

Representative Policy Board
Land Use Committee
South Central Connecticut Regional Water Authority
Meeting Location: Lake Glen
2040 Litchfield Turnpike, Woodbridge, CT*

AGENDA

Regular Meeting of Wednesday, June 12, 2024 at 5:30 p.m.

1. Safety Moment
2. Approval of Minutes – May 9, 2024 special meeting
3. History of Lake Glen: J. Triana
4. Updates on land and RWA properties, including invasive species update
5. Other land items
6. Notification of Committee Chair Election in July
7. Next regular meeting - Wednesday, July 10, 2024 at 5:30 p.m.
8. Adjourn

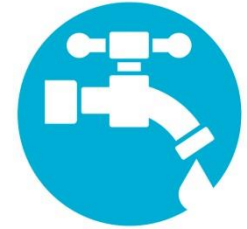
*In the event of rain *ONLY*, the meeting will be held at 90 Sargent Drive, New Haven, Connecticut. To view meeting documents, please visit <http://tinyurl.com/tvu5cy9m>. For questions, contact the board office at 203-401-2515 or by email at jslubowski@rwater.com.

SAFETY MOMENT

SKIN CANCER AWARENESS

Exposure to ultraviolet (UV) rays causes most cases of melanoma, the deadliest kind of skin cancer. To lower your skin cancer risk, protect your skin from the sun and avoid indoor tanning. Even if it's cool and cloudy, you still need protection. UV rays, not the temperature, do the damage.

Tap Into
Safety



Regional Water Authority

Tips to Stay Safe on the Sun:

- A lightweight long-sleeved shirt or cover-up.
- A hat with a wide brim that shades your face, head, ears, and neck.
- Sunglasses that block both UVA and UVB rays.
- Sunscreen with SPF 15 or higher and both UVA and UVB (broad spectrum) protection.
- Stay in the shade, especially during late morning through mid-afternoon.
- Can't stay in the shade? Wear a long-sleeved shirt and pants to protect your skin.
- Remember to reapply sunscreen at least every 2 hours and after swimming, sweating, or toweling off.

Service – Teamwork – Accountability – Respect – Safety

Safety is a core company value at the Regional Water Authority .
It is our goal to reduce workplace injuries to zero.

 Regional Water Authority

Representative Policy Board
Land Use Committee
 South Central Connecticut Regional Water District
 May 9, 2024

Minutes

A special meeting of the Land Use Committee (“Committee”) of the Representative Policy Board (“RPB”) of the South Central Connecticut Regional Water District (“RWA”) took place on Thursday, May 9, 2024 at Lake Saltonstall, 10 Hosley Avenue, Branford, Connecticut. Chair Betkoski presided.

Committee Members Present: P. Betkoski, P. DeSantis, B. Eitzer, C. Havrda, M. Levine, G. Malloy, J. Oslander and J. Mowat Young

Committee Members Absent: M. Horbal

Authority: M. Ricozzi

Management: S. Lakshminarayanan and J. Triana

Chair Betkoski called the meeting to order at 4:30 p.m. He reviewed the Safety Moment distributed to members.

On motion made by Mr. Malloy, and seconded by Mr. Eitzer, the Committee voted to approve the minutes of its April 10, 2024 regular meeting and April 15, 2024 joint special meeting.

Mr. Triana, the RWA’s Real Estate Manager, provided an update on the different species of oak trees at Lake Saltonstall. The update included:

- Oak tree classifications and habitats
- Characteristics and identification
- Oak tree wood uses
- Lifespan

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

Reservoir Levels (Percent Full)

	Current Year	Previous Year	Historical Average	Drought Status
April 30	98%	99%	94%	None

Rainfall (inches)

	Current Year	Previous Year	Historical Average
April 2024	3.78	6.03	4.28
Fiscal YTD (6/1/23 –	58.77	39.49	42.73

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

- Cheshire, Bis/Bowman property – Received and reviewed draft of survey. Inspected property and found farm dump. Opted to extend the due diligence period in order to perform Phase II investigation. Amended the P&SA.

- Hamden, Preisner property – Signed P&SA. Wired deposit.
- North Haven – Corresponded with property owner of 15+/- acres.
- Cheshire – Corresponded with property owner of 16+/- acres.
- Seymour, Squantuck Rd. (SE 5) – Received appraisal and preliminary assessment. Started compiling the disposition application.

Rental houses:

- Hamden, Skiff St. house (HA 9A) – Deposited funds from the condemnation. Received the information about recording the condemnation documents on the land record.
- Woodbridge, 1955 Litchfield Tpk. (WO 1) – Met Environmental Planning staff and consultant to inspect the house, barn, and old treatment building.

Forestry Update

- Killingworth - East Hammonasset Leaf Screen Thinning, (KI 4) – 75% complete.
- Hamden - Overstory removal and Tornado Salvage, (HA 36) – The harvest was halted in early June, and the logger pulled his equipment off the property on June 13th. It is uncertain at this point whether the buyer will continue with the salvage operation even if a market is found - 15% complete.
- Killingworth - N. Chestnut Hill Patch Cuts, (KI 6) – 100% complete. Equipment removed, but some firewood logs still at the landing.
- Guilford - Menunketuc High-Grade Rehabilitation Cut and Conifer Release (GU12/12A) – 20% complete.
 - Planted 600+ Christmas trees at Lake Gaillard.
 - Planted 250 chestnut seedlings at Seymour slash wall harvest and Maltby Lakes. Mudpacked one fertile American chestnut tree within the harvest area.
 - Planted additional trees and shrubs at the Great Hill Tunnel clearing, Maltby Lakes, and Brenski Swamp.
 - Met with CAES staff to begin further experimentation on white oak regeneration.
 - Met with CAES staff to look at the hemlocks south of Lake Bethany (BE 23). Ordered 400 beetles for biocontrol of a hemlock wooly adelgid infestation.
 - Researched, filled out and submitted a National Woodland Owner Survey compiled by the USDA Forest Service

Recreation

- Forestry walk at Prospect had 16 attendees.
- Changed combination lock code at all locations. Several locks were broken after the change.
- Fishing began on all RWA properties on April 1st. The docks were put in at Lake Saltonstall.
- Boat rentals started on April 27th.
- Trout were stocked in the Maltby Lakes, including 12 large tagged fish. Three tagged fish have been caught.
- Cleared trees from Lake Bethany and Lake Chamberlain trails.
- Closed Big Gulph trails for a week while Sol’s Path bridge was worked on.

