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

AGENDA

Regular Meeting of Wednesday, November 10, 2021 at 5:30 p.m.

1. Safety Moment
2. Approval of Minutes – October 13, 2021 meeting
3. Biocontrol of Swallowworts: Lisa Tewksbury and Gail Reynolds
4. Updates on other land and RWA properties, including invasive species update
5. Other Land items
6. Set Calendar Year 2022 Meeting Dates
7. Member to attend November 18, 2021 RWA Meeting – J. Oslander
8. Next Meeting: Wednesday, December 8, 2021 at 5:30 p.m.
9. Adjourn

**Members of the public may attend the meeting via remote access. For information on attending the meeting and to view meeting documents, please visit https://www.rwater.com/about-us/our-boards/board-meetings-minutes?year=2021&category=1435&meettype=&page=. For questions, contact the board office at 203-401-2515.

Topic: RPB Land Use Committee Meeting

Time: Nov 10, 2021 05:30 PM Eastern Time (US and Canada)

Join Meeting *(via conference call)*

Dial by your location

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Meeting ID: 886 8535 7073

Passcode: 829007

For more information, contact the board office at 203-401-2515 or by email at jslubowski@rwater.com

SAFETY MOMENT

YOU CAN PREVENT CARBON MONOXIDE EXPOSURE – NOVEMBER SAFETY

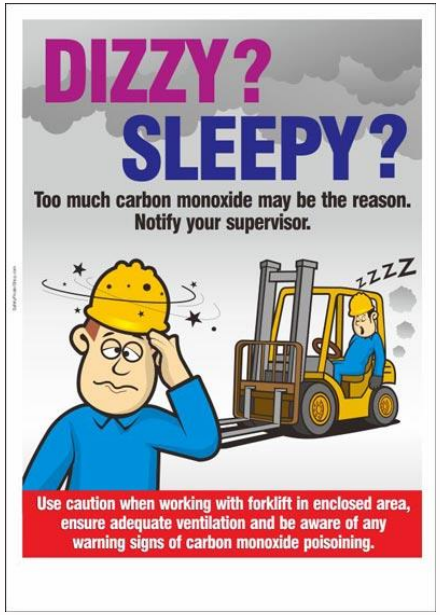
Check or replace carbon monoxide batteries twice a year: when you change the time on your clocks each spring and fall. Replace smoke alarm alkaline batteries at least once a year. Test alarms every month to ensure they work properly.

- **Do** have your heating system, water heater and any other gas, oil, or coal burning appliances serviced by a qualified technician every year.
- **Do** install a battery-operated or battery back-up CO detector in your home and check or replace the battery when you change the time on your clocks each spring and fall. If the detector sounds leave your home immediately and call 911.
- **Do** seek prompt medical attention if you suspect CO poisoning and are feeling dizzy, light-headed, or nauseated.
- **Don't** use a generator, charcoal grill, camp stove, or other gasoline or charcoal-burning device inside your home, basement, or garage or near a window.
- **Don't** run a car or truck inside a garage attached to your house, even if you leave the door open.
- **Don't** burn anything in a stove or fireplace that isn't vented.

Service – Teamwork – Accountability – Respect – Safety

Tap Into Safety

Regional Water Authority



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

Regional Water Authority

UNAPPROVED DRAFT

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

Minutes of October 13, 2021 Meeting

A 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, October 13, 2021 at Lake Saltonstall, 100 Hosley Avenue, Branford, Connecticut. Chair Betkoski presided.

Present:	Committee Members:	P. Betkoski, P. DeSantis, B. Eitzer, R. Harvey, M. Horbal, M. Levine, G. Malloy, J. Oslander and J. Mowat Young
	Authority:	C. LaMarr
	Management:	L. Bingaman, T. Norris and J. Triana
	RPB Staff:	J. Slubowski

Chair Betkoski called the meeting to order at 5:00 p.m. He reviewed the Safety Moment distributed to members.

On motion made by Mr. Malloy, seconded by Mr. Eitzer, and unanimously carried the Committee approved the minutes of its September 8, 2021 meeting.

Mr. Triana, the RWA's Real Estate Manager, provided an update of additions to the RWA's recreation program, which included:

5 Kayak rentals
Shipping container for patrol boat
New fish shack

Mr. Triana stated that boating rentals are down from last year when the pandemic was at its peak and have since dropped to prior years' averages.

Discussion took place regarding foot traffic, mandates, and signage at Lake Saltonstall.

Update on *The Land We Need for the Water We Use Program* – J. Triana, the RWA's Real Estate Manager, reported:

Reservoir Levels (Percent Full)

	Current Year	**Previous Year**	**Historical Average**	**Drought Status**
September 30, 2021	89%	68%	68%	None

Rainfall (inches)

	Current Year	Previous Year	Historical Average
September 2021	7.99	2.99	3.77
Fiscal YTD (6/1/21 – 9/30/21)	21.50	11.43	15.17

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

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

- Cheshire – Corresponded with property owner of 56+/- acres.
- Madison – Corresponded with property owner of 19+/- acres.
- Madison – Corresponded with property owner of 23+/- acres.
- North Branford, Beech St. and Pumps La. properties (NB 4 and NB 4A) – Authorized new appraisals of the two pieces that are part of land unit NB 4.
- Guilford and Madison (GU 21 and MA 2A) – Discussed Class III land with member of the Guilford Sportsman Association.

Rental houses:

- Hamden, 95 Ives St. (HA 13) – Compiled material for the bid, but await amendments from Murtha.
- Hamden, 233 Skiff St (HA 9A) – Town stated updated survey was fine. They would start condemnation procedure. Sent them the property description to use.
- Woodbridge, 1029 Johnson Rd. – Received plans from the Tarlowski's for the work on the house.
- Orange, 499 Derby Ave. – Received plans from the Corjuc's for the work on the house.

Forestry Update

- Guilford – West of Sugar Loaf ash salvage (GU 4) – 40% complete
- Killingworth - East Hammonasset Leaf Screen Thinning, (KI 4) – 25% complete.
- Hamden - Overstory removal and Tornado Salvage, (HA 36) – Not started yet.
- Madison - Nathan's Pond Slash Wall Harvest (MA 6) – **75% complete.**
- Seymour - Silvermine Road Slash Wall Harvest (SE 9) – Awarded contract. Not started yet.
- Killingworth - N. Chestnut Hill Patch Cuts, (KI-6) - Marking Complete, Job out to Bid.

