

**Representative Policy Board
Land Use Committee
South Central Connecticut Regional Water District
Place: Waite St. Garden, Hamden (Park along Gordon Street)***

AGENDA

Regular Meeting of Wednesday, May 11, 2022 at 4:30 p.m.

1. Safety Moment
2. Approval of Minutes – April 13, 2022 and April 18, 2022 meetings
3. Special Topic: Pollinator Pathways Gardens: Ron Walters
4. Updates on other land and RWA properties, including invasive species update
5. Other Land items
6. Next meeting – Wednesday, June 8, 2022 at 5:30 p.m.
7. Adjourn

***In the event of rain *ONLY*, the meeting will take place in-person at the South Central Connecticut Regional Water Authority, 90 Sargent Drive, New Haven.**

SAFETY MOMENT



PREVENT BACK INJURIES

According to the Bureau of Labor Statistics (BLS), back injuries account for one of every five injuries and illnesses in the workplace. Many of these injuries are associated with manual materials handling tasks. BLS further states that re-aggravation of a previous injury almost always results from a new incident which involves the employee (i.e. slip, twist, trip, extended reach). Lifting-related injuries include sprains, strains, neural related, neuromuscular related injuries and/or bone related injuries. These injuries can affect any part of the body, but the majority occurs to the lower back. The bottom line is that **YOU** bear the responsibility for preventing back

Recognize the 5 Leading Back Injury Risk Factors!

- Poor posture
- Poor physical condition
- Improper body mechanics
- Incorrect lifting
- Jobs that require high energy

Be Willing to Change Your Posture Habits!

When you assume a neutral posture, your body will find its natural balance.
Adjust your worksite to fit you before you begin the task.



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.

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

Minutes of April 13, 2022 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, April 13, 2022, at the Madison Slash Wall, Route 70 and Durham Road, Madison, 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: K. Curseaden

Management: S. Lakshminarayanan and J. Triana

Chair Betkoski called the meeting to order at 5:30 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 March 9, 2022 meeting, as corrected.

Mr. Triana, the RWA’s Real Estate Manager, introduced Mr. Cordes, the RWA’s Forester II, who provided an update of the Madison slash wall timber update, which included:

- Slash wall harvest
- Gate installation
- Maintenance
- Intrusion preventative
- CT Agricultural Experiment Station and Natural Resources Conservation Service meetings

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
March 31, 2022	97%	96%	91%	None

Rainfall (inches)

	Current Year	Previous Year	Historical Average
March 2022	2.49	3.43	4.30
Fiscal YTD (6/1/21 –	40.70	33.59	38.35

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

- Cheshire, adjacent to Bis property – Town Attorney indicated we would need a certificate of title to complete our claim. Murtha staff emailed with 3 options. Set up meeting with Town Attorney to discuss.
- North Branford, Beech St. and Poms La. properties (NB 4 and NB 4A) – Surveys completed by Bennett. Submitted to town planner who wanted to see draft deeds before allowing splits. Submitted draft deeds by the end of the month.
- Branford, Brushy Plain Rd. (BR 7) – Met with Branford First Selectman and BLT members to walk the property.

Rental houses:

- Hamden, 95 Ives St. – Working on fixing the assessor's record. By end of the month, assessor's office said the matter was resolved, but the polygon has not been split on their GIS website. Asked Murtha about getting copies of the deed for the vault.
- Hamden, 233 Skiff St. (HA 9A) – Talked to Assistant Town Attorney and he was still non-committed to providing us with condemnation documents for what property and rights they need.
- Woodbridge, 1029 Johnson Rd – Noticed that the Tarlowski's have started demo at the house.

Forestry Update

- Killingworth - East Hammonasset Leaf Screen Thinning, (KI 4) – 25% complete.
- Hamden - Overstory removal and Tornado Salvage, (HA 36) – Not started yet. Looking to grant extension.
- Madison - Nathan's Pond Slash Wall Harvest (MA 6) – 95% complete. Slash wall complete and awaiting gate installation.
- Seymour - Silvermine Road Slash Wall Harvest (SE 9) – **100% complete. Gate 50% complete.**
- Killingworth - N. Chestnut Hill Patch Cuts, (KI 6) – Not started yet.
 - Attended meeting at the Madison slash wall harvest with CAES and NRCS staff.
 - Coordinated delivery of Christmas tree order.
 - Inspected both slash wall harvests occurring in Madison and Seymour on a weekly basis. Worked with lake crew to install gates.
 - Met with DEEP bat specialist at Lake Gaillard for installation of transponders.
 - Investigated firewood cutting permit infractions at SE 11 tract, including hazard tree, improper felling technique, unauthorized access during mud season and minor road rutting, and cutting of unmarked trees.

Recreation

- Received the renewed DPH horseback riding permit for Lake Chamberlain.
- Submitted comments to the DEEP about the newly proposed changes to the freshwater fishing regulations and how they would affect fishing on our properties.
- Three new 14' aluminum boats were delivered to Lake Saltonstall.
- Walked Parish Farm Rd. property in Branford with land trust member to access possibility of access trail to their property.

- Working with Vermont Systems to fix the issue of the logo not being printed on the permits.
- Reblazed several trails at Lake Hammonasset.
- Annual recreation photo contest was completed.
- New pictogram rule signs for the recreation areas were ordered and received to replace some of the deteriorating signs.
- Two picnic tables were ordered for use at Lake Saltonstall and the Maltby Lakes this season.
- The fishing and boating docks were installed back at Lake Saltonstall in preparation for fishing season.

