



County of Lake

Hazard Tree Removal Plan (HTRP)

July 25, 2023

County of Lake

255 North Forbes Street
Lakeport, CA 95453
www.lakecountyca.gov

BACKGROUND

As the impacts of tree mortality grew beyond the scope of resources available locally to remediate, the County of Lake proclaimed a Local State of Emergency due to Pervasive Tree Mortality conditions on May 3, 2022, and has renewed it every 30 days, more frequently than required by the California Emergency Services Act, Article 14 §8630(c). Years of catastrophic wildfires and extreme drought led to a resurgence of bark beetle infestation in forested areas which has resulted in over 590,000 dead trees spread over 31,000 acres in Lake County as assessed by the US Forest Service's Aerial Detection Survey¹ completed in October 2022. Tree mortality is not unique to Lake County; statewide an estimated 39.6 million trees are impacted and while originally the most severely impacted counties were within the central Sierra Nevada Range, the Governor Jerry Brown declared a disaster due to tree mortality in 2015 to address the growing concerns statewide.

This plan is created in July of 2023 to address only the removal of hazard trees that threaten public infrastructure and public safety in a specific portion of Southern Lake County, not all hazard trees throughout the County. This plan may be amended in the future to include other areas of Lake County.

Tree Mortality is currently widespread and worsening in many parts of California, as demonstrated by the United States Forest Service's (USFS') Annual Aerial Surveys. In 2019, USFS estimated 1,000 Lake County acres were afflicted by Tree Mortality. The estimated number of dead trees was 3,000. Those estimates have exponentially grown in the time since:

2019 – 1,000 Acres, 3,000 dead trees

2021 - 21,000 Acres, 331,000 dead trees

2022 - 31,000 Acres, 590,000 dead trees (*See attachment A*)

Note: no directly analogous survey was conducted in 2020.

The magnitude of this issue means remediation carries a highly significant level of cost, with some estimates to address roadside trees, only, ranging into the tens of millions of dollars. Project planning is underway to perform mitigation activities in areas of high priority, but this is expected to be a long-term concern, with work continuing for perhaps a decade or more.

¹ https://www.fs.usda.gov/detail/r5/forest-grasslandhealth/?cid=fsbdev3_046696

Lake County HTRP
Approved by the Lake County
Board of Supervisors,
July 25, 2023

FISCAL IMPACT

In accordance with CDAA regulations all funding provided is on a 75%/25% reimbursement basis. The County of Lake will need to secure funding for all costs associated with this emergency and then seek 75% cost reimbursement from the State, if this HTRP is approved. Funding has been applied for via a United States Department of Agriculture Forest Service Urban & Community Forestry Inflation Reduction Act funding on June 1, 2023.

County of Lake Hazard Tree Removal Plan

1. Core Planning Team

Role: Assist in developing operational plans, resource sharing, regulatory oversight, and facilitation.

- CalFire LNU
- California Office of Emergency Services
- CalTrans
- Lake County Community Development Department
- Lake County Department of Public Works
- Lake County Fire Protection Districts
- Lake County Auditor/Controller's Disaster Finance Team
- Lake County Office of Climate Resilience
- Lake County Office of Emergency Services
- Lake County Risk Reduction Authority JPA
- Pacific Gas & Electric

The Core Planning team consists of decision makers from each of the agencies listed above, which will allow for the utmost efficiency when creating operational plans county wide.

2. Lake County Tree Mortality & Forest Health Task Force - Monthly meetings began June 2022

Role: Inter-Agency forum for information sharing/gathering and coordination of plans and resources. This monthly meeting creates the venue for representatives of federal, tribal, state, county, cities, special districts, non-profits, FireSafe councils, and Firewise USA® Communities, , to discuss needs, concerns, and resources with local, state, and federal regulators as well the University of California Cooperative Extension who have the necessary expertise and experience to offer guidance throughout the process.

