

South Central Connecticut Regional Water Authority

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OR

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AGENDA

Regular Meeting of Thursday, March 28, 2024 at 11:00 a.m.

- A. Safety Moment
- B. Public Comment: The time limit granted to each speaker shall be three (3) minutes. Residents and customers may address the Board.
- C. Review and discuss proposed capital and operating budgets for Fiscal Year 2025 (June 1, 2024 – May 31, 2025): R. Kowalski - *Upon 2/3 vote, convene in executive session pursuant to C.G.S. Section 1-200(6)(E) to discuss matters covered by Section 1-210(b)(5)(B), pertaining to commercial and financial information.*
- D. Consider and act on distribution of proposed capital and operating budgets for Fiscal Year 2025 to members of the Representative Policy Board
- E. *Meet as Environmental, Health & Safety Committee: M. Ricozzi
 - 1. Approve Minutes – November 16, 2023 meeting
 - 2. Raw Water Quality Study Memorandum
 - 3. Health & Safety Initiatives Update Memorandum
 - 4. Invasive Species Update Memorandum
- F. Consent Agenda
 - 1. Approve Minutes –
 - a. February 22, 2024 regular meeting
 - b. February 29, 2024 special meeting
 - c. March 13, 2024 special meeting
 - 2. Capital Budget Authorization – April 2024
 - 3. Capital Budget Transfer Notifications (no action required) – April 2024
 - 4. Accounts Receivable Update – February 2024
 - 5. Key Performance Indicators
 - 6. RPB Quarterly Dashboard Report
 - 7. 2023 Deer Hunt Update Memorandum
- G. Finance: R. Kowalski
 - 1. Quarterly Financial Update
 - 2. Type B3 Amendment
- H. RPB committee assignments and reports on RPB committee meetings
- I. Business Updates: L. Bingaman
 - 1. RWAY/CIS Update: P. Singh
 - 2. Monthly Business Highlights
 - 3. *Security Update: S. Lakshminarayanan and P. Ruggiero - *Upon 2/3 vote, convene in possible executive session pursuant to C.G.S. Section 1-200(6)(E) for matters covered by Section 1-210(b)(19)(i)(ii), pertaining to security matters and pursuant to C.G.S. Section 1-200(6)(B) to discuss litigation.*
- J. Consider and act on acquisition of 10+/- acres at 0 Easterly Drive, Hamden: S. Lakshminarayanan and J. Triana - *Upon 2/3 vote, convene in executive session pursuant to C.G.S. Section 1-200(6)(D) to discuss real estate matters.*
- K. Meet as Commercial Business Committee: K. Curseaden

1. Approve Minutes – December 21, 2023 meeting
 2. Adopt FY 2025 Work Plan
 3. Commercial Business/Acquisition Update: R. Kowalski and A. Cosma - *Upon 2/3 vote, convene in executive session pursuant to C.G.S. Section 1-200(6)(E) to discuss matters covered by Section 1-210(b)(5)(B), pertaining to commercial and financial information.*
- L. Act on matters arising from Committee meetings.

****** Members of the public may attend the meeting in person or by conference call. To view meeting documents please visit <http://tinyurl.com/3hhtm38z>. For questions, contact the board office at 203-401-2515 or by email at jslubowski@rwater.com.

**RPB Member (J. Jaser) should join at Item E and will be excused at Item I.3.*

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**South Central Connecticut Regional Water Authority
Environmental, Health & Safety Committee**

Minutes of the November 16, 2023 Meeting

The regular meeting of the Environmental, Health & Safety Committee (“Committee”) of the South Central Connecticut Regional Water Authority (“RWA”) took place on Thursday, November 16, 2023, at 90 Sargent Drive, New Haven, Connecticut and via remote access. Chairman Ricozzi presided.

Present: **Committee** – Messrs. Ricozzi, Borowy, Curseaden, and Mss. LaMarr and Sack
Management – Mss. Kowalski, Calo, and Augur, and Messrs. Bingaman, Barger, Hill, Lakshminarayanan, and Singh
Murtha Cullina LLP – Atty. Boye-Williams
Staff – Mrs. Slubowski

The Chair called the meeting to order at 12:32 p.m.

