

Representative Policy Board
Land Use Committee
South Central Connecticut Regional Water District
90 Sargent Drive, New Haven, Connecticut

AGENDA

Regular Meeting of Wednesday, March 8, 2023 at 5:30 p.m.

1. Safety Moment
2. Approval of Minutes – February 8, 2023 regular meeting
3. Beekeeper Update: Vincent Kay
4. Updates on land and RWA properties, including invasive species update
5. Other land items
6. Next meeting regular meeting: Wednesday, April 19, 2023 at 5:30 p.m. (*Management's presentation of FY 2024 Budget*)
7. Adjourn

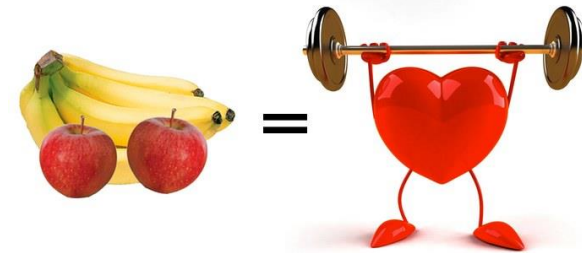
SAFETY MOMENT

MARCH - NATIONAL NUTRITION MONTH

GO FURTHER WITH GOOD FOOD

Whether it's starting the day off right with a healthy breakfast or fueling before an athletic event, the foods you choose can make a real difference. Preparing your foods to go further, by planning meals and snacks in advance, can also help to reduce food loss and waste.

1. Include a variety of healthful foods from all of the food groups on a regular basis.
2. Consider the foods you have on hand before buying more at the store.
3. Buy only the amount that can be eaten or frozen within a few days and plan ways to use leftovers later in the week.
4. Be mindful of portion sizes. Eat and drink the amount that's right for you.
5. Continue to use good food safety practices.
6. Find activities that you enjoy and be physically active most days of the week.
7. Realize the benefits of healthy eating by consulting with a registered dietitian nutritionist. RDNs can provide sound, easy-to-follow personalized nutrition to meet your lifestyle, preferences and health-related needs.



**Tap Into
Safety**



Regional Water Authority

Service – Teamwork – Accountability – Respect – Safety

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

 Regional Water Authority

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

Minutes of February 8, 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, February 8, 2023, via remote access. Chair Betkoski presided.

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

RPB: C. Havrda

Authority: C. LaMarr

Management: J. Hill, S. Lakshminarayanan, N. Smith, and J. Triana

Staff: J. Slubowski

Chair Betkoski called the meeting to order at 5:30 p.m. He reviewed the Safety Moment distributed to members.

Chair Betkoski called for a moment of silence in remembrance of Anthony DiSalvo, prior Authority member.

On motion made by Mr. Horbal, seconded by Mr. Eitzer, the Committee approved the minutes of its January 11, 2023 meeting.

At 5:32 p.m., Ms. Young entered the meeting.

Ms. Smith, the RWA’s Natural Resources Analyst, provided a Deer Hunt Update, which included:

- Historical review of the program
- Hunting areas
- Regeneration
- Application process and survey reports
- Changes made in 2022
- Harvest totals
- Impact, analysis, and reporting

At 5:55 p.m., Mr. Levine entered the meeting.

Committee members discussed year-over-year deer population decrease, Sunday hunting restriction, and hunting methods.

At 5:58 p.m., Ms. Smith withdrew from the meeting.

Chair Betkoski reported that the March 8th committee meeting would be hybrid and that the committee would receive an update from the RWA’s Bee Keeper, Vincent Kay. Members may attend in person at 90 Sargent Drive, New Haven or by remote access.

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
January 31, 2023	90%	87%	77%	None

Rainfall (inches)

	Current Year	Previous Year	Historical Average
January 2023	4.89	2.68	3.57
Fiscal YTD (6/1/22 – 1/31/23)	28.75	33.81	30.68

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

- Prospect, off Roaring Brook Rd. – P&SA executed by both sides. Draft survey reviewed. Total acreage is 43.34. Submitted application to The Watershed Fund for \$20,000 to help offset cost of the acquisition.
- Branford – Corresponded with property owner of 12+/- acres.
- North Branford – Corresponded with property owner or 40+/- acres.
- Madison – Corresponded with property owner or 7+/- acres.
- North Branford, Beech St. and Poms La. properties (NB 4) – Murtha confirmed with Assessor that the “island parcel” could be split administratively, but didn’t want to do it until after the GL was finalized (1/31/23). Spoke to NBLCT and DEEP staff about the language that we used in a draft deed that was included in NBLCT’s OSWLA application.

Rental houses:

- Hamden, 233 Skiff St. (HA 9A) – Appraiser completed appraisal of area to be condemned by town. Emailed Asst. Town Attorney to get status update of the matter. Last of tires removed and the driveway was blocked with a large tree.
- Hamden, 95 Ives St. - Corresponded with owner about work at the property. Article published in the NH Register about work on the house.
- Guilford, 1155 Great Hill Rd. – Noticed unapproved shed on the property and contacted owner. Will inspect the property in February.

Forestry Update

- Killingworth - East Hammonasset Leaf Screen Thinning, (KI 4) – **70% 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) – **35% complete.**
 - Woodcutter in Guilford (Prifitera) completed the road on his property and his firewood permit was reinstated.
 - Replied to inquiry about the timber sale off of Abner Lane Rd. in Killingworth.
 - Worked with RWA Operations staff and PermaTreat to establish access for the second landing off of North Chestnut Hill Road.
 - Corresponded with Seymour town staff about water ponding on Haddad Rd. near the log landing.
 - Looked into the request to expand the PA 490 forest-land classification for two parcels in Guilford, and researched opportunities for tax abatement for open space/non-forestland.
 - Worked with professional deer hunter to remove deer from within the Nathan’s Pond slash wall.

Recreation

- Bird walk at Lake Bethany had 20 participants.
- Annual DPH reports were submitted.
- Trails were cleared of downed trees at Lake Chamberlain and Lake Bethany.
- Continued process for hiring new recreation staff for the 2024 fishing season.
- Collected information for the next newsletter.
- Granted request from NBLCT to use wood chips at Gaillard for their trail coming from the Harrison Preserve.
- Responded to inquiry about metal detecting on our property.

	January		December	
	2023	2022	2022	2021
Permit Holders	4,847	5,605	4,851	5,655

Special Activity Permits

- Central CT State University, (Katerina Gillis and Dr. Paul Hapeman, PhD., John Correia,- provide a better understanding of the distribution of fisher in suitable habitats throughout Connecticut, Lake Saltonstall area, (2/4/2023-2/19/2023).
- New Haven Bird Club (Patrick T. Leahy) – Maintain and monitor bluebird nesting boxes on 7 sites – Downes Road, Bethany, adjacent to Lake Bethany property and field below Lake Dawson dam, Woodbridge, farm field on Sperry Road and Lake Chamberlain below the dam, Lake Watrous and other properties – 1/5/23-12/31/23.
- Branford Land Trust (Tom Cleveland) - Tracking class - Lake Saltonstall woods - 1/28/23 (Rain Date: 1/29/2023) & 2/25/2023 (Rain Date: 2/26/2023).

Other items

- Encroachments/agreements –
 - Agricultural agreements – Corresponded with the tenant of the Matthew St. field in Prospect. Met prospective tenant at North St., North Branford to discuss use of the fields for Christmas trees.
 - North Branford, Forest Rd. (NB 17) – Sent letters to many abutters about encroachments after remarking the boundary.
 - West Haven, Shingle Hill tanks (WH 7) – Corresponded with consultant for Yale to place radio repeater at the tanks.
 - Hamden, 364 Putnam Ave. (HA 8) – Signed license agreement with abutter to use our property while they rebuild a retaining wall.
 - Cell phone towers – Authorized changes at Orange site for Verizon antennas. TMobile expects to work on the Rabbit Rock Tank (NO 1) generator.
 - Hamden, New Haven Country Club (HA 5) – Talked to NHCC president about the license agreement for the parking area which will expire at the end of this year.
 - Trespassing – Recorded instances of trespassing including ATV's, hikers with dogs, and hikers in unpermitted areas, people illegally parking, and illegal fishing.
- Invasive plants – Treated or documented invasive plant populations in North Branford, Bethany, and Woodbridge.

Invasive Species Documented/ Mapped (ac)	181.21 acres
Invasive Species Treated (ac/MH)	12 acres

- East Haven, Beach Ave. watermain – The easement was executed and recorded by the town.
- Deer hunt – Post-hunt surveys were returned. Reviewed planned schedule for this year.
- Seymour, Great Hill Reservoir – Corresponded with consultants for the town about any plans we had of the dam. Noted that we don't have anything since it was conveyed before we bought the BUI system.
- Coyotes – Responded to reporter looking for information on coyotes. Article was published in the NH Register.
- Ansonia, Kimberly La. – Responded to owner of 303 Kimberly La. after he called again about marking our boundaries. Informed him once more that we do not own the property next to his – the state does.
- Boundaries – Completed remarking of boundaries in Guilford (GU 9). Started additional property lines in Guilford (GU 12), Woodbridge (WO 16), and Killingworth (KI 11).
- Met with Operations staff to discuss removing trees from water main ROW's and easements and maintaining these areas in the future.

The next meeting is scheduled for Wednesday, March 8, 2023 at 5:30 p.m.

At 6:23 p.m., on motion made by Mr. Levine, seconded by Mr. Malloy, and unanimously carried, the committee meeting adjourned.

Peter Betkoski, Chairman

March 8, 2023
Land Use Committee Meeting

Reservoir Levels (Percent Full)

	Current Year	Previous Year	Historical Average	Drought Status
February 28, 2023	92%	97%	82%	None

Rainfall (inches)

	Current Year	Previous Year	Historical Average
February 2023	0.88	4.40	3.33
Fiscal YTD (6/1/22 – 2/28/23)	29.63	38.21	34.01

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

- Prospect, off Roaring Brook Rd. – Reviewed title report. Inspected property. Owner contacted those he previously gave permission to hunt the property to remove anything they still have on the property. Reviewed the title objection notice that Murtha was sending to the owner.
- Madison – Corresponded with property owner of 7+/- acres.
- North Haven – Corresponded with property owner of 14+/- acres.
- North Branford, Beech St. and Poms La. properties (NB 4) – Met with surveyor and Murtha staff to discuss progress. Murtha will contact town staff to see if they are ready to make whatever administrative cuts are possible.

Rental houses:

- Hamden, 233 Skiff St. (HA 9A) – Have not heard back from Asst. Town Attorney about the condemnation.
- Guilford, 1155 Great Hill Rd. – Inspected property. No watershed issues found. The unapproved shed was removed.

Forestry Update

- Killingworth - East Hammonasset Leaf Screen Thinning, (KI 4) – 70% 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) – **40% complete.**
 - Corresponded with Seymour town staff about water ponding on Haddad Rd. near the log landing. Made more changes on the log landing to divert water to the north.
 - Received notification from USDA that our grant application was ranked 20th out of 30.
 - Met with Eversource staff and contractors who plan to control vegetation within their ROW at Lake Saltonstall from the UI lines to the substation.
 - Met DEEP staff to discuss the summer bat monitoring season.
 - Looked into the request to extend PA 490 forest-land classification for two parcels in Guilford, and researched information on the Tax Assessor's webpage regarding the open space application program.

Recreation

- Winter tree walk at Lake Saltonstall had 15 participants.
- Trails were cleared at Sugarloaf, Hammonasset, and Chamberlain.
- Continued process for hiring new recreation staff for the 2024 fishing season.
- Spring newsletter was published and distributed.

- Responded to abutter's question about horse trails off of Sperry Rd., Woodbridge.
- Rejected inquiry about installing a new trail behind Glendower Rd., Hamden.
- Met to discuss recreation proposals including other trails in Hamden.
- Repaired plank bridge at Pine Hill.
- Issued a warning to a permit holder seen parking and walking in unauthorized places.

	February		January	
	2023	2022	2023	2022
Permit Holders	4,822	5,601	4,847	5,605

Special Activity Permits

- CT Forest & Park Assoc. (CFPA) (Elizabeth Merow) conduct tour of property, Master Woodland Manager Program, forestry ecology, Rt. 79 Madison, (3/4/23)
- Bryan M. Tirrell, Forester, US Forest Service NRS FIA, completion of Northern Research Station Forest Inventory Plot as part of a national inventory study, Goat Lot Road, Madison (6/1/2023-9/30/2023)
- CTDEEP (Ansel Aarrestad, Environmental Analyst II) - To monitor and assess the surface waters across CT as part of a probabilistic study. Install temperature logger, diatom community survey, fish community survey, macroinvertebrate community survey, swap temperature logger, remove temperature logger. Mill River (41.394847-72.892324) off of Riverside Drive, Hamden (3/20/2023-3/20/2024)
- New Haven Youth and Recreation (Shashinka) – Fishing Derby to allow inner city children a fishing experience, Maltby Lakes, (4/22/23 raindate of 4/23/23).
- Yale University Film and Media Studies (Kilga) – Yale thesis film about a group of young students who retreat to the forest to reconnect with nature, Maltby Lakes, (4/20/23 – 4/23/23).
- UConn, Dept of Ecology & Evolutionary Biology (Dr. Mark Urban) – Research on pond amphibians - Totoket mountain in Northford; ridge north of Lake Gaillard; 60 ponds distributed to the west and east of Big Gulph Brook (3/1/2023- 3/1/2024)
- Connecticut Agricultural Experiment Station (Dr. Chris T. Maier, Agricultural Scientist)-Conduct research on insects, particularly longhorned beetles (continuation of 2022 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), (3/15/2023 – 11/30/2023)

Other items

- Encroachments/agreements –
 - Agricultural agreements – Executed amendment to Christmas tree agreement Miscio to have them manage the fields by North St. in North Branford.
 - North Branford, 215 Forest Rd. (NB 17) – Sent draft license agreement to Regan.
 - Guilford, Great Hill Rd and Cooks La. (GU 9) – Sent letters to two abutters regarding encroachments. Sent draft license agreement to Wall.
 - Guilford, Beaver Head Rd. (GU 6) - Sent letters to two abutters regarding encroachments.
 - West Haven, Shingle Hill tanks (WH 7) – Continued to correspond with consultant for Yale to place radio repeater at the tanks.
 - Hamden, 364 Putnam Ave. (HA 8) – Inspected property and emailed owner about having sediment and erosion controls in place.
 - Cell phone towers – Sent email to TMobile for them to use with town officials authorizing the work on the Rabbit Rock Tank (NO 1) generator.
 - Hamden, New Haven Country Club (HA 5) – Met with NHCC staff about the license agreement for overflow parking which is expiring at the end of the year.

- Trespassing – Recorded instances of trespassing including ATV's, hikers with dogs and horseback riders at Sugarloaf, and hikers in unpermitted areas, note on logger's machine at Hammonasset, illegal parking at Hammonasset, and illegal fishing at Hammonasset.
- Invasive plants – Treated or documented invasive plant populations in North Branford, Seymour, Guilford, and Orange. Met with UConn staff to look at data they collected at the two slash wall harvests using a LiDAR camera.

Invasive Species Documented/ Mapped (ac)	60 acres
Invasive Species Treated (ac/MH)	0.5 acres

- East Haven, Beach Ave. watermain – Met with consultant who will help compile the DEEP permit application.
- Deer hunt – DPH annual report was submitted. Presentations about the 2022 hunt were given to the FMA, CAC and LUC. One hunter was barred from future hunts since he left his tree stand on the property.
- Hamden, tire dumping – Forwarded information on all the tire dumping we were aware of to Amy to check with local tire businesses.
- Bethany, Rt. 69 driveway – Gave information to Environmental Planning staff about a new driveway coming off Rt. 69 in Bethany south of Gaylord Mt. Rd. No sediment or erosion controls were observed.
- Boundaries – Completed remarking of boundaries in Durham, Madison, Guilford, Killingworth, and Woodbridge. Contacted Guilford Land Trust about possible unapproved activity on one of their easements.
- Solar projects – Discussed possible locations for solar arrays with various RWA staff. Attended virtual meeting with RWA staff and a consultant to discuss sites.
- Hamden, Eli Whitney Museum – Answered question from Operations staff about the responsibility for grounds maintenance. Corresponded with Eli Whitney Museum staff about proposal for a bioswale at the WWC and EWM parking lot.
- Drone flight – ISMT and NRA performed a drone flight at Shingle Hill Tanks.

Attachments

- February 2023 - CT Is Littered With Dams – Orange Times
- February 17, 2023 - Water Utilities Brace for Imminent EPA Proposal on PFAS in Water – Bloomberg Law
- February 16, 2023 - Warmer winter means extended threat from ticks – Waterbury Republican
- February 21, 2023 - New England researchers optimistic a tiny wasp is turning the tide against emerald ash borer – CT Public Radio
- February 27, 2023 - Deer ticks are benefiting from warming winters in the Northeast. That's raising health concerns – CT Public Radio

Upcoming Agenda Items

April 2023 -

CT Is Littered With Dams

By Dan May - On Our Land – The Orange Times

Connecticut has more than 4,000 dams, with nearly all its rivers impounded to some level. They serve multiple purposes, from simple impoundments for aesthetic purposes or recreation to major structures for water supply, hydroelectric power and flood control.

Stevenson Dam in Monroe is the largest nearby dam. Route 34 crosses the Housatonic River on top of this large concrete dam, which impounds Lake Zoar, mitigates downstream flooding, and provides hydroelectric power. This is one of the stations used by the US Weather Service to issue river flood warnings for our region, and the dam's spillway on the north bank dramatically discharges when the Housatonic is at flood stage.

Dams that impound water for water supply and/or hydropower are usually kept nearly full and thus have limited flood storage capacity in storms. Flood control dams, by contrast, are built to host reservoirs that are empty most of the time and fill up only during major flood events. One that is important for this region is the Thomaston Dam across the Naugatuck River about 30 miles north of Orange.

Thomaston Dam was constructed after Hurricane Diane in 1955 drenched northern Connecticut and southwestern Massachusetts, with some locales receiving nearly 20 inches of rain in a 24-hour period. That hurricane caused major shoreline damage in Milford (near what became Silver Sands State Park), but downstream flooding devastated communities all along the Naugatuck to Long Island Sound. This was the most damaging flood in Connecticut history; over 75 people died across the state. Thomaston Dam is a massive earthen dam designed to retain floodwaters for future comparable events.

Closer to home, the Wepawaug River is dammed at more than 10 locations from its headwaters in Woodbridge to its outfall into Long Island Sound in Milford. Two of its larger dams form reservoirs that are noticeable when driving through Orange – Lake Wepawaug west of Grassy Hill Road and the Wepawaug Reservoir north of Route 34. Part of Prudden Lane between Grassy Hill and Derby-Milford roads is an earthen causeway that retains the water for Lake Wepawaug. The spillway for this lake is barely noticeable when driving across the bridge on Prudden Lane – except in flood events that overtop the road.

