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Minutes of the Newburyport Parks Commission
July 14, 2022
Newburyport City Hall, Council Chambers

Call to order: 6:01 p.m.
A quorum was present

In attendance: Chair Ted Boretti, Charles Griffin, Matt Ellsworth, Paul Swindlehurst

Also in attendance: Parks Manager Mike Hennessey, Special Projects Manager Kim Turner, Finance Director Ethan Manning, Council President Heather Shand, Councillor Sharif Zeid, Councillor Jennie Donahue, Councillor Christine Wallace, Councillor Jim McCauley, Councillor Mark Wright, Michael Sabulis (GEI Consultants), Krista Wolfe (GEI Consultants), Michael Igo (Aqueous Consultants), Ashley Hammond (Aqueous Consultants), Jane Snow

NEW BUSINESS

Bartlett Mall Presentation

Bartlett Mall Frog Pond is a kettle pond that was created by a glacier 15K years ago. GEI and Aqueous Consultants engineering team executed a large investigation last fall. Two major findings: 1. contaminants were found within all layers of the sediment and subsoil to a depth of 12', and 2. ground water table is 30 ft below the pond, meaning this pond does not have hydrologic connection to groundwater currently. Contaminants include heavy metals as well as phosphorous. The phosphorous present in the sediment is feeding the algal blooms in the pond. The pond is an average of 4' deep.

Potential remedies: 1. Dredge (costly and environmentally unsound), 2. Liner, 3. In-situ binding/solidification (would still need to haul material off-site, costly), 4. Chemical treatment (not legal in MA). Liner system is the most feasible—drain the pond, add piping for off-gassing of methane, add geogrid to add bearing capacity to the sediment/subsoil, install HDPE liner, install armor stone to protect the liner, add sand to support aquatic life. Question: has this been done somewhere else before? Response: Yes. Question: By Contractors in Northeast? Response: One in process. Question: What is durability of it? Response: as long as it is protected will last. Some say limit of 50 yrs., but it will last much longer than that with armor stone and sand. Question: Most of cost presented is for initial cost, what about ongoing cost? Response: Possible need to add more sand. Question: if this system failed how would you know? Response: Would be maintained through filtering system and periodic water testing. If there were a tear in the liner, it would not be catastrophic to the system. Question: If it hasn't been designed how did we get cost estimate. Response: Engineer cost estimate \$2.79M.

Maintenance and long-term care are important parts of design. Once the pond is lined, we are starting from scratch with a clean system. Frog Pond is being looked at as a water feature. Pond currently has no inflow or outflow other than minor stormwater/snow melting and evaporation—it is stagnant. Need 6 key components for healthy pond: oxygen, water, temperature, circulation, nutrient balance, and biodiversity. Proposing a bedrock well, 3-500 ft deep to be located at the bottom of ramp (Pond St side) which would be a means of keeