

**Representative Policy Board  
Land Use Committee  
South Central Connecticut Regional Water District  
Eli Whitney Museum, 915 Whitney Avenue, Hamden**

**AGENDA**

**Regular Meeting of Wednesday, July 14, 2021 at 5:30 p.m.**

1. Safety Moment
2. Approval of Minutes – June 9, 2021 meeting
3. Eli Whitney Museum Update: R. Paxton
4. Updates on other land and RWA properties, including invasive species update
5. Other Land items
6. Elect Committee Chairperson for 2021-2022
7. Next Regular Meeting: Wednesday, August 11, 2021 at 5:30 p.m.
8. Adjourn

# SAFETY MOMENT

## Bicycle Safety

Bicycling is one of the best ways to get exercise, see the sights and reduce your carbon footprint. However, bicyclists face a host of hazards. They often must share the road with vehicles, and injuries can happen, even on a designated path. How can you stay safe:

- Inspect your bike prior to riding
- Wear a helmet
- Get acquainted with traffic laws; bicyclists must follow the same rules as motorists
- Ride single-file in the direction of traffic
- Remain alert; watch for opening card doors and other hazards
- Use hand signals and take extra care at intersections
- Never hitch onto cars

Tap Into  
Safety



Regional Water Authority



Service – Teamwork – Accountability – Respect – Safety

 Regional Water Authority

**UNAPPROVED DRAFT**

**Representative Policy Board  
Land Use Committee  
South Central Connecticut Regional Water District**

**Minutes of June 9, 2021 Meeting**

The regular meeting of the Land Use Committee of the Representative Policy Board of the South Central Connecticut Regional Water District (“RWA”) took place on Wednesday, June 9, 2021 at Lake Hammonasset, 701 Old Toll Rd. (Rte. 80), Killingworth, Connecticut. Mr. Harvey presided at until Chair Betkoski arrived.

Present: Committee Members: P. Betkoski, P. DeSantis, R. Harvey, M. Horbal, M. Levine, G. Malloy, J. Oslander and J. Mowat Young

Authority: C. LaMarr  
Management: T. Norris and J. Triana  
RPB Staff: J. Slubowski

Due to inclement weather, Mr. Harvey called the meeting to order at 6:00 p.m. He reviewed the Safety Moment distributed to members.

On motion made by Mr. Malloy, seconded by Mr. Horbal, and unanimously carried, the Committee approved the minutes of its May 12, 2021 meeting.

Mr. Triana, the RWA’s Real Estate Manager, provided an update of Lake Hammonasset, which included:

- Historical information
- Size of lake and surrounding area
- Tunnel development and dam project
- Watershed area
- Water source information
- Recreation activities
- Contribution to water supply

At 6:10 p.m., Chair Betkoski entered the meeting.

Discussion took place regarding inspections and importance of water source to Lake Gaillard water system. Mr. Triana stated that Lake Hammonasset is a crucial part of Lake Gaillard’s water source.

On motion made by Ms. Young, seconded by Mr. Malloy, and unanimously carried, the application for the creation of a new trail on Authority property at Lake Hammonasset in Bethany was deemed complete and is recommended to the Representative Policy Board as a Non-substantial Land Use Plan Amendment and does not require a public hearing.

Update on *The Land We Need for the Water We Use Program* – J. Triana reported:

Reservoir Levels (Percent Full)

|              | <b>Current Year</b> | <b>Previous Year</b> | <b>Historical Average</b> | <b>Drought Status</b> |
|--------------|---------------------|----------------------|---------------------------|-----------------------|
| May 31, 2021 | 97%                 | 96%                  | 93%                       | None                  |

Rainfall (inches)

|                               | Current Year | Previous Year | Historical Average |
|-------------------------------|--------------|---------------|--------------------|
| May 2021                      | 5.08         | 1.73          | 3.93               |
| Fiscal YTD (6/1/20 – 5/31/21) | 42.26        | 47.74         | 46.56              |

Land We Need for the Water We Use Program (Dispositions/Acquisitions)

- Durham - Corresponded with property owner of 16+/- acres.
- Killingworth – Corresponded with a property owner of 4+/- acres.

Hamden, Olin property option – Executed transfer of the option, but will have to re-execute in order to file it on the land records. Attended online meeting about the property with various stakeholders.

Guilford and Madison (GU 21 and MA 2A) – Continued discussion of Class III land with member of the Guilford Sportsman Association.

Rental houses:

- Hamden, 95 Ives St. (HA 13) – Notices for the public hearing were published.
- Woodbridge, 2040 Litchfield Tpk. – Juliano found pins and staked midpoints, including one that was about 5’ within the garden. Issued letter about the lines. Met with contractor to get quote on fences.

Forestry Update

- Guilford – West of Sugar Loaf ash salvage (GU 4) – 40% complete
- Killingworth - East Hammonasset Leaf Screen Thinning, (KI 4) - Contract not yet awarded.
- Hamden - Overstory removal and Tornado Salvage, (HA 36) – Not started yet.
- Madison - Nathan’s Pond Slash Wall Harvest (MA 6) – **15% complete.**
- Seymour - Silvermine Road Slash Wall Harvest (SE 9) – Awarded contract. Not started yet.
  - Planted pitch pines at Maltby.
  - Marked 400+ cords of firewood.
  - Performed a drone flight over timber harvest by Nathans Pond.