The concrete spillway for the Wepawaug Reservoir is visible on the north side of Route 34 and was recently rebuilt. That construction project highlights one of the challenges for all dams: they are engineered structures that have to be maintained and ultimately torn down and/or rebuilt. For municipal or state-operated dams this ends up as a tax burden. But many small dams are privately owned and maintained, and private dams incur both liability and maintenance costs to owners.

One set of private dams are those maintained by the Regional Water Authority for drinking water supply. Closest to us are their dams and reservoirs on the West River in Bethany and Woodbridge, which provide water to RWA's Woodbridge drinking water plant and then customers in nearby towns.

A good place to get an up-close look at a dam is the one that impounds Lake Bethany. This structure has been modified several times since it was first constructed in the 1890s. It has earthen, masonry and concrete components. Hatfield Hill Road crosses in front of the dam on top of an earthen substructure, with a masonry superstructure towering above, placing the reservoir well overhead. In a cold winter, many icicles emerge on the dam's face from weep holes that are spaced through the masonry. All dams leak, and those leaks are one of the factors that age a dam. In major floods, aged dams can catastrophically collapse.

One of the oldest dams in the region is the RWA dam that impounds the Mill River to create Lake Whitney in Hamden. The spillway on the east bank of the dam is an attractive feature at the Eli Whitney Museum. The dam was built by Eli Whitney's son in 1862 and is nearing the end of its safe operating life. Dam failure here could potentially devastate the neighborhoods of East Rock and Fair Haven in New Haven.

RWA is working on plans to rebuild the dam, as Lake Whitney is an important supply for drinking water. But the project has engineering and sociopolitical challenges. With regard to engineering, a temporary cofferdam must be constructed upstream so the reservoir can be drained and the dam rebuilt. A drained reservoir will generate nuisance odors and possible environmental hazards from sediment that has built up in the reservoir over 160 years. The existing dam is of historical significance as well.

Meeting the needs of all stakeholders is a challenge for this project, and ultimately for thousands of aging dams in the state. Balancing flood control with water supply needs over dam lifetimes that will encounter changing climatic conditions adds more uncertainty both to engineering design and the community discussions about this essential infrastructure.

Dan May is a geologist and professor of environmental science at the University of New Haven. He can be contacted at dmay@newhaven.edu.

Water Utilities Brace for Imminent EPA Proposal on PFAS in Water

Bobby Magill – Bloomberg Law – Feb. 17, 2023

Drinking water systems are preparing for the possibility that the EPA will try to codify its 2022 health advisories suggesting no amount of PFAS substances are safe, water attorneys say.

The Environmental Protection Agency is expected to issue its proposed PFAS drinking water standards by March 3, according to the EPA's latest regulatory agenda. That date is exactly two years after the agency published its 2021 decision to regulate per- and polyfluoroalkyl substances, or PFAS, under the Safe Drinking Water Act.

The EPA, which did not respond to a request for comment, said in a news release this week that the draft of the proposed rule is undergoing interagency review, and the proposal will be released in the "coming weeks." The agency said it expects to finalize the PFAS drinking water limits by the end of the year.

"Whatever they come up with will have a huge impact on the next several years for drinking water systems planning their budgeting," and litigation will likely follow, said Tom Lee, a partner at Bryan Cave Leighton Paisner LLP in San Francisco.

The EPA in 2022 issued interim health advisories that said almost no levels of two PFAS substances in drinking water are safe. The question now is whether the agency's proposed limits for PFAS in drinking water will reflect the non-binding advisory. The advisory set safe PFAS levels "so low that most if not all public water systems can't even detect it," said John Kindschuh, an attorney at Bryan Cave Leighton Paisner in St. Louis who works with Lee on PFAS regulatory issues.

The interim advisory levels of 0.004 parts per trillion (ppt) for perfluorooctanoic acid (PFOA) and 0.02 ppt for perfluorooctanesulfonic acid (PFOS) dramatically tightened EPA's 2016 advisory of 70 ppt for either compound or a combination of both. The EPA is "telegraphing that that the maximum contaminant levels will be incredibly low values," Lee said.

