

Oak Wilt: An Emerging Threat to Forests

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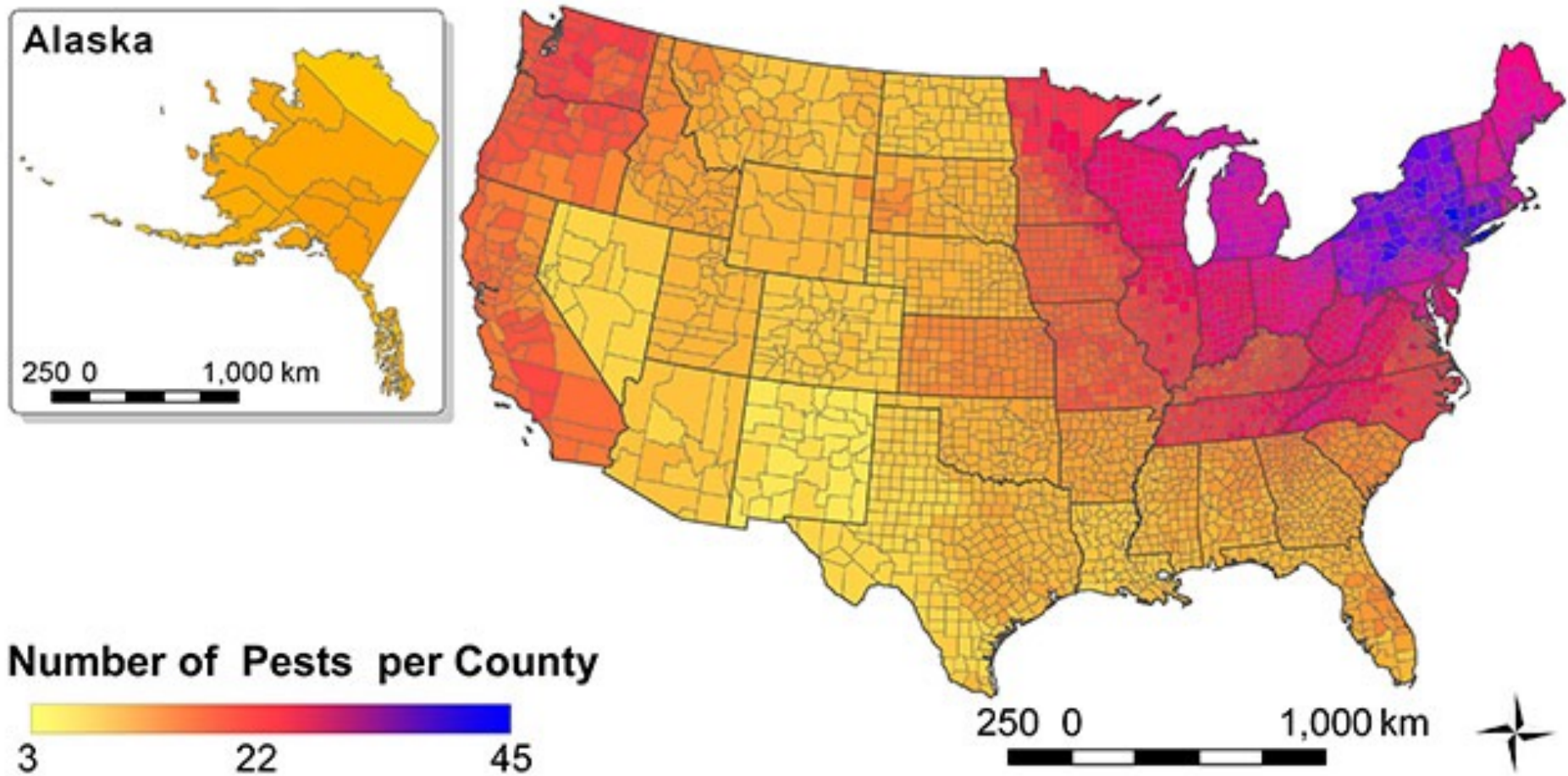
Special thanks to:

Kelsey McLaughlin, NYSDEC Oak Wilt Program



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Such nice neighbours to share their bounty with us...



The Latest Gift: **Oak Wilt**

Discovered in 1944 in Wisconsin – unknown origin.

Fungal pathogen, *Bretziella fagacearum*, plugs xylem vessels.

Spread mainly by sap beetles, and also through root grafts.



