Representative Policy Board

Land Use Committee

South Central Connecticut Regional Water District

Via Remote Access**

AGENDA

Regular Meeting of Wednesday, April 14, 2021 at 5:30 p.m.

1. Safety Moment
2. Approval of Minutes – March 10, 2021 meeting
3. Whitney Water Center Update: L. DiFrancesco
4. Updates on other land and RWA properties – including invasive species update
5. Other land items
6. Upcoming Meetings:
    a. Special Meeting: Monday, April 19, 2021 at 5:30 p.m. (joint meeting with CAC to review FY 2022 Budget)
    b. Next Regular Meeting: Wednesday, May 12, 2021 at 4:30 p.m.
7. Adjourn

**In accordance with the Governor Lamont's, Executive Order No. 7B for the Protection of Public Health and Safety during COVID-19 Pandemic and Response, the public meeting will be held remotely. Members of the public may attend the meeting via conference call, videoconference or other technology. For information on attending the meeting via remote access, and to view meeting documents, please visit https://www.rwater.com/about-us/our-boards/board-meetings-minutes?year=2021&category=1435&meettype=&page=. For questions, contact the board office at 203-401-2515.

Topic: RPB Land Use Committee Meeting

Time: Apr 14, 2021 05:30 PM Eastern Time (US and Canada)

Join Zoom Meeting *(via conference call)*

Dial by your location

+1 301 715 8592 US (Washington DC)

+1 312 626 6799 US (Chicago)

+1 646 876 9923 US (New York)

+1 346 248 7799 US (Houston)

+1 408 638 0968 US (San Jose)

+1 669 900 6833 US (San Jose)

+1 253 215 8782 US (Tacoma)

Meeting ID: 853 3662 5607

Passcode: 716152

Find your local number: https://us02web.zoom.us/u/kenGj2Kxnh

SAFETY MOMENT

Tap Into Safety

Regional Water Authority

APRIL - DISTRACTED DRIVING AWARENESS MONTH

Every day, at least nine Americans die and 100 are injured in distracted driving crashes. Cell phones, dashboard touchscreens, voice commands and other in-vehicle technologies pose a threat to our safety. The consequences of those distractions are not worth the convenience they offer. Ignore the distractions and #justdrive to keep us all safer on the roads.

Take the Pledge:

I pledge to **Just Drive** for my own safety and for others with whom I share the roads. I choose to not drive distracted in any way – I will not:

- Have a phone conversation – handheld, hands-free, or via Bluetooth
- Text or send Snapchats
- Update Facebook, Twitter, Instagram, Vimeo or other social media
- Check or send emails
- Take selfies or film videos
- Input destinations into GPS (while the vehicle is in motion)
- Call or message someone else when I know they are driving

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

UNAPPROVED DRAFT

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

Minutes of March 10, 2021 Meeting

The 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, March 10, 2021 via remote access. Chair Betkoski presided.

Present: Committee Members:	P. Betkoski, P. DeSantis, B. Eitzer, R. Harvey, M. Horbal, G. Malloy, J. Oslander and J. Mowat Young
Authority:	A. DiSalvo
Eli Whitey Museum:	W. Brown and R. Paxton
Management:	T. Norris and J. Triana
RPB Staff:	J. Slubowski

Chair Betkoski called the meeting to order at 5:34 p.m. He reviewed the Safety Moment distributed to members.

On motion made by Mr. Malloy, seconded by Mr. Harvey, and unanimously carried the Committee approved the minutes of its February 10, 2021 meeting.

Mr. Triana, the RWA's Real Estate Manager, introduced Messrs. Brown, Director Emeritus, and Paxton, Director, of the Eli Whitney Museum who provided an overview of the educational activities of the Museum, which included:

- Historical background
- Evolution of public health
- Educational outreach program in the state
- Experimental water learning lab
- On-site projects
- Employees
- Apprentice programs and student employees
- Bird migration

Discussion took place regarding number of projects per year, inner city reach, project funding and contributions, challenges and needs, and staff.

Mr. Triana reported that the committee would like to arrange for the committee to hold a meeting at the museum in the summer when social distancing restrictions are relaxed.

At 6:09 p.m., Messrs. Brown and Paxton withdrew from the meeting.

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

Reservoir Levels (Percent Full)

	Current Year	Previous Year	Historical Average	Drought Status
February 28, 2021	89	92	82	None

Rainfall (inches)

	Current Year	Previous Year	Historical Average

February 2021	3.83	3.24	3.34
Fiscal YTD (6/1/20 – 2/28/21)	30.16	36.28	34.03

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

- Durham - Corresponded with property owner of 16+/- acres.
- Madison – Corresponded with a property owner of 19+/- acres.

Hamden, DePodesta property (HA 38) – Submitted easement to file on the Hamden land records.

Cheshire, Ricci property – State announced that the town received the OSWLA grant and we will receive a portion of the award.

Hamden, Olin property option – Met with town council member, HLCT, and Save the Sound staff. Determined we could transfer the option without impacting any plans of the town.

North Branford, Beech St. and Pomps La. parcels – Contacted by party potentially interested in buying the parcels.

Rental houses:

- Hamden, 95 Ives St. (HA 13) and 233 Skiff St. (HA 9A) – Decided to bifurcate the two applications. Sent draft of the Ives St. house disposition to Ted for his review.

Forestry Update

- Guilford – West of Sugar Loaf ash salvage (GU 4) – 40% complete
- Killingworth - East Hammonasset Leaf Screen Thinning, (KI 4) - Contract not yet awarded.
- Hamden - Overstory removal and Tornado Salvage, (HA 36) – Not started yet. **Logger awarded contract experiencing health issues.**
- Madison - Nathan's Pond Slash Wall Harvest (MA 5) – Contract awarded. Not started yet.
- Seymour - Silvermine Road Slash Wall Harvest (SE 9) – Awarded contract. Not started yet.
    - Started inventories for harvests coming up this year.
    - Attended digital meeting with West Point Military Academy's Forestry Department. Discussed our timber harvesting, specifically slash wall deer exclosures.
    - Modified the firewood permit renewal system, and completed mailing of renewal paperwork to permit holders.

Recreation

- Mounted new "no horses" signs at Lake Chamberlain dam.
- Sent change-in-use application to DPH for Lake Chamberlain fishing trails. Received final preliminary assessment for the project. Attended Bethany inland wetlands meeting about the project.
- Discussed possible capstone project for Quinnipiac students to plan a trail along the Mill River.
- Hike for Sugarloaf was moved to Lake Saltonstall due to deep snow. Ten people attended.
- Received and organized photos for the photo contest.
- Five interviews were held with potential recreation staff members. Three have been offered the position.

	February		January	
	2021	2020	2021	2020
Permit Holders	6,131	3,780	6,129	3,762

* - Although the overall number of permits continued to increase for the 15th consecutive month due to COVID restrictions, this is the first time since Dec. 2019 that the number of permits bought was less than same month of the previous year.

