

Minutes for November 28, 2023

RSC Representatives present: Anne Slugg, Co-Chair (Sudbury), Emma Lord (NPS), Elissa Brown (Lead River Ambassador), Ron Chick (Framingham), Christine Dugan (Lincoln), Bill Fadden (Framingham-Alt), Alison Field-Juma (OARS), Ralph Hammond (Bedford), Carlene Hempel (Concord), Marlies Henderson (Billerica), Stephanie Koch (USFWS), Laura Mattei (SVT), Tom Sciacca (Wayland)

RSC Representatives absent: Dan Cook (Carlisle), Frank Richichi (Bedford-Alt), Eric Simms (Wayland-Alt)

Guests: Robin Stuart (Mass Audubon), Jane Calvin (Lowell Parks & Conservation Trust (LP&CT)), Michael Van Arnam (LP&CT), Antonio Trinidad Martinez (LP&CT), Leigh Cameron (LP&CT), Ben Wetherell (OARS), Kathryn Pope (Mass Audubon), Melissa Hansen (Mass Audubon)

Minutes

7:00 pm Ms. Slugg opened the meeting and asked for corrections to the October Minutes. Mr. Sciacca offered a correction, stating that after the MWRA connection is official the only active wells in Wayland will be the Happy Hollow wells between the high school and the Sudbury River. Ms. Henderson motioned that the Minutes be passed with Mr. Sciacca's correction, Ms. Hempel seconded and the motion passed 11-0.

7:07 pm Ms. Lord noted that representatives for the 2022-2023 RSC's Partners were in attendance to report on their projects funded by the RSC over the past year.

Partner Presentations

7:08 pm Antonio Trinidad Martinez introduced himself as the Community Conservation Coordinator for the **Lowell Parks and Conservation Trust (LP&CT)**. He shared a slide of the fish ladder at Wamesit Falls on Centennial Island in Lowell where the Trust's alewife monitoring takes place. Volunteers observe from a wooden platform just above the last run of the ladder as the fish pass into a metal weir where a motion sensor camera captures images and videos of the fish. The ladder is also used as an outdoor classroom for school trips and afterschool programs where students learn about alewife. Volunteers monitor the fish passage for 10 uninterrupted minutes each hour. They completed at least 9 sessions every day from May 6-June 2, 2023. No alewife were seen by the program's 29 volunteers, though review of the footage is ongoing. Other data collected may include sighting other fish species, weather conditions, visible wildlife, and usage of the Concord River Greenway. He said some factors that could affect alewife migration and inhibit spawning include overfishing, dam blockage, fish ladder design, and water quality issues.

7:16 pm Leigh Cameron explained that LP&CT first became involved with Blanding's Turtle conservation and raising them in the Trust's office when a female was found nesting along a road in Dracut in 2020. With the help of Zoo New England and permission from Mass Wildlife the staff was able to protect that nest, which resulted in 8 hatchlings. Since then the Trust has protected over 80 hatchlings and monitoring has become a year round program. Each season they monitor adults using radio telemetry. They learn when the turtles are getting ready to move, when they are getting ready to settle in for the winter, and where they are in Spring. Each year hatchlings are headstarted for 10 months in the Trust's office where approximately 15 volunteers take turns caring for them before their release. Last year that amounted to 373 visits and 520 volunteer hours. Some hatchlings have been raised in public schools in Lowell. In response to questions from RSC members Ms. Cameron said that the turtles are released into the same area where they were found and that Zoo New England tags them for radio telemetry purposes.

7:28 pm Ms. Lord turned to Robin Stuart from the Mass Audubon Society (MAS), who then introduced Kathryn Pope as their Watershed Teacher/Naturalist. Ms. Pope said that 2022-2023 was the last year that Riverschools would be taught in Wayland and Sudbury. Five fifth-grade classes were taught in Wayland. Four sixth grade classes were taught at Curtis Middle School in Sudbury. MAS taught one afterschool class at Cameron Middle School in Framingham and one at the Boys and Girls Club in Billerica, which had 10 students. About 30 students participated in Riverschools programming in the out-of-school Hoops & Homework program in Framingham. Over the past year Ms. Pope investigated new ways to teach connections between the Town's watershed and climate change. She created a kind of library of activities about topics such as watersheds, rivers, the water cycle and climate change. She is now focused on a multidisciplinary approach by relating the programming to English, arts, history, math and other subjects. Last year independently paid Riverschool programs were taught for 3rd and 4th grade classes at Fayerweather School in Cambridge and for 6th graders at Mill Pond School in Westborough. Next year an honors level class with a climate justice lens will be taught at Wayland High. It will be called the Connect class. In January 2023 MAS held a workshop at Drumlin Farm for Riverschools teachers from different towns to encourage confidence and to provide information they could weave into their own interdisciplinary approaches.