	April		March	
	2024	2023	2024	2023
Permit Holders	4,972	5,021	4,827	4,954

Special Activity Permits

- Irish Heritage Society of Milford (John O’Connell and designees) – hiking around Maltby Lakes with members of club, Maltby Lakes, (4/7/24).
- Quinnipiac University (Professor Scott Davies)-Study bird nest boxes and record bird nesting activity and success, band the adults and chicks, and collect tissue samples for analysis during breeding season, Lake Chamberlain Recreation Area, Sperry Rd. Farm Field, Lake Watrous, and Lake Dawson, (05/01/24 – 09/31/24).

Other items

- Encroachments/agreements –
 - Orange, 854 Greenway Rd. (OR 4) – Surveyors completed remarking corners of the property. Checked work and discussed with surveyors.
 - Woodbridge, 888 Greenway Rd. (OR 4) – Spoke to property owners and sent them license agreement to execute.
 - West Haven, 20 Saw Mill Rd. (WH 8) – Met with property owner and showed property line location. Property owner said that he would move the dumpsters to his property.
 - Hamden, 445 Sherman Ave. (HA 17) – Sent letter to property owner after consultation with Murtha staff. Noted requirement to execute release of damages.
 - Hamden, 251 Sherman Ave. (HA 17) – Sent letter to property owner about invisible dog fence over the property line.
 - Hamden, 95 Booth Ter. (HA 22 & HA 22A) – Sent letter to property owner about lawn encroachment.
 - Hamden, 775 Gaylord Mountain Rd. rear (HA 37) – Sent letter and spoke to property owner about a deer stand over the property line.
 - Hamden, Hamden Hall (HA 9A) – Contacted school about the upcoming need for appraisals.
 - Branford, 91 Linden Ave. – Sent letter to property owner with shed over 8” water main.

- Invasive plants – Treated or documented invasive plant populations in North Branford, East Haven and Branford.

Invasive Species Documented/ Mapped (ac)	89 acres
Invasive Species Treated (ac/MH)	18 acres

- New Haven, former Prospect Hill Reservoir site – Spoke to Yale staff about the former water basin on Prospect St.
- Branford, Bayberry Rd. 2” main – Met with property owners and RWA staff at the site where we were trying to abandon the old 2” main and have the seasonal house at 219 Linden Ave. run their service parallel to it.
- West Haven, Allings Crossing Rd. (WH 6) – UI staff contacted us about expected work along the railroad tracks.
- Boundaries – Checked and remarked boundaries in East Haven, Branford, North Branford, Hamden, Derby, and Woodbridge.
- Acquired new drone that is capable of multispectral, thermal, and photogrammetric imagery.

There were no other land items to report.

Representative Policy Board
Land Use Committee
May 9, 2024

The next regular meeting is on Wednesday, June 12, 2024 at 5:30 p.m.

At 5:25 p.m., on motion made by Mr. Malloy, and seconded by Mr. Oslander, the Committee voted to adjourn the meeting.

Peter Betkoski, Chairman

UNAPPROVED

June 12, 2024
Land Use Committee Meeting

Reservoir Levels (Percent Full)

	Current Year	Previous Year	Historical Average	Drought Status
May 31	98%	97%	93%	None

Rainfall (inches)

	Current Year	Previous Year	Historical Average
May 2024	5.44	2.84	3.93
Fiscal YTD (6/1/23 – 5/31/24)	64.21	42.33	46.65

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

- Hamden, Preisner property – A2 survey finalized. Inspected property. Closed on property.
- Cheshire, Bis/Bowman property – Phase II investigation found some contaminants above limits. Contacted sellers about addressing the issue before any closing. Reviewed draft survey.
- North Haven, Boy Scout camp – North Haven Land Trust closed on the property on May 15th.
- Cheshire – Corresponded with property owner of 16+/- acres.
- Seymour, Squantuck Rd. (SE 5) – Completed draft of disposition application for review.
- Seymour, Silver Mine Rd. (SE 9) – Corresponded with town staff about what acreage might be available for sale on this parcel.

Rental houses:

- Hamden, Skiff St. house – Discussed process of severing the lot for the house from the remaining acres with Murtha staff.

Forestry Update

- Killingworth - East Hammonasset Leaf Screen Thinning, (KI 4) – 75% complete.
- Hamden - Overstory removal and Tornado Salvage, (HA 36) – The harvest was halted in early June, and the logger pulled his equipment off the property on June 13th. It is uncertain at this point whether the buyer will continue with the salvage operation even if a market is found - 15% complete.
- Guilford - Menunketuc High-Grade Rehabilitation Cut and Conifer Release (GU12/12A) – 20% complete.
 - Worked closely with RWA’s Invasive Species Management Technician to plan and implement the first field season of the Landscape Scale Restoration grant.
 - Interviewed four applicants for the Natural Resources Technician internships, and worked with HR to offer positions to the two, best candidates.
 - Observed bat mist-netting on the night of May 14th with DEEP’s bat specialist.
 - Organized and participated in planting 250 additional chestnut hybrids inside the Seymour slash wall donated by The American Chestnut Foundation.
 - Released 400 beetles in Bethany (BE 23) as part of a multi-year effort to establish a population of beetles to act as a biocontrol on a hemlock wooly adelgid infestation.
 - NRA met with CAES staff at Prospect Reservoir and Lake Chamberlain to show where dead ash were still on the ground.