  - Hosted and presented to Yankee Society of American Forester's meeting on RWA property in Madison. 50+ attendees from MA, RI, NY, and CT.
  - Worked with NRCS in Madison to expand soil pits intended for the measurement of organic carbon in the soil.
  - Ordered Christmas trees for planting next spring.
  - Completed necessary timber harvest notifications for 2021-03 (Guilford – Menunketuc).

Recreation

- Storage container was delivered to Lake Saltonstall to house the patrol boat.
- Held history walk at Maltby Lakes with 25 participants.
- Astronomical Society cancelled the planned star gazing event in October due to pandemic.
- The Water Wagon attended three events.

	September		August	
	2021	2020	2021	2020
Permit Holders	5,684	5,711	5,926	5,615

Special Activity Permits

- CT Dept. of Energy & Envir. Protection Fisheries Division (Christopher McDowell and designees) -, Boat night electroshocking to access the lake's fishery, Lake Gaillard (9/7/2021 – 10/7/2021).
- Dog Gone Recovery Volunteers (Melanie Heltke and designees) - To locate a missing dog last seen in the woods at the area of Big Gulph (9/10/2021-10/10/2021).

- Univ.of New Haven Army ROTC Program Coordinator (Robert Clark) - Squad Tactical and Platoon Tactical Training - 1955 Litchfield Turnpike/West River Training Area, Woodbridge (9/13/21-9/13/22).
- CT Dept. of Energy & Envir. Protection Wildlife Biologist (Dr. Devaughn Fraser) - acoustic monitoring of bats to determine species occupancy of hibernacula and species presence/bat activity in Fall, Spring, and Summer to help inform tree management activities, Lake Gaillard (10/1/2021-10/01/2022)
- Save the Sound (Ms. Briana Costello) – volunteer clean up captain, trash cleanup along public road and residential debris removal along access road to prevent it from entering the river and flowing to Long Island Sound, 255 Rock Street, East Haven, CT, (9/18/2021)
- Southern Connecticut State University (Michael J. Maloney)-looking to set mesh minnow traps in several ponds in Madison, transport the wood frongs that swim into the traps to the lab in New Haven for tests (strength, jump distance, etc.) then return the frogs to the ponds where they came from, Rt. 79 north of the traffic circle and Summer Hill Road, (09/17/2021-09/17/2022).
- Resources in Search and Rescue, Inc.-(Ms. Celeste Robitaille and designees)- Training of Search and Rescue K9 teams to locate lost or missing individuals, RT 42 Swamp southeast of RT 42 Bethany; (09/17/2021-09/17/2022)
- Robert Uhl - photography for purpose of documenting CT Waterfalls; south of Falls Rd. in Bethany, along Hopp Brook; (9/27/21-10/4/21).

<u>Other items</u>

- Encroachments/agreements –
    - Agricultural agreements – Spoke to Galgano about use of one of the Downs Rd. fields in Hamden. Replied to another potential farmer.
    - East Haven, 167 Saltonstall Parkway (Route 1) (EH 7) – Spoke to neighbor about the encroachment of Lucido. She claimed that we did something to exacerbate flooding in her yard. Installed fence along property line. Observed car parked antagonistically in front of our property. Murtha trying to contact their attorney and insurance carrier.

- Invasive plants – Got quotes from Charter Oak for clearing fields on Downs Rd., Hamden and Sugarloaf recreation area, Guilford. Recorded herbicide plot data in Prospect. Installed two Spotted Lanternfly traps on the Saltonstall ridge to monitor for the invasive pest. Discussed water chestnut removal and disposal with Branford Land Trust staff regarding a pond on BLT property that drains on to RWA property. Documented 4.4 acres of water chestnut harvested from furnace pond this season, using drone mapping that took place before and after the harvest. Though this collection covered roughly the same area as the collection from last year, there was significantly more material collected in comparison. The operator estimated that he harvested material on more like 5-6 acres of a pond, but it's difficult to determine that while you are in the pond collecting, and he might have determined this based on the volume of material. The removal of more material this year will hopefully lead to less material needing to be collected next year to make the same impact.

Invasive Species Documented/ Mapped (ac)	15.6 acres
Invasive Species Treated (ac/MH)	1.8 acres

- East Haven, Beach Ave. watermain – Contacted property owner who was not in favor of the easement to find out where the letter was from his lawyer. He said he would check.
- West Haven, Allings Crossing Rd. (WH 6) – Met with UI contractor and CP&D staff to discuss the matter. They will get a special permit from us to conduct their borings to see if there is the right base for the new poles.
- Deer hunt – The check-station volunteer acceptance and rejection letters were mailed to the volunteers. Started remarking the boundaries.
- Bethany, Simon dam – Corresponded with owners of dam between Lake Bethany and Lake Watrous. Conditions have not allowed us to cooperate with them like we did last year.
- Hamden, LWWTP bat boxes (HA 1) – Met with girl scout about potential locations for bat boxes.
- Prospect dam – Participated in discussion about the report about the Prospect dam.

At 5:21 p.m., Mr. Levine withdrew from the meeting.

The committee discussed board meeting dates for the calendar year 2022, updates to the Derby Tank project, and concerns regarding the Hop Brook Village Application.

The next regular meeting of the committee is Wednesday, November 10, 2021 at 5:30 p.m.

At 5:33 p.m., on motion made by Mr. Malloy, seconded by Mr. Horbal, and unanimously carried, the meeting adjourned.

