

Northeast Region Cohesive Wildland Fire Management Strategy

Restoring Resilient Landscapes - Creating Fire Adapted Communities - Responding to Wildfires

The National Cohesive Wildland Fire Management Strategy Northeast Regional Action Plan - 2020 Update

*Restoring and Maintaining
Resilient Landscapes*



*Creating Fire Adapted
Communities*



*Safe and Effective
Wildfire Response*



A 5 Year Update Report by the Northeast Regional Strategy Committee

January 2020



Northeast Regional Strategy Committee Regional Action Plan - 2020 Update



EXECUTIVE SUMMARY

*The purpose of the **Northeast Regional Strategy Committee (NE RSC)** is to provide a forum for Northeast and Midwest wildland fire management partners to collaborate in order to establish common objectives to advance the goals of the [National Cohesive Wildland Fire Management Strategy](#); to identify and overcome barriers to implementation, and to provide tools and resources to professionals and the public that can work to advance the three goals:*

- 1) Restoring Resilient Landscapes**
- 2) Creating Fire Adapted Communities**
- 3) Safe and Effective Wildfire Response**

This report is a 5 YEAR UPDATE to the [Northeast Regional Action Plan](#) that was published in May 2015, and has been produced for the following purposes –

- 1) summarize progress made to date,*
- 2) support the National Cohesive Strategy 5 year report, as called for by the [FLAME Act of 2009](#),*
- 3) formally communicate recommended actions based on the work of the NE RSC and its priority work groups to all NE RSC partners and stakeholders to help advance national and regional priorities.*

The priority areas include:

- *Northeast LANDFIRE*
- *Prescribed Fire Coordination*
- *Wildfire Risk Assessment and Planning*
- *Engaging Fire Departments*
- *Fire Adapted Communities*
- *Resource Sharing and Availability*
- *Communication and Collaboration*

The NE RSC sincerely hopes all wildland fire management partners and stakeholders will consider these priorities and recommendation actions as they develop and implement their respective natural resource and wildland fire management strategic and implementation plans.

Northeast Regional Action Plan - 2020 Update



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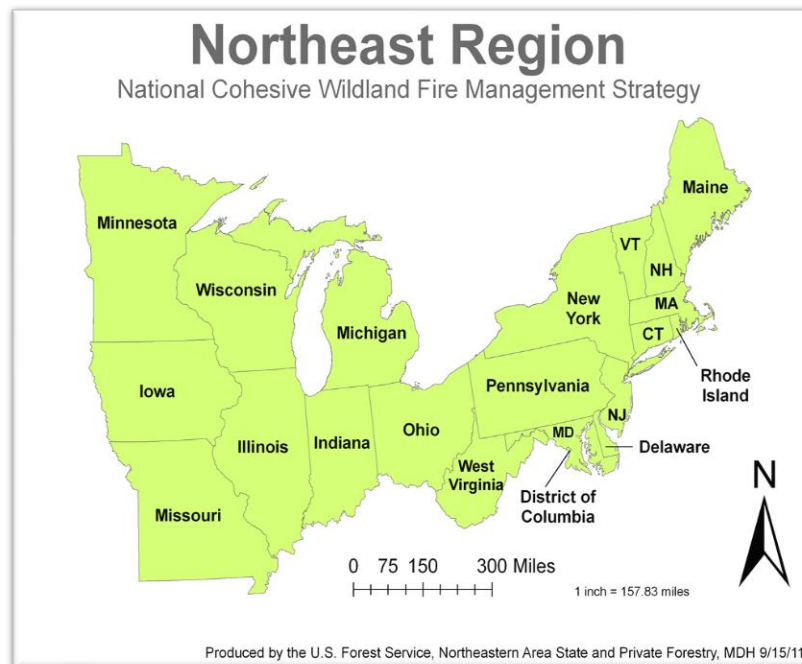
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Northeast Regional Action Plan - 2020 Update



Introduction

- *The purpose of the Northeast Regional Strategy Committee (NE RSC) is to provide a forum for Northeast wildland fire management partners to collaborate in order to establish common objectives to advance the goals of the [National Cohesive Strategy](#); to identify and overcome barriers to implementation, and to provide tools and resources to professionals and the public that can increase landscape resiliency, protect communities and ensure a safe, effective and risk-based fire response.*



- *The NE RSC endeavors to represent all the federal, state, local, Tribal, and non-governmental organizations (NGO) in the wildland fire management community in the 20 Northeastern and Midwestern States, and is the only regional wildland fire management forum in the Northeast to exchange ideas and maintain a collaborative environment among many partners, and focus on developing mutually beneficial strategies and problem-solving.*

I. NE RSC PRIORITY ACTIONS AND ACCOMPLISHMENTS

Beginning with the [May 2015 Northeast Regional Action Plan](#) and based on a number of NE RSC member surveys and face-to-face meetings conducted over the last several years, a set of strategic priorities were identified and agreed upon that would help advance the three goals of the Cohesive Strategy in the Northeast. Three partner and stakeholder surveys were conducted during 2019 by the Prescribed Fire Coordination, Wildfire Risk Assessment and Planning, and Engaging Fire Departments NE RSC Priority Work Groups. The results of these surveys were analyzed and used to develop recommended actions for these three priority areas, along with other established priority areas presented in this 2020 Update.

Table 1: Cohesive Strategy Development Timeline

PLANNING	
• 2009	FLAME Act
• 2010	Report to Congress: Vision, 3 Goals, Collaborative, Science-based
• 2011	WFLC, WFEC, CSSC, RSCs formed
• 2011-2014	3 Phases: National and Regional Analyses, Assessments & Action Plans
• 2014	National Strategy and Action Plan (April 2014)
• 2015	NE Regional Action Plan Updated/Published May 2015
IMPLEMENTATION	
• 2015	New WFLC Priorities set, NSC formed, and Executive Mgr. hired
• 2016	Regional Priorities established
• 2017-20	Work on NE RSC priorities continues

The specifics of these actions and some key accomplishments to date are highlighted in the section below:

Goal 1: Resilient Landscapes

- **Improve the quality, quantity, and use of [LANDFIRE](#) products** in the Northeast 20 state region.

LANDFIRE processes, data and products developed from the data at a national scale have affected what many in the Northeast stakeholder community believes to be an inaccurate portrayal of the landscape with regard to where fire was and still is a desired disturbance agent; where fire is a risk to resources and communities; and is a barrier to making accurate assessments of regional conditions, such as the regional wildfire risk assessment.

- **Increase prescribed fire opportunities and training in the region** available to agency and cooperator personnel as well as landowners. Increase outreach and education efforts related to prescribed fire.

- Prescribed fire is a primary, long-term solution that is needed to:
 - reduce the risk of wildfire to communities
 - restore and maintain fire dependent ecosystems and habitats
 - reduce the unwanted impacts of wildfires (to watersheds, wildlife habitats, etc.)
 - reduce safety hazards for firefighters and the public
- **Encourage the development of collaborative partnerships** across jurisdictions to facilitate ecosystem-based landscape scale restoration projects.
- Virtually all large landscapes in the Northeast consist of multiple ownerships, including significant amounts of private land. Therefore, nearly all projects require multiple partners' cooperation and support. Much more effort is needed to increase the size of projects to gain the desired resource benefits.

Accomplishment Highlights:

- The **NE RSC has an established LANDFIRE Coordination Group**, led by Megan Sebaskey, NE LANDFIRE Coordinator to improve the quality and use of LANDFIRE data for the Northeast Regional Wildfire Risk Assessment, revisions of State Forest Actions Plans and U.S. Forest Service (USFS) Land and Resource Management Plans.
- A **NE RSC Wildfire Risk Assessment and Planning Work Group** has been established to foster collaboration and communication among all regional partners and stakeholders to address the identified barriers and issues, facilitate training, information sharing, and improve collaboration with other regional and national partners. It will also support of the **Northeast regional wildfire risk assessment** project that is currently underway. This work group will be developing a set of online resource guides to assist all wildland fire management partners and communities throughout the region with state and local wildfire risk assessment planning and implementation activities.
- The NE RSC LANDFIRE Coordination Group was instrumental in setting up **three fuels calibration workshops, conducted by [Pyrologix LL](#), that were held in March 2019** in New York, Indiana, and Wisconsin (there were 70+ attendees) to improve the accuracy of fuels data and mapping across the region as a foundation for the ongoing USFS Eastern Regional Wildfire Risk Assessment project to cover all lands.
- A **NE RSC Prescribed Fire Coordination Work Group** has been established and will continue its work to improve the number of trained personnel with prescribed burning experience, and coordinate with established state prescribed fire councils, and increase engagement by states, Fire Compacts and other key partners. The purpose of this work group is to explore and implement solutions to improve coordination for prescribed fire in the Northeast - with a purpose of sharing information and providing support for sub-regional and state activities such as training.