Recreation

- DEEP stocked catfish at the Maltby Lakes.
- Discussed impact of trout season changes by DEEP with them.
- Archery class held for kids had 12 participants.
- Issued letter to CFPA approving a de minimis relocation of the Quinnipiac Trail relocation in Hamden and Bethany.
- Issued letter to CFPA approving a de minimis relocation of the Mattabesset Trail relocation in Madison.
- FMA approved the LUP amendment for fishing trails at Lake Chamberlain and forwarded to the RPB.
- Hazardous trees removed at Lake Chamberlain.
- Gave tour of three recreation areas to two Customer Service staff.
- Walked more of the proposed mountain bike trails at Genesee with NEMBA representatives.
- Received updated request for disc golf properties in North Branford (NB 14 and NB 14A). Responded that we would not be interested in the proposal at that location.

|                | May   |       | April |       |
|----------------|-------|-------|-------|-------|
|                | 2021  | 2020  | 2021  | 2020  |
| Permit Holders | 6,337 | 5,160 | 6,502 | 4,479 |

Special Activity Permits

- Connecticut Agricultural Experiment Station, (Gerda Magana and Sara Carson) - Placing and servicing of invasive insect traps and doing visual inspections for invasive insects. Looking for Velvet longhorned beetle, Oak ambrosia beetle, Oak processionary moth, Asian longhorned beetle and spotted lanternfly, Lake Saltonstall, (05/19/21 – 10/31/21)
- North Madison Vol. Fire Co. (Bob Blundon) – map roads and trails for fire rescue and fire fighting property in North Madison; (5/19/2021 – 12/31/2021) Mr. Bob Blundon
- RWA and St. Bridget School (Jeffrey Yale) – offering families of St. Bridget School in Cheshire, to bring children to Lake Chamberlain Recreation Area to hike and fish; 5/22/21
- Milford Police Department (Lieutenant Luke Holder and designees) – Police dive training, Maltby Lakes, (5/24/21)
- USDA Forest Service (Dr. Melody Keena) – Collect tree branches off large or small trees for research on Asian gypsy moth or spotted lantern fly; West River Watershed, Peat Swamp reservoir area, Lake Gaillard areas, Mill River; (5/20/2021-5/20/2022)
- CTDEEP (Dr. Min Huang) – mallard nesting study; Maltby Lakes (5/20/21-6/30/21)
- State of CT Cross Connection Committee (Adam Pandolfi) – State of Connecticut Cross Connection Committee Meeting; Lake Gaillard; (06/16/2021)

Other items

- Encroachments/agreements –
  - Agricultural fields – Corresponded with four perspective farmers about using Authority property. Discussed use of herbicides at the Sol’s Path field (NB 4) with Miscio.
  - Branford, Hilltop Dr. (BR 6) – Met with Land Trust staff to look over gate that was installed and gave them signs to use at the proposed gate at Hilltop Dr.
  - Seymour, ginseng request (SE 3) – Signed license agreement with Duclos to grow ginseng.
  - Madison, Dead Hill Rd. (MA 4) – Sent letter to Philbrick and Weinstein about the trees cut over the property line. Firewood will be paid for by Hopkins on his permit.
  - East Haven, 167 Saltonstall Parkway (Route 1) (EH 7) – Encroachment originally noticed by the town engineer and confirmed later by our staff. Contacted the abutter at 161 Saltonstall Parkway and issued cease and desist letter. Operations staff has been working on stabilizing and restoring the site. Contacted Juliano to reset the boundary corners once work is complete to install fence.
- Invasive plants – Treated or documented invasive plant populations in Guilford, Bethany, North Branford, Madison, and Branford. Held walk at Sugarloaf for CIPWG with eight participants. Met with researchers at Gaillard for sites with mugwort and goldenrod growing together for a predator-prey study. Installed insect traps with researcher to monitor potentially invasive insects (velvet longhorn beetle, oak ambrosia beetle, oak processionary moth). Met with UI staff to discuss herbicide use at Lake Saltonstall.

|  |            |
|--|------------|
| Invasive Species Documented/ Mapped (ac) | 9.5 acres  |
| Invasive Species Treated (ac/MH)         | 1.75 acres |

- East Haven, Virginia Rd. (EH 3) – Juliano found boundaries and pins for us to remark the boundary lines. Issued map with what they found.
- North Branford/Guilford, Reeds Gap Rd. – The Guilford assessor’s office corrected the matter and transferred the property card to landowner’s name.

- New Haven, East Rock Park access to Lake Whitney dam – Collected GPS data for CP&D on the proposed easement route.
- Comcast lease, Burwell Tank site – Finalized the changes to the 2<sup>nd</sup> amendment. Forwarded to Comcast. Signed our copy of the agreement.
- Bethany, Simon Dam – Corresponded with the dam contractor for the Simon's and noted that we would not alter operations to meet their needs in the spring, but would be willing to make changes in the late summer or fall.
- Deer hunt – Applications have been received throughout the month. Deadline for applications is June 18.
- Bethany, Bear Hill Rd. – Corresponded with Bethany RPB representative about an old discussion among the Bethany selectmen to discontinue the road. Explained the situation and noted that it is open to the public, but there is no ability for people to travel it legally since there is no bridge over the impoundment.

There were no other land items to report.

Chair Betkoski notified members that the July meeting would include the appointment of Committee Chair. Any members interested should contact him prior to the next meeting.

The next regular meeting of the committee is Wednesday, July 14, 2021 at 5:30 p.m.

At 6:40 p.m., on motion made by Mr. Malloy, seconded by Mr. Harvey, and unanimously carried, the meeting adjourned.

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Peter Betkoski, Chairman

**July 14, 2021**  
**Land Use Committee Meeting**

Reservoir Levels (Percent Full)

|               | <b>Current Year</b> | <b>Previous Year</b> | <b>Historical Average</b> | <b>Drought Status</b> |
|---------------|---------------------|----------------------|---------------------------|-----------------------|
| June 30, 2021 | 93%                 | 90%                  | 88%                       | None                  |

Rainfall (inches)

|                               | <b>Current Year</b> | <b>Previous Year</b> | <b>Historical Average</b> |
|-------------------------------|---------------------|----------------------|---------------------------|
| June 2021                     | 1.34                | 2.33                 | 3.74                      |
| Fiscal YTD (6/1/21 – 6/30/21) | 1.34                | 2.33                 | 3.74                      |

Land We Need for the Water We Use Program (Dispositions/Acquisitions)

- Durham - Corresponded with property owner of 16+/- acres.
- Killingworth – Corresponded with a property owner of 4+/- acres.
- Cheshire – Corresponded with property owner of 56+/- acres.

