeping forest ecosystems healthy and intact while concurrently drawing on their resources. We will meet this challenge by carefully monitoring and managing the effects of natural and human forces on the forest. Our decisions will be guided by our professional knowledge, our compassion for all living things, our desire to improve citizens' lives, and our respect and concern for the entire forest ecosystem. By advancing forestry science, education, technology, and the practice of forestry, NE SAF will provide the leadership to achieve its mission.