

Representative Policy Board  
**Land Use Committee**  
South Central Connecticut Regional Water District  
Location: Lake Gaillard, 105 North Street, North Branford\*

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**AGENDA**

**Regular Meeting of Wednesday, May 10, 2023 at 4:30 p.m.**

1. Safety Moment
2. Approval of Minutes – April 19, 2023 regular meeting
3. Invasive Plant Management: J. Tracy
4. Consider and act on recommendation to the Representative Policy Board re: Completeness of the Authority's Application for a Non-substantial Land Use Plan Amendment for the relocation of the New England Trail on Authority property in Guilford
5. Updates on land and RWA properties, including invasive species update
6. Other land items
7. Next meeting regular meeting: Wednesday, June 14, 2023 at 5:30 p.m.
8. Adjourn

<p>*Attendees should meet at the Gaillard tool house. Go through the gate at 105 North Street to the tool house. From there a van will take everyone to the meeting site.</p>
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# SAFETY MOMENT

## MAY IS NATIONAL WATER SAFETY MONTH!!!!

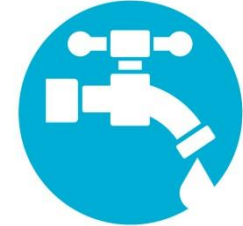
With the promise of summer comes more time spent near and in the water. Below are some tips from the American Red Cross to keep your family safe:

- Ensure members of your family learn to swim
- Use barriers to prevent access to water by young children
- Use life jackets
- Supervise children while swimming
- Know what to do when someone is struggling in the water

By working together to improve water competency including swimming skills, water smarts and helping others, water activities can be safer and just as much fun.

Service – Teamwork – Accountability – Respect – Safety

**Tap**Into  
**Safety**



Regional Water Authority

**NATIONAL**  
**Water**  
**Safety**  
**MONTH**



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

 Regional **Water** Authority

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

**Minutes of April 19, 2023 Meeting**

The regular meeting of the Land Use Committee of the Representative Policy Board (“RPB”) of the South Central Connecticut Regional Water District (“RWA”) took place on Wednesday, April 19, 2023 at 90 Sargent Drive, New Haven, Connecticut.

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

**Committee Members Absent:** B. Eitzer and J. Oslander

**RPB:** M. Ricoszi and N. Campbell

**Authority:** K. Curseaden

**Management:** L. Bingaman, R. Kowalski, E. Calo, J. Hill, S. Lakshminarayanan, P. Singh, and J. Triana

**Office of Consumer Affairs:** Atty. Donofrio

**Staff:** J. Slubowski

Ms. Young called the meeting to order at 5:32 p.m. She reviewed the Safety Moment distributed to members.

Ms. Young stated that it would be appropriate to move into executive session to review the FY 2024 proposed budget with management. At 5:33 p.m., Messrs. Betkoski and Levine entered the meeting and by unanimous consent, the committee voted to convene in executive session pursuant to C.G.S. Section 1-200(6)(E) to discuss matters covered by Section 1-210 subsection b #’s 5 B, pertaining to commercial and financial information. Present in executive session were Committee members, Messrs. Ricoszi, Curseaden, Bingaman, Hill, Lakshminarayanan, Singh, Triana, and Atty. Donofrio, and Mss. Kowalski, Calo, Campbell, and Slubowski.

At 7:08 p.m., the Committee came out of executive session. No votes were taken in, or as a result of, executive session.

On motion made by Mr. Malloy, and seconded by Mr. Harvey, the Committee approved the minutes of its March 8, 2023 meeting.

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

Reservoir Levels (Percent Full)

	Current Year	Previous Year	Historical Average	Drought Status
March 31, 2023	98%	97%	91%	None

Rainfall (inches)

	Current Year	Previous Year	Historical Average
March 2023	3.83	2.49	4.30
Fiscal YTD (6/1/22 –	33.46	40.70	38.31

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

- Prospect, 200 Saddle Ct. – The Watershed Fund approved our grant application. Exchanged emails and reviewed closing documents including draft deed. Scheduled closing for April 4<sup>th</sup>.
- Madison – Corresponded with property owner of 7+/- acres.
- North Haven – Corresponded with property owner of 14+/- acres.
- North Branford – Corresponded with property owner of 75+/- acres.
- Cheshire – Corresponded with property owner of 56+/- acres.
- North Branford, Beech St. and Pumps La. properties (NB 4) – Murtha shared some of the work the title searcher completed. Town Planner signed off on the surveys to subdivide the parcels and they were filed on the land records. Murtha will follow-up with the Assessor about subdividing the “island” parcel. Submitted draft disposition application to Sunny.