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Peter Betkoski, Chairman

Evaluation of Field Releases of *Hypena opulenta*: a Biological Control Agent of Invasive Swallow-worts in New England

Lisa Tewksbury, Alana Russell

Dept. of Plant Science and Entomology

University of Rhode Island

Non-native Swallow-worts

Black Swallow-wort

(*Vincetoxicum nigrum*)

Native to Spain, France, and Italy

Pale Swallow-wort

(*V. rossicum*)

Native to southwest Russia and Ukraine

Swallow-worts

- Milkweed family (Apocynacae)
- Perennial, herbaceous plants
- Vining growth habit
- Wind blown seeds
- High tolerance and good plasticity to envir. conditions
- Monocultures shade out native plants and threaten habitat of endangered species (Lawlor 2000)
- Monocultures decrease Arthropod diversity and community composition (Cappucino 2005)
- Toxic to Livestock
- Potential competition in pastures with milkweeds, also confuse egg-laying Monarchs

Hypena opulenta (Christoph)

Background

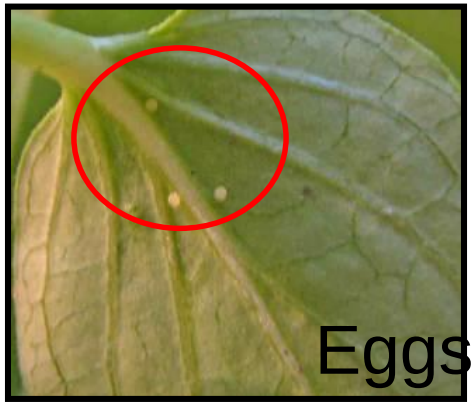
- Noctuidae: Hypeninae
- Recorded from Ukraine, Turkmenistan, Turkey, and Iran
- Host plants prev. unknown (before Aaron Weed's collection in 2006)

Hypena opulenta

Found in wooded ravines on pale swallow-wort in southeastern Ukraine, host plants previously unknown.

Biology

- Life cycle:
  - 5-6 weeks (20˚C)
  - 5 instars
- Multiple generations a year
- Overwinter as pupae in leaf litter or soil



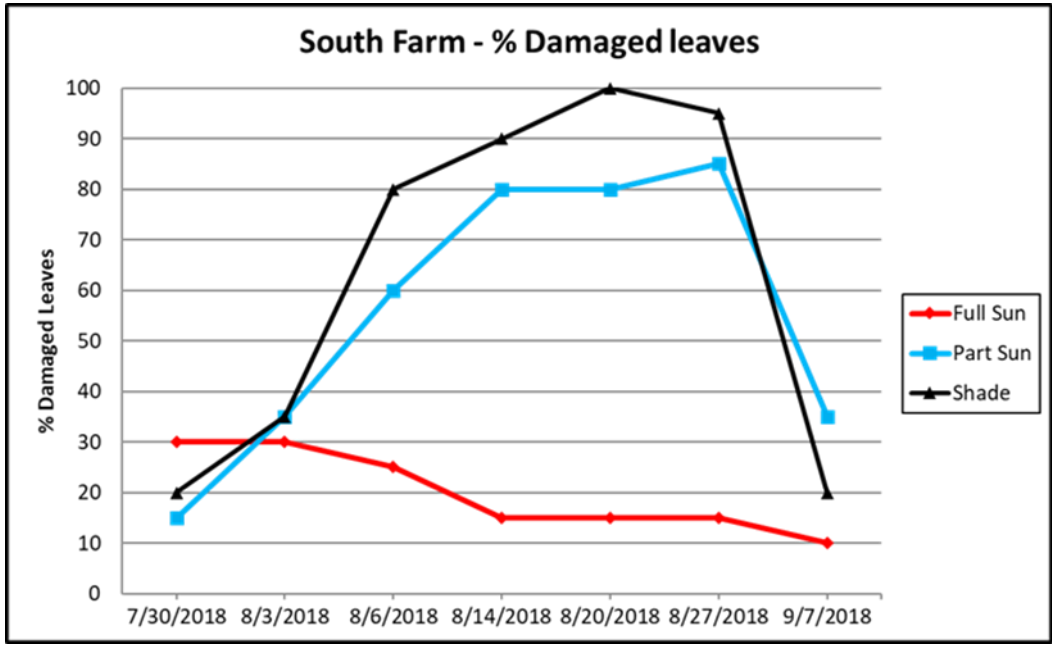
Host specificity

- Test plant list
  - Entire approved TAG list (79 spp.)
  - 48 species of Apocynaceae
    - Minus unavailable rare species
  - Included additional taxa with close phylogenetic relationship to herbivores
    - *Artemisia* spp./*Chrysolina a. asclepiadis*
    - Urticaceae/*Abrostola* and *Hypena*

Permit for Field Release – August 2017

Naushon, MA Release


Charlestown, RI – Sept. 2017


South Farm - % Damaged leaves
% Damaged Leaves
100
90
80
70
60
50
40
30
20
10
0
7/30/2018
8/3/2018
8/6/2018
8/14/2018
8/20/2018
8/27/2018
9/7/2018
Full Sun
Part Sun
Shade

Arnold Arboretum (MA)

Lessons Learned

- Improved performance of *H. opulenta* in the shade was suspected, but field releases have confirmed this.

- *Hypena opulenta* releases need to be earlier than we originally anticipated. Adults should be released mid-May to mid-June ideally.

- A second generation is only possible with very early releases (cutoff of daylength is 15 hours during larval stages)

- Larvae successfully disperse after adult cage removal

Unidentified Pathogen in RI/MA/(others?)

Isolated genera: *Cercospora, Colletotrichum*

Charlestown, RI 2019

Upper Surface

Lower Surface

Matt Tancos and Lisa Castlebury from USDA working on identification of pathogen; also getting assistance from Nathaniel Mitkowski at URI

Thank You!

Acknowledgements:
Current Funding Provided by USDA APHIS PPQ
Biological Control
Assistance from Coastal and Science and Engineering Fellows
Rebecca Donegan, Lexi Johnson, Karina Camacho as well as many URI students in the biocontrol lab.

