

CAMBRIDGE WATER BOARD

MEETING MINUTES

February 9, 2021

As a result of the Walter J. Sullivan Water Purification Facility being closed to the public due to COVID-19, this meeting is available virtually on Zoom. This meeting is being recorded.

This meeting was called to order at 5:08 p.m. at 250 Fresh Pond Parkway, in Cambridge, Massachusetts. Those in attendance via *Zoom* were:

Cambridge Water Board (CWB): Ann Roosevelt, Kathleen Kelly, Mike McNeley and Jason Marshall

Cambridge Water Department (CWD): Sam Corda, Ed Dowling, Dave Kaplan, Jamie O'Connell, Anna Van Dresser, Linda Vierboom and Jeremy Halsdorff (until 5:30pm)

CDM: Duke Bitsko, Ken Wagner, Ben Griffith

A. MINUTES OF JANUARY 12, 2020 MEETING

Mr. Marshall moved, and Ms. Kelly seconded the motion to approve the January 12, 2021 minutes as written. The vote was unanimous in favor of the motion.

Anna Van Dreser - Our new Watershed Management Assistant intern was introduced to the Board.

B. MANAGING DIRECTOR'S REPORT

Black's Nook In-Pond Restoration Project – A presentation on the Black's Nook In-Pond Restoration Project was made by Duke Bitsko, Hatch; Water Quality Expert Ken Wagner, Ph.D.; and Wildlife Scientists Ben Griffith from Normandeau Associates. The presentation can be found using the following link.

https://www.cambridgema.gov/-/media/Files/waterdepartment/waterboardminutes/cwb_bn_292021_final.pdf

The presentation is summarized below:

Black's Nook In-Pond Goal Setting

1. Fresh Pond Reservation Master Plan Vision
 - Preserve water quality, natural green spaces, wildlife habitat and refuge from hectic urban life.
2. Black's Nook Pond – Water Quality Goals
 - Slow cultural eutrophication;
 - Keep Black's Nook an open water body; and
 - Address Category 5 impaired water body status on the State's 303(d) list.
 - Meet Class B Water Quality (WQ) Standards.

Key Topics: Black's Nook Pond Limnology and Environs Assessment, Drought/Water Conservation Update, PFAS Update, and COVID-19 Update

Black's Nook with its diverse habitats and historical relevance is a unique place. This 2 - plus acre pond, north of Fresh Pond Reservation and wedged between the golf course and Neville Manor, is used as passive recreation and as an outdoor classroom. It was separated from Fresh Pond over 150 years ago.

Key Findings-

Sediment Characterization: This has never been a major storm water discharge area and for the most part, the sediment is clean. Sediment cores are highly organic and nutrient rich with one to two feet of organic elements. Loose Organic Muck is layered at the top 0'-12", mixture of organic muck and pure peat is layered at 12"-24", and Pure Peat 24'-36" down.

Watershed & Groundwater Inputs: Pond Hydrology mainly impacted by precipitation.

Water Quality: There is low dissolved oxygen (bottom) and high pH (surface) caused by excessive plant growth. There is a large temperature gradient caused by high plant density restricting mixing and sunlight penetration.

Aquatic Vegetation: Aquatic plants are not diverse but excessively abundant. Plant density is higher than desirable. Dominant species include water smartweed, coontail and Indian Lotus. Water chestnut and Indian lotus are non-native.

Zooplankton, Benthic Communities, Fish, Herptile, Breeding Birds and Bats were discussed in detail.

Rehabilitation Alternatives –

1) Do Nothing: Does not meet any water quality goals.

2) Manage Aquatic Vegetation:

Benthic Barriers - These barriers prevent vegetation from growing. Returns Black's Nook to Open Water Body (portions) and partial improvements to habitats. Won't meet class B WQ Standards or address impaired category 5 water body status. The cost, per 20 years is \$100,000 (50%) of the pond.

Mechanically (Hydro-Rake): Partially meets class B WQ Standards and addressing impaired water body status. This may allow other non-native species to expand. This control lasts 3 to 5 years. The cost, per 20 years is \$70,000.

Chemical Treatment: Returns Black's Nook to open water body. Partially meets class B WQ standards and addressing impaired water body status. Requires use of multiple herbicides based on species. The control lasts 1-3 years. The cost per 20 years is \$60,000.

3) Phosphorus Inactivation Treatment:

Enhances water quality and limits algal blooms. Partially meets class B WQ standards and addressing impaired water body status. Most commonly aluminum compounds are used. The cost per 20 years is \$20,000.

Key Topics: Black's Nook Pond Limnology and Environs Assessment, Drought/Water Conservation Update, PFAS Update, and COVID-19 Update

4) Dredging:

Shallow Dredging (2' Depth starting 20' from shoreline): Returns blacks nook to open water status. Meets class B WQ standards. Limited future maintenance. Permitting costs associated. Minimum cost of \$300,000 over the next 20 years.