Rental houses:

- Hamden, 233 Skiff St. (HA 9A) – P&Z Commission reviewed the matter and sent to Town Council. Town Council needs to sign off and authorize funds.
- Seymour, 189 Maple St. – Spoke with owner and sent him copies of the deeds since he asked about the insurance requirement.

Forestry Update

- Killingworth - East Hammonasset Leaf Screen Thinning, (KI 4) – **80% complete.**
- Hamden - Overstory removal and Tornado Salvage, (HA 36) – Not started yet. May be pushed to summer due to ground conditions.
- Killingworth - N. Chestnut Hill Patch Cuts, (KI 6) – **70% complete.**
  - Participated in project work and field planning meeting for upcoming bat research around Lake Gaillard.
  - Organized meeting with US Forest Service grant administrator regarding LSR grant.
  - Investigated and responded to timber sale trespassing issues at the KI 6 timber harvest.
  - Participated in a US Forest Service presentation on Urban and Community Forestry grant opportunities through the Inflation Reduction Act programs.
  - Conducted a walk-through with the logger for the Crosby salvage operation. Distributed letters and hung signs at entrance to landing.

Recreation

- Walk with Forester at Genesee had 7 participants.
- In addition to the physical newsletter, O&C sent it out via email to the permittees that we have email addresses for.
- Received recreation activity permit from DPH for relocation of part of the New England Trail in Guilford. Submitted LUP amendment to Sunny.
- CFPA asked to relocate another part of the New England Trail away from Hart Rd. in Guilford,
- A permit holder reported a new eagle nest at Lake Saltonstall. Reported the discovery to DEEP.
- Cleared trails at Lake Saltonstall and Big Gulph.
- Two new recreation staff members were on-boarded.
- Installed the docks for the upcoming fishing season.
- Repaired picnic table at the Maltby Lakes.
- Soft plastic bait recycling containers were put up at Saltonstall, Chamberlain and Maltby Lakes.

- The fish liberation permit was submitted to DEEP for the stocking of trout at the Maltby Lakes and arrangements made for their delivery.

	March		February	
	2023	2022	2023	2022
Permit Holders	4,954	5,712	4,822	5,601

#### Special Activity Permits

- 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, (03/22/2023-3/22/2024)
- 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
- (03/22/2023 – 3/22/2024)
- UConn, Dept. of Ecology & Evolutionary Biology (Professor Eric Schultz) – Research on alewives (fishes) for genetic study, Lake Saltonstall, (8/1/2023-9/30/2023)
- Northeast Work & Safety Boats, LLC (Jack Casey) – inspection of bridge 00186 Lake Saltonstall (4/3/23-4/4/23)

#### Other items

- Encroachments/agreements –
  - North Branford, 215 Forest Rd. (NB 17) – Executed license agreement for lawn and bench.
  - Guilford, Great Hill Rd and Cooks La. (GU 9) – Executed license agreement for a shed partially over the line as well as parking a vehicle over the line.
  - Killingworth, Bunker Hill Rd. (KI 9A) – Found deer stand on the line and sent letter to abutter.
  - Orange, 869 Dogburn Rd. (OR 7) – Observed abutter using our property to access the rear of their lot. Sent letter to cease and repair damage.
  - Orange, 43 Pine Crest Dr. (OR 3) – Sent letter and spoke to abutter about lawn and other encroachments. Sent them a draft license agreement to review.
  - Orange, 820 Ogg Meadow Rd. (OR 2) – Sent letter and met with abutters about firewood stored over the property line. Abutter said they would move the stacks.
  - West Haven, Shingle Hill tanks (WH 7) – Continued to correspond with consultant for Yale to place radio repeater at the tanks.
  - Cell phone towers – Corresponded with TMobile staff about new generator at the Rabbit Rock Tank (NO 1).
  - Hamden, New Haven Country Club (HA 5) – Reviewed the red-lined agreement from the NHCC staff.
  - Trespassing – Recorded instances of trespassing including ATV's, dirt bikes, hikers without permits, illegal fishing, mountain bikers in unapproved locations, and hikers with dogs.
- Invasive plants – Treated or documented invasive plant populations in North Branford, East Haven, Madison, and Branford. Issued PO to clear field of invasives in Guilford. Corresponded with Madison resident about plans for invasive management at Coan Pond.

