COUNTY OF LAKE
BOARD OF SUPERVISORS
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MEMORANDUM

December 17, 2024

To: **Nancy Ward, Director**
California Governor's Office of Emergency Services
3650 Schriever Avenue
Mather, CA 95655

From: **Lake County Board of Supervisors**
255 North Forbes Street
Lakeport, CA 95453

Subject: Request for CDAA funding and Initial Damage Assessment in Lake County

On October 30, 2015, Governor Brown proclaimed a State of Emergency including provisions to expedite the removal and disposal of dead and dying hazardous trees (CDAA 2015-5). Lake County experienced Tree Mortality at that time, but it had not yet reached a level beyond the capacity of local resources and funding.

The County of Lake proclaimed a Local State of Emergency due to Pervasive Tree Mortality on May 3, 2022, after decades of extreme drought and groundwater depletion led to widespread tree mortality across the county. It is estimated that 129 million trees died in California and this number continues to grow. In 2022, tree mortality was particularly severe and widespread in the northern interior counties where drought conditions were most severe, including Lake County. While the unprecedented precipitation events of 2023 reduced drought conditions throughout the area, the US Forest Service's Aerial Detection Survey program has identified over 1,000,000 dead trees across 66,000 acres in Lake County since 2019. Tree mortality in Lake County is a deepening crisis and has reached a critical level. Removal of the more than 15,000 hazard trees currently threatening public infrastructure, evacuation routes, and the health and safety of residents is well beyond the capacity of the County to fund through local resources. The County of Lake has coordinated with Cal OES since the Local State of Emergency was declared, to evaluate the magnitude of the situation and potential for local funding.

Removal of hazard trees would likewise have multiple benefits, including but not limited to:

- Reducing the threat from catastrophic wildfire;
- Reducing the threat of falling trees along public roadways during high wind storms;
- Creating defensible spaces along roadways and around infrastructure

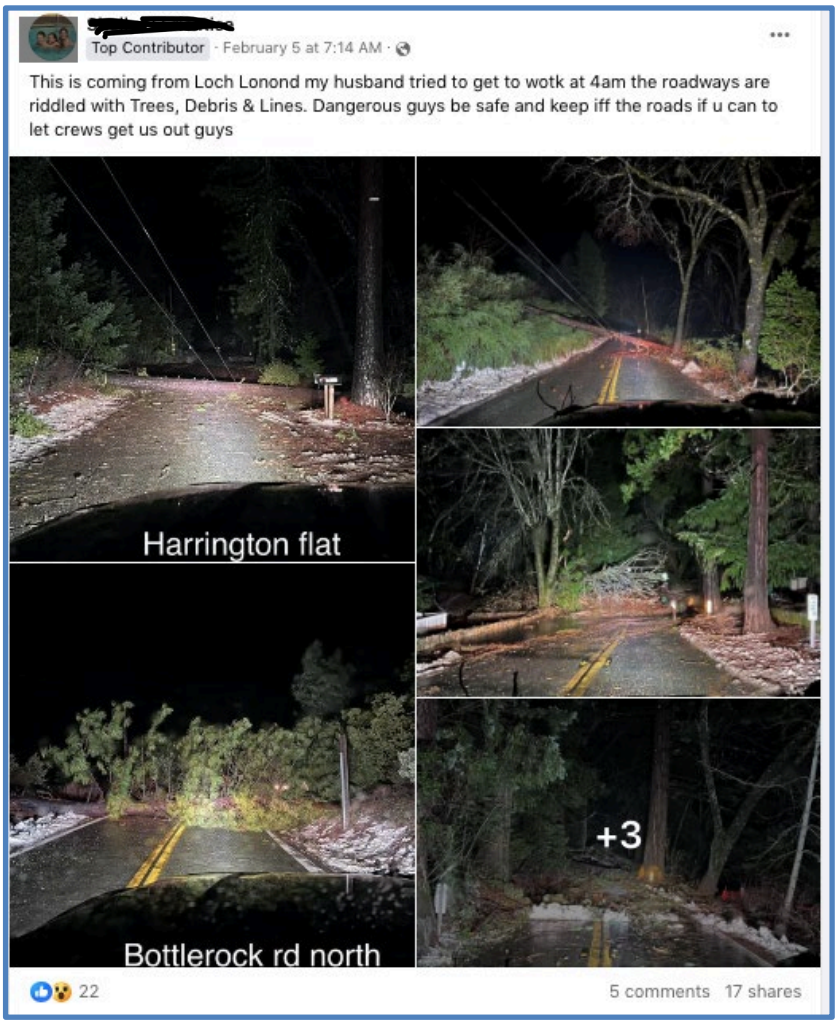
- Improving biodiversity and reduce expansion of invasive species;
- Reducing invasive species transmission along roadways;
- Improving open access of emergency evacuation routes;
- Improving defensible space around homes and utilities;
- Improving safety for all County infrastructure including roads, buildings, parks, and trails;
- Reducing adverse effects to the public water supply;
- Promoting forest management, maintenance, and stewardship; and
- Increasing public awareness of the impact the drought, groundwater depletion, and insect infestation have had on tree health throughout California