Special Activity Permits

- A. DiCesare Associates (Clay Carlson) - I-95 bridge inspection for CTDOT – Lake Saltonstall, East Haven (2/9/2021 & 2/10/2021)-cancelled by CTDOT- will reschedule
- Yale University School of the Environment- (Dr. Craig R. Brodersen) - Field trips in field botany and forestry. - North Madison Cedar Swamp off of Rt. 80, 2/10/2021 - 5/31/2021 (actual use Spring Semester 2021)
- Hamden Fire Department (Richard Lennon) – to conduct annual cold water rescue training – Clark's Pond, Hamden – 2/12/21 – 3/31/21
- Branford Parks & Open Space Authority (Richard Shanahan) – to scout out a potential suitable route for possible future relocation of a portion of the Branford Trail, West of Brushy Plain Road, east of Lake Saltonstall, north of Lidyhites Pond, Branford – 3/1/21 – 5/31/21
- Allingtown Fire Department (Deputy Chief Michael Esposito) – cold water rescue training, Maltby Lakes, West Haven – 2/22/21 – 2/26/21
- Northeast Work & Safety Boats, LLC (Jack Casey) – to conduct bridge inspection at Lake Saltonstall – 2/26/21 – 3/12/21
- A. DiCesare Associates (Clay Carlson) - I-95 bridge inspection for CTDOT – Lake Saltonstall, East Haven (3/3/2021 & 3/4/2021)-rescheduled to these dates

Other items

- Encroachments/agreements –
    - Agricultural fields – Discussed fields with seven potential farmers. Received signature pages and check for Guilford fields from Potter, but did not include a COI.
    - Killingworth, Bunker Hill Rd. (KI 9A) – Spoke to Lally on the phone. Sent draft license agreement.
    - Seymour, 8 Jefferson Rd. (SE 1) – Corresponded with Lupoli to either pay the fee or remove the encroachment, else we will move the fence to the property line in June.
    - Killingworth, Rt. 148 (KI 3 and KI 3A) – Discovered encroachments from abutters from property.
    - North Branford, Beech St. (NB 4A) – Emailed Gaudio to move vehicles which he did by the end of the month.

- Invasive plants – Cut and documented invasive plants in Bethany, North Branford, and Branford. Submitted application to state regarding aquatic invasive plant management.

Invasive Species Documented/ Mapped (ac)	~26 acres
Invasive Species Treated (ac/MH)	~25 acres

- Deer hunt – DPH issued permit for all areas covering the next 10 years.
- East Haven, Beach Ave. – Title searcher is having problems since the town hall has not been open. Have only been able to access what is online.
- Regional Conservation Partnership – Held steering committee meeting. Contacted potential speakers for zoom meetings.
- Branford, Queach Rd. gate – Corresponded with Branford Land Trust staff about gate that was installed on the road. We will wait to put our lock out after the gate is painted.

- Hamden, LWWTP campus – Corresponded with two girl scouts about placing bat boxes at the LWWTP property.
- North Branford, path through Northford properties – Discussed possibility of a trail or path through Northford properties by the Farm River with Andy Bozzuto.
- Derby Tank – Reviewed the draft lease for the tank site and sent comments to CP&D.

There were no other land items to report.

The next regular meeting of the committee is Wednesday, April 14, 2021 at 5:30 p.m.

At 6:36 p.m., the meeting adjourned.

_____
Peter Betkoski, Chairman

Whitney Water Center

The Whitney Water Center in Hamden offers free, hands-on water science programs for K-8 students within our district.

- **Public and Private Schools**
- **Girl and Boy Scout Troops**
- **Libraries**
- **Summer Programs**
- **Community Organizations**

Regional Water Authority
Tapping the Possibilities™

Whitney Water Center

We offer outreach, onsite lessons and loan boxes.

- **Most teachers utilize the outreach option, where we bring our programs to their classroom.**
- **Onsite programs are also offered for teachers who choose to bring their students to us.**
- **Water Science Loan Boxes bring our science programs into the classroom, but the teacher can use the materials at their convenience.**

Regional Water Authority
Tapping the Possibilities™

Whitney Water Center

PROJECT water
REGIONAL WATER AUTHORITY

Field study program along the Mill River in Hamden for middle school students to help them understand how land use affects water quality.

Regional Water Authority
Tapping the Possibilities™

Whitney Water Center

In the last 30 years, we have reached over 350,000 students with our programs.

- **13,400 students participated in Project WATER.**
- **44,000 students have used our Water Science Loan Boxes.**