Invasive Species Documented/ Mapped (ac)	302.4 acres
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Invasive Species Treated (ac/MH)	0.8 acres

- East Haven, Beach Ave. watermain – Met Tighe and Bond staff at the site to work on the DEEP permit application. Told Murtha staff to go ahead with the title policy.
- Deer hunt - The lottery applications for the 2023 deer hunt went out March 6. The applications are due May 2.
- Hamden, tire dumping – Met with North Lake Condo’s staff to look at tires dumped on the Atria Larson property. Talked to consultant hired by town about what we have observed.
- Boundaries – Completed remarking of boundaries in Durham, Madison, Orange, Killingworth, and Woodbridge.
- The Watershed Fund – A special permittee gave us a check for \$250 to go to a charity. Forwarded to The Watershed Fund.
- Yale Golf Course remodeling – Spoke with various local residents about Yale’s plans to restore some of the gold course.
- Prospect Reservoir – Reviewed plan for dredged materials from the reservoir and sent comments to Engineering.
- Drone flights - Performed one drone flight at West River to document the DAF project. Performed a drone flight to document manure issue in Bethany.

There were no other land items to report.

The next meeting is scheduled for Wednesday, May 10, 2023 at 4:30 p.m.

At 7:24 p.m., on motion made by Mr. Malloy, seconded by Mr. Harvey, and unanimously carried, the committee meeting adjourned.

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Peter Betkoski, Chairman

**May 10, 2023**  
**Land Use Committee Meeting**

Reservoir Levels (Percent Full)

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

Rainfall (inches)

	Current Year	Previous Year	Historical Average
April 2023	6.03	3.87	4.28
Fiscal YTD (6/1/22 – 4/30/23)	39.49	44.57	42.59

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

- Prospect, 200 Saddle Ct. – Closed on the property. Marked boundaries. Tree stands have been removed. Surveyor will install additional pins.
- Madison – Corresponded with property owner of 24+/- acres.
- Cheshire – Corresponded with property owner of 56+/- acres.
- North Branford, Beech St. and Poms La. properties (NB 4) – Assessor signed off on separating the “island” parcel from 105 North St. Disposition application expected to go to FMA in May or June.

Rental houses:

- Hamden, 233 Skiff St. (HA 9A) – Spoke to Asst. Town Attorney. Reviewed draft of Order that was going to the Town Council.

Forestry Update

- Killingworth - East Hammonasset Leaf Screen Thinning, (KI 4) – **90% complete.**
- Hamden - Overstory removal and Tornado Salvage, (HA 36) – Not started yet. May be pushed to summer due to ground conditions.
- Killingworth - N. Chestnut Hill Patch Cuts, (KI 6) – **85% complete.**
  - Participated in planning work around expected receipt of the US Forest Service Landscape Scale Restoration grant.
  - Planted Christmas trees at Lake Gaillard.
  - Planted ~375 tree seedlings at Maltby Lakes, Saltonstall, Peat Swamp, and Nathan’s Pond properties for a large-scale restoration project and a long-term study testing species migration potential related to climate change.
  - Attended the American Chestnut Foundation annual meeting. Requested backcrossed chestnut and chestnut seedlings for planting in deer exclosures.
  - Conducted follow-up communications regarding a landscape waste dumping incident at the log landing for the Crosby salvage operation.
  - Spoke to Engineering about using some of the forestry budget to regrade and reseed the landing off of Haddad Rd., Seymour.
  - Met with logger at HA 36 about need to use some of the field. Relayed information to the tenants of the fields.

Recreation

- Held training class for new and existing recreation staff.
- Easter egg hunt was cancelled due to inclement weather.
- Attended kids fishing derby at Maltby Lakes.

- Blocked off unapproved trail at Coan Pond.
- The Water Wagon was brought to three events this month.
- 1800 trout were stocked in the Maltby Lakes.
- Boats were brought from storage down to Lake Saltonstall in preparation of our boat rental season. Boats started being rented on the April 29<sup>th</sup>.
- Melted and recast used soft plastic baits as part of our recycling effort.
- Trail cleared of downed tree at Lake Chamberlain.