The Prescribed Fire Coordination Work Group is developing a document that is essentially “The Story of Prescribed Fire in the Northeast region” and has conducted its first survey. Results will help us

describe capacity, identify limitations to implementation, and describe opportunities for cooperative work with the specific objective of increasing the pace and scale of prescribed burning in the Northeast region. This group is composed of experts from a wide range of organizations including the USFS, USFWS, FEMA, Research and Joint Fire Science Exchanges, TNC, state forestry and wildlife agencies, private consultants, and the Army National Guard.

Table 2. NORTHEAST REGION: PRESCRIBED FIRES

<u>YEAR</u>	<u>NUMBER OF FIRE</u>	<u>NUMBER OF ACRES</u>
2018	2,196	286,956
2017	2,444	259,667

SOURCE: USFS Eastern Area Activity Reports 2017 & 2018

Goal 2: Fire Adapted Communities

- **Encourage the development and implementation of all hazard state and community plans, including Firewise USA®, Ready Set, Go! and Community Wildfire Protection Plans (CWPP) as a foundation for the development of fire adapted communities.**
 - While large wildfires are a relatively rare occurrence in the Northeast, the potential risk to life and property is significant due to the high percentage of WUI present across the region. By using the wildfire planning tools and taking an “all hazard” approach to potential community risks, many hazard mitigation benefits to the community and its natural resources can be realized.

Accomplishment Highlights:

- The NE RSC published its [Northeast Wildfire Preparedness Resource Guide](#) in early March 2019.
An NE RSC Fire Adapted Communities work group made up of members from federal state, non-governmental organizations (NGO), and local organizations began work in 2017 to develop the Northeast Wildfire Preparedness Resource Guide which is designed to help homeowners, homeowner associations, fire departments, and community leaders actively protect their property from wildfires with the best information available. The Guide is posted on the NE RSC website.
- A **NE RSC Wildfire Risk Assessment and Planning Work Group** has been established to foster collaboration and communication among all regional partners and stakeholders to address the identified barriers and issues, facilitate training, promote information sharing, and improve collaboration with other regional and national partners in support of the **Northeast regional qualitative wildfire risk assessment (QWRA)** project.

The purpose of this work group is to improve wildfire risk mitigation planning - While there is certainly a wildfire risk to communities in many areas of the Northeast, community wildfire planning is often not seen as a priority when there are more frequent threats from snow & ice storms, hurricanes, tornadoes, flooding, etc. A survey has been conducted to help assess the region's needs and design a resource guide for all potential users of risk assessments. This group is composed of experts from FEMA, state forestry agencies, USFS, the Eastern Forest Threat Assessment Center, and the Joint Fire Science Exchanges.

- **Northeast states leverage Forest Service's Risk Assessment efforts** - The Eastern Region (R9) of the U.S. Forest Service recently procured the services of [Pyrologix LL](#), to conduct a Wildfire Risk Assessment consistent with the methodologies described in publication [RMRS-GTR-315: "A Wildfire Risk Assessment Framework for Land and Resource Management"](#). The original contract provided for a hazardous fuels assessment across all lands, but the risk assessment only covered NFS lands plus a 10 mile buffer. The NE RSC and NMSFA worked with the USFS to extend the risk assessment portion to all lands.

Table 3. NORTHEAST REGION: COMMUNITY WILDFIRE PROTECTION PROGRAMS

<u>PROGRAM</u>	<u>NUMBER OF PARTICIPATING COMMUNITIES</u>
Community Wildfire Protection Plans (CWPP)	390+
Firewise USA® Communities	127
Fire Adapted Community (FAC) Learning Hubs	2
Community Protection Against Wildfire (CPAW) Communities	2
Ready, Set, Go!	274

Goal 3: Safe and Effective Wildfire Response

- **Getting more Northeast local fire departments involved in wildland fire management** (i.e. community planning, WUI awareness, wildland fire training, evacuation planning, prescribed fire and other hazard mitigation strategies & activities)
- Local fire departments have the potential to actively support and help implement all three goals of the National Cohesive Strategy.

- **Engaging Fire Departments Work Group** - Local fire departments have the potential to actively support and help implement all three goals of the National Cohesive Strategy. The purpose of this work group is to increase fire department awareness of the WUI problem in the Northeast. A survey has been conducted to help reach out to fire departments across the region to identify those that have a need and interest in expanding their knowledge and involvement in wildland fire management. This group is composed of experts from the National Fire Protection Association (NFPA), the International Association of Fire Chiefs (IAFC), the National Volunteer Fire Council (NVFC), the Federal Emergency Management Administration (FEMA), and state and local fire agencies and departments. The survey was conducted in 2019 to help guide the RSC in developing key messages and communication networks to reach out to more fire departments to help with implementation of the Cohesive Strategy.
- **Provide expertise and support for breaking down resource availability barriers.** A key principle in the Cohesive Strategy states: “Local, state, tribal, and federal agencies support one another with wildfire response, including engagement in collaborative planning and the decision-making processes that take into account all lands and recognize the interdependence and statutory responsibilities among jurisdictions”.
- As a net exporter of wildfire response resources, the Northeast wildland fire community will continue to help identify **resource availability** issues and propose solutions as they become evident. This effort has included areas such as liability protection constraints and Administratively Determined (AD) hiring processes.

Accomplishment Highlights:

- Over the past several years, assistance provided to Western wildfires and Canada from the Northeast wildland fire community has been extensive. Annually, approximately 1,500-2,000 interagency resources (crews, engines, aircraft, modules, the Eastern Area (EA) Type 2 incident management team (IMT), and other overhead) were provided. A second Type 2 IMT was established in 2019. These deployments are critical for improving and maintaining expertise in the Northeast region as well as providing additional national response capacity.
- The NE RSC continues to work with state and federal partners, the [Alliance of Forest Fire Compacts](#), and the West and Southeast RSCs to eliminate barriers to resource availability. There are issues that affect the Northeast such as with resource ordering system constraints, cooperative agreement limitations, jurisdictional recognition of qualifications and loss of expertise, but also inhibit the national capacity to share valuable wildfire response resources. There is a broad concern within the wildland fire community about liability protection, especially from third party claims.

Table 4. NORTHEAST REGION: WILDFIRES

<u>YEAR</u>	<u>NUMBER OF FIRES</u>	<u>NUMBER OF ACRES</u>
10 YEAR AVERAGE	10,832	128,014
5 YEAR AVERAGE	9,372	71,832
2018	6,891	50,734

SOURCE: USFS Eastern Area Activity Report 2018

Overarching Activities

- **Promote integration of the Cohesive Strategy goals and priorities** between the programs within the agencies. In addition, future revisions of State Forest Action and land management plans should include applicable actions from the Northeast Regional Action Plan.
 - No single agency, organization, or landowner can adequately address complex and interrelated wildland fire challenges on its own. A cross-boundary approach involving all stakeholders including federal and state land management agencies, local governments, private landowners, environmental organizations, Tribes, fire professionals, non-governmental organizations and others is the key to success in the Northeast.
 - Working to implement the Cohesive Strategy goals, especially goals 1 and 2, can also serve to advance the goals of many other natural resource program goals including: increasing forest health, sustainable forest uses, wildlife habitat improvement, reducing invasive species and many others.
- **The NE RSC provided support for the [3rd Annual National Cohesive Strategy Workshop](#) that was held in Plymouth, MA, October 21-24, 2019.** The 3rd national workshop was held in the Northeast for the first time, and the NE RSC helped ensure a successful workshop by provided an Northeast Compact sponsored incident management team (IMT), and supporting the Wildland Fire Leadership Council (WFLC), Western RSC, Southeast RSC, and International Association of Wildland Fire (IAWF) to showcase wildland fire management in the East.
- **The NE RSC provided wildland fire management input for the [State Forest Action Plan](#) revisions.** The priority work groups produced this [set of actions and recommendations](#) based on stakeholder surveys to help guide progress by the NE RSC partners on the Northeast region's priorities. Preliminary recommendations were provided to each state in September 2019 for consideration in the revision of state forest action plans. These recommendations are included in this 2020 update to the Northeast Regional Action Plan.