Near Zero

The EPA's standards, to be proposed under the Safe Drinking Water Act, are not likely to be set at near-zero because the law requires the EPA to consider the economic impacts of new regulations as well as other factors, said Melanie Benesh, vice president of the Environmental Working Group, which advocates for strict PFAS limits. The EPA's health advisories are based solely on health effects, and what the agency considers a safe lifetime exposure threshold, she said. The chemical industry is pushing back against the health advisories because they question whether the limits are substantiated by the scientific evidence, said Jessie Rosell, counsel for Lathrop GPM LLP in Kansas City. The industry is concerned about what scientific evidence is being considered, especially because the World Health Organization issued draft guidance in 2022 that would allow more PFOA and PFOS in drinking water than the EPA has recommended, she said. The WHO recommended a limit of 100 ppt of either PFOA or PFOS in drinking water and a total cap of 500 ppt for combinations of up to 30 PFAS. "From my reading, the WHO looked at the same basic data EPA looked at and reached different conclusions," said Jeffrey Longworth, a partner at Barnes & Thornburg LLP in Washington. "I don't think that has any legal impact on EPA, but it certainly fuels information for comments and for potential criticism of EPA and how they looked at things," he said. Longworth is co-coordinator of the PFAS Regulatory Coalition, which is a group of oil, paper, auto and other companies, as well as municipalities and other entities that are affected by PFAS regulation but don't manufacture the substances.

No Patchwork Solution

The industry is "begging for uniformity" in PFAS regulations amid a patchwork of state standards, Kindschuh said. Twenty-two states had adopted their own widely-varying PFAS drinking water standards as of last June, with 28 states having none at all, according to Lee and Kindschuh's August analysis of state standards. Since then, Wisconsin and Pennsylvania adopted PFAS standards. Benesh said she worries the proposed EPA standards are being delayed after the agency had previously committed to releasing them by the end of 2022. The delay "gives us less time to comment on the rule," she said. "It will take more time before the final regulations are in place."

The EPA in 2022 also issued new, final advisories for hexafluoropropylene oxide dimer acid (HFPO-DA) and its ammonium salt—commonly referred to as "GenX chemicals" due to the technology used to produce it—and perfluorobutane sulfonic acid (PFBS).

The final health advisories set lifetime exposure at 10 ppt for GenX chemicals and 2,000 ppt for PFBS. The analytical detection limit for all four chemicals is 4 ppt, according to the laboratory methods the agency developed.

Warmer winter means extended threat from ticks

BY TRACEY O'SHAUGHNESSY REPUBLICAN-AMERICAN - February 16, 2023

A warmer winter this year means that hikers, walkers and dog owners will be seeing more of the blacklegged tick, the fearsome arthropod that can cause Lyme disease.

"They will continue to be active as long as the temperatures are suitable high 30s," said Kirby C. Stafford III, a medical-veterinary entomologist at the Connecticut Agricultural Experiment Station, whose research focuses on the ecology and control of the blacklegged tick. "So, unless you have an extensive snow cover, you're going to encounter our common blacklegged tick. That will be the one thing that's active."

That means protecting yourself and protecting your dog.

"Dogs are common hosts," Stafford said. "The only ticks right now that you are going to encounter is the blacklegged tick." The tick is also called the deer tick because deer are the adult tick's primary wild hosts.

Generally, the greatest risk is of being bitten by in the spring, summer and fall in the Northeast, Upper Midwest and mid-Atlantic, the Centers for Disease Control and Prevention reports. However, adult ticks may be out searching for a host any time winter temperatures are above freezing.

Scientists say warmer temperatures mean ticks are hanging around a bit longer. Adult ticks need a blood meal at every stage of their life to survive and can feed on mammals, birds, reptiles and amphibians. The CDC reports that most ticks die because they don't find a host for their next feeding.

"What we are seeing right now, because of the mild January we've had, are the blacklegged ticks," Stafford said. "In a cold January, you wouldn't encounter or see any of these ticks."

Protecting yourself from ticks means wearing long pants tucked into socks. Stafford said three-quarters of tick bites are acquired in the home environment – yards, gardens and the like.

"They can get you at any time walking around your neighborhood, walking around your yard," said Kathryn Schubert, of the Connecticut Humane Society.

Schubert said veterinarians are not reporting any large increases in tick bites among dogs but recommends tick prevention measures year-round. She said dog owners should first check with their veterinarian because some dogs are more sensitive to topical solutions or oral medications. The Humane Society recommends the Seresto flea and tick collar, she said, largely because the product lasts 8 months. "These are releasing the active ingredients in a low concentration over those 8 months," she said.

Schubert also recommends checking your dog for ticks manually after the dog has been outside. "Brushes are also a great way to do this," she said, "and it's always nice to give the dog a brushing."

She said that a tick may feel like a scab on a dog initially. "When the tick latches on and is engorged, those bumps get a lot bigger," she said.

Not all ticks are infected with the Lyme disease bacteria. According to Johns Hopkins Medical, anywhere from fewer than 12% of ticks to 50% of ticks are infected. If you are bitten by a tick, wash the area with antiseptic or rubbing alcohol. If you are a Connecticut resident, you can submit a tick to your municipal health departments, which forward the specimen to the agricultural experiment station to be identified and tested for Lyme and other diseases.

Although blacklegged ticks carry potential danger of disease, Stafford said two new ticks, the lone star tick and the Asian longhorned tick, have moved into Connecticut.