	March		February	
	2022	2021	2022	2021
Permit Holders	5,712	6,336	5,601	6,131

Special Activity Permits

- Branford Parks & Open Space Authority (Richard Shanahan) – to perform a field inspection of RWA property that may be subject of a sale to The Town of Branford and/or The Branford Land Trust, north of #280 Brushy Plain Road and south of Lidyhites Pond, Branford (3/25/22-4/2/22).
- Resources in Search and Rescue, Inc.-(Ms. Celeste Robitaille and designees)- Training of Search and Rescue K9 teams to locate lost or missing individuals, 20 Rimmon Road, Seymour. (03/14/2022-03/14/2023)
- Resources in Search and Rescue, Inc.-(Ms. Celeste Robitaille and designees)- Training of Search and Rescue K9 teams to locate lost or missing individuals, Two Cornwall Avenue, Prospect, (03/15/2022-03/15/2023)
- West Haven Parks & Recreation – (Ms. Margaret Ruggiero and designees) – Fishing Derby, Maltby Lakes, 5/7/22.
- Western CT Orienteering Club – (Ms. Susan DeWitt and designees) – cross country race on foot, property near Ansonia Nature Center, 2000’ to the north of Nature Center with frontage on Rimmon Rd. (Rt. 313) in Seymour, 5/15/22.
- Connecticut Agricultural Experiment Station (Dr. Chris T. Maier, Agricultural Scientist)-Conduct research on insects, particularly longhorned beetles (continuation of 2021 projects), and flower flies and to survey for abnormal emergencies of periodical cicadas, Near Lake Gaillard and Totoket Mountain complex (North Branford); near Beaver Head Road, especially Beaver Head Swamp (Guilford); forest off Dogburn Road (Orange); and along Hosley Avenue (Branford), (3/31/2022 – 11/30/2022)

Other items

- Encroachments/agreements –
 - East Haven, 181 Barberry Rd. (EH 12) – Juliano completed the map and marking the eastern boundary. Checked in field and talked to abutter responsible for fence over the property line. Sent letters to all abutters involved in the encroachment.
 - East Haven, 167 Saltonstall Parkway (Route 1) (EH 7) – Authorized Murtha staff to start drafting interrogatories and document requests.

- East Haven, 27 Virginia Rd. (E XX) – Discovered abutter coming into the Farm River-EH property, driving through wetlands, and cutting deadwood. RWA police talked to the abutter.
- North Branford, Skylark Dr./Old Mountain Rd. (GU 9) – Sent letters to abutters with items on our side of the road. Offered them license agreements. Spoke to Kirschner and he said everything was moved.
- Seymour, 8 Maiden La. (SE 3) – Executed license agreement with Arbour for parking on our property.
- Invasive plants – Documented and/or treated invasive populations in Woodbridge, Bethany, and Guilford. Discussed using our outside contractor money to have Charter Oak remove invasives around some of the sediment detention basins in Hamden. ISMT attended a soil carbon meeting with the CAES and USDA and a Cooperative Agricultural Pest Survey meeting.

Invasive Species Documented/ Mapped (ac)	41.75 acres
Invasive Species Treated (ac/MH)	1 acres

- Deer hunt – Applications are being received. NRA gave summary of the 2021 deer hunt to the FMA’s Environmental Health and Safety committee.
- Boundaries – Remarkd boundaries in Hamden, Bethany, Guilford, North Branford, and East Haven. Worked on encroachment reports for Guilford and East Haven.
- Boundaries – Remarkd boundaries in Bethany, Killingworth, Woodbridge, Hamden, and East Haven.
- Yale Golf Course – Performed site visit to verify which parts of the course drained to the Maltby Lakes.
- Lake Whitney view (HA 9) – Spoke with property owner at 6 Waite St., Hamden about seedling trees growing on our property obscuring his side view of the lake.
- North Branford ATV ordinance – Notified by NBLCT member that the ordinance was passed by the town council.

There were no other land items to report.

Chair Betkoski reported on upcoming meetings of the Land Use Committee:

- a. Monday, April 18, 2022 at 5:30 (joint meeting with CAC to review FY 2023 Budget)
- b. Wednesday, May 11, 2022 at 4:30 p.m.

At 6:28 p.m., on motion made by Mr. Malloy, seconded by Ms. Young, and unanimously carried, the committee meeting adjourned.

Peter Betkoski, Chairman

**Representative Policy Board
South Central Connecticut Regional Water District
Joint Meeting
Consumer Affairs Committee
and
Land Use Committee**

Minutes of the April 18, 2022 Joint Meeting

A joint meeting of the Consumer Affairs Committee (“CAC”) and the Land Use Committee (“LUC”) of the Representative Policy Board of the South Central Connecticut Regional Water District (“RPB”) took place on Monday, April 18, 2022, at 90 Sargent Drive, New Haven, Connecticut and via remote access.

CAC Committee members present: S. Mongillo, N. Campbell, M. Levine, T. Rescigno, and R. Smith

LUC Committee members present: P. Betkoski, P. DeSantis, B. Eitzer, B. Harvey, M. Horbal, G. Malloy, J. Oslander

RPB members present: M. Ricozzi, RPB Chair and C. Havrda

Authority: D. Borowy, K. Curseaden, C. LaMarr, and S. Sack

RWA members present: L. Bingaman, R. Kowalski, P. Singh, J. Courchaine, D. Donovan, S. Lakshminarayanan, D. Verdisco

Office of Consumer Affairs: Atty. Donofrio (“OCA”)

RPB staff: J. Slubowski

Chair Mongillo, called the meeting to order at 5:30 p.m. He stated that the meeting is a joint meeting of the CAC and the LUC. The CAC is a regular meeting and the committee’s regular business would be conducted prior to management’s FY 2023 budget presentation.

Chair Mongillo reviewed the Safety Moment distributed to members.

On motion made by Ms. Campbell, seconded by Mr. Rescigno, and unanimously carried, the committee voted to approve the minutes of its March 21, 2022 meeting, as presented.

The OCA reported that he received one consumer complaint that he is working to resolve with management of the Regional Water Authority. He also stated that he has been reviewing the Application and related materials for the Lake Gaillard Water Treatment Plant valve replacement project, and reviewing budget materials.

On motion made by Mr. Rescigno, seconded by Ms. Campbell, and unanimously carried, the Committee approved the OCA’s March 2022 billing (\$1,832.50).

