

Challenges and Recommendations for Wildland Fire Management in the Northeast-Midwest US

Submitted by the Northeast Regional (Cohesive Wildland Fire) Strategy Committee (NE RSC) as input to the development on NE-MW State Forest Action Plans

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*The goal 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 and 3) Safe and Effective Wildfire Response.***

By late 2019, the NE RSC will publish a 5 YEAR UPDATE to the NE RSC Action Plan, published in May 2015. It will be shared with all Northeast-Midwest wildland fire management agencies and organizations for the purpose of formally communicating 2019 survey results and recommended actions based on the work of the NE RSC and its work groups.

The priority areas being addressed are:

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

The following findings, challenges and recommendations, by priority area, are provided below for consideration in the development of the 2020 State Forest Action Plans.

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Priority: Northeast LANDFIRE

LANDFIRE processes, data and products developed from the data at a national scale have affected what many in the Northeast (NE) 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.

Findings and Challenges

- Inaccurate LANDFIRE data is a barrier to making accurate assessments of regional and state level conditions, such as developing wildfire risk assessments for hazard mitigation planning.
- Improving data submission process: 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.
- Fire occurrence data: The Northeast LANDFIRE 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.

Recommended Actions

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

- Accurate LANDFIRE data should be developed and used to insure consistent, compatible cross-boundary information is for landscape restoration and maintenance planning and projects.
- 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 there are improvements or inaccuracies still exist.
- Fire occurrence data: State fire occurrence data submissions need to include accurate disturbance data to LANDFIRE for mapping. Digital spatial perimeter data, not point data, is needed. States are 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.

Priority: Prescribed Fire Coordination

Promote an increase in the amount of beneficial fire on the landscape (prescribed and "managed" fire - where legally allowed, utilizing smoke management best practices). Benefits of prescribed fire include:

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

Findings and Challenges

Based on a NE RSC work group survey conducted in April-May 2019, the key barriers or issues to accomplishing more prescribed burning include:

- Increasing capacity (training, sharing resources, etc.)
- Addressing liability limitations for firefighters conducting prescribed fires
- Increasing public awareness and education on prescribed fire
- Managing smoke
- Expanding burn windows
- Burning in wildland urban interface (WUI)
- Improving data collection and sharing

Recommended Actions

- 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.
- Increase the number of prescribed fire training opportunities and wildfire assignments to increase the number of experienced practitioners in all areas of the region.
- 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.
- Consider forming more prescribed fire councils and associations in states across the region.
- Explore capacity of the four Forest Fire Compacts to expand their support of resource sharing for prescribed fire activities (training, mobilization, etc.)
- Increase prescribed fire opportunities using available science to expand burn windows to growing seasons in a variety of fuel types.

- Improve reporting processes and record keeping and spatial data mapping of prescribed fire accomplishments across the region.
- 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 NE states.

Priority: Wildfire Risk Assessment and Planning

The purpose of this priority is to improve wildfire risk assessment and 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.

Findings and Challenges

In April 2019, the NE RSC 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.

The goal for this work is to improve the quality 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.

The following are highlights from the survey findings:

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 WRAs 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 WRA to develop.
- Most 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.
- 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.

Northeast Region Cohesive Wildland Fire Management Strategy

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

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.
- Insect damage, drought, capacity for wildfire response, and climate change data were the top additional types of data that respondents said they need to include in their risk assessments.

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:

- Provide training as needed for the following areas: GIS, LANDFIRE, fuel & fire behavior models, available climate information and tools, hazard mitigation plans and programs, and WRA and CWPPs, etc.
- Focus on data quality improvement (Continue with LANDFIRE improvement of fuel models/mapping/etc., fire history and occurrence data and reporting, WUI, assets & infrastructure, etc., inclusion of prescribed fire).
- Improve data access and tools in support of acquiring, developing, accessing and using wildfire risk assessment information for state and local level planning.
- Foster increased collaboration, outreach and education in support of interagency coordination to develop and use wildfire risk assessments and plans.

Priority: Engaging Fire Departments

Local fire departments have the potential to actively support and help implement all three goals of the National Cohesive Strategy. The purpose of this priority is to increase awareness of the WUI problem by fire departments in the NE. A survey was 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.

