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BOARD OF SUPERVISORS

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TO: Supervisor Lindsey P. Horvath, Chair  
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FROM: Edward Yen *Edward Yen*  
Executive Officer

**BOARD REPORT ON DEFENDING LOS ANGELES COUNTY'S OAK TREES FROM THE INVASIVE GOLDSPOTTED OAK BORER (ITEM NO. 5, AGENDA OF MAY 7, 2024)**

On May 7, 2024, the Board of Supervisors (Board) adopted a motion directing the Chief Sustainability Office (CSO) to work with relevant Departments to report back to the Board regarding recommendations for: 1) an ordinance to regulate the movement of firewood to prevent the spread of the goldspotted oak borer (GSOB) and other invasive tree pests; and 2) reforestation following infestations. The motion also directed the CSO to explore the possibility of declaring a local emergency related to GSOB, which poses a significant threat to the Los Angeles County's biodiversity and ecosystems, particularly in areas rich in oak trees.

This report contains the CSO's updates and recommendations developed in response to the motion's directives with input from Agricultural Commissioner/Weights and Measures (ACWM), County Counsel, County Fire, Office of Emergency Management, Parks and Recreation, and Regional Planning.

**Background**

Oak trees are a keystone species in Los Angeles County (County), supporting biodiversity by providing food and shelter to hundreds of species, especially to insects which form the foundation of many food webs that support birds, mammals, and other wildlife. Oaks also hold cultural significance for local Native American tribes, including as a traditional food source. Oak trees in the County face several threats, including stress from heat, drought, and wildfire caused by climate change and destruction and habitat loss due to development. Oak woodlands in the County now face the threat of GSOB, which is

typically fatal to the oak trees it infests, including mature Coast Live Oak (*Quercus agrifolia*), California Black Oak (*Quercus kelloggii*), and Canyon Live Oak (*Quercus chrysolepis*).

The County Community Forest Management Plan (CFMP), adopted by the Board on October 8, 2024, is a long-term strategy designed to manage and enhance tree canopy across LA County, in order to ensure equitable access to the benefits provided by trees, such as shade, cooling, and biodiversity. The CFMP covers tree planting, maintenance, protection, and community engagement in urban and rural settings across the County. It also prioritizes actions that address climate resilience, equity, and regional coordination. The CFMP focuses on promoting a healthy, well-managed community forest, integrating cultural knowledge, understanding the historical and natural legacy of communities, and providing resources for tree maintenance and education, especially in underserved communities.

The CFMP includes recommendations for managing invasive species that threaten local trees, including tree pests as well as tree pathogens. Its comprehensive approach will help support LA County in efforts to maintain its biodiversity and protect its oak woodlands, which are particularly vulnerable to invasive species like GSOB. The CFMP emphasizes early detection of and rapid response to invasive pests and pathogens, as well as the importance of collaboration among regional agencies to mitigate the spread of pests like GSOB. As a part of CFMP implementation, the CSO has coordinated with various partners on an educational and outreach campaign to inform the public about the threat of GSOB. This outreach includes creating and distributing educational materials, tabling at community events, and holding informational meetings in areas most at risk of GSOB infestation, including the Santa Monica Mountains.

Two key actions recommended by the CFMP related to invasive tree pests and pathogens include the development of a “firewood ordinance” to reduce the spread of invasive pests and pathogens and the need to pursue replacement tree planting and establishment after tree mortality due to invasive threats, also known as “reforestation.”

### **Developing a Firewood Ordinance**

Limiting the movement of firewood in the County is essential to prevent the spread of invasive tree pests like GSOB, which can devastate oak trees and disrupt ecosystems. Firewood is a common carrier for these pests, as eggs, larvae, and even adult beetles can remain hidden in firewood and be carried to new areas by humans, where the beetles can infest healthy trees. By limiting or controlling firewood movement, the County can slow the spread of GSOB and other invasive species, buying time for monitoring and treatment efforts. This is especially important in communities that rely heavily on firewood, either out of necessity for heating or as part of their culture and lifestyle.