Rental houses:

- Hamden, 95 Ives St. (HA 13) – Held public hearing for the disposition application.
- Hamden, 233 Skiff St (HA 9A) – Still no word from the town about a condemnation. Steve Mongillo was attempting to contact the Town Attorney.
- Woodbridge, 2040 Litchfield Tpk. – Solar panels were moved on the roof to accept the faux chimney.

Forestry Update

- Guilford – West of Sugar Loaf ash salvage (GU 4) – 40% complete
  - Killingworth - East Hammonasset Leaf Screen Thinning, (KI 4) – **5% complete.**
  - Hamden - Overstory removal and Tornado Salvage, (HA 36) – Not started yet.
  - Madison - Nathan’s Pond Slash Wall Harvest (MA 6) – **35% complete.**
  - Seymour - Silvermine Road Slash Wall Harvest (SE 9) – Awarded contract. Not started yet.
- Hosted Cornell University, MDC, Aquarion, DEEP, CAES, Massachusetts DCR, University of Rhode Island, and NRCS at timber harvest 2020-01 to demonstrate experimental slash wall/deer exclosure management techniques.
  - Performed several drone flights including over timber harvest 2020-01 and Lake Hudak to document vegetation management.
  - Helped Environmental Planning with 90 Sargent Dr. pollinator garden.

Recreation

- RPB approved the LUP amendment for fishing trails at Lake Chamberlain.
- Trails day walk at Sugarloaf had 8 participants.
- Installed new gate at Maltby Lakes.
- Prepared material for next newsletter.
- Water wagon attended two events.

|                       | June         |       | May   |       |
|-----------------------|--------------|-------|-------|-------|
|                       | 2021         | 2020  | 2021  | 2020  |
| <b>Permit Holders</b> | <b>5,991</b> | 5,435 | 6,337 | 5,160 |

### Special Activity Permits

- Yale University School of the Environment (Stanley Gosliner) - placing wire mesh cages in the ground for masters and postdoctoral research. Cages will be stocked with native grasshoppers and spiders to understand the effects of invasive plant species on native plant and insect communities; Lake Gaillard; (06/01/21-10/07/21).
- Wright Water Engineers, Inc. (Dr. Andrew Earles, PhD and Scott Schreiber, P.E., CFM) - photo-document and observe streams and wetlands on these parcels including Farm River and unnamed tributaries, including adjacent wetlands. Access the area to record data using non-invasive methods such as pressure transducers, time lapse cameras, working with EPA (Ray Putnam) and US Department of Justice, 1739, 1744 and 1778 Middletown Avenue, and the Big Gulph Recreation Area, North Branford; (6/9/21 – 6/9/22)
- UConn-Waterbury, Dept of Ecology & Evolutionary Biology (Trumbo) - Continue on-going research on the behavior and ecology of burying beetles - Off Route 42 (near the Cheshire-Bethany-Prospect line) just east of traffic light at Rt.69-Rt. 42 juncture - (6/10/2021-9/20/2021)
- Eversource-Real Estate Department (Hadden) – Eversource transmission line maintenance – replace lightning arrestors; Dogburn Rd., Orange – (8/1/2021 - 12/31/2021)
- Mill River Watershed Association (Walters) – hike proposed Mill River Trail along GNHWPCA row from Dixwell Avenue to South New Rd., (6/24/21 and 6/26/21)
- New Haven Bird Club (Mr. Patrick T. Leahy)-Spring bird walk to observe species that nest in the bluebird/tree swallow boxes that are being maintained by self on RWA lands, Lake Chamberlain hiking trails, Sperry Road farm field, Lake Dawson bluebird trail below the dam, Watrous access road at north end, Bethany and Woodbridge, (05/18/2022)
- United Illuminating (Mr. Jonathan Clark)-United Illuminating electric transmission right-of-way– inspect wire splice between two towers that may have a poor wiring connection; cleared right-of-way approx. 600 ft. north of Vaiuso Farms between tower #8897 and #8898; (6/30/21 – 7/31/21)

### Other items

- Encroachments/agreements –
  - East Haven, 167 Saltonstall Parkway (Route 1) (EH 7) – RWA crews stabilized and restored the site. Survey showed that part of the driveway was over the property line. Discussed letter to be given to Lucido with Murtha staff.
  - Woodbridge, 60 Wepawaug Rd. – Inspected site of license agreement since Bixler wanted to terminate it since he wasn't using it anymore. Asked Murtha to create termination document that could be filed on the land records.
  - Killingworth, Rt. 148 – Sent letter to Venuti and met him to go over placement of signs along the boundary.
  - Killingworth, Emmanuel Church Rd. – Corresponded with Church staff about blocking the path that led onto our property.
  - Bethany, 146 Wooding Hill Rd. – Met with Prentice about hazardous trees and encroachments.
- Invasive plants – Removed invasive plants around green milkweed and narrow-leaved vervain populations. Documented and/or treated invasive populations in North Branford, Madison, Guilford,



Killingworth, Bethany, East Haven, and Hamden. Sustainability Team removed Japanese knotweed at Davis St., Hamden. Met again with researcher looking for velvet longhorn beetle, oak ambrosia beetle and the oak processionary moth.

|  |            |
|--|------------|
| Invasive Species Documented/ Mapped (ac) | 35.5 acres |
| Invasive Species Treated (ac/MH)         | 2.4 acres  |

- New Haven, East Rock Park access to Lake Whitney dam – Met with New Haven park staff to go over the plan at the site.
- Hamden, Lake Whitney access (HA 4) – Met with UI real estate staff to discuss our access to the dam.
- Deer hunt – 220 applications were received. Lottery will be held in July.
- Hamden, York Hill 2 Tank gate (HA 30) – Contacted DEEP about issues with the gate leading to the tank.
- North Branford, Foxon Rd. (NB 1C) – Met with North Branford DPW director about vegetation management adjacent to our property.
- Environmental Career Camp – RES staff presented macroinvertebrate sampling at the Mill River, forestry operations, and invasive species management.