Deeper Dredging (4' Depth starting 20' from shoreline): Longer term benefit. Removing an additional 2 feet. Permitting costs associated. Minimum cost of \$600,000 over the next 20 years.

Regulatory Permitting Requirements will be required for all proposed treatments. The decision matrix in the presentation is a good summary of the options for Black's Nook.

Questions/Comments -

It was asked if the reason chemical treatment could be used is because Blacks Nook is isolated from Fresh Pond? Answer: Yes, they aren't going to leach into Fresh Pond.

Are you leaning towards dredging? What best meets your goals? Answer: Mr. Bitsko said, "My advice is to look at the goal and how does it balance with the costs."

For the deepest dredging how long to come back and restore to natural habitat? Could the muck/peat be recycled? Answer: The peat level would still be there, and this method has about a year of substantial impact. The permitting will likely dictate what we can do with the removed materials.

Has this been untouched since it was separated from Fresh Pond? Answer: There was a clean-up in the 1960's to remove junk.

Is the Hydro rake method a risk to fish and wildlife? Answer: No, it is not.

Would a recommendation be made to begin with hydro rake, as a short-term interim solution? Answer: Many groups do short term solutions until they are ready to go to dredging.

Peat is a protective layer and if we do excavation, will we break that barrier? Answer: There is that chance, but because that peat is so thick it's thought that won't happen.

Ms. Roosevelt asked that the Decision Matrix be sent to the Board Members.

Mr. Marshall asked if this is something that the Board will vote on in the future or if this is informational. Mr. Corda said it's informational for now. It is Mr. Corda's recommendation that as this project moves forward and develops a recommendation, we would present it to the Board for approval. There is quite a bit more work to do before we get to a formal recommendation.

The Board thanked Mr. Bitsko for the thorough and interesting presentation which laid out the possibilities. The Board will be discussing the Black's Nook options as the project progresses and asked to be kept informed.

Key Topics: Black's Nook Pond Limnology and Environs Assessment, Drought/Water Conservation Update, PFAS Update, and COVID-19 Update

Drought/Water Conservation Update: The State has declared the drought over on January 9, 2021. We are recharging our reservoirs and we have had above average precipitation in October, November and December of 2020.

PFAS Update: DEP Regulations have officially begun. PFAS6 is the new acronym for the six Per and polyfluoroalkyl Substances (PFAS) being regulated by Massachusetts. The January 2021 sampling result of our finished water for PFAS6 is 12.2 ppt. The MCL for PFAS6 is 20ppt. We will continue to test on a monthly basis. The pilot study is looking positive, so far. In a month or so we will have most of the data from the PFAS Pilot Study.

COVID-19 Update: The City continues to be at yellow status and is staffed at 25% capacity. CWD administration staff is rotating. Operational staff is at 100%. Masks are required for all employees except in their own office with a door shut. Disinfection of offices continues. We are doing well for a large City. The City manager suggests we will move back to 40% around March 1st.

C. OPERATIONS

Transmission and Distribution:

Questions/Comments: Ms. Roosevelt commented that North Point sounds like it's going to be huge. Mr. Corda said it may use up to a million gallons per day (estimated).

Watershed:

It was noted that there are a lot of projects ongoing in our watershed.

Questions/Comments: There has been 10 Housing Appeals Committee (HAC) hearing days for the 104 Boston Post Road project with three more scheduled for March 2021.

Ms. Roosevelt asked for more clarification of tree cutting at the Minuteman Athletic Facility Construction Project in Lincoln/Lexington. Ms. O'Connell said they followed the wetland protection act permitting and this was in the scope of plans.

Water Operations:

Questions/Comments- Could the decrease in daily consumption be attributed to COVID-19 Pandemic? Mr. Dowling responded "Yes".

Engineering:

Questions/Comments: None

Business/Billing:

Questions/Comments: The -5.45% revenue decrease is linked to decreased water usage. We are working with the City to address the revenue shortfall/potential shortfall for the current and next fiscal years, FY21 and FY22.

D. ACTION ITEMS

None

E. MISCELLANEOUS CORRESPONDENCE AND ITEMS OF INTEREST

No Comments

F. NEW BUSINESS

None

G. NEXT MEETING DATES/AGENDA – Meetings via Zoom

- March 9, 2021: Approved/Watershed Land Acquisition Planning
- April 13, 2021: Approved/TBD
- May 11, 2021: Approved/TBD
- June 8, 2021: TBA/TBD

Mr. Marshall moved, and Ms. Roosevelt seconded the motion to adjourn the Zoom meeting at 6:39 pm. The vote was unanimous in favor of the motion.