Communication Activities

A NE RSC Communications Action Plan was developed in 2016 and includes the following activities to assist in expanding the awareness and influence of the Cohesive Strategy by partners and communities throughout the 20 Northeast states:

- Continue to publish Success Stories on community successes such as through [Firewise USA®](#) with NFPA.
- The NE RSC published its new website: northeasternwildfire.net in early October 2019. Support for this website is hosted through the Northeast-Midwest State Foresters Alliance ([NMSFA](#)). The website is based on the three Cohesive Strategy goals and Northeast Wildfire Preparedness Resource Guide which is designed to provide relevant national and Northeast regional information to help homeowners, fire departments and communities to actively protect their property from wildfires.
- Continue to draft monthly/bi-monthly profiles and/or conduct interviews with local leaders and project participants to highlight successes and promote wildfire prevention, protection and suppression efforts across the Northeast region.

In addition, the NE RSC will:

- Continue to hold **monthly coordination calls**,
- Periodically **convene face-to-face partner meetings** in conjunction with other regional meetings or conferences,
- Produce the **monthly newsletter** with success stories, coordination opportunities and other relevant regional news,
- Maintain and enhance the **NE RSC website** (northeasternwildfire.net) in partnership with the Northeast-Midwest State Foresters Alliance as a regional communication tool and resource, and
- **Form ad-hoc task groups** as needed to address timely issues or produce regionally relevant products such as the [Northeast Wildfire Preparedness Resource Guide](#) released in March 2019.

A FOUNDATION IN SCIENCE

From its inception, using the best and latest scientific information has been a foundational principle for implementing the three goals of the Cohesive Strategy. Several areas of science-based study and monitoring are important in ensuring effective wildfire risk assessments and wildland fire management. These include, but are not limited to:

Obtaining the Best Data – Systems and processes that collect, analyze, and inform the various planning and budget process, and project implementation are critical to effective and efficient use of resources in all aspects of wildland fire management in the Northeast region. These include: LANDFIRE and the regional Qualitative Wildfire Risk Assessment (QWRA), fire occurrence reporting, etc.

Prescribed Fire – the use of prescribed fire in the Northeast region has many purposes and factors to consider including vegetation types, fuel loads, seasonality, fire effects, burn objectives, smoke management, weather conditions and variability and public perception. The science underlying prescribed fire is continuously evolving through research studies, monitoring and practical experience. In order to expand the use of prescribed fire, maintain the highest level of safety, and meet desired objectives, close interaction between science and management is critical.

Smoke and Air Quality - The science of wildfire behavior and management is complex and highly technical. Wildfire smoke produced from combustion of natural biomass contains thousands of individual compounds, including particulate matter, carbon dioxide, water vapor, carbon monoxide, hydrocarbons and other organic chemicals, nitrogen oxides and trace minerals. Wildfires can move into the wildland urban interface (WUI), burning homes and structures and thereby consuming man-made materials in addition to natural fuels. More research is needed to understand potential health impacts of breathing this complex mix of natural and man-made material emissions. [[*Wildfire Smoke: A GUIDE FOR PUBLIC HEALTH OFFICIALS*](#), Revised 2019]. The differences between wildfire smoke and prescribed fire smoke can be dramatic. More study and communication on the relative impacts between the types and quality of smoke on air quality will be critical if the use of prescribed fire is to be increased as a cost-effective means to reduce wildfire risk around communities.

Climate Change - climate change manifests itself in many ways nationally and regionally. Of concern in the Northeast region are droughts. Even short-term droughts (sometimes even over several weeks) at certain times of the year can severely escalate wildfire risk. Other events such as hurricanes, tornadoes, wind and ice storms, and flooding can significantly add to the fuel loads which can also contribute to high wildfire risks. An increased understanding of climate change impacts along with developing useful assessment tools can help guide managers in designing management strategies both short-term and long-term.

Forest Health – many forest health issues can impact wildland fire management in the Northeast. These include insect infestations like the emerald ash borer, southern pine beetle, Asian long-horned beetle, spruce budworm and gypsy moth - to diseases such as oak wilt, bacterial leaf scorch, white pine blister rust and more. Many of these insect and diseases contribute to both decline of critical forest ecosystems and

increased fuel loads in turn leading to increased wildfire risk. Both the latest research and studies of various management treatments are important in guiding effective wildland fire management.

Community Protection and Mitigation – prescribed fire is one the most effective tools managers have to both re-introduce fire into important ecosystems, but to reduce the risk of wildfire to communities. There is a substantial and on-going need to communicate these potential benefits and include prescribed fire as a tool in community wildfire protection plans and mitigation strategies at all levels. Science has a critical role in helping managers demonstrate the effectiveness of prescribed fire in community protection and mitigation.

Firefighter Safety – wildland firefighters face more risk working with fire than ever before, from typical wildland hazards such as falling trees, transportation, smoke, rough terrain and more to increasing risks associated with wildfire in the wildland-urban interface (WUI). These WUI-related risks include hazardous materials and smoke from household and industrial chemicals released through combustion to high stress associated with protecting life and safety in a complex urbanized forest environment leading to an increasing incidence of post-traumatic stress disorder (PTSD), and even suicide. Science plays a crucial role in both identifying these hazards and developing protection and mitigation strategies to assist firefighters.

Community Involvement and Public Perceptions – some of the greatest challenges to improving wildland fire management nationally and regionally involve understanding community needs, perceptions and misperceptions about the role of fire in the environment. Scientific social surveys have also revealed that fire managers themselves don't necessarily understand the evolving perceptions the public has with respect to wildfire. As perspectives and the social environment changes, scientists must assess and communicate these changes so managers can adapt their thinking and messaging as they try to both suppress unwanted wildfires, but also introduce more prescribed fire in an effort to reduce risk and achieve other resource management objectives.

Fire Science Exchanges - With more people than ever living in the vicinity of the wildland-urban interface, especially in the Northeast, communicating wildland fire management activities and building trust with the public is paramount for safety. Although the time and resources it takes to build and maintain the public's trust may seem daunting, it may be one of the most important factors determining the long-term viability of a wildland fire management program. The [Joint Fire Science Program](#) exchanges and consortiums are critical to our success as managers need help in translating the wildland fire science that is produced into lessons and applications to help address the many critical issues facing the wildland fire management community.

II. RECOMMENDED ACTIONS FOR NE RSC PARTNERS AND STAKEHOLDERS

The following recommended actions to the wildland fire community are based on the surveys' key findings, and other efforts led by the NE RSC and its work groups:

A. NE RSC Priority: LANDFIRE Support in the Northeast-Midwest U.S.

The [2015 Northeast Regional Action Plan](#) described the need for forming a Northeast LANDFIRE Coordinating Group. To summarize the driving issues, LANDFIRE processes, data and products developed from the data at a national scale have affected what many in the Northeast stakeholder community believe to be an inaccurate portrayal of the landscape with regard to where fire was and still is a desired disturbance agent, and where fire is a risk to resources and communities. The inadequate quality of LANDFIRE data has been a barrier to making accurate assessments of regional and state level conditions, such as developing wildfire risk assessments for hazard mitigation planning.

The Northeast LANDFIRE Coordination Group was formed in June 2015 with member affiliations including state forest fire supervisors, USFS Region and State & Private Forestry, the TNC LANDFIRE team, the Wisconsin Department of Natural Resources (DNR), NE RSC, and USFWS. This group developed a proposal for a Wildfire Risk Reduction (WRR) grant to support a full time Northeast Region LANDFIRE Coordinator through the Great Lakes Forest Fire Compact and the Wisconsin DNR. The Northeast LANDFIRE Coordinator position was hired in March 2017.