On motion made by Mr. Borowy, seconded by Ms. Sack, the Committee voted unanimously to approve the minutes of the its meeting held on August 24, 2023.

Borowy	Aye
Curseaden	Aye
LaMarr	Aye
Ricozzi	Aye
Sack	Aye

At 12:33 p.m., on motion made by Mr. Borowy, and seconded by Mr. Curseaden, the Committee voted unanimously to go into executive session pursuant to C.G.S. Section 1-200(6)(B) to discuss matters pertaining to pending litigation. Present in executive session were Committee members, Messrs. Bingaman, Barger, Hill, Lakshminarayanan, Singh, and Mss. Kowalski, Calo, Augur, Slubowski, and Atty. Boye-Williams.

At 12:50 p.m., Mr. Barger withdrew from the meeting.

At 1:53 p.m., the Committee came out of executive session. No votes were taken in, or as a result of, executive session. On motion made by Mr. Borowy, and seconded by Ms. LaMarr, the Committee voted unanimously to adjourn the meeting.

Borowy	Aye
Curseaden	Aye
LaMarr	Aye
Ricozzi	Aye
Sack	Aye

Mario Ricozzi, Chairman

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To: Authority Environmental, Health & Safety Committee
David J. Borowy
Kevin J. Curseaden
Catherine E. LaMarr
Mario Ricozzi
Suzanne C. Sack

Cc: Larry Bingaman, President & CEO
Sunny Lakshminarayanan, VP, EES

From: William Henley, Sr. Aquatic Resource Scientist

Date: March 2024

Subject: Raw Water Quality Program

Question:

To maintain best water quality in a dynamic system, RWA has relied on raw water intake remote automation at several reservoirs to withdraw water supply at different depths of the water column via SCADA technology. With upcoming streamflow regulations taking effect in RWA's system in 2026, many additional downstream flow changes will be needed at several dams. These regulatory changes will increase the need for staff time to report to the sites and make the necessary changes. Does the Board see a benefit to investing in equipment necessary to automate these blowoff structures with the goal of making remote regulated releases? The ROI will be taking a longer time as compared to other capital projects.

Reservoir Program Overview:

In 2023, Environmental Planning continued with its reservoir monitoring program, conducting 170 individual reservoir profiles and collecting over 475 samples for laboratory analysis of key informational parameters. Raw water sampling was conducted monthly at all 10 active reservoirs, with supplemental sampling occurring at terminal reservoirs (Dawson, Gaillard, Glen, Saltonstall, Watrous and Whitney). Additionally, staff conducted supplemental sampling at critical periods to support water treatment processes and preferred intake source selection. Sampling as part of the company wide DBP initiative also continued, with a focus on streams and diversions in the Lake Gaillard system. Monthly sampling was conducted to optimize diversion selection and to build a robust dataset to guide management projects at RWA's largest source of supply. Variability in raw water quality has increased over the past decade, with indications of impacts from changes in both climate and demand.

Environmental Planning will continue with a comprehensive sampling schedule for 2024, conducting monthly sampling of all sources and providing additional sampling efforts at key reservoirs as needed. During the 2024 sampling season, a revival of additional historic

tributary sampling sites in the West River system is planned with a focus on organic loading in the West River watershed (Lake Bethany/Lake Watrous). Tributary sampling will be conducted monthly and will cover similar parameters to the DBP-focused sampling in the Lake Gaillard system. Continued algal issues and diminished reservoir water quality continue to impact Lake Watrous and Lake Bethany.



Figure 1: Significant surface algae bloom in October at Menunketuc reservoir. Bloom was composed of primarily harmful cyanobacteria.



Figure 2: Routine reservoir sampling at the Lake Chamberlain upstream storage source.

