



## Attachment A

### Mediterranean Oak Borer (MOB) Status Report

<p><b>Date of Report:</b> December 18, 2023</p>	<p><b>Subject:</b> Current Status of City Actions Related to the Mediterranean Oak Borer’s (MOB) Presence in Wilsonville’s Oregon White Oaks</p> <p><b>Staff Members:</b> Chris Neamtzu, Community Development Director Georgia McAlister, Associate Planner Martin Montalvo, Public Works Operation Manager Brad Painter, Roads &amp; Stormwater Maintenance Andrew Sheehan, Public Works Asset Management Coordinator Dustin Schull, Parks Supervisor Chris Delk, Parks Maintenance Specialist and Certified Arborist</p> <p><b>Departments:</b> Community Development, Public Works, Parks and Recreation</p>
<p><b>Time Period Included in Report:</b> June 2023 – December 2023</p>	

**PURPOSE OF REPORT:** This is an informative report with the intent to provide periodic updates to the City Manager and City Council on the status of the impact of Mediterranean Oak Borer on Wilsonville’s Oregon white oak (OWO) trees and the City’s response.

**Bold and underlined text has been added since October report publication.**

**SUMMARY:** The City Manager has created a multi-disciplinary team of staff members from the Community Development, Public Works and Parks and Recreation Departments to respond to the MOB infestation. This is an evolving situation that will change over time with the addition of information, knowledge, field observations and real science that will inform and adjust the City’s approach and response.

This report includes the following primary sections and subsections:

## Logistics

- Partnerships
- Permitting and Mitigation - **Updated**
- Removal
- Disposal- **Updated**
- Challenges of Disposal - **Updated**
- Publicly Owned and Privately Owned Trees- **Updated**
- Costs- **Updated**

## Outreach and Communication

- Press releases
- Declaration of Emergency – **Declared on October 6, 2023, and remain in effect through December 29, 2023.**
- Impacted Residents
- Tree Care Companies
- State and Local Agencies - **Updated**

## Action Items

- Preparation of ACI Site - **Complete**
- ACI Burn – **Complete**
- Communications Plan - **Updated**
- Survey of Wilsonville’s OWOs- **Updated**
- Charbonneau survey- **Complete**
- MOB and OWO Management Plan

## Developing Knowledge and Resources

- Oregon White Oak Tree MOB Confirmed Status – ODA and ODF Survey- **Updated**
- State Resources
- Observational Learnings - **Updated**

## Background

## Attachments

As the situation in Wilsonville develops, these sections will be expanded and adjusted as needed.

## LOGISTICS:

### Partnerships

To date the City has partnered with the following entities to address various aspects of the response:

- Oregon Department of Agriculture (ODA)
- Oregon Department of Forestry (ODF)

The ODA and ODF are the lead state agencies providing direction to citizens of the State of Oregon regarding the appropriate response to this invasive insect. To date, two Frequently Asked Question sheets have been created. They can be found at the following links.

- [ODA FAQ Sheet](#)
- [ODF FAQ Sheet](#)

For more info on other oak pests go to:

[https://www.oregon.gov/odf/Documents/forestbenefits/Oak\\_galls\\_2017.pdf](https://www.oregon.gov/odf/Documents/forestbenefits/Oak_galls_2017.pdf)

Landowners are asked to review the signs and symptoms of MOB below and report oaks with both crown dieback and any of the symptoms below to the Oregon Invasive Hotline her:

[Oregon Invasive Hotline](#)

Don't Move Firewood to prevent spreading this and other pests:

[Don't Move Firewood](#)

- Local Consulting Arborists
  - Bartlett Tree Experts
  - Morgan Holen and Associates

City staff have been coordinating closely with local consulting arborists to identify MOB, conducting surveys of the landscape, windshield surveys, including collecting drone footage and aerial crown reconnaissance to verify the extent of infestation and organizing the treatment of the community's most important OWO with insecticide and fungicide.

- West Linn- Wilsonville School District

City staff have coordinated closely with staff at the WLWVSD regarding amending their Integrated Pest Management (IPM) list to include the fungicide and insecticide needed to treat OWO trees. The School Board held a hearing on September 18, 2023 to add the treatment to their IPM list. The Cumberland OWO at WHS has been treated.