Regional Water Authority
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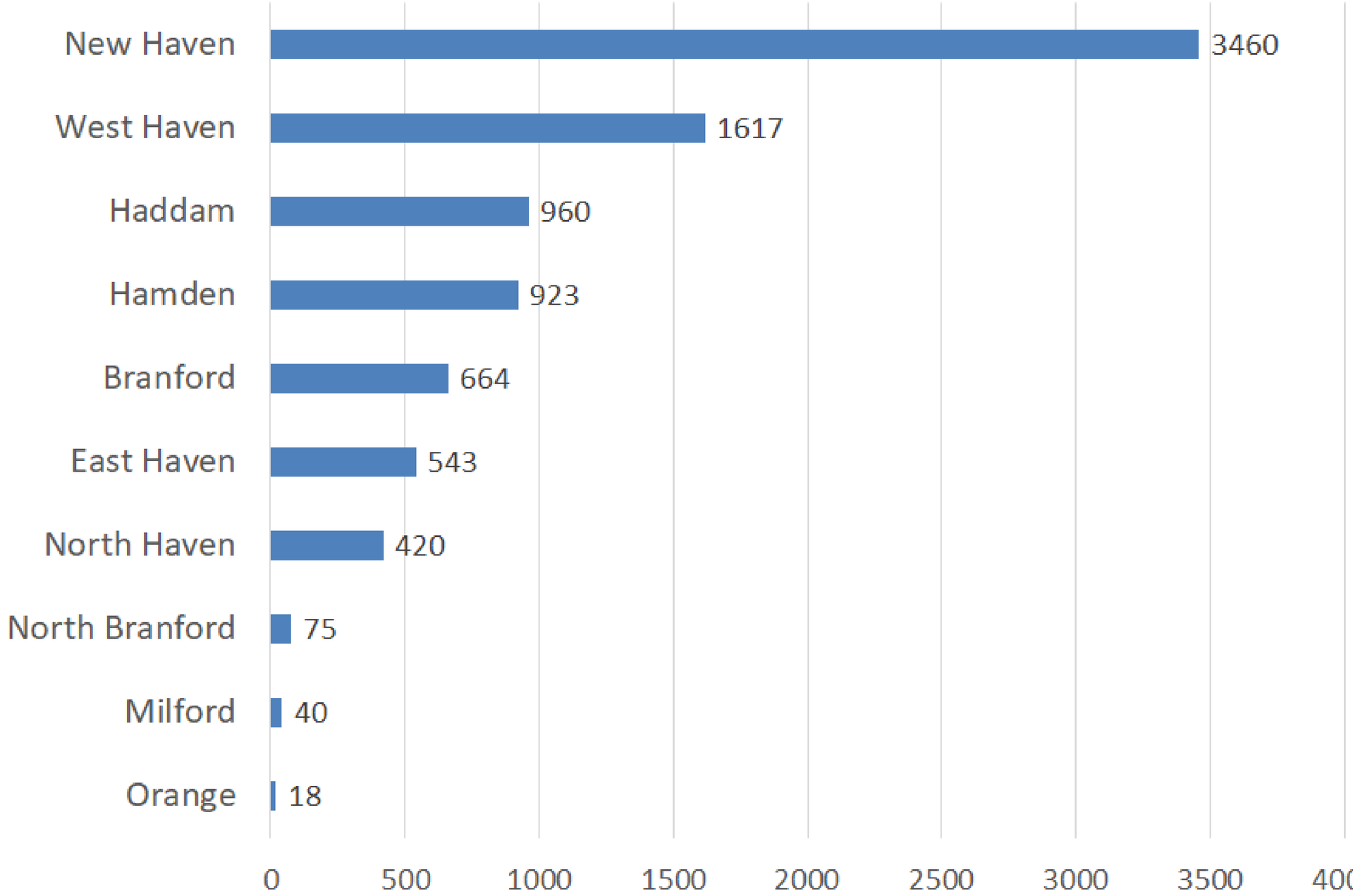
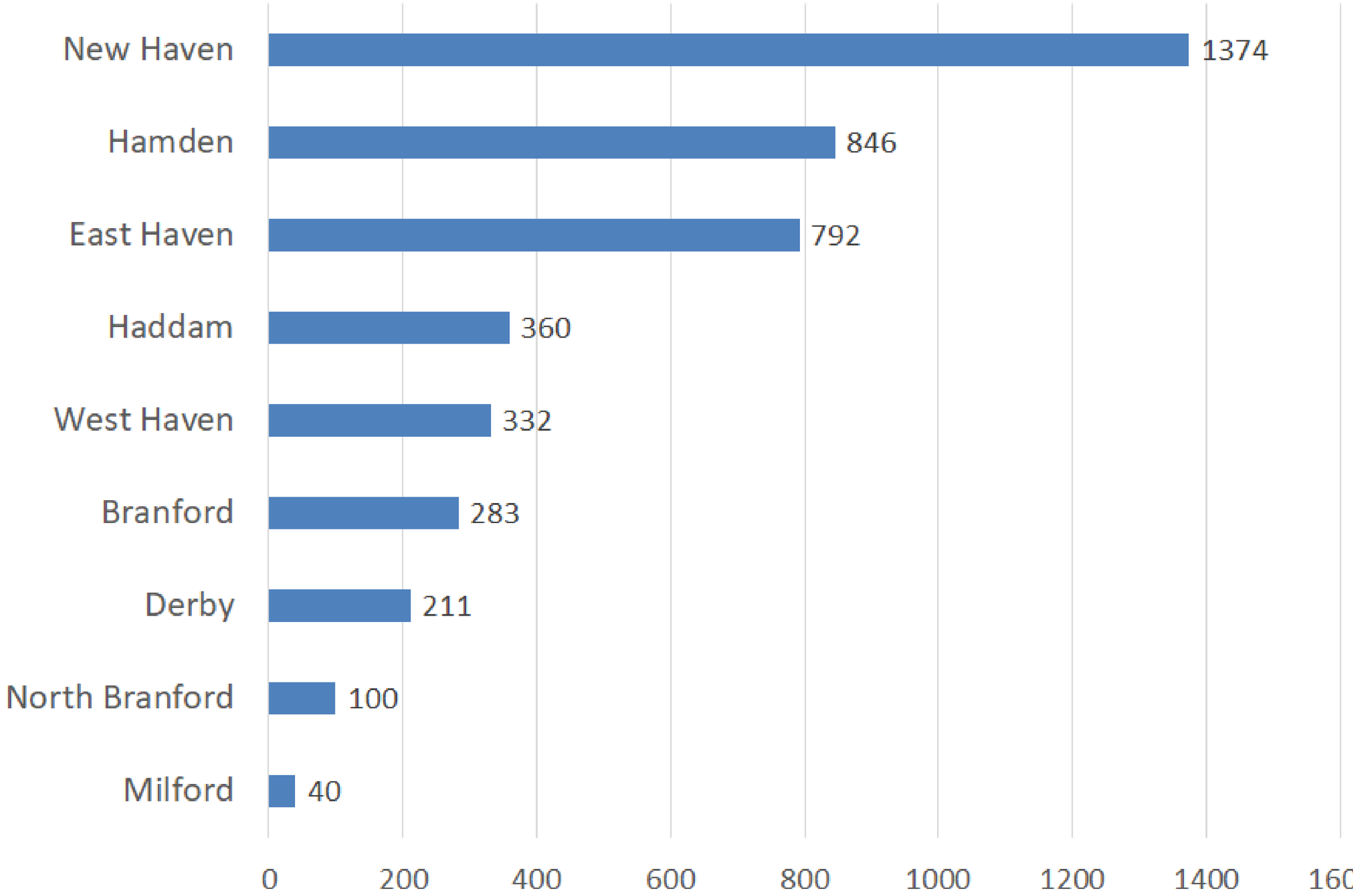
2018-2019 Whitney Water Center Participation



Total 8720

2020-2021 Whitney Water Center Participation

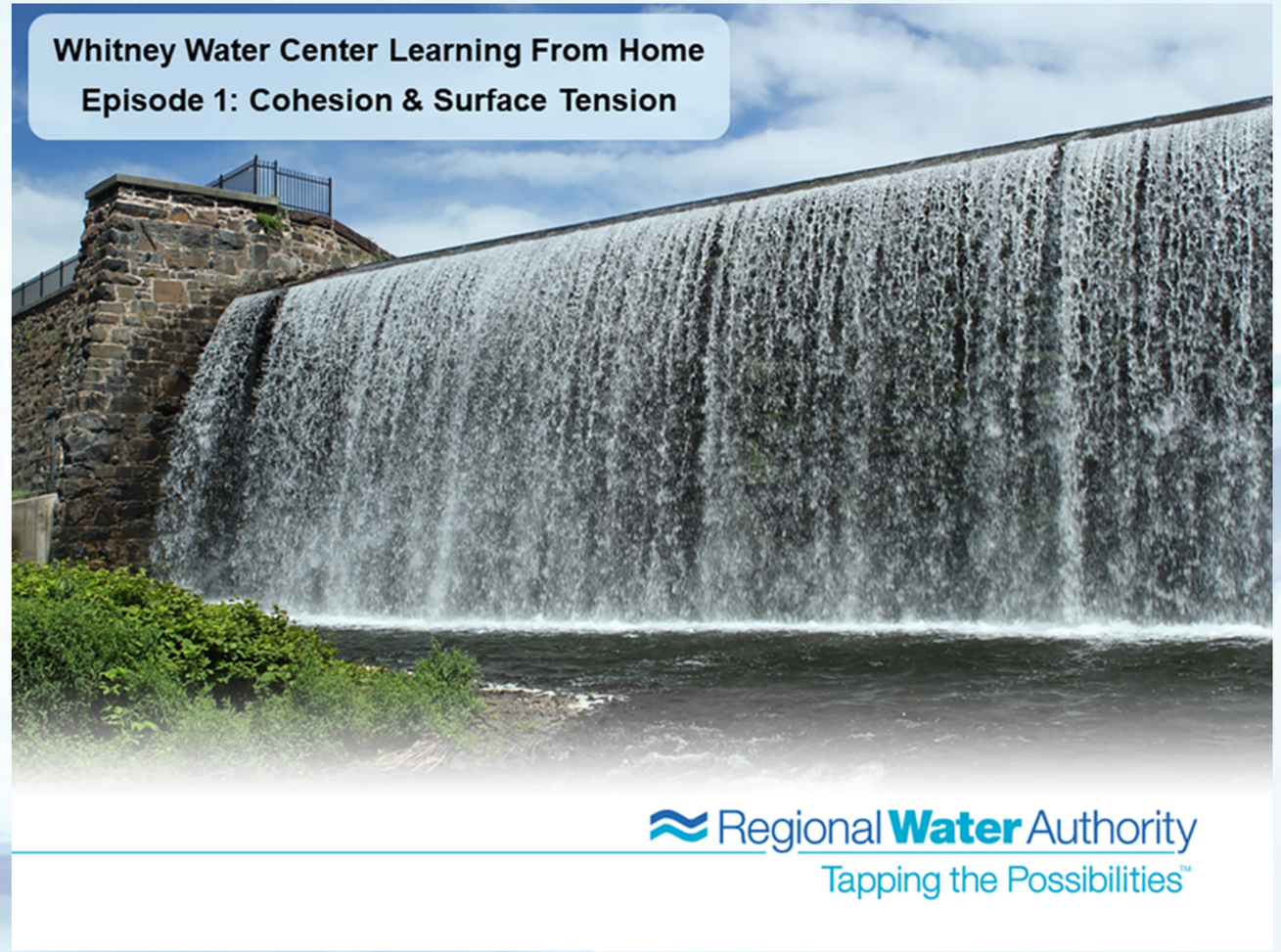


Total 4338

COVID-19 Pandemic: How Did We Adapt?