Recreation

- Installed two waterbars along trail south of Lake Chamberlain with help of Bethany Horsemen.
- Discussed Bethany Horsemen’s plans to put up signs at Lake Chamberlain.
- Cleared trails at Lake Chamberlain.
- The Water Wagon attended three events.
- Kids fishing derby had 21 attendees.
- Recycled plastic bait was created, packaged, and distributed.
- Applications for two bass tournaments at Lake Saltonstall were submitted to DEEP.

	May		April	
	2024	2023	2024	2023
Permit Holders	4,571	4,972	4,972	5,021

Special Activity Permits

- West Haven Parks & Recreation – (Ms. Margaret Ruggiero and designees) – Fishing Derby, Maltby Lakes, 5/11/24.
- Stephen Trumbo, Ph.D. (Dept. of Ecology and Evolutionary Biology, UConn Waterbury) - Continue 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 (5/15/2024-9/20/2024).
- Trinity Baptist Church (George Hayner)-to walk Lake Chamberlain with international students bible study group at Trinity Baptist Church (5/25/24).—Revised date due to weather issues in March.

Other items

- Encroachments/agreements –
 - Orange, 854 Greenway Rd. (OR 4) – Abutter called and was antagonistic. Sent letter giving them a deadline to remove the encroachment or enter into a license agreement.
 - Woodbridge, 888 Greenway Rd. (OR 4) – Executed license agreement for the encroaching lawn and fence.
 - West Haven, 20 Saw Mill Rd. (WH 8) – Abutter said he would move the dumpsters, but upon inspection, they were still on RWA property. Alerted abutter. He said they would be moved within the week.
 - Hamden, 445 Sherman Ave. (HA 17) – Met with property owner and went over the encroachment.
 - Hamden, 95 Booth Ter. (HA 22 & HA 22A) – Met with abutter about the property line. Discussed options. Exchanged maps.
 - Hamden, Hamden Hall (HA 9A) – Met with President of the school about the appraisals needed to determine the fee for the remainder of the lease.
 - Hamden, 14 Russell St. (HA 6B) – Corresponded with abutter about installing fence along the property line.
 - Branford, 91 Linden Ave. – Met with property owner and showed her location of the watermain. Said we would get back to her about any actions needed.
 - West Haven, Shingle Hill Tanks (WH 7) – Corresponded with Yale’s consultant about their proposed repeater at the tanks.
 - North Haven (NO 10) and North Branford (NB 14 & 14A) – Renewed hay agreements with the Page’s for another 5 years at these two sites.
- Invasive plants – Treated or documented invasive plant populations in Bethany, North Branford, East Haven and Branford. The new steam weeder was received and staff from multiple departments attended a training session with the new equipment. Met with CT Invasive Species Outreach Specialist to look at treatment areas in North Branford and Madison.

Invasive Species Documented/ Mapped (ac)	49 acres
Invasive Species Treated (ac/MH)	21 acres

- East Haven, Beach Ave. watermain – Consultant started submitting the plans to DEEP.
- West Haven, Allings Crossing Rd. (WH 6) – UI staff shared plans for removing poles near our property, and installing a new pole on the other side of the railroad tracks near the 20” watermain.
- New Haven, Yale Golf Course (NH 1) – Inspected new drainage system coming off the golf course to Authority property.
- Woodbridge, Sperry Rd. – Asked by abutter if we owned the gates that the town used to close off Sperry Rd. Replied that they were not ours and we never operated them. A new gate has been installed farther south on the road.
- East Haven, Rock Rd. SNET easement (EH 2)– Corresponded again with Frontier about their abandoned equipment at Rock Rd.
- Guilford, Lanes Pond Rd. access – Corresponded with surveyor working for new owner of the former Marchegian Club property about the legal status of Lanes Pond Rd.
- Deer hunt - The application deadline was in May. There are 182 hunters: Seymour/Ansonia has 8 hunters, Prospect has 20, Bethany has 20, and North Branford has 134. The contact database was cleaned and culled of non-responsive candidates.
- Boundaries – Checked and remarked boundaries in East Haven, Branford, North Branford and Woodbridge.
- Furnace Pond re-vegetation – Planned and executed planting of woody plants along a stretch of Furnace Pond shoreline that was disturbed.
- Drone inspections – ISMT performed drone missions at Armory St. Pump Station, West River Water Treatment Plant, and Derby Tank.

Attachments

- May 9, 2024 - A CT resident got Rocky Mountain spotted fever. Here’s what to know about the rare tick disease – New Haven register
- May 21, 2024 - Smelly Bradford pear tree among CT's latest invasive plant. Here's what else was added to the list – New Haven Register
- May 22, 2024 - Before Remediation, More Info – New Haven Independent
- May 27, 2024 - Hamden's Olin Powder Farm sees first tests in years, but more studies needed to uncover contamination, officials say – New Haven Register
- March 2024 - Look Out for Jumping Earthworms! – Penn State Extension website
- May 31, 2024 - Sixth graders from a CT middle school head to the woods to combat the spread of Lyme disease – New Haven Register

Upcoming Agenda Items

July 2024 - ???

A CT resident got Rocky Mountain spotted fever. Here's what to know about the rare tick disease.

Several cases of RMSF are reported in Connecticut every year. Here's everything to know about the potentially fatal tickborne disease.