Neither cause Lyme disease, but the invasive Asian longhorned tick has been found on pets, livestock, wildlife and people. Not normally seen in the Western Hemisphere, as of fall 2021, it has been spotted in Connecticut, Arkansas, Delaware, Georgia, Kentucky, Maryland, Missouri, New Jersey, New York, North Carolina, Ohio, Pennsylvania, Rhode Island, South Carolina, Tennessee, Virginia and West Virginia, according to the CDC.

Stafford said that although both these new tick species can feed off people or dogs, he expects the Asian longhorned tick will emerge largely as a cattle pest. "So far, in the U.S., that's going to be the biggest issue of danger," he said. "There's actually been some cattle who have died because of the number of these ticks feeding on them."

However, Stafford said that "at this point, the full impact of the Asian longhorned tick remains unclear."

HOW TO PROTECT PETS

To keep pets safe, the American Veterinary Medical Association recommends the following:

Discuss the use of preventive products, including over-the-counter products, with your veterinarian to determine the safest and most effective choice for each pet.

Always talk to your veterinarian before applying any spot-on products, especially if your dog or cat is very young, old, pregnant, nursing or on any medications.

Only purchase EPA-registered pesticides or FDA-approved medicines.

Read the entire label before you use/apply the product.

Always follow label directions. Apply or give the product as and when directed. Never apply more or less than the recommended dose.

Products labeled for use only for dogs should only be used for dogs, and never for cats..

Make sure that the weight range listed on the label is correct for your pet because weight matters. Giving a smaller dog a dose designed for a larger dog could harm the pet.

When using these products, monitor your pet for any signs of an adverse reaction, including anxiousness, excessive itching or scratching, skin redness or swelling, vomiting or any abnormal behavior. If you see any of these signs, contact your veterinarian.

New England researchers optimistic a tiny wasp is turning the tide against emerald ash borer

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

How do you find an insect the size of your fingertip in a densely-packed forest? For Jian Duan, the answer is simple: follow the dead ash trees.

On a rainy day in eastern Connecticut, Duan, a federal research entomologist with the U.S. Department of Agriculture, walked to a dying ash covered with holes. Peeling back the bark with a draw knife, he revealed a mess of serpentine tunnels. Curled up inside was one of his targets: a larva of emerald ash borer. "Let's collect it," Duan said, gesturing as his assistant handed him a pair of tweezers tied to a brightly-colored ribbon. (In case you're wondering, the ribbon makes the tweezers easy to spot when they're dropped on the leaf-covered ground.)

But today Duan isn't just collecting emerald ash borers. He's also looking for its predator, one released here on purpose in 2019 and 2020: a wasp known as *spathius galinae* (pronounced spay-see-us glee-nuh). "It's from the Russian Far East," Duan said, smiling. "Unfortunately, there are no common names for these parasitic wasps." The stingless wasp is tiny – about the size of a mosquito. But scientists have big hopes for it. In Russian forests, this wasp naturally targets and attacks emerald ash borer. "Emerald ash borer, in its native range, northeast Asia, [does] not kill trees like this," Duan said. And if this experiment works, the borers won't kill as many trees here either. A biological solution to a biological problem. Solutions like this, known as biological control, are one way scientists can deal with biological problems like the invasive emerald ash borer. Right now there are experiments across New England to see if the wasps can help save the region's ash trees. Connecticut and Massachusetts began using the "biocontrol agents" in 2013. Maine, New Hampshire and Vermont are doing similar experiments, hoping to stop a devastating pattern.

Claire Rutledge, with the Connecticut Agricultural Experiment Station, says when emerald ash borer feeds on trees, it cuts off key nutrient pathways. For ash trees, that's death by a thousand cuts. "One larva is not a big deal. Twenty larvae are not a big deal. Two thousand larvae kill the tree," Rutledge said.

Since it was first detected in Michigan in 2002, emerald ash borer (EAB) has killed tens of millions of ash trees. Federal officials estimate it has cost municipalities, nursery operators and the forest-product industry tens of millions of dollars. The massive die-off of ash trees has also disrupted the making of culturally-important products like baskets and baseball bats.

Duan said the idea of biocontrol is to find the natural predators of an introduced pest and bring them to the new environment to slow the pest's spread. "Because in the native range, these natural enemies co-evolved with the pest," Duan said.

Shortly after EAB arrived in the U.S., DNA testing traced its origin to northeast Asia. Duan traveled to Russia – trekking through cold forests to collect wasps that only prey on EAB. Samples were brought to America, quarantined and carefully tested for years to ensure the wasps wouldn't kill any other non-target species. Now that some of these wasps have been living in the forests of Connecticut and Massachusetts for about 10 years, scientists are trying to find out if the intervention is working.