March 12, 2020 was the final outreach program.

March 23, 2020 we began the Whitney Water Center Learning From Home series. There were 25 episodes released through mid-June.



COVID-19 Pandemic: How Did We Adapt?

We also began our Whitney Water Center In The Field video series to expand our educational reach and increase environmental awareness for students and our adult customers.

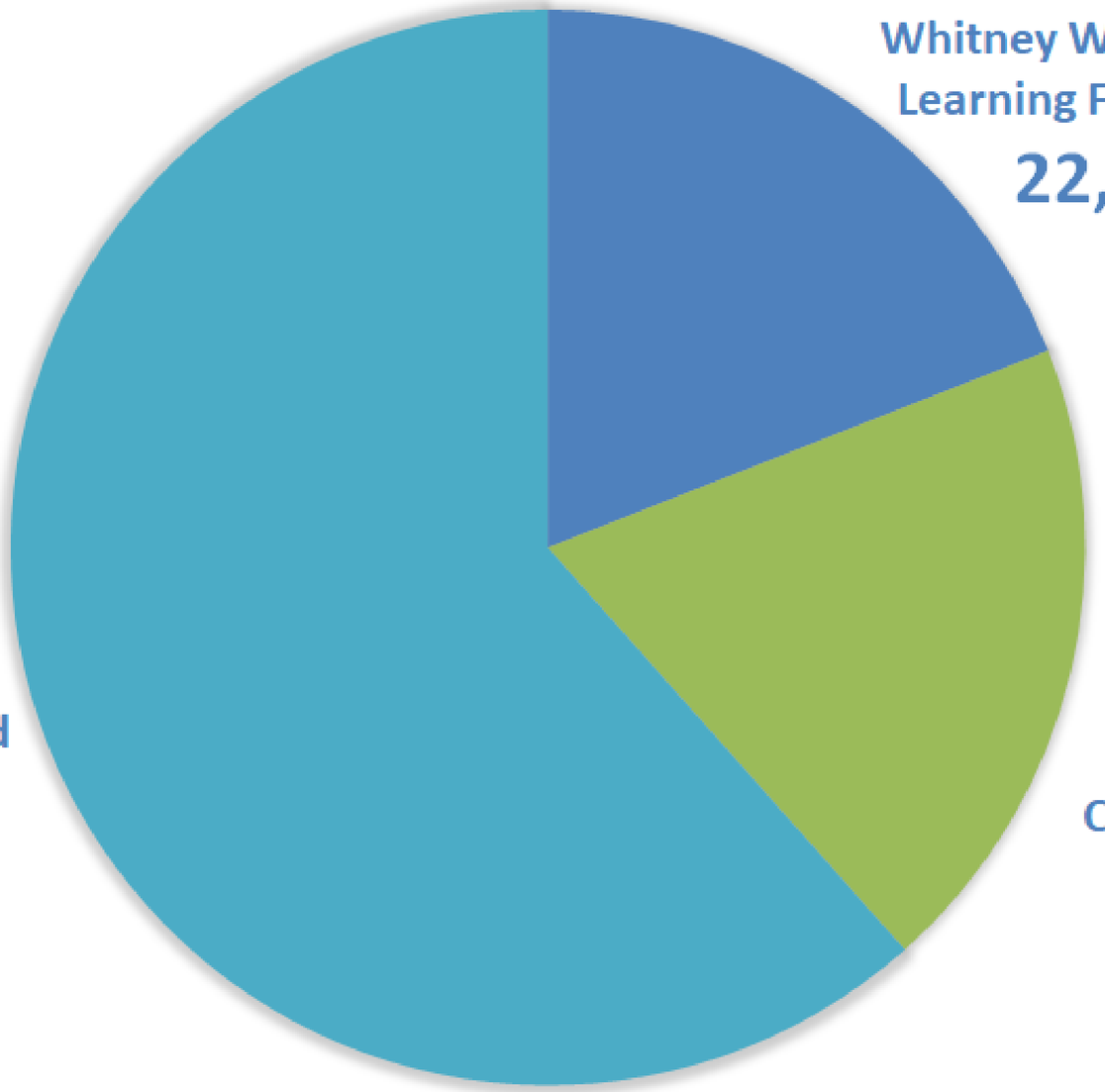
COVID-19 Pandemic: How Did We Adapt?

Everyone's favorite marsupial from the RWA's Recreation Program, Opie, is helping with environmental education as well!

Opie's World - Tap Into Nature are weekly posts about what's happening in nature.

Regional Water Authority
Tapping the Possibilities™

MARCH 2020-APRIL 2021
DIGITAL REACH



Whitney Water Center
Learning From Home
22,442

Whitney Water
Center In The Field
22,877

Opie's World
72,571

COVID-19 Pandemic: How Did We Adapt?

Remote programs in classrooms and libraries.

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COVID-19 Pandemic: How Did We Adapt?

PROJECT W.A.T.E.R.
REGIONAL WATER AUTHORITY

We brought our Project W.A.T.E.R. field trip into the classroom!

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Questions?

Regional Water Authority
Tapping the Possibilities™

April 14, 2021
Land Use Committee Meeting

Reservoir Levels (Percent Full)

	Current Year	Previous Year	Historical Average	Drought Status
March 31, 2021	96	98	91	None

Rainfall (inches)

	Current Year	Previous Year	Historical Average
March 2021	3.43	4.03	4.32
Fiscal YTD (6/1/20 – 3/31/21)	33.59	40.31	38.35

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

- Durham - Corresponded with property owner of 16+/- acres.
- Killingworth – Corresponded with a property owner of 4+/- acres.
- Madison – Corresponded with a property owner of 19+/- acres.

Hamden, DePodesta property (HA 38) – Easement to the state was filed on the land records and returned. Updated title policy and sent to DEEP.

Hamden, Olin property option – Discussed matter with Larry and prepared memo and resolution for the FMA.

Hamden, Skiff St. ACES condemnation – Received notice from State of condemnation of part of ACES condemnation along road on Skiff St. Sent to Murtha for review if there was anything for us to do.

North Branford, Beech St. and Pomps La. parcels – Discussed these parcels more with the interested party.

Rental houses:

- Hamden, 95 Ives St. (HA 13) and 233 Skiff St. (HA 9A) – Disposition application submitted to FMA and approved. Forwarded to the RPB. Public hearing expected in June.
- Woodbridge, 1029 Johnson Rd. – Contacted owners and perspective new buyers about the status of the property.

Forestry Update

- Guilford – West of Sugar Loaf ash salvage (GU 4) – 40% complete
- Killingworth - East Hammonasset Leaf Screen Thinning, (KI 4) - Contract not yet awarded.
- Hamden - Overstory removal and Tornado Salvage, (HA 36) – Not started yet.
- Madison - Nathan's Pond Slash Wall Harvest (MA 6) – Contract awarded. Not started yet.
- Seymour - Silvermine Road Slash Wall Harvest (SE 9) – Awarded contract. Not started yet.