	April		March	
	2023	2022	2023	2022
Permit Holders	5,021	5,792	4,954	5,712

#### Special Activity Permits

- CT Forest & Park Assoc. (CFPA) (Elizabeth Merow) conduct tour of property, Master Woodland Manager Program, forestry ecology, Rt. 79 Madison, (4/22/23)
- Native Plant Trust (formerly New England Wild Flower Society) – (Micah Jasny, Botanical Coordinator) – survey and seed collection of CT endangered plant species with DEEP approval, Totoket Mountain North Branford, Beaver Head Swamp Guilford, Lake Saltonstall Branford, (4/15/23-12/1/23)
- Quinnipiac University (Professor Scott Davies)-Study bird nest boxes and record bird nesting activity and success, band the adults and chicks, and collect tissue samples for analysis during breeding season, Lake Chamberlain Recreation Area, Sperry Rd. Farm Field, Lake Watrous, and Lake Dawson, (05/01/23 – 11/31/23)
- Menunkatuck Audubon Society (Tom Kelly) - Monitoring of Barn Owl nesting boxes - North Guilford owl box locations: Menunkatuck Reservoir (RT 77); Beaverhead Road; (04/01/2023 to 07/01/2023).

#### Other items

- Encroachments/agreements –
  - Orange, 43 Pine Crest Dr. (OR 3) – Contacted abutter again about the license agreement.
  - Guilford, 797 Beaver Head Rd. (GU 6) – Abutter moved the materials to their property.
  - Hamden, New Haven Country Club (HA 5) – Sent comments to NHCC staff and set up meeting to discuss new license agreement for overflow parking area.
  - East Haven, 9 Pardee Pl. (EH 6) – Executed license agreement to allow the fence, lawn, gazebo, and other yard materials.
  - Bethany Horsemen – Sent the annual agreement for BH to execute.
  - Hamden, 33 Rolling Ridge Rd. (HA 12) – Send letter about encroachments and offered a license agreement.
  - Hamden, 47 Rolling Ridge Rd. (HA 12) – Send letter about encroachments and offered a license agreement.
  - East Haven, 161 Saltonstall Pl. (EH 7) – Observed our fence was taken down. Abutter put up a new fence in its place. Talked abutter and sent letter letting them know the fence was entirely on our property.
  - West Haven, Shingle Hill tanks (WH 7) – Continued to correspond with consultant for Yale to place radio repeater at the tanks. Waiting for confidentiality agreement to be signed.
  - Cell phone towers – New generator installed at the Rabbit Rock Tank by TMobile.
  - Trespassing – Recorded instances of trespassing including kayak being launched at Lake Saltonstall, horses in unapproved locations, illegal fishing, ATV's, and hikers without permits in unapproved locations.



- Invasive plants – Treated or documented invasive plant populations in Madison, North Branford, East Haven, Guilford, West Haven, Woodbridge and Branford. Madison staff/volunteers cut phragmites at Coan Pond. Contractor cleared field of invasives in Guilford.

Invasive Species Documented/ Mapped (ac)	44 acres
Invasive Species Treated (ac/MH)	4.5 acres

- East Haven, Beach Ave. watermain – Murtha sent email to all property owners updating them with the status of the project.
- Regional Conservation Partnership – Attended meeting about reinvigorating the RCP.
- Hamden, Olin Powder Farm Ponds – Answered question that came into Environmental Planning about our interest in this property. Noted that we conveyed our conditional option to purchase the property to the Hamden Land Trust.
- New Haven, Edgerton Park wall – Responded to New Haven Park staff about gaining access to part of the Edgerton Park wall that had collapsed in order to repair it.
- New Haven, Whalley Ave PRV (NH 5) – Staff from the Livable City Initiative called about tires and other refuse dumped behind RWA property. Informed them about where the property line was and that most of the dumping was on City property.
- Whitney Water Center parking lot – Corresponded with WPCA staff about plans for a bioswale in the parking lot.
- New Haven Arbor Day event– RE staff helped plan, coordinate and execute the event which included planting trees at DeGale Field in New Haven.
- Boundaries – Completed remarking of boundaries in Woodbridge, North Branford, Madison, Guilford, and Bethany.
- Performed multiple drone flights at the Derby tank site, as well as the DAF project at West River. Acquired new drone for use in places where GPS navigation is not available.