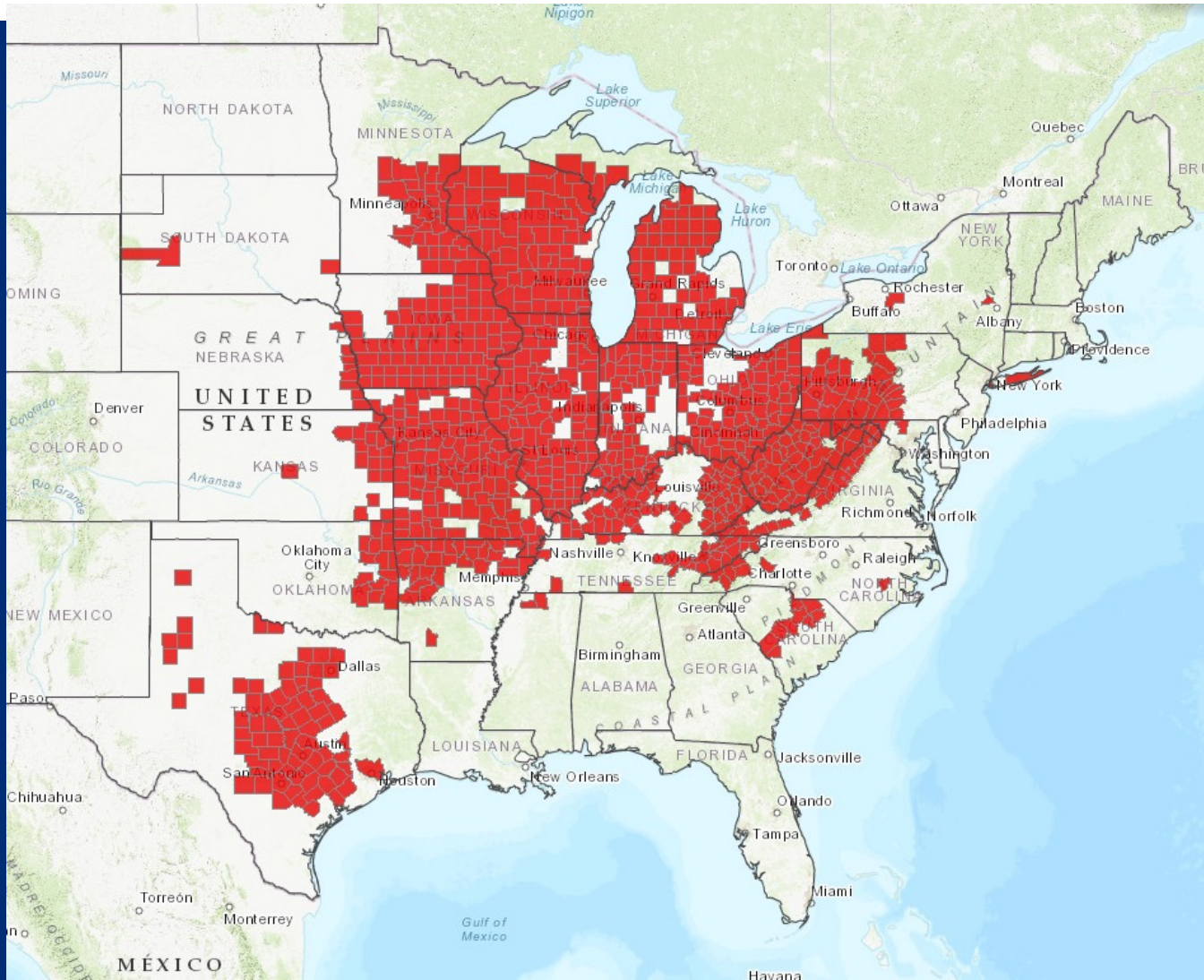
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Red vs. White Oaks

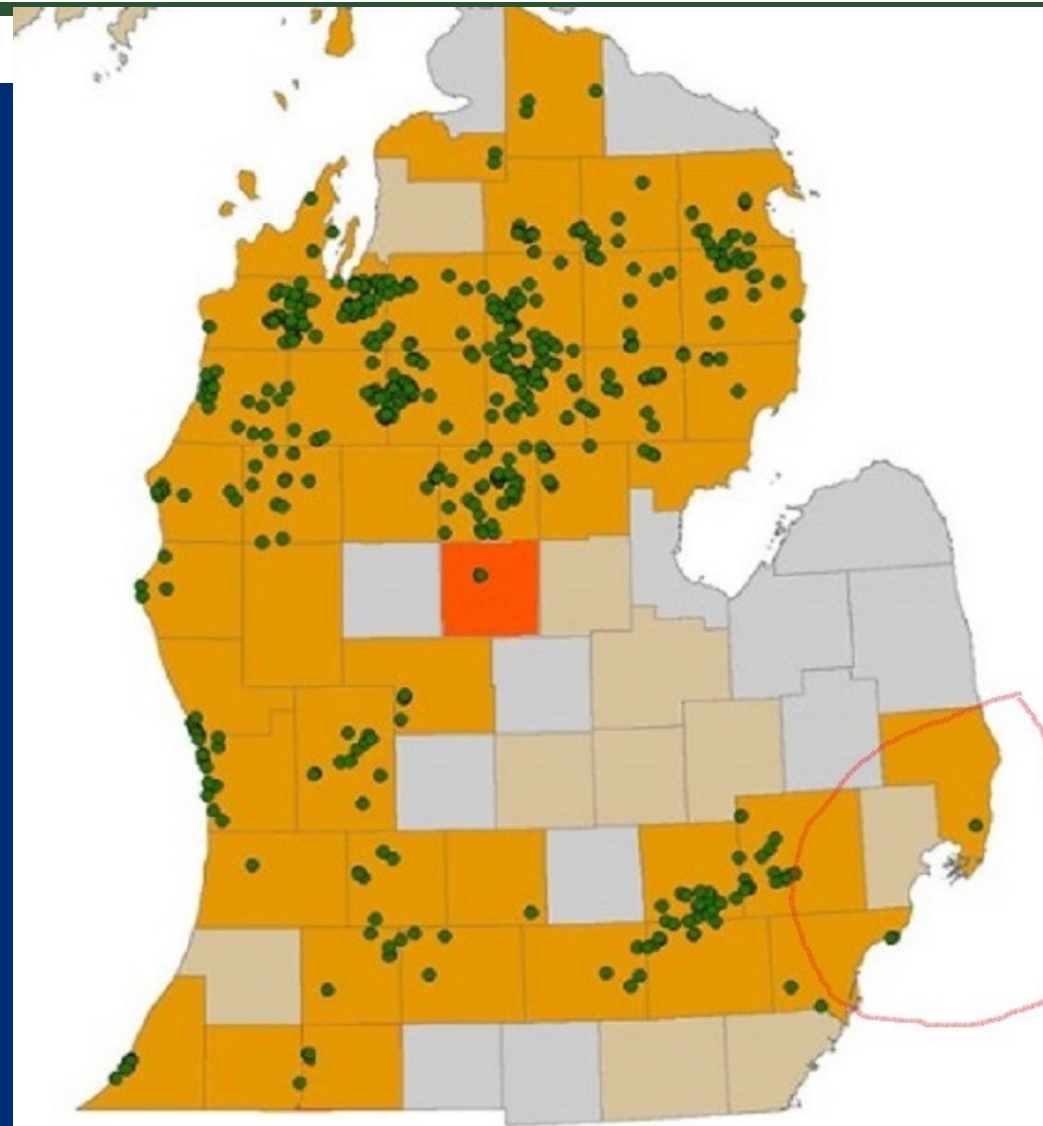
Red, Black, Pin, and Scarlet (bristle-tip lobes) are most vulnerable.