The ability to limit the movement of firewood depends on widespread public education and engagement, especially with communities that are most likely to purchase and transport firewood. Residents and businesses must understand the risks associated with transporting firewood and be encouraged to use locally sourced wood or wood that has been heat-treated. Outreach campaigns, community engagement, and clear communication such as signage at firewood sale or firewood use locations as well as training to identify GSOB, can be critical in raising awareness and influencing behavior. Leveraging, translating, and distributing existing materials and collaborating with local organizations, outdoor recreational groups, park agencies, and other agencies already involved in GSOB and invasive pest education and response could all further strengthen the engagement needed to protect the County's oak trees.

To support efforts to limit the spread of invasive pests through firewood, CSO recommends developing a firewood inspection ordinance which should include the following elements:

- **Residential Firewood Inspection Upon Request:** Develop a service that allows residents to request on-site County inspection of firewood that they have purchased or gathered. The inspection service should include an option for residents to request that the County safely dispose of wood that is found to be infested. Both inspection and disposal services should be free and voluntary for all County residents.
- **Firewood Seller Inspection:** Develop a regulation requiring firewood sellers to undergo periodic mandatory inspection of firewood for signs of invasive tree pests and pathogens. Inspections should be paired with education about strategies for limiting the spread of invasive pests. Development of a mandatory inspection regulation can include:
  - **Developing a definition of regulated firewood sellers:** Clearly define what constitutes a regulated firewood seller for the purposes of this regulation.
  - **Inspection:** Establish inspection frequency and inspection protocols.
  - **Best practices:** Develop recommended best practices that firewood sellers can implement to limit the spread of invasive pests and pathogens. Inspectors can share information about best practices during inspection. Compliance with best practices should be voluntary but may phase into mandatory compliance over time.
  - **Mitigation:** Develop recommendations for County action when inspection reveals firewood that is infested with invasive tree pests or infected with tree pathogens, as well as recommendations to incentivize participation in mitigation by firewood sellers. Mitigation action should be based on established best management practices and tailored to address the specific pest or pathogen. Participation by firewood sellers should be strongly encouraged and incentivized whenever possible. Firewood is a valuable

commodity, and once infested, it may not be salvageable through mitigation efforts.

- **Incentivized participation:** Develop recommendations to positively incentivize participation by firewood sellers, such as a “certification” program for firewood sellers who voluntarily demonstrate compliance with best practices related to invasive tree pests, such as heat treatment and local sourcing, or the sharing with customers of informational materials related to tree pests.
- **Phasing:** The ordinance should include recommendations for phasing in, over time, from less stringent and voluntary requirements to more stringent and mandatory requirements. This will provide transparency and stability to affected businesses, allowing them to plan for compliance over time. This can include consideration of the phasing in of subsequently more ambitious requirements, such as a requirement for firewood to be heat-treated.
- **Regional Coordination:** Both a residential inspection service and a firewood seller mandatory inspection will be more effective if implemented Countywide. The County should seek options to implement these programs across the entire County, and it should coordinate with cities to adopt parallel programs where possible. Additionally, the County should encourage collaboration with state and federal forestry and agriculture agencies, as well as local parks and natural resource organizations, to ensure comprehensive monitoring and engagement across jurisdictions.

The CSO recommends that ACWM be the lead agency for developing and enforcing the proposed firewood movement ordinance because the department has the expertise, infrastructure, and legal authority to manage pest control and invasive species issues countywide. ACWM is responsible for enforcing agricultural and environmental regulations, including quarantine laws related to plant pests, which aligns directly with the goals of controlling the spread of invasive pests like the GSOB. For example, ACWM performs inspections at plant nurseries countywide.

Additionally, ACWM has experience with inspections, certifications, and monitoring programs, making it well-suited to inspect firewood, provide education about compliance with treatment standards, and conduct necessary mitigation actions. Its established relationships with other regulatory agencies and local communities would also be key in coordinating efforts, while leveraging its existing outreach programs to educate the public about the risks of moving untreated firewood. This supports a streamlined, knowledgeable, and effective approach to implementing the ordinance.