Local government participants include:

- Lake County Administrative Office
- Lake County Agricultural Commissioner
- Lake County Air Pollution Control District
- Lake County Community Development (Planning, Building, Code Enforcement)
- Lake County Department of Health and Human Services
- Lake County Department of Public Works
- Lake County Fire Chiefs' Association
- Lake County Office of Climate Resiliency
- Lake County Office of Emergency Services
- Lake County Resource Conservation District
- Lake County Sheriff's Office
- Lake County Special Districts
- Northshore Fire Protection District Hogback Ridge Fuels Crew

City, State, Federal & Other Interested Parties Include:

- Bureau of Land Management, Ukiah Field Office
- Cal FIRE LNU (Sonoma, Lake, Napa Unit)
- CalTrans
- Cities of Clearlake and Lakeport
- Clear Lake Environmental Research Center (CLERC)
- Konocti Fire Safe Council
- Lake County Fire Safe Council
- Lake County Prescribed Burn Association
- Lake County Resource Conservation District
- Lake County Risk Reduction Authority JPA
- Tribal Governments
- Natural Resource Conservation Service
- North Coast Opportunities, Inc (NCO)
- Pacific Gas & Electric
- Seigler Springs Community Redevelopment Association
- South Lake Fire Safe Council
- Tribal EcoRestoration Alliance (TERA)
- United States Forest Service, Mendocino National Forest
- University of California Cooperative Extension, Lake County

3. Ad-Hoc Committees

Role: Communication, coordination, and resource sharing. Participants may include:

- Clear Lake Environmental Research Center (CLERC)
- Community water districts
- Fire Wise Communities
- Fires Safe Councils
- Homeowner's Associations
- Lake County Administrative Office (Public Information Officer, Chief Climate Resiliency Officer, Assistant Administrative Officer)
- Lake County Agricultural Commissioner
- Lake County Prescribed Burn Association
- Local timber/tree falling companies
- Northshore Fire Protection District Hogback Ridge Fuels Crews
- Red Cross, Community Disaster Risk Reduction Division
- Tribal EcoRestoration Alliance (TERA)
- UC Cooperative Extension, Lake County

These ad-hoc committees will be short-lived and created on an as-needed basis.

4. Education & Outreach

Regarding the tree mortality emergency, County OES staff will provide guidance on how to access California Disaster Assistance Act (CDAA) funding. This process includes:

- Cover letter
- Waiver request letter
- Resolution (to designate authorized agent)
- Resolution (proclaiming a state of emergency)
- Plan development Reimbursement

The County's Public Information Officer in coordination with the Lake County Risk Reduction Authority JPA, the Chief Climate Resiliency Officer, and the Lake County Fire Safe Council will develop a communication plan to most effectively inform the public. Staff plans to meet with and provide guidance to other local jurisdictions as needed. As the number of dead and dying trees continues to grow, outreach and education need to be dynamic to quickly address changing conditions.

Options for communication include:

- Regularly use social media to disseminate messaging
- Engage media to deliver important messaging
- Co-opt materials developed by other agencies
- Assist the public in finding resources to address dead and dying trees on private property
- Provide information on tree removal by utilities and government entities
- Conduct community meetings as needed
- Make presentations to municipal advisory councils as needed
- Address community service groups and local school districts
- Outreach at the annual "Heroes of Health and Safety Fair"
- Provide frequently asked questions online and in print
- Provide informational brochures/handouts
- Maintain links off the County website to other essential sites
- List licensed tree removal companies and licensed foresters and arborists.
- A multi-jurisdictional webpage will be developed that resides on the County website dedicated to tree mortality. The types of information available include:
 - Current County resolution proclaiming a local state of emergency
 - Governor's Executive Order on Tree Mortality and authorizing California Disaster Assistance Act CDAA
 - Right of Entry forms for private property owners
 - Links to agencies dedicated to emergency preparedness, resilience, recovery, and hazard mitigation
 - FAQ's
 - Informational brochures/handouts
 - Contact information
 - Current actions
 - List of Licensed Timber Operators (Tree Removal Companies)

- List of Licensed Foresters and Arborists

Additionally, each Supervisorial District has at least one Municipal Advisory Council, which will be utilized to directly inform the public.