  - Brush fire at Maltby Lake #1 across from the toolhouse was extinguished by local fire department. Covered about an acre.
  - Assisted other RWA staff with pollinator pathway garden at 90 Sargent Dr.
  - Supervised crew conducting tree removal work at LSWTP.

Recreation

- State moved opening day of fishing season up to March 4th. Docks were installed at the end of the month.
- Completed photo contest with 72 entries.

- One of the three new hires for recreation resigned after finding a full-time job.
- Wildlife tracking class by the Branford Land Trust had 15 participants.
- Knot tying event at Lake Saltonstall had 10 participants.
- Led hike for North Branford recreation department at Lake Gaillard with 15 participants.
- Reviewed bridge designs for the North Branford Land Trust across the Gaillard spillway channel.
- Received DPH permit for the new fishing trails at Lake Chamberlain.
- Cleared trails at Chamberlain of downed trees and brushed out red trail going up ridge at Lake Saltonstall.

	March		February	
	2021	2020	2021	2020
Permit Holders	6,336	4,049	6,131	3,780

Special Activity Permits

- Connecticut Agricultural Experiment Station (Dr. Chris T. Maier, Agricultural Scientist)-Conduct research on insects, particularly longhorned beetles (continuation of 2020 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); Magicicada Preserve (Hamden); and along Hosley Avenue (Branford), (3/12/21-11/30/21)
- 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, (02/26/2021-02/26/2022)
- Resources in Search and Rescue, Inc.-(Ms. Celeste Robitaille and designees)- Training of Search and Rescue K9 teams to locate lost or missing individuals, 20 Rimmon Road, Seymour (03/15/2021-02/26/2022)
- Resources in Search and Rescue, Inc.-(Ms. Celeste Robitaille and designees)- Training of Search and Rescue K9 teams to locate drowning victims, Gaillard Reservoir south and west portion; (4/1/2021-4/4/2021) REVISED DATES: 4/29/21 – 5/2/21
- Shoreline Outdoor Education Center and Guilford School System (Karen S. Christensen, Ph.D., Director)-Provide geology instruction and collect rock samples from the area-Genesee Tunnel spoils area, Race Hill Road in Madison (05/01/21-12/31/21)
- Southern Connecticut State University (Steven K. Burian, Professor) Sampling for caddisfly larva of family Sericostomatidae using d-frame kick net and screen to sieve sediment in stream channel, Sargent River between Valley Road and Hilldale Road, Bethany, (4/1/2021-9/30/2021).

Other items

- Encroachments/agreements –
    - Agricultural fields – Discussed fields with six potential farmers. Received COI from Potter and executed agreement for four hay fields. Signed agreement with Cave for Christmas trees at Lake Gaillard.
    - Killingworth, Bunker Hill Rd. (KI 9A) – Emailed Lally again since he has not responded after receiving the license agreement.
    - Killingworth, Rt. 148 (KI 12) – Documented encroachment (trail) coming from State of CT property. Mailed abutter (Sweeney) asking if they have noticed trespassers.
    - Killingworth, Emmanuel Church Rd. (KI 14 and KI 14A) – Documented encroachment (trail) coming from Emmanuel Episcopal Church property. Mailed letter.

- Killingworth, Rt. 148 (KI 14) – Documented encroachment (brush and debris) coming from Jurewicz property. Mailed letter.
- Killingworth, Rt. 148 (KI 14) – Documented encroachment (machinery and animals had been over the line) coming from Coker property. Mailed letter.
- North Branford, 229 Forest Rd. (NB 17) – Executed license agreement with Ferrucci at 229 Forest Rd. for shed, vehicles, and storage trailer.
- Woodbridge, Sperry Rd. field (WO 5) – Denied two requests from Urbano for use of herbicides in the field. Discussed possibility to amend the license agreement to just allow mowing the field and hosting beehives.
- Woodbridge, Morris Rd. field (WO 6) – Contacted Hubbard and told him he had to remove the machinery in the field and the piles of leaves brought from offsite.

- Invasive plants – Submitted plan for the next 5 years to Ted for review. Treated or documented invasive plant populations in Branford, Bethany, North Branford, and East Haven. Assisted with vegetation management at Lake Hudak.

Invasive Species Documented/ Mapped (ac)	~60 acres
Invasive Species Treated (ac/MH)	~ 49 acres

- Deer hunt – DPH issued permit for all areas covering the next 10 years.
- Eli Whitney Museum – Discussed license agreement that affords access to the site with EWM staff.
- Prospect, Roaring Brook Rd. drainage – Met with town staff and abutters to discuss drainage coming off the road.
- Woodbridge, Cassway Rd. – Corresponded with Steve Conn about clearing the path from the improved section of the road to Sperry Rd. It is still a town road so they are free to clear anything within the town ROW.
- Cell phone antennas – Again spoke with potential vendor for cell site in Cheshire.
- Comcast lease, Burwell Tank site – Received draft amendment from Comcast and started review. Main issue observed was a change in the description of what the site can be used for.
- Personnel – Applicants screened and interviewed. Position of Natural Resources Analyst offered to and accepted.
- Ansonia, Birmingham Blvd gate – Contacted Ansonia officials on the behalf of our Police to determine who owns the chain gate that leads to the Fountain Lake Tank since someone keeps cutting our lock.
- New Haven Museum – Donated copy of Otto's manuscript on NHWC/RWA history to the Museum's library.

Attachments

- March 24, 2021 - Killingworth Officials Announce Public Forums on Water Contamination – CT Examiner
- March 31, 2021 - We sampled tap water across the US – and found arsenic, lead and toxic chemicals – The Gaurdian
- April 5, 2021 - Once again, someone tampered with an entire drinking water supply via the internet – The Verge
- March 31, 2021 - Transportation And Climate Initiative Passes Legislative Hurdle In Connecticut – WNPR
- April 7, 2021 - High Levels of Arsenic, Uranium Detected in Connecticut Drinking Wells – Newsweek
- March 26, 2021 - As National Populations Surge, Connecticut's Bald Eagle Numbers Also Soar - WNPR

Upcoming Agenda Items

May 2021 –

Killingworth Officials Announce Public Forums on Water Contamination

by Brendan Crowley – CT Examiner - March 24, 2021

KILLINGWORTH — Per- and polyfluoroalkyl substances, known as PFAS, were detected in three wells serving the age 55+ Beechwood Community, but only one of the wells exceeded state guidelines. Officials at Connecticut Water assured residents that the water, once treated, is safe to drink.

Three wells registered levels of PFAS greater than 10 parts per trillion. Only one well exceeded the state guidelines of 70 ppt for the total accumulations of five specific PFAS chemicals in drinking water.

Connecticut Water stated in a release that because drinking water is treated, the guidelines "apply only to the treated water and not the individual wells."

PFAS are a group of long-lasting chemicals that are used in some firefighting foams and a range of products from non-stick pans to food packaging. The EPA identifies PFAS with a variety of adverse human health effects.

The Beechwood wells are located near the Haddam-Killingworth Middle School and the Killingworth Elementary School, town hall and library.

The town of Killingworth is working with state officials to identify the source of the PFAS contamination, and has tested other wells in the area for contamination. The tests typically take two to four weeks for results, and the local schools have started using bottled water as a precaution, according to a news release from Killingworth First Selectman Catherine Iino and Director of Health Amy Scholz.