Swallowwort Biological Control Project—Field Implementation

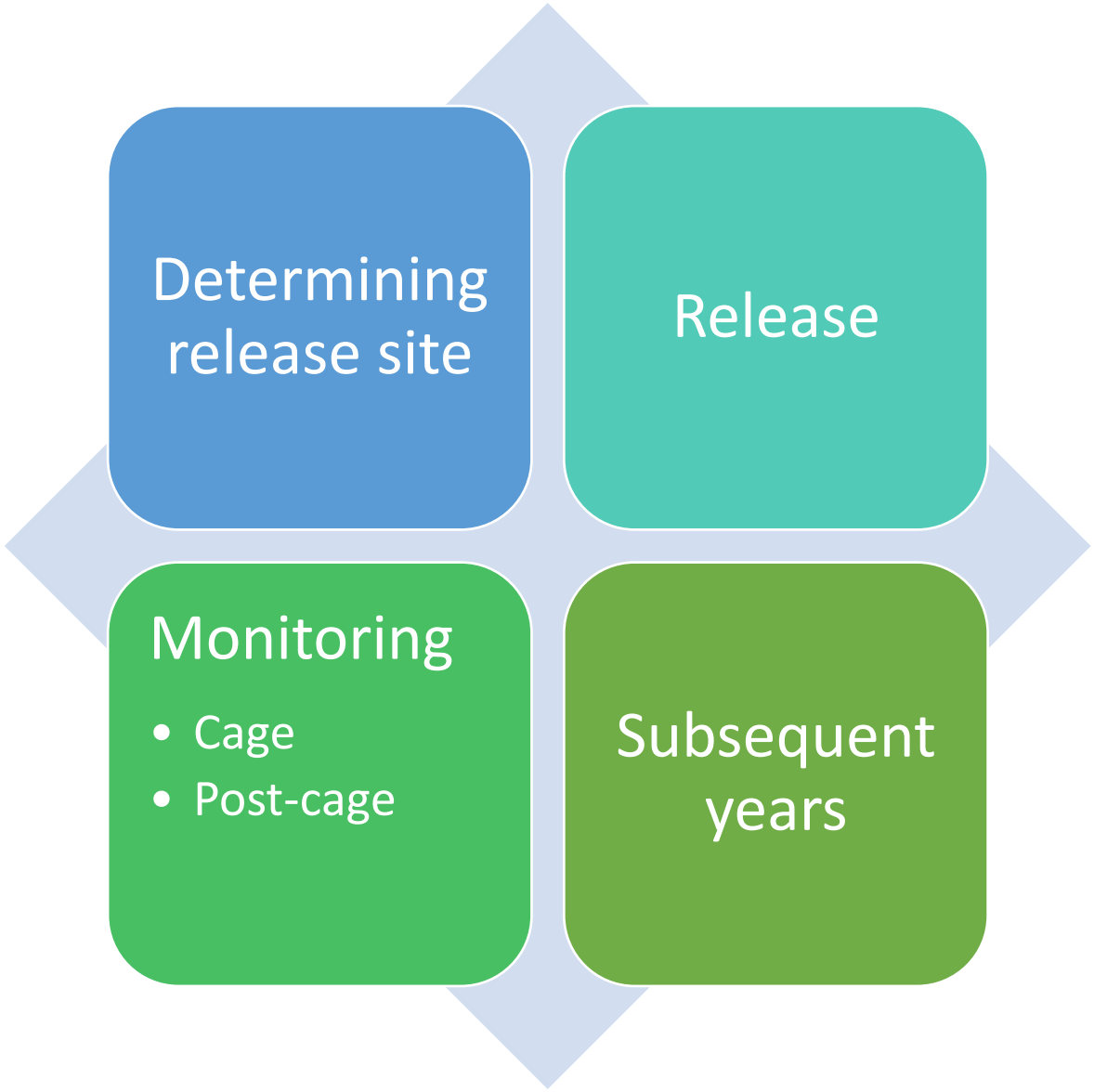
Gail K Reynolds, M.F.S.

UConn Extension

Pale Swallowwort
Vincetoxicum rossicum

Hypena opulenta later instar

Implementation



Determining Release Site

Criteria

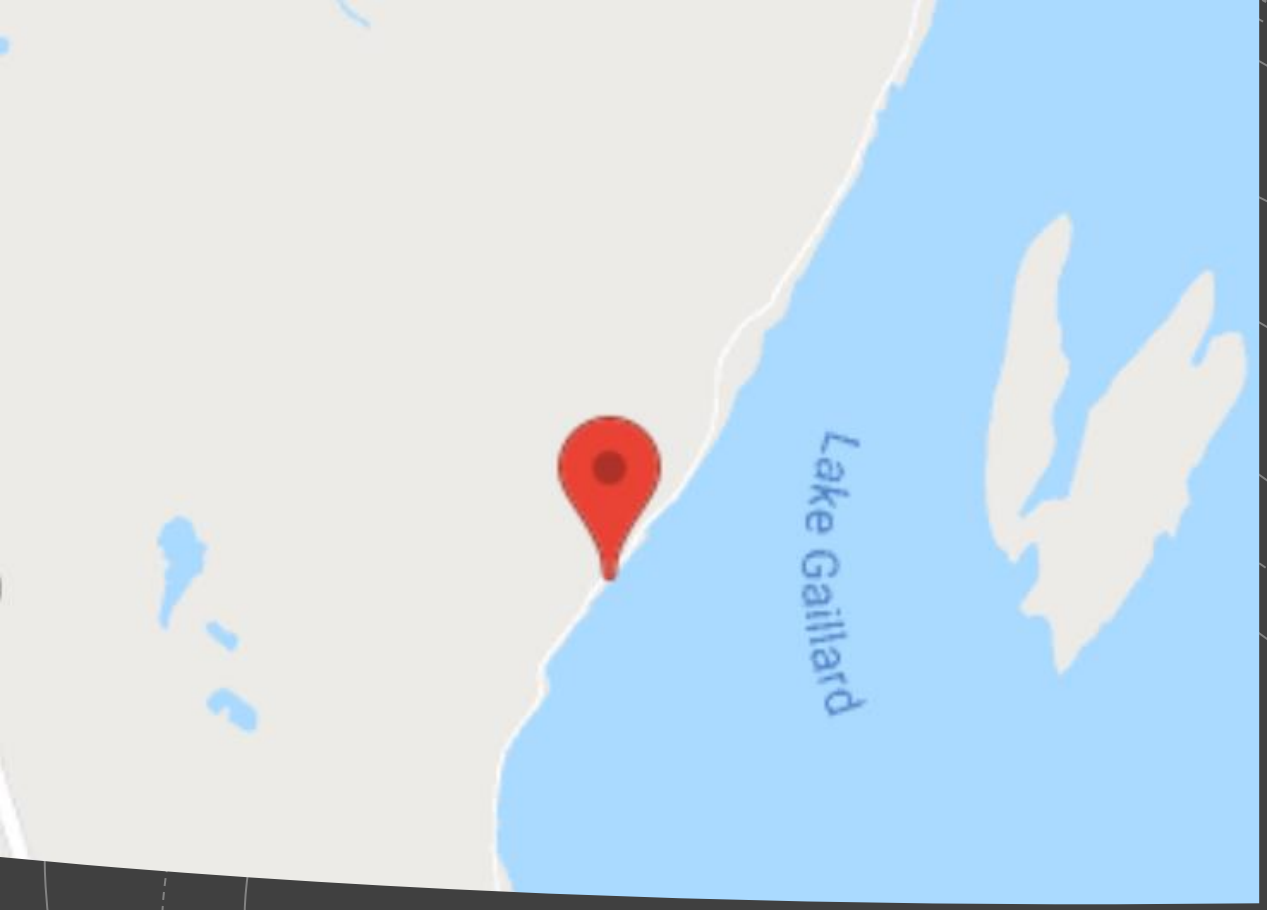
- Extensive black or pale swallowwort infestation
- Release site with field edge and dappled sun rather than direct sun