#### Attachments

- June 10, 2021 - Scientists: Beech Leaf Disease, potentially fatal for trees, widespread in CT – NH Register
- June 11, 2021 - Historic homes are being demolished in Branford. Some builders say they aren't worth saving. – NH Register
- June 18, 2021 - Bartlett Land Preserve Acquisition 'Protects, Preserves' Site – Patch.com
- July 29, 2020 - Maintaining Forest Property Lines – PSU website
- June 23, 2021 - 'Absolute Nightmare Scenario': Caterpillar Outbreak Defoliating Northeast Trees – WNPR
- July 1, 2021 - Where's My Lyme Vaccine? – Slate.com

#### Upcoming Agenda Items

August 2021 –

## Scientists: Beech Leaf Disease, potentially fatal for trees, widespread in CT

Ben Lambert – NH Register - June 10, 2021



NEW HAVEN — A potentially fatal disease for beech trees has become widespread in large parts of Connecticut, and is thus no longer novel, according to Connecticut Agricultural Experiment Station scientists.

Beech Leaf Disease, first detected in the state in 2019 in lower Fairfield County, is now widespread and prevalent on American beech trees (*Fagus grandifolia*) throughout Fairfield, New Haven, Middlesex, and New London counties, and appears to be spreading into Litchfield, Tolland and Windham counties as well, officials said in an email.

“This disease, which can kill trees within several years of detection, was first discovered in 2012 in Ohio, followed in subsequent years by detections in Pennsylvania, New York, and Ontario, Canada,” officials said.

The disease, typically “characterized by dark striping between leaf veins” on beech foliage, as observed looking up into the canopy, has been particularly severe this year.

The intensification was potentially driven by a hot and dry summer last year and a dry spring this year, officials said.

“(This year’s symptoms) can include: aborted leaf enlargement; cupping, browning, and yellowing of foliage; branch and tip dieback; and in some cases, premature leaf drop,” officials said.

The disease is caused in American, Oriental and European beech trees by the foliar nematode, officials said.

It has become common enough, as widespread occurrence of BLD has been well-documented in 2021, that “reports of BLD in Fairfield, New Haven, Middlesex, and New London Counties to CAES and DEEP are no longer requested” from the public, officials said.

CAES scientists, along with federal staffers and researchers in Ohio, Pennsylvania, New York and Ontario, have joined together to study the disease’s development, transmission, and possibilities for controlling it, officials said.

## Historic homes are being demolished in Branford. Some builders say they aren't worth saving.

Sarah Page Kyrzcz - June 11, 2021 – NH Register

BRANFORD — While an antique home may have a provenance and is beloved by many, the question is — should this old house be saved? Two shoreline builders agree that it's not worth it to save some old houses.

The issue has come to the fore in the wake of recent tear-downs of the historic Warner House in Pine Orchard and the Pawson Park Roller Rink House in Branford, which was demoed earlier this month. These builders came out on the side of building new versus preservation.

Eric Rose, owner of Branford's E.M. Rose Builders, Inc. for some 35 years, walked through the Warner House a few years ago at the request of a potential buyer. Demolishing the house was the right decision, he said. The Pine Orchard landmark was sold for \$1.3 million, while the Roller Rink house at 44 Wakefield Road sold for \$1.38 million.

Rose, a Pine Orchard resident and a member of the Pine Orchard Zoning Board of Appeals, spoke about why he thinks many people, including a majority on Facebook, expressed shock that the 1894 Warner House was razed last month.

"I just think it allowed reaction from people who see demolition and they think conspicuous consumption, history is being destroyed — don't we value anything anymore?" Rose said. "They don't know enough to look at a building, what goes into deciding whether to keep it, change it or replace it," he added.

Builder Bill Plunkett, who has done about a dozen historic preservation jobs in Madison, said decisions about saving a building need to be made on an individual basis. He talked about what needs to be considered when looking at a building. "Historical significance," he said. "Structurally, does it have some merit? Does it have some architectural significance?"

Rose has spent years renovating historic homes, including a recent restoration of an 1875 Branford Victorian, he said. "Probably, even in the good 'ole days, it didn't make a whole lot of sense, but in terms of modern floor plans, it was horrible," he said.

The house, built by Pine Orchard founder Alden M. Young, was a gift to his daughter Olive and her husband Milton Warner, who was also Young's business partner at the turn of the 19th century.

One of the most distinctive features of the 10,105-square-foot house was the palatial music room that was home to a Skinner pipe organ. The room was used for musical concerts and family nuptials. "You have the really big organ room on the left that was dedicated to being an organ room," Rose added. "It just was very awkward."

Rose talked about the floor plan in detail. "It wasn't even a good floor plan back in the day, when you had servants, let alone use it today in a modern context," he said. "The floor plan itself couldn't be fixed, unless you gutted it and started over in that volume of the outside walls."