Summary of Recent LANDFIRE Work and Feedback

Over the past two years, the Northeast LANDFIRE Coordinator and Coordination Group has achieved:

- Significant face-to-face interaction and collaboration with all state forest fire supervisors, forest fire compacts, Joint Fire Science Consortia members, NE RSC, TNC, and local USFS and USFWS personnel.
- Worked with several states to collect, organize and submit over 20 geospatial datasets to LANDFIRE describing vegetation, fuels, and disturbances in the region, all which will be included in the modeling for the Remap (*term used by the LANDFIRE program for these dataset updates*). Worked with the LANDFIRE Reference Database Administrator to ensure the data would be used. In the past, data submitters would not be aware if their data was being used and how.
 - In addition, [many 'pseudo plot' datasets](#) were submitted to be used in the Remap to identify problematic vegetation types
- Analysis to support understanding of fire occurrence data issues, tabularly in Fire and Aviation Management Web Applications ([FAMWEB](#)) and spatially (Fire Program Analysis Fire-Occurrence Database ([FPA FOD](#)))
 - Released a briefing paper in October 2018 regarding fire occurrence data and its use in the upcoming USFS-led wildfire risk assessment

- Organized and hosted over 50 fire managers, ecologists, and practitioners to participate in the LANDFIRE fuel calibrations for the USFS-led regional risk assessment
 - Documented workshop results and worked with the fuel calibration contractors to develop a summary of all the feedback and fuel rule changes. Worked with the LANDFIRE fuels team to implement what we learned at the workshops into the Remap.
- Continuously updated and worked with the LANDFIRE business leads and mappers to address the main issues in the Northeast:
 - Non-burnable fuels (agriculture and urban)
 - Inaccurate mapping of vegetation types (particularly hardwood vs. conifer)
- Hosted a workshop on fuel calibrations, bringing together Huron Manistee National Forest and the Michigan DNR to begin a collaboration on wildfire risk assessment in Michigan.
- The Northeast LANDFIRE Coordinator actively participates in the NE RSC Risk Assessment work group as much of the concern in the region regarding LANDFIRE relates to its use in wildfire risk assessments.

Challenges:

- **Improving feedback processes with LANDFIRE:** The only options are the online [Help Desk](#) and previously the [Data Product Review Site](#). The latter is powerful, but getting participation in the Northeast has been difficult, and now LANDFIRE has decided not to update this site so it is not in use currently. The NE LANDFIRE Coordination Group is advocating for this (or something like it) to be implemented again, but needs participation from users (and non-users who are familiar with vegetation and fuels in the Northeast).
- **Improving data submission process:** With tight deadlines over the past couple years to get data submitted to LANDFIRE for the Remap, the Northeast LANDFIRE Coordinator has continued the manual process of asking for data when needed and saved the data locally on computers at the Wisconsin DNR. There is a need to develop a culture of continually submitting vegetation/fuel/disturbance data to LANDFIRE on a regular basis and educating new personnel on this process. A shared online data drive may also be useful, except for datasets that are sensitive.
- **Fire occurrence data:** The Northeast LANDFIRE Coordinator has been involved with state submissions of fire occurrence data because of the need to submit accurate disturbance data to LANDFIRE for mapping. The Northeast region is far behind in that most states only have point data for fire occurrences (with very variable spatial accuracy), and what LANDFIRE needs is polygons to map the full disturbance and change of vegetation and fuels on the landscape. Before forcing the polygon approach, it is necessary to make the point data more accurate. There are two steps for this:

- **FAMWEB/NASF fire occurrence data.** States submit fire occurrences to FAMWEB/NASF using an online upload system. This system only checks that the data are accurate in text and numeric formatting; it does not check the spatial accuracy at all. Some states are still having trouble with this uploading step.
- Once fires are successfully processed by the FAMWEB/NASF database, they are available for use in the national [Fire Program Analysis Fire-Occurrence Database \(FPA-FOD\)](#), which is commonly used to develop burn probability for risk assessments. This database undergoes spatial quality assurance, e.g. checking if latitude/longitude points are located in the ocean (this was a problem in New Jersey), many fires located at the same point (e.g. fire station that responded) and all coded to exactly 1 acre (a problem in Michigan). The Northeast LANDFIRE Coordinator has been working with the curator of the FPA-FOD database, to understand why states' fires are being dropped and how to alleviate those issues.
- Receiving actionable feedback from Northeast stakeholders.
- Fuels mapping
 - There will always be issues with the mapping of vegetation and fuels at a national scale with consistent methodologies. However, there are many large-scale issues we can make traction on that will affect our regional map, especially when being used in a risk assessment. The Northeast LANDFIRE Coordinator continues to work diligently on the following issues: non-burnable fuels in areas that have burned, including: non-burnable agriculture (two issues: accurately mapped but incorrect fuel model, or incorrectly mapped) and non-burnable urban vegetation types.

Recommended Actions

Based on the above efforts, the NE LANDFIRE Coordination Group and Coordinator has developed the following recommended actions for consideration and/or implementation as applicable by the NE RSC and its partner agencies:

For the NE RSC LANDFIRE Work Group and Coordinator:

- 1) **Awareness and support:** Continue the Northeast LANDFIRE section in the monthly NE RSC newsletter and encourage subscribers throughout the region to read it consistently. There are many specialists and practitioners who can help with the LANDFIRE effort that don't even realize it. In order to accurately map vegetation on the ground (and therefore fuels), LANDFIRE needs local input.
 - **Develop a Northeast LANDFIRE user guide** to supplement national LANDFIRE guidance that identifies what type of useful information Northeast regional agencies need to submit, when to submit it, how often, to where or whom, etc.

- 2) **Provide regional partner training on the use of LANDFIRE products** to maintain data quality for use in cross-boundary planning at the multi-state, in state, county, local levels for State Forest Action Plans, National Forest Plans and State Hazard Mitigation plans.
- 3) **Review and communicate changes in Remap data:** Continue analyzing the accuracy of LANDFIRE Remap data as it is available and share with the region through the monthly newsletter and appropriate presentations. Help the TNC LANDFIRE team prepare for regional webinars on the Remap data.

For agencies and organizations in the Northeast:

- 4) **Improved feedback processes:** Submit questions/concerns about LANDFIRE and its data products to the [LANDFIRE Help Desk](mailto:helpdesk@landfire.gov) (e-mail helpdesk@landfire.gov). These submissions are tracked and will receive a response. The Northeast LANDFIRE Coordinator is working with the LANDFIRE team to make these submissions and responses public so that others can learn from previous questions. In the near term, copy the Northeast LANDFIRE Coordinator on submissions to ensure they will be tracked and promptly responded to.
- 5) **Review the data:** LANDFIRE will be releasing the new and improved Remap products over the next couple of years (concluding at end of 2020). Local experts will need to review the data and let the Northeast LANDFIRE Coordinator know where improvements are needed, or inaccuracies still exist. To make submissions easier, the Northeast LANDFIRE Coordinator is working with LANDFIRE to re-activate an [online portal](#). For now, keep up with the monthly newsletter and participate as possible for different needs that arise.
- 6) **Fire occurrence data:** Work with the USFS R9 State and Private Forestry Cooperative Fire Management Specialists to improve and maintain fire occurrence data in both the NASF and FPA FOD databases. States are also encouraged to participate in the testing of the INFORM App, which is a phone application that allows for mobile fire reporting and delineation of a polygon by walking the perimeter of a fire.

B. NE RSC Priority: Wildfire Risk Assessment & Planning

The Northeast region, as outlined in the Northeast Regional Action Plan, has an on-going need to assess the wildfire risk across all ownerships and jurisdictions. Due to limited resources, it is important that wildland fire agencies systematically and scientifically use the best data available to prioritize both landscapes and communities that have the highest potential risks from wildfires. Risk assessments provide a consistent, comparable set of scientific results to be used as a foundation for wildfire mitigation and prevention planning. The information provided in a wildfire risk assessment can be used to support the following key priorities:

- Identify areas that are most prone to wildfire
- Identify areas that may require additional tactical planning, specifically related to mitigation projects and Community Wildfire Protection Planning
- Provide the information necessary to justify resource, budget and funding requests
- Allow agencies to work together to better define priorities and improve emergency response, particularly across jurisdictional boundaries
- Define wildland communities and identify the risk to those communities
- Increase communication with local residents and the public to address community priorities and needs
- Plan for response and suppression resource needs
- Plan and prioritize hazardous fuel treatment programs

Stakeholder Survey: In April 2019, the NE RSC Wildfire Risk Assessment and Planning Work Group sent out an online questionnaire to improve our understanding of wildfire risk assessments in the 20 Northeast-Midwest states and explore the planning needs in the region.

Our goal for this work is to improve the quality and use of the data that is available to calculate wildfire risk and to better support the community and landscape planning work in the region. Land managers, planners, wildfire response and outreach professionals, emergency managers, and others were invited to complete the survey.

SUMMARY OF SURVEY RESULTS

- 718 people were emailed an invite to the survey from our existing listservs.
- 187 people completed the survey. (*Our response rate was 26%*)
- Data cleaning of incomplete and duplicate surveys led to 165 responses.

Affiliation	Number of respondents	Percentage of respondents
State government	75	45%
Federal government	38	23%
Private firm	14	8%
Other affiliation (please specify)	13	8%
Non-profit organization	11	7%
Local or municipal government	7	4%
Academic institution	5	3%
County government	2	1%
Total	165	100%

NOTE: 13 more respondents were removed (from this summary) who work outside the Northeast region. The data in this summary only includes the 152 respondents who work within the Northeast-Midwest region. Links to the complete survey reports are listed under [Surveys](#) at the end of this Update.