#### Attachments

- April 21, 2023 - For New England farmers, silvopasture could be a key adaptation to a changing climate – CT Public Radio
- April 19, 2023 - The Ohio River, which supplies drinking water to millions of people, is endangered – NPR
- April 16, 2023 - Lake Tahoe's clear water is due to tiny creatures called Zooplankton, researchers say – NPR
- April 5, 2023 - EPA invests millions more in New England water infrastructure upgrades – CT Public Radio

#### Upcoming Agenda Items

June 2023 -

## For New England farmers, silvopasture could be a key adaptation to a changing climate

Connecticut Public Radio | By Patrick Skahill - April 21, 2023

To understand silvopasture, imagine you're a cow grazing under full sun on a hot August day.

It's 95 degrees and the humidity is brutal. "Do you want to be out there eating a full buffet?" asked Joe Orefice, a beef cattle farmer at Hidden Blossom Farm in northeastern Connecticut. "You don't want to do that. As a human, you're gonna be like, 'This is miserable.'"

But Orefice's cows aren't actually eating in an open field. They're in the comfortable shade of carefully spaced trees. Healthy trees get bigger. Soil conditions are better. And more sunlight hits the forest floor, allowing grass to grow lush and green. That's silvopasture.

"Silvopasture is the intentional integration of livestock, trees and forage on the same unit of land," said Orefice, who is also a lecturer at the Yale School of the Environment. "Trees are producing a crop, the grass is producing a crop, which is feeding the livestock. And all of those are managed."

The nonprofit Project Drawdown, which focuses on what it calls "science-based climate solutions," lists silvopasture as a top global solution for climate change. It's not a new idea, but it's starting to gain momentum in New England.

Orefice said integrating trees into his pasture makes for shaded, happier cows that produce more. The trees produce too, yielding fruits or syrup that can translate into extra income. And silvopasture has another key benefit: the whole system is more resilient to climate change.

"When you have a drought, the grass in a treeless pasture just stops. Last summer, 2022, it was dry. I was still grazing," Orefice said. "Well, my cows are still grazing. I don't eat grass. But the cows are grazing. And that was because I had silvopasture."

As record drought gripped much of the U.S. last year, the National Oceanic and Atmospheric Administration said five of the six New England States saw record warm temperatures.

"There are times when I go to a farm site visit, where I feel scared on behalf of those farmers, because most farms are not well prepared for what's coming," said Meghan Giroux, with Interlace Commons, an organization that helps farmers in the northeast start silvopastures.

"Farms are communicating that they're experiencing longer periods of drought and shorter periods of precipitation, but those periods of precipitation are very intense." Giroux said more farmers want to do silvopasture as they face the reality of climate change.

Intense precipitation can erode soil and drought can shorten grazing, meaning farmers pay more for animal feed. The latest report from the Intergovernmental Panel on Climate Change said continued global warming will only make things worse.

"If there is one, or two, or three drought years simultaneously, farmers are the biggest ones to lose," said Yusuf Jameel, an associate scientist with Project Drawdown. Part of the reason his organization sees silvopasture as a major solution, Yusuf said, is because pasture fields are everywhere.

"Silvopasture can be implemented in total land for about 823 million hectares. So that's a huge amount of land," Yusuf said. "When you can implement a solution globally, it makes it super powerful."

He said carbon in trees and soil is much better than in the atmosphere. And that harvesting crops like apples or nuts from trees in silvopastures means farmers can sell more. In heavily-forested New England, creating silvopasture often involves thinning out trees. Orefice said that's rarely carbon positive, but is still better than creating a pasture by clear-cutting a forest.

Ben Coerper, who farms at Wild Harmony Farm in Rhode Island, said silvopasture is all about balancing concerns for the climate against the economic uncertainty of being a farmer. "We call it our drought insurance policy," Coerper said.

Today, he pastures beef cattle on about 60 acres of land. He's converted about half to silvopasture. He rents the farmland and said silvopasture has another benefit, it can make land more affordable. "If you look at the cost of land rent, as a farmer," he said, "you might pay \$300 an acre for an open field. You might only have to pay \$20 an acre for forest."