The objective of the County of Lake's Tree Mortality Program is to identify and mitigate dead and dying trees that pose a significant threat to public safety, and to develop tools essential for wildfire risk assessment modeling. Drought-affected hazardous trees that threaten county roads and infrastructure, utilities, and private structures will be inspected and tagged by the program on public and participating private land. Tree removal through the program will focus on creating defensible spaces around county roads and private infrastructure mitigating life threatening risk to residents during fire and high wind events. The project will also use imagery, new 2024 LIDAR data, input from interested parties, existing data layers, and field reconnaissance to create the suite of wildfire hazard and risk landscape data layers.

During major wind events, drought-affected trees are far more susceptible to felling due to high winds. Since the Local State of Emergency declaration, reports of fallen trees across roadways hindering the movement of first responders, residents, and members of the community have significantly risen after major wind events and winter storms. The following examples illustrate threats faced by first responders and private individuals, alike:

- Gifford Springs Road, 2/19/24 (Cobb, CA)

- Harrington Flat Road (Kelseyville)



- Bottle Rock Road (Kelseyville, CA)

Economic Impact – Network effects of the Valley Fire (2015), severe drought (2015-2023), Western pine (bark) beetle infestation (2020-present), and Mediterranean Oak Borer infestation (2021-present) have brought great economic costs, including, but not limited to, the following:

- Negative impact on County departments – ongoing efforts by County officials to remove downed trees to protect life, limb, and property have resulted in budgetary constraints on all departments and the need to tap into reserve funding and bringing in additional resources as required
- Negative effects on County revenue, population and business growth – staff within the County of Lake's Community Development Department have heard from private individuals that many families are either moving away or choosing not to rebuild within the Valley Fire footprint due to the lack of trees and fear of future fires stemming from dead and dying trees
- Negative economic impacts on the broader regional area to include surrounding local governments, private citizens, and commercial businesses
- Increased costs for first responders due to supplemental calls for service (*one downed tree can generate one hundred calls after a storm*)
- Threat to County residents and visitors – one downed tree can cause a power outage affecting large areas, particularly in light of Enhanced Public Safety Shutoff program norms; if a resident or visitor requires a steady power supply at home for medical support, a downed tree can become a life-threatening event.

First Responder Operational Impact – there is a cascading impact of these sequential (and sometimes concurrent) disasters of drought, fire, and infestations that impact fire and police responses. Routine calls (such as a downed tree on private property with no injuries) do not receive an immediate response as higher-priority calls have to be responded to. Some examples of high-priority responses include the following:

- February 2024 High Wind Event
    - Chief Avansino (CAL FIRE Battalion Chief for South Lake County) reported on one incident of a woman going into labor in the Gifford Springs area. Approximately 20 trees were downed between Hwy 175 and the patient's address; an off-duty Kelseyville firefighter drove the patient part of the way down the hill with neighbors cutting their way down the hill and approximately 20 firefighters were cutting their way up the hill
    - Chief Avansino reported that on Hwy 175 between the two Salminas Roads a tree fell on a house in the Whispering Pines neighborhood; the tree split the house in half and narrowly missed a man walking down a hallway; his spouse called 911 and first responders found him in a crawlspace and aided him in getting out of the confined space
    - Straight-line winds downed numerous pine trees after the Valley Fire decimated many of the trees; what was once a wind event at tree-top heights is now a ground wind event that uprooted pine trees with limited root structure and created a threat county citizenry
    - This wind event temporarily knocked out power to the entire county, compromising citizens' health for those that relied on a steady power supply