Key findings from the survey include:

Use of Wildfire Risk Assessments

- Respondents work across all three areas of focus of the National Cohesive Strategy (maintaining landscapes, fire adapted communities, and wildfire response).
- In total, 80% of respondents have used wildfire risk assessments over the last 10 years. Among the non-users, 60% said they are likely to need one in the next 5 years.
- Nearly half of respondents (46%) are satisfied with the quality of wildfire risk assessments. Overall, most respondents see opportunity to improve the quality of wildfire risk assessments.
- The top three uses of QWRAs were for prescribed fire/fire management plans, CWPPs, and Hazard Mitigation Plans. Of note, climate change resiliency planning was the plan type that the largest number of respondents (50) say they don't currently use but would like to use a QWRA to develop.
- The majority of potential users of each plan type below have either already used a wildfire risk assessment to inform the plan OR they would like to use one in the future.

Use/Quality of Data

- A total of 105 respondents (78%) said they were familiar with spatial data related to wildfire or affected resources, and 11 respondents (8%) said they weren't sure about their level of familiarity.

- Over a third of respondents typically use a combination of both national and local data to calculate fire hazard in their area. Most respondents rated the national data available for topography (69%) and historical weather (66%) as high quality (good), whereas a majority of respondents rated the national data available for fire history, fuel assignment and vegetation as medium quality (fair).
- Most respondents who use these data to calculate wildfire effects say they are using either local data or a combination of national and local data to calculate fire effects. Few rely solely on national data.
- Respondents described how low-quality national data could be improved to support their work. (see examples below, for full listing, see the [QWRA survey](#)).
 - *Need more recent data and smaller scale events.*
 - *Much historical weather data I have found is more coarsely spread across the state than would be useful for us to develop risk models and look at risk.*
 - *National datasets don't capture the fine scale detail necessary to ID, much less analyze, things like critical infrastructure or forest structure.*
 - *Keep improving and ground truthing LANDFIRE.*
 - *Fire history data is poor for this region for non-federal agencies. More data is needed.*
 - *Increased accuracy*

Barriers to use of wildfire risk assessments

- The top barriers to respondents' use of wildfire risk assessments in the Northeast-Midwest region are limited staff time, limited staff with the necessary skills or training, and limited financial resources.
- In an open-ended question, respondents described other barriers, concerns or challenges related to wildfire risk assessments in the region. (see examples below, for full listing, see the [QWRA survey](#))
 - *Accuracy of available WUI data - smaller areas with volatile fuels in Northeast U.S. often overlooked*
 - *Accuracy of assessments without field experience verification.*
 - *Ensuring that all federal Agencies are utilizing the same data sets. We cannot come at this from a different direction to inform our state and local partners on the true risk.*
 - *Few risk models take into account the impact of wind and embers nor of structures (homes, commercial buildings) as fuel that will help spread the fire.*

- *How to use them (QWRAs) might be the biggest barrier.*
- *They (QWRAs) don't assess the potential use of prescribed fire as a mitigation tool, which could pave the way for education, resource allocation, public acceptance and implementation.*
- *We have almost zero understanding of long-term climate-fire relationships that can inform current risk/hazard in the Great Lakes region (GLR) and Northeast. We also do not understand our fire ecology which is requisite to understanding risk/hazard.*
- *Wildfire is not a priority in the northeast for emergency responders, though it should be in many cases.*

General comments

- In an open text question, respondents shared final thoughts on the topic of wildfire risk assessments in the Northeast region, some examples are listed below.
 - *Experience is limited but am anxious to build local capacity in Hazard Mitigation Planning*
 - *Needs to be buy in from all agencies and participants and it needs to be reproducible so that results can be compared and analyzed.*
 - *I participated in a review of fire behavior outputs with the contractor conducting the assessment for the eastern region of the FS, very happy to see the efforts made to involve local managers of the resources.*
 - *I have a need for GIS based training, I feel this would improve my program greatly.*
 - *It is a challenge to discuss this with communities, even rural communities. They do not see fire as a big risk, maybe because of our fast action and cooperation with fire companies, but with the changing urban interface and climate change they need to understand the wildfire risk.*
 - *There is a lot of useful data available and we use it frequently for wildfire risk assessments. However, the quality of data can always be improved.*
 - *The ones I have seen lack the assessment and integration of identifying potential use of prescribed fire as part of the solution, which is a missed opportunity.*
 - *We need an online portal for state and regional [use].*

Recommended Actions

Based on these survey findings, the NE RSC Wildfire Risk Assessment and Planning Work Group has developed the following recommended actions for consideration and/or implementation as applicable by the NE RSC and its partner agencies:

- 1) **Training** (GIS, LANDFIRE, fuel and fire behavior models, available climate information and tools, hazard mitigation plans and programs, QWRAs, CWPPs)

Extensive training is already available online but not in a centralized location. Establishment of a regional fuels website may facilitate users' ability to locate these tools. Collaboration with the 5 Fire Science Consortia within region would be integral for success. [Tallgrass Prairie and Oak Savanna Fire Science Consortium](#), [Oak Woodlands and Forests Fire Science Consortium](#), [Lake States Fire Science Consortium](#), [Consortium of Appalachian Fire Managers and Scientists](#), and [North Atlantic Fire Science Exchange](#)

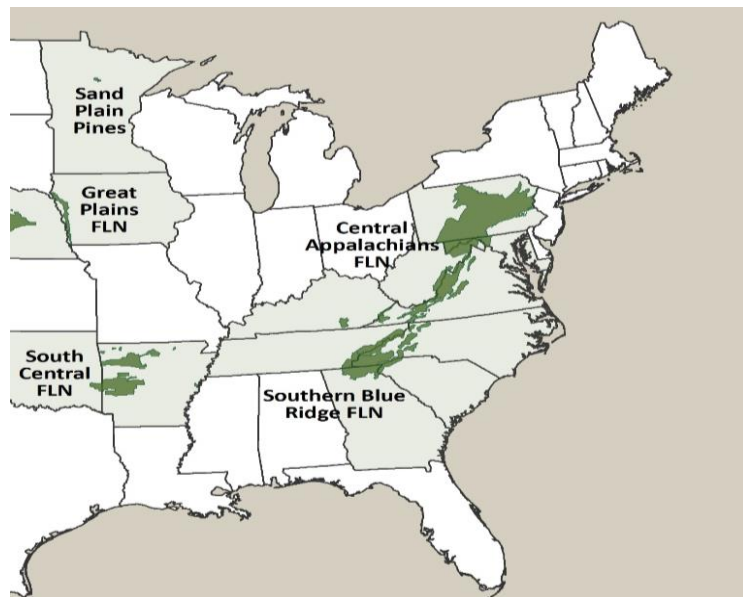


Joint Fire Science Program supported Fire Science Exchange Network

- *Example: Lakes States Fire Science Consortium has webinars related to working with landowners, fire behavior modeling, and local adaptation of LANDFIRE data. There are also links to NIFTT training*
 - Alternatively, instead of creating a new website to be managed by the USFS Regional Office, a collaboration could be made with the 5 Fire Science Consortia with generation of an additional “page” highlighting items identified in recommendation. One option would be to use the NE RSC website for this purpose.
 - A webinar and corresponding white paper could be generated illustrating on the ground existing stories of how fire and land managers have used or can use QWRA data on their landscapes. Information can be disseminated through fire science consortia.
- 2) **Data Quality Improvement** (continue with LANDFIRE fuel models/mapping/etc., fire history and occurrence data and reporting, WUI, assets and infrastructure, etc.) and inclusion of prescribed fire
 - USFS Regional office staff currently working across USFS and State and Private forestry to explore options on how to upgrade data quality for fire history across the region. One suggestion is to create a strike team to travel across the region to integrate with locals and assist with data upgrades and calibration to ensure consistency across the region.