By Abby Weiss, Staff writer May 9, 2024- New Haven Register

Stamford resident K.J. Kelly didn't know about Rocky Mountain spotted fever (RMSF) until he was admitted to Stamford Health's emergency department. What he originally thought was the flu turned out to be a potentially fatal rare tickborne disease.

In mid-February, Kelly, 42, started experiencing a slight fever and body aches. Within three to four days, his body temperature had spiked to 104 degrees and the aches and chills grew more severe, he said. He later developed "spots" under his forearms and back that he said looked like clumps of reddish and pinkish mosquito bites. The headaches and rash exacerbated and he eventually went to the emergency room, where he ended up staying for nine days.

Kelly recalls the numerous tests performed on him during the first few days in the hospital, including a flu test, CAT scans and an ultrasound. All of the results came back normal, leading Kelly to worry if doctors would ever find the source and treatment for his symptoms.

"They're looking at your brain and your heart and doctors aren't really sure what's wrong with you. It's very nerve-racking. That was a tough few days for me and especially for my family," he said.

On around the fifth day, he was diagnosed with Rocky Mountain spotted fever (RMSF), an illness caused by the bacterium *Rickettsia rickettsii*. RMSF is spread through the bite of several tick species in the U.S., according to the Centers for Disease Control and Prevention (CDC).

In Connecticut, RMSF is spread through the bite of an infected American Dog Tick and has an average rate of just several cases a year, the Connecticut Department of Public Health states. The disease is more common around central and southern parts of the U.S., Dr. Asha Shah, director of infectious diseases at Stamford Hospital, told Hearst Connecticut Media.

Its symptoms are similar to the flu (fever, body aches), as well as a severe headache and rash, and it is treated with oral antibiotics over the course of a week, Shah said.

"I have not treated a case up here in Connecticut and I've been at Stamford for almost 12 years," said Shah. "So it's rare for us to find a case here," she said. But the doctor who did treat Kelly, Dr. Bibek Koirala, is part of her practice and had the thought to test for RMSF.

Kelly said the rareness of the disease in Connecticut and the missing tick bite on his body extended the diagnosis process to several days. He believes he contracted the disease the week before the symptoms started when he and his family decided to take advantage of mild winter weather and go hiking at Bartlett Arboretum.

He recovered within a few days on the antibiotics, he said.

Kelly is hoping that his story will spread awareness about the existence of RMSF and that people will be encouraged to get tested for it.

"If gone unnoticed and undiagnosed, it can lead to more severe illness," Shah said. "It can infect the brain and can sometimes even lead to death."

"Prior to my experience, I don't remember ever hearing anything about Rocky Mountain spotted fever. Maybe I had in passing, and it was kind of in and out, but definitely not on my radar. Growing up in the northeast, you've always been aware and on the lookout for ticks, but most people just think about Lyme disease, primarily, at least that's been my experience. And, there are other things out there to be aware of," he said.

Rocky Mountain spotted fever in Connecticut

While the disease is rare in the northeastern U.S., RMSF has been present in Connecticut for decades. Data from the Connecticut Department of Public Health shows reports of the disease as far back as 1980.

Several tick species, including Rocky Mountain wood tick and the brown dog tick, can spread RMSF in the U.S., according to the CDC. In Connecticut, specifically, the RMSF vector is the American dog tick, Goudarz Molaei, chief scientist and head of the Department of Entomology for the Connecticut Agricultural Experiment Station (CAES), said. The species resides in all parts of the state and they are more present during the middle of summer.

Molaei said the number of RMSF cases and American dog ticks fluctuate each year, but both rates have increased since 2016.

American dog ticks used to make up 12 to 13 percent of all tick species submitted the CAES laboratory. Residents and local health departments send ticks to the CAES lab to determine if they're causative for infections. In recent years, that rate has increased to 25 percent.

The annual number of human RMSF cases in Connecticut increased from six to 24 between 2016 to 2018, then dropped down to five in 2019. Last year, there were six cases of RMSF. From 2007 to 2015, there were zero cases reported in the state. Molaei said the cause of that gap is unclear and he's unsure why cases reemerged in 2016.

Molaei reiterated that not all the cases recorded in Connecticut were locally acquired.

"Some of these cases were because people traveled to other areas, like to areas at the immediate vicinity of Rocky Mountain region like like Colorado and other states. They were bit by ticks over there. But when they got to Connecticut, they felt sick," he said.

Although the American Dog Tick is relatively common in the Nutmeg state, it's rare for the species to spread RMSF. Last year, Molaei's lab test several hundred specimens of American dog ticks for the disease agent responsible for RMSF and none of them tested positive for the disease.

"It is a very rare infection in ticks here, in the American dog tick," he said.

Is Rocky Mountain spotted fever a growing risk?

Cases of RMSF have risen dramatically across the country over the past 20 years, as warming temperatures due to climate change perpetuate the spread of infectious diseases and reduce the mortality of insects, according to a 2020 release by the University of California, Davis.

Molaei's lab has received an unprecedented number of ticks for testing this past winter due to the warm conditions the past few winters. The volume of ticks carrying diseases hasn't changed very much, but increasing tick activity could raise the likelihood of somebody getting bitten by an infected tick, he said in a past interview.

Shah said the rate of RMSF has not increased significantly in Connecticut compared to other parts of the country where cases are higher. She said Kelly's story isn't a cause for alarm, but rather an example of shifting environmental and disease patterns.

"I just think it's a reminder for folks, especially as we get now into the warmer months, that when you are outside... practicing those tick precautions are very important," she said.

To protect yourself against exposure to ticks, she recommends wearing long sleeves while gardening, tucking pants into socks and conducting consistent tick checks with yourself, pets and kids after spending long periods outside.