Plunkett also talked about elements of older homes that don't fit in with today's lifestyle — such as unusable space, low ceilings and drafty interiors. "So, there's merit to knocking some houses down." But, on the flip side, he said, "People say, 'well, you can build a more energy efficient house,' which is often the argument you hear about knocking it down and building a new house." "My take is that the most energy-efficient house is the one you don't knock down," he added. "Do you know how much energy it takes? When I say energy — human and resources." It comes down to money for some

"You're certainly not going to buy a building and say, 'Well, I'll fix it up, but I'm not going to make it what would be a great house,'" Rose said. "It doesn't make sense — who would do that? If you're going to invest money in it, you're going to make it a great house." Rose addressed the outdated mechanical, electrical and plumbing systems in the Warner House.

"The old boiler system was completely gone," he said. "It needed to be replaced. You can't replace it with air, because there's no way you can put duct work into a building with those ceiling height and layout, which means you really can't have air conditioning, but you can put back radiators and baseboard radiant heat."

While the windows were original, they were not energy-efficient, said Rose. Rose contends that the home wasn't well-constructed. "In my business we always say, 'They don't build things like they used to.'

"Thank God," he added. "It's not often we see really well-built buildings of that period, let alone, do they remain in good condition after all the things that have been changed over the decades?"

Plunkett agreed. "They say that they don't make them like they used to, and that's typically a good thing, because most of them aren't built very well."

Both Rose and Plunkett agreed it's ultimately the homeowner's decision. "It's private property," Rose said. "If you're really upset about it, buy it. Otherwise, it's the way it is."

## **Bartlett Land Preserve Acquisition 'Protects, Preserves' Site**

The site, part of a traprock ridge at the northern reaches of Totoket Mountain, is surrounded by over 400 acres of protected open space.

Patch.com - Jun 18, 2021

GUILFORD, CT —The \$127,500 acquisition of the 64-acre Bartlett Land Preserve announced by Gov. Ned Lamont Thursday as part of the state's \$5.5 million in grants to buy nearly 3,000 acres of land to protect and preserve open space across Connecticut means the "public can continue to use these trails in perpetuity."

The site is part of a traprock ridge at the northern reaches of Totoket Mountain in North Guilford. Surrounded by over 400 acres of protected open space owned by the Guilford Land Conservation Trust, the South-Central Regional Water Authority and the town of Guilford, contains a wetlands area and lies within the Coginchaug River watershed.

Thursday, Lamont announced a total of \$6.2 million in funding to protect and preserve open space lands, \$5.5 million to support 29 grants toward the purchase of nearly 3,000 acres of land, plus an additional 5 grants totaling more than \$700,000 for distressed communities to promote the use of open space in urban settings.

The grants are authorized under the state's Open Space and Watershed Land Acquisition Program and the Urban Green and Community Garden Program, which are administered by the Connecticut Department of Energy and Environmental Protection (DEEP) and assist local governments, land trusts, and water companies in purchasing land to protect as open space. These open spaces have tremendous value for the state by protecting wildlife habitat, offering recreation opportunities, and protecting ecosystems that are sequestering carbon.

"Our administration has set high goals to mitigate the effects of climate change and implement policies that better preserve our air, water, and natural resources," Lamont said. "This program is an important component of preserving some of the best and most beautiful land in the world, and by partnering with our municipalities and nonprofits we can ensure that these valuable resources are preserved in perpetuity for generations to come."

The projects bring the total land in Connecticut designated as state or local open space to more than 512,000 acres – approximately more than three quarters of the way toward the state's goal of having 673,210 acres designated as open space.

DEEP's 2021 grant rounds for both of these grant programs are now underway, with applications due by September 30, 2021. These programs use funding from the Community Investment Act and state bond funds and require matches by the grant recipient and stipulations that the land be protected by a conservation and public recreation easement, ensuring that the property is forever protected for public use and enjoyment. Projects are evaluated by statutorily defined parameters and ranked, according to natural resource and recreational value, and natural area resiliency and adaptation to mitigate climate change. Updated applications for the 2021 grant round are available on DEEP's Open Space website.

"Open space is key to ensuring a bright economic future for our state," DEEP Commissioner Katie Dykes said.

"These natural assets are valuable as we attract and retain residents who are increasingly looking for varied recreational opportunities where they work, play, and live," Dykes said. "No single entity can accomplish the critical goal of protecting our lands with significant conservation values now and for future generations. We need continued cooperation of land trusts, our towns and cities, and conservation-minded citizens to build upon existing and form new partnerships and new approaches to protecting open space."

## Maintaining Forest Property Lines

PSU website – 7/29/2020

Property line maintenance is one of the most important aspects of land ownership. It is your responsibility as the landowner to know where the boundaries to your property are located. Most forest landowners have a general idea where their lines are and have accurately surveyed maps, but few have their lines clearly marked and painted on the ground.

Well-marked boundaries can protect you from timber theft and help ensure other assets are protected. They also help you avoid trespassing on your neighbors when cutting trees or building roads and trails. When selling timber or performing other management activities it is important to know exactly where the boundary line is to avoid damage or disturbance to neighboring properties.

Only a licensed land surveyor can establish a property boundary. However, if you have a good modern survey description, you may be able to locate the property lines based on evidence and marking left behind from previous surveys. If your boundary lines cannot be located, you will have to contact a reputable surveyor. For the purposes of this article, we are going to assume you have an accurate modern survey and the lines and corners have been previously marked or "blazed" by a surveyor.

Once located, the boundary line should be marked using a combination of flagging and paint. Paint is preferred since it is the most durable, lasting more than 5 years, and cannot be torn down or moved. Plastic flagging is generally used to temporarily locate boundary lines but should be followed by more permanent blazing and painting trees along and near the line. Use a bright, (white, blue, red, or orange show up well) durable, brush-on paint. Many commercial brands of boundary marking paint are available. Choose your preferred color. Removing any loose bark before applying will allow the markings to last longer.

