



Department of
Environmental
Conservation

Finger Lakes Oak Wilt 2025

Austin Shay, Forest Health Crew Lead – Region 8

Gary Koplun, Forester – Region 8

Outline

- Background
- Causes
- Spread
- Symptoms
- Management efforts
- Region 8 Big Picture
- Quarantine/Permits



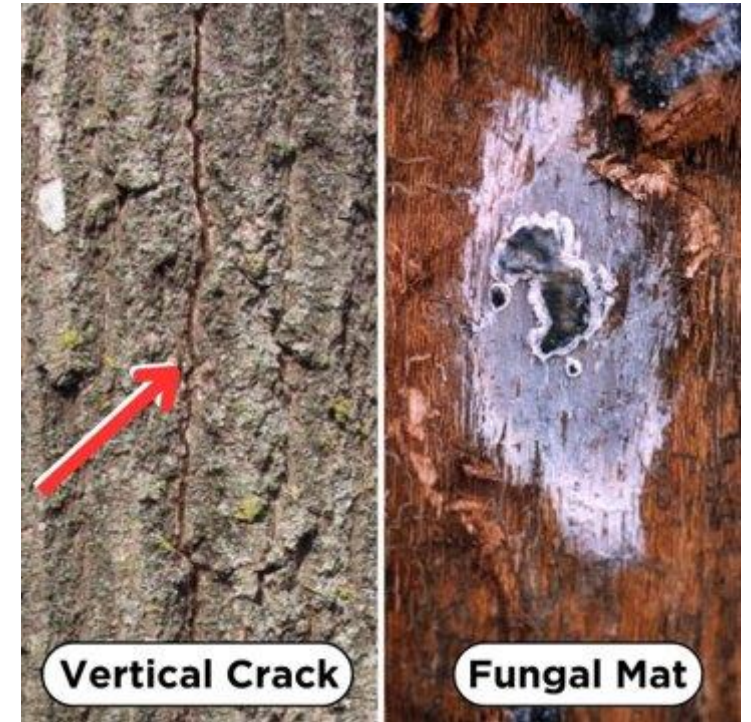
Why Do We Care?

- Oak/hickory is the second most abundant forest type in the state
- Oak provides \$33 million of revenue for private landowners annually
- 9.4% of the state's log production
- Excellent wildlife tree
- Landscape trees



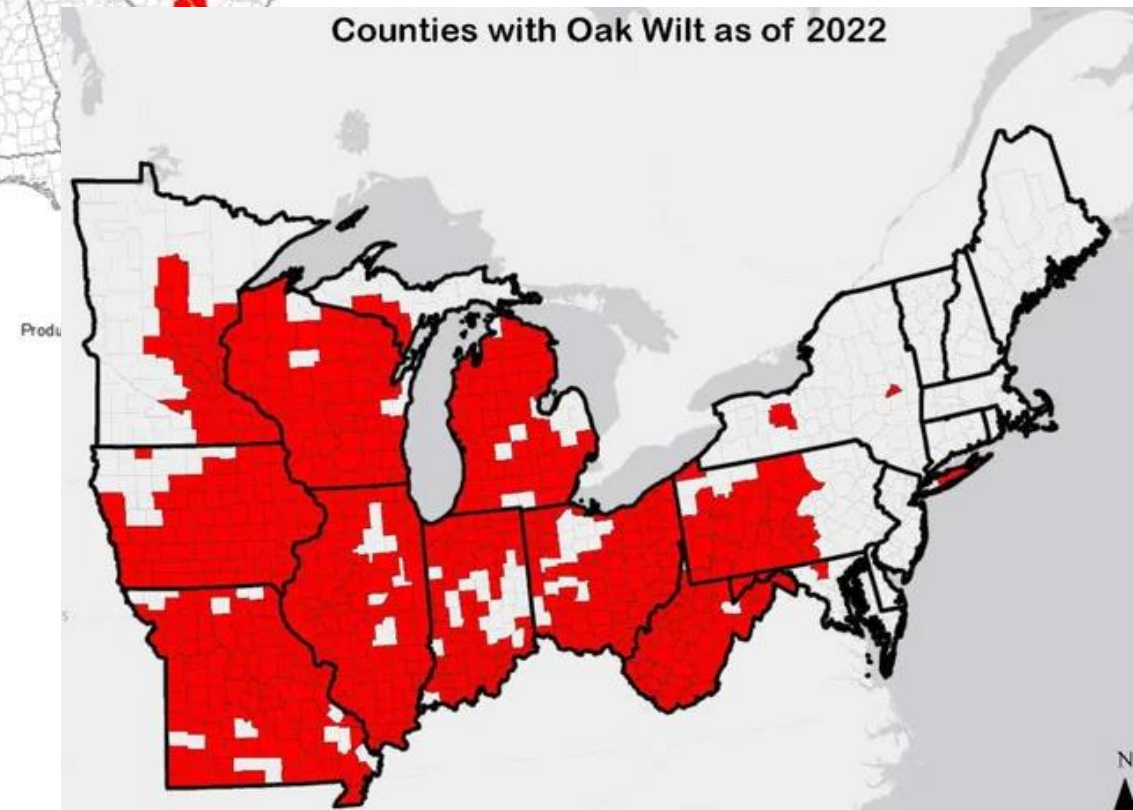
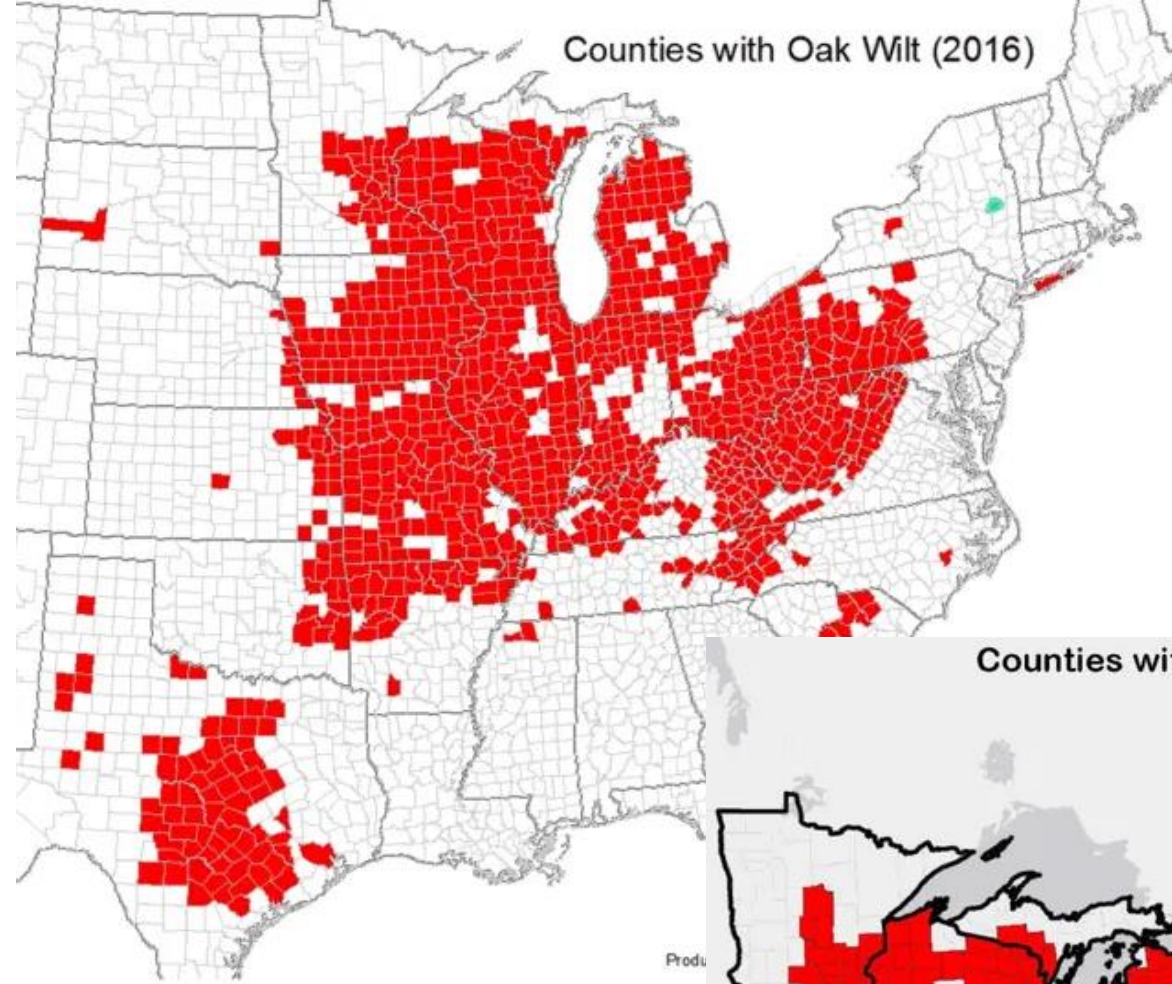
What is Oak Wilt?