For Coerper, silvopasture is all about balance: combining the carbon-storing power of trees with a local food production system that's protecting his farm against the threats posed by climate change.

"Silvopasture is ... a very clear answer," he said, "where we can keep the carbon sequestering trees out there, and then also be producing food underneath it."

## **The Ohio River, which supplies drinking water to millions of people, is endangered**

NPR - Seyma Bayram - April 19, 2023

AILSA CHANG, HOST: The Ohio River supplies drinking water to millions of people between Pennsylvania and Illinois. It's also one of the most endangered rivers in the country, according to a new report from the conservation nonprofit American Rivers. NPR's Seyma Bayram joins us now to discuss why. Hey, Seyma.

SEYMA BAYRAM, BYLINE: Hi, Ailsa.

CHANG: So I understand that you recently visited the Ohio River where it starts in Pittsburgh. What did you see there?

BAYRAM: So I had this beautiful view from this overlook in Pittsburgh where you can actually see the Allegheny and Monongahela Rivers come together to form the Ohio River. There are barges going up and down the river, a reminder that this nearly thousand-mile long river is still a main way to transport goods. You know, it's important to remember the Ohio River gave life to Pittsburgh's coal, petroleum and steel industries, which sustained the local economy, but also polluted the waterways.

I met this woman, Judy Baumgartner. She's a Pittsburgh native. She remembers seeing big pipes from the plants going into the river and the smell.

JUDY BAUMGARTNER: It had a sweet, different smell. It wasn't fresh water. You know, you just got used to it.

BAYRAM: And many people I talked to in Pittsburgh, including Baumgartner, assumed that the river was in good shape.

BAUMGARTNER: To me, the river looks a lot more healthy now than it did back then.

BAYRAM: The Ohio River is much healthier than it was back then, but it still faces some challenges.

CHANG: OK. Well, let's talk about those challenges. Like, what are some of the biggest threats to the Ohio River now?

BAYRAM: So, Ailsa, it comes down to a few things. One - you have legacy pollution left over from these old industries. The toxins they dumped, like mercury, still impact fish and other wildlife. And then, two - you have these new industries that have moved into the Ohio River Basin. These companies, they have permits to release a certain amount of chemicals into the water, but environmental groups say there is not enough enforcement when companies exceed those permitted amounts. And three - climate change, of course, is another factor because it leads to more frequent and heavy rainfall. That overwhelms the stormwater and sewer system in Pittsburgh. And so when it rains a lot, sewage overflows and seeps into the Ohio River, creating these toxic algae blooms.

CHANG: Well, of course, as well, the Ohio River was in the news in February when a train carrying hazardous chemicals derailed in East Palestine, which I understand is only - what? - 16 miles from the Ohio River. How did that derailment impact the river, specifically?

BAYRAM: So you may have heard of this toxic chemical, butyl acrylate. It was released into nearby streams after the East Palestine derailment. What's important to remember is that those tributaries flow directly into the Ohio River, so that chemical did end up in the river. And companies transport hazardous materials on this waterway all the time, either in barges or on nearby freight trains. So if an accident happens, that can have huge consequences on the river.

CHANG: Yeah. Well, what's being done now to help clean up and protect the river?

BAYRAM: So there's a group of stakeholders drafting a plan right now to submit to Congress this year that could help transform the Ohio River Basin into a federally protected water system. Meanwhile, environmental groups, like Three Rivers Waterkeeper, want polluting industries to be held accountable.

(SOUNDBITE OF ENGINE RUNNING)

BAYRAM: I went out on the Ohio River with the organization's Evan Clark. He explained they do regular patrols for microplastics and test water quality.

EVAN CLARK: It's a source of food and this source of abundant and relatively rare on the global scale of fresh water. It just deserves a lot of protection and love.

BAYRAM: Fresh water is where we get our drinking water from, and it's the water we use to grow crops, but only 2.5% of the Earth's water is fresh water. And as climate change and pollution threaten water supplies, experts say it's critical that we find ways to protect it.

## Lake Tahoe's clear water is due to tiny creatures called Zooplankton, researchers say

NPR - Ayesha Rascoe - April 16, 2023

AYESHA RASCOE, HOST: There's something in the water at Lake Tahoe. The freshwater lake between California and Nevada is the clearest it's been in decades, and researchers say that could be thanks to some tiny organisms called zooplankton. To tell us more about it, we turn to Geoffrey Schladow. He's director of the UC Davis Tahoe Environmental Research Center. Welcome to the program.