5. Role of all Local Governmental Agencies

Each agency must apply for California Disaster Assistance Act (CDAA) independently of the County and is responsible to develop its own plans based on what their governing Board desires to accomplish and within their jurisdictional authority. Local governments include County, City, special districts, and Tribes. It is important for the respective Boards and Councils representing their community understand that this application for CDAA is for one specific area of the County, and other jurisdictions must implement their own plan which would be between them and Cal OES. The County may amend this request in the future to address tree mortality in other areas of the county.

6. Hazard Tree Removal on County Owned and Maintained Properties

The County of Lake will identify and remove dead and dying trees due to drought and bark beetle infestation. This process will continue as the number of hazard trees increases. Public safety and continuity of essential services (power, water, communications, roads, etc.) are of primary concern. Therefore, County and contracted resources will focus on mitigating hazards along County-maintained roads in the hardest hit area of Southern Lake County

Lake County will assess all County owned and maintained infrastructure for dead and/or dying trees due to drought and bark beetle infestation within 200 feet of infrastructure in the South County area (*See Attachment B*). Registered Professional Foresters (and/or licensed Arborists)² will inspect trees for bark beetle attack and designate trees for removal mitigation. Visually dead trees (brown from top to bottom) will be marked and pictures taken to document mortality. Photographs will be taken of all dead trees and a GIS mapping system is being developed utilizing GPS locators for each worksite. Prioritization as outlined below:

- Priority 1 - Dead or dying trees in the hardest-hit area of Southern Lake County (*See Attachment B*)
- Priority 2 - Dead or dying trees in other very high hazard zones that threaten power lines, roads, and other evacuation corridors, critical community infrastructure and other existing structures. (*See Attachment C*)
- Priority 3 - Incidental vegetation such as shrubs that restrict access for safe and efficient removal of the dead and dying trees in priority 1 above.

7. Private Property

Hazard trees located on private property that threaten public Right of Way or within 200' of Public Infrastructure will be assessed and removed with landowner approval and a Right of Entry Permit. By signing the permit, landowner allows access and entry to property to the State of

² To qualify for CDAA reimbursement funding, Trees marked for actual removal must come at the recommendation of Registered Professional Foresters (RPFs) or Certified Arborists.

California, the County of Lake, and their agents, officials, employees, and/or volunteers, contractors and subcontractors, subject to all license, easements, encumbrances, and claims affecting the Premises.

The owner grants County a right-of-entry ("Permit") over the premises for the purpose of inspecting the premises for dead and/or dying trees, testing materials on the Premises, removing and/or clearing trees, hauling and/or disposing of trees, subject to the terms set forth in the Permit. No inspection, removal or clearance of trees will take place until Permit is signed.

Owner also agrees and understands the County and/or its agents may sell the felled trees and hereby waives any and all right, actions, claims, in law or equity as to the value of the said trees in exchange for the services provided pursuant to this Permit. The county will not be requesting reimbursement from Cal OES for the removal of trees from private property that do not threaten the public Right of Way or Public Infrastructure.

8. Removal and Disposal of Trees, Slash, and Wood Products

Removal and disposal of wood products is one of the most difficult aspects of the hazard tree removal process as resources are very limited. However, there are several tools available locally to assist in the removal of trees and slash. The following represents a cross section of some resources that are available to Lake County:

- CalFire LNU, which operates an air curtain burner near the impacted area
- Scotts Valley Energy Corporation, which is in the process of constructing a bioenergy/biochar production facility near the impacted area
- Licensed Timber Operators (Tree Removal Companies)
- Licensed Foresters and Arborists
- Individual Property Owners

Per the Governor's Executive Order on October 30, 2015, County staff is working with Cal Trans and Cal Fire in identification of equipment such as commercial chippers, masticators, and air curtain burners that can be made available for use. County staff will work with Cal Fire to generate a list of locations for storage for removed trees.

