Background on Forest Health Needs Lists

The Northeast-Midwest State Foresters Alliance, Forest Health Committee (NMSFA FHC) Priority Needs documents are lists of current sub-regionally important needs to address pests or other concerns that threaten resource goals. It was developed to capture the experience of committee members to help coordinate efforts among the 20 states and Washington DC.

- The list is *not* prioritized. Users are encouraged to address the needs they can most efficiently address.
- The list will be reviewed annually with initial review in in February fostered by state NMSFA representatives with input from their state forest health colleagues and updates completed and communicated at the annual NMSFA FHC meeting.
- When a need is taken off the list, the reason is communicated to relevant agencies to avoid assumption it is not still needed. When a need is met, it may be removed from the list but that doesn't mean states don't want that service to continue.
- Forest health needs will be shared with other NMSFA committees that may have similar needs or be able to address Forest Health Committee needs.

Mid-Atlantic Forest Health Needs 2021

Goal	Threats	Needs
Restoration and regeneration of forest and urban forest landscapes impacted by invasive species	Asian longhorned beetle, beech bark disease, beech leaf disease, butternut canker, chestnut blight, Dutch elm disease, elongate hemlock scale, emerald ash borer, hemlock woolly adelgid, southern pine beetle, spotted lanternfly, thousand cankers disease	Formation of an Eastern U.S. Coalition for Forest Tree Breeding and continued support for tree breeding programs that incorporate tree performance in urban areas
Address climate change impacts through adaptive management and keeping forests healthy	Severe weather patterns and abiotic factors affecting the health of trees and forests	Better understanding of climate change impacts to urban and rural forests and development and implementation of strategies to improve or maintain healthy and sustainable forest landscapes
Maintain healthy oak species in forest and urban forest landscapes	*Lymantria dispar dispar*	Funding for the eradication, slow the spread, and suppression programs
	Oak wilt and bacterial leaf scorch	Continued development of alternative management strategies
	Oak decline, including rapid white oak mortality	Research on the causes of decline and mortality coordinated across states and regions and development of management options
Maintain healthy eastern hemlock in forest and urban forest landscapes	Hemlock woolly adelgid and elongate hemlock scale	Continued support for the National HWA Initiative which supports outreach, survey, suppression, technology transfer, and restoration

Maintain healthy mixed hardwood forest tree species in forest and urban forest landscapes	Asian longhorned beetle, ambrosia beetles, beech leaf disease, spotted lanternfly, exotic earthworms, and any new emerging forest pests	Support forest pest outreach and survey program to continue survey and cooperation with regulatory agencies
Maintain healthy pine species in forest and urban forest landscapes	Southern pine beetle	Development of guidelines for prevention and suppression strategies
	White pine decline and associated insect and disease pests and root disease	Collaboration with silviculturists to coordinate silviculture and pest management options for various pine habitats
Conserve ash species as a component of rural and urban forest landscapes	Emerald ash borer	Support USDA APHIS' emerald ash borer biological control program, efforts to identify “lingering ash” for host tree resistance breeding programs, and seed banking and long-term treatment cycles to protect ash genetic diversity

Northeast Forest Health Needs 2021

Goal	**Threats**	**Needs**
Improve ability to respond to forest health threats.	Fragmentation of funding into multiple grants opportunities with separate RFP and grant administration load and no continuity of funding level. Simultaneously core costs of response have increased due both to new threats and increased cost of doing business.	USFS share funding to the states primarily through the Core Grants, rather than multiple small grants, so states can be more flexible and efficient with resources to respond to forest pest issues and use fewer valuable resources in administration of those funds.
Identify and respond quickly to emerging threats to increase likelihood of success.	Emerging and unknown pests get established under the radar.	Support modern early detection projects.
	Lack of flexibility delays response to novel pests.	Emerging pest funds directed by local needs.
Maintain healthy oak forests.	Delay in oak wilt detection reduces the chance for successful eradication.	Survey and control funding to find oak wilt when outbreaks are small.
	Resurgence of naturalized invasive insects (*Lymantria dispar dispar* and browntail moth).	Research into the current browntail moth and *Lymantria dispar dispar* outbreak especially in regards to *Entomophaga* effectiveness.
Maintain northeastern forest ecosystems.	Forest health impacts related to climate change.	Support monitoring of changes in forest health related to changing climate, identification of mitigation strategies, and implementation of them.
Maintain hemlock forests.	Exotic insects (hemlock woolly adelgid and elongate hemlock scale and novel disease (hemlock tip blight) suppress health	Support for hemlock survey, hemlock woolly adelgid biocontrol and hemlock health research.
Maintain ash in the ecosystem.	EAB induced ash mortality	Increase support for projects that keep ash on the landscape and mitigate damage from EAB.

