

Emerald Ash Borer (EAB) Update



Sioux Falls City Council
Informational

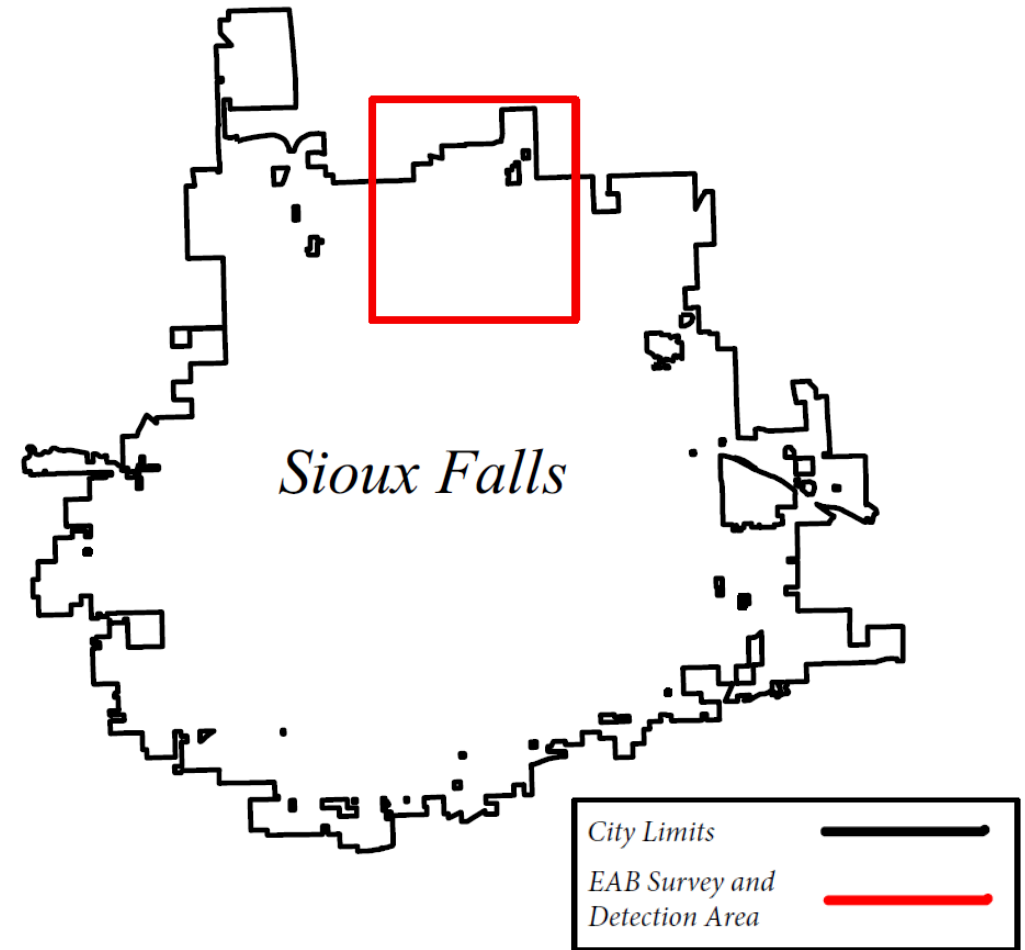
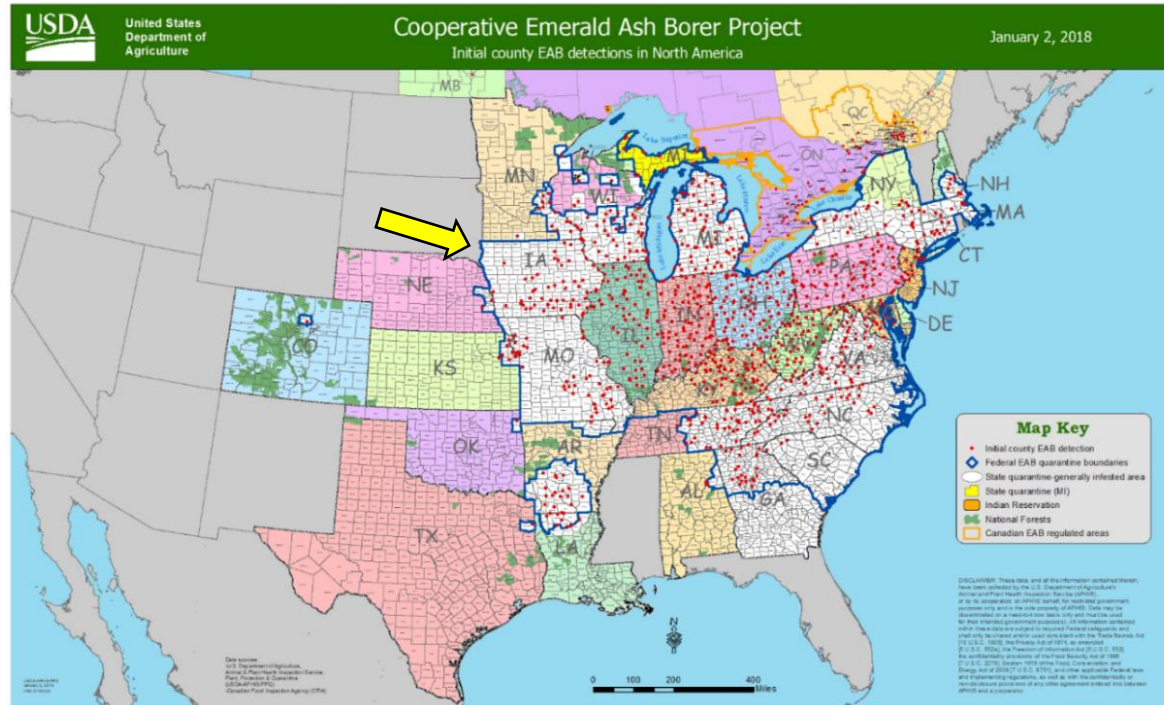
June 12, 2018