White, Bur, and Swamp-White (rounded lobes) take longer to die.





Dots = **lab-confirmed**
oak wilt cases.



Oak Wilt: How Close is It?

(Please choose the correct answer.)

1. Roughly 6 km from the Ontario border, south of Sarnia.
2. 579 metres from Windsor on an island in Detroit River.
3. Close as the first idiot who brings firewood home from a trip.
4. No one knows for sure.
5. It is almost certainly here already.
6. All of the above.



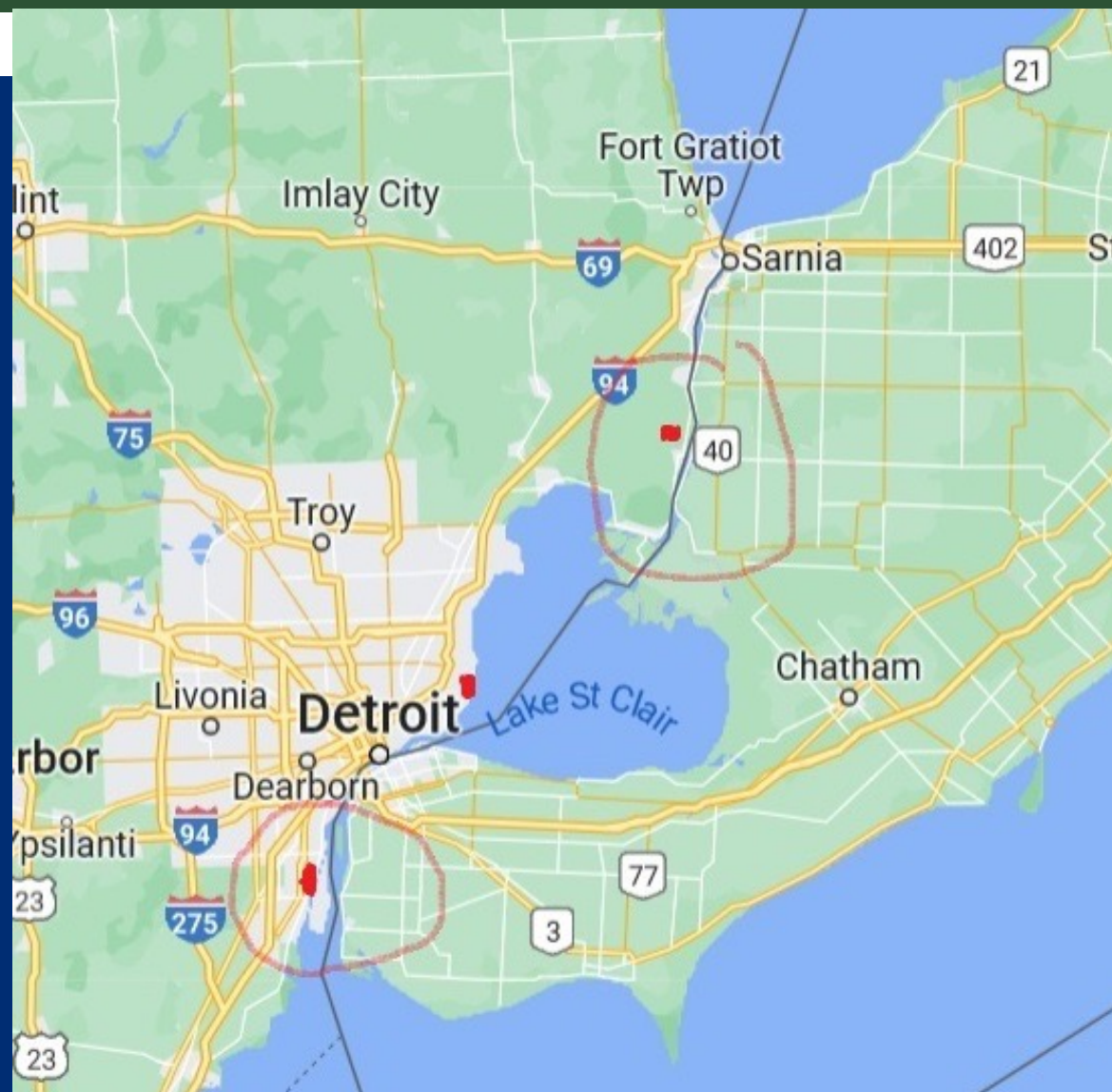
Many cases **100+ km apart.**

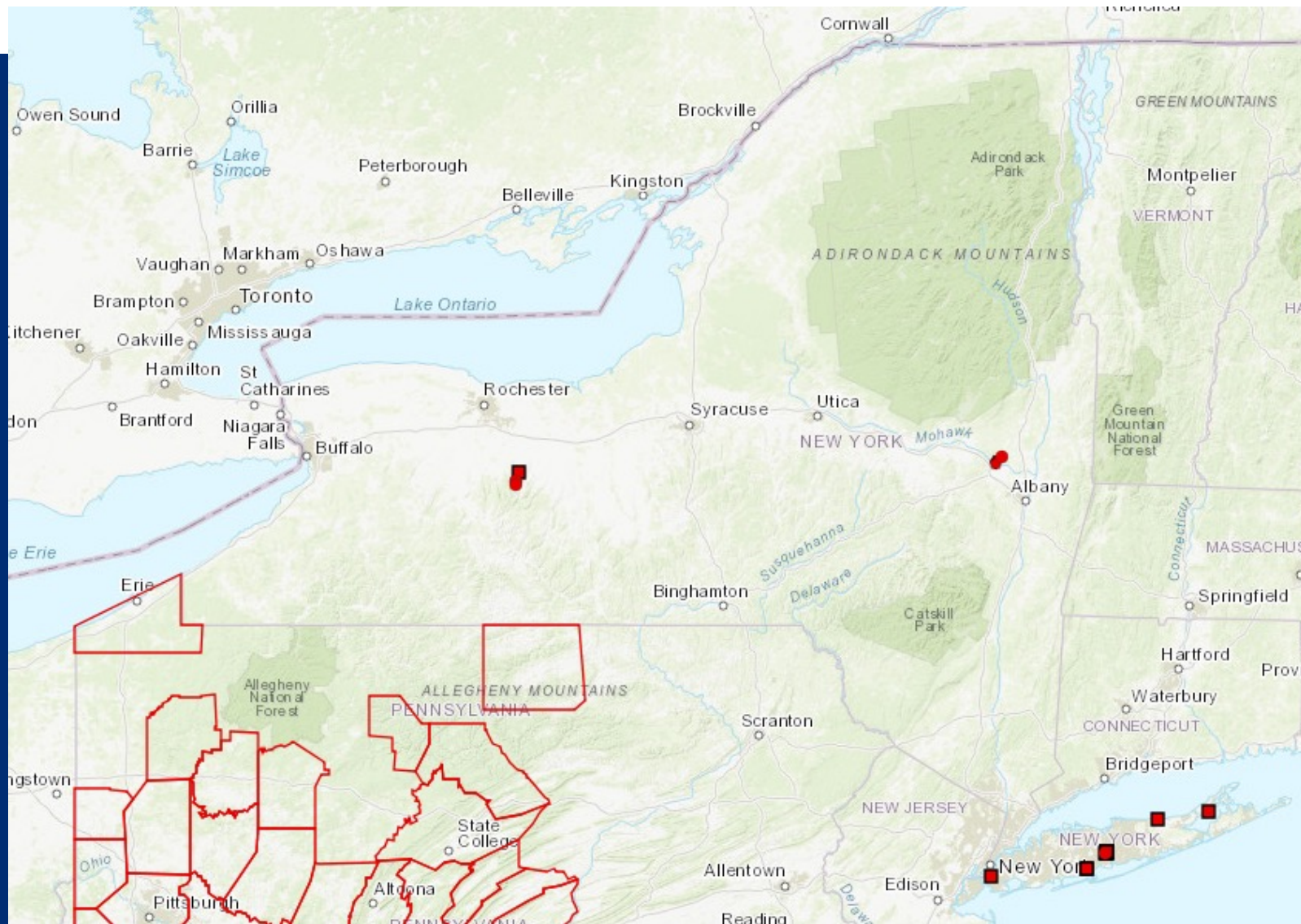
Outbreak in centre is 6-8 km from border; found in 2014.