Smelly Bradford pear tree among CT's latest invasive plant. Here's what else was added to the list

By Vincent Gabrielle, Staff writer May 21, 2024 – New Haven Register

Landscapers and gardeners beware. A number of ornamental plants have been added to the state's invasive plant list, soon making it illegal to root the showy or aromatic vines, trees and grasses, some of which are staples in Connecticut suburban terrain. Earlier this month, Gov. Ned Lamont signed into law an update to the invasive plant statute banning the sale, transport, purchase and cultivation of several plants including the Japanese and Chinese varieties of wisteria; the Japanese angelica tree; porcelainberry and mugwort. These plants will all be banned for sale as of Oct. 1.

"Wisteria can really take over stands of trees, similar to how bittersweet grows, it's another, similar woody vine," said Laren Kurtz, invasive species outreach specialist at the University of Connecticut. "Wisteria are a lot prettier than bittersweet, that's why it's a popular landscape plant, but it can get out of control if left to its own devices." Callery or "Bradford" pear trees were also added to the list and will be phased out over three years to give tree nurseries time to eliminate their stock. They are widely planted as ornamental trees and are known for their beautiful tiny, but stinky, white flowers that bloom each spring, but doesn't bear edible fruit in the fall. "It's very pretty. It blooms early spring and it can grow almost anywhere and that makes it a problem," said Kurtz.

The plants added this year were banned for different reasons. The two wisteria species which are often found draping purple blossoms from shady porches or pergolas, can also wrap around other plants, smothering them in their vines. Quackgrass and mugwort grow aggressively through their root systems, while Japanese angelica trees are covered in sharp spines and can easily shade out native species.

Some of these plants were introduced as ornamental or landscape plants but have escaped into the wild. Others, like quackgrass, were likely introduced accidentally. Without natural herbivores, these plants can easily move into disrupted habitats, like forest patches in suburban sprawl.

"They tend to dominate the landscape and they have a very fast growth rate," said Jatinder Aulakh, a botanist and invasive plant scientist at the Connecticut Agricultural Experiment Station. "They produce a large number of seeds."

Once established they're often difficult to remove. Some of these plants, like quackgrass, produce chemicals that inhibit the growth of other plants. Others, like Callery pear trees produce a multitude of seeds that can be easily spread by birds. "They displace our native plants by creating monotypic stands," said Aulakh. "They don't let other (native) vegetation grow." If invasive plants come to dominate a landscape, it creates cascading problems in the ecosystem. Native insect larvae can't often feed on invasive plants, which cuts down the local supply of food for birds, frogs and small mammals.

"The real problem comes with the native fauna, the native animals and insects," said Kurtz. "They have evolved for millions of years alongside native species. There are very particular relationships between these plants and animals that have evolved over time."

The problem doubles when you consider native pollinators. Butterfly and moth caterpillars are adapted to eat specific, native, host plants, said Kurtz. Without food, they can't mature to help pollinate the landscape. Making matters worse, some invasive plant species help other invasive insect species colonize the landscape. The tree of heaven, which was already listed on the Connecticut invasive species list, is a preferred food of the invasive spotted lanternfly.

Unfortunately, the spotted lanternfly also feeds on many other different species of plants, said Jim Fredericks, vice president of public affairs for the National Pest Management Association. "Nobody would mind if they just stuck to the tree of heaven."

Spotted lanternflies can cause widespread ecosystem damage by feeding on native plants, which makes the plants vulnerable to fungal infection, said Fredericks. This fungus makes it harder for an infected plant to photosynthesize, as it becomes covered in powdery mold.

Scientists estimate that nationwide, invasive plants have caused about \$190 billion dollars in environmental and agricultural damage between 1960 and 2020. Nationally, the cost of controlling aquatic invasive plants, such as hydrilla, is estimated to be about \$100 million.

The Connecticut Invasive Plants Council has been trying to get updates to the list for several years. The signing of the law is the first update to the invasive plant ban lists since 2018. Connecticut has regulated invasive plants since 2004, with the Invasive Plant Council making annual suggestions for species to ban.

Kurtz said that people could help by planting native plants and reducing the population of invasive plants on whatever land they managed.

"Each plant has its own weak spot that people can take advantage of to manage them properly," said Kurtz. "Once you've removed those plants from your area, it's important to repopulate with native species that do well in your conditions."

Before Remediation, More Info

by Brian Slattery | May 22, 2024 – New Haven Independent

Someday, Six Lakes, a.k.a. the Olin Pine Swamp, a.k.a. the Powder Farm, could be “a tranquil oasis for you to go to — not just for Hamden, but for the region,” said Elizabeth Hayes, a longtime community activist who is also on the Democratic Town Committee in Hamden and on the town’s wetlands commission. “We’ll just ask you to be patient.”

That was the prevailing tone of a community meeting held Tuesday evening by the Six Lakes Park Coalition in Thornton Wilder Hall in Miller Library in Hamden, to discuss the latest developments in the remediation of the 102-acre site in southern Hamden. The coalition — represented at the meeting by Hayes and Justin Farmer — has grown since its inception to encompass environmental groups (Save the Sound, Farmington Canal Commission, West River Watershed Association, Hamden Land Conservation Trust), religious groups (Christian Tabernacle Baptist Church, Spring Glen Church, Congregations Organized for a New Connecticut), and community organizers from each of the site’s adjacent neighborhoods.

Last summer, officials from the Department of Energy and Environmental Protection (DEEP) announced that the Olin Corporation, which owns the Pine Swamp, was collecting data to determine what level of remediation was needed to clean up the area. The results of that study are in. The conclusion: they need more data. John Duff, an environmental analyst at DEEP, and Raymond Frigon, director of DEEP’s remediation division, were on hand once again to explain why.