Scientists are 'cautiously optimistic'

As Duan and his assistant peel more bark and pull more larvae from the dying tree in Connecticut, they still can't find the Russian wasp or two other species that were introduced here. So they decide to cut down the tree to study it further. They cut the wood into meter-long segments and continue looking. Rutledge said it's too late for the wasp to stop the massive wave of EAB that's killing older ash trees. But there is hope for the younger trees that are just starting to grow.

"When regeneration starts to happen, after the EAB levels drop, the parasitoids will be able to keep those populations down so that the new ash can grow and escape," Rutledge said.

On this old ash tree, they found a few EAB larvae – and no wasps. But they did find parasitoids just a few miles away at another site they're studying. And as recently as last year, Rutledge said they found reproducing populations of wasps initially introduced in 2013. So, she said, it's looking like success: the wasps are sticking around and spreading. "I'm really cautiously optimistic," Rutledge said. "The problem with bio control is it's going to be 10 or 15 years later when we see how much of a resurgence the ash manages." Even then, she said, it's going to be a long time before we see big, healthy ash trees in New England forests again.

Deer ticks are benefiting from warming winters in the Northeast. That's raising health concerns

Connecticut Public Radio | By Michayla Savitt - February 27, 2023

Every year, deer ticks bite thousands of people in the Northeast. And as winters in the region become more mild, adult deer ticks are becoming more active at a time when they're normally dormant – causing a bigger public health risk.

"It's becoming a year-round, check-yourself-for-ticks situation," said Dr. Toni Lyn Morelli with the Northeast Climate Adaptation Science Center. Morelli said if temperatures are at or above 40 degrees Fahrenheit, adult deer ticks will emerge to seek hosts in the winter.

Data from the U.S. Global Change Research Program show that New England temperatures are rising faster than national and international averages. The largest increases in the region are happening during winter.

Deer ticks, also known as blacklegged ticks, can pass on Lyme disease, anaplasmosis and other sicknesses. Lyme in particular can cause chronic symptoms for some people.

"Everybody's looking for the scapegoat when it comes to vector-borne diseases and ticks and tick-borne diseases," said Dr. Megan Linske with the Connecticut Agricultural Experiment Station. "I think climate change is a big one."

Testing 'ticks of concern' in a Connecticut lab

In New England, there is little active tick surveillance in winter, which requires going outdoors to collect ticks. Instead, the Connecticut Agricultural Experiment Station runs a passive tick surveillance program to determine whether a tick bite gave someone a disease. Connecticut residents either drop off ticks they pulled off people or a pet, or mail them into the lab in New Haven, Connecticut.

On a day in February, Entomology Department head Dr. Goudarz Molaei tested a female adult deer tick that was sent in. It was so swollen that it was almost unrecognizable. The tick might have fed for several days, Molaei said, which could make it more likely to transmit an infection. "This is a fully engorged tick," Molaei said. "It is a tick of concern." And his lab is seeing lots and lots of ticks.

From December into late February, he said 275 tick samples arrived at his lab, which is much more than past winters. Noelle Khalil, a research technician with the lab, placed the fully engorged tick in a vial, added liquids, and shook it all up to break up the tissue before putting it into a centrifuge. "It's going to spin all this debris you see to the bottom," Khalil said, holding up the small mixture. Results take a few days to come back after more steps and a PCR test.

Data from the Centers for Disease Control and Prevention (CDC) show that national Lyme disease rates have been steadily increasing, with New England experiencing the biggest increase in cases and overall infections. Meanwhile, Northeast Regional Climate Center data show that average regional temperatures from November to January were 1 to 7 degrees higher than normal for half of the last decade.

Linske, with the Connecticut Agricultural Experiment Station, said continued warming could lead to greater populations of native and non-native ticks. "Without that limiting factor of winter, we're going to see more of those pop up. And we're going to see more of them establish in the Northeast as well," she said.

Learning to live alongside more ticks

Chantal Foster is an avid hiker from central Connecticut and no stranger to ticks. Her dog has had Lyme disease before and recovered, but Foster hasn't had it. Just this February, she said she picked ticks off her dog after two hikes. Foster is careful that she and her dog don't get bitten.

"If you're just paying attention to what you're doing, you should be OK," she said. "That's not to say that it can't happen, but I'm not going to not go outside."

In 2019, Linske co-authored a study examining winter deer tick survival in coastal New England. One finding was that as the mean temperature increased, so did nymphal tick survival.

Linske said that while they research how to manage tick populations, people in the Northeast must learn to coexist with them year-round. Whether it's the backyard or the woods, the CDC advises avoiding brushy, wooded areas, tall grass and leaf litter – and doing a full body check of people and pets afterward.

"It's being more cognizant of the ticks that are on the landscape and the potential diseases that they may carry with them," Linske said, adding that in her work monitoring ticks, she hasn't caught Lyme. "And I think it's because we're vigilant."