Half a km from Windsor.

Sap beetles can fly 3-4 km.

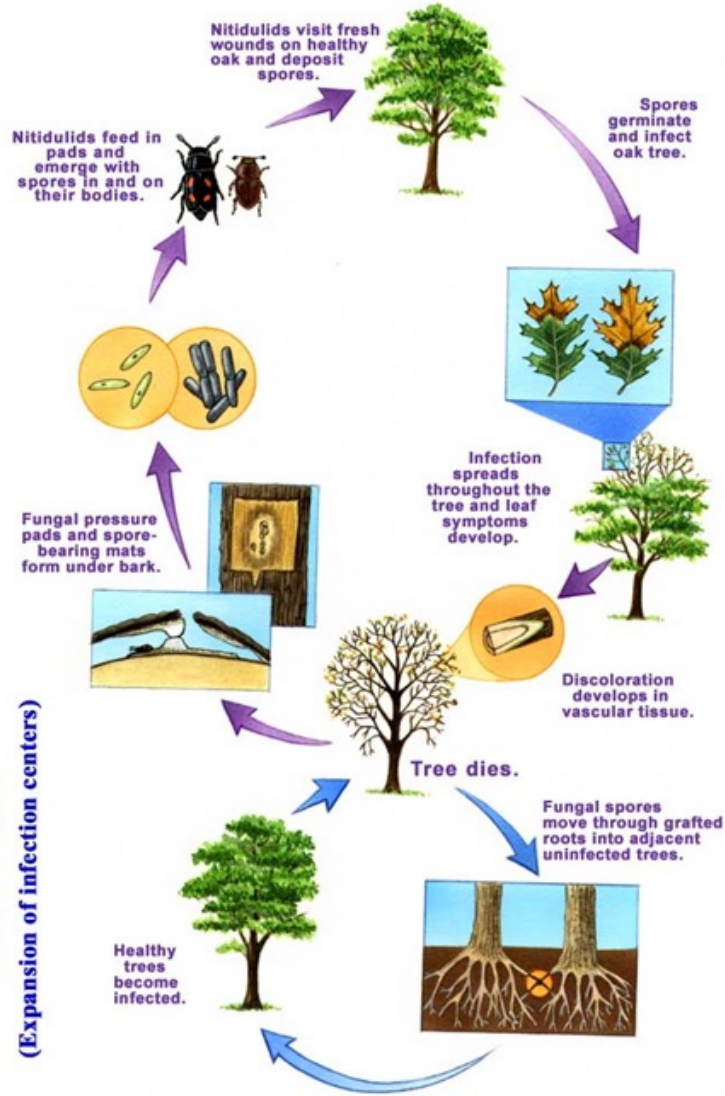
2019, 2020: oak wilt eDNA found in Ontario.





Overland Spread (Initiation of new infection centers)

Root Graft Spread (Expansion of infection centers)