Regional Water had contacted URI in 2019

A post on the CT Land Trust listserv by Gail in 2020 also received a Regional Water Response

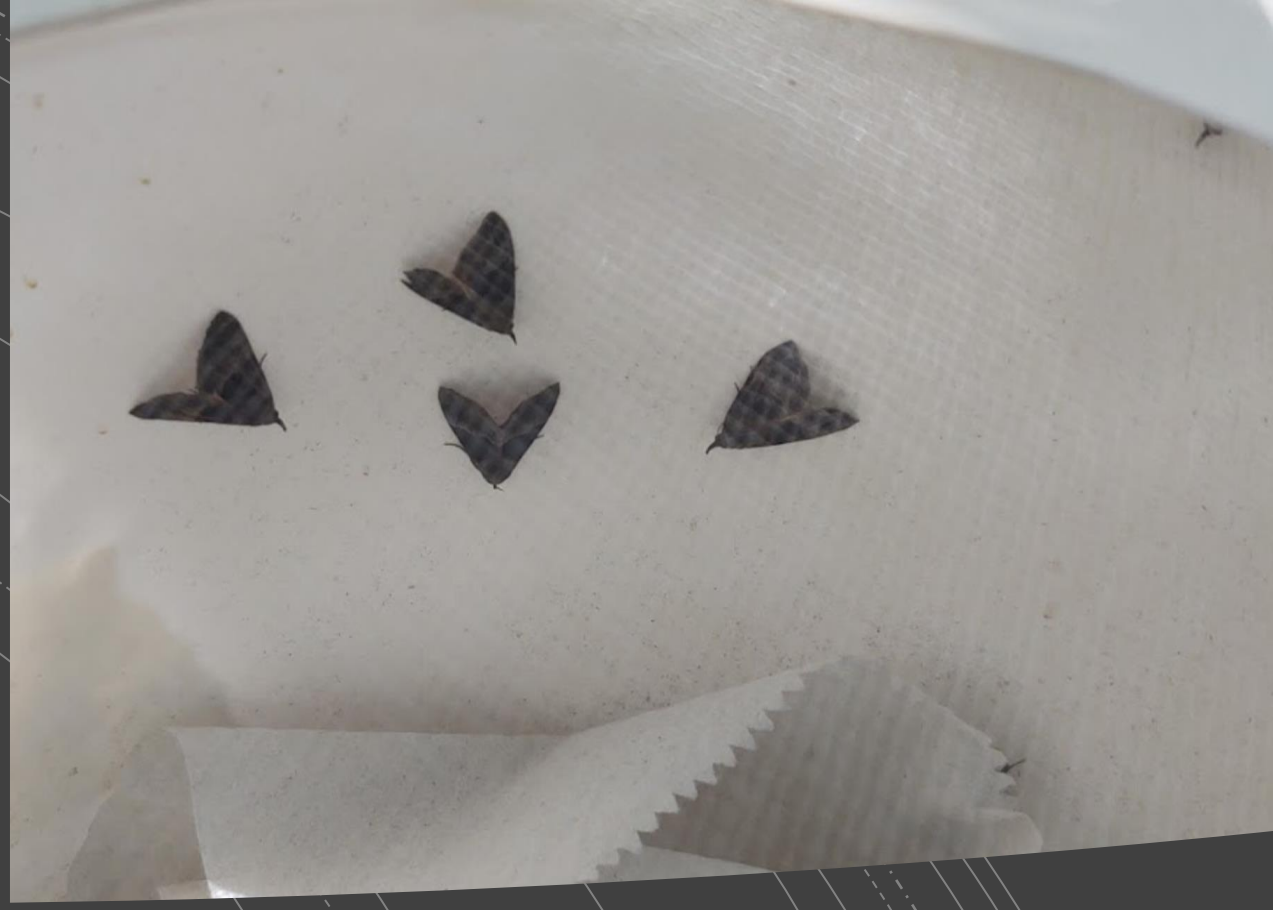
Gail met Josh Tracy for field visit in July 2020 and identified a potential release site in North Branford

Original Site Visit July 2020



2021 Implementation

- Gail applied for and received a RegionalWater permit for the activity
- Josh Tracy identified a site that he felt better met the project needs on the other side of Lake Galliard



Release

- Left: Putting the cage together
- Right: *Hypena opulenta* moths waiting to be released

Monitoring

- After the moths are released, the cage is checked weekly to gauge progress
- The moths mate
- The females lay eggs
- The eggs hatch
- The larvae feed on the swallowwort as they grow through their instars

Data Gathering

- Standardized data collection for each visit
- Environmental conditions also monitored via instrumentation

Early Monitoring

- Adults remain
- Eggs
- Very small caterpillars
- Light feeding

Subsequent Week

- Defoliation becomes more noticeable
- Even if the caterpillars are not seen, their frass indicates they are present and eating the swallowwort leaves