In the field, locate all corners or monuments and mark them as well. Corners should also be identified by "witness" trees. The marks on witness trees face or point to the corner. Surveyors make hacks or chop marks on witness trees in three parallel lines about equal distance apart that face the actual corner marker. Be sure to paint over the scars that remain from the axe chops. A combination of paint and hack mark scars ensure long term visibility of corner markings.

Line sections between corners can be long, where one corner is not visible from the first. Therefore, it is important to mark trees along the line as well. You may need to install posts along sections of lines with only small trees or no trees to make the location more obvious. Trees marking a line are designed with side-line chops or blazes made by the surveyor. Blazes are typically 5-6" long, 3-4" wide, and 4 to 5 feet above the ground. All old survey blazes need to be located and painted so they are visible. Paint both the blazed callous tissue surface as well as 2-3" of bark surrounding the blaze.

Blaze marks made along a line face the actual line and are made in a way to visualize the exact placement of the property border. When trees are located directly in the path of the line, two blaze marks will be on the tree, one on the side the line enters and another on the opposite side where the line exits. Survey markings can occur at different intervals along a line. When painting your line, it is a good idea to mark trees close enough so that from any mark you can see the next in either direction, the exact distance will vary with terrain and vegetation density.

Finding and marking your boundary lines with paint can be enjoyable and helpful. The best time of year to do this is when the leaves are off the trees. Once located, it is best to re-paint every 5-7 years to keep the marks fresh and easy to locate. Marked property lines are a sign of good forest management. They protect you from trespass, make forest management activities possible, and reduce the potential for accidental timber theft from neighbors.

## 'Absolute Nightmare Scenario': Caterpillar Outbreak Defoliating Northeast Trees

By Jane Lindholm • Jun 23, 2021 – WNPR

The emergence of the 17-year cicadas has dominated bug news of late, but in the northeastern parts of the U.S. and Canada, another cyclical menace has emerged that has the potential to do more lasting damage.

Several weeks ago, Mark Boltz-Robinson started noticing that a couple of red oaks on his Monkton property were thinning at the top, and he wondered if it might be due to stress from drought conditions.

“But then one of them literally was, like, overnight, [I] woke up the next morning and it was like: ‘Woah, this tree is gone. What the heck?’ And then of course they started showing up, crawling all over the property.”

Boltz-Robinson is referring to an invasive critter known familiarly as the gypsy moth caterpillar. Rather than use an outdated name, we’re going to refer to them in this story as LDD caterpillars, shorthand for their Latin name: *Lymantria dispar dispar*. But people in this part of Monkton might have other ... unprintable ... names for them as well.

Neighbors report finding LDD caterpillars in their hair while they mow the lawn, covering the foundation of their houses and dangling from trees while they walk. Some are making a sport of trying to squish them with their cars while they drive along the dirt roads in town.

There are so many caterpillars in the trees that it constantly sounds like it's raining. Except, it's not raining. It's caterpillar poop — called frass — falling through the trees.

Boltz-Robinson is also Monkton's tree warden and chair of the town forest committee. And it's clear that he really cares about his trees. But this summer, there's not much for him to admire.

“Almost everything I want to have on the property, that I enjoy having on the property, they're decimating all of it, regardless,” he said. “The spruce trees, the fir trees, the oaks, the birch, the maples, the apples, any number of berry bushes. So no hope for blueberries.”

He lifts up a branch of what would have been a beautiful raspberry bush, but it is completely defoliated. The 80-year-old apple tree that makes the centerpiece of his yard has no leaves whatsoever, and only a few tiny apples are left — covered with hairy caterpillars.

Over the course of the early summer, these caterpillars molt five or six times, growing up to two inches in length before they go into their cocoons at the end of June. They have yellow heads and five pairs of blue dots followed by six pairs of red dots down their fuzzy backs.

The caterpillars originated in Europe, but made their way to the U.S. more than 100 years ago as part of an economic experiment.

“They were brought over by a French scientist named Trouvelot in 1869,” explained Vermont State Entomologist Judy Rosovsky. “He was trying to find something to compete with silk worm moths. They got out of his lab, and 20 years later there was this big outbreak, horrifying the people of Medford, Mass. and vicinity.”

From there, the caterpillars spread, and they now cause damage to forests and suburban landscapes in about half the U.S. states. Every now and then their populations surge, causing a major outbreak in one place or another.

This year, Vermont is experiencing its first major outbreak in 30 years. Rosovsky says she's particularly heard from people up and down the northwestern part of the state, but reports are coming in from around the northeast, including Ontario and New York.

These invasive insects can completely defoliate the landscape, starting with things like oaks and apple trees but moving pretty indiscriminately to other trees and bushes once they've chewed those bare. In some places, bare hillsides resemble forests in the dead of winter, not the full foliage of early summer. They're known to eat more than 500 different species of tree.

### Why Now?

It's pretty bad this year for a number of reasons: One is drought conditions, which decrease the LDD's main predator—a fungus called *Entomophaga maimaiga* [say: en-toe-MOFF-uh-guh my-MAY-guh]. Without the fungus, the population of these caterpillars, which already has a natural ebb and flow, is allowed to grow largely unchecked.

And there's a pandemic angle, too. In normal years, the Vermont Department of Forests, Parks and Recreation conducts aerial surveys to check on forest health and look for issues caused by caterpillars and other pests. If it was clear that the LDD caterpillars were going to cause a problem, the state could have sprayed a caterpillar-killing bacteria over hard-hit areas this spring.

But it didn't seem like a smart idea to send groups of people up into tiny planes together during COVID-19, so Rosovsky says the department wasn't able to see the full potential scope of this outbreak.

"They ended up trying to use fire towers and mountain tops to do some surveillance, which was helpful, but it's not quite the same thing," she said. "And because the population wasn't that high last year, we were imagining we'd get something like an outbreak, but we weren't entirely sure where it would be most concentrated."