Findings and Challenges

In April and May 2019, this survey was sent to thousands of local fire departments across the NE-MW 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.
- 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).

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) 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.)
 - 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) Develop, identify and disseminate information on wildland fire training opportunities, particularly those that address the needs identified in the NE RSC survey. Utilize 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) 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)
- 4) Engage local fire departments in support wildland fire through agreements, participation in inter-agency training opportunities, increasing experience with prescribed fire, etc.
- 5) Developing outreach messages and communication channels to engage fire departments in planning, training, and implementation of community prescribed fire projects

Priority: Fire Adapted Communities

Promote a significant increase in the number of communities with a current community wildfire protection plan (CWPP) or equivalent, that serves to identify and foster actions that reduce their risk exposure to wildfire.

Findings and Challenges

- Fire causes have remained consistent over the past 30 years. People and man-made objects cause 98 percent of wildfires in most of the 20 NE-MW states.
- Debris burning is the single most common wildfire cause, followed by equipment. There are numerous other causes, all 10 percent or less of the total.
- The relationship between human activity and fire starts also means wildfires often occur near structures. The majority of wildfire starts occur on private property.
- Zoning codes lack wildland urban interface standards for landscape vegetation, building materials and emergency vehicle access. Wildfire suppression concern increases when homes are built in remote areas, have substantial vegetation in close proximity, and when roads and driveways are narrow or sandy, which may make it impossible for emergency vehicles to get to the structures.

Recommended Actions

- Support the development and implementation of Community planning efforts (Ready, Set, Go, Firewise USA™, CWPPs, etc.)
- Promote greater involvement of local emergency management agencies and fire departments in community wildland fire planning and implementation activities.
- Continue and expand focus on promoting and supporting wildfire prevention and outreach programs and activities to reduce the number of unwanted human-caused fires.

Priority: Resource Sharing and Availability

Findings and Challenges

- There is an inadequate number of trained, qualified personnel for both suppression and fuel treatment activities due to retirements, process barriers to resource sharing, insufficient training opportunities, etc. This situation contributes to an increased safety risk to firefighters and the public.
- 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.

Recommended Actions

- Significantly increase the number and availability of qualified wildland fire management personnel to support both wildfire suppression and wildland fire management activities.
 - Streamline and standardize cooperative interagency fire agreements to accommodate and facilitate resource sharing and reimbursements nationally and across jurisdictions.
 - Continue to work on providing liability protection for qualified wildland fire personnel carrying out their assigned responsibilities regardless of agency.
 - Expand and develop initiatives (e.g., USFS “Life First”) to further protect wildland fire responders and the public from unnecessary risk while protecting communities and restoring landscapes.
 - Ensure agency efforts related to recruitment and retention provide educational and training opportunities that include transfer of institutional knowledge to the next generation of leadership.
 - Accelerate deployment of wildland fire management support technology and applications to improve safety and efficiency (e.g. real-time fireline personnel and resource tracking, use of handheld perimeter mapping and fire reporting systems, expanded use of drones for mapping, monitoring, aerial ignition, etc.)

Priority: Communication and Collaboration

Challenge

Obtaining and maintaining awareness of wildfire risk is particularly challenging in the Northeast-Midwest region of the country due to the relatively low frequency of large, news-making wildfire incidents; and the more frequent occurrence of other natural weather events such as tornados, hurricanes, floods, snow and ice storms, etc.

Recommended Actions

- For those reasons, addressing wildfire preparedness in the context of an all hazard preparedness and mitigation planning approach is recommended for all jurisdictions.

For wildfire preparedness, the following additional recommendations are offered:

- Provide for the united, visible, consistent promotion of the Cohesive Strategy vision, guiding principles and goals as a national priority in all relevant policy, budget justification, and other strategic communication opportunities.
- Provide guidance to agencies and organizations to facilitate better pre-fire/pre-season coordination at the local level.
- Seek to align funding, planning, grant opportunity timelines, and other processes with other agencies to allow for leveraged funding across landscapes and foster improved collaboration efforts. This could include efforts to streamline grants procedures, project planning and aligning collaborative processes wherever possible.
- Actively encourage and recognize leadership at all levels to support collaborative activities that implement the Cohesive Strategy, e.g., encourage local leaders to engage with or promote fire adapted communities in their areas of responsibility.