Time to Remove Cage

Subsequent Years

1

Visit site

2

Assess defoliation

3

Search for signs of *Hypena opulenta*

November 10, 2021
Land Use Committee Meeting

Reservoir Levels (Percent Full)

	Current Year	**Previous Year**	**Historical Average**	**Drought Status**
October 31, 2021	87%	65%	66%	None

Rainfall (inches)

	Current Year	Previous Year	Historical Average
October 2021	6.51	4.22	3.85
Fiscal YTD (6/1/21 – 10/31/21)	28.01	15.65	19.02

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

- Killingworth, 200 Little City Rd. (O'Hare property) – Deed and map filed on the land records. Submitted QFR and forestland 490 application to the assessor.
- Cheshire – Corresponded with property owner of 56+/- acres.
- Madison – Corresponded with property owner of 19+/- acres.
- Madison – Corresponded with property owner of 23+/- acres.
- North Branford, Beech St. and Pomps La. properties (NB 4 and NB 4A) – Received all the updated appraisals. Corresponded with NBLCT staff.
- New Haven, Rt. 80 PRV – Corresponded with New Haven BOE staff to re-start discussion about acquisition of an easement for the PRV on school grounds off of Barnes Ave.

Rental houses:

- Hamden, 95 Ives St. (HA 13) – Received final materials needed from Murtha and sent bid to Purchasing.
- Woodbridge, 1029 Johnson Rd. – Discussed Tarlowski's plans with Preservation Connecticut staff. Corresponded with Tarlowski about PC's suggestions.
- Seymour, 59 Rimmon Rd. – Approved request for work at the house by Kanzler.

Forestry Update

- Guilford – West of Sugar Loaf ash salvage (GU 4) – 40% complete
- Killingworth - East Hammonasset Leaf Screen Thinning, (KI 4) – 25% complete.
- Hamden - Overstory removal and Tornado Salvage, (HA 36) – Not started yet.
- Madison - Nathan's Pond Slash Wall Harvest (MA 6) – 75% complete.
- Seymour - Silvermine Road Slash Wall Harvest (SE 9) – Awarded contract. Not started yet.
- Killingworth - N. Chestnut Hill Patch Cuts, (KI-6) - Marking Complete, Job out to Bid.

  - Hosted a walk with DEEP in North Madison on RWA property for the Master Woodlands Program (35+ people)
  - Hosted an open Land Trust and legislator walk with CAES, DEEP, & UConn in North Madison (40+ people).
  - Met with Dr. Fraser from DEEP to set up acoustic monitoring stations for bats at Lake Gaillard.
  - Met with UConn remote sensing team to discuss projects for FY23.
  - Attended Guilford Inland Wetland Commission meeting for timber harvest 2021-03.

Recreation

- Climate change walk (Nicole) at Lake Saltonstall had 22 people.

- Forestry walk (Alex) with NBLCT at Lake Gaillard had over 50 people.
- Tree/shrub identification walk (Nicole) at Lake Gaillard for the North Branford Recreation Department with 18 people.
- The Water Wagon attended three events this month. It was brought to a fourth event, but upon arrival, recreation staff found out the event was not taking place and we were never notified.
- Boat rentals ended at Lake Saltonstall for the season and the docks were removed.
- 1900 walleye fingerlings were delivered to Lake Saltonstall.
- Lake Gaillard walk-a-thon fundraiser for the Branford Women's Club was held with 162 walkers participating. They made a donation to the Watershed Fund of over $800.

	October		September	
	2021	2020	2021	2020
Permit Holders	5,366	5,758	5,684	5,711

Special Activity Permits

- Resources in Search and Rescue, Inc.-(Ms. Celeste Robitaille and designees)-Training of Seach and Rescue K9 teams to locate lost or missing individuals, Lake Watrous and Lake Dawson, (10/13/2021-10/3/2022).
- Branford Community Television (BCTV) (Ted Ebberts) Rest stop for annual fundraiser "Tour de Branford" - Sugarloaf Parking Lot (11/7/21)
- Stantec Consulting Services – (Mr. Joelvito G. Villaluz, Structural Engineer)—take photos of completed bridge project for company use, Wepawaug Reservoir, (10/28/21 – 11/4/21).

Other items

- Encroachments/agreements –
    - Agricultural agreements – Signed license agreement with Galgano for the use of one of the Downs Rd. fields in Hamden. Replied to two other potential farmers.
    - Seymour, Maiden Lane – Aitkenhead indicated that he will be selling his property and will not renew the license agreement for parking.
    - East Haven, 167 Saltonstall Parkway (Route 1) (EH 7) – Provided all documentation to Murtha staff about what damage was done and was remediation was completed. Included invoices.

- Invasive plants – Charter Oak completed clearing fields on Downs Rd., Hamden. Documented or treated invasive populations in East Haven, Branford, Woodbridge, and Prospect. Recorded the final day of data collection from the Prospect stilt grass plots. Attended a zoom meeting with folks from UConn to discuss a drone project that would allow us to use LIDAR to measure regeneration in two locations that we are performing some clear-cut harvests surrounded by slash walls. Periodically checked on spotted lanternfly traps on the Saltonstall Ridge.

Invasive Species Documented/ Mapped (ac)	21.75 acres
Invasive Species Treated (ac/MH)	7.1 acres

- Deer hunt – Scouting period occurred. Continued marking boundaries. Hunt started on October 30th.
- East Haven, Beach Ave. watermain – Corresponded with Murtha asking for the draft easement and what remedies would be if we can't get complete agreement from property owners.

- Hamden, Olin property option – Alerted by HLCT attorney that Olin staff claimed we relinquished the option in 2005. Researched this and did not find any evidence of this. Reported what I found on Chaplik's emails to them.
- Bethany, Bear Hill Rd. partial discontinuance – Received documents from the town about the partial discontinuance of Bear Hill Rd. to motorized vehicles.

Attachments

- October 18, 2021 - The American chestnut was wiped out a century ago. Could it make a comeback? – NPR
- October 12, 2021 - Official: New Haven's Hillhouse high to be all remote Wednesday after water main break – NH Register
- October 14, 2021 - American bumblebees have disappeared from these 8 states. Now they could face extinction – USA Today

Upcoming Agenda Items

December 2021 – ?