- Local property owners/HOA's (on-going)

City staff are fielding questions, providing information and coordinating with property owners and their arborist representative regarding identifying MOB and properly removing and disposing of the tree debris. This work is on-going.

- Press

City issued a press release on September 18, 2023 regarding the presence of this invasive insect in the Wilsonville community. Regional news carriers (KGW, OPB) also covered the information contained in the press release. The City has created an informative MOB web site – [Wilsonville MOB Information Page](#). Numerous articles have been written in the Wilsonville Spokesman as well as the Boones Ferry Messenger. This work is on-going.

- Interested citizens

Staff has been contacted by a number of concerned citizens. Staff is providing information and contacts as needed to address the various issues that are arising. This work is on-going.

### Permitting and mitigation

- On October 16, 2023 Mayor Fitzgerald declared a local state of emergency to facilitate response to the MOB (Attachment A2.).
- Due to the Emergency Declaration, no permits are being required at this time for the removal of infected OWO.
- Emergency permits will be helpful for tracking and mitigation. **An Emergency Removal Process has been established. See attachment B2. Several Emergency permits have been obtained or are in process.**
- OWO may not be a viable species for mitigation until more is known about MOB. **Observational evidence suggests that MOB impacts older and weakened OWO trees. This observation suggests replanting OWOs is an option to support the declining population.**

The Planning Division is **not** currently requiring property owners to submit permits for the removal of OWO with confirmed MOB infestation. City staff is asking that there be coordination on suspected infested trees. There is latitude in the code to require emergency removal permits within 30 days of removal. This may be a viable approach to allow for monitoring and ensure mitigation. Now that an Emergency order has been issued there is more flexibility in tree removal requirements.

**Emergency removal permits are required after removal. See attachment B2 for the Emergency Removal Process.**

### Removal

- OWO trees confirmed to have MOB must be removed in a timely manner by a professional team.
- Tools (chainsaws) and instruments (trucks, haulers) used for removal must be sanitized between jobs to prevent the spread of the fungus or the insect.
- Due to the growth patterns of OWOs non-infested trees in close proximity to infested trees may need to be removed
- ODA has issued a MOB Pest Interim Management Guidance sheet – [MOB Guidance](#)

## Disposal

The following guidance for disposal is provided by ODA. Candidates for disposal:

- Oaks with at least 30% crown dieback (not just leaf discoloration or seasonal leaf drop) and/or evidence of pale boring dust
- Oaks damaged (large cracks, broken branches, etc.) by mechanical, abiotic or biotic stressors that indicate they have been weakened via poor crown development.
- Oaks whose roots (typically 2x tree height) are within active or proposed construction

### Disposal options:

- Destroy infested trees on-site with a masticator, tub grinder, or burn boss (above-ground air curtain incinerator). Ensure that the tree is cut flush with the ground and a stump is not left exposed. Chip material to 1 inch or less and burn or cover with tarp for two months to reduce beetle spread, do not spread chips near standing oaks.
- Transport felled trees in covered trucks to nearby Covanta incinerator. Beetles are less likely to fly November through January, avoid transporting infested, uncovered material outside of this timeframe. **While the use of the Covanta incinerator has been explored, difficulty with communication and cost has redirected the team's effort to explore more cost and time efficient options.**
- Alternate disposal option: If neither of the above options are workable and a chipper/grinder is available that can create chips no more than 3" in any direction, then infested material may be chipped and tarped until it can be burned, moved in a covered truck to the Covanta incinerator, or sent to a landfill for immediate deep burial.

**Deep burial within secure landfills is the City's current preferred method for disposal. The deep burial method is most efficient for bulk disposal of City OWO tree debris.**

### Challenges of Disposal

- A semi-permanent woody debris storage site may be needed.
- ACI unit to be used for Emerald Ash Borer (EAB) containment in Forest Grove until mid-December, at which time it could return to Wilsonville for as much as two weeks.
- Operating the ACI unit requires equipment and operators the City does not have the capacity to consistently provide. There are costs associated with operating the ACI.
- Trees for incineration need to be broken down to smaller pieces, a significant challenge given the size of the trees. Tub grinder likely only way to break down material.
- Open burning will take very long and would require 24/7 supervision.
- Burning in the urban environment is problematic, smoke and pollutants are unhealthy.
- Property owners have limited space to store infected wood on-site.
- There are often fire bans (TVFR) inside the city during summer months.
- Disposing of woody debris correctly is very expensive (removal, trucking, disposal).

