

November 20, 2025 - Fresh Pond Reservation Master Plan Advisory Board Meeting Minutes

(Hybrid Meeting – Remote, In-person)

Submitted by David Kaplan, March 19, 2026

Approved: March 19, 2026

Advisory Board Members in Attendance:

In-person: Janice Snow (Chair), Susan Agger, Janet Burns, Candace Young, Sophia Emperor, Ann Roosevelt, David Kaplan

Remote: Deb Masterson, Jennifer Letourneau, Kathy Hess (joined late)

Others in Attendance:

In-person: Vincent Falcione (CWD), Amanda Garms (CWD), Julie Greenwood-Torelli (CWD), Stephen Humphrey (CWD), Lindsay VanFossen (CWD), Andrew Keel (Hatch), Ken Wagner (WRS)

Remote: Omar Mejia (CWD), Liam Spratt (CWD), Alanna Hagen (Public), Luke Smith (Public)

Meeting opened 6:00 PM

Meeting Minutes: D. Kaplan

Item 1: Review Agenda

Agenda reviewed, no changes

Item 2: Meeting Minutes

May and September meeting minutes were reviewed. S. Emperor motioned, A. Roosevelt second, May minutes approved unanimously. C. Young motioned, A. Roosevelt second, September minutes approved unanimously.

Item 3: Little Fresh Pond In-Lake Study Results (Hatch, K. Wagner)

J. Snow introduced Ken Wagner, Water Resource Services (WRS) who investigated Little Fresh Pond for water quality and odor issues. K. Wagner also studied Black's Nook in 2020. The presentation can be viewed and downloaded here https://www.cambridgema.gov/-/media/Files/waterdepartment/freshpondreservation/advisoryboardagendasandminutes/Minutes/2025/11_20_25_LFP_Water_Quality_Presentation_FINAL.pdf.

K. Wagner discussed his study of this ~3.5-acre reservation pond over the summer of 2025 and his analysis methods. Little Fresh Pond's (LFP) physical and chemical feature highlights include an average depth of 4.4 feet, a thick sediment blanket, a strong thermal gradient unusual for ponds this shallow, and low dissolved oxygen below 3' of water depth. Nutrient observations in the water column include low nitrates due to the abundance of aquatic plants, low surface phosphorus and ammonia, but high bottom readings for both. Dominant aquatic plants include coontail and water lilies. Coontail is a floating plant that takes nutrients directly from the water column, whereas lilies are rooted and take up sediment nutrients. Cyanobacteria including some Oscillatoria and Nodularia was low. Green algae dominated, including mats of Oedogonium. A small population of invasive Eurasian watermilfoil was observed in the southwest portion of the pond.

K. Wagner determined that low oxygen is the root cause of water quality concerns including malodorous compounds and nutrient release fueling excessive plant growth. Low oxygen drivers include the high oxygen demand from decomposing organic matter in the sediments, and the lack of mixing due to dense plant growth.

Management strategies include adding oxygen with aerators, fountains, or diffusers. LFP holds approximately 5 million gallons (MG) of water, so the circulation goal should be 1 MG/day. K. Wagner warned against under sizing equipment to increase oxygen.

Controlling aquatic plants could lead to more natural circulation and oxygenation. This could be accomplished through chemical means or physical means. Chemical herbicides are not recommended, nor supported because of drinking water supply proximity, but inactivating phosphorus with alum treatments could work. There is documented success for alum treatments in Centennial Park, Wellesley MA on a similarly-sized pond with similar issues. Biological control is not legal in MA, and physical harvesting or benthic barriers could be considered. K. Wagner recommended an integrated approach starting with phosphorus inactivation with aluminum sulfate or polyaluminum chloride, and considering hydroraking/plant harvesting in future.

A. Roosevelt asked about the opportunity for dredging. K. Wagner confirmed dredging is the preferred option to fix existing issues if cost were no object and estimated that sampling and feasibility assessment costs alone would be ~\$50,000 (\$25,000 survey, plus ~25 sediment samples at ~\$1,000/sample). DEP regulations call for 1 sample per 1,000 cubic yards of material removed, and Ken estimates ~15 acre-feet * 1,613 = 24,200 cubic yards of material to dredge. To dredge, it costs ~\$50,000/acre-foot * 15 acre-ft. = ~\$750,000. K. Wagner's estimate did not include other permit and bid document costs. If the phosphorus inactivation doesn't work, K. Wagner recommends revisiting other options. A. Roosevelt asked about the observed small stand of Eurasian water milfoil and K. Wagner recommended hand pulling before it becomes an issue. J. Snow reminded the Board that we have a similar study and dredging plan for Black's Nook, but do not have the money to implement it. J. Snow thinks that the alum treatments will help with the odor issue and we should continue to prioritize dredging for Black's Nook.