Mr. Bingaman, RWA’s President and Chief Executive Officer, reviewed the FY 2023 capital budget outline and summarized the key points of the capital budget history. He reviewed assumptions used to develop the proposed budget. Mr. Bingaman noted that the FY 2023 capital budget includes funding of 79 projects and programs in four categories: Natural Resources, Treatment, Transmission & Pumping, and General Plant. He reported that the total proposed budget for capital projects is \$47.1 million and is within the recommended range of GHD’s capital expenditure review. . He also noted that the amount proposed excludes projects that would be discussed in executive session.

At 5:54 p.m., Mr. Levine entered the meeting.

Mr. Lakshminarayanan, the RWA's Vice President of Engineering and Environmental Services, discussed the prioritization methodology and provided a breakdown of the projects and highlights, related to:

- Natural Resources
- Treatment
- Transmission & Pumping
- General Plant
- Five Year Plan Capital Improvements Plan

Mr. Singh, the RWA's Chief Information Digital Officer & Vice President of Customer Care, also presented certain projects within General Plant.

Committee members discussed contingencies, federal funding, and the prioritization matrix.

At 6:25 p.m., on motion made by Mr. Ricoszi, seconded by Mr. Malloy, and unanimously carried, the committees voted to go into executive session to discuss strategy and negotiations, and real estate matters. Present in executive session were CAC and LUC members, OCA, Mss. Kowalski, LaMarr, Sack, Slubowski and Verdisco, and Messrs. Bingaman, Courchaine, Lakshminarayanan, and Singh.

At 7:15 p.m., Mr. Donovan entered the meeting.

At 7:55 p.m., the committees came out of executive session.

Chair Mongillo reported that the executive session also included the commercial business enterprise update and no votes were taken.

Mr. Bingaman, RWA's President and Chief Executive Officer, introduced the FY 2023 operating budget, and provided a recap of reserve fund balances and operating budget highlights. He stated that the operating budget reports no shortfall for FY 2023. Mr. Bingaman discussed declining trends with committee members.

Ms. Kowalski, RWA's Vice President of Financial Reporting & Analysis, provided the Authority with the FY 2023 Operating Budget, which included FY 2022 projections. Her report also included a review of:

- Revenue trends and assumptions
- Expense trends and assumptions
- Other key assumptions
- Maintenance Test
- Opportunities and vulnerabilities
- Summary

Chairs Betkoski and Mongillo thanked management for their FY 2023 budget review presentation.

Mr. Mongillo reported that the next Land Use Committee meeting is scheduled for Wednesday, May 11, 2022 at 4:30 p.m., and the Consumer Affairs Committee's next meeting is scheduled for Monday, May 16, 2022 at 5:30 p.m.

Representative Policy Board
Joint Meeting Consumer Affairs and Land Use Committees
April 18, 2022

UNAPPROVED DRAFT

At 8:29 p.m., the meeting adjourned.

Stephen Mongillo, Chair
Consumer Affairs Committee

Peter Betkoski, Chair
Land Use Committee

May 11, 2022
Land Use Committee Meeting

Reservoir Levels (Percent Full)

	Current Year	Previous Year	Historical Average	Drought Status
April 30, 2022	98%	98%	94%	None

Rainfall (inches)

	Current Year	Previous Year	Historical Average
April 2022	3.87	3.59	4.26
Fiscal YTD (6/1/21 – 4/30/22)	44.57	37.18	42.62

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

- Cheshire, adjacent to Bis property – Murtha staff stated they would draft an affidavit for this matter. Talked to appraiser to get general value of the ~30 acres. Juliano circulated latest draft of the survey.
- North Branford, Beech St. and Poms La. properties (NB 4 and NB 4A) – Contacted Beth Evans to create the new preliminary assessment. Town Planner indicated that he would sign the surveys. Later, he stated that we needed to submit the executed deeds with the maps in order for him to release and us to record. Informed him that the deeds would not be ready for many months. Discussed the matter with Murtha and our surveyor and determined to move ahead with the disposition application without the parcels carved out yet.

Rental houses:

- Hamden, 95 Ives St. – Received hardcopies of the closing documents and filed in the vault.
- Hamden, 233 Skiff St. (HA 9A) – Talked to Assistant Town Attorney multiple times about the condemnation. He was still researching it, not believing that it was possible. I supplied more information to him about the Seymour condemnation and asked him to contact Fred Stanek.
- Woodbridge, 1029 Johnson Rd – Found stolen doors on our property behind the house. Alerted the Tarlowski's.

Forestry Update

- Killingworth - East Hammonasset Leaf Screen Thinning, (KI 4) – 25% complete.
- Hamden - Overstory removal and Tornado Salvage, (HA 36) – Not started yet. **Summer start time is anticipated.**
- Madison - Nathan's Pond Slash Wall Harvest (MA 6) – 95% complete. Slash wall complete and awaiting gate installation.
- Seymour - Silvermine Road Slash Wall Harvest (SE 9) – 100% complete. **Gate complete.**
- Killingworth - N. Chestnut Hill Patch Cuts, (KI 6) – Not started yet.
 - Planted Christmas tree seedlings in Great Hill Rd. field at Lake Gaillard.
 - Processed annual firewood renewals.
 - Dealt with drainage issues at the Seymour slash wall harvest at Haddad Rd. Operations put asphalt patch in potholes by the landing.
 - ISMT conducted a drone flight to create a map and get some photographs of the Seymour slash wall harvest.
 - Conducted field tour for Yale School of the Environment masters students in a Forest Health Class to discuss management concerns and options in stands suffering significant mortality from beech leaf disease and LDD impacts.

Recreation

- Responded to Yale student about her shooting part of a film at Lake Saltonstall.
- New signs for each recreation area were placed at six sites in April.
- Completed reblazing at Lake Hammonasset and started reblazing at Genesee.
- Continued to recruit people for the recreation staff. Rental boat days will be reduced for May. We are only able to offer boats on Fri., Sat., and Sun.
- Boat rentals started on April 30.
- Six people attended hike at Pine Hill on April 23.
- 1,800 trout were stocked at the Maltby Lakes.
- Two tagged trout were caught at Maltby Lakes and gift certificates were issued.