Meetings with local tree removal companies and haulers will be scheduled to determine capacity for potential contracts.

9. Potential Revenues Generated by Wood Products

Any revenues generated from the sale of wood products salvaged may be used to offset the local match of 25% or to offset the claim to Cal OES for CDAA. As outlined in the Right of Entry Permit, any and all revenues generated from wood product salvaged from private property is waived, by the landowner, in exchange for the services provided pursuant to the Permit signed by the landowner.

10. Order of Magnitude Scope & Cost

The initial estimate of dead and diseased trees requiring removal due to their threat to County-owned infrastructure (e.g. County roads, buildings and key infrastructure) in the South County area is 22,000. This number is derived from Cal Fire and USFS flyover data from 2021-2022. As evidenced by the exponential increase since 2019 (refer to *BACKGROUND* above), staff expect this number to increase.

Per discussions with a local arborist and local forester, the projected removal cost per tree is \$4,000. At this rate, the entire project could equate to \$88,000,000. The cost of mitigating the threat to County-owned infrastructure is far beyond the ability of the County to fund through regular revenue sources.

Tree mortality rates will continue to rise across the County as trees beyond the realm of recovery die off per Michael Jones, Forest Advisor, UC Cooperative Extension – Mendocino, Lake, and Sonoma. For this reason, Cal Fire recommends applying a growth factor of 30% over a five-year period to reflect the high probability of additional trees dying and/or becoming diseased in the months/years ahead and thus needing to be removed. Application of the 30% growth factor over the original base estimate of 22,000 dead trees would place the total number of dead trees needing removal to 28,600 by 2027. This could increase total costs to \$114,400,000. While the County identified a need to remove an estimated 28,600 trees, it is unlikely that approval will be granted to remove 100% of the trees on private property that pose a threat to County public infrastructure..

Actual costs will depend on location. The cost will be less when trees are located in a forest-like environment where they could be safely felled, limbed, and skidded to a roadside and loaded as full-size logs and shipped directly to their intended destination. The cost will be higher in residential situations where more trees will need to be sectioned down versus fallen and loaded using smaller equipment, versus skidded to roadsides, and hauled away in smaller loads. Clean-up of debris will vary in both environments to ensure properties are left in a clean, low fuels/fire threat condition.

11. Share of Cost/Funding

Under CDAA, assuming the Lake County is CDAA approved, the State will reimburse 75% of all eligible costs. Unless waived, the remaining 25% share will be the County of Lake's responsibility, which is far beyond the capacity of the County to absorb. Therefore, given the scope and cost outlined above, the share of cost for removal of trees threatening County owned roads and infrastructure alone would be as follows:

State	\$85,800,000 (75%)
County	<u>\$28,600,000 (25%)</u>
Total	\$114,400,000 (100%)

To fund the local share, the County will examine all potential sources including:

- Pursuit of federal funding to reduce the local match requirement.

- An application was submitted by the County on June 1, 2023 for the USDA Forest Service Urban & Community Forestry Inflation Reduction Act grant program
- Pursuit of additional grants (local and federal)
- Initiating a fee for participating landowners
- Limited use of County General Fund