Plus, Rosovsky admits, "We hoped we'd have a wet fall or a wet spring."

Wet conditions would have fueled the growth of that fungus, helping to keep the caterpillar boom in check. But both the fall and spring have been significantly dry -- nearly the entire state is currently experiencing abnormally dry or moderate drought conditions.

And the drought conditions could be a compounding problem alongside the LDD caterpillars.

"Drought stress and defoliation -- those are two stresses on the trees, so they're really in for a hard time," Rosovsky said. "They can withstand some defoliation. They can withstand some drought. But the combination is not good for their long-term health."

Rosovsky doesn't currently think we're in for a massive die-off of oak trees in Vermont. As she points out: most of the mature trees in these forests have seen caterpillar outbreaks before. The trees that look so bare right now may even be able to regrow some leaves later this summer, once the caterpillars become moths.

But for property owners like Boltz-Robinson, the fact that this outbreak could continue into next year and beyond is worrying. Surveying the scope of the damage in his yard alone, he remarks, "I have to just hope for the best: that enough of them will have enough resilience to rebound. One season of this, sure. But if next year turns out similar, it's going to be an absolute nightmare scenario to the landscape of all of Addison County and northwestern Vermont."

### **Insecticides**

Foresters, municipalities, and state agencies may conduct spraying in heavily affected areas next spring, when the caterpillars are small. The most common spray to combat LDD caterpillars is a bacteria called *Bacillus thuringiensis*, usually called Bt. Individuals can also use bacterial or chemical sprays, but this can be cost-prohibitive for many homeowners.

### **Tree protection**

If you have a few trees in particular that you'd like to help protect, you can wrap the tree all the way around in duct tape and apply a sticky substance to the tape ring. Many caterpillars are hesitant to cross the tape and climb the tree. When the caterpillars get bigger, they often drop to the ground during the day, to avoid predators, climbing back up the trees at night. So you can wrap a burlap or paperbag ring around your trees, folding the top over to create a kind of skirt around the trees. The caterpillars may hide in the folds of your "tree skirt" during the day. You can then collect the caterpillars and kill them.

It may also be beneficial to water trees that are overstressed, helping to mitigate the effects of drought and encourage refoilation in the latter part of the summer.

### **Kill the pests one-by-one**

Or by the hundreds! While it may seem like a Sisyphean task, every caterpillar killed now is one that does not reproduce. If you want to try this route, get a bucket of soapy water and drop individual caterpillars, pupae in their cocoons, or whitish egg masses (these appear later in the summer and into fall/winter) into the bucket overnight to kill them.

## Where's My Lyme Vaccine?

The complex downfall of LYMERix—and what's coming next.

By Rebecca Onion – Slate.com - July 01, 2021

Here's a fun game I've played with fellow woodsgoing types over the years: How much would you pay to get vaccinated against Lyme disease? I generally settle on a number in the three or even low four figures. That's a lot for my budget—a good chunk of a month's mortgage payment—but would be worth it to eliminate the twinges of anxiety I feel about being outside, an activity that is otherwise No. 1 in my book. Without a Lyme vaccine on the market, this question is purely hypothetical, of course. But I'm not alone in the moderate-but-still-painful lengths I'd go to get one—a colleague recently confessed to trying to convince a vet acquaintance to give her a canine Lyme shot. (Yes, dogs can get Lyme vaccines, while humans cannot.) I *think* she was kidding!

I've been playing the what-would-you-do-for-a-Lyme-vax game more frequently this year, as my friends and I have spent most of our social time bushwhacking along the sides of overgrown creeks while our kids run wild. This was also the year we made unlikely folk heroes of giant pharmaceutical companies, proudly bragging about having Pfizer or Moderna or J&J coursing through our veins. A little subculture of vax positivity rose up to celebrate Americans' collective quasi-liberation from COVID, because the COVID vaccine, like no other vaccine we've ever taken, *directly* fixed a big problem in our lives.

That's different from the way we typically experience vaccines: as preventives for diseases that feel controlled or even obsolete. Sure, I'm hypothetically happy that my young child had access to the DTaP shot—I definitely don't want her to get D, P, or, God forbid, T—but I'm not actively worried about those things because the vaccines against them have done their job and pushed them out of mind. But the COVID shot was a ticket, a Get Out of Jail Free card that took most of the fear out of going to Kroger or seeing vaccinated friends inside of their houses. If science could give us that kind of liberation from a virus, I have heightened interest in it doing the same for the bacteria that lurk in questing ticks on tall grass. As I'm about to leave for my Fourth of July vacation—headed straight into the New Hampshire forest, at the epicenter of Lyme—I'm thinking, again:

*Where is my Lyme vaccine?*

We had one, once. The Food and Drug Administration approved LYMERix, manufactured by SmithKline Beecham (now GlaxoSmithKline), for use in 1998. LYMERix worked by inducing antibodies into human blood, which would then go into any ticks that attached to your body. There, they would neutralize the bacteria that cause Lyme, *Borrelia burgdorferi*, before the bacteria could go from the tick into you. In clinical trials, the shot showed about 78 percent effectiveness after the required three doses (hey, I'd take it). But some patients who got the shot after it went on the market testified that they developed arthritis after vaccination. The FDA investigated, but decided the evidence that the vaccine was linked to patients' arthritis wasn't strong enough to withdraw its approval for LYMERix. Sales fell nonetheless, and the company pulled the vaccine in 2002.

The story of LYMERix's downfall has become a case study in the history of vaccines, in part because of its complexity. In his book on the Cutter Incident—a disastrous episode in the mass distribution of the Salk polio vaccine—and its impact on vaccine production, vaccine historian Paul Offit described what happened with LYMERix as a story about liability. The Lyme vaccine was an optional shot, so it wasn't covered by the National Vaccine Injury Compensation Program. (The program was set up in the 1980s to encourage pharmaceutical companies to continue production of vaccines by reducing the fear of liability.) Because of that exemption from the federal program, writes Offit, there was no cushion between the manufacturers of LYMERix and anyone who might claim it caused their arthritis. The vaccine “was left to survive the abuses of personal injury lawyers and the inaccurate media reports that inevitably follow.”