J. Letourneau asked about alum lowering the pH of Little Fresh Pond, current pH levels, and the potential impacts to the golf course from their irrigating with alum-treated water. K. Wagner stated there is potential for pH lowering with aluminum sulfate, but with current alkalinity, the prescribed dose (5 mg/L) would not impact pH. Impacts would be expected at a higher dose of 10 mg/L which is not being prescribed. During the study, pH in Little Fresh Pond was between 6.8 and 7.5 and would likely be more uniform throughout the water column in the spring with less plant growth. If there are any pH concerns, polyaluminum chloride is recommended, which does not impact pH. Any pH changes during treatment would only last a couple of days.

D. Kaplan recommended the alum treatment and noted that neither funding nor a plan to conduct the work has been identified, developed. Discussion continued on how the alum could be applied. A. Roosevelt asked about aeration and K. Wagner stated that there should be natural mixing after alum treatments knocking back the dense coontail that's currently prohibiting it. If not effective, aeration could be added in the future. Alum will not only remove the phosphorus from the water column but seal the sediment surface and keep phosphorus from being released under anoxic conditions. At a 5 mg/L dose considering average depth, there will be approximately 7 grams of aluminum per square meter. K. Wagner stated that the alum target is 50g/m², so expect annual treatments for at least 7 years. K. Wagner stated algal mats could be an issue even after treatment, but they are not toxic like some cyanobacteria. Alum should reduce the risk of cyanobacteria blooms, which can be toxic on contact.

Item 4: Maynard Ecology Center Report (S. Agger)

S. Agger presented the Maynard Ecology Center's science curriculum and the positive impact it's having on Cambridge schoolchildren. The presentation can be viewed and downloaded [here](#).

Highlights include 220 second graders investigating rotting logs and natural processes in Fresh Pond Reservation, 176 fourth graders studying weathering and erosion and materials movement with stream tables. Cambridge Water Department lab staff hosted 194 sixth graders at the Water Treatment Plant showing the drinking water treatment process and explaining the chemistry behind it. Ranger Omar taught them about natural watersheds at Kingsley Park.

Item 5: Watershed Manager's Report (D. Kaplan)

D. Kaplan introduced Ranger Amanda Garms to the Board. She introduced herself and discussed her background and interests and talked about future education and outreach programming. She's developing a winter tree ID event and publishing a memorial tree story map among other projects. J. Letourneau welcomed Amanda and asked about bat box success at Fresh Pond with respect to a participatory budget question. V. Falcione installed a number of boxes, but bats never used them.

S. Humphrey, the new Watershed Management Assistant, introduced himself and discussed his work and educational background. He was welcomed by all. His key responsibility is implementing the watershed water quality monitoring program.

D. Kaplan provided updates on the Huron Pine Grove test plots. V. Falcione and L. Spratt discussed plant survivability. The larger plants were unsuccessful despite consistent watering throughout the drought. V. Falcione stated that larger material is harder to get established. They will replant in the spring and track conditions with the Anecdota citizen science app.

D. Kaplan discussed directional signage installation requests on the Watertown Cambridge Greenway. He stated that it was not the Water Department's jurisdiction and that he has been unsuccessful in soliciting interest from the Community Development Dept. Any signage installed on the Greenway should have input from the (new) Cambridge Dept. of Transportation, DCR, Community Development and the Water Department.

V. Falcione discussed deer impacts and the continuation of the deer deterrent spray every 30 days in the Lusitania Woodland. The Reservation is at or slightly above carrying capacity and CWD continues to monitor deer presence and populations for damaging impacts.

J. Burns asked about new "no camping" signage recently installed and V. Falcione discussed issues arising from overnight camping and management strategies. A. Garms stated that signs will be relocated farther away from the pond path, closer to problem areas.

D. Kaplan and the Board discussed the council order to review poison ivy management practices and report back to the City Council. The Board discussed the accuracy of statements in the order and current management practices.

S. Emperador, C. Young, and J. Letourneau briefly discussed the Community Preservation Act (CPA) meeting timeline.

Item 6: Status of 2020 Board Vote to Designate Joseph Harrington Way (A. Roosevelt)

A. Roosevelt is working with the new Deputy City Manager.

Item 7: Preliminary Agenda for March 20, 2026

Annual Volunteer and Lusitania Woodland Habitat Reports, and Transition Zones are planned to be discussed.

Discussion veered to the Participatory Budget program as a potential funding source for Little Fresh Pond water quality work and J. Letourneau provided an update on the Maher Garden fence replacement project. Consensus was reached for City staff to pursue alum treatments in Little Fresh Pond.

Item 8: Public Comment

No public comment (no remaining public participants)

A. Roosevelt motioned, C. Young seconded a motion to adjourn. Vote to adjourn at 7:55 PM was unanimous.