	April		March	
	2022	2021	2022	2021
Permit Holders	5,792	6,502	5,712	6,336

Special Activity Permits

- CTDEEP (Dr. Min Huang) – mallard nesting study; Maltby Lakes (4/4/2022-7/31/2022)
- Menunkatuck Audubon Society (Tom Kelly) - Monitoring of Barn Owl nesting boxes - North Guilford owl box locations: Menunkatuck Reservoir (RT 77); Beaverhead Road; (04/01/2022 to 07/01/2022).
- Branford Parks & Open Space Authority (Richard Shanahan) – to perform a field inspection of RWA property that may be subject of a sale to The Town of Branford and/or The Branford Land Trust, RWA property on Brushy Plains Road, north of Hosley Avenue and south of Lidyhites Pond, Branford (4/12/22-4/21/22).
- 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, (04/14/22 – 11/31/22)
- Hammonasset Fishing Assoc. (Mr. Vic Donahey, Manager)-road access for wildlife enhancement projects, Summerhill Road to South End of Hammonasset Fishing Assoc. Property, (4/19/22-5/31/22)
- New Haven Bird Club, (Mr. Patrick T. Leahy)-Fall bird walk to observe species that are wintering on Lakes along the West River, Lake Watrous, Lake Chamberlain (10/15/22)
- UCONN, (Dr. Chandi Witharana, Principal Investigator), drone mapping flights in support of RWA/UConn joint applied research on the use of remote sensing and drones for forest management, RWA timber harvest locations hear Haddad Rd., Seymour & Rt. 79, Madison (4/29/22-4/29/23)

Other items

- Encroachments/agreements –
 - Agricultural agreements – Sent email to Cave’s approving their weed control plans. Spoke to one farmer about taking over the fields at Parish Farm Rd., Branford.
 - Woodbridge/Orange (WO 14/OR 7) - Documented increased trespassing of mountain bikers at Maltby Lakes.
 - East Haven, 167 Saltonstall Parkway (Route 1) (EH 7) – Responded to complaint about the fence from Lucido. Found it in good condition. Murtha responded through his attorney. Dealt with Lucido parking vehicles in front of our property again. His attorney asked for 30-day extension to answer our complaint. We will ask court to deny the request. In court filing from Lucido, it seems he admitted to doing the damage.
 - East Haven, 27 Virginia Rd. (EH 3) – NRA and REM remarked the boundary and further documented the encroachment.

- Invasive plants – Documented and/or treated invasive populations in North Branford. Cut down a red pine tree infected with southern pine beetle at Lake Bethany for CAES staff to examine. Met with researchers from UConn to begin the LIDAR drone studies of the slash wall harvests.

Invasive Species Documented/ Mapped (ac)	37 acres
Invasive Species Treated (ac/MH)	3 acres

- Deer hunt – 150 applications were received by the end of the month. The lottery will be run in May, if needed.
- Boundaries – Remarkd boundaries in Woodbridge and Bethany.
- East Haven, Beach Ave. watermain – Alerted by the town engineer that the matter was not on the town council’s meeting agenda. Sent memo to the town attorney about the purpose of the project. Discussed need for DEEP permit with DEEP staff. Corresponded with affected property owners and continued to collect the easement documents for their properties.
- Regional Conservation Partnership – Discussed future of the RCP with Highstead staff and Dave Sargent.
- Branford, Parish Farm Rd. (BR 19) – Responded to rumor of a parking lot being planned for our property at this location.

Attachments

- April 19, 2022 - These invasive trees smell like rotting fish and kill plants. State bans want Bradford pears gone – USA Today
- April 17, 2022 - Somerset County may become the last bastion of maple syrup producers in New England – Maine Public
- April 19, 2022 - REGIONAL WATER AUTHORITY INVITES THE PUBLIC TO DISCUSS THE WHITNEY DAM REHABILITATION – RWA news release
- April 14, 2022 - Route 10 Fire Hydrant Replaced After Overnight Crash – Patch.com
- April 21, 2022 - The Clean Water Act at 50 – Penn Today website

Upcoming Agenda Items

June 2022 –

These invasive trees smell like rotting fish and kill plants. State bans want Bradford pears gone.

Chesley Cox – April 19, 2022 - USA TODAY

Spring is a time for blooming plants and flowering trees. But word to the wise: some of those beautiful blooms might come from invasive species.

One such plant is the Bradford pear, a tree covered in attractive white blossoms with some unattractive features. What was once considered an ornamental and low maintenance decoration for yards and parks has proven detrimental to native plants and has even been banned in some states.

The trees "have little to no value to wildlife and displace native trees," said Steven Long, assistant director of the department of plant industry at Clemson University in South Carolina. Other problems? Their thorns can puncture vehicles tires and their blooms stink, Long said.

Where did the Bradford pear tree come from? Why is it dangerous to native plants? How do homeowners get rid of it? Here's what to know about this invasive plant:

What is a Bradford pear tree?

The Bradford pear, also known as the "Callery" pear, is a popular ornamental tree native to Asia and found throughout the eastern U.S. It is most commonly planted in South Carolina.

"They're in suburban and rural areas, as well as in natural forests," Kelly Oten, assistant professor of forestry and environmental resources at North Carolina State University in Raleigh, said.

The tree is perhaps most famous for the scent of its blooms, which some have compared to rotting fish, urine and baby poop. The fragrant white blooms that appear in early spring draw admirers, despite the offensive smell.

Where did they come from?

The trees were introduced by the United States Department of Agriculture as ornamental landscape trees in the mid-1960s. They became popular with landscapers because they were inexpensive, transported well and grew quickly.

Considered a sterile hybrid, plant experts did not think the tree would propagate out of control, but scientists developed smaller hybrids designed to compensate for the Bradford pear's weak branch structure.

The trees cannot self-pollinate, but can reproduce with another variety of the *Pyrus calleryana* species. The offspring are called Callery pears.

The resulting hybrids are even more problematic than the original Bradford pear tree.