- If infected wood is transported, it needs to be done in a closed truck.
- **ACI unit was not as effective as hoped. Very little debris was burned in the four days of operation due to the hardness of the wood, size of debris material, and weather impacts.**

### Publicly Owned Trees and Privately Owned Trees

- The public versus private ownership of OWOs present several challenges in addressing MOB. To contain MOB, all property owners within Wilsonville will need to follow best practices per ODA and ODF recommendations.
- Following best practices is costly for both the City and private owners of OWOs. Without City, County, State or Federal assistance, residents safely disposing the wood is extremely challenging. The cost burden is significant. The City is not currently able to support resident's private trees with removal or disposal beyond providing information.

### Public Trees

- Several significant publicly owned trees have been treated with insecticide and fungicide including:
  - The Piccadilly park grove in Villebois
  - The WES grove (MOB was discovered 1 week post treatment)
  - The three largest OWO trees at the Park at Merryfield neighborhood park
  - The Willow Creek tree retained in the median in Frog Pond West
  - The OWO along with 5<sup>th</sup> street retained during the 5<sup>th</sup> to Kinsman project
  - The Failmezger Heritage Tree along Parkway Avenue
  - The Boeckman dip and Boeckman House OWOs
- Several publicly owned OWO trees will need to be disposed of, a stockpile site is temporarily set up at the Advance Road Community Park site.
  - **Impacted OWO trees at the WES Mitigation Site were disposed using the deep burial method.**
  - Portions of the Ichijo tree and infested OWOs and snags at the WES site were the first trees to be burned in the first test of ODAs ACI unit. City staff is investigating other ways to dispose of large quantities of infected wood.
  - While progress was made, there is still a large amount of woody debris remaining at the site.
  - **Process has been established for how OWO tree debris will be managed in both day to day and emergency situations. An internal workshop was held in November for the Roads and Parks teams.**

### Private Trees

- The majority of OWOs in Wilsonville are privately owned/managed.

- Several significant privately owned/managed trees were treated with insecticide and fungicide in partnership with the City including:
  - The Cumberland Heritage Oak at WHS
  - Two OWOs retained during the construction of Morgan Farms in Frog Pond West
  - The Siemens/Mentor Graphics OWO along Boeckman Road
  - The Target OWO in Argyle Square
  - Two of the Three Sister OWOs at Coca-Cola
- Please note that all of these injections were done in partnership with community members.

### Costs

Expenses to date:

Staff has created a spreadsheet of all expenses incurred or encumbered to date. A total of \$49,316.52 has been spent on the community response to MOB as of 10.23. As of 12.23 a total of \$78,217 has been spent on community response to MOB. Of the \$78,217 allocated, \$15,300 is encumbered and \$24,425 is an estimate prior to final cost of materials and labor.

(See Attachment F1)

- The Team is exploring grant opportunities for funding.
  - The USDA Forest Service granted \$1 billion to various environmental organizations across the country in September 2023. Many of the organizations will be providing grant application opportunities for projects that support their forestry goals.
- The City's Community Enhancement Grant program could be a source for future funding removal and disposal activities at the neighborhood level.

### OUTREACH AND COMMUNICATION:

#### Press releases, Declaration of Emergency

Since the discovery of MOB in Wilsonville two press releases have been issued by the City.

- First press release issued September 18 2023 (See Attachment A1)
- Second press release issued October 6, 2023 (See Attachment A2)
- The first was released on September 18, 2023 via the Boones Ferry Messenger, the City website, and City Social Media. The press release alerted the community of the presence of MOB, the impact on Wilsonville's OWOs, and the State and City response to date.
- The second press release was issued on October 6 to alert community members of the Local State of Emergency Declaration plan to use the ACI unit on site for the incineration of OWO trees removed due to the impact of MOB. The press release included information on how the ACI works and its low environmental impact.

