

Minutes for May 28, 2024

RSC Representatives present: Anne Slugg, Chair (Sudbury), Emma Lord (NPS), Matt Brown (OARS), Ron Chick (Framingham), Christine Dugan (Lincoln), Ralph Hammond (Bedford), Marlies Henderson (Billerica), Carlene Hempel (Concord), Tom Sciacca (Wayland), Ellie Sablak (River Ambassador), Eric Simms (Wayland-Alt)

RSC Representatives absent: Elissa Brown (Lead River Ambassador), Dan Cook (Carlisle), Bill Fadden (Framingham), Laura Mattei (SVT), Stephanie Koch (USFWS), Frank Richichi (Bedford)

Guest: Sarah Nelson, Appalachian Mountain Club, Julia Khorana, Riverfest Committee

Welcome and April Meeting Minutes

7:03 pm Ms. Slugg opened the meeting and asked everyone to introduce themselves to Ms. Nelson and Ms. Sablek.

7:07 pm Ms. Henderson motioned to accept the April Minutes with the corrections suggested by Mr. Sciacca. Ms. Lord seconded, and the motion passed 9-0.

Dragonfly Mercury Project Presentation

7:08 pm Ms. Lord gave some background on the Dragonfly Mercury Project (DMP). The RSC will be participating this year, as it has since 2020. The sampling will occur in late July or in August, depending on the water level. RSC volunteers are welcome to participate.

7:10 pm Ms. Nelson introduced herself as AMC's Director of Research. She spoke about AMC's interest in the Merrimack River, which originates in the White Mountains, flows south where it is joined by its tributaries, including the SuAsCo River, and then empties into the ocean on the North Shore. The NPS and the USGS are the primary federal agencies in charge of the DMP, with collaborative engagement from AMC and Dartmouth College. Dragonfly larvae samples from WSR's go to the USGS lab where they are included with other national parks. The Merrimack DMP is a community-based science initiative begun by the AMC. It was started after high mercury concentrations were found in the 2017 dragonfly sampling at Minute Man National Historical Park. The AMC became interested in developing a spatial picture of the watershed to help determine if the source of the mercury was legacy pollution, the Nyanza site, or atmospheric mercury. Ms. Nelson explained that dragonflies can live underwater for years as larvae. The larvae can give us information about particular sites because they stay put in individual water bodies. They are biosentinels of mercury because they accumulate mercury over the years. Unlike fish, which can migrate, we can easily measure mercury accumulation in dragonflies in a lab.

7:16 pm The Merrimack DMP now has many partners, including the RSC, local schools, and the Tsongas Center. One community science project involved Lowell high school students collecting dragonfly samples. The results were reported out quickly so that students in 5 different schools could participate in a symposium to share their findings with each other.

7:21 pm The DMP has assembled dragonfly sampling data in almost all 50 states, including 32 sites within the Merrimack River watershed. The Merrimack DMP information is part of the bigger national database. It is possible to zoom in and out on individual collection points on the USGS Data Visualization Dashboard:

<https://geonarrative.usgs.gov/dmpdatadashboard/> Ms. Nelson shared a slide showing an Integrated

Impairment Index for sites within the Merrimack DMP area which related dragonfly mercury to risks to human and animal health. The SuAsCo rivers were all in the moderate risk category. Ms. Nelson would like to continue analysis to see why the SuAsCo has moderate risk sites while Lowell and Lawrence have some low risk sites. She is looking at whether hydrologic conditions may be important. 2023 was particularly wet in the SuAsCo while there were droughts in 2021 and 2022. When the rivers were dry it was difficult to find samples. She will look across years to see if there are patterns in mercury that might be controlled by the hydrology of the site, potentially from year to year. She thanked the RSC for volunteering on the Merrimack DMP over the years and also for its help with shipping and funding. She noted that all the data collected goes through the USGS quality assurance process and will be entered into the UN international database. That information is important to the Minamata Convention, which is an international treaty to reduce mercury pollution.

7:36 pm Mr. Sciacca said that about 15 years ago the EPA determined that about 50% of the mercury found in Wayland marshes was from Nyanza and 50% was airborne from Ohio Valley powerplants. He asked if the AMC had any new analysis related to that ratio. Ms. Nelson said that it did not. She said that there have been reductions in domestic mercury emissions from coal-fired utilities which scrubbed some mercury in an effort to lessen acid rain. A few weeks ago the EPA released Mercury and Air Toxic Standards which could result in more cuts to mercury emissions.