Are Bradford pear trees harmful?

Yes. The trees choke out other plants, particularly in fallow fields, or empty tracts of land seen as future forests. They can grow to 30 feet tall and the "dead zone" beneath its dense canopy keeps light from reaching other plants.

Because they bloom earlier in the spring from March to mid-April, Bradford pears overtake resources from surrounding native species.

Long said the trees also increase the cost to maintain land.

"They reproduce prolifically in (once-landscaped) areas and tend to dominate small lots as they are of the first to emerge once a lot is no longer being mowed," he said.

"Callery pears are like a food desert for birds," Oten said. "Caterpillars, which are especially important in the spring when mother birds are getting soft-bodied insects to feed their young, don't feed on them. Because there are no caterpillars that feed on the Bradford pear, there's nothing for them to eat there."

The trees "break easily during ice and wind storms which we have plenty of in (South Carolina)," Long said.

Researchers discovered in the '80s that the tree has a fragile composition. Its signature "steep v crotch" means the tree has a weak structure at the "V" of the branch, yet is stronger in other directions so that it snaps off in areas from old age and high winds.

Drivers should avoid parking their cars beneath a Bradford pear.

Where is the tree banned?

South Carolina has enacted a ban on new Bradford pear sales effective on Oct. 1, 2024. A ban on the sale and cultivation of the tree in Pennsylvania will also take effect in February of that year.

The tree was placed on the invasive species list in Ohio in January 2018, meaning in-state nurseries and landscapers must phase out selling the trees over the next five years.

Experts say all native species in South Carolina will struggle as long as the Bradford pear tree survives. Even other trees that are not threatened for survival, such as oaks, maples and hickories, are being out-competed.

"I expect many more states will soon follow Ohio and South Carolina's lead on this," Long said.

How can you get rid of a Bradford pear tree?

At 20 years, the lifespan of a Bradford pear is relatively short, but the species might have reached its tenth generation of production.

"When they cross with another pear and become wild, the offspring does have thorns. This can make it difficult to remove," Oten said.

The thorns are sharp enough to puncture tires, making it difficult to mow down a field of Bradford's.

Fire and some herbicides are alternative options for elimination, but fire has been shown to aid resprouting.

The best weapon, according to experts, is to cut down the trees, and some states are providing incentives for removal. Clemson University in South Carolina has offered to exchange five cut-down Bradford pears with native trees.

The North Carolina Forest Service Urban and Community Forestry Program advises people to remove or treat the stump with an herbicide to prevent it from sprouting new trees and to grind down the stump before placing a new tree in the same spot. Some landscaping companies provide stump-grinding services, according to the program.

Most importantly, homeowners should avoid planting the tree altogether and instead plant native species.

"We have plenty of native trees that have very similar blossoms, such as the flowering dogwood, black cherry, and serviceberry," Oten said.

Somerset County may become the last bastion of maple syrup producers in New England

Maine Public | By Steve Mistler, Esta Pratt-Kielley - April 17, 2022

The iconic maple syrup industry is an economic driver in New England and in Maine, the third largest producer in the U.S. But rising temperatures and erratic sap runs are posing big challenges and foreshadowing even bigger changes.

If scientists' predictions are correct, the northernmost reaches of Somerset County could become one of the last strongholds of syrup production in the region.

Donna and Jereme Frigon are aware of those dire forecasts even if their business, Gray Jay Mapleworks, is a bit more insulated from climate change. The couple leases a sugarbush from the state conservation department in Sandy Bay Township, just a couple miles south of the Canadian border.

This is their sixth year in operation, and it's a big step up from their humble beginnings tapping their grandparents' trees.

"I think our best season was six gallons," Donna Frigon said. "And that, that was a lot for the number of trees we had. I think we only had 20 trees."

The Frigons now produce about 3,200 gallons of syrup that comes from 8,000 taps that crisscross this remote sugarbush. They're one of many producers in northern Somerset County, the largest producing county in the entire U.S.

"In southern Maine, we're pretty big," Frigon said. "But here there are only a few that are smaller than us."

Gray Jay is also a different kind of operation than what people typically see in southern Maine, where maple syrup production is often a shoulder season crop for local farms and an attraction for families.

The Frigons run it by themselves with some help from their two children. The scale of the operation is immense and it's far more mechanized than many operations in southern Maine and New England.

When the sap runs the way it did in mid-March — when temperatures in Sandy Bay Township hit nearly 60 degrees — the couple works virtually nonstop.

"I have to check my records," Frigon said between stints monitoring the evaporator and a sap boil-off that can be affected by even the slightest change in barometric pressure. "But I feel like this is early to be making this much syrup."

Jereme kept a close eye on the reverse osmosis system that extracts about 75% of the water and minerals from sap, helping to reduce the amount of water that needs to be cooked off to get the sweet, sticky stuff.

"You get a feel for what you need to do to keep up with it and there are nights when we don't sleep much," Jereme Frigon said. "There are nights when we don't sleep at all."

And when they do, they sleep at the sugarhouse where they've constructed a triple-decker bunk bed.

Sleeping quarters are common for operations here. Arnold Farms, located directly across Route 201, has living quarters for teams of migrant workers from Guatemala. They help set the 80,000 taps that funnel sap through five video-monitored pump houses and into the sugarhouse through six miles of underground piping. The workers have constructed a makeshift soccer field out back, using branches for goals.

Arnold Farms is owned by Claude and Francois Rodrigue, a father-son duo. They're one of many Canadian producers operating in the region. Some are here because they once worked as loggers in the Maine woods. Others because producing syrup here means not having to do so under the strict quotas and restrictions set by the Quebec Maple Syrup Producers, an organization sometimes compared to the Organization of the Petroleum Exporting Countries, or OPEC. Like OPEC, the Quebec syrup producers organization has an outsize effect on setting and stabilizing the market prices for maple syrup.

Operations like this one are already vital to Maine's standing as the third largest syrup producer in the U.S., behind Vermont and New York.

They also could become key to the industry's survival from climate change.

