

**DOT Briefing Sheet – 6/3/24**  
***INVASIVE SHOT HOLE BORER AND FUSARIUM DIEBACK CONFIRMATION***

**Background**

- Invasive shot hole borer (*Euwallacea* spp.) *Fusarium* dieback (ISHB) was confirmed in San José on 1/8/24 by the Santa Clara County Agriculture Commission
- How ISHB was introduced to San José is unknown at this time.
- This pest has the potential to cost property owners, with street trees, upwards of \$19.7 million in tree removals.
- At a minimum, there are 69,000 street trees at risk.

**Invasive Shot Hole Borer and *Fusarium* Dieback (ISHB)**

The ISHB is a very small borer from Asia. In 2012 ISHB was first confirmed in North America in Los Angeles County. It had been contained in southern California until its discovery in San José. This pest is a great threat to the entirety of the urban forest due to its ability to attack many of the most populous tree species in the City.



- The borer itself does not kill trees
- The insect carries a fungus (*Fusarium*) that grows in the cambium of the tree, (the area just under the bark that moves around water and sugars) clogs up the living tissues, and digests the wood in the trunk and branches
- The borer carries the fungus as a food source and tends to it like a farmer.

**Mitigation**

This pest/pathogen is not easily managed. Once the borer enters the tree, the borer can be treated with pesticide but the fungus it carries is much harder to treat. Trees that have yet to be infested can proactively be treated to prevent infestation.

### Treatment Options

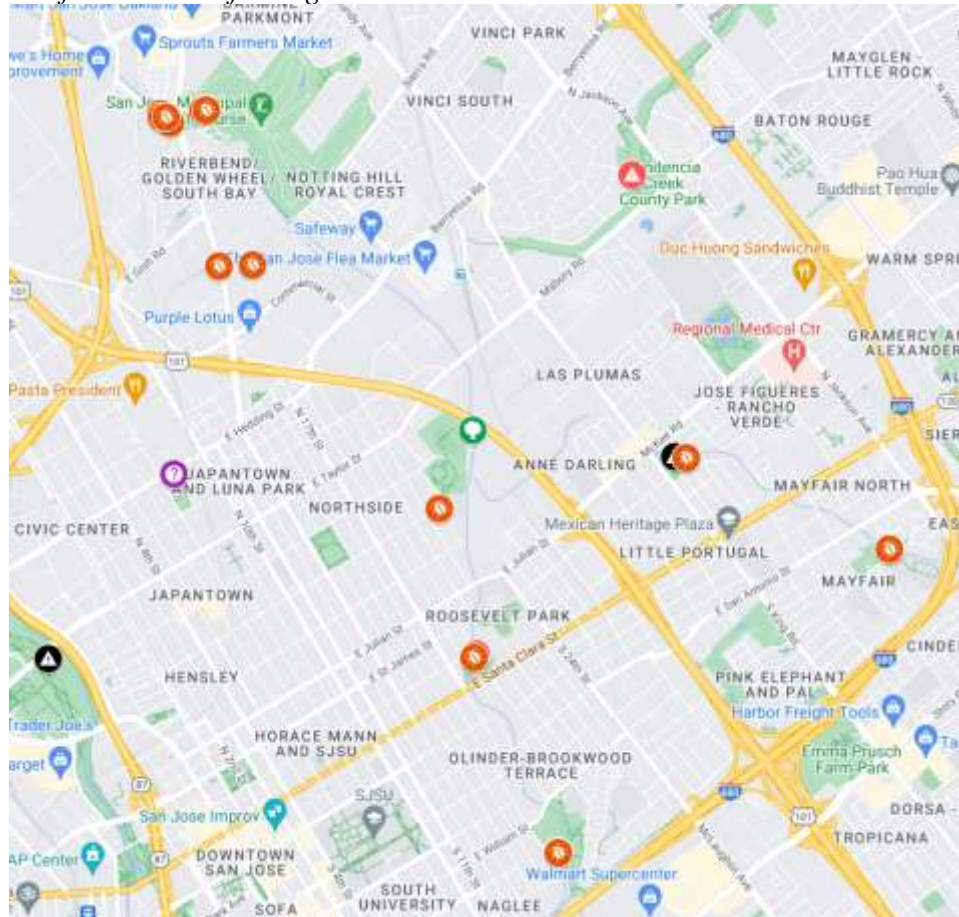
Borer infestation can be prevented with an injectable pesticide, emamectin benzoate. This pesticide is delivered directly to the vascular system of the tree and does not need to be sprayed or poured onto the soil. Emamectin benzoate is not a neonicotinoid, and its use is noncontroversial.

### Impacted Trees and Magnitude

*Street trees at risk of ISHB: 69,000*

- Sycamores (including London plane) 28,000
- Oaks 18,000
- Liquidambar 15,000
- Maples 9,000
- Cottonwoods
- Figs
- Avocados

*Confirmed IHSB findings are shown below and indicated with an insect icon:*



ISHB has been confirmed on Coyote Creek from Brokaw Road to I-280 and Lower Silver Creek from the confluence with Coyote Creek to I-680. This is roughly an eleven square mile area.

Borers emerge from the trees in the springs and can fly to nearby trees. The City is currently using traps with sticky and funnel traps; the traps do not impact the size of the population. This trapping helps determine the extent of the infestation. If the infestation is isolated to a small area all the known infested trees can be removed. If the infestation is widespread, a proactive treatment plan may be to be developed.

*Funnel trap being used for detection of ISHB:*



### **Current Status**

- UCANR has hosted a training on the pest and pathogen in April, and the DOT Forestry and PRNS teams were in attendance.
- Santa Clara County Ag Commission has been supportive by providing laboratory services.
- DNA from the trapped borers have been sequenced. It has been determined that the infestation is from the population is southern California and not a new introduction from Asia.
- Infested trees have been removed at the San José Municipal Golf Course.
- Unhoused encampments have made other tree removals unfeasible.