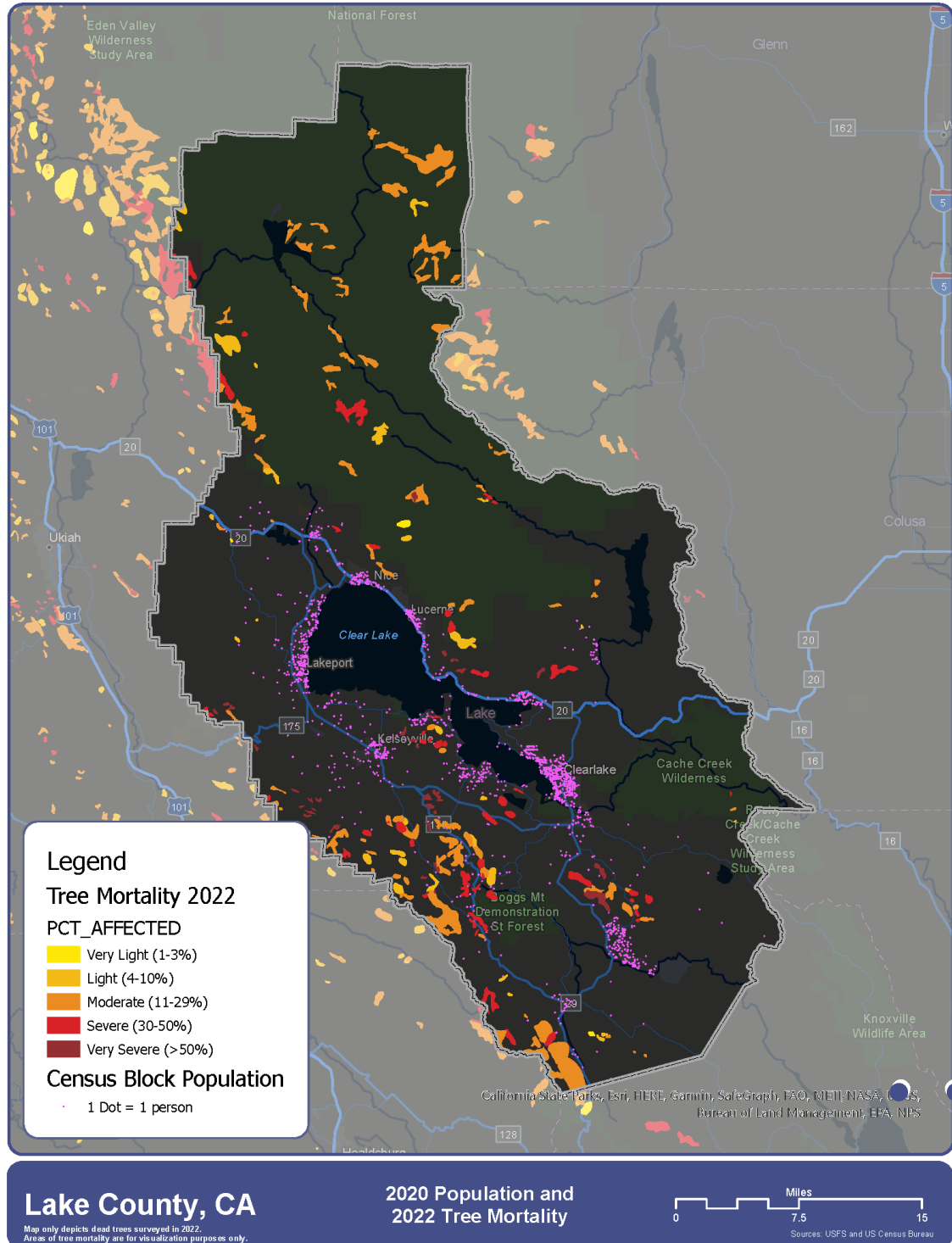
It should be noted that these costs are anticipated to be borne over a two to five-year period at a minimum, and while the drought conditions have mostly abated for now, more trees will continue to die and/or become diseased and given the time it will take to remove and dispose of the large quantity of the related material. In addition, while the maximum County share is estimated at \$28,600,000 it is impossible for the County to provide that level of expenditure. The County will establish a priority for hazard tree removal that facilitates the largest reduction in risk to County facilities in conjunction with providing resilience to wildfire events and access to evacuation routes for at risk communities.