- February 2023 Snow Event
    - Chief Duncan (Division Chief, Operations – CAL FIRE LNU) reported that in snow events such as the February 2023 snowfall, first responders spend an inordinate amount of time opening roadways, especially in the Bottle Rock corridor and Hwy 175 to the Little Red Schoolhouse; downed trees take out power lines during critical times when utility customers need power
    - This snow event was the first measurable snow event that impacted the *entire* County at the same time in 50+ years. The County only has 8 snowplows in total
    - Chief Avansino reported the County Command Center received 700+ calls for service within a 24-hour period while their typical call level is 150 calls per day
    -

Communications Infrastructure Impact – Both snow and wind events impact the County's ability to communicate within governmental agencies as well as to County citizens

- The February 2023 Snow Event impacted state and local communications infrastructure on Mt. St. Helena; Chief Avansino reported that this infrastructure experienced a power outage and was forced to operate on backup propane-powered generators; however, snow impacted the ability to resupply the propane tanks; first responders were forced to coordinate with PGE and use CAL FIRE bulldozers to push snow off access road; DOJ, CalTrans, CDFW and other entities rely on the communications infrastructure at that site
- Chief Duncan reports that the power feed to Cobb Mountain is "constantly bombarded" by trees from both infestations and drought; very few citizens have landlines in the area and rely on cell coverage; with no power, cell towers do not operate. With no social media and no cell phone coverage our citizens cannot communicate with each other and government entities. At one point, CalFIRE was forced to bring in a portable cell tower to restore connectivity
- Because of these continuous power interruptions and comms blackouts, private citizens have set up a Cobb Area Volunteer Radio Network to keep citizens informed during wind and fire events; this network was created immediately after the Valley Fire

County Private Citizen Expectations – Prior to the back-to-back winter disasters, members of the community held the expectation that "someone would be there" when they pick up the phone and call 911 for assistance. However, due to drought-cause tree mortality, fallen trees across roadways after wind events have become a rapidly growing problem. These fallen trees are causing reduced response times by CalFire and local first responders immediately following an event, as they must first utilize their resources to clear critical roadways before they are able to reach their calls. Residents in these areas are resilient, and often will aid in clearing roadways for first responders, but in life or death emergency situations some may need responders there in minutes while trees can take hours to remove. County citizens recognize the growing threat that tree mortality has caused, as evidenced by the standup of the Cobb Area Volunteer Radio Network described above, however this threat has reached a point where local resources cannot combat the issues solely on their own any longer.

Cultural and Historical Impacts – Lake County is home to seven federally-recognized Tribal Nations, including the Big Valley Band of Pomo Indians, Elem Indian Colony, Habematolel Pomo of Upper Lake, Koi Nation of Northern California, Middletown Rancheria of Pomo Indians, Robinson Rancheria Band of Pomo Indians of California, and Scotts Valley Band of Pomo Indians. Widespread Tree Mortality has imperiled Tribal Cultural Resources, including acorns and pine nuts, and basketry materials.

Right of Way (ROW) – Due to the abundance of Sugar Pine, Ponderosa Pine, and Douglas Fir trees throughout the county, many of which stand 150-200 ft., the County respectfully requests an expanded ROW (*i.e., reimbursement of costs incurred taking mitigative action on private property*). To ensure these tall trees do not affect transportation, communications and electrical infrastructure, the County requests a 200' ROW "defensible zone" measured from the road's edge.

