



# 2023 Work Plan

## Regional Exploration Project: Exploring trends in Tree Mortality as a Response to Disturbance Drivers

The FEMC community has expressed interest in exploring patterns of tree mortality and how regional coordination of monitoring for both acute events and delayed responses following chronic stress can lead to a better understanding of regional impacts. The information currently available from FIA data does not provide the level of detail needed by the community. Cooperators have expressed interest in development of a working group to develop a rapid response plan following acute events. The working group would be tasked with identifying a regionally targeted rapid response group to act as early responders during and following outbreaks and mortality events. The working group would also identify best practices for responding to events, including implementation of monitoring plans for long-term tracking of potential mortality events.

Additional opportunities exist to review and compare tree mortality data currently available, including FIA, NEFIN CFI and ADS, to evaluate how well mortality patterns compare to each other, and if there are any trends or risks that can be determined from the long-term data.

The outputs of this project will include:

1. A regional stakeholder first responder list
2. Monitoring plans to implement during and following a mortality event or disturbance
3. Comparison and analysis of FIA, NEFIN CFI and ADS mortality data
4. Report and outreach materials, including web page, to share resources, rapid response monitoring data and recommendations to expand the monitoring network
5. Workshop to train and plan for response to potential mortality episodes region wide.

These activities and outputs will be available to forest managers to implement monitoring plans to better track and predict mortality events, understand long-term impacts of mortality events. With better tracking of mortality and implications, managers will be able to determine best management practices to follow and understand other risks to future mortality events.



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This project plan is detailed in the following logic model:

<p><b>Problem Statement:</b> The FEMC community has expressed interest in exploring the topic of tree mortality and how to evaluate long-term impacts, for both acute events and delayed responses following disturbance or defoliation. The information currently available from FIA data does not provide the level of detail needed by the community. Following an acute event, funding is often available, but long-term tracking does not typically occur.</p>			
<p><b>Inputs:</b></p> <ul style="list-style-type: none"> <li>• Forest Health Atlas mortality filter;</li> <li>• FIA mortality data (when available);</li> <li>• NEFIN CFI regional mortality data</li> <li>• Availability as a facilitator/hub for community management;</li> <li>• ForWarn tool;</li> <li>• Project planning and staff time</li> </ul>	<p><b>Activities:</b></p> <ul style="list-style-type: none"> <li>• Review of FIA, ADS data available for evaluating mortality events;</li> <li>• Formation of working group; Development of monitoring response plans following varying acute events or ongoing disturbance to track short- and long-term changes;</li> <li>• Create stakeholder list and gain agreements from organizations to serve as tree mortality first responders to implement monitoring plans;</li> </ul>	<p><b>Outputs:</b></p> <ul style="list-style-type: none"> <li>• Analysis of mortality events from FIA, NEFIN CFI and ADS data;</li> <li>• Monitoring plans for different mortality event types;</li> <li>• stakeholder list</li> <li>• Workshop to train and plan for response to potential mortality episodes region wide</li> </ul>	
<p><b>Assumptions:</b> Stakeholder and partner groups will agree to serve as first responders;</p>			
<p><b>Outcomes:</b></p> <ul style="list-style-type: none"> <li>• Forest managers will have monitoring plans available to implement following various mortality events;</li> <li>• Data analysis (FIA, ADS) will help managers compare remote sensing to what is seen on the ground</li> </ul>	<p><b>Short-term Impacts (Learning)</b></p> <ul style="list-style-type: none"> <li>• Monitoring of mortality events will provide managers with important information about managing for long-term impacts</li> </ul>	<p><b>Mid-term Impacts (Actions)</b></p> <ul style="list-style-type: none"> <li>• Analysis of monitoring data may reveal trends and identify regions/forests at risk of mortality events</li> </ul>	<p><b>Long-term Impacts (Conditions)</b></p> <ul style="list-style-type: none"> <li>• With understanding of mortality risks, management plans can be developed to lower risk of mortality events</li> </ul>
<p><b>External Factors:</b> Monitoring is implemented following mortality events; Monitoring data is analyzed; Mortality trends are identified, and risks determined; Management plans are implemented in response to mortality trends</p>			