Special Initiatives

In addition to routine sampling, Environmental Planning is implementing numerous new resources and strategies to mitigate raw water quality impairments:

Preventative Algaecide Treatments

Increased algal activity at Lake Watrous has been especially problematic in the last 3 years (statement of why – I believe it is due to precipitation pattern changes). Prior to the implementation of dissolved air flotation (DAF) at West River Water Treatment Plant, algal abundance in the Watrous reservoir rose to levels causing extreme impairment to the treatment process. Specifically, cyanobacteria activity at the Watrous reservoir reached previously undocumented levels (under certain conditions, cyanobacteria can release cyanotoxins which are regulated contaminants). In response to this upswing in algal activity, Environmental Planning continues experimenting with methods developed by the US Army Corps of Engineers (USACOE) to preventatively treat overwintering benthic (lake bottom) algae, which in USACOE research was seen to contribute significantly to early season cyanobacteria development. The management strategy consists of applying Sodium Carbonate Peroxyhydrate (granular peroxide) to the Watrous reservoir early in the growing season (typically May). Oxygen from the peroxide reacts with the cyanobacteria cell walls and kills the organisms. This type of algal management differs greatly from traditional copper-based algaecides, which RWA no longer uses due to their significant negative impacts on beneficial reservoir organisms such as zooplankton, benthic microbes, and invertebrates. Peroxide based algaecides have minimal impacts and inherently add oxygen to a system as a byproduct due to the nature of their chemical composition, which is highly beneficial for water quality.

While DAF is a good tool for removing algae, it does not mitigate potential toxin loading in the reservoir source, nor does it prevent nutrient cycling within the reservoir system caused by recruitment of benthic cyanobacteria. High algae abundance can also have secondary impacts on the treatment process such as variable pH and increased dissolved organic material (a DBP precursor). Environmental Planning intends to continue experimenting with this tool to mitigate known cyanobacteria issues in the Watrous Reservoir. In addition, a peroxide-based algaecide application is scheduled for May 2024.

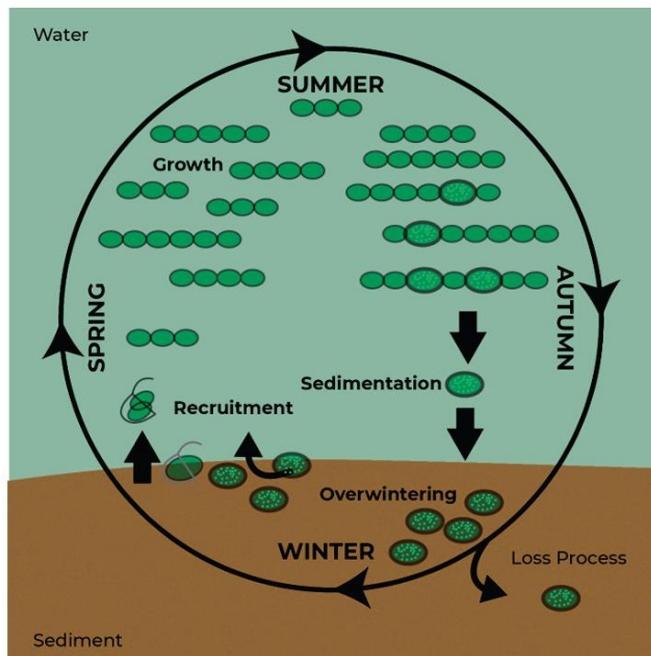


Figure 3: USACOE diagram highlighting cyanobacteria overwintering processes. Algaecide is applied in the spring to prevent recruitment, thereby depressing summer growth.

Remote Monitoring Technologies

Continuing with RWA’s goals to utilize cutting edge technologies and embody a 21st century water utility, Environmental Planning is piloting the use of two different remote monitoring systems:

A turbidity monitoring system was deployed in early 2023, which provides hourly data for the Farm River East Haven diversion. The diversion is located below a moderately urbanized watershed with many agricultural uses, which leads to turbid water quality during storm events. With real-time turbidity data, staff are able to open and close the diversion during times of low and high turbidity events to optimize the water quality entering Lake Saltonstall.