7:48 pm Ms. Slugg turned to Alison Field-Juma and Ben Wetherell from OARS for their presentation. Mr. Wetherell said that last year's RSC grant contributed to OARS' water quality monitoring, biomass monitoring, bacteria monitoring and special studies work. He began with their water quality (WQ) monitoring program, saying that 2023 was the highest year for precipitation since 1949 and had an effect on the WQ results. More than 30 volunteers participated in WQ and bacterial sampling. The long-range WQ monitoring program has been very stable. There was an improvement in phosphorus concentrations, steady improvement in dissolved oxygen (DO), and the pH has been getting to the midpoint of the Class B Standard Ranges in the Assabet. DO levels were low in the Sudbury River. OARS has monitored biomass since 2005 to evaluate the effects of nutrient reduction. Those levels have remained basically the same at the Gleasondale Dam and Ben Smith impoundment. They have been increasing at the Hudson impoundment for the last few years, creating a eutrophic soup of algae. Several locations in the National Wildlife Refuges in the Sudbury and Concord rivers are always found to be very clean with low levels of bacteria and are probably swimmable. OARS conducted a 3-year study in Lowell which they shared with the Lowell sewer department to alert them to some hot spots. OARS will share similar data with the Maynard Public Works Department.

OARS' bacterial studies have 3 components: spatially frequent bacterial studies, environmental DNA analysis to identify sources of the bacteria, and a detergent study at outfall pipes to see if there are household detergents in the aquifers. Another of their special studies is looking at conductivity chloride. Conductivity is a very good indicator of high chloride levels. OARS' conductivity measurement data over the last 40 years shows a strong upward trend in all our rivers. Our rivers are becoming saltier. Last year OARS put connectivity loggers in the Upper Assabet and River Meadow Brook to measure conductivity over time. Mr. Wetherell showed graphs of conductivity measurements taken in summer and fall and those taken in winter. He showed another slide of actual chloride loads in kg/day. He then summarized by saying that even though the concentrations in fall were high because water levels are low and there is not much dilution, the load was actually low. Conversely, in the winter the concentrations were lower but the load was much higher, presumably from road salt.

OARS has been doing a special study in Hop Brook to identify the source of the phosphorus (P) which is causing eutrophication. Hop Brook has always had the highest P concentrations in the watershed. OARS did a load-based study where they tried to identify the expected P node for each of the impoundments based on the geographic area that is covered by that spot. They compared those results to the actual load of P in the water and saw a higher load than was expected. They deduced that the P load was probably coming from the sediments in the impoundments. OARS expected an increase in load of about 17%. What they actually saw was an increase in load in the Spring of about 200% and about 100% in September. OARS will continue to work with the Hop Brook Protection Association on this.

OARS is studying dissolved oxygen (DO) in the Concord River, upstream of Talbot Mills Dam. A logger was placed a mile upstream of the dam in 2022 and 2023. Instead of seeing low levels of DO in 2022 because of slow stagnation of the water, OARS saw supersaturation. On some days OARS saw more than 150%

saturation. That might improve after dam removal. Supersaturation can be deadly to fish. It is probably caused by excess vegetation, most likely water chestnuts. OARS conducted a special study concerning temperatures around dams. They have been doing temperature studies for the Wheeler Pond dam (2022) in Berlin and Warner's Pond dam (2022) in Concord. They placed loggers upstream and downstream of the impoundments and saw that the impoundments were warming. The difference between the upstream and downstream impoundments is about one degree Celsius.

8:23 pm Ms. Slugg introduced Laura Mattei to speak for **SVT** and **CISMA**. Ms. Mattei said CISMA used some RSC money to work on their website and manage their small grants program. CISMA also created a useful calendar feature which allows Weed Warrior members to post events and allows volunteers to sign up directly. A group of small grant recipients gave their presentations at a recent CISMA meeting. SVT has been working on stewardship projects on the SuAsCo and near riverfront properties. SVT worked with volunteers at the Elliot Concord River property to continue maintaining rare plant habitat and invasive plant control. Invasive plant species have increased in both their distribution and numbers at Wolbach Farm. SVT developed a removal plan for the barn area and the wet meadow which involved Weed Warriors and some professional weed control specialists. SVT continued to maintain the north field at Greenways Conservation Area in Wayland with a combination of mowing and mechanical and chemical control for invasive plants. Last year SVT offered a webinar series on climate change which was also available for later viewing.