Scientists like Andy Whitman with the environmental group Manomet believe that the area where sugar maple trees can survive and thrive is shrinking.

"It's clear that it is shifting north, and it will continue to shift north," he said. "Northern Maine will still be in that belt 50-100 years from now. But southern Maine will not."

Whitman's assessment largely aligns with a 2019 report by the University of Massachusetts Amherst and the U.S. Geological Survey that predicts maple syrup production in most of New England will be cut in half by the end of the century, except for places like northern Somerset County.

The problem for southern Maine and New England producers is erratic winter weather and shortening sap seasons. Whitman said researchers are already seeing the effects on smaller producers, who could find it increasingly difficult to produce enough syrup to justify the costs of production and sap harvesting.

At the same time, climate change and extreme weather events are making the region increasingly inhospitable for sensitive sugar maple trees to grow and thrive, according to Aaron Weiskittel, an associate professor of forest biometrics at the University of Maine.

Weiskittel was part of a team of researchers that four years ago analyzed decades of U.S. Forest Service Forest Inventory and Analysis data. It found that aggressive and resilient American Beech saplings are outcompeting sugar maples in several parts of New England and the trees are well positioned for climate change.

"I would say maple, sugar maple, is the most sensitive (of native hardwoods)," he said.

Red maple trees are also resilient, but there are some producers who find the sap less desirable.

For sugar maple trees in the southern part of the region, longer winters of bare ground expose root systems to wide temperature variations — extreme freezes or midwinter thaws.

University of Maine Cooperative Extension researcher Jason Lilley said it's widely accepted in the industry that climate change is affecting syrup production, which is uniquely tied to weather patterns.

He said sap season is coming earlier and ending sooner, especially in southern New England, where the freeze-thaw cycle that makes for good sap runs is increasingly erratic and forcing producers to make difficult choices.

"So, it's this very fine line of, should we tap early and catch those first two runs and potentially miss out on the quantity that we could get at the end, or not?" he said.

Lilley said northern Maine looks more insulated from that kind of variability, but there's still concern that extreme weather events like drought can also affect the health of maple trees and the quality of the sap they produce.

He said Maine producers last year didn't see a big drop-off in sap production, but the sugar content was significantly lower than usual, which meant more sap needed to be boiled off to extract the syrup.

The working hypothesis is that the extreme drought from two years prior stressed out the maple trees, "so that there's less photosynthesis, less sugar production from the photosynthesis and then lower sap sugar content," he said.

Snowpack can help protect sugar maple root systems, and there's plenty of it in Sandy Bay Township.

More than two feet remained in most areas in mid-March, even after three consecutive days of mild weather.

But the region is still experiencing the drought conditions southern Maine endured in 2020.

Some attribute last year's sap output to the drought.

"A lot of sap, low sugar content, for whatever reason," said Bill Jarvis, who manages the land where Arnold Farms sits. The landowner leases the sugarbush to the Rodrigues. Timber harvesting is done on other sections.

Jarvis has been pulling crews out of the woods earlier and more frequently because mud season has come sooner.

"Like I said, the big sugar producers haven't seen it as much, but I do on the timber harvesting side," he said.

The Rodrigues don't worry about the weather as much.

"I would say no. It's different, year to year," Claude Rodrigue said. "We finish as late now (as) 20 years ago. But each year is different. But more or less, it looks the same."

The Rodrigues also have sap in abundance and plenty of cheap power to process it; Claude managed to get permission to run a small transmission line that delivers hydropower from Canada.

The Rodrigues said the sugar content in last year's sap never cracked 2%, the industry standard.

But there are positive signs for this year's first big sap run in mid-March. Sugar content in this batch of sap is already on the rise from earlier in the day.

"But I don't know about tomorrow. We get it as we get," Francois Rodrigue said. "We have to be very adaptive to everything that can happen."

The same goes for Maine's \$50 million maple syrup industry, which might become concentrated in areas like Sandy Bay Township.

Producers here are gearing up for changes.

"What we are expecting is more sap at one time, as our season maybe gets smaller, or the warmups are quicker," Donna Frigon of Gray Jay Mapleworks said. "And we've seen some of those runs the last few years."

The changes have so far not altered the Frigons plans for expansion.

In fact, growing syrup production in this part of the state could be key to the industry.

Bill Patterson, the deputy director of the Maine Bureau of Parks and Lands, said the state currently allows syrup production on two properties in the area, including the operation at Gray Jay Mapleworks.

He said he didn't believe the state had originally anticipated syrup production as a use when conserving the property. But he said the state might add it as a consideration on other conservation properties in the region.

Manomet scientist Whitman said maple trees in this area of the state might become even more productive as the effects of climate change worsen conditions in other parts of the state.

"I think Maine can continue to produce as much maple syrup as it has in the past," he said. "It's just that it will do that in a different place."

Places like northern Somerset County.

RWA news release

REGIONAL WATER AUTHORITY INVITES THE PUBLIC TO DISCUSS THE WHITNEY DAM REHABILITATION

RWA invites members of the public to participate in the first of several community outreach discussions as it begins to envision the rehabilitation of the historic Whitney Dam.

NEW HAVEN, CT – The Regional Water Authority (RWA) invites all members of the public interested in the rehabilitation of the historic Whitney Dam in Hamden to two community meetings scheduled in May 2022. These meetings are intended to give the public a voice in the process while the RWA is currently in the planning and design phases. These meetings will be the first in a series planned over the duration of the project for the next four years

Built in 1861, the Lake Whitney Dam is over 160 years old. While the RWA performs regular maintenance, the dam's original structural aspects remain largely unchanged. The dam is a vital, operational part of the RWA's drinking water and fire protection infrastructure.

With many citizens in the region passionate about the dam, lake, and the surrounding watershed, the goal of the RWA is to understand the community's perspectives on the project. The RWA believes that public participation will help ensure a robust feedback process so that upgrades to the dam will meet evolving regulatory needs and address climate concerns.