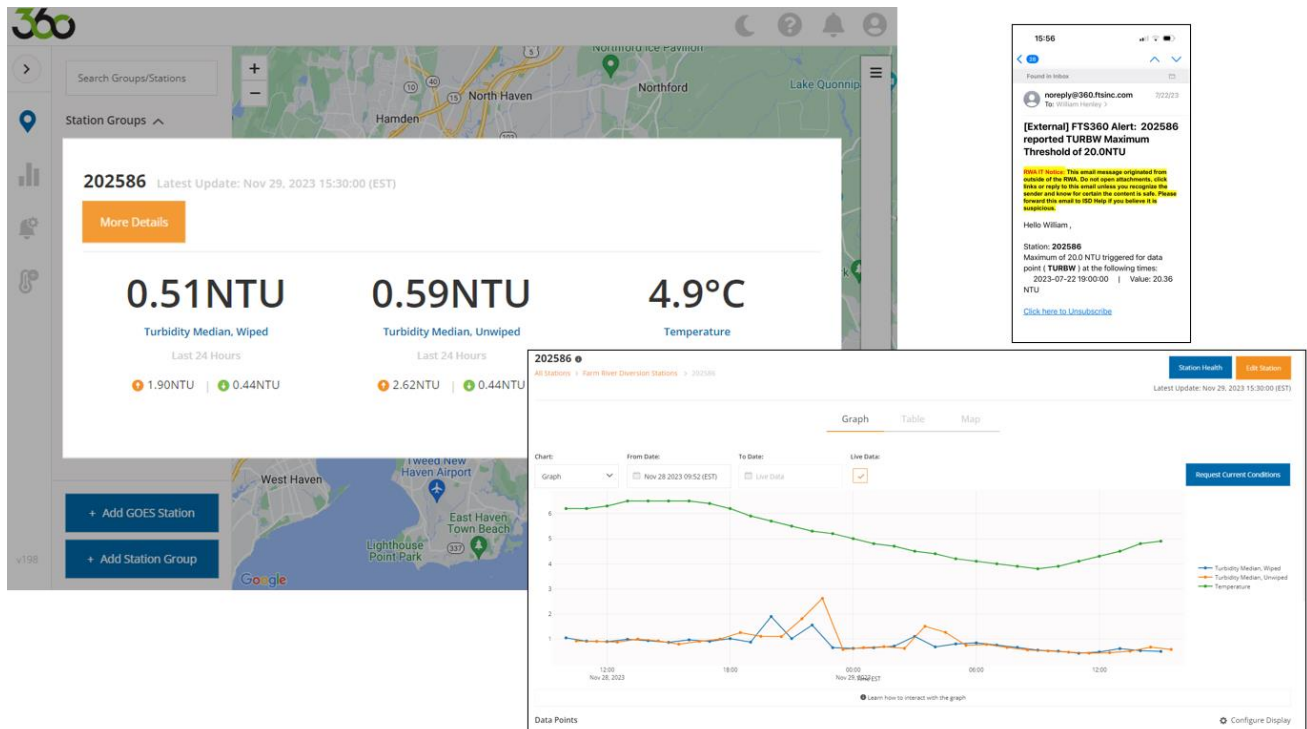


Figure 4: Graphic interphase and email-based alerts showing turbidity conditions at the Farm River in East Haven.

In 2024, Environmental Planning will be piloting two remote monitoring buoys in the Lake Gaillard and West River systems. These monitoring buoys are based on designs used in Maine by several environmental organizations including the Portland Water District. Buoys will provide environmental and treatment staff with real time data on both reservoir dynamics and intake-specific water quality information. At present, our largest source of supply receives sampling efforts every 1-2 weeks. The current data frequency is sufficient for high level decision-making processes but overlooks key diurnal variations and short-term oxygen trends. These new systems will output data directly to a dashboard which can be viewed by multiple organizational stakeholders and will allow staff to make proactive intake changes. These important operational changes will aid with water treatment process improvements, saving treatment costs over time. The system for Lake Gaillard will be deployed in late March.