- Regional feedback sent to Interagency Fuel Treatment Decision Support System (IFTDSS) regarding assets and infrastructure critical to regional assessment NOT included in existing database.
 - LANDFIRE is updating their mapping rules and applications in another data refresh. Reports indicate the data will be of higher quality than before (continuous process).
- 3) **Improved Data access and tools** (websites), regional QWRA, online portal, improved fire reporting tools (IRWIN, Collector, INFORM), national/regional CWPP repository with templates, online training tools, available climate info and tools, etc.
- USFS Regional office is currently seeking partners for online portal development post Regional Fire and Fuels Risk Assessment workshops to make data available for regional partners to use and display.
 - When online portal is created, will be a clearinghouse for regional risk assessment, display of regional values at risk, footprints/occurrence of wildfire data and prescribed fire and hazardous fuels activities for the public. Online portal will have a print feature to generate maps for community, stakeholder and cooperator meetings to facilitate discussion.
 - Regional office currently collecting all existing CWPPs to place in central location (repository).
 - New Interagency Fire Occurrence Reporting Modules (INFORM) will assist with data quality improvement regarding mapping and occurrence data for wildfires across the landscape.
- Some states are also adopting the INFORM Mobile (Survey 123 and Collector) applications.*
- *Issue regarding collecting data from states within the region is the inconsistency of software used by individual states to catalog their wildfire occurrences. They have different methods of uploading relevant data into National Fire Plan Operations and Reporting System (NFPORS).*
 - *Issue regarding data collection from states is the individual state identification statistical fires vs non-statistical fires. For example, Michigan used to only report fires they took suppression actions on as statistical fires. Fires fire departments contained or fires the DNR investigated were cataloged as non-statistical fires.*
 - *Issue assigning relevancy for fire departments and states to ensure statistical data is accurate. Need to find a way to communicate importance of this data.*
- 4) **Collaboration, outreach and education** (learning labs, website improvements, webinars, etc.), regional working group to improve and maintain interagency collaboration/coordination.
- Establish a NE RSC working group comprised of members from the USFS R9 Regional office, the 5 fire science consortiums, delegated candidates from State Foresters with mission of sharing information and identifying opportunities for collaboration.

- Engage pre-existing groups and add regional support to them in their endeavors to collaborate, outreach and educate. Groups like [Fire Adapted Communities Learning Network](#) [Fire Learning Network](#), and the Fire Science Consortiums within the region.
- Generate a Public Information Officer (PIO) toolbox to communicate with partners, collaborators and public about prescribed fire and hazardous fuels projects. Toolbox will include list of recommended talking points, list of suggested items to bring to meetings and necessary preparations, suggested social media posts and where to find additional information.
- Recommend each state create Wildfire Risk Steering Committee (or create a chapter of the Fire Learning Network) comprised of representatives from all stakeholders to disseminate information for on the ground practical use post release of Regional Risk Assessment. group can have a temporary span unless a need is identified for the group to stay together longer. Objectives for group would be to help determine landscape level long-term goals for active, adaptive land management projects in addition to tackling some of the larger issues identified earlier in this paper (wildfire statistics reporting, opportunities for the [Collaborative Forest Landscape Restoration Program \(CFLRP\)](#) and/or Joint Chiefs projects and/or other grants).



Fire Learning Networks in Eastern US.

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C. NE RSC Priority: Prescribed Fire Coordination

In response to the 2015 Northeast Regional Action Plan, specifically Regional Option 1A: Expand the use of prescribed fire as an integral tool to meet management objectives in the Northeast, the NE RSC has created a prescribed fire coordination work group. This group was tasked with developing ideas that promote an increase in the amount of beneficial fire on the landscape. Benefits of prescribed fire include:

- Reducing the risk of wildfire impacts to communities
- Restoring and maintaining fire dependent ecosystems and habitats
- Reducing the unwanted impacts of wildfires (to watersheds, wildlife habitats, etc.)
- Reducing safety hazards for firefighters and the public
- Improving and maintaining wildland fire management skills

In order to evaluate the current status of prescribed fire operations in the region, this work group solicited responses to a [survey](#) from a diverse group of land management agencies across the NE RSC region in the Spring of 2019. It also used a recently published survey from the [2018 National Prescribed Fire Use Survey Report](#), which looked mostly at the national picture, but provided some useful regional insights.

With the goal of working towards increasing the pace and scale of prescribed fire, the work group used these data to explore the current situation of prescribed fire in the region, define several priority areas and recommend actions.

Challenges

Prescribed fire implementation in the NE RSC region is defined by the vast arrays of political boundaries, land management agencies, and categorical exclusion of fire. The key barriers or issues to accomplishing more prescribed burning by the survey include:

- Developing capacity (training, sharing resources, etc.)
- Addressing liability limitations for firefighters conducting prescribed fires
- Increasing public awareness and education on prescribed fire
- Smoke management
- Limited traditional burning windows
- Burning in wildland-urban interface (WUI)
- Improving data collection and sharing
- Lack of available prescribed fire science
- Restrictive state and local regulations
- Increased fuel loads due to fire exclusion and extreme weather events

Recommended Actions

1) Capacity

- Coordinate with partners to help ensure capacity is available through improved strategic planning, use of *dedicated prescribed fire crews*, greater flexibility to use fire personnel across units, and more effective use of partner capacity.
- Explore capacity of the four Forest Fire Compacts to expand their support of resource sharing for prescribed fire activities (training, mobilization, etc.)
- Support an operationally focused Prescribed Fire Needs Assessment that focuses on identifying priority areas for restoring ecosystems; protecting the habitat of Federal and State threatened, endangered, and sensitive species; and controlling invasive plants through expanding and maintaining the use of prescribed fire. Private lands adjacent to public lands should also be considered within the larger landscape.

2) Training

- Establish a Prescribed Fire Training and Science center.
- Increase the number of prescribed fire training opportunities and wildfire assignments to increase the number of experienced practitioners in all areas of the region.

3) Regulation

- Encourage increased collaboration among the EPA, state air quality agencies, state fire management agencies and other partners to streamline the permitting process for prescribed fire use.
- Consider forming more prescribed fire councils and associations in states across the region.

4) Awareness and Education

- Improve public awareness and acceptance of prescribed fire by using wildfire incidents and other related news to communicate the significant differences between uncontrolled wildfire smoke and prescribed fire smoke impacts on air quality and public health.
- Establish a website to share prescribed fire success, lessons learned, training opportunities and other resources to support increases coordination across the 20 Northeast states.
- Improve reporting processes and record keeping and spatial data mapping of prescribed fire accomplishments across the region.

5) Prescribed Fire Science

- Increase prescribed fire opportunities using available science to expand burn windows to growing seasons in a variety of fuel types.
- Work more closely with JFSP Fire Science Exchanges to share information relevant to prescribed fire managers across regions.
- Support the [Prescribed Fire Science Consortium](#) and advocate for applied science aimed at understanding burning windows, fire effects, and the impact that changes in climate may have on our ability to burn.

D. NE RSC Priority: Engaging Fire Departments

As a critical component of the wildland fire management effort, our goal is to get more Northeast local fire departments involved in wildland fire management (i.e. community planning, WUI awareness, wildland fire training, evacuation planning, prescribed fire and other hazard mitigation strategies and activities). The NE RSC Engaging Fire Departments Work Group conducted a [regional survey](#) of local fire departments (volunteer and career) in April and May 2019 to improve our understanding of fire department engagement in wildland fire in the 20 Northeast states.¹

¹ Connecticut, Delaware, Illinois, Indiana, Iowa, Maine, Maryland, Massachusetts, Michigan, Minnesota, Missouri, New Hampshire, New Jersey, New York, Ohio, Pennsylvania, Rhode Island, Vermont, West Virginia, Wisconsin

Fire departments, especially in the Northeast, are often the first responders to wildfire incidents. Due to limited resources, many fire departments don't always have the necessary training and equipment to engage more complex fires in the wildland-urban interface (WUI). Increased engagement with wildland fire management agencies has the potential to increase the knowledge and ability to more safely engage wildfires, and work with the other wildland fire management partners on all aspects of the Cohesive Strategy.

Our goal for this work is to improve the quality of the information available to local fire departments, increase wildland fire partner collaboration, and better support community wildfire preparedness and planning work.

Summary of Survey Results

In April and May 2019, this [survey](#) was sent to thousands of local fire departments across the Northeast 20 state region through mailing lists from the IAFC, NVFC, NFPA, NE RSC, state forest fire agencies, and local fire chiefs and firefighter associations. Key findings from the survey include:

- A total of 874 responses were received comprised of approximately 72% volunteer, 7% city, and 19% mixed volunteer and career members.
- Responses were received from all 20 states - with the greatest number of responses coming from Wisconsin (19%), West Virginia (14%), Massachusetts (14%), Pennsylvania (9%), and New York (8%).
- When asked if their department had responded to wildfires, almost 98% replied yes.
- Of those responding to wildfires, 81% of departments had an average percentage of wildfire responses of their total call volume of 10% or less; with about 15% of departments having a call volume of wildfire response percentage ranging from 11 to 30%.
- When asked *"How familiar is your agency with the National Cohesive Wildland Fire Management Strategy?"*, only about 34% of respondents were very or somewhat familiar.
- The biggest roadblocks/hurdles to improving fire department's wildland fire capability were 1- funding, 2 - staffing, 3 - time constraints, and 4 - training.
- Approximately 64% of fire departments stated they had some level of collaboration with their state forest fire agency.
- Approximately 44% of fire departments were aware that their community had a wildfire mitigation plan of some type.
- The types of wildland fire related training fire departments identified most were: 1 – wildland fire behavior, 2 – chainsaw operations, 3 – reducing community wildfire risk, 4 – wildland fire orientation, and 5 – incident management.