The RWAs three major goals targeted during the rehabilitation process include the following:

- Enhance the stability of the dam
- Increase the dam's spillway capacity
- Control water seepage

The planning and design phases are ongoing into early 2023, with construction and final completion of the project anticipated for 2026.

The RWA will hold these community meetings in person on Thursday, May 5, 10 am -11 am, and virtually on May 10, 6 pm -7 pm. To RSVP, email WhitneyDam@rwater.com or contact us at 203-401-2738.

Route 10 Fire Hydrant Replaced After Overnight Crash

Repairs lasted all day Wednesday after a vehicle hit a fire hydrant early that morning, causing water to flood the street.

Gabby DeBenedictis, Patch Staff - Apr 14, 2022

HAMDEN, CT — Regional Water Authority crews replaced a Route 10 fire hydrant on Wednesday after a car hit the hydrant early that morning, causing water to spill out of it.

Route 10 (aka Whitney Avenue) was closed in both directions between Mt. Carmel Avenue and Sherman Avenue all day Wednesday, and it reopened early Thursday morning.

During the closure, RWA crews contained the water spillage, assessed the damage and replaced the hydrant and its associated piping, the company said in a news release.

The workers also filled a void under Route 10 to prepare for temporary patching and cleaned up the street to get it ready for drivers, RWA said.

Only three customers had water service interrupted during the repairs, though some of the area's 17,000 customers reported discolored water — which occurs when "flushing" water mains, a process that is typically necessary during emergency repairs, RWA said.

Anyone whose water is discolored should run a single cold water faucet for five to 10 minutes, RWA said. If discoloring continues after that, the company recommends turning off the water, waiting an hour and trying again.

Both RWA and the Hamden Police Department thanked the public for their patience during the road closures.

"These emergency events can cause temporary disruptions in our service, our team is focused on fulfilling the RWA's higher purpose — to make life better for people by delivering water for life," Larry Bingaman, RWA President and CEO, said in a statement. "It was the hard work and collaboration of our RWA crews in the field, our team in the Operations Center, and our partners with the Town of Hamden and the State of Connecticut, which help us fulfill that higher purpose."

The Clean Water Act at 50

Penn Today website – April 21, 2022

Approaching the half-century mark of this landmark piece of environmental legislation, Penn students, staff, and faculty share their reflections on its legacy, both strengths and shortcomings.

In 1969, the Cuyahoga River caught fire. Industrial plants with permits to discharge pollutants into rivers did not have to disclose what exactly they were releasing into waterways. Two-thirds of lakes, rivers, and coasts were considered unsafe for fishing or swimming.

Against this backdrop, Congress proposed a transformative set of amendments to what was then known as the Federal Water Pollution Control Act of 1948. Passed with a bipartisan majority over President Nixon's veto, the legislation became law in October 1972. Its scope was so much broader than the previous Act that it got a new name: the Clean Water Act.

The landmark piece of environmental legislation turns 50 this year. Its sweeping aims led to significant improvements in water quality across the country, but challenges remain. Penn Today asked five Penn community members whose expertise intersects in different ways with water to share their perspectives on the Act.

Ellen Kohler, director of applied research and programs, The Water Center at Penn

The Clean Water Act has clearly had a significant and positive environmental impact on our country. The marshaling of all the point-source discharge into permits that limited the amount of pollution that was flowing into our waterways from pipes was absolutely monumental and changed the life history of many waterways. That was undoubtedly a huge policy success.

After we dealt with pollution from factories and wastewater treatment plants, the next big challenge was dealing with combined sewer overflows (CSOs)—where sewage waste ends up traveling into water bodies through pipes that combine sewage and stormwater after a significant rainfall overwhelms the capacity of the system. When those combined systems were designed, they made sense for many communities. But communities have grown and we now have such large storm events that these old systems can't handle the amount of water anymore. Reducing—or better yet, eliminating—the number of times sewage overflows into rivers is an enormous undertaking in urban communities.

In the 1980s, federal funding to address the water pollution challenges switched from capital grants to the state revolving fund programs, which provide almost entirely loan financing. This funding is helpful and allows many communities to invest in repairs that address sewer overflows. But loans are only helpful to communities that haven't reached their debt-financing limits trying to address other environmental and social burdens—like poverty and unemployment. Just as in the housing market, the lack of access to financing has had clear inequitable impacts that has perpetuated structural racism—in this case, evidenced by the persistent pollution of rivers and streams in communities of color.

As climate change brings stronger storms, there's an increasing need to manage overflows from combined sewer systems. These large storms are also causing more flooding in urban neighborhoods more often where people of color live. We need to integrate water management to build resiliency, reduce flooding, and address persistent pollution. We have the tools we need through the CWA and other federal and state laws and policies—we just need to use them.

A lot of cities are transitioning to a more “green” approach to managing stormwater, using plants and soils to filter our water rather than building big treatment systems. They're investing in tree canopy cover, green roofs—Washington, D.C. is doing that, New York City is doing that, Pittsburgh and Philadelphia are doing that. It's very encouraging, but we have to come to terms with the fact that we haven't invested enough in our water quality challenges in urban areas. If we really invest there, all of us are going to benefit from those investments.

Amisha Shahra, graduate student in the Master of Environmental Sciences program

The Clean Water Act was revolutionary. It set a precedent as to what a good environmental policy can do. It has been an extremely successful legislation which has transformed polluted streams and rivers to clean surface water sources. In a place where environmental policies are still being developed, like India, where precedent means a lot as well, looking at successful policies like the CWA is interesting and helpful.

In India, environmental laws are coming into place as environmental movements are arising. Just a few weeks ago, Mumbai launched its first climate action plan. It's the first city in India to have a road to a net-zero carbon goal. Water is a key component in the plan that's being developed.

After I graduated from Penn in 2016, I was part of a small founding team of Global Citizen India, a movement to end extreme poverty by 2030 by bridging public policy and popular culture. The first year's efforts were committed to the United Nation's Sustainable Development Goals with a focus on Water and Sanitation, Quality Education, and Gender Equality.