Karl Higgin 2011, Bugguide.com



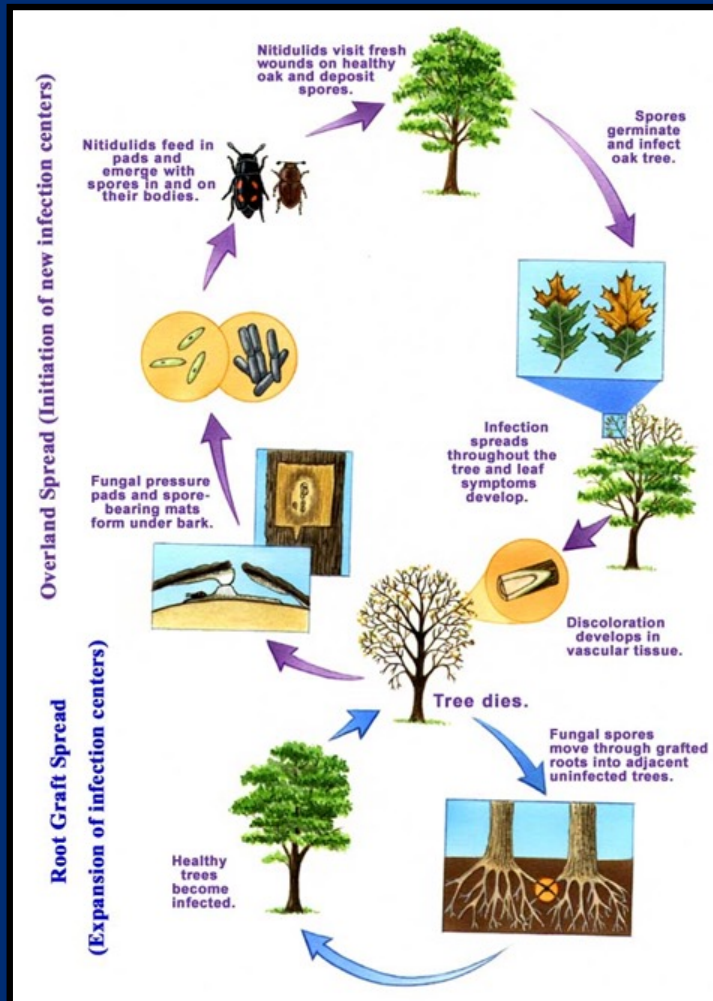
Joe Schuller 2005, Bugguide.com



Sam Houston 2010, Bugguide.com



Tom Murray 2010, Bugguide.com

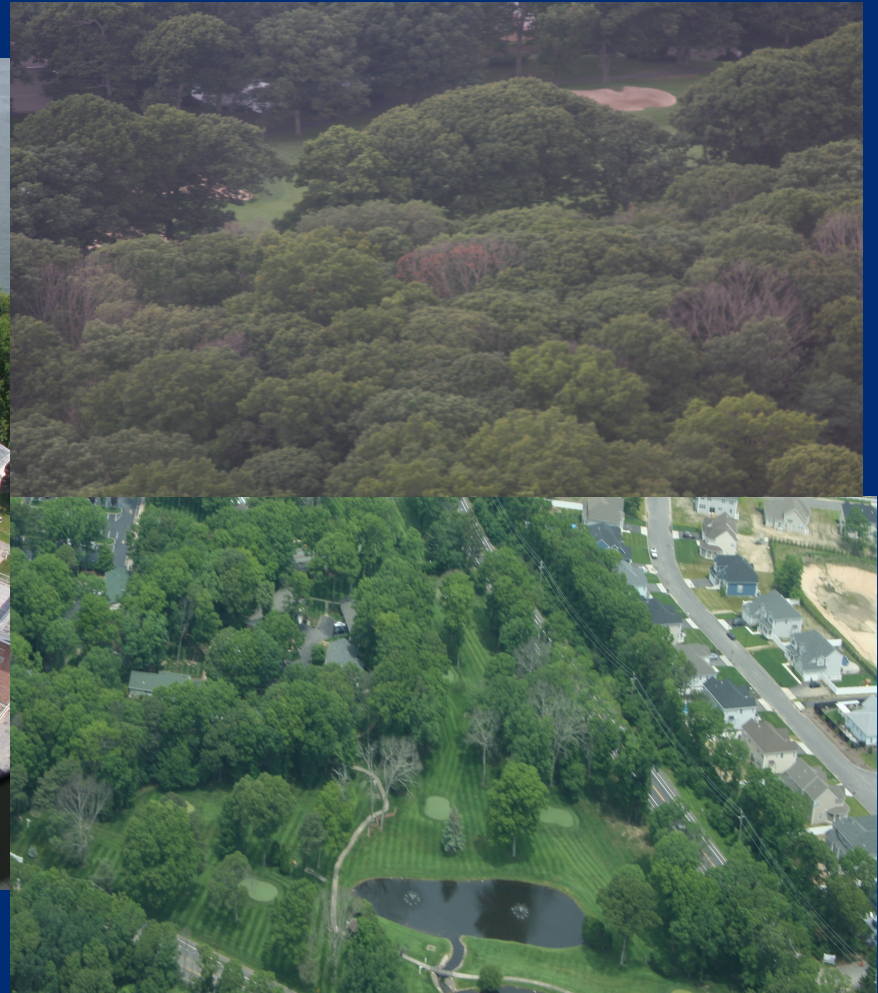












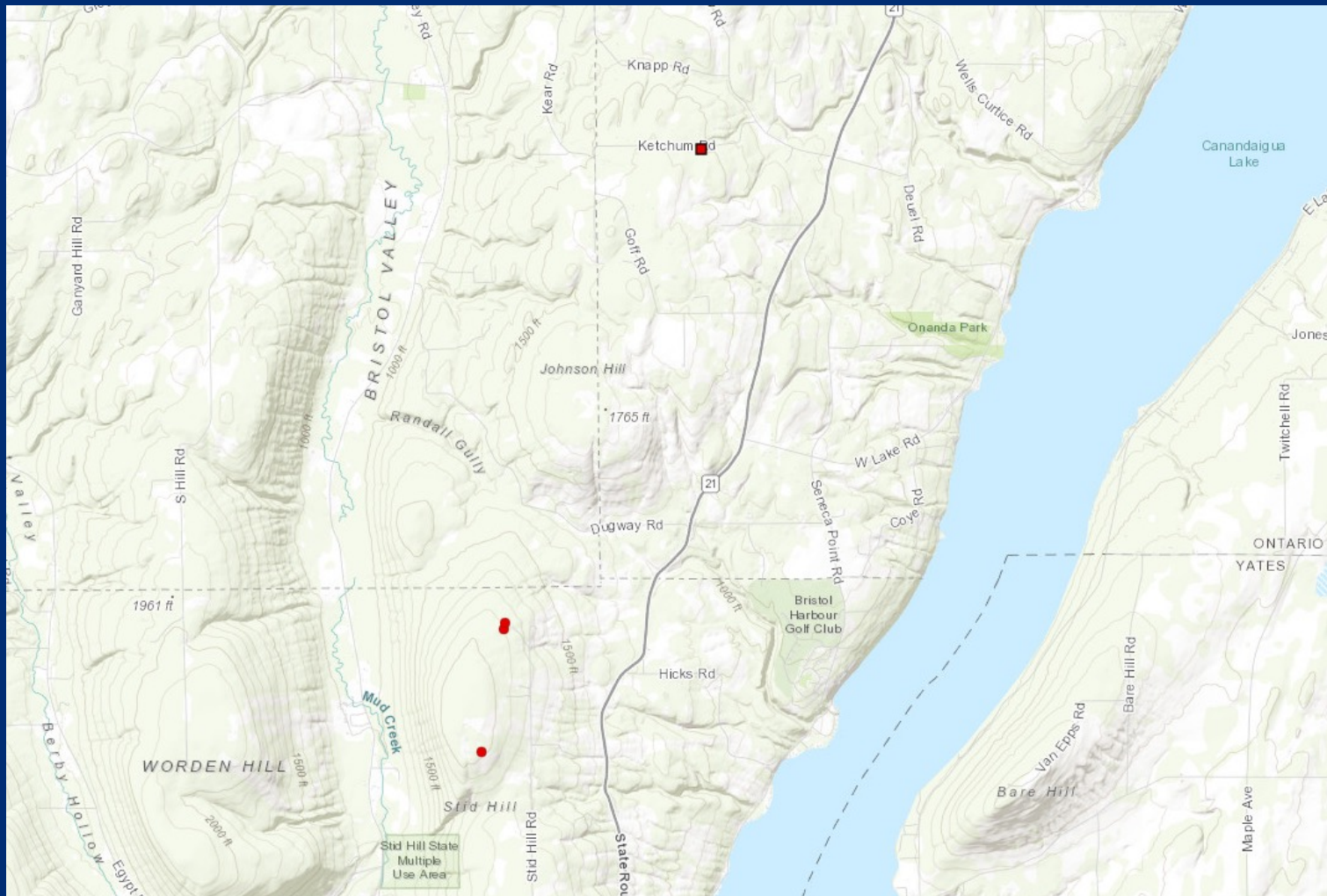






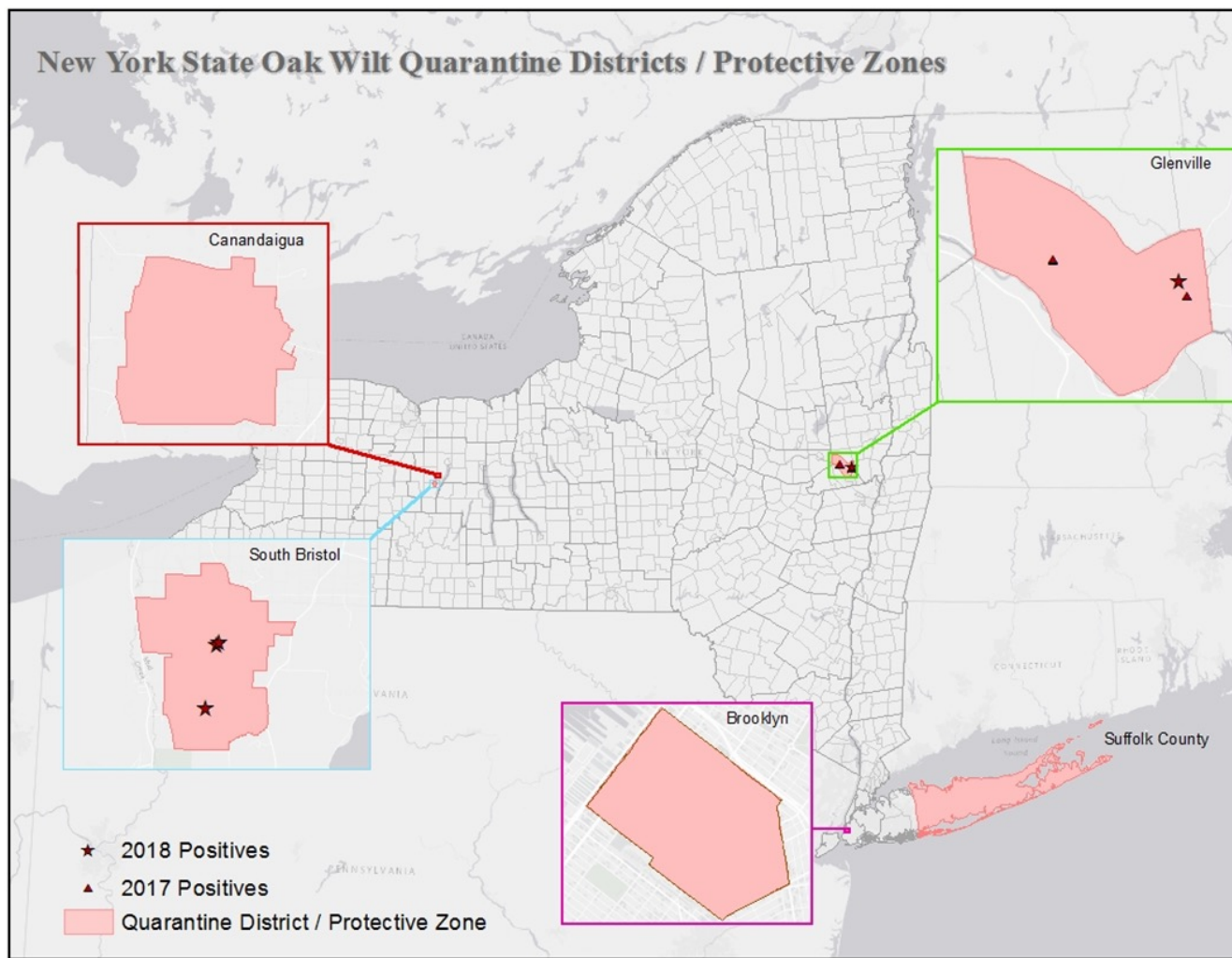