		Increase core funding to help offset loss of monitoring funds from USDA APHIS so ash resource monitoring can continue.
Successful eradication of ALB.	Delay in detection allows ALB to spread.	Good lure/trap combo and survey funds to find ALB infestations when they are small.

Upper Midwestern States List of 10 Unmet Forest Health Needs 2021

Goal	Threats	Needs
Recover diversity and full function of lowland and riparian forests impacted by invasive species and native species undergoing changes in population dynamics.	Emerald ash borer (EAB) removes all ash species in as canopy dominant species of lowland and riparian forests and in urban forests.	Critical need for development and distribution of EAB-resistant and genetically diverse ash planting stock for recovery of forests where green, black, and white ash have been eliminated by EAB.
	Hemlock woolly adelgid (HWA) removes eastern hemlock from riparian forests.	Critical need for development and distribution of HWA-resistant hemlock. This breeding program must start with eastern genotypes but as potentially resistant hemlock from the Lakes States become apparent, these could be entered into the breeding program
Minimize impacts of invasive plants on forests.	Many invasive plants are so because of inadequate natural enemies in North America. This competitive advantage helps them displace native trees.	Support an increase in biological control options for the managing invasive plants species through prospecting and testing candidate biological control species, encouraging timely approval of vetted species, and cooperative production and release of approved species.
	Herbicide use is becoming less acceptable by public and forest certifiers.	Development of herbicide alternatives for control of invasive plants.
Maintain oak as a dominant forest component.	Causal factors are unknown for oak decline, preventing effective management.	Support research examining the causes and possible management options for oak declines.
Reduce and minimize injury to trees and forests from legal use of agricultural herbicides dicamba and 2,4-D.	Long-term impacts are unknown regarding off-target herbicide injury to trees and forests related to changes in use patterns of dicamba and 2,4-D in field crop systems.	Support research examining the impacts of dicamba and 2,4-D injury on the physiology, growth, and longevity of mature trees.
Maintain pine-dominant and codominant forests	Heterobasidion root disease (HRD) impacts pine and spruce growth for an unknown period once established in a stand.	Silvicultural research on early intervention, recovery, tree spacing, and species diversity to recover HRD stands.
Restoration of eastern forests from loss of tree species due to invasive pests and diseases.	Invasive pests and diseases are removing trees species and genera from eastern forests. For long-term recovery of these forests, managers need genetically diverse, resistant or tolerant	Critical need for the Forest Service and states to increase coordination and support for eastern tree breeding programs and moving improved stock

	seed and planting stock of these species. In recent decades, tree breeding has been neglected. Tree-breeding programs that exist are not coordinated and supported for optimal rate of progress in resistance development and transfer to propagation and planting out.	into out plantings. Formation of an Eastern US Coalition for Forest Tree Breeding is one option but there are others.
Maintain healthy and productive forests by addressing impacts on forest health due to climate change through adaptive management.	Climate change contributes to underlying stress on trees and direct damage from severe and variable weather. It also favors some pests and diseases leading to levels of injury and mortality not observed in the past.	Monitor changes in forest health related to changing climate, identify mitigation strategies, and implement them.
Prevent permanent establishment of Asian longhorned beetle (ALB) in North America	Delay in detection and control allows ALB to spread.	Fund detection surveys, related public awareness, and eradication activities so infestations are detected early and acted on decisively. Increased attention on detection with guidance to states on methods for detection appropriate to the state.

Check our website for the current list of identified needs: http://www.northeasternforests.org/content/fhc_page