Ms. Mattei spoke about SVT's Regional Prioritization Plan. It is an update of its 2014 Priority Assessment. It is part of the Metrowest Conservation Alliance (MCA) "Conservation in the SuAsCo Story Map." Previous work focused solely on habitat and agriculture. A survey of MCA and SVT members led to prioritizing 4 themes in the update. Natural Services data includes carbon storage, connecting core habitats for biodiversity, protecting water quality and flood storage capacity. Habitat for Biodiversity data includes priority natural communities for habitat for rare species, migration corridors, and climate resiliency. Community Conservation data includes access points for all people as well as water quality, flood storage, and environmental justice areas. Farmland is the fourth theme. She encouraged RSC members to look at the Story Map on SVT's website to discover patterns from the individual data layers by choosing a theme and then exploring individual parcels.

Land protection projects that SVT completed in 2023 include Highland Ridge, which is a 42-acre wetland property in Berlin that provides conservation for inland flood resilience and regional habitat connectivity. It added some parcels to its Grist Mill Pond Conservation Area in Sudbury and Marlboro that offer good quality wetlands and some upland forest buffers. Horseshoe Pond in Berlin conserved 100 acres and provides good water quality and watershed protection.

River Ambassador Update

8:43 pm Ms. Slugg introduced Elissa Brown to give a River Ambassador Update. Ms. Brown said that Concord has several projects of interest to the RSC. She gave an update about the former Papparazzi restaurant site on Elm Street. The developer's plan currently includes building a bank and a restaurant, reducing impervious surface, and pledging storage capacity and more riparian area along the river.

Ms. Brown spoke about the proposed Assabet River Bridge and Trail project in West Concord which the Town has been working on for years. It includes a pedestrian mixed-use trail that will reach from the planned 40B housing development on Baker Avenue and link to the MBTA commuter rail station and businesses in West Concord. There will be seating for people to look at the river. An application has been submitted for \$200,000 in CPA funding. That money will be combined with \$650,000 from other sources. Concord has been approved for placement on the state's Transportation Improvement Program (TIP) but is not yet on TIP's schedule. She has been attending meetings and workshops on the Warner's Pond dam removal, as have Alison Field-Juma and Carlene Hempel. Concord recently moved the vote on the dam's removal from the 2024 Town Meeting to the 2025 Town Meeting. A task force is being developed to evaluate alternatives such as dredging. A discussion followed on whether the RSC should ask for an updated presentation on the Assabet bridge and trail project. Ms. Henderson suggested that interested Council members visit The Assabet River Bridge Trail website where they can view the current design plan and videos about the project.

Ms. Brown said that the EPA is required to provide 5 year updates on the mercury issue at the Nyanza Superfund site. The EPA delegated the mercury issue to the DEP who hired a contractor named Verdantas to do fish sampling along the river in Wayland, Lincoln, and Concord. The results are not back yet. As part of that work the DEP also installed new signs at Sherman's Bridge and the Route 20 boat launch in Wayland. The Lincoln Town Archivist contacted Ms. Brown about documents from the 1950's and 1960's relating to the SuAsCo watershed which she received from the estate of Robert Booth. Lincoln's Conservation Director, Michele Grzenda, and Ms. Brown met with the archivist and looked through the documents which included The SuAsCo Watershed Association, the Concord River Improvement Association, and some proposed legislative bills. Ms. Brown wanted to make the Council aware that those documents are part of Lincoln's Archives in case someone in the future wants to dig into SuAsCo history. She concluded her update by saying that she has seen people still paddling on the rivers over the past month.

8:58 pm Mr. Chick said that he submitted one CPC grant to Framingham to design a replacement for the stairway from the Stapleton School down to the Carol Getchell Trail, and another one for ecological restoration on the Cochituate Rail Trail where stormwater runoff and erosion flow into a storm drain and then into Cochituate Brook and the Sudbury River. The Framingham Conservation Commission submitted a CPC grant for about \$700,000 to replace about 1,000 feet of boards leading to an ADA accessible part of the south end of the Getchell Trail.

8:59 pm Ms. Slugg said that funding would likely be a topic at our January meeting in anticipation of funding decisions that are usually made in February. She said that the Chairs will suggest to RSC partners that they begin to think about their grant proposals. She asked Council members to think about projects the RSC might want to fund in addition to Community and Partner grants.

9:00 pm Ms. Slugg adjourned the meeting.

Minutes respectfully submitted by Christine Dugan