## **Developing and Implementing Guidelines for “Reforestation” After Tree Mortality Due to Invasive Pests**

Planting and establishing new trees, sometimes known as “reforestation,” is important in areas affected by invasive pests. This is true both for naturally forested areas and for the community forest, where trees do not propagate themselves without human intervention. Reforestation is particularly critical in the case of GSOB because the pest specifically targets oak trees, which are keystone species in many ecosystems, providing essential habitat and food for wildlife, stabilizing soil, and supporting biodiversity. When GSOB infestations kill large numbers of oak trees, it not only disrupts these ecological functions but also increases the risk of soil erosion, wildfire, loss of wildlife habitat, and the spread of other invasive species.

LA County's approach to reforestation following invasive pest infestations should be strategic, equitable, science-based, and focused on building resilience against future pest outbreaks and climate change. This requires careful planning, species selection, and a long-term commitment to ecosystem restoration and urban tree establishment. Guidelines for “reforestation” can be used to guide funding requests, grant applications, and budgeting to help ensure that County responses to invasive tree pests are sufficiently funded to be proactive, holistic, and regionally coordinated. The CSO recommends that the reforestation efforts following tree mortality due to invasive tree pests and pathogens be divided into two broad categories: (1) reforestation in open space resource areas<sup>1</sup>, and (2) tree planting and establishment in the community forest<sup>2</sup>.

- **Reforestation in open space resource areas:** In open space resource areas impacted by invasive tree pests and pathogens, priority considerations for reforestation include supporting biodiversity, protecting habitat, and restoring ecosystem services including wildfire resilience. Guidelines for reforestation in these areas should consider components similar to traditional reforestation efforts, including:
  - **Assessment of impacted areas:** Conduct a thorough assessment of those areas affected to determine the extent of damage and prioritize the most severely impacted areas for reforestation efforts.
  - **Native species selection for biodiversity:** Prioritize the planting of native tree species that are resilient to local pests and climatic conditions. Species diversity, as appropriate for the ecological area and watershed, should be

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<sup>1</sup> Per the Conservation and Natural Resources Element of the LA County General Plan, open space resource areas include natural areas, wildlife and wildflower sanctuaries, regional parks with significant natural resources maintained by County, State, and Federal agencies, and conservancies, as well as private open space lands.

<sup>2</sup> Per the CFMP, the community forest is the collection of all the actively managed trees in our communities, including along streets, between buildings, in parks, and around all the places we live, work, and play.

a core principle to enhance ecosystem resilience and reduce the risk of future infestations or diseases that could target monocultures. County Fire manages nurseries that grow native trees and plants; these nurseries can be key partners in supplying trees for reforestation efforts. Reforestation can include not only planting new trees, but also include protecting and supporting naturally occurring seedlings, planted by birds and other animals, that are already growing on site. These seedlings have the added benefit of maintaining the local genetic stock and already being adapted to local environmental conditions. On-site seedlings can be supported by installing protective screening around them to prevent deer and other animals from browsing them.

- **Soil and ecosystem restoration:** Evaluate and restore soil health, as invasive pest infestations can degrade soil quality. For example, while GSOB kills a tree without soil impacts, the Invasive Shot Hole Borer (ISHB) may infect soil with fusarium, a harmful fungus that disrupts plant health. Soil restoration techniques, as appropriate for the ecological area, should be considered to support healthy tree growth. Reforestation efforts should also account for the broader ecosystem, ensuring that other native plants, animals, and pollinators are supported.
  - **Long-term monitoring and maintenance:** Develop a long-term monitoring and maintenance plan that addresses topics such as watering schedules and pest monitoring to track the success of tree growth and detect any signs of new infestations.
  - **Public engagement and education:** Involve local communities in the reforestation efforts, such as through volunteer programs, educational campaigns, public outreach, and/or other strategies. This will help build support for the project and create a sense of shared responsibility for the care and protection of newly planted trees.
- **Tree planting and establishment in the community forest:** In areas of the community forest impacted by invasive tree pests and pathogens, priority considerations for reforestation include tree canopy equity, tree species selection, commitment to irrigation and maintenance, and community engagement. Guidelines for tree planting after tree removal due to invasive pests in these areas should consider the following:
    - **Tree canopy equity:** Resources for planting and establishing new trees should be equitably distributed. This can mean that tree planting resources are not always allocated to the same geographic location as the initial infestation. For example, a community that has many trees to begin with may experience a higher absolute number of tree deaths due to an invasive pest than a community with fewer trees. When replanting, the County should consider preferentially allocating resources to tree-poor communities, even if they are not as severely impacted by tree mortality, to