- The sources most used to learn about wildfire related research and resources were: 1 – state forester/state forest fire agencies, 2 – National Fire Protection Association (NFPA), 3 – U.S. Forest Service, 4 – International Association of Fire Chiefs (IAFC), 5 – National Volunteer Fire Council (NVFC).
- The main sources where fire departments obtain their wildfire-related news are: 1 – fire department associations' magazines (hard copy), 2 – wildfire news websites, 3 - fire department associations' magazines (online), 4 – Facebook.
- Approximately 56% of fire department respondents indicated interest in learning more about wildland fire through participation with the Cohesive Strategy and the NE RSC. 537 respondents provided their email addresses to receive more information.

Recommended Actions

Based on these survey findings, the NE RSC Engaging Fire Departments Work Group has developed the following recommended actions for consideration and /or implementation as applicable by the NE RSC and its partner agencies:

1) Communication

Develop, promote, and disseminate orientation information about the National and Northeast Cohesive Wildland Fire Management Strategy and associated implementation efforts and successes.

- Use the communication tools identified by fire departments in the survey (magazines (hard copy and online), websites, Facebook, etc.)
- Develop and use the NE RSC fire department mailing list built from the survey responses to periodically provide wildland fire information directly and through key partners such as NFPA, IAFC, NVFC, state forest fire and emergency management agencies, and state fire department associations.
- Provide the NE RSC developed Cohesive Strategy overview presentation to the Northeast Fire Departments mailing list and make available on the NE RSC website for future access.
- Federal, State, Tribal, and local wildland fire and emergency management agencies are encouraged to include Cohesive Wildland Fire Management Strategy information and messages in their official program and business activities with state fire associations and local fire departments, including program guidance, trainings, budgeting and reporting.

2) Training

Develop, identify and disseminate information on wildland fire training opportunities, particularly those that address the needs identified in the NE RSC survey. Use the communication tools identified in action 1.

- Identify, offer, and promote training courses (online and on site) to meet top survey identified needs: 1 – wildland fire behavior, 2 – chainsaw operations, 3 – reducing community wildfire risk, 4 – wildland fire orientation, and 5 – incident management
 - Training sources include federal wildland fire agencies (USFS, USFWS, BIA, DoD, NPS, FEMA/US Fire Administration, NWCG); state forestry, wildlife, and emergency management agencies; Forest Fire Compacts; TNC, NFPA, prescribed fire councils and associations, etc.

3) Information Resources

Identify, post web links, and promote partner agency and organization guides and resources designed to support wildland fire management strategies and actions on the NE RSC website (northeasternwildfire.net) including, but not limited to:

- The Northeast Wildfire Preparedness Resource Guide
- The IAFC Wildland-Urban Interface (WUI) Chief's Guide and the Community Wildfire Protection Plan (CWPP) - Leaders Guide
- The IAFC Online Training: Fire Adapted Communities for the Fire Service
- IAFC's Ready, Set, Go! Program
- IAFF's Responding to the Interface training
- NPFA's Firewise USA® Program
- NVFC's Wildland Fire Assessment Program (WFAP)
- The Fire Adapted Communities (FAC) Learning Network - TNC
- The Fire Learning Network (FLN) - TNC

E. NE RSC Priority: Fire Adapted Communities

There is extensive existing wildland fire scientific and management information and experience about how to prepare for a wildfire, but due to the fact that large wildfires are a relatively rare occurrence in the Northeast, most communities are not as prepared as they should be in the event of a large rapidly moving wildfire such as occurred recently in Gatlinburg, Tennessee (which has conditions much like many areas in the Northeast). The impact from the 2007 Warren Grove Fire in NJ is another example. Like the areas in these examples, much of the Northeast region is in the wildland-urban interface (WUI).

In 2016, the NE RSC noted that there was no single source of information where community leaders or planners can go and easily find and learn about best practices, existing programs, and community assistance tools and resources that exist to facilitate the development and implementation of a community wildfire protection plan (or equivalent) – especially tailored to the Northeast.

Many of the same planning and preparation activities for a large wildfire will also help communities prepare for other potentially life-threatening severe events such as hurricanes, floods, windstorms, ice storms,

tornadoes, etc. In the Northeast, wildfire planning could, and probably should, be integrated into other community emergency planning efforts.

An NE RSC Fire Adapted Communities work group made up of members from federal, state, non-governmental organizations and local organizations began work in 2017 to develop the [Northeast Wildfire Preparedness Resource Guide](#) which is designed to help homeowners, homeowner associations, fire departments, and community leaders actively protect their property from wildfires with the best information available. The Guide is posted on the [NE RSC website](#).

While producing this guide was a significant accomplishment, much more needs to be done to help Northeast communities identify their wildfire risk, develop appropriate mitigation plans, implement and maintain preventive actions. Some possible additional actions the NE RSC partners could also take are listed below.

Recommended Actions

1) Provide and Promote available Resources

- Maintain and keep current both the NE RSC new website: northeasternwildfire.net and the Northeast Wildfire Preparedness Resource Guide. The website is based on the three Cohesive Strategy goals and Northeast Wildfire Preparedness Resource Guide which is designed to provide relevant national and Northeast regional information to help homeowners, fire departments and communities actively protect their property from wildfire risks.
- Expand the use of the [R9 State & Private Forestry CWPP Story Map tool](#) to help document and promote fire adapted community progress and needs. In addition to CWPPs, there are [state hazard mitigation plans](#), [Firewise USA®](#), [Ready, Set, Go! \(RSGI\)](#), [NFPA Community Preparedness Day](#), and other prevention/awareness activities including the [Smokey Bear program](#).
- Sponsor Learning Labs – These community workshop events utilize local examples and issues (challenges and successes) that set the context for audience learning about what living with wildland fire looks like in their space, and provides an opportunity to commit to priority actions that will increase progress towards the goals and vision of the Cohesive Strategy.

2) Communications

- Continue to publish Success Stories on Northeast community successes such as through [Firewise USA®](#) with the National Fire Protection Association (NFPA).
- Continue to draft monthly/bi-monthly profiles and/or conduct interviews with local leaders and project participants to highlight successes and promote wildfire prevention, protection and suppression efforts across the Northeast region.
- Develop an annual Northeast regional report on [Fire Adapted Communities](#) (FAC) progress that includes [Community Wildfire Protection Plans](#) (CWPP), [Firewise USA®](#), [Community Planning](#)

[Assistance for Wildfire \(CPAW\)](#), [State Hazard Mitigation Plans](#) (SHMP) and other activities in the region to help communicate progress, needs, success stories.

F. NE RSC Priority: Resource Sharing and Availability

There are a very limited number of trained, qualified wildland firefighters within the U.S. Due to staffing and program reductions, higher training standards, and administrative obstacles to resource-sharing; there has been a serious decline in the total number of qualified wildland firefighters over the past decade. During any serious fire year, such as in 2017, agencies often can't fill their resource orders when engaged in suppression. Two issues contributing to this reduction include:

1) Liability Protection for Resource Sharing

- **Current Status:** Most wildland fire agencies are very willing to share resources for wildland fire response. These agencies have spent much money, time, and energy in training firefighters to meet acceptable interagency standards. However, there is a broad concern within the wildland fire community about liability protection, especially from third party claims.

This concern has hindered wildland fire response from many states thus reducing the number of available firefighters in times of need. The liability concerns of the agencies are hindering this situation. It is a concern at all levels of exchanges between federal and state, state and state, compact to compact, and even internationally. Unless addressed, the trend of having less resources available due to this issue will continue.

- **Recommended Action:** A solution would be to enact a federal law and/or amending current Compact enabling legislation that would provide extra liability protection to agencies when responding and working on incidents. There is a draft of this legislative proposal currently being worked on and supported by the National Association of State Foresters (NASF).