Coordination of Response –The County will coordinate efforts to abate hazards and assess risks with other entities conducting similar actions. Project areas will be prioritized in consideration of multiple benefits (*e.g., hazard tree removal, reduction of hazardous fuels, ensuring traffic safety, forest health, environmental resiliency, etc.*) wherever possible. Leveraging and coordinating joint activities with participating agencies will be encouraged to the greatest extent possible through the County of Lake's Tree Mortality and Forest Health Task Force. Implementation entails securing access to properties, conducting surveys of dead and dying trees, vegetation mapping, marking and documenting trees to be removed or otherwise mitigated (e.g., steep terrain may require that dead trees be felled and left on site), engaging one or more contractors to perform the work, monitoring the performance of contractors, and ultimately obtaining reimbursement for the completed work.

Obtaining Access to Private Properties – Analysis of GIS and County data yielded a list of properties to which a Right of Entry (ROE) Agreement will either be mailed or otherwise made available. In addition to permitting access to properties, the ROE packet contains language releasing the County from liability and specific information on the expected post-implementation conditions of the property including the disposition of trees and slash created by tree mitigation, and site restoration requirements (*if applicable*). The ROE form permits the property owner to specifically request that logs and/or slash be left on site (*and not removed*), at the discretion of the property owner. When ROE forms are returned, the salient data will be recorded by the County. In cases where forms are not returned, a second direct mailing may be conducted. Should a property owner initially refuse to participate, offers to discuss the project may be made, to encourage participation. Field teams will use a final list of participating property owners to conduct on-the-ground surveys and marking of dead and dying Hazard Trees.

Steps have been taken to alert residents to upcoming tree mortality mitigation actions by the County and these efforts will continue. In future project areas, these steps will include informational public meetings, distribution of flyers to property owners with trees eligible and proposed for removal, media releases, and outreach through the County Tree Mortality webpage. The purpose of this outreach is to encourage County residents to allow the County and its consultants access to private properties to verify the locations of hazard

trees and ultimately to mitigate them. An open dialog on the importance of forest health on both human well-being and the environment will be utilized to facilitate discussions on the project.

Preliminary Survey of County Infrastructure and Vegetation Mapping - Using existing information from the US Forest Service's Aerial Detection Survey program, satellite and aerial data identified over 22,000 dead and dying trees located along the 615 miles of county-maintained roads. This analysis was conducted by layering year over year satellite imagery and spectral analysis such as CIR, NIR, and SWIR coupled with aerial drone flight data to capture foliage and evergreen forest variances over time. Based on that analysis GIS boundaries were develop along roadways overtop the imagery analysis to determine an estimated number of potential threats and tree mortality cases along roadways.

A second survey and analysis was performed on the ground to inspect trees along the ROW that could threaten the safety of residents and the community at large. That sampling was performed in the southern region the County and analyzed trees both for full tree mortality and for secondary infection cases such as bark beetle. Based on that analysis an estimated 3,100 trees within the sample region and within 200 ft of a roadway are estimated to have experienced tree mortality and have the high likelihood of a secondary infection. County wide the statistical analysis estimated approximately 11,700 trees within 200 ft of the roadway could have experienced tree mortality and possible secondary infections. This analysis was performed based on visual inspection by an arborist and was limited in scope by the sample points chosen and the arborist's ability to reach the tree from the roadway and physically inspect it.

Given the pre-sampling and analysis performed, it is confirmed that the bark beetle risk in Lake County has begun to affect an expansively large area in the southern part of the county, and they have a significant food source ahead of them for which to populate and expand. These analyses should serve as an upper and lower boundary for expected tree mortality and secondary infection cases within defensible spaces along county roads.

Surveys of Hazard Trees - The County, through a County Tree Mortality Contractor, intends to be equipped with the best available technology to identify and geo-reference locations of trees, and will ensure applications are compatible with County GIS systems. We anticipate the County's contractor will create and/or utilize a mobile platform for data collection. Surveys of dead and dying trees will be completed for all potentially affected County infrastructure in the project area. Teams of field technicians will conduct the surveys with training and supervision provided by Registered Professional Foresters and Certified Arborists. All trees to be removed or otherwise mitigated will be clearly marked with tree ID numbers at mid-bole and base. Data collected during the field surveys will be used to produce tree lists and maps that will be included with invitations to bid or requests for proposals for tree removal.