- Fungal infection in the xylem tissue - *Bretziella fagacearum*
- Blocks flow of water/nutrients to crown
- Red and white oaks susceptible, but **Red oaks** are more likely to be infected
- Red oak can take as little as a few weeks to die, white oak can take years
- Associated with sap-feeding and bark beetles – particularly the **Nitidulid Beetles**



Distribution of Oak Wilt

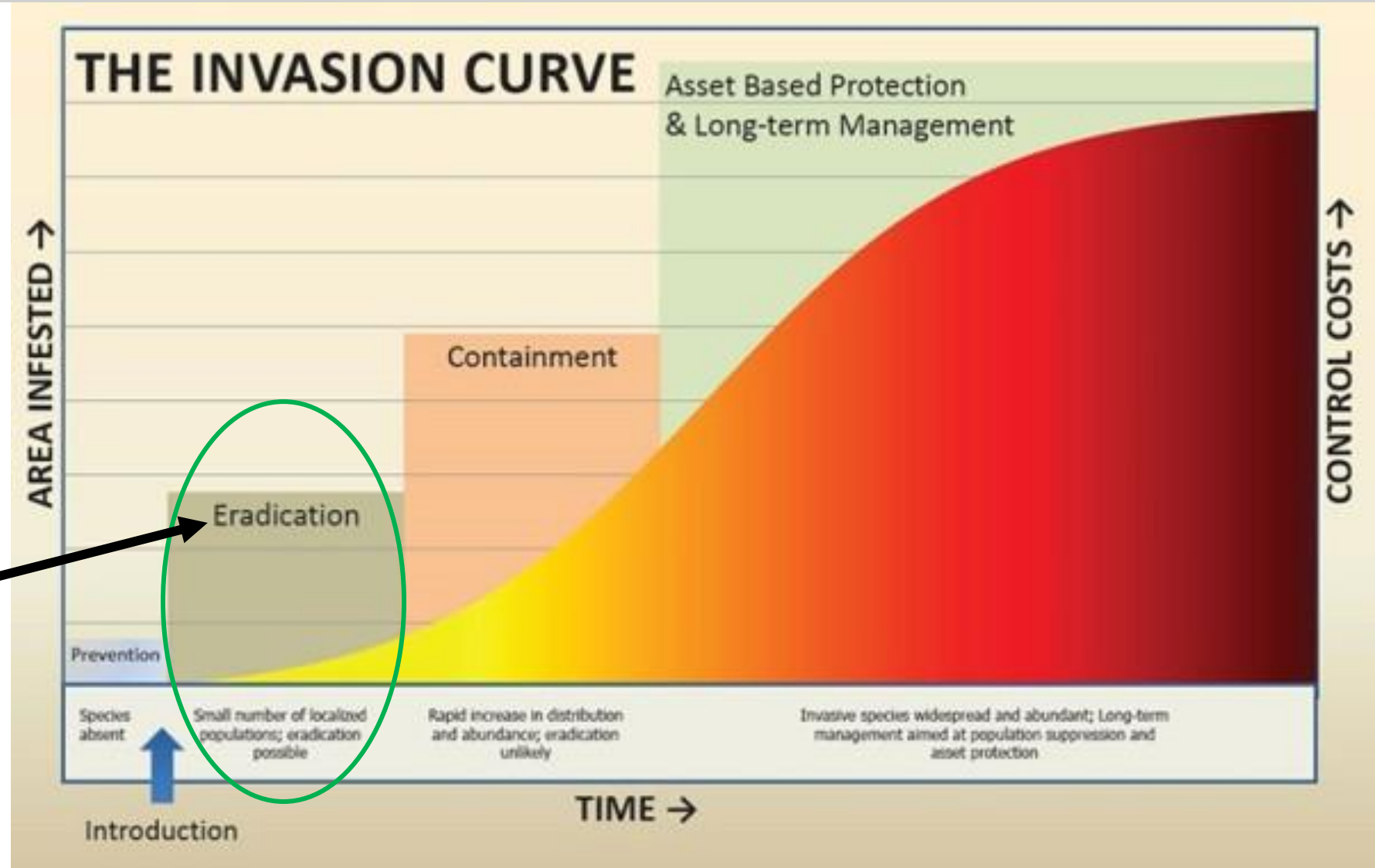
First found in 1944 in WI
Spread through Midwest and Texas
Detected in NYS in 2008