Figure 5: NexSens water quality monitoring buoy. This photo is from Portland Water District and shows the system deployed on Sebago Lake.

Watershed & Reservoir Improvement Projects

Environmental Planning is continuing to work with consultants at GZA and regulatory agencies (CT DEEP, CT DPH, USACOE) to improve source waters from Roses Brook. In 2020, Environmental Planning reviewed studies from DBP source monitoring and historical watershed datasets to target key areas of organic loading to Lake Gaillard. As dissolved organic loading is a key precursor to DBP formation, the study focused on ranking these sources by size and contribution to Lake Gaillard. Roses Brook and the associated Brenski's Swamp were highlighted as a watershed which contributes a vastly larger load in comparison to its watershed size than any of the other natural streams and diversions entering Lake Gaillard. Environmental Planning is moving forward with plans to pilot a forebay for management of these highly organic sources. The project will intercept flows from Roses Brook, retaining the water for 24-48 hours to allow for UV degradation of highly tannic organic materials. The project has potential for long term positive water quality impacts for the Lake Gaillard reservoir.



Figure 6: Water entering Rose's Brook from Brenski's Swamp in Guilford. The dark color of the water is from tannins and lignin, the result of decomposing organic material in wetland areas.

Environmental Planning has also been taking a more “hands on” approach to the management of Furnace Pond in the Lake Saltonstall system. Waters from Beaver Swamp Brook flow through a large peat swamp and agricultural nursery located on Hosley Avenue in Branford. These highly organic source waters enter Furnace Pond, which during heavy precipitation events can flow north into Lake Saltonstall. Due to recent extreme precipitation events, numerous instances have occurred since 2021 where raw water quality at the Saltonstall intake has been directly impacted by severe backflow events. Environmental Planning has revised and reassessed previous operating procedures to mitigate such backflow events. During extreme events, additional water is discharged via the Furnace Pond dam, alleviating lake level imbalances and preventing extreme backflow of highly organic waters. Valve automation at Furnace Pond is underway, which will allow for instant response, which is required to effectively mitigate impacts while preserving water storage in Lake Saltonstall.



Figure 7: Documented backflow. Water on the right is from Furnace Pond. A visible imbalance is present and highly organic water is entering Lake Saltonstall.

Finally, Environmental Planning has proposed capital improvements to the West River Aeration system, with studies to be tentatively initiated in FY25. The current aeration systems at Lake Glen and Watrous have diminished in effectiveness over time. Changing environmental conditions have led to increased sediment oxygen demand during late summer and throughout the fall. Effective aeration is critical to maintain lower levels of manganese and phosphorus in the hypolimnion (bottom layer) of both reservoirs. While DAF has the ability to mitigate some manganese impacts, excessively high values dictate a need to use warmer surface water, which has negative distribution system impacts, including warmer distribution water, increased DBP formation, and taste & odor issues. The goal of the capital improvements are to optimize oxygen output to these systems, either through compressor improvements or addition of supplemental oxygen (LOX or onsite generation). Oxygen demand will be used to develop potential improvements, which will be evaluated for feasibility of implementation.