Contracting for Tree Mitigation - It is anticipated multiple contracts will be issued for the work but the option of hiring one or multiple contractors to do the work will be available by issuing an Invitation for Sealed Bids (IFB) or Request for Proposals (RFP). On release of the IFB or RFP, pre-bid meetings will be held at areas proposed for treatment. The County's procurement process will include formal opportunity for questions and responses. Contracts will be issued based on defined treatment areas, rather than per-tree costs (to meet *California Disaster Assistance Grant* funding requirements). Costs must include tree mitigation through cutting or other means (following the *University of California Cooperative Extension guidance*), disposal of trees and slash (*if applicable*), and resource/asset protection and/or remediation of any incidental damage to private property. Contractors will be selected based on experience, safety record, and production rates. Contractors will be required to comply with all state, federal and local laws and regulations.

Environmental Compliance - The County will comply with all State and Federal Environmental Requirements.

Implementation of Tree Mitigation - Contractors retained to perform mitigation services will be supervised in the field by the County Tree Mortality Contractor. All aspects of contract compliance will be monitored. It is anticipated tree mitigation projects will be subject to permitting requirements of the California Forest Practice Act. Exemptions from preparing a full Timber Harvest Plan will be prepared by a Registered Professional Forester and submitted to CAL FIRE for approval. Securing an exemption allows the County to transfer ownership of logs to contractors who may, in turn, sell the logs to sawmills, biomass facilities, or other commercial enterprises.

Implementation Schedule and Outcomes - All preparations for conducting the preliminary reconnaissance survey, permissions to enter, and initiation of hazard tree surveys will be completed in FY24/25. It is anticipated contracts for tree removal will be advertised and awarded in 2025, with implementation soon after. Additional project areas will be defined through the continuation of hazard tree surveys. Project milestones will be reported at County Tree Mortality and Forest Health Task Force and Board of Supervisors meetings. The Countywide Hazard Tree Inventory Survey and Vegetation Mapping are anticipated to be completed by Spring 2026, with annual assessments of Tree Mortality, informed by USFS Aerial Detection Surveys. Tree Removal is anticipated to extend through December 2026. The County proposes developing a phased program and stacked scheduling method to expedite surveying and project scoping. The first phase of surveying would be along public right-of-ways. Then, that data would be utilized to develop a true bark beetle expansion boundary. If the bark beetle infestation is as pervasive and damaging as the US Forestry department states, then getting ahead of the leading edge of these "wildfire like colonies" before they can expand into new food sources is critical to mitigating the threat to the community and reducing the fuel load potential before the next Fire season. Utilizing several survey crews, ROW surveying of all 615 miles of roadway would take approximately 3-6 months to complete, with surveys beginning in the southern region of the county. Based on initial estimates, a target removing hazardous trees and bark beetles from 1,500 homes in the southern region would significantly reduce the population and provide a natural means for bark beetle colony reduction. Depending on the number of crew utilized in the field, the number of hazards identified per property, and the environmental conditions estimated scope for the PPDR portion of this program would last between 18-30 months. This includes ROE collection, surveys, and hazard removal operations.

Local Cost Share Waiver - The County requests a Local Cost Share Waiver, due to the estimated 25% project cost of $6,015,000.00. Lake County is limited to revenue streams from Sales and Property Taxes, unlike other counties within the state that have additional funding streams, including ports of entry. On an annual basis, the County's General Fund budget is approximately $79,000,000; of this, approximately $48,000,000 is discretionary funding. As previously alluded, multiple declared disasters (*See attachment A*) have brought concurrent effects, and the County is funding tree removal using a variety of other funding sources (*primarily grant funding*). Recovering from these back-to-back disasters has fiscally stressed the County and affected County staff workload for almost a decade.

Based on Phase I scoping, which includes a full ROW survey and ROW hazard removal estimated at 1,000 potential hazards directly within the 15ft max right-of-way space, the following budget estimate was developed based on utilizing 5 survey crews working in separate regions to complete all 615 miles of ROW.