7:43 pm Ms. Hempel noted that 2 years ago she had hundreds of dragonflies in her yard but had none at all last year. She wondered if that could be related to drought years. Ms. Nelson said that was an interesting hypothesis but could not speculate on the theory. Ms. Hempel then asked how many larvae were taken each year. Ms. Nelson said they take between 15-20 individual larva per site. Adult dragonflies lay between 100-400 eggs. It is estimated that 95% of those eggs never make it to the adult phase because they are eaten by predators.

7:45 pm Mr. Hammond asked how long the larvae are in the water and how much mercury they pick up. Ms. Nelson said that some can live for 5 or even 8 years before they fly away. They are very short lived in their flying form. A PhD student at Oregon State has been rearing dragonflies in the lab and dosing them with different amounts of mercury in order to look at their accumulation pattern. The results have not been reported yet.

2024 Riverfest Updates and Promotion

7:49 pm Ms. Lord shared a spreadsheet listing all the RiverFest events. She said that Ms. Khorana has been working hard to get RiverFest events lined up for July 6-July 28. The brochure is finalized and at the printer. Once those are printed we can start to promote and advertise throughout the watershed. Ms. Khorana said that there will be more than 27 events. There are hubs at the Old Manse and at Great Meadows, with multiple small activities which are mainly for children. She and Monty have been working to update the website. Those changes should appear in about a week.

7:51 pm Mr. Sciacca asked when the physical flyers might be ready. Ms. Khorana thought they would be ready in less than a week. They will be delivered to the OARS office where Council members and River Ambassadors can pick them up.

New RSC Officers – Upcoming Election

7:54 pm Ms. Slugg said that the Council will soon need to fill the Chair, Vice-Chair and Treasurer positions. She asked if anyone wanted to volunteer for any of those positions. No one volunteered. Ms. Lord read out the job descriptions for each position. The RSC initially had term limits but did away with those in 2021. Mr. Sciacca read the bylaw that specified only Town or State representatives could serve as Chair. The Co-Chairs may reach out to Council members over the next month in an effort to finalize a slate of candidates which will be presented to the RSC at the June meeting.

Warner's Pond Subcommittee Update

8:03 pm Ms. Hempel represented the RSC at a Bike Fest in Concord. She talked with many people about the Warner's Pond dam removal and had positive reactions from all of them. She also attended a climate festival at the high school and spoke to people there about the dam removal. Those attendees also reacted positively to the dam removal. She is starting to think that the emotional argument for keeping the dam is only compelling to the group of abutters. She shared a screen of the image Mr. Cook worked on for the Warner's Pond Committee promotional material. The Council liked the image and approved an order of buttons and magnets using that image.

8:09 pm Mr. Sciacca referenced Ipswich's recent Town vote to remove the Ipswich Mills Dam. Mr. Brown said that it might be worth contacting the proponents of that dam removal to talk about what their strategy was because the Ipswich dam and the Warner's Pond dam are similar in that both are town owned. Ms. Hempel said that Heather Conkerton from OARS had forwarded her an email from the proponents of the dam removal in Ipswich as an example of what the RSC Subcommittee could do. Ms. Hempel also attended a meeting on the Draft Historic Preservation Master Plan for Concord. One item in the document focused on how to restore ecological landscapes. Ms. Hempel was able to talk quite a bit about the Warner's Pond dam removal at that meeting.

Updates

8:12 pm Ms. Henderson spoke about the disc golf expansion under discussion for the Vietnam Veterans Park in Billerica. She understood SVT's letter which cautioned against the expansion. Ms. Henderson would like the RSC to consider that the expansion is important to a lot of Billerica residents. Ms. Henderson said there had been some unauthorized activity, such as tree cutting and disc buckets in the boardwalk area, but she requested that the RSC consider suggesting a compromise which would allow the expansion. It was her opinion that recreational activity will encourage residents to appreciate the outdoors and would discourage inappropriate behavior from happening in the park. It was agreed by the Council that this issue is out of the RSC's jurisdiction since it does not directly impact the river and its resources.

8:21 pm Mr. Sciacca said that Wayland passed another appropriation to work on Stone's Bridge. That brings the total amount to just under \$1,000,000 for work on that bridge. The Town also convincingly passed another 3-year moratorium on building plastic athletic fields.

8:22 pm Mr. Chick said that the conceptual design for access to the Carol Getchell Trail was not approved because the easement from 20 years ago was never recorded. The Framingham Community Preservation Committee has agreed to use up to \$10,000 of their administrative budget to research finding the easement or trying to reconstruct it. Another grant for the ecological reconstruction of the Cochituate Rail Trail, where storm water flows over the Trail into Cochituate Brook, was approved and is going out to bid.

8:25 Ms. Slugg said that the RSC's next meeting will be on June 25th. She adjourned the meeting.

Minutes respectfully submitted by Christine Dugan