2) States Need a Dependable Mobilization System

- **Current Status:** While the federal agencies have established and use the nationwide *Resource Ordering and Status System (ROSS)*, its design has been primarily to assist with federal mobilizations. However, resources from all levels of government, as well as contractors, use the system to mobilize to federal incidents. On some occasions, the system is used to help states that also need resources. However, ROSS has not addressed the needs of the states in effectively using it for all types of mobilizations. States often need to share resources that don't fit the National Wildfire Coordinating Group (NWCG) rules or standards. As a result, many informal and sometimes conflicting approaches to resource-sharing takes place to address the state needs. Fixing this issue could also help federal agencies by enabling states to deal with state to state responses themselves.

- **Recommended Action:** A solution to this problem would be to add an Interstate Compact and State to State component to the new system intended to replace it named the *Integrated Resource Ordering Capability (IROC)* <https://famit.nwcg.gov/applications/IROC>. The key to success would be to build this component with flexibility so that the 50 different states could use it to meet their needs. Work is underway on this solution.

Resource Sharing for Prescribed Fire Implementation

There is a recognized need to promote an increase in the amount of beneficial fire on the landscape (prescribed and "managed" fire - where legally allowed, using smoke management best practices).

Recommended Actions:

- 1) Increase the number of prescribed fire training opportunities and wildfire assignments to increase the number of experienced practitioners in all areas of the region.
- 2) Coordinate with partners to help ensure capacity is available through improved strategic planning, use of dedicated prescribed fire crews, greater flexibility to use fire personnel across units, and more effective use of partner capacity.
- 3) Explore capacity of the four regional Forest Fire Compacts to expand their support of resource sharing for prescribed fire activities (training, mobilization, etc.)

Conclusion: Solving these issues and needs would increase the number of available resources nationally and help the states, which have been helping federal agencies for many decades, to more efficiently and effectively manage resource exchanges to meet their specific needs. As IROC is developed and implemented, subject matter experts (SME) from the states should be consulted to ensure their current issues are adequately addressed.

G. NE RSC Priority: Communication and Collaboration

The following tools and resources are being used to advance the goals of the Cohesive Strategy and help maintain networking and information sharing among both national and regional wildland fire management partners:

- **Websites:** The NE RSC published its new website: northeasternwildfire.net in early October 2019. Support for this website is hosted through NMSFA. The website is based on the three Cohesive Strategy goals and Northeast Wildfire Preparedness Resource Guide which is designed to provide relevant national and Northeast regional information to help homeowners, fire departments, and communities actively protect their property from wildfires risks.

- **Resource Guides:** The NE RSC published its Northeast Wildfire Preparedness Resource Guide in early March 2019. The Northeast Wildfire Preparedness Resource Guide is designed to help homeowners, homeowner associations, and communities actively protect their property from wildfires with the best information available. The Guide is posted at northeasternwildfire.net.
- **Newsletters:** The NE RSC has been publishing a monthly newsletter featuring relevant wildland fire management national and regional news, success stories, and updates on NE RSC partner activities. Current and past issues of the NE RSC newsletter can be found at northeasternwildfire.net.
- **Success Stories:** are important tools to illustrate how activities that implement one or more goals of the Cohesive Strategy are accomplished at the local, state, tribal, and regional levels. Success stories are published in the monthly newsletters and posted at northeasternwildfire.net.
- **Links to Resources:** Extensive lists of resource links have been included in both the NE RSC website and Northeast Wildfire Preparedness Resource Guide. These will be updated and added to as needed by the NE RSC Coordinator.
- **Workshops and Conferences:** Annually, there are several national and regional learning and networking opportunities that provide valuable opportunities for partners to meet and share both successes and failures in a broad inter-organizational context. Examples include the National Cohesive Strategy Workshops, the IAFC WUI Conferences, FAC Workshops, Smoke Summits, Fire Ecology Conferences, WFLC meetings, RSC meetings and many more.
- **Learning Labs, Field Tours, Etc.:** In the field training, tours, and learning labs have the potential to demonstrate how implementation of Cohesive Strategy goals and strategies are accomplished by many local partners to address real-life challenges. There is a need to do more in all parts of the Northeast region, especially in high risk areas and fire dependent ecosystems. In particular, Fire Science Exchanges and Forest Fire Compacts are uniquely positioned to support these types of activities.



ACRONYMS

AD – Administratively Determined
BIA – Bureau of Indian Affairs
CPAW – Community Planning Assistance Program
CS – Cohesive Strategy
CWPP – Community Wildfire Protection Plan
DoD - Department of Defense
EPA – Environmental Protection Agency
FAC- Fire Adapted Communities
FEMA – Federal Emergency Management Agency
FLN - Fire Learning Network
IAFC – International Association of Fire Chiefs
IAWF – International Association of Wildland Fire
IFTDSS - Interagency Fuel Treatment Decision Support System
IMT – Incident Management Team
JFSP – Joint Fire Science Exchange
NASF – National Association of State Foresters
NE RSC Northeast Regional Strategy Committee
NFPA – National Fire Protection Association
NFVC – National Volunteer Fire Council
NMSFA – Northeast-Midwest State Foresters Alliance
NFPORS - National Fire Plan Operations and Reporting System
NPS- National Park Service
NWCG – National Wildfire Coordinating Group
QWRA - Qualitative Wildfire Risk Assessment
RSG! – Ready, Set, Go!
SHMP – State Hazard Mitigation Plan
TNC – The Nature Conservancy
USDA – United States Department of Agriculture
US DOI – United State Department of the Interior
USFS – United States Forest Service
US FWS – United States Fish and Wildlife Service
WFAP – Wildfire Assessment Program
WFLC – Wildland Fire Leadership Council
WUI – wildland-urban interface

REFERENCES

NOTE: To access most references in this report, click on the web-linked item in the main document. Other key references are listed below.

- [Flame Act of 2009](#)
- [Northeast Regional Risk Analysis Report](#) 2012
- [National Cohesive Wildland Fire Management Strategy](#) 2014
- [National Cohesive Wildland Fire Management Action Plan](#) 2014
- [Northeast Regional Action Plan](#) 2015

SURVEYS

- [NE Prescribed Fire Survey 2019](#)
- [NE Wildfire Risk Assessment Survey 2019](#)
- [NE Fire Department Survey 2019](#)

NE RSC MEMBER ROSTER

- U.S. Department of Agriculture (USDA)
 - U.S. Forest Service – Eastern Region (R9), State & Private Forestry (S&PF)
 - U.S. Forest Service – Northern Research Station (NRS)
 - U.S. Forest Service – National Incident Management Organization (NIMO)
- U.S. Department of the Interior (DOI)
 - Bureau of Indian Affairs (BIA)
 - Fish and Wildlife Service (FWS)
 - National Park Service (NPS)
- U.S. Dept. of Homeland Security (DHS)/Federal Emergency Management Administration (FEMA)
 - U.S. Fire Administration (USFA)
- U.S. Dept. of Commerce/NOAA
- U.S. Department of Defense (DoD)
 - Massachusetts National Guard
- Intertribal Timber Council (ITC)
- National Association of Counties (NACO)
- Northeast-Midwest State Foresters Alliance (NMSFA)
 - Twenty (20) State Forestry and Fire agencies from: *Connecticut, Delaware, Illinois, Indiana, Iowa, Maine, Maryland, Massachusetts, Michigan, Minnesota, Missouri, New Hampshire, New Jersey, New York, Ohio, Pennsylvania, Rhode Island, Vermont, West Virginia, Wisconsin*
- Massachusetts Division of Fisheries and Wildlife
- Maine Emergency Management Agency
- Regional Forest Fire Compacts
 - Northeast Forest Fire Protection Compact
 - Big Rivers Forest Fire Compact
 - Great Lakes Forest Fire Compact
 - Mid-Atlantic Forest Fire Compact
- International Association of Fire Chiefs (IAFC)
- The Nature Conservancy (TNC)
 - Fire Learning Network (FLN)
- Dovetail Partners, Inc.
- Forest Guild
- Joint Fire Science Exchanges
 - Tallgrass Prairie and Oak Savanna Fire Science Consortium (TPOSFSC)
 - Oak Woodlands and Forests Fire Science Consortium (OWFFSC)
 - Lake States Fire Science Consortium (LSFSC)
 - Consortium of Appalachian Fire Managers and Scientists (CAFMS)
 - North Atlantic Fire Science Exchange (NAFSE)
- National Fire Protection Association (NFPA)
- Northeast Forest & Fire Management, LLC
- National Volunteer Fire Council (NFVC)
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