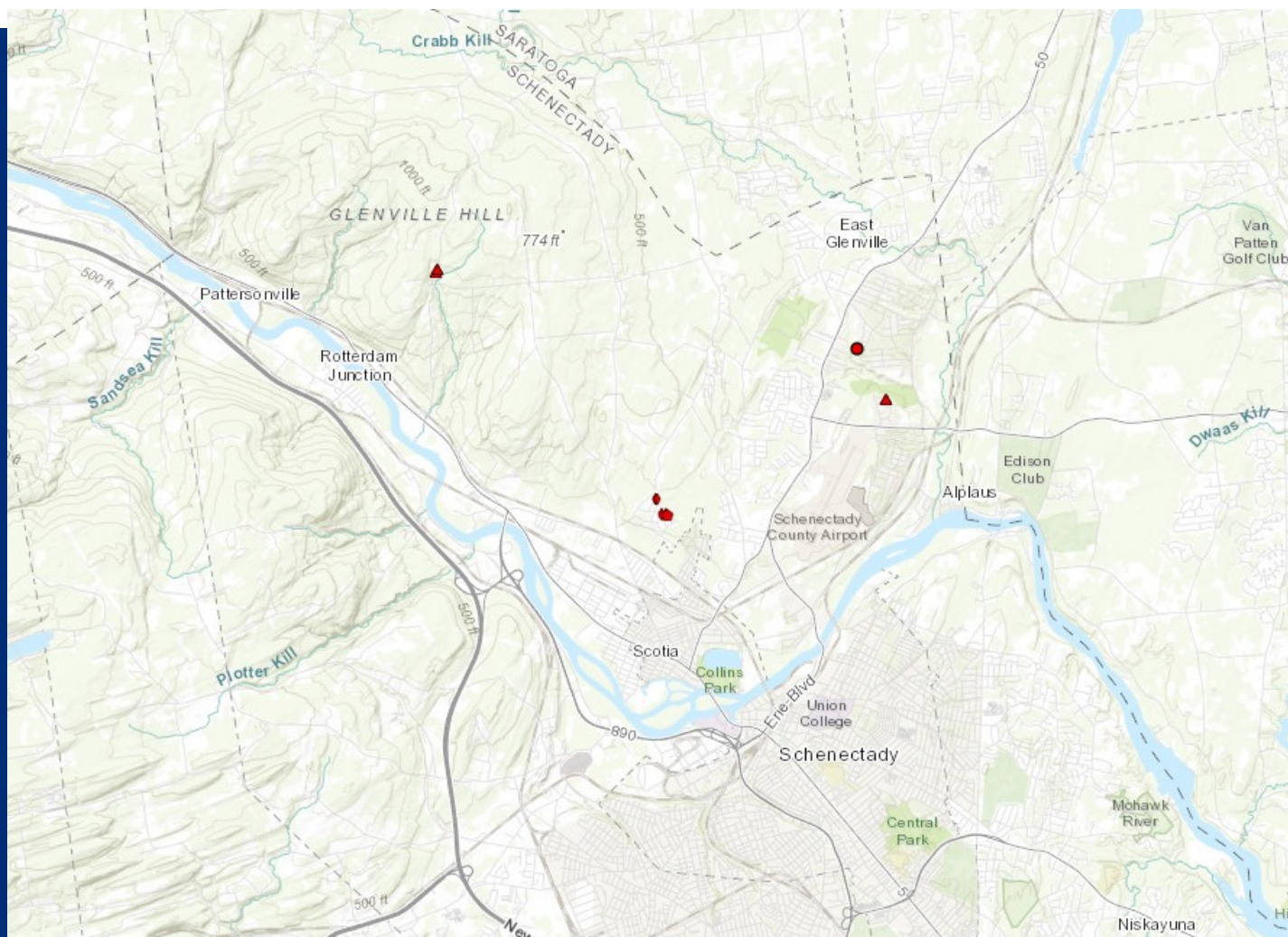
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Firewood Movement





Month	Risk	Pruning	Timbering	Firewood Movement
Apr-July	High	NOT recommended, immediately cover wounds with paint	NOT recommended, immediately cover wounds with paint	NOT permitted
Aug-Sept	Low	NOT recommended, immediately cover wounds with paint	Can be done, should still look to minimize oak wounding	Requires DEC permit
Oct-Mar	Very Low	Recommended, no need to cover wounds	Recommended	Requires DEC permit



Questions?

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