GEOFFREY SCHLADOW: Thank you. It's a pleasure to be here.

RASCOE: So first, can you tell us what these creatures are exactly? What are zooplankton?

SCHLADOW: Well, they're microscopic animals that live in all lakes, and they come in different forms. And they're parts of different families there. But basically, they eat the phytoplankton, the small, microscopic animals that live in the lake.

RASCOE: So how exactly are the zooplankton making the lake clear?

SCHLADOW: Well, these particular zooplankton, the Daphnia, are very indiscriminate feeders, meaning they eat everything, and they particularly eat everything that's very small. So very fine clay particles, very small phytoplankton - they consume that. They remove it. And it's those fine particles that are the root cause of the decline in clarity. So essentially, they're little Roombas cleaning up the lake.

RASCOE: OK. And then, like, why is lake clarity important?

SCHLADOW: So lake clarity is important for many reasons. It's an aesthetic quality, and it's a reason people come to Lake Tahoe. But it also impacts the drinking water quality, and clarity is a really important integrator of many things that impact all lakes. So things that wash into the lake from its watershed, things that fall from the air affect the clarity. So by taking this one simple measurement, we can keep track of the daily and the seasonal changes that any lake is subjected to.

RASCOE: So, I mean, your recent report about the ecology of the lake says that the water is the clearest it's been since the 1980s. How do you measure something like that?

SCHLADOW: Well, we measure it in many ways, but the simplest one and the one that we have the longest record for is using a 10-inch white disc. It's called a Secchi disc, and it's lowered down into the water. And we measure the depth at which we can no longer see it. In many lakes, that could be just 10 or 12 feet. In Lake Tahoe, typically, the last few years it's been about 70 feet on average. But this last six months, it's been over 80 feet.

RASCOE: Oh, wow. So why is that? It's because are there more zooplankton now than normal?

SCHLADOW: What's happened is that there are different zooplankton now. And what we've had is a resurgence of the native zooplankton. There are a few of them, but the main one is called Daphnia. For many, many years, Daphnia were absent from the lake because of an introduction of invasive shrimp. But those shrimp have themselves now disappeared, and the Daphnia are back, and the lake very quickly has gotten clear.

RASCOE: Is this just a short-lived moment of clarity, or do you think this will be long term?

SCHLADOW: Well, that's the unfortunate part. We believe that it will be short term. It may last maybe two years, maybe a little longer because the shrimp will come back. And they're very aggressive, and they prey upon the Daphnia. And once they do that, Daphnia will disappear, and clarity will go back to what it had been.

RASCOE: That's Geoffrey Schladow, director of the UC Davis Tahoe Environmental Research Center. Thank you so much for joining us.

SCHLADOW: Thank you. It was a great pleasure.

## **EPA invests millions more in New England water infrastructure upgrades**

Connecticut Public Radio - Michayla Savitt - April 5, 2023

The U.S Environmental Protection Agency is sending over \$57 million to New England to help upgrade wastewater and stormwater systems across the region.

The EPA said Connecticut will receive \$9 million to protect drinking water, limit the PFAS “forever chemicals” in water and build resilience against climate change.

“Improving and upgrading our water infrastructure betters the livelihood of Connecticut’s families,” Rep. Rosa DeLauro, a Democrat who represents Greater New Haven, said in a statement.

EPA New England Regional Administrator David Cash echoed that sentiment.

“The investments we are making now will result in long-lasting benefits for communities across New England, from southern Connecticut all the way up to rural northern communities in Maine, Vermont and New Hampshire,” Cash said.

Massachusetts is slated to receive \$25 million. New Hampshire will get \$7 million, Maine and Rhode Island will each receive more than \$5 million, and Vermont will get over \$3 million for upgrades.

“Upgrading wastewater treatment plants means protecting the environment that sustains our communities, and it means healthier places we live and raise our families,” Cash added.

The EPA has provided low-cost financing to states for water upgrade projects for decades. The money is part of the agency’s Clean Water State Revolving Fund.

This builds upon \$2.4 billion invested in clean water infrastructure this year through the Bipartisan Infrastructure Law and a stated commitment by the agency to accelerate lead pipe replacement in specific states, including Connecticut.