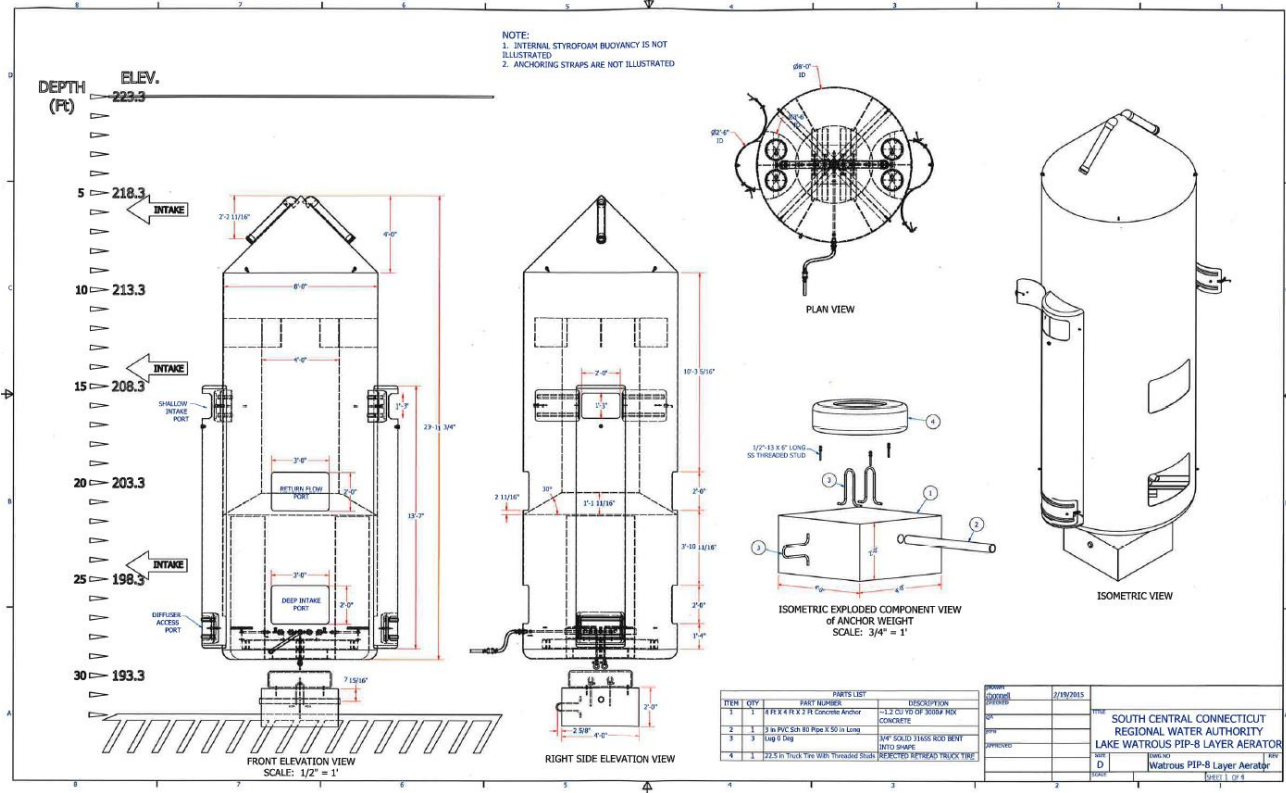


Figure 8: Diagram of aeration systems present in the West River system.

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To: Authority Environmental, Health & Safety Committee
David J. Borowy
Kevin J. Curseaden
Catherine E. LaMarr
Suzanne C. Sack
Mario Ricozzi

Cc: Larry Bingaman, President & CEO
Sunny Lakshminarayanan, VP EES
Elizabeth Calo, GM HR

From: Amanda Schenkle, Manager of Environmental, Health, Safety & Risk

Date: March 29, 2024

Subject: Health and Safety Initiatives Update

Question:

- As of 2023, 19% of employees in the US are over the age of 65. What is needed in a safety and wellness program to promote and avoid injuries in an aging workforce?

The Regional Water Authority's **Health and Safety Initiatives** are incorporated into our Strategic Goals for FY24 to aid in our mission of zero injuries at the RWA. For FY24, the Environmental, Health, Safety and Risk team focused on reducing workplace hazards by researching best-in-class corporate safety practices and deploying new safety plans that will further decrease recordable injuries to zero.

Best In Class Safety Programs

The Environmental, Health, Safety and Risk team performed an in-depth review of safety programs from Dupont, Exxon Mobile, other utilities, and members of our captive, Churchill. Our research showed RWA has many of the same positive attributes as other best-in-class organizations with some areas of opportunity for continued improvement of the safety program. The team presented their findings to the full Leadership Team and the following plans were chosen for deployment in FY24.