There's a lot of energy around water issues right now and different ways in which water is impacting economies, geopolitics, and much more. Currently I'm studying sustainable water management in the MES program, and in the long term, I hope to return to India to scale efforts in this sector.

Bethany Wiggin, associate professor of German in the School of Arts & Sciences, founding director of the Penn Program in Environmental Humanities

Philadelphia's famously unpronounceable river, the "Skookill," or Schuylkill in colonial Dutch, just might be the birthplace of the Clean Water Act. As the CWA turns 50, the river and its "wooder" offer important vantage points to reflect on the success of the CWA as well as on considerable challenges we face in making all American waters swimmable and fishable.

Used for decades as an energy corridor for coal transportation and for centuries as a waste sink, a path-breaking project began in 1947 to clean up a 100-mile stretch of the river. The Schuylkill restoration project offered important evidence that even rivers that caught on fire or swam with "Schuylkill punch" could become rivers again: fishable and swimmable. Today, the river can be swum by triathletes, at least when it hasn't rained too much.

The CWA has brought justice to many American waters, but hardly all. A 2022 study found that fully one half of American lakes and rivers are too polluted for swimming and fishing. Many of these waters border environmental justice communities. Downriver communities along the Schuylkill show us what's at stake in the ongoing failure of the CWA to accomplish its mandate. Upriver communities enjoyed "dry privilege" even before the advent of rapid climate change. Downriver, near where the Schuylkill debouches into the Delaware, communities such as Grays Ferry were redlined and made home to landfill, highways, train yards, and what was, until it exploded in June 2019, the largest and longest continuously operating oil refinery on the east coast. Today, the Delaware continues to be a major artery for fossil fuels' refining, storage, and transport. As climate change worsens Philadelphia's flooding, this toxic legacy is flooding back.

As the CWA turns 50, we see what work for water justice can accomplish—and how local advocates can champion projects that take on national significance. Today, a new generation of projects—including the arts-driven Ecotopian Toolmakers project for water justice, with contributions by many Penn and Philadelphia-area experts working across sectors—help us to recognize how to celebrate and restore our waters. This work for water justice is only more timely amidst accelerating climate change.

Richard Pepino, deputy director of the community engagement core of the Center of Excellence in Environmental Toxicology and coordinator of the Academically Based Community Service courses in the School of Arts & Sciences' Department of Earth and Environmental Science

The Clean Water Act is one of two core environmental laws, along with the Clean Air Act, that changed the quality of the air and water that we are so dependent upon. The CWA established water quality standards for surface waters, enacted rules for the regulation of pollutant discharges, and granted the U.S. Environmental Protection Agency (EPA) authority to regulate and enforce pollution control programs. A job well done. But even the crowning achievements of the CWA are hampered by weaknesses that prevent the ultimate goals of this legislation from being reached.

Such is the case for the phrase "Waters of the United States" (WOTUS). This term represents the limits of the law in defining the boundaries for comprehensive protection under the CWA. When the law was passed by Congress, the qualifier of "navigable waters" was used to denote when and where the mandates of the law should be applied. But a careful reading of the record clearly shows that Congressional intent was to go beyond protecting only those waters considered traditionally navigable. "Special waters," such as wetlands, estuaries, headwaters, and seasonal water, while all performing critical ecological functions in the watershed, often go unprotected because they fall outside the legal definitions in the CWA.

In 1974, a polluted pond littered with junk cars in Utah was captured on film by a photographer with the Environmental Protection Agency. Under provisions of the Clean Water Act, it was later cleaned up, protecting a nearby wildlife refuge and the Great Salt Lake. (Image: Bruce McAllister/EPA/Documerica)

Both the EPA and U.S. Corps of Engineers, which share primacy for implementing the CWA, would tangle over what degree of protection should be afforded to the "special waters" in question, notably for wetlands. For two decades, negotiated definitions worked pretty well. But as case law mounted on defining WOTUS, legal opinions from the Supreme Court called for a more detailed definition for this term. The Court wanted to know whether special waters had a "significant nexus," or a clear connection, to surface water and whether the special waters play a role "in preserving the chemical, physical, and biological integrity of the adjacent navigable waters."

Today the technical nuisances of what constitutes special waters have been replaced with political discord accompanied by Clean Water Rules that last only as long as a political administration holds power. We need a scientifically sound definition of WOTUS that can be universally applied to ensure that all waters are fully protected and allow watersheds to continue their journey to improved water quality to meet environmental, recreational and human health needs.

Chaeri Kim, doctoral student in City and Regional Planning at the Stuart Weitzman School of Design

Since 2007, green infrastructure has been promoted by the EPA as a tool to achieve CWA compliance. Philadelphia's Green City, Clean Waters Plan is one example. After violating the CWA with combined sewer overflows, a mixture of raw sewage and stormwater, the city entered into a Consent Order and Agreement in 2011 that mandates the creation of 10,000 Greened Acres to capture the first inch of stormwater through green infrastructure at an estimated cost of nearly

\$2.4 billion. Last year, the city celebrated the agreement's 10-year anniversary. For the past decade, it created 1,888 Greened Acres through Green Streets, Green Schools, and other greening programs. This is a significant achievement. However, the city has not seen empirical, conclusive evidence that its green infrastructure projects have reduced combined sewer overflows and improved water quality to meet CWA standards.

Philadelphia is not alone in this regard. In 2010 in Cleveland, for example, the local government planned to invest \$42 million in green infrastructure projects to reduce 44 million gallons of combined sewer overflows to return to CWA compliance. However, this year, the local government found that it spent \$53 million, but the estimated reduction is only 8.3 million gallons.

Over the last decade, the EPA has incorporated green infrastructure into its CWA compliance contexts. However, it has not evaluated the effectiveness of green infrastructure for compliance purposes. There is no national tracking system or evaluation framework that shows if and how much green infrastructure has contributed to water quality improvements.

My dissertation is hoping to get at this challenge by investigating the influence of federal consent decrees on local green infrastructure planning and suggesting areas for regulatory and policy improvements to better facilitate desired outcomes in enforcement actions.