- avoid perpetuating inequity. The CFMP provides guidance about communities in the County with the highest tree canopy need.
- **Tree species selection:** Changing temperatures, precipitation patterns, and extreme weather events due to climate change all impact tree health. Guided by the CFMP, the County should select a combination of native and climate adapted tree species that will be resilient to these changes to support the long-term viability of the community forest, increase the benefits of trees to communities, and maintain and enhance local biodiversity.
  - **Commitment to irrigation and maintenance:** Unlike trees in naturally forested areas, trees planted in the community forest require regular irrigation for up to three years or more after planting, as well as regular maintenance for the life of the tree. Guided by the CFMP, guidelines for replanting should include a long-term commitment to the establishment and maintenance of trees.
  - **Community engagement:** Community support and engagement is critical to the success of trees in the community forest. Planting and establishment activities in the community forest should be informed by community feedback such as information received as part of the CFMP process and should also include educational and workforce development opportunities as appropriate.

By developing a set of guidelines that includes these elements, the County can proactively plan for a robust reforestation response that not only addresses the damage caused by invasive pests but also builds a more resilient, biodiverse, and sustainable natural and community forest for the future.

### **Pursuing Funding Opportunities**

To implement the above recommendations for addressing invasive pests, the securing of additional funding is critical. Currently, County departments are relying on, or reallocating, their already limited resources to meet this challenge. For instance, County Fire established the Invasive Pest Management (IPM) Unit to combat pests such as the GSOB and ISHB but did so by temporarily reassigning staff from other units. Additional funding is required to establish new permanent forestry positions within the IPM Unit.

As part of efforts to secure additional funding, the CSO is working with departments to develop a proposal for submittal to potential funders, including the California Department of Forestry and Fire Protection, for approximately \$800,000 in funding to support the creation of a regional framework for proactive management of invasive tree pests and pathogens, with a continuing response to GSOB as a pilot focus of this approach. Specifically, the proposed scope of work includes: developing a common survey and database tool for tree pest and pathogen tracking; mapping of oak woodlands; pilot treatment programs and case studies; education and outreach; and reforestation planning and pilot implementation. The CSO, along with County departments, plans to design the

framework collaboratively with regional and statewide partners with the goal of creating a model that is sufficiently scalable to serve as a potential resource statewide.

**Declaring a Local/State Emergency**

The County may legally proclaim a local emergency in response to "conditions of disaster or of extreme peril" to the safety of persons and property, which are beyond the control of local resources, and which require the combined forces of other subdivisions to combat. A proclamation of local emergency enables the County to act quickly to address emergency conditions, potentially access state and federal resources, obtain multi-jurisdictional assistance, and issue emergency protective measures. The Governor has authority to proclaim a state of emergency within the County or within multiple geographic areas within California under appropriate conditions. Based upon the existing recommendations to respond to this incident, there does not appear to be a need for a local or state proclamation of emergency. While the County should act quickly to slow the spread of GSOB, long-term and strategic approaches will be most effective in combating the threat of invasive pests. Therefore, at this time, the CSO (in consultation with CEO-OEM) does not recommend that the County proclaim a local emergency for the GSOB, nor does it believe there is a need for the Governor to proclaim a state of emergency.

Should you have any questions concerning this matter, please contact Rita Kampalath, Chief Sustainability Officer, at (323) 459-3939 or [rkampalath@cs0.lacounty.gov](mailto:rkampalath@cs0.lacounty.gov).

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Attachment

c: County Counsel  
Agricultural Commissioner/Weights and Measures  
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