## Impacted Residents

- A Mediterranean Oak Borer informational page is live on the City Website: [Wilsonville MOB Informational Page](#)
- Notice was sent to all owners adjacent to the FP East Future Park site regarding the ACI on October 6, 2023 (See Attachment A3)
- City staff has developed a standard response for residents with potentially infested and infested trees on their property. (See Attachment B1)
- Other outreach materials including a guide to the removal process for infested OWOs, OWO identification handout, and decision making process. (See Attachment B2, B3 and B4)

## Tree Care Companies

- A list of tree care companies most active in Wilsonville has been compiled
- Once an official process for removal and disposal is established a letter regarding process should be sent to all tree care companies on the “Active in Wilsonville list” (Attachment C1)

## State and Local Agencies

### ODA

- Met on-site in Wilsonville with team on September 8th, 2023.
- Regular communications with Cody Hothouse, Insect Pest Prevention Management Program Manager, and Matt Mills, Survey Coordinator, regarding ODA communications with Cal Fire and the ACI unit
- Regular communications with the larger ODA team regarding best practices and care
- Will meet with ODA, ODF and City Team in the next few weeks to discuss our current management plan as well as future phases
- **Meeting held on November 30 with the City, ODA, and ODF to talk current status and next steps.**

### ODF

- Met onsite in Wilsonville with team on September 8th, 2023.
- Regular communications with Christine Buhl, Forest Entomologist, regarding best practices and care.
- Will meet with ODA, ODF and City Team in the next few weeks to discuss our current management plan as well as future phases
- **Meeting held on November 30 with the City, ODA, and ODF to talk current status and next steps.**

### Metro

- The City contacted Metro regarding the presence of MOB in Wilsonville and proximity to Graham Oaks Nature Park.

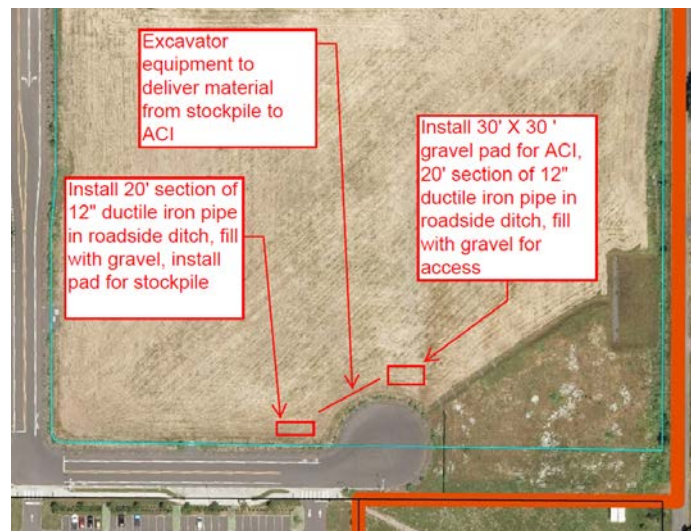


- The Metro science team informed the City they were not aware and will check the health of their oak trees regularly.
- Semi-regular communication with Andrea Berkley, Senior Natural Resource Scientist has occurred.

#### **ACTION ITEMS:**

##### **Preparation of ACI Site**

- The undeveloped Advance Road Community Park site will be utilized for the ACI unit
- Coordination with School District, neighbors and SMART
- The City and Northwest Earthmovers (NEI) have partnered for the preparation of the site
- Preparation includes
  - Temporary gravel access and pad for ACI unit
  - Geotextile fabric
  - Temporary culvert
  - Clearing of plant material
  - Temporary fencing installation
  - Erosion Control
  - Porta-potty



Preparation Work for ACI Unit

##### **Air Curtain Incinerator (ACI) Burn**

- The ODA has a new device, an Air Curtain Incinerator, which was brought to Wilsonville to dispose of infected wood. Target was to burn for four days.
  - First burn occurred on 10/09/2023
  - Debris included Frog Pond Estates (Ichijo Homes) tree and WES station trees
- Burning is taking longer than anticipated due to unfamiliarity with equipment.
  - ½ load burn in a 5 hour period
  - Strong winds on day two (10.10) shut down the operation early
  - The following day, the ACI could not operate due to strong wind.