Emerald Ash Borer- State of Sioux Falls

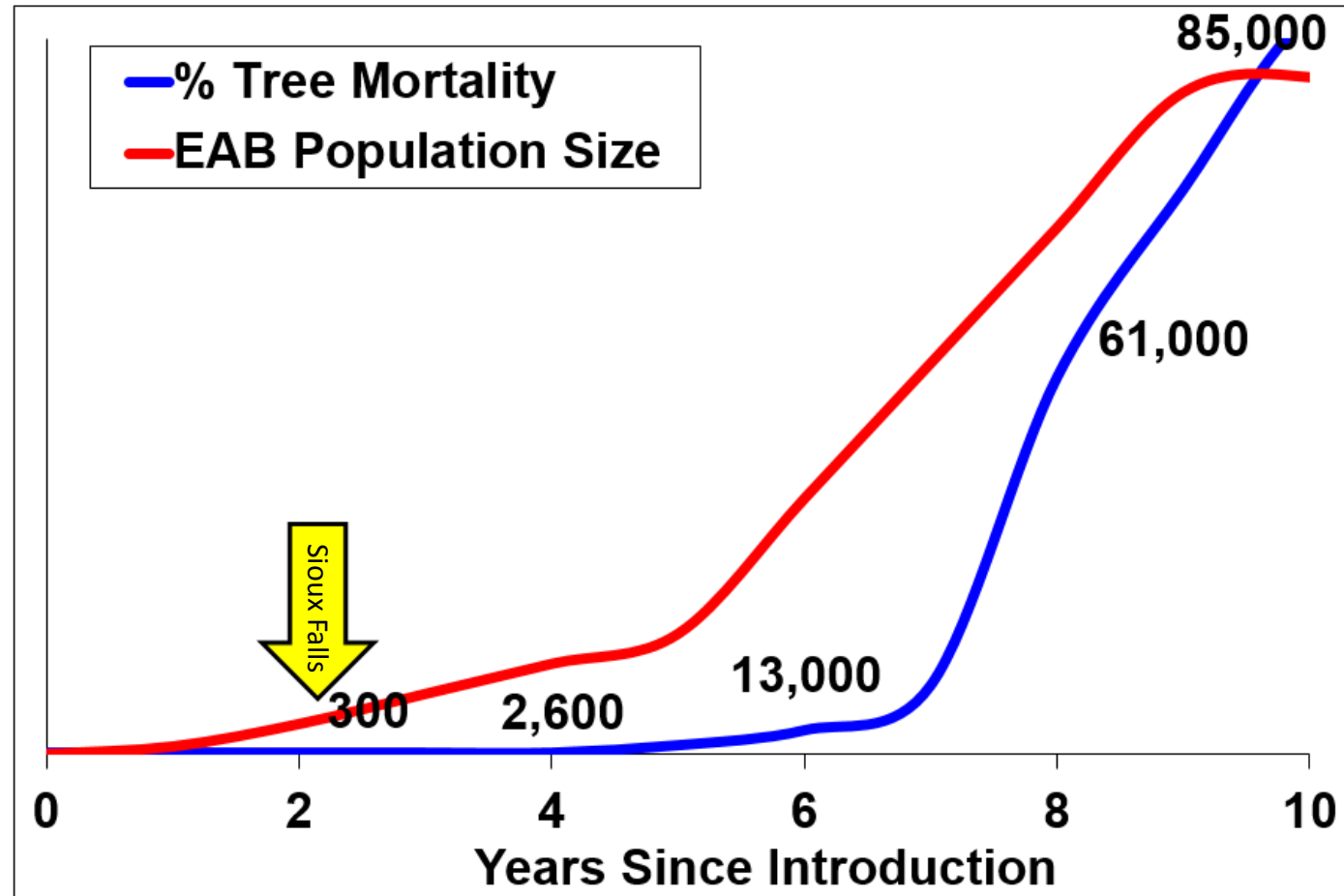
- EAB has been confirmed.
- All indications conclude the infestation is in its early stages and has impacted approximately 250 trees.
- Many of these trees have only been infested for about 2 years, with a few 4 years.



Emerald Ash Borer- Infestation



Emerald Ash Borer- Mortality



Graph derived from EAB spread data from: Siegert, et al and Ash mortality data from Knight, et al



Emerald Ash Borer- Injections

- Trees can be protected by injections.
 - Not a practical solution for large stands of trees (city trees, shelterbelts, etc.).
- The injections are repeated every 2 years at a cost of about \$200 to \$300 per treatment.
- Most tree owners inject about 3 or 4 times before deciding to quit – “injection fatigue.”



“I wish we would have started sooner!”



Toledo, Ohio Before and After

Emerald Ash Borer- Lessons Learned

- Stay ahead of the death curve.
- Reevaluate as the infestation spreads.
- Do not remove all ash trees in a given area.
 - Leave food for the insect to slow the spread.
- Treatments can be effective to slow the spread.
- Stopping the infestation is not possible.



Emerald Ash Borer- Lessons Learned

- Start 'replanting' efforts
 - Diversify the species being planted – target no more than 5%.
 - Consider ordinance changes to help support increased diversity in planting.
- Focus on public safety:
 - Standing dead ash trees are hazardous, they become brittle and fail quickly.
 - Dead ash are more expensive to remove due to risk to the arborists.
- The removal of poor quality trees now helps to minimize the number of standing dead ash trees later.



Ash Tree Numbers in Sioux Falls (est.)

Location - % of all trees	Total Ash	Total All Trees
Street trees - 40%	22,800	57,000
Parks and Public trees - 19%*	16,500	41,250
Private trees - 20%	<u>45,600</u>	<u>228,000</u>
TOTAL - 26%	84,900	326,250

*19% of park trees are ash trees. 16,500 includes riparian areas that have not been inventoried.