Invasion Curve

EDRR:
Early Detection
+
Rapid Response

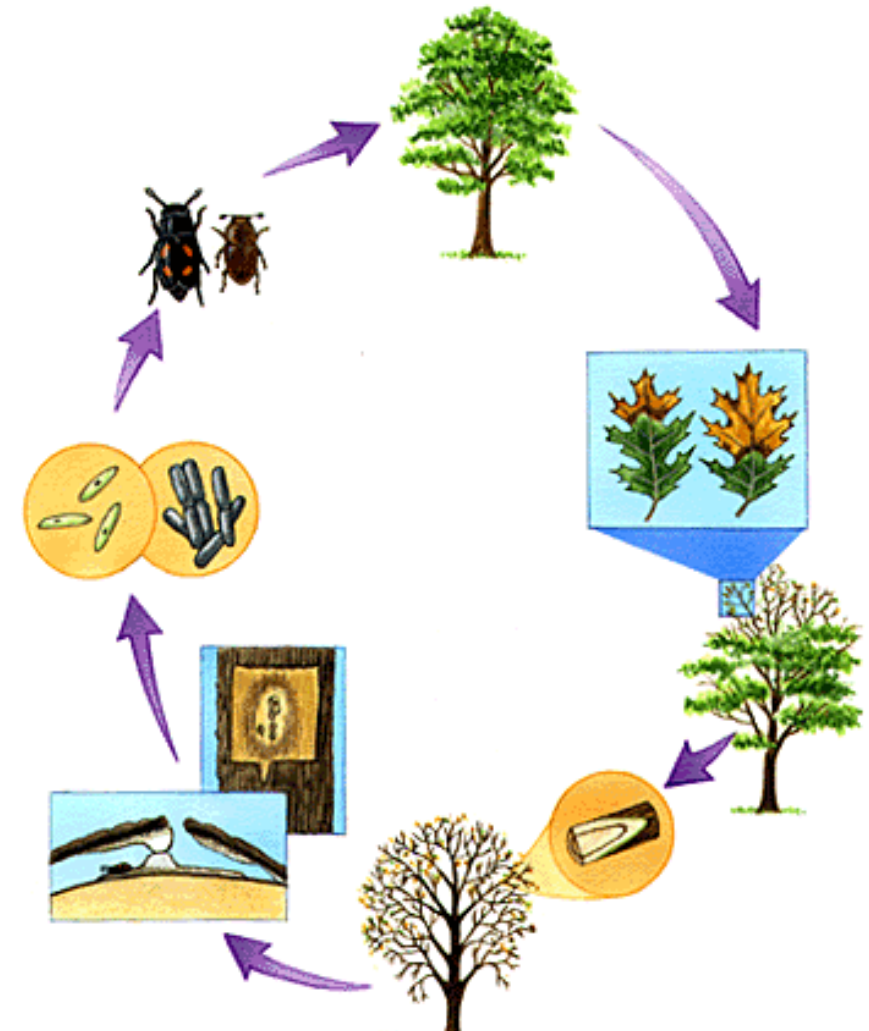
We are here



Overland Spread of Oak Wilt

Nitidulid beetles feed on oak wilt fungal mats

- Attracted to the smell of fresh oak sap
 - Pruning, wind damage, mower damage, squirrels, etc.
- Transfer spores to other oaks within minutes of wounding



Underground Spread

Root Graft spread:

Sharing water/nutrients through their root systems

- Roots and pathogen survive 5+ years



Ronald F. Billings, Texas A&M Forest Service,
Bugwood.org

UGA3226027



Canandaigua, 2016

Symptoms

- Leaf discoloration/wilting in spring/summer
- Early leaf drop with 50+ % of leaves falling
- Vascular streaking



Leaf Symptoms of Oak Wilt



Look-A-Likes

- Anthracnose
- Bacterial leaf scorch
- Leaf spots



Precautions

- Not pruning when fungi and insects are active
- Not moving firewood
- Quarantine zones

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



Management



Detection

- Aerial flights
- Ground-truthing
- On-the-ground surveys
- Public reports



Sampling

- Branch and leaf samples from symptomatic trees
- Quick shipping methods



Eradication

- Burning
- Chipping

Detection


- Helicopter flights around Canandaigua Lake in **July**
- Ground surveys
- Drone flights
- Public reports



Sampling


- **Branch testing:** 3+ branch sections 8-12" long, 1-2" diameter from symptomatic branch
- **Leaf testing:** 10-15 symptomatic leaves with petiole attached
 - 1st year using this method





Cornell University

Plant Disease Diagnostic Clinic
Oak Wilt Suspect Sample Submission Form
Regulatory



An NPDN
STAR-D Accredited
Laboratory

Collection Site:

Name: _____

Address: _____

County: _____ Zip: _____

Phone: (____) _____ Cell Phone: (____) _____

Email: _____

Submission agent (CCE, NYSDEC, NYSDAM, Arborist)

Name: _____

Address: _____

Phone: (____) _____ Cell Phone: (____) _____

Email: _____

Collection date (MM/DD/YY)?: _____ Date received (filled in by PDDC): _____

Symptoms appeared date (MM/DD/YY)?: _____ Please use decimal degrees coordinates ↓

Field ID	Genus and species	PDDC # (filled in by lab)	GPS latitude (##.####)	GPS longitude (-)
1.	_____	_____	_____	_____
2.	_____	_____	_____	_____
3.	_____	_____	_____	_____
4.	_____	_____	_____	_____
5.	_____	_____	_____	_____
6.	_____	_____	_____	_____

Symptoms:

Cracked

Dieback

Leaf distortion/cupping/curling

Marginal browning

Shedding leaves all at same time

Shedding leaves—only brown dropped

Vascular discoloration/streaking

Wilted

Yellowing

Other: _____

Symptom Distribution in Crown:

Bottom branches

Scattered branches

Top branches

Other: _____

Comments: i.e. all same tree or location on lot or health, etc...

Ship to:

Karen Snover-Clift—PDDC

329 Plant Science Building

236 Tower Road

Ithaca, NY 14853

Sampling

Unique management challenges:

- Northern long-eared bat regulations?
- Wound sealant?
- Pole saw
- Rope saw
- Slingshot
- Arborist
- Felling



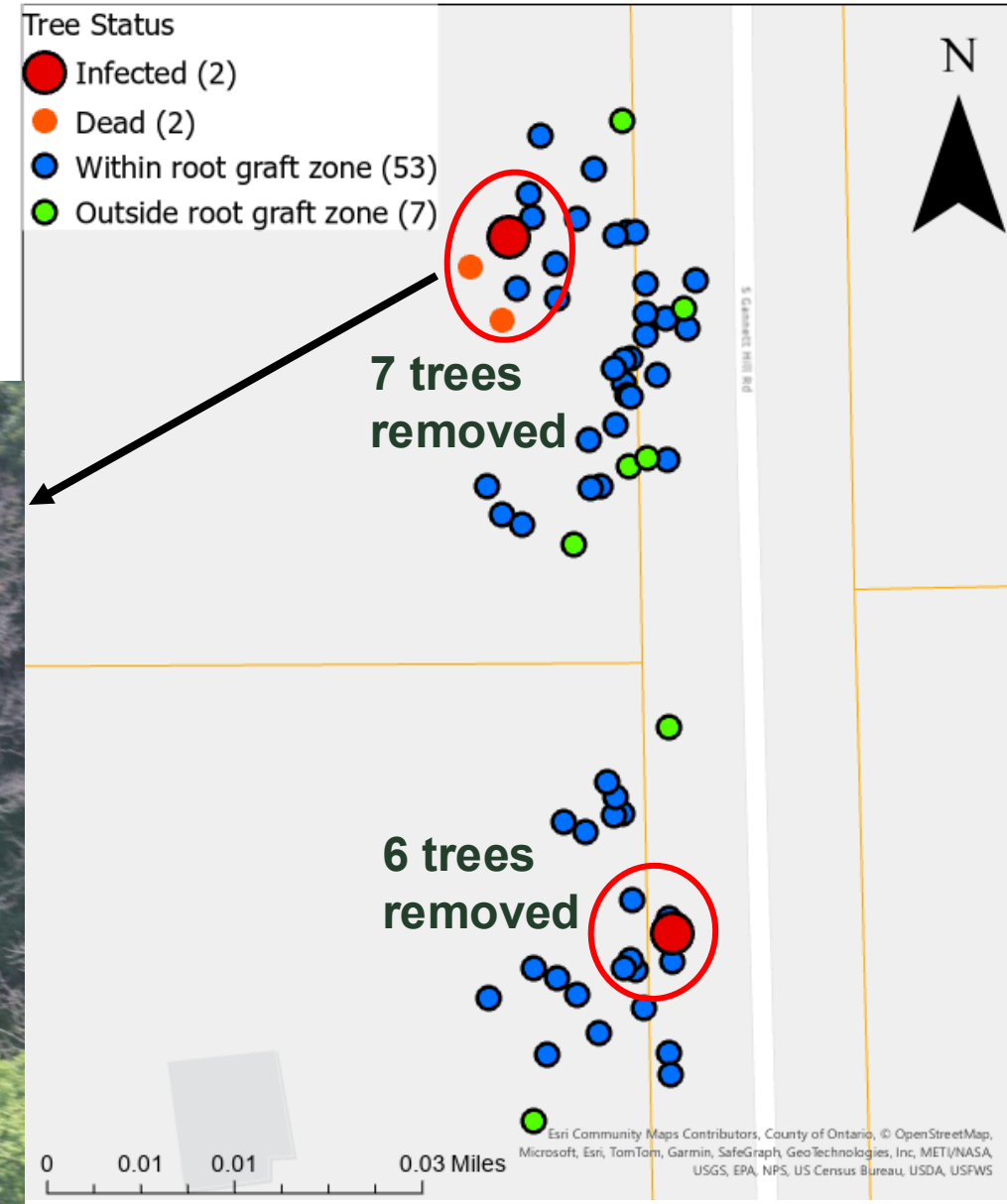
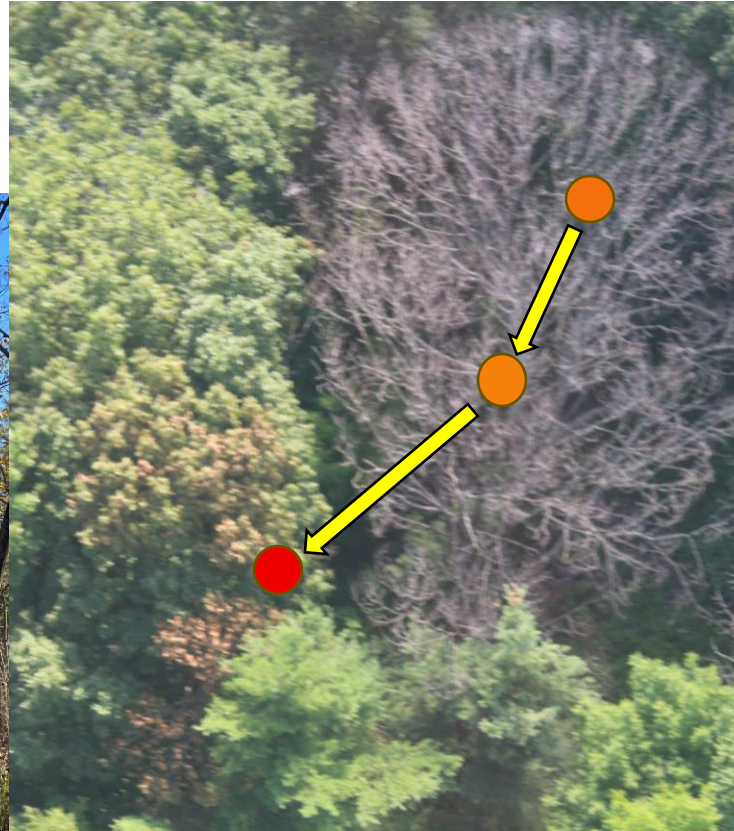
Eradication