The American chestnut was wiped out a century ago. Could it make a comeback?

October 18, 2021 - Jacob Fenston - WAMU

The American chestnut tree was once called "the redwood of the East" because of how huge it could grow. It was an amazing food source: each fall, the tree would drop an unbelievable bounty of tasty and nutritious nuts — feeding wildlife, livestock and people. The tree was wiped out a century ago by blight, but the American chestnut can still be found clinging to life in forests around D.C. and across the eastern U.S. It could make a comeback, thanks to modern science and a highly committed cadre of chestnut aficionados, including dozens of locals who volunteer their time and land in an attempt to bring the tree back from the brink of extinction.

American chestnuts were once among the most common trees in forests in the D.C. area, accounting for as many as one in four trees in some places. Nowadays, finding surviving chestnuts isn't easy — but a few hundred have been documented growing wild recently in the District, Maryland and Virginia.

In Rock Creek Park, a handful of American chestnuts can be found on the steep eastern ridge above the creek.

"This is a tree, I'm sure thousands of people have passed and never paid any attention to," says Gabriel Popkin, pausing at one of the chestnut trees. Popkin is a local science and environmental writer who leads occasional tree walks.

The tree he's stopped at is a completely unremarkable sapling, blending in with nearby beech and chestnut oaks, which have similar leaves. The chestnut is identifiable by its sharply saw-toothed leaves (beeches have much shallower serrations, while chestnut oaks have rounded serrations.)

This small tree is what is known as a stump sprout — a young tree growing from old roots.

"That's the tree trying to make another go at it," says Popkin.

When chestnut blight attacks, it girdles the tree's trunk, cutting off nutrients and killing everything above. But the roots can live on, repeatedly sending up new sprouts, only to have them knocked down after a few years. Nowadays, the "redwood of the East" very rarely grows large enough to flower and bear fruit.

'The Wail Of The Chestnut Tree Lover'

The story of the American chestnut's demise starts in 1904, at the Bronx Zoo in New York City. The zoo's forester found small orange-red dots on the bark of chestnut trees, and cankers encircling the trunks. Affected trees succumbed quickly.

By 1908, blight had made its way to the D.C. area, with reports coming in from Maryland and Virginia.

"All the chestnut trees in the United States are doomed to destruction," wrote the New York Times, as efforts to contain the blight were stymied. In just a few years, the chestnut blight had killed thousands of the valuable timber trees, an economic loss of $5 to $10 million. It was the "most rapid and destructive" fungus known to the world, according to the Times.

"The wail of the chestnut tree lover is heard from all parts of New York, Long Island and adjacent country," wrote the Times in another 1908 story, oozing with helplessness and distress. Experts at the New York Botanical Garden had received hundreds of letters, "containing almost piteous appeals for help from people whose trees were dying."

The pathogen had traveled over the oceans on shipments of imported Japanese chestnut trees. The Asian trees were blight resistant, but the fungus spread unchecked among the defenseless American trees. People tried all sorts of things to stop the spread: spraying with various chemicals that had worked on other pests, even cutting down mile-wide swaths of trees as a sort of firebreak against the fungus.

"Pretty quickly people realized there was just nothing to be done," says Popkin. "It was just this scene of total devastation."

By around 1950, an estimated 4 billion American chestnuts had been killed by the fungal blight.

But there are still likely millions of American chestnuts, sprouting from old roots, struggling for survival in forests throughout the D.C. region (and elsewhere in the eastern United States). The National Park Service documented living chestnuts in D.C.-area parks in a 2014 inventory.

"We found a surprising number," says NPS ecologist Liz Matthews, who worked on the project.

In Rock Creek Park, 20 trees were found. There were 27 along the George Washington Memorial Parkway, and 29 at Wolftrap. Catoctin Mountain Park, in Maryland, had the most trees: 98, including 4 that were flowering. One large tree was discovered, 78 ft. high, tall enough to reach the forest canopy.

But most trees were small, with an average trunk diameter of about 3 inches.

Matthews says the easiest way to find American chestnut sprouts is to look for co-occurring species. The presence of mountain laurel, in particular, is a good indicator chestnuts may be growing nearby. Another way to find chestnuts (and

report them when you do), is with the citizen science app iNaturalist, which currently has dozens of reports of chestnuts in the region.

"Once you start looking, you can't stop finding them," says Matthews. "We had interns working with us that summer we did the inventory and they got hooked."

'Nature Has Solved The Problem'

Bruce Levine, of Takoma Park, Md., also got hooked on chestnut trees after stumbling upon a few in the wild, about 25 years ago.

"I thought I had found the only chestnuts left," recalls Levine. He knew blight had wiped out the American chestnut, and didn't realize there were still survivors. "I went home and started Googling — I don't know if they had Google — I started Yahooing or something."

In his Yahooing, he came across the American Chestnut Foundation, which has been working to create a blight-resistant American chestnut tree for decades. Levine is now president of the Maryland chapter.

At a chestnut orchard operated by the group in Montgomery County, Levine shows off some of the progress. Most of the trees in the orchard near Sugarloaf Mountain are hybrids — a cross between American and Chinese chestnut trees — and are at least somewhat blight-resistant.

Levine points out his favorite tree — it's growing tall and straight like an American chestnut, but shows signs of good blight resistance. It's being attacked by the fungus, but it's fighting back.

"You see that it has these chestnut blight cankers on it, including a big one up at the top, but it's kind of superficial," says Levine, examining the tree's bulging bark.

Chinese trees have developed resistance to blight over millennia. Now TACF is attempting to transfer that trait into trees that are mostly American through a breeding program.

Breeding trees is not easy work. For one thing, it takes years before they're old enough to reproduce.

"This is not like corn where you get one or two crops a year," says Levine. "It's like 10 years a generation."

The orchards require lots of land, most of it donated, and volunteers to tend the trees. In Maryland alone, the foundation has more than 10,000 hybrid chestnut trees growing in 22 orchards, cared for by dozens of local volunteers tree-lovers. In Virginia, the foundation has another 14 orchards.

The trick is to create a hybrid tree with the tall growth habit of an American tree, so it can compete with the towering oaks, tulip trees and maples that now dominate eastern deciduous forests, but that also has the blight resistance of the lower-growing Chinese tree.