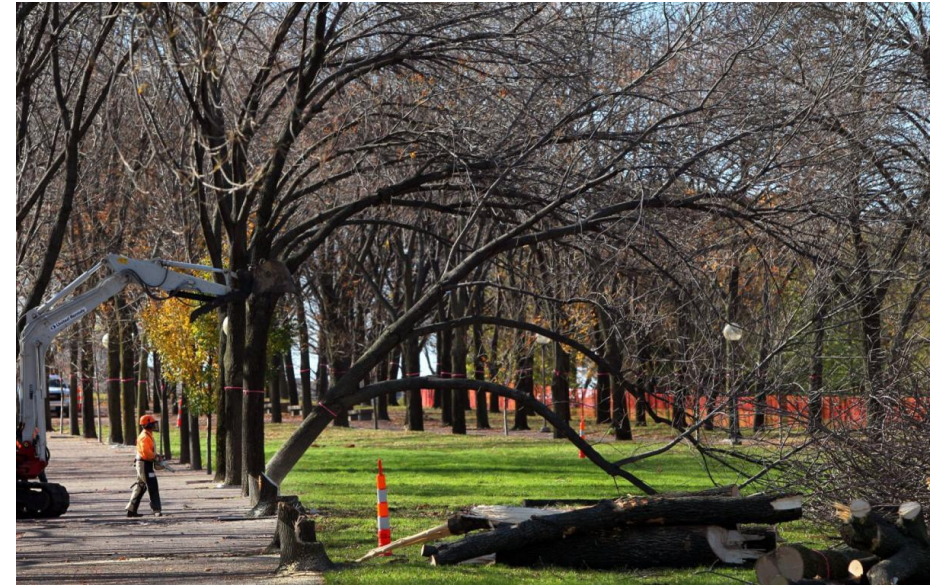
What to expect....



Sioux Falls' Proactive Approach

Overall goal is to keep our ash trees standing as long as possible vs. falling behind the death curve.

- Start with a 10 year plan, adjust annually.
 - 2019 targeted removals of public trees and street trees: 10%.
- Begin selective removals to reduce the number of trees that will become infested.
 - Start with the largest trees – public safety.
 - Poor quality trees.
 - Trees in a bad location.