New Safety Plans:

- Stand up Nurse reporting hotline for all workplace injuries (Priority Care 365- Live as 2/1/24)
- Add new training requirements for RWA staff including standing up a Safety Leadership Course for all People Leaders. (Classes launch April 2024)
- Create Customer outreach materials about making meters, cellar wall valves, curb box covers, meter vault covers and flexnet units accessible for employee safety. (Go-Live in progress and on goal)

- Add new safety position to Safety and Risk department with a goal of filling from internal candidates (Under review with staffing study)

In addition to the Strategic Goals for FY24, the Environmental, Health, Safety and Risk team has been working on improving our audit and inspections program, developing the strain/sprain prevention program, leveraging the Safety Ambassadors for improvements to the safety program, and expanding the safety program to commercial businesses.

- Audits and Inspection Program
 - 186 audits and inspections completed as of 2/29/24
 - The new audit program includes a set cadence for type and frequency of inspection by facility type.
- Development of the Strain/Sprain Program
 - Piloted stretching program in Field Service
 - Developed new and updated stretching materials (See Appendix)
 - In-Person stretching class and launch of posters in progress
- Safety Ambassadors:
 - 31 new safety call outs in FY24
 - On task for 20% increase in program improvements over FY23
- Commercial Businesses
 - Safety Program review provided to all 3 Well Services Teams
 - 1 out of 3 safety visits completed
 - BCP plan for commercial business in progress

Safety Statistics FY24

RWA has experienced 8 recordable injuries in FY24. This fiscal year's injuries involve seven (7) sprain/strain injuries and one (1) contusion injury. Meetings were held with Leadership and department stakeholders for each recordable injury to review the steps RWA can take to avoid these incidents from happening in the future. Upon conclusion of an injury review meeting, corrective actions were implemented for each incident.

Actions included:

- New wearable lights (hands free) for Field Operations
- Updated script language for appointment setting
- Situational Awareness training
- New Effective Practice Guidelines and Job Safety Analysis for Field Service tasks
- Improved development of new operations staff through buddy program with senior staff
- New and improved hoisting mechanism for treatment
- Development of the Strain/Sprain prevention program
- Ergonomic changes to fleet vehicles including new side steps and movement of storage cabinet

Commercial Statistics

- 0 reported injuries since creation of RWA Well Services
- Total Recordable Incident Rate (TRIR) for plumbing industry is 3.3
- RWA Well Services TRIR is 0.0.

FORWARD PLANNING

For FY2025, the team is focusing on continuing to advance workplace safety:

1. Reducing recordable Injuries to reach and sustain the zero-injury goal.
 - a. Partner with internal and external experts to reduce the frequency and severity
 - b. Raise awareness through increased hazard communications (i.e. SDS reviews)
 - c. Work with departments to develop/adjust Effective Practice Guides (EPG's) and Job Safety Analysis (JSA).
 - d. Grow interdepartmental collaboration to increase near miss reporting and safety call outs.
 - e. Continue follow-up and root cause analysis for injuries.
2. Continued expansion of Strain/Sprain Prevention Program
 - a. Increase Employee Wellness programs
 - b. Safety in Design program expansion
 - c. Review of best practices for aged workforce
 - d. Research best-in-class industry practices to bring more innovative ideas to RWA.
3. Improved Safety Training program
 - a. Increase and innovate RWA safety training, utilizing the RWA Learning Management tool (LMS) and other platforms.
 - b. Promote safety culture, collaboration and engagement through safety meetings, musters, and trainings.
 - c. Broaden awareness of emergency response procedures for employees, vendors and consultants at the RWA
 - d. Provide flexibility to departments for training in a quickly changing work environment.
 - e. Collaborate with CTAWWA Safety Committee for insight into industry best-in-class practices and techniques.

In Summary, the RWA continues to enact new programs and initiatives to aid in our goal of reaching and sustaining zero injuries. Programs like our Near Miss Reporting Program and Safety Ambassador Program are assisting RWA with being proactive in our approach to safety. Our focus on prevention rather than reaction is a key characteristic of a first-in-class safety program.

Appendix: Stretching Poster

It's time to stretch, your safety is important to us!