A 3-Dimensional Model Of Contamination

Duff began with a brief overview of the site and its history: Winchester bought it in 1899 and used it as a shooting range and waste dump until the town ordered it to stop in 1966. The site — by then owned by the Olin Corporation, which also owned Winchester — then went dormant. Environmental investigations in the 1980s led to a consent order from DEEP (then called DEP) to remediate the site in 1986. Olin did “a considerable amount of remediation,” Duff said, and further data collection in the 1990s, but then the site went dormant again until 2022, when DEEP made it a priority again (read this previous article for more details) to see what was needed to “bring it back to what it really should be,” Duff said. In the meantime, the Pine Swamp has become heavily forested and home to a lot of wildlife; no one knows for sure just how much.

Last year’s data collection, Duff explained, was shaped by the mandate in the 1986 consent order, which had identified five general areas of concern, clustered in the southern portion of the Pine Swamp behind the buildings on Leeder Hill Drive and Putnam Avenue. In these places, Olin had burned waste, disposed of incinerator ash, and dumped battery waste, among other activities. However, even a review of previous environmental studies suggested that the problems at the Powder Farm were more widespread than that, with “far more areas of concern,” Duff said. There were areas of exposed slag and demolition debris, and areas that had been used for arms testing and disposal. There also has been illegal dumping there, by “locals and non-locals.”

“The site in its entirety is going to need some sort of level investigation,” Duff said.

Basing a remediation plan on the data from the 1980s and 1990s can’t happen because the data is old and “a lot of things can happen in 20 or 30 years,” Duff said. Since then, data collection technology has also advanced, and new data could offer a much more complete picture of what’s needed at the Pine Swamp.

“You need to collect enough data” to “create a three-dimensional model” of the site, so “we have an idea of how deep the contamination goes and how far it spreads,” Duff said.

Collecting the data, however, will be difficult. Much of it involves taking readings of vapors from the soil, which involves planting small pipes like wells in the terrain that are then sealed at the top. The researchers hired by Olin this year found that securing adequate places for those wells was tricky owing to the hilly terrain and dense foliage. In addition, researchers learned that the sealant used at the ends of the pipes to trap and measure vapors attracted deer, who then removed the sealant and destroyed the results for half of the wells the researchers made. Researchers also can’t yet collect contamination data from the wetlands that comprise half the site.

But the data the researchers did collect, from dozens of locations in the Pine Swamp, made clear the general extent of the problem. “At each location there was some chemical that exceeded the standard for both soil and groundwater,” Duff said. “The results supported and confirmed” the historical data but still “doesn’t give us the detail needed for cleanup.” (View Olin’s full report [here](#).) Frigon expected a work plan to conduct further investigation to materialize in the summer or fall.

Which Level Of Remediation?

Part of the reason for needing more detailed data stems from the fact that Connecticut currently has two standards for remediation based on land use. Remediation for industrial and commercial use is less involved and less expensive, but disallows certain uses for the land once remediation is done. Remediation for residential use is more in-depth and more expensive, but allows the land to be used without restrictions once it’s completed.

Most of the Pine Swamp is currently zoned as open space, with a small part of it zoned for commercial or industrial use, so Olin, as its owner, can theoretically opt for industrial remediation and be in compliance with the 1986 consent order. To use the property as a park, however, would require residential-use remediation. Olin can “clean up to whatever standard they want to,” Frigon said, and “they may determine that it is in their best interest to clean to industrial standards.”

Though he added that the corporation is open to “going further” than that, to reach residential standards. The difference in part comes down to dollars and cents: the more detailed data are on hand, the more clearly remediation plans can be drawn, and the more concretely Olin, DEEP, and the public can talk about how much money is needed to create a park out of a contaminated forest — and whether Olin will foot the bill entirely itself, or get state support for more remediation.

The many facets of remediation work emerged during the question-and-answer period after Duff’s presentation. It’s unclear what the land — now a dense forest interlaced with ponds — would look like after remediation. Soil excavation remains “popular,” Frigon said, with possible resulting changes in the landscape. Three decades ago, it was the only option for a site like the Powder Farm. But “today we have so many more tools at our disposal,” Frigon said, depending on the pollutant. Some remediation methods allow for the contaminants to remain in place; others break down the pollutants where they are.

Remediation at the Pine Swamp is complicated by the fact that half of it is wetlands connected to the public water supply. So far, Frigon said, there has been no evidence that pollutants from the Powder Farm are entering the water supply, either through the reservoir or through groundwater; the pollution on the site “does not appear to be moving.” Olin, he was adamant, cannot “unearth pollution” in a way that changes that, and the “remediation action plan will need to address that.”

The conversation also allowed Frigon to touch on changes in remediation regulations that may be coming down the pike. One involves the creation of a third category of remediation, for “passive recreation,” that could come into play by the time Pine Swamp remediation plans are ready to be drawn up. Passive recreation standards are “not yet woven into anticipated legislation,” he said. “We need to hear more from the citizens of our state” to make it happen, but it could be “very helpful to the cause.”

Frigon also teased that “Connecticut is about to go through a significant transformation in how we address pollution in our state,” he said. Under the Transfer Act of 1985, currently many pollution concerns on properties arise when the property changes hands; the previous owner must disclose it, and the obligation to deal with it transfers to the next owner. Connecticut is an outlier in this regard, and officials have complained about it for years. Reforming the regulations to a “you spill it, you clean it” system, Frigon said, would align Connecticut with most other states. These reforms might happen in 2025, and could affect remediation at the Pine Swamp.

Frigon reminded the meeting attendees that once Olin completes remediation, as the owner of the Powder Farm, it could sell the property to whoever it wanted. But Olin so far has been a compliant partner, and Frigon believed that attending to environmental concerns while working harmoniously with a corporate partner was possible; “the two can go hand in hand,” he said.