CDAA Tetra Tech ROW Project Budget			
Program Task	**Duration**	**Scope**	**Cost**
ROW Surveys	3-6 Months	5 Crews	$ 1,100,000.00
ROW Haz Removal	3-4 Months	5 Crews	$ 1,400,000.00

The ROW Hazard removal costs may be reduced if crews are able to work extended ROW segments on private property in conjunction with the standard ROW debris and simply segment ticketing and debris. This would reduce contractor and monitoring site mobilization times, time on location, and improve contractor efficiency with labor and equipment.

CDAA Tetra Tech PPDR Budget & Time Estimations				
Intake & Outreach	$600,000.00		6 Months	
# of Survey Crews	5	10	5	10
Surveys @ 1 Parcel per Day	$4,760,000.00	$460,000.00	10 Months	5 Months
Surveys @ 2 Parcel per Day	$2,390,000.00	$2,305,000.00	5 Months	2.5 Months
# of Work Crews	5	10	5	10
Monitoring @ 1 Parcel every 3 days	$16,200,000.00	$10,500,000.00	2.5 Years	16 Months
Monitoring @ 1 Parcel every 2 days	$11,000,000.00	$7,000,000.00	20 Months	10 Months

These estimations are based on known information, and are subject to adjustment based on survey data and hazard counts found during the ROW full survey phase.

24,060,000 Total Estimated Potential Tetra Tech Budget

Contractor budgets will be additional and based on a full scope assessment of eligible program hazards identified during ROW surveys and PPDR site assessments.

We sincerely appreciate your and CalOES' consideration of this request. Please do not hesitate to reach out to County Administrative Office staff (Matthew.Rothstein@lakecountyca.gov or 916-544-8150), if further information is needed.

Sincerely,

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Michael Green, Chair
Lake County Board of Supervisors

Attachment A – Disaster Declarations

Year-Mo	Description	State Declaration	Federal Declaration
2023 – February	Late February Storm	X	
2023 - January	Atmospheric River (Severe Storm)	X	X
2022-May	Tree Mortality	Local	
2021 – October & Ongoing	Drought	X	
2021-September	Cache Fire (Wildfire)	DR 4619	X
2020-March	COVID-19 (Pandemic)	DR-4482-CA	X
2020-September	August Complex Fire (Lightning)	X	
2020-August	LNU Lightning Complex Fire (Lightning)	DR-4558	X
2019-February	Atmospheric River (Severe Storms)	4434	
2019 - October	Kincaid Fire (Wildfire)		
2018 – July	Mendocino Complex Fire (Wildfire)	DR-4382	X
2018 – June	Pawnee Fire (Wildfire)	5244	
2018 – July	Steele Fire (Wildfire)	X	
2017 – February	California Severe Winter Storms	(DR-4301 & 4308) FM-5145	X
2016 – August	Clayton Fire (Wildfire)	FM-5145	
2015 – August	Valley Fire and Butte Fire (Wildfire)	DR-4240	X
2015 – September	Valley Fire (Wildfire)	FM-5093	X
2015 – July	Rocky Fire (Wildfire)	FM-5093	
2014 – January	California Drought (Drought)	FM-5004	
2012 – August	Wye Fire (Wildfire)	FM-5004	
2006 - June	2006 June Storms (Severe Storms/Flood)	DR 1646	
2005/ 2006	2005/06 Winter Storms (Severe Storms/Flood)	DR-1628	X
2003 – January	State Road Damage (Severe Storms)	GP 2003	
2001 – January	Energy Emergency (Economic)	GP 2001	
1998 – February	1998 El Nino Floods (Severe Storms/Flood)	DR-1203	
1997 – January	1997 January Floods (Severe Storms)	DR-1155	
1996 – August	Lake County Fire (Wildfire)	DC-96-03	
1995 – March	California Severe Winter Storms	DR-1046	
1995 – January	1995 Severe Winter Storms (Severe Storms)	DR-1044	
1987 – September	1987 Fires (Wildfire)	GP	X
1986 – February	1986 Storms (Severe Storms)	DR-758	
1985 - July	Hidden Valley Lake Fire (Wildfire)	FM-2055	
1983 – December	Winter Storms (Severe Storms)	DR-677	