To do this, TACF begins with one American parent and one Chinese parent, creating offspring that are a 50-50 hybrid. Volunteers then "backcross" those hybrids, breeding them with pure American chestnuts, and only retain the most blight-resistant trees. This backcrossing is repeated for three generations, resulting in trees that are more than 90% American.

But Levine says blight resistance is turning out to be more complicated than originally thought, involving more genes. Starting this year, TACF is changing its procedures to try to speed up the process, weeding out weak trees earlier and only crossing the best parents with each other.

Levine is still optimistic about the breeding program. "It's a slow process, but it definitely will eventually work," he says. "Nature has solved the problem of chestnut blight."

It's just a matter of transferring nature's solution into American trees.

The First Transgenic Trees

Meanwhile — there's another, parallel effort to bring back the chestnut. Scientists at the State University of New York College of Environmental Science and Forestry in Syracuse successfully used genetic engineering to introduce a blight resistant gene from wheat into the tree. Journalist Gabriel Popkin has written about the project; he says it's a first for genetic engineering.

"This idea of using it to reintroduce a native tree, and really for noncommercial purposes — yeah, that's totally new. It sort of takes the GMO controversy and puts a whole new spin on it."

Bringing back a species that was wiped out before most people in this country were born may sound a bit like Jurassic Park. Genetically modified organisms are controversial, and some chestnut enthusiasts are opposed to GMO trees. But Popkin says it's hard to imagine the slow-growing chestnut turning into an unstoppable superweed.

"If the American chestnut started reproducing out of control, most people would probably think that's a good thing. It's a great tree," he says. "I thought about it for a while, and it was hard to really get myself feeling too anxious about it."

The transgenic tree is currently under review by the U.S. department of agriculture. Even if it wins approval there, there are numerous other agencies that would have to sign off before GMO trees could be introduced.

Aside from that, reintroducing the American chestnut comes with a host of other challenges — whether it's a GMO tree, or one created through the TACF breeding program.

NPS ecologist Liz Matthews says one issue is that other trees have taken the place of the chestnut in the woods around D.C.

"These forests are not the same forests that occurred in 1940, when the chestnut declined," Matthews says. "All sorts of things have happened: climate change; the forest has undergone succession — so a different group of species. It would be a real challenge, I think, to reintroduce the American chestnut."

Still, the prospect of eventually bringing back the iconic tree offers a glimmer of hope on a warming planet beset by species extinctions. Some day, forest floors in D.C., Maryland and Virginia could again be blanketed by spiky chestnut burrs, feeding squirrels and raccoons and human foragers.

Official: New Haven's Hillhouse high to be all remote Wednesday after water main break

Oct. 12, 2021 – NH Register

NEW HAVEN — Due to a water main break outside of the school, Hillhouse High School will be fully remote on Wednesday, October 13, a school district spokesman said.

All staff and students are to log on virtually during regular school hours, according to district spokesman Justin Harmon.

Harmon the South Central Regional Water Authority is doing the repairs. He said the district does not yet have a repair estimate.

American bumblebees have disappeared from these 8 states. Now they could face extinction.

Asha C. Gilbert - USA TODAY – Oct 14, 2021

Dwindling populations of the American bumblebee and their complete disappearance from eight states has led to a call for the bee to be placed under the Endangered Species Act before they face extinction.

Maine, Rhode Island, New Hampshire, Vermont, Idaho, North Dakota, Wyoming, and Oregon each have zero or close to zero American bumblebees left, according to a petition by the Center for Biological Diversity and Bombus Pollinators Association of Law Students.

"The American bumble bee was once the most common bumble bee species in North America, but without immediate action to protect it under the ESA, it will continue its alarming decline towards extinction," the petition authors wrote.

Over the last two decades, the American bumblebee population has decreased by 89% across the U.S. New York had a decline of 99% and they disappeared from the northern part of Illinois that has seen a 74% decrease in population since 2004, the petition said.

Climate change, pesticides, disease, habitat loss and competition from honey bees are listed as driving the bee to extinction.

'In rapid decline': Australia has lost 30% of its koalas in just 3 years, foundation says

Expect extinction numbers to grow: These are some of the most endangered animal species in each state, from sea turtles to dragonflies

The petition was submitted to the U.S. Fish and Wildlife Service on Feb. 1 for review to determine if the insect could be listed as an endangered species and if a critical habitat could be designated for the bee under the Endangered Species Act.

A 90-day review conducted by the U.S. Fish and Wildlife Service found substantial evidence that the listing of the American bumblebee under the Endangered Species Act may, in fact, be warranted.

The review now heads to a 12-month status review where the U.S. Fish and Wildlife Service will evaluate the potential threat to the species.

“This is an important first step in preventing the extinction of this fuzzy black-and-yellow beauty that was once a familiar sight,” Jess Tyler, a Center scientist and petition co-author, said in a statement. “To survive unchecked threats of disease, habitat loss and pesticide poisoning, American bumblebees need the full protection of the Endangered Species Act right now.”

The Bombus Pollinator Association of Law Students, or BPALS, is a group of 14 students from Albany Law School who collaborated with the Center for Biological Diversity, a nonprofit organization that works to protect endangered species, to file the petition.

The loss of the insect could cause serious repercussions to the environment and crop production due to them being essential pollinators in agriculture. If the American bumblebee is added to the endangered species list, it will join the rusty-patched bumblebee.

If granted federal protection, anyone found to have killed or harmed the bee could face up to $13,000 in fines.

Representative Policy Board

Land Use Committee

Calendar of 2022 Proposed Meeting Dates

(Meeting dates are the second Wednesday of each month, unless otherwise indicated below)

Land Use
January 12 @ 5:30 pm
February 9 @ 5:30 pm
March 9 @ 5:30 pm
April 13 @ 7:00 pm *
May 11 @ 4:30 pm
June 8 @ 5:30 pm
July 13 @ 5:30 pm
August 10 @ 5:30 pm
September 14 @ 4:30 pm
October 12 @ 4:30 pm
November 9 @ 5:30 pm
December 14 @ 5:30 pm

**Time subject to change*