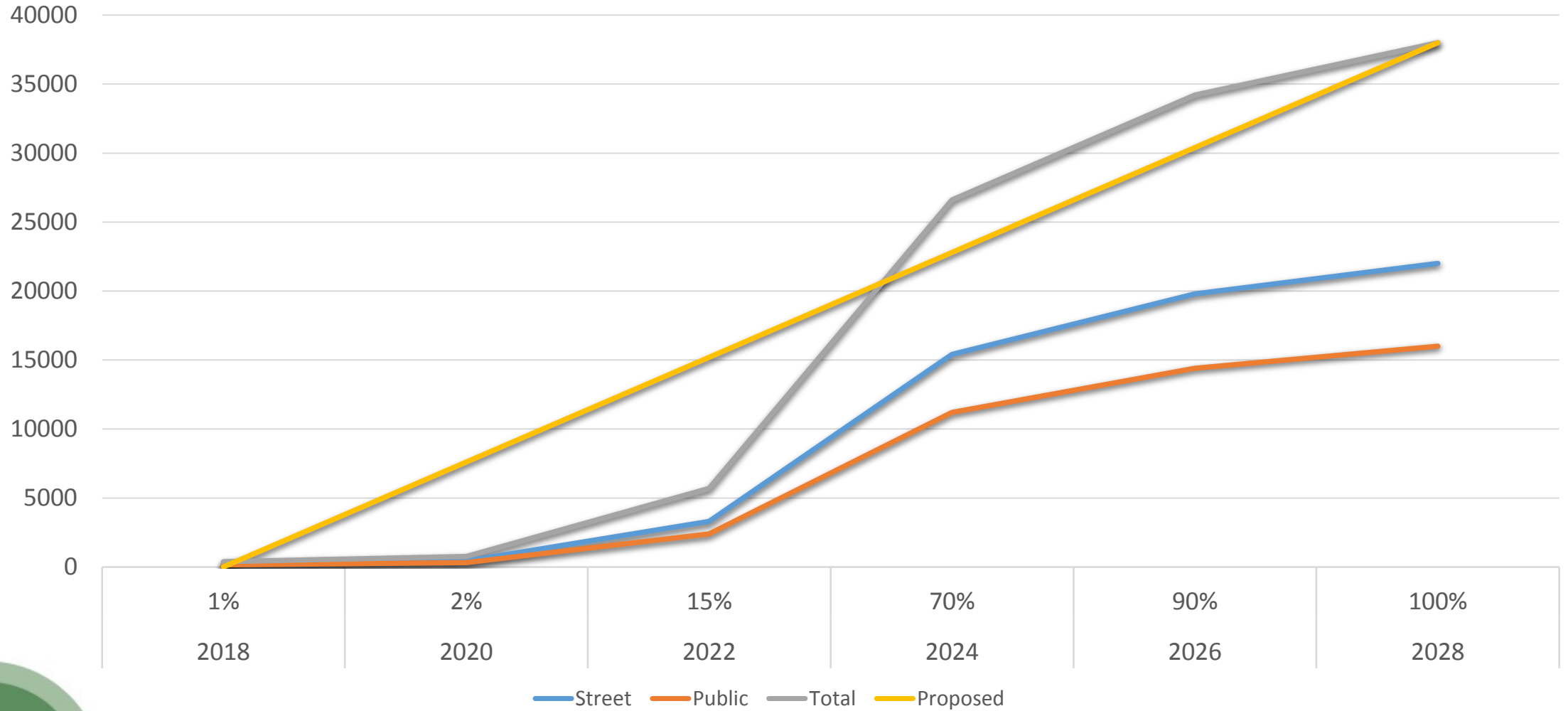


Sioux Falls' Proactive Approach

- Ash trees have been counted by forestry sections.
- All City Parks have a complete tree inventory.
- Leverage use of Master Gardeners/volunteers to complete a Street tree inventory.
 - Street tree inventory will be critical in re-planting efforts to ensure diversity.
- Begin selective removals in the core part of the city removing 33% of trees to a total of 2,200 street trees in 2019.
- Selective removal of park and public trees.
- Continue to restrict the movement of ash wood between Memorial Day and Labor Day.



Ash Tree Mortality and Proposed Pace of Removal



Current Forestry Resources

Operating:

- Personnel – 3 Crews
 - Caretaker
 - Service Worker
 - Part-time
- Miscellaneous small equipment

Equipment- cost varies by year:

- High-ranger bucket trucks (3)
- 2.5 ton trucks (4)
- 1 ton pickup truck (1)
- Log loader (1)
- Bobcat loader (1)
- Stump grinder (1)
- Chipper (2)



Equipment Needed

- **\$500K Capital Equipment**
 - Evaluation underway
 - Exploring truck-mounted grapple saw
 - Additional loading/hauling equipment



Additional Operating Needed

- **Annual Operating Costs-**
 - \$275K – Personnel
 - Dedicated forestry specialist
 - Additional forestry crew
 - \$825K – Contracted Services
 - Additional tree removal
 - Stump removal
 - Street Tree Inventory
 - Replanting
- **Other City Department's will be impacted**
 - Public Works (Light & Power, Landfill, Streets, etc.)



Conclusion

- We have a solid plan for managing the infestation to smooth out the impact and will adjust strategy as we learn more each year.
 - Start early.
 - Start replanting.
 - Stick with the plan – don't get complacent.
 - Avoid the 5 year – “nobody told us this would happen.”
 - Continue to communicate throughout the response.
 - Don't repeat history – diversify the tree population!



Questions?

Additional Resources

- www.siouxfalls/eab.com
- [South Dakota Department of Agriculture/Forestry](#)
- [Emerald Ash Borer Brochure](#)
- [Emerald Ash Borer.info](#)