Frigon also understood that a park was “definitely the desire of the community,” he said. “We all know that having green space ... speaks to quality of life.” At several points during the Q&A, he talked about the importance of continued community enthusiasm. “Remaining engaged” with “local leadership” and “applying the right pressure” on government officials will “help pave the way. That’s how you get from Point A to Point B on projects like this” — including community input into the remediation plan itself.

Frigon suggested the community hold meetings this summer to clarify what they want a Six Lakes Park to look like, what amenities they want it to have (just hiking trails? Or gardens? Tennis courts?) “What is it that you want to see this property become?” he said.

The call for community involvement found willing ears in the room, from community members and elected officials alike. “This is going to be a project that will take a lot of time,” Hamden mayor Lauren Garrett had said at the beginning of the meeting, and she wanted to “make sure it’s done right.” She noted that the idea of a state park has gotten support from the state — Sen. Martin Looney expressed his enthusiasm for the idea in November. Garrett was pushing for a park “that everyone has access to,” meaning that the site should be “remediated to a high standard so that everyone can use it.”

Echoing the sentiment were a group of students from Hamden High School’s Eco Club, who asked how they might get involved in the effort to create Six Lakes Park. One student suggested if high-school students had more information, even more of them would get involved. The club received a round of applause from meeting attendees.

“You have a seat at the table,” Farmer said. Hayes suggested that perhaps the coalition could do a presentation at the school.

“Just invite us. We’d be glad to come,” she said.

Hamden's Olin Powder Farm sees first tests in years, but more studies needed to uncover contamination, officials say

By Austin Mirmina, Staff Writer May 27, 2024 – New Haven Register

HAMDEN — Olin Powder Farm recently underwent its first environmental testing in years, but more studies are needed to uncover the extent of contamination at the 102.5-acre site before it can become valuable open space for residents, officials said.

The privately owned property in southern Hamden has been the subject of remediation efforts for nearly four decades.

Winchester Repeating Arms, a defunct New Haven gun manufacturer, mainly used the property, also called Six Lakes, to store gunpowder and ammunition in concrete bunkers from the early to mid-1900s. The company also used it for bulk disposal and burning of waste, including batteries, powders and shotgun shell casings.

Today, Olin Powder Farm has at least seven "areas of concern" that contain levels of contamination exceeding state-required standards for both soil and groundwater, John Duff, an environmental analyst at the state Department of Energy and Environmental Protection, said last week, citing the results of a recently completed study on the Putnam Avenue parcel.

In some of those affected areas, Duff said, the contamination levels have decreased over time. He also said the newly acquired data does not suggest that pollutants from the property are traveling into the nearby public water supply.

The results supported many of DEEP's previous findings showing contamination at Olin Powder Farm, Duff said. The site has not been thoroughly studied since 1988, two years after its owner, the Olin Corp., signed a consent order with the then-state Department of Environmental Protection to investigate and remediate the property.

"What we got was a lot more data, updated data," Duff said. "But it doesn't quite give us the needed detail to begin cleanup because we really need that three-dimensional approach.

"Additional investigation activities really need to be done to get a full picture of the entire impact," he added.

Though more work is required, the latest study marks another step forward in the effort to restore a property that residents and town officials have said they would like to see become open space.

From the early 2000s to around 2015, remediation of Olin Powder Farm was put on the back burner as its owner and DEEP shifted their focus to cleaning up contaminated soil in the town's Newhall neighborhood, which they considered a "much higher priority" due to its potential impacts on human health, Duff said.

According to the report, Olin will perform further studies on the property, including more groundwater sampling, unearthing the extent of soil and groundwater impacts, and locating other potential areas of concern.

"Upon CT DEEP's review and approval of the recommendations in this report, a finalized work plan will be submitted to CT DEEP for review and approval," the report states.

Duff said he expects Olin's future work to "add to the investigation that they've already performed." The analyst said he will ask the company to "go outside the boundaries and begin taking a look" at other areas that might be contaminated.

"I think you can get the idea that this is a challenging site, and it's going to take a lot of time," he said.

Look Out for Jumping Earthworms!

Penn St Extension website – March 2024

Jumping worms, also called crazy worms, are a relatively new invasive species from Asia but are rapidly spreading across the United States. They can be found in the Southeast, along the Eastern Seaboard, and in the mid-Atlantic, Midwest, and some Northwestern states.

There are still native species of earthworms in a few areas of North America, but in states where glaciation occurred, the native species were wiped out. Forests developed without them, but in time European earthworms appeared and began to burrow through the soil. As the tunnels were created, the earthworms mixed soil components and improved air and water

movement. Unfortunately, both native earthworms and European nightcrawlers are now being displaced by the destructive jumping worms.

These invasive worms are members of the genera *Metaphire* and *Amyntas*. They live in the organic matter or the topmost layer of soil. This upper layer of organic matter protects the soil from erosion. Many of the tree roots establish in this duff layer of the forest floor, and wildflowers grow. Jumping worms are ravenous feeders that quickly consume the organic matter and degrade the soil. Nutrients from their castings are rapidly released, with a small amount actually reaching the roots of plants. During heavy rainstorms, the nutrients are quickly lost, and the soil may be unable to support plant growth. There is only bare soil where there was once lush vegetation and wildflowers. When such a disturbance happens, it provides an opportunity for an invasive plant species, such as garlic mustard or stiltgrass, to move in. The structure of the soil is also damaged, and often, there will be voids under tree roots that are near the surface of the soil.

Jumping worms are an annual species—the adults die after the first freeze. The cocoons, which are about the size of a mustard seed, will survive the winter and hatch in mid-April after temperatures reach 50°F for a consistent period. One worm can produce many cocoons without mating. While the cocoons can survive winter temperatures, the hatchlings cannot survive freezing temperatures.

How do you know if you have Asian earthworms?