"The local and state health departments have identified no immediate health threat, and they are not issuing a recommendation to alter consumption of water inside the home at this time," said Iino and Scholz in the release. "We do not yet know the source or extent of the contamination. DEEP is analyzing the geology of the area and will reach out to initiate testing for PFAS in private home wells based on the risk analysis."

Connecticut Water will hold a forum for Beechwood residents at 6 p.m. on Thursday, March 25.

The Town of Killingworth will hold an online public forum at 7 p.m. on Thursday to provide residents with information about the chemical PFAS and the contamination. Experts from the Connecticut Department of Public Health, Department of Energy and Environmental Protection and Connecticut Water will be available to answer questions.

We sampled tap water across the US – and found arsenic, lead and toxic chemicals

A nine-month investigation by the Guardian and Consumer Reports found alarming levels of forever chemicals, arsenic and lead in samples taken across the US

by Ryan Felton and Lisa Gill of Consumer Reports and Lewis Kendall for the Guardian - 31 Mar 2021

In Connecticut, a condo had lead in its drinking water at levels more than double what the federal government deems acceptable. At a church in North Carolina, the water was contaminated with extremely high levels of potentially toxic PFAS chemicals (a group of compounds found in hundreds of household products). The water flowing into a Texas home had both – and concerning amounts of arsenic too.

All three were among locations that had water tested as part of a nine-month investigation by Consumer Reports (CR) and the Guardian into the US's drinking water.

Since the passage of the Clean Water Act in 1972, access to safe water for all Americans has been a US government goal. Yet millions of people continue to face serious water quality problems because of contamination, deteriorating infrastructure, and inadequate treatment at water plants.

CR and the Guardian selected 120 people from around the US, out of a pool of more than 6,000 volunteers, to test for arsenic, lead, PFAS (per- and polyfluoroalkyl substances), and other contaminants. The samples came from water systems that together service more than 19 million people.

A total of 118 of the 120 samples had concerning levels of PFAS or arsenic above CR's recommended maximum, or detectable amounts of lead. Testing of the samples showed:

More than 35% of the samples had PFAS, potentially toxic "forever chemicals", at levels above CR's recommended maximum.

About 8% of samples had arsenic, at levels above CR's recommended maximum.

In total, 118 out of 120 samples had detectable levels of lead.

The study has some limitations: the quality of the water at one location on a single day doesn't necessarily reflect the quality of the water supplied by an entire system or at other times. But the ambitious undertaking, with community water systems chosen by CR's statisticians from a representative mix of systems across the country, provides a unique view into some of the most significant challenges in America's ongoing drinking water crisis.

Almost every sample tested had measurable levels of PFAS, a group of compounds found in hundreds of household products. These chemicals are linked to learning delays in children, cancer, and other health problems. More than 35% exceeded a safety threshold that CR scientists and other health experts believe should be the maximum.

Yet many consumers have never heard of PFAS.

Hung Ng, a resident of Florida, New York, says he has long used home water filters, in part to remove lead. But the 69-year-old says he didn't know anything about PFAS until he had his water tested as part of this investigation, which found comparatively high levels of the chemicals in his water. "Now I've got to find something to filter out the PFAS," Ng says.

The tests revealed other problems as well. About 8% of samples had levels of arsenic – which gets into drinking water through natural deposits or industrial or agricultural pollution – above CR's recommended maximum for drinking water. And almost every sample had measurable amounts of lead, a heavy metal that leaches from corroding water lines and home plumbing fixtures. It is unsafe at any level.

In response to the findings, Environmental Protection Agency spokesperson Andrea Drinkard says that 93% of the population supplied by community water systems gets water that meets "all health-based standards all of the time" and that the agency has set standards for more than 90 contaminants. That includes arsenic and lead but does not include PFAS.

America's water crisis, while widespread, affects some communities more than others, according to an analysis of more than 140,000 public water systems published by the Guardian in February. It found that access to clean drinking water is highly unequal in the US, with water systems that service poorer and rural counties far more likely to have violations than those that provide water to wealthier or urban ones. Water systems in counties with large Latino populations were particularly likely to have violations, the Guardian found.

PFAS: the 'forever chemical' problem

The PFAS results from CR's tests are particularly troubling.

Manufacturers use PFAS to make stain-resistant fabrics and carpets, water-repellent clothing, nonstick cookware, and hundreds of other common products. The compounds can seep into water from factories, landfills, and other sources. And because they don't easily break down in the environment, they're often called "forever chemicals".

Investigation into the health effects of PFAS exposure is ongoing, but some of the strongest evidence about their potential risks comes from research of about 69,000 people in and around Parkersburg, W Va. The research – part of a settlement between DuPont, which makes some PFAS, and residents of the community – was depicted in the 2019 movie Dark Waters.

It found a "probable link" between exposure to a type of PFAS and six health problems: high cholesterol, ulcerative colitis, thyroid disease, pregnancy-induced hypertension, and testicular and kidney cancers. Research has also linked some PFAS to learning delays in children.

At least 2,337 communities in 49 states have drinking water known to be contaminated with PFAS, according to a January analysis by the Environmental Working Group (EWG), an advocacy organization.

CR's tests results confirm the ubiquity of the chemicals: We found PFAS in 117 of the 120 samples we tested, from locations across the country.

Despite mounting evidence of widespread contamination and health risks, the EPA has still not set an enforceable legal limit for PFAS in drinking water. Instead, it has established only voluntary limits, which apply to just two of the better-studied forever chemicals – PFOA, or perfluorooctanoic acid, and PFOS, or perfluorooctanesulfonic acid – at 70 parts per trillion combined.

Harvard environmental health professor Philippe Grandjean has suggested that the limit should be just 1 ppt for PFOA and PFOS, citing his 2013 research– partly funded by the EPA – showing decreased vaccine response in children exposed to the chemicals.

CR's scientists say the maximum allowed amount should be 5 ppt for a single PFAS chemical and 10 ppt for two or more. Among the 120 samples CR tested, more than a third had PFAS levels above 10 ppt, and more than a quarter exceeded 5 ppt for a single PFAS chemical.

Two samples had PFAS levels above the federal advisory level of 70 ppt, with the highest amount – 80.2 ppt – coming from a sample that Jim Vaughn, a 76-year-old retired electrical equipment salesman, collected at his church in Pittsboro, NC.

Vaughn wasn't particularly surprised, he says. Places such as Pittsboro – a community of about 6,700 on the fringes of North Carolina's Research Triangle, which is anchored by three universities and filled with industry and hi-tech business – are used to getting "dumped on," he says. "It's that little feeling of helplessness. Is there something that the town will do about it? Or will we let it ride?"

Indeed, residents of Pittsboro have reason to worry, beyond the results of CR's tests. In 2007, an EPA study found PFAS contamination in the Cape Fear River Basin, a major source of drinking water for the eastern half of North Carolina. Some of the highest levels came from the Haw River in the basin's north end – where Pittsboro gets its water.

Ongoing research out of Duke University, in nearby Durham, has also raised concerns. It found that levels of PFAS in a study of 49 Pittsboro residents' blood are two to four times higher than that of the general US population. Heather Stapleton, the project's lead investigator, says Vaughn's test results align with her team's findings. "If you think about the number of communities that could be impacted, it's close to a million people," she says.

Chris Kennedy, town manager for Pittsboro, says the town was not a source of PFAS but that it was "diligently working towards removing PFAS from our potable water supply". He adds that the town is installing filters at the water treatment plant to remove at least 90% of PFAS by the end of 2021 and is taking steps "to reduce contamination into the Haw River, which will provide the best results long term".

Arsenic: a toxin in the water

More than 1,200 miles away from Pittsboro, Sandy and Scott Phillips sat around their kitchen table in Texas on a weekday in February reflecting on the test results for their water samples.

Last year, looking to downsize, they built the custom home of their dreams in a new development in Round Rock, 20 miles north of Austin.

But soon after moving in, they began to notice the water had an unusual odor, prompting them to invest thousands in a water softening and reverse osmosis water filtration system.

Not long after, the couple got their water tested as part of CR's project, taking samples from water before it was filtered. The results were concerning: high not just in PFAS (32.8 ppt) but also in arsenic, at 3.3 parts per billion. "We get this gorgeous house," Sandy Phillips says, "and then the water is terrible."

Bill Brown, general manager of the Jonah Water Special Utility District, the couple's water supplier, says it "has complied with all federal and state minimum contaminant level standards for arsenic and lead for many years". He says that while CR's results conflicted with its records, the water district will investigate. He did not comment on the PFAS found in the Phillipses' water.

In the early 2000s, the EPA considered a drinking water limit for arsenic of 3 ppb, before settling on 10 ppb as an amount that balances the costs for water system operators while reducing health risks. CR scientists have long said the EPA should set a limit of 3 ppb or lower, in line with what other health experts and environmental advocacy groups, such as the Natural Resources Defense Council (NRDC), have called for.

Almost every sample CR tested had measurable levels of arsenic, including 10 – or about 8% – with levels between 3 and 10 ppb. Previous tests from CR and others have shown elevated levels in juices and baby foods.

Research suggests that exposure to even low levels of arsenic can pose health risks over the long term. A 2014 study in the journal Environmental Health found an association between water with arsenic of 5 ppb or greater and a five- to six-point IQ reduction in children.

Two states – New Hampshire and New Jersey – have lowered their arsenic limit to 5 ppb, citing warnings from studies. The EPA itself even sets its "maximum contaminant level goal" – the level below which there is no known or expected risk to health – at zero for arsenic.

Lead: no safe amount

The Phillipses, in Texas, were especially fortunate to have installed a filtration system because the results of their unfiltered tap test showed high levels of not only arsenic but also lead, at 5.8 ppb. (CR's follow-up tests of the couple's filtered water showed trace amounts of lead and levels of arsenic and PFAS well within CR's recommended limits.)

The risks of lead, and problems with how water utilities test for it, became a national concern when news of the water crisis in Flint, Mich., exploded in 2015. Scientists and the EPA agree that there's no safe exposure level of lead. But taking into consideration the feasibility of achieving lower levels, the EPA says utilities have to take significant steps to lower lead levels – including replacing lead service lines – only when 10% of samples from homes in their service areas exceed 15 ppb.

Consumer advocates say those EPA regulations are problematic – a reality underscored by the testing results of water being piped into a condo owned by Stephen and Robin Newberg in New Britain, Connecticut. Lead typically works its way into drinking water through lead pipes that feed people's homes or in the home's plumbing itself. While New Britain's annual water quality report for customers indicates that its average lead level is 6 ppb, the Newbergs' results showed a concentration of 31.2 ppb, more than double the EPA's action level of 15 ppb.

Stephen Newberg, a former postal worker, says he drinks filtered water and his wife drinks bottled water, so he's not personally worried. But the 66-year-old sits on the board of his condo, and he's concerned about the possibility of the heavy metal being in his neighbors' water.

Ramon Esponda, New Britain's deputy director of public works, says that the city complies with the EPA's lead regulations, based on its 2020 tests, which found an average lead level of 2 ppb. Esponda says that results of a single sample may be thrown off by new fixtures, recent plumbing work, or other factors. After this article was published, Esponda told CR the city retested the Newbergs' water and found lead levels of 3 ppb. CR's experts say lead levels are indeed known to vary, but the fact that the Newbergs' earlier tests showed high levels remains concerning.

The installation of new lead service lines – pipes that connect a water main in a street to individual buildings – was banned in 1986. But an estimated 3 million to 6 million homes and businesses nationwide still get water through older lines that contain lead, according to EPA estimates. An untold number of homes have plumbing fixtures made of the heavy metal. Exposure can especially pose risks in children, such as reduced IQ and behavioral problems.

The Newbergs' results were the only ones in CR's tests to be above the EPA action level. But almost every sample had measurable levels of lead, and health experts emphasize that no amount of lead is safe.

Erik Olson, senior strategic director of health and food at the NRDC, says the Newbergs' results illustrate several problems with how the EPA regulates lead. One is that water systems may test for lead only once every three years, and smaller systems can get waivers to test every nine years. Another is that the sample sizes are generally small.

"There's very little oversight, and they may not be testing the highest-risk homes," Olson says.

The EPA, in the waning days of the Trump administration, finalized changes to the lead regulation that would require testing in elementary schools and established new rules regarding the steps water systems must take when lead is detected.

But the NRDC, the NAACP, and other groups recently sued the EPA, saying those steps didn't go far enough, and urged the Biden administration to improve on them.

Solutions

People seeking cleaner drinking water do have some options for reducing their exposure to dangerous contaminants. But consumer advocates say that fixing the problem shouldn't be up to consumers.

“Americans shouldn’t have to navigate bureaucracy and be forced to make significant investments in order to access clean tap water,” says Brian Ronholm, CR’s director of food policy.

Legislation passed last year by the House of Representatives would have authorized $22.5bn to replace lead service lines across the US, according to the NRDC, but the bill died in the Senate. The NRDC called for the Biden administration and Congress to enact legislation requiring the expeditious removal and replacement of lead lines.

Congress is also focusing on PFAS. In January, a congressional taskforce urged the Biden administration to take immediate steps to address PFAS contamination by, among other things, directing the EPA to phase out any uses for the chemicals deemed “non-essential,” to finalize a standard for PFOA and PFOS, and to accelerate cleanup.

Democratic congresswoman Debbie Dingell, a member of the taskforce, responded to the findings from CR’s tests, saying they show that “we do not have any time to waste as we battle these toxic chemicals.” She renewed her call for PFAS to be banned and designated as hazardous.

Pittsboro’s Jim Vaughn says that while government and industry debate, residents of his town are left with unsafe water. “The town that has the polluters in it, they’re getting their water from upstream, so what’s their impetus” to fix the problem, he says. “The ones downstream have no power over the ones upstream to force them to do that. I just don’t think it’s fair.”

Methodology: how consumers helped us test America’s tap water

Consumer Reports and the Guardian teamed up to ask our readers if they could help us investigate the nation’s drinking water. The response was overwhelming: more than 6,000 said “Yes!” From that pool, CR statisticians winnowed the group down to 120 volunteers representing a cross-section of the country and the water systems that service it. That included 12 samples from each of the Environmental Protection Agency’s 10 jursidictional regions. Within each region, testers were chosen to provide a mix of urban and rural locations as well as small and large water systems.

We were particularly interested in PFAS (per- and polyfluoroalkyl substances), chemicals notorious as much for their potential health risks as for their perseverance in the environment. Municipalities often don’t test PFAS, and when they do, only on a small scale. Each participant received test kits for PFAS as well as arsenic, lead, and other contaminants of concern, plus a detailed video showing how to collect the samples – precision really matters here!

When tests were complete, we sent the volunteers advice tailored to their specific results. While we can’t draw conclusions about any of the specific water systems, since only one sample came from each, together they provide powerful insights into problems faced by the nation as a whole. “While much of CR’s testing is done in our labs with our scientists, projects like these, need real-people,” says James Dickerson, CR’s chief scientific officer. “We are so grateful to the readers who made this possible, particularly those who shared their stories with us.”