12. Plan Implementation

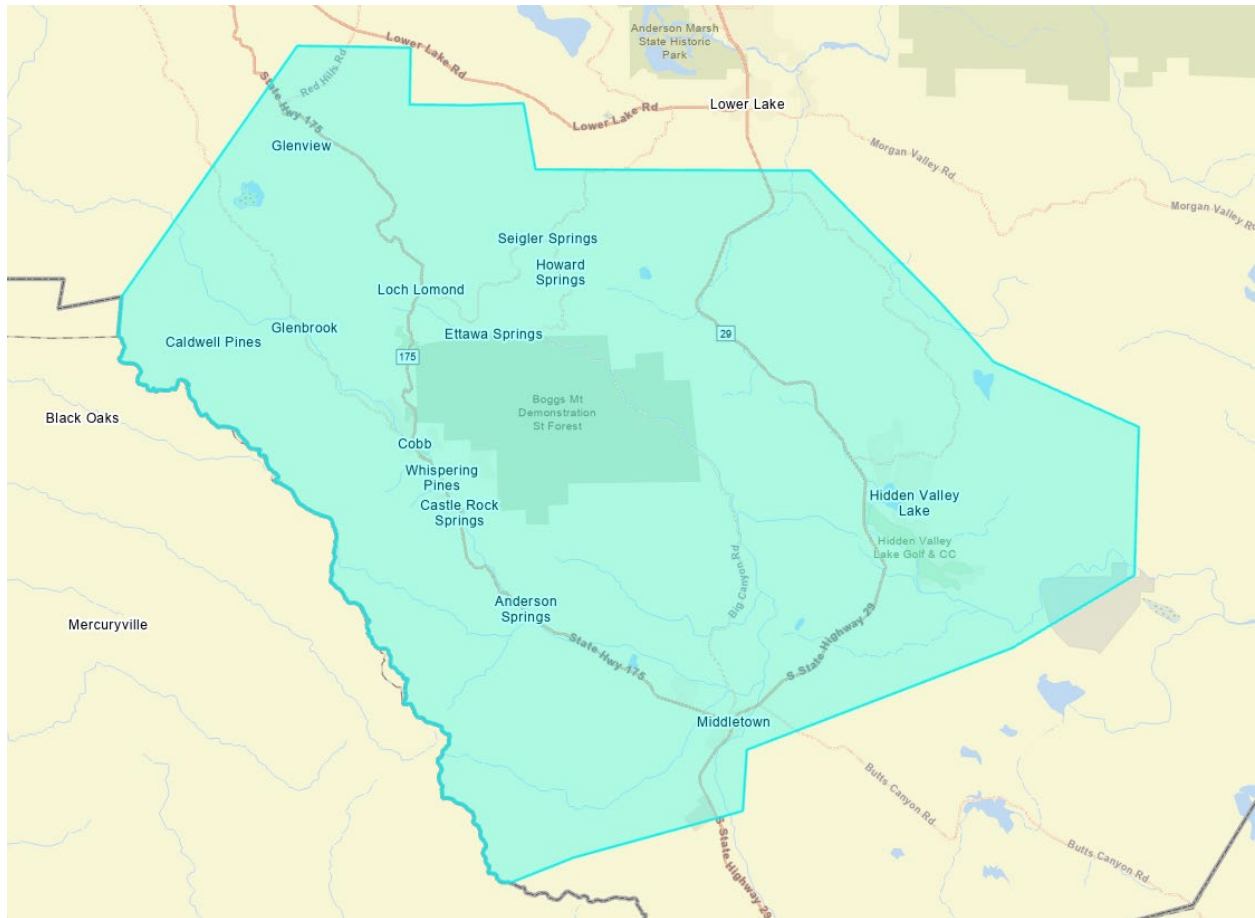
With Cal OES' approval of the County's Tree Mortality Removal Plan, staff will return with additional details on how it would like to proceed in implementing the Plan. This could include a professional services agreement with a local firm that specializes in such work and establishment of an initial budget to provide base funding for all work anticipated to occur in fiscal year 2023-2024.

This plan is a living document and will be continually updated by the County, Core Planning Team, and other partners

Attachment A – MAP – Tree Mortality and Population



Attachment B – South Lake County Area of Focus



Attachment C – Lake County FHSZ, June 15, 2023