Sunshine Stretch



Side Stretch



Shoulder Stretch



Extended Stretch



Neck Stretch



Wrist Stretch



Elbow Stretch



Hamstring Stretch



Hip Stretch



Calf Stretch



Quad Stretch



Quad Stretch - Modified

Hold each stretch for 15 seconds.

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From: Joshua Tracy, Invasive Species Management Technician

Date: 21 March 2024

Subject: Invasive species update- plan for mitigation and prevention in 2024.

Question:

Other large water companies in Connecticut rely on large scale herbicide applications to control invasive species populations in a cost-effective manner on water company owned land. Historically, RWA has not utilized herbicides to treat invasive species. Do the cost benefits and effectiveness of herbicide treatments warrant the RWA to explore this methodology moving forward given the optics of herbicide application?

RWA's invasive species program was initiated in 2018 to document and treat invasive species populations on RWA properties. To date, the program has documented over 4,800 acres of invasive species populations and treated 550 acres of invasive species. Efforts have been made to experiment with new technologies and techniques to relinquish the need for herbicides to mitigate the impacts of invasives on our properties. Recently, the RWA has acquired a grant through the U.S. Department of Agriculture that will aid in valuable research toward this goal. The RWA staff have been involved with various committees to change the legislative status of specific species to reflect their invasiveness and danger to our native ecosystems.

The RWA had applied for a Landscape Scale Restoration grant and secured the amount of nearly \$200,000. The genesis of the project spawned from a bat hibernaculum at Lake Gaillard that is utilized by every native bat in Connecticut, including species that will be classified as endangered or of special concern. The RWA is working with DEEP Wildlife division to gather acoustical and geographical data on the bats hibernating in the tunnel as the data would be used to inform potential management activities within a certain radius of the hibernaculum. Currently there are restrictions on forestry operations near the hibernaculum due to minimal insight regarding where bats raise their offspring. Bats need a litany of diverse ecosystems, some of which can be created through timber management. Using information acquired by DEEP, we hope to identify frequently used trees and perform management on surrounding forest ecosystems to provide potential feeding areas for these bat species, while still performing important timber harvests.

The grant funding will allow RWA to hire two seasonal workers for three years to assist with controlling invasive species and providing inventory of RWA forests. A portion of the grant is allocated to procure a steam weeder. The steam weeder utilizes pressurized saturated steam to burn herbaceous plants without the use of fire. The unit is trailer mounted and can be mobilized on RWA woods roads that are infested with invasives. This is an experimental technique to kill plants such as Japanese Stiltgrass and Black Swallow-wort, which are two plants that are typically controlled with a broadcast application of herbicide. The hypothesis is that the steam will impede the growth of these plants prior to releasing seed, causing populations to decrease over time. RWA's woods' roads are one of the largest vectors for spreading invasives due to the seeds attaching to vehicles, shoes, and animals, which eventually drop off and reseed in new locations. In addition, we plan to use the steam weeder at log landings in the future to reduce the spread of invasives to timber management areas.

The RWA works closely with the Connecticut Invasive Plant Working Group (CIPWG) and a new committee was formed to determine if a plant meets all nine criteria of an invasive species. From our observations, we had identified and provided evidence to map at least one species commonly found on RWA property to be added to the list of prohibited invasive species, while another species found on the property was designated to a watch list. This committee has determined seven new plants to be considered invasive, all of which the State Environmental Committee added to the official ban list. The ban list consists of over one hundred plants considered invasive and declares no person shall "import, move, sell, purchase, possess, transplant, cultivate or distribute" these listed plants. This committee allows RWA to provide input on plants that could potentially harm public drinking water supply watersheds and helps educate the public on associated negative impacts.

In addition, members of the staff of the RWA belong to the CIPWG planning committee, and this educates members and the public about invasive plants and methods to treat them during the bi-annual events. The event includes speakers from esteemed universities and organizations, as well as volunteers and landowners who share their experience about new and innovative methods to control invasive species. These opportunities aid in prevention of spreading future invasives and may give the RWA an advantage controlling species being spread from neighboring properties. The upcoming symposium will be held in October 2024.