The perception was that people got Lyme disease from their beautiful lawns in Connecticut.

This is how I have seen it explained, in shorthand form: *We don't have a Lyme vaccine because of anti-vaxxers*. Retelling the LYMERix story in 2018, Vox's Brian Resnick described it as “a stark reminder of how anti-vaccine mania of the past few decades is leaving us all more susceptible to disease.” Brittany Flaherty pointed out in a 2019 STAT piece about the Lyme vaccine that LYMERix hit the market at a bad time for vaccine hesitancy and anti-vax activism. The infamous Lancet report claiming that the MMR shot was linked to autism was published in 1998 (it does not; the paper has been widely debunked and retracted), and the rotavirus vaccination RotaShield was withdrawn from the market in 1999, after a number of infants who received it suffered intussusception, or bowel obstruction. There was an unease in the public climate around *any* new shot, especially an optional one.

But there's another reason LYMERix had trouble: It had what I think of as a “New England problem.” The perception was that people got Lyme disease from their beautiful lawns in Connecticut. “For many individuals in Lyme-endemic areas, it is precisely the environmental privilege of being able to live in or close to ‘nature’ that makes possible the environmental risk of Lyme disease,” wrote Abigail Dumes, an anthropologist who has published a book about Lyme. Lyme does not stand to affect everyone; it is dependent on the range of the deer tick and cannot be transmitted between people, so it has a unique status among infectious diseases. The LYMERix shot was not like the MMR vaccine, a key tool of public health that would be recommended for all children so that transmissible diseases would stop spreading; it was seen as a choice, one



made by privileged adults who wanted to live free of fear. Chinh Le, a member of the Centers for Disease Control and Prevention's Advisory Committee on Immunization Practices, called the shot a "yuppie vaccine" for people who "will pay a lot of money for their Nikes and their Esprit and shop at L.L.Bean's" and who "will have no consideration for cost-effectiveness when they want a vaccine because they're going to travel to Cape Cod." (I'm in this picture, and I don't like it!) Historian Robert Aronowitz cites Le's testimony in a retrospective of LYMERix as evidence that regulators were lukewarm about the shot. Aronowitz notes that the lack of enthusiasm showed up in their recommendations for who should get it: The government issued a "should consider" recommendation for people at high risk for tick bites in areas where Lyme was present, and a "may consider" for people sometimes exposed to tick habitats. Some experts Aronowitz interviewed thought these designations may have made it hard to encourage uptake.

There are other oddities to the LYMERix saga. Trying to drum up enthusiasm, the pharmaceutical company had aggressively promoted the vaccine through direct-to-consumer advertising emphasizing tick-related anxiety, to a public that wasn't necessarily afraid of Lyme. The end result may have been suspicion of the company, which looked like it was trying to profit from creating a new fear. Then there's the fact that the vaccine intersected with the complicated, decadeslong conflict between some Lyme patients and mainstream doctors (a clash so singular and complex that Dumes wrote a whole book about it). A faction of Lyme patient advocates, who had initially been supportive, ended up not wholly on board with the vaccine. They "were not, of course, against preventing the disease per se but were against the way the vaccine might reinforce the idea that [Lyme disease] was an acute, unproblematic, and clinical entity," explains Aronowitz. That is, the vaccine to them was a falsely simple solution to a problem that was much more complicated and not well understood by current medicine.

Seen from 2021, this history gives me some hope that the next round of Lyme preventive shots will succeed in making it to market and into my family's arms. The failure of LYMERix was not just about "anti-vaxxers," broadly painted, but about a very specific brew of hesitancy—which, at least in part, was fueled by a general unawareness of Lyme. It's also true that there was just less need for the vaccine. In the years since LYMERix was pulled from the market, Lyme has become much more common and geographically widespread in the United States. Cases have tripled—at least. Climate change and human expansion into wooded areas amp up the numbers every year. And public health and government officials are increasingly aware of the cost burden of Lyme.

The increased market for a Lyme preventive has prompted action from pharmaceutical companies. There are two options for preventing Lyme in the works: one vaccine that works the same way LYMERix did; and one shot that would be taken annually, in advance of tick season (technically a preexposure prophylaxis, or PrEP, shot). The vaccine is a collaboration between Valneva (a French biotech company) and Pfizer and has already shown promising results in Phase 2 trials. In March, the companies announced that their candidate was going into an additional Phase 2 study that would include a pediatric population of kids over age 5. (LYMERix was never approved for kids under 15—another factor in the low demand for the shot.) Pfizer and Valneva hope for their vaccine to be available by 2025.

Meanwhile, MassBiologics is developing a PrEP shot for Lyme. This is a shot that would be immediately effective, unlike a true vaccine, where you have to wait a while to build antibodies before you're covered. Mark Klempner, executive vice chancellor for MassBiologics and a professor of medicine, said over email that MassBiologics' Lyme PrEP shot was almost through its Phase 1 clinical trial, with the next phase anticipated to be completed in 2022; Klempner added that if all continues to go well, the company hopes for FDA approval by 2024.

It's not clear whether these shots will be expensive—as they are in my fantasy about shoving piles of cash at a needle-wielding doctor—or covered by insurance. That will be determined by the designation they receive from the government this time around (it's probably too much of a fantasy to think that they'll just be free, like COVID shots). But I can hope that there will be enough enthusiasm and support for these vaccines when they finally make it to market. I know I'll be more than ready to get my shot and take to the woods.