Once again, someone tampered with an entire drinking water supply via the internet

The Verge - By Sean Hollister, Apr 5, 2021

You would think that something as critical as a town or county's drinking water supply would be well-protected — you know, like how America's nuclear armament was isolated from the internet and even relied on eight-inch floppy disks until just recently? And yet we've now had *two* instances where someone was able to remotely log into a municipal water supply in a way that could have harmed people.

Remember the story of the Florida water treatment facility where someone was able to change the chemical levels? Something similar happened in March 2019 in Kansas' Ellsworth County, too, where 22-year-old Wyatt Travnichek now stands accused of shutting down the region's water cleaning system "with the intention of harming" it, according to a statement from the Department of Justice.

Maybe remote access shouldn't be a feature of our nation's drinking water supply

The wildest part is that in both cases, these municipalities left themselves wide open to tampering — they installed the remote access software themselves so employees could log in to monitor the systems! That's what Travnichek was hired to do in Kansas, and authorities aren't even accusing him of "hacking" the system in their indictment. He simply "logged in remotely" months after he left the job, began shutting things down, and is now facing up to 20 years in prison.

That sounds remarkably similar to what happened in Florida, where the water treatment plant never bothered to change the password or even remove an old piece of remote control software after they'd installed a newer one.

Transportation And Climate Initiative Passes Legislative Hurdle In Connecticut

WNPR - By Patrick Skahill • Mar 31, 2021

A key legislative committee voted Wednesday in favor of a program that could raise hundreds of millions of dollars for environmental programs in Connecticut, but it could also have an impact at the gas pump.

The Transportation and Climate Initiative would place a declining cap on emissions from gas and on-road diesel fuel. It requires wholesalers to purchase "allowances" to cover those emissions. And it reinvests that money into transportation projects.

Supporters say TCI will reduce on-road carbon dioxide emissions by about one-quarter while raising $1 billion by 2032.

The legislature's environment committee voted in favor of the bill.

Democratic committee Co-Chair Sen. Christine Cohen supports TCI and told committee members money raised would help vulnerable communities.

"It requires that a certain percentage, at least 50 percent, be invested into communities that are overburdened by air pollution or underserved by a transportation system," she said.

If TCI becomes law, it could raise gas prices by at least 5 cents per gallon in 2023.

Republican ranking member Rep. Stephen Harding, who voted against the bill, characterized TCI as a "gas tax."

"No matter how we examine it, this is going to be a tax on the consumers and our constituents," Harding said. "We are voting today to implement a gas tax."

TCI still needs to pass through both the Senate and House before becoming law. It has the support of Gov. Ned Lamont.

High Levels of Arsenic, Uranium Detected in Connecticut Drinking Wells

Newsweek - By Ed Browne ; 4/7/21

A U.S. Geological Survey study has found some private water wells in Connecticut have high levels of naturally occurring arsenic and uranium in them, and residents are being urged to get their water tested.

Around 23 percent of Connecticut residents have private water wells for their water supply, the USGS said.

In the study, posted in November 2020, thousands of water samples from more than 2,000 private drinking water wells in the state between 2013 and 2018 were analyzed. 2,433 samples were studied for arsenic and 2,191 for uranium.

The most recent data has shown that around 3.9 percent of private water wells contained water with arsenic concentrations higher than 10 micrograms per liter—the maximum level for public drinking water standards granted by the Environmental Protection Agency.

In addition, around 4.7 percent of wells contained uranium concentrations higher than the EPA's drinking water standards.

Arsenic can enter the water supply either from natural deposits in the Earth, but it can also be dumped by industrial outlets, the Centers for Disease Control and Prevention states. In private water wells, it may come from previous fertilizer use or industrial waste.

Arsenic has been related to increased cancer risk, low birth weight, decreased child intellectual development, immune system suppression and other health effects. Excessive uranium exposure can also be harmful and has been linked with kidney disease.

Ryan Tetreault, private well program supervisor at the Connecticut Department of Public Health—which cooperated with the study—said in a statement: "Even though we know there are areas across our state that have higher concentrations than others, any private well in Connecticut has the potential to have elevated arsenic or uranium. Private well owners should have their well water tested at least once for these contaminants."

A listing of environmental labs approved to test drinking water can be found here.

The department recommends that anyone using a water well with arsenic concentrations above federal and state levels should either swap to another water source or install a treatment system.

Wells containing uranium concentrations higher than EPA standards should also be treated, the USGS said.

The USGS study follows on from another, similar one carried out in 2017 which also identified areas where there were high levels of arsenic and uranium in Connecticut water wells.

The 2017 study found seven percent of water samples from 674 private wells in the state contained arsenic or uranium concentrations that were higher than the EPA's maximum contaminant levels (MCL) for drinking water supplies. The MCL for 10 micrograms per liter for arsenic and 30 micrograms per liter for uranium.

The newest study included additional samples and focussed on previously underrepresented areas.

Eliza Gross, USGS physical scientist and lead author of the study, said: "The previous USGS study published in 2017 identified some areas where there were high contaminant levels, and we now have a more complete statewide assessment."

As National Populations Surge, Connecticut's Bald Eagle Numbers Also Soar

WNPR - By Patrick Skahill • Mar 26, 2021

A new federal report released last week shows U.S. bald eagle populations quadrupling over the course of a decade. It's an encouraging sign of growth for one of America's most iconic animals, which comes as eagle populations in Connecticut also reached record-setting levels last year.

The report from the U.S. Fish and Wildlife Service shows the number of breeding pairs of bald eagles have grown significantly since 2009.

And as breeding pairs grew, overall population numbers also went up. Biologists now estimate there are more than 300,000 individual bald eagles in the lower 48 states.

Here in Connecticut, bald eagles are also doing well.

Last year, the state logged the most active bald eagle territories on record.

"Our population numbers are increasing pretty rapidly," said Brian Hess, a wildlife biologist with the state Department of Energy and Environmental Protection. "In 2020, we had 72 active eagle territories. So that's nests and attempted nests throughout the state."

"That's just the ones that we know about. There's likely many more that we don't," Hess said. "But to put that into perspective, in 2010, we had 23 nesting territories."

Going back to the mid-1990s, bald eagles were an even more rare sight in Connecticut. In 1994, the state DEEP listed only one active bald eagle territory. But years of state and federal conservation work paid off. Bans on harmful chemicals like DDT and the removal of other pollutants from waterways helped drive the recovery.

In 2007, when the bald eagle was removed from Endangered Species Act protection, the federal government said there were more than 9,700 breeding pairs, a striking increase from the known all-time low of 417 pairs in 1963.

Latest federal data now show more than 71,000 breeding pairs in the lower 48 states.

"I think at the end of the day it really does demonstrate that with concerted environmental conservation actions," Hess said, "we really can move the needle on some of these problems."

Hess said as the charismatic birds move into more populated environments, volunteers have been crucial to the state's efforts to track and conserve bald eagle populations. "We're seeing them a lot more on the edges of people's yards, in more urban settings," Hess said, "starting to be tied in with where people are."

Residents who spot a bald eagle nest are encouraged to report the sighting to the state wildlife division.

"If you see eagles carrying sticks or clumps of grass, especially at this time of year, it usually means that there's a nest nearby," Hess said. "We really do try to gather as much information as we can about our nesting population of eagles here in Connecticut, so if you report them to the wildlife division it would be greatly appreciated."