One telltale sign of an infestation is a very uniform, granular soil created from worm castings, the nutrient-rich soil that the worms leave behind. The texture of this soil is often compared to coffee grounds.

When you scratch the top layer of soil, you will see the worms thrashing about with an erratic, snakelike movement. These worms, which can reach 6 inches in length, are much more active than European nightcrawlers.

If you examine a worm close-up, you will notice the prominent band around the body of the worm called the clitellum, where cocoons are produced. On a jumping worm, the band completely encircles the body, is milky white to light gray, and is flush with the body. On European nightcrawlers, the clitellum is raised and reddish-brown in color and does not wrap entirely around the body.

How can you prevent jumping worms from invading our forests and landscapes?

It is very difficult to remove an invasive species once it is well established in an ecosystem, so the focus must be on preventing the spread of jumping earthworms. The cocoons, which are very small and difficult to see, can be easily introduced to your garden in compost, bark, or leaf mulch or when swapping plants with friends.

Consider reducing the amount of organic matter that you add to your garden each year. Most importantly, when purchasing bulk mulch or compost, use a reputable producer that has heat-treated the material to a temperature of 130°F for at least three days to destroy the cocoons. The other option is to purchase bagged mulch.

Check any plants that you bring into your garden for the distinctive coffee ground-like soil. If present, throw out the plant, or remove all soil and rinse the roots thoroughly before bringing the plant into your garden.

What to do to control jumping worms?

Research is currently being conducted on invasive worms at the University of Wisconsin, the University of Minnesota, and Cornell University. Several practices do show some promise of control. Once you have identified jumping worms in your landscape, you will need to eliminate both the cocoons and the worms.

If you have a small population of jumping worms, handpick and destroy adult worms by bagging them and throwing them in the trash. Brad Herrick, an ecologist, and researcher at the University of Wisconsin Arboretum recommends making a mustard solution of one-third cup of dry mustard in one gallon of water and drenching the area. The solution will irritate the worms and bring them to the soil surface, where you can easily remove them.

While research is ongoing, abrasive materials such as biochar (ground-up charcoal) and diatomaceous earth (fossilized diatoms) may show some promise in killing adult jumping worms. Incorporate one of these products into the infested soil to the depth where the worms are located. Worms that come in contact with the materials will be adversely affected.

It is important to also destroy jumping worm cocoons. The cocoons are sensitive to heat and can be destroyed with clear plastic solarization. In late spring or summer, cover moistened soil with a sheet of transparent polyethylene for two to three weeks or until the soil temperature exceeds 104°F for at least three days.

Diligence in following the preventive measures and implementing control methods for both the cocoons and adult worms can impact the health of your soil by eliminating these destructive invasive worms.

Sixth graders from a CT middle school head to the woods to combat the spread of Lyme disease

By Jamila Young, Staff Writer May 31, 2024 – New Haven Register

TOLLAND — Walking into the woods of the Becker Conservation Area, 12-year-old Aidan Cooley wishes he had dressed more appropriately.

With his pants tucked into his socks, he second-guessed not putting on a long-sleeve shirt and worried that the pest he and his classmates were trying to eradicate would make its way through the holes in his hat.

Aidan said he's never come in contact with a tick and wasn't ready to do so on Wednesday, as sixth graders from Tolland Middle School continued their work of ridding the town of the barberry plant, which is used as a habitat by white-footed mice that can carry Lyme disease-infested ticks.

With experts warning of a higher number of ticks this season due to the increasingly warmer winters, the students, led by science teacher Faye Sleeman, have been going out to the conversation area in teams to pull out barberry plants which, according to the University of Connecticut College of Agriculture, can grow up to six feet in height. The hope is that the fewer the barberry plants, the fewer mice and ticks.

"We're solving real-world problems with real-world solutions, and that's really where we're headed," Sleeman said. "It's important for them to get their minds around that and learn how to plan for that, learn how to do it, learn how to work a shovel or clippers."

Using the tools and gloves that were made available to them, the students trekked through the conservation trail — with the guidance of the Tolland Conservation Commission members and Tolland Conservation Corps members — in search of the barberry plant, which they cut at the stem. The students then found an available area to add other native plants such as highbush blueberry, silky dogwood, buttonbush, and spicebush — plants that don't attract mice and ticks.

Conservation Commission Chairwoman Jane Simao said that the native plant types were a recommendation from New England Wetland Plants Inc.

"They all like wet feet and shade," Simao said of the plants. "We need plants that don't mind getting their feet wet, and can tolerate shade, and also are good for our native wildlife — either birds or insects."

During their hike Wednesday, sixth graders Cole Matchett and Finnley Murray worked together to plant a silky dogwood. Cole dug the hole and Finnley planted the dogwood. Together they filled in the area with soil and watered the plant.

Cole said that he's had experience with gardening before. "Sometimes I plant at my house," he said.

According to the Centers for Disease Control and Prevention, about 476,000 people are treated for Lyme disease annually, but only about 35,000 cases are reported each year in part due to diagnostic errors and unnoticed infections.

The disease can cause chronic neurological, cardiac, or arthritic symptoms, sometimes lasting years, if not treated with antibiotics.

About 30 percent of ticks in Connecticut are infected with the bacterial cause of Lyme disease and about 6 percent of ticks in the state also carry another pathogen.

Through their work in the classroom, the students are learning about the cause and effect of Lyme disease. Aidan said that before learning about it at school, he thought Lyme disease was just "a regular sickness."

"Then I found out in the later stages, it's different," he said.

"This project is all about science in the real world," Simao said. "The students have been learning about Lyme disease in school and what they can do to help reduce the spread of Lyme disease."

Though he said it's a good idea to get outside and enjoy nature, Aidan shared a way to avoid getting Lyme disease.

"Just don't really go in the woods too much, and clear a trail," he said.