- 7 sites
 - 3 in Ontario county
 - 4 in Yates county
- 8 trees confirmed positive
- 14 trees assumed positive



Gannett Hill Rd - South Bristol, NY

- 2 symptomatic confirmed positive trees
- Root grafting spread seen
- Selective buffer and herbicide to stop underground spread
- 13 trees removed and chipped
- Contracted out due to powerlines



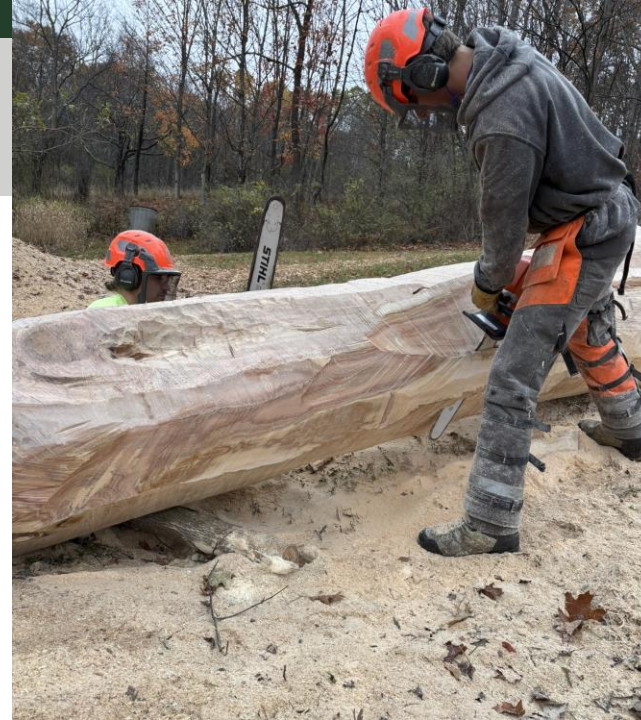
High Tor West River WMA – Italy, NY

- 1 positive red oak
- State property
- Recently pruned
- No other nearby oaks
- Contracted out due to power lines and busy road



Wolfanger Rd – Middlesex, NY

- 1 positive red oak
 - Landowner had "dead wood" trimmed up recently
- Chipped top branches
- Removed and chipped infected sapwood
- Landowner kept trunk of heartwood





Shay Rd – Italy, NY

- 1 symptomatic red oak removed and chipped
- Landowner pulled logs to landing where it was split and transported to roadside chipper



Stid Hill – South Bristol, NY

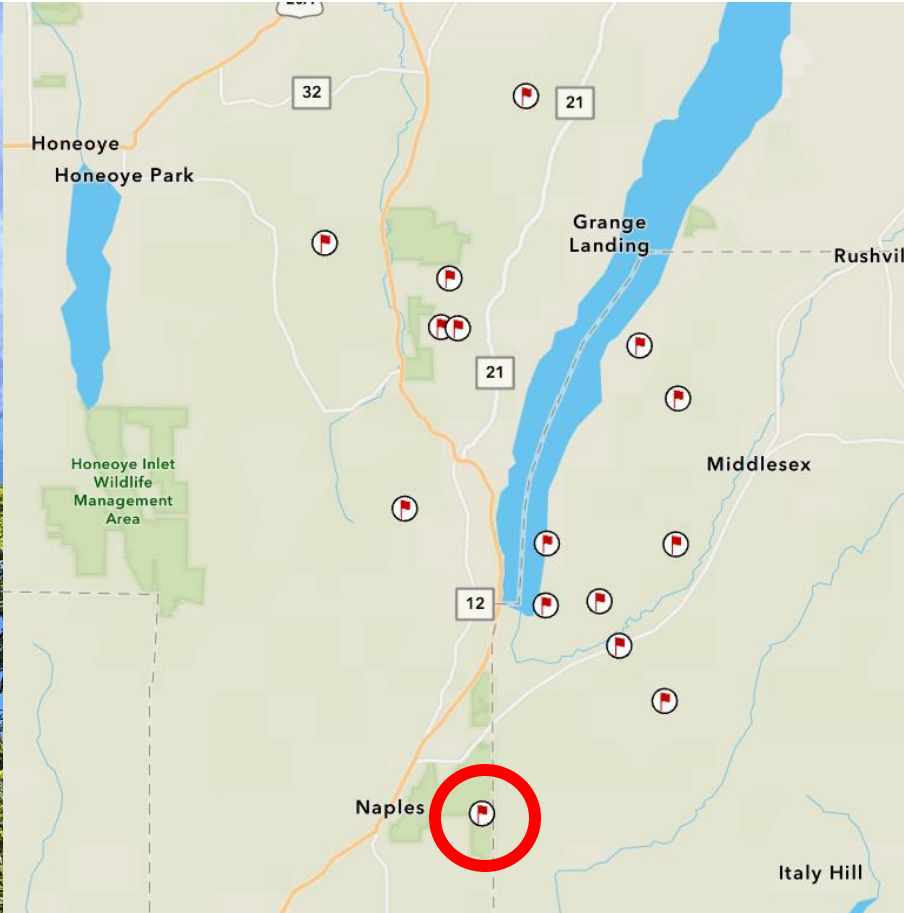
- Group of 3 assumed positive red oaks
- 4 more red oaks removed for a buffer
- Bucked, split and chipped on site
- Stumps treated with herbicide

High-Tor Wildlife Management Area - Middlesex, NY

- 1 positive red oak, 1 adjacent red oak
- Limited access: 0.5 mile downhill into the stand
- Bucked, split + burned in place
- 2nd finding of oak wilt fungal mat in NY



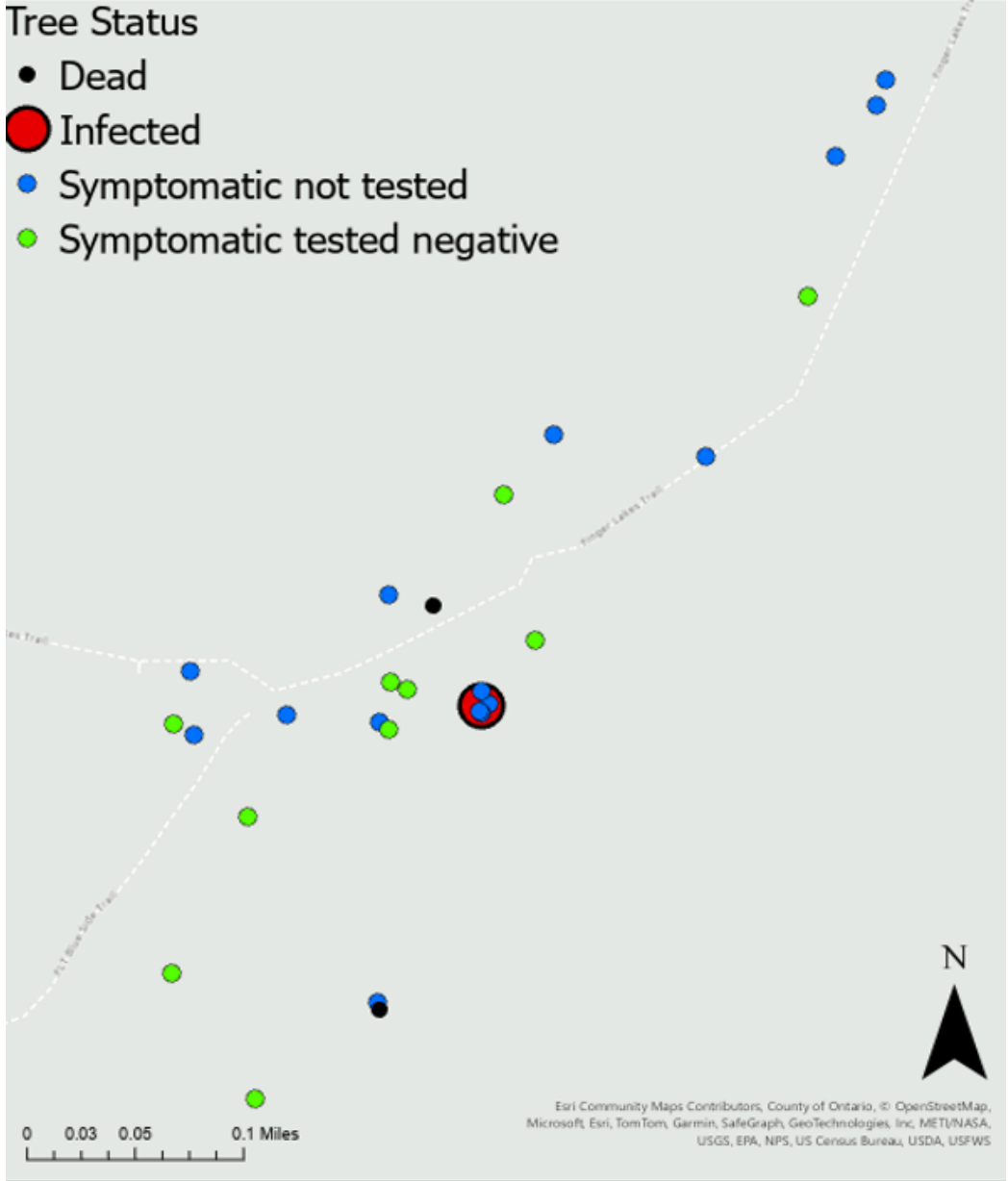
High-Tor Wildlife Management Area – Naples, NY



- Southern-most Finger Lakes infection to date
- Located by forester inspecting timber sale
- 1 group of symptomatic trees
- Many other red/white oak showing similar symptoms

Hi-Tor WMA – Naples NY

Oak Wilt Positive



Oak Wilt Negative



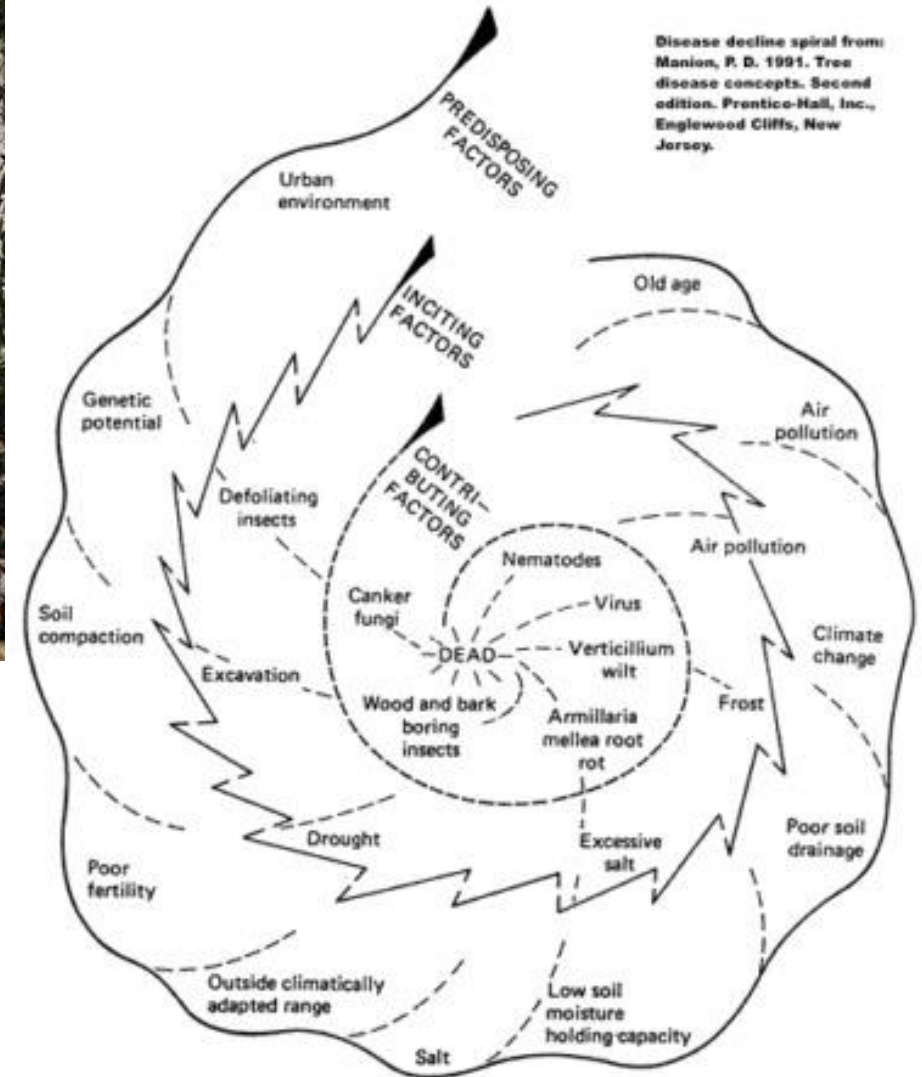
Oak Decline – Decline Spiral

In region:

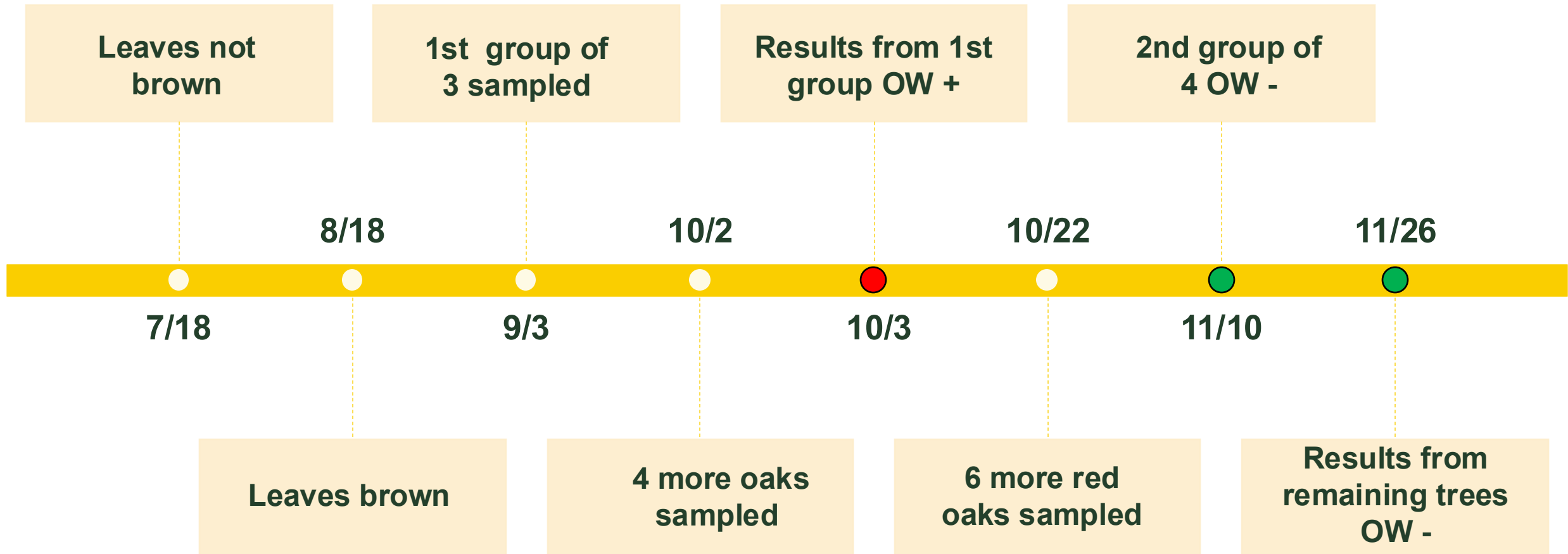
- Spongy moth defoliation in 2020-2022
- Late spring frost '23 or '24
- Drought in 2025

On site:

- Two-line chestnut borer damage
- Soil compaction and trunk damage from log skidder – possibly in late March



High-Tor Wildlife Management Area – Naples, NY Timeline



High-Tor WMA – Naples, NY

- As a precaution we treated everything as positive until all test results came back
- Between 10/3 and 11/26:
 - Logger drug all 13 suspect **red oaks** to landing
 - Everything was split and burned on site



Region 8 Oak Wilt Big Picture

Number of Trees Managed

Trees Visited	Sampled	Confirmed Positive	Assumed Positive	Destroyed
NY: 180 Region 8: 133	NY: 22 R8: 20	8	14	55
Gannett Hill:	2	2	4 (2 dead)	13
Stid Hill:	1	1	3 (2 symptomatic)	7
Hi Tor - Naples:	11	1	3 (2 symptomatic)	30
Shay Road:	1	1	1	1
Hi Tor - West River:	1	1	1	1
Hi Tor - Clark Gully:	1	1	1	2
Wolfanger Road:	1	1	1	1

Person Hours Spent Managing Oak Wilt (August- December)

Forest Health Crew	Private Lands	State-Lands	Wildlife	Forest Rangers
543	132.5	100	66	15.5

Total hours: 857 hours spent across the 7 sites

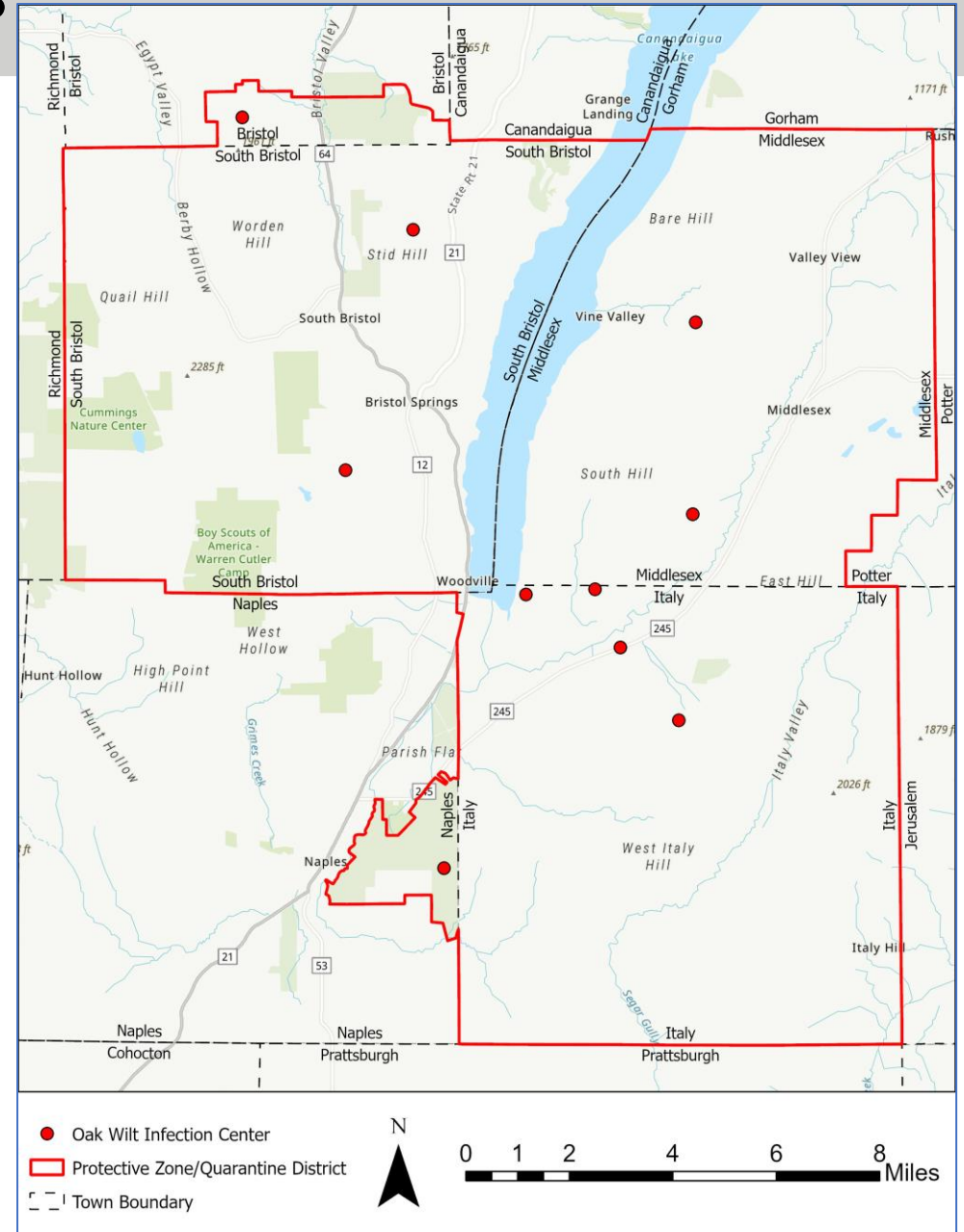
Quarantine District Regulations

Prohibited from leaving the quarantine districts:

- Oak logs or branches
- Wood pieces less than 29" long - no matter the species, including *untreated* firewood.
- Once wood is cut to firewood size it is difficult to tell one species from another.

Allowed to leave the quarantine districts:

- Chipped wood
- Larger wood pieces from non oak trees
- Heat-treated firewood



Limited Transportation Permit

Allows limited movement of oak and firewood during fall and winter months

Stipulations:

- Only sawlogs can leave the site until March 1st
- Sawmill scraps must be chipped by April 1st to prevent fungal mats from forming
- Firewood/pulpwood must stay on site until September 1st

**DIVISION OF LANDS AND FORESTS
ISSUING OFFICE**

FORESTER NAME:	1.	PHONE:	2.
DEC ADDRESS:	3.	EMAIL:	4.
SIGNATURE:	5.	PERMIT NUMBER:	6.

LIMITED TRANSPORTATION PERMIT

PERMITTEE NAME:	7.	EMAIL:	8.
BUSINESS ADDRESS:	9.	DATE ISSUED:	10.
		EXPIRES:	11.
		PHONE:	12.
HARVEST LOCATIONS & HARVEST DATE(S):	13.		
TOTAL NUMBER OF OAK TO BE REMOVED:	14.		
SPECIAL CONDITIONS:	15.		
PERMITTEE SIGNATURE:	16.		

Questions?

Contact:

Austin Shay
austin.shay@dec.ny.gov
518-225-5662

Gary Koplun
garrett.koplun@dec.ny.gov
585-226-5314

General Forest Health Contact:

Foresthealth@dec.ny.gov