- ACI operated a total of 2.5 days out of 4 targeted.
- Site will remain prepared for ACI unit
- ODA expects the ACI unit to be available in December
- Several local companies have mobile ACI units



### Communications Plan

- Weekly meetings of the interdisciplinary staff team to coordinate efforts  
***Meetings to be reduced to monthly during the winter.***
- Regular reports to Bryan and Council
- Regular communications in the BFM for residents
- MOB page on the City Website

### Survey of Wilsonville’s OWOs

- 2021 tree survey includes publicly owned OWOs and OWOs visible from the ROW
- Updated survey on the health of the OWOs
- Mapping the locations of the trees in GIS
- Entering the treatment information into the city’s asset management software, Cartegraph which will allow for work orders to be automatically processed for future treatments. **Treatment and infestation information has been updated.**
- **A public facing MOB impact survey map has been created by the Public Works Team.**

### Charbonneau

- A visual windshield survey was conducted of the Charbonneau District with Public Works staff and consulting arborist Morgan Holen in October 2023.

- While Charbonneau does not contain OWO, it does have a population of over 800 red oaks (*Quercus rubra*) which is potentially susceptible to MOB.
- NO evidence was observed during this survey of any indication of MOB in the Charbonneau red oak population.
- Drone footage was flown over the entire French Prairie Road canopy to document crown conditions in order to provide baseline information going forward.
- **Nine red oak trees showing decline unrelated to MOB are to be removed from ROW areas. This is a preventative measure to support the health of the red oak trees.**

## MOB and OWO Management Plan

The management structure is in place:

- Team Lead - Chris Neamtzu
- Operations Lead – Martin Montalvo
- Operations Support – Dustin Schull, Chris Delk, Brad Painter, Andy Sheehan
- Planning, Outreach and Community Development Lead- Georgia McAlister

The team’s current focus is immediate response and figuring out the most effective and cost efficient way to dispose of infected wood. As more information is gathered in this response phase the long-term management plan will be developed more substantially.

## DEVELOPING KNOWLEDGE AND RESOURCES:

### Oregon White Oak Tree MOB Confirmed Status – ODA and ODF Survey as of 12.23

- 14 OWO trees confirmed with MOB in Wilsonville
- 6 OWO trees showing signs of MOB
- Numerous removals have occurred (**WES, Frog Pond Estates, Frog Pond Meadows, ProGrass, Villebois**).

### State Resources

- [Survey of Confirmed MOB in Wilsonville](#)
- [ODA FAQ Sheet](#)
- [ODF FAQ Sheet](#)

### Observational Learning

- Given the amount and level of infestation, MOB has likely been present in Wilsonville 3-5 years.
- It takes several years for the population load of MOB to be high enough to kill large OWO.
- The majority of OWOs with confirmed MOB in Wilsonville show signs of defects or damage (ice damage, drought stress, insect damage).

- Wilsonville is currently the epicenter, however, OWOs displaying symptoms have been observed outside of City limits, the extent of presence of MOB in the Willamette Valley will take some time to understand.
- No signs of MOB have been observed in species other than OWO within Wilsonville.
- ODF and ODA are interested in partnering with Wilsonville as a study for the testing and observation of potential treatments, disposal methods, and observations on the behavior and impacts of MOB.
- **The behavior of the MOB present in Oregon is distinct and different than the behavior of MOB in California.**

## BACKGROUND:

Since the summer of 2022, when it was first noticed that the large 56" DBH Oregon white oak (OWO - *Quercus garryana*) tree at ProGrass began to show rapid signs of decline, staff and arborists have hypothesized at what might be causing the decline. While insects, root disease and climate (heat, drought, ice) were all suspected culprits documented in the two detailed arborist reports that were prepared as part of the Willamette Water Supply Project (WWSP), there was no definitive diagnosis made that would explain the rapid decline of the main scaffold branches in this tree.

One consideration at the time in summer of 2022, was the fact that the Mediterranean Oak Borer (MOB) may be present, and actually causing some of the significant and rapid decline of this mature OWO tree due to the symptoms presented as well as evidence of insect damage. ODF staff observed evidence of insect damage caused by oak lace bug, gall-making insects, and other defoliating insects, and believed that the beetles were native ambrosia beetles that only attack dead and dying wood. At the time, ODF staff did not concur with the suggestion that the decline was the cause of the MOB and believed the decline was primarily caused by site conditions and drought stress. However, in May 2023, ODF published a FAQ sheet on the invasive beetle species and in June 2023 Oregon Department of Agriculture (ODA) published their own FAQ sheet. Both can be found in Attachments D1 and D2. Attachment E1 presents a scientific description of the insect and its preferences, prepared by Jeremy Slone, PhD, entomologist with Bartlett Tree Experts.

MOB has been detected in Oregon since 2018. One beetle was captured in a trap in 2018 at Chinook Landing near Troutdale. One beetle was captured in a trap near Woodburn in 2021. In 2022 across seven sites in four counties, there were 21 beetles captured, 14 of which were near Troutdale. Additionally in 2022, one beetle was found in a trap on the west side of Wilsonville. In May 2023, the first Oregon white oak tree was found to be positive for MOB near Troutdale. In August of 2023, Wilsonville had the second confirmed OWO tree with MOB with evidence of much more infestation emerging daily.

Fast forward to the summer of 2023; staff and local arborists began to notice an alarming trend across the broader landscape of the Wilsonville community where very large OWO trees in numerous locations (i.e. Frog Pond West, Target store, ProGrass) began to show sudden and

rapid large scaffold branch decline, or complete canopy decline that is indicative of something potentially more serious. Because of the importance of these OWO trees to the Wilsonville community and the potential presence of MOB, staff prioritized looking into the matter further.

One suspected tree, located in Frog Pond West, declined very rapidly over the past year. This 55-inch OWO was to serve as the focal point of an open space in the neighborhood. However, based on major canopy dieback and branch decline, staff requested an arborist assessment. As a result of the arborist recommendation, an emergency tree removal permit had to be issued as the rapid decline of the tree left eminent danger to the public.

Prior to the actual removal, during the week of August 21, 2023, branch, leaf and insect samples were collected from parts of the declining tree by arborists from Bartlett Tree Experts and sent to their laboratory in North Carolina. The following week verification came back from the samples that MOB was indeed present in the Frog Pond West tree samples. Since MOB is an invasive insect pest, the Oregon Department of Agriculture was immediately notified. A field meeting with ODA, ODF and Metro staff was held on September 8, 2023 where more samples were collected from the debris of the Frog Pond tree, as well as at the WES site along Barber and Kinsman Roads. Visual evidence was collected at the WES site indicating the presence of MOB in that grove. Observations of the Three Sister Oaks on September 12, 2023 by the City's consulting arborist also indicated presence of MOB in the middle oak.

Staff at the City, along with the support of consulting arborists at Bartlett Tree Experts and Morgan Holen & Associates, LLC have sprung into action to help to save the City's threatened oaks. Staff from Oregon Department of Agriculture and Oregon Department of Forestry are also providing support. To date there have been numerous coordination meetings and as of the last week of August, arborists were already applying insecticides and fungicides into the trunks of publically owned large Oregon white oak trees while coordination continues to occur with Homeowner Associations (HOA) and private land owners. During the week of October 9, an Air Curtain Incinerator was mobilized to the Advance Road future park site to assist with the disposal of several large oak trees, two from the oak grove on the Wilsonville Transit Station site, and one from Frog Pond Estates, where Ichijo Homes is building a new subdivision.

## **ATTACHMENTS**

### **Official Communications to the Public**

- A1. September 18, 2023 Press Release
- A2. October 6, 2023 Press Release
- A3. October 6, 2023 Letter to Property Owners Adjacent to ACI

### **Resident Resources**

- B1. Standard Response to Property Owners with MOB Concerns
- B2. Mediterranean Oak Borer Tree Removal Process
- B3. Resident MOB Decision Chart

B4. Oregon White Oak Identification Handout

**Tree Care Resources**

C1. Fact Sheet for Tree Companies

**State FAQ Sheets**

D1. Oregon Department of Agriculture FAQ Sheet

D2. Oregon Department of Forestry FAQ Sheet

D3. Wilsonville Specific Guidance ODA and ODF Provided FAQ Sheet

**Scientific Reports and Research**

E1. Bartlett Tree Research Diagnostic Report

**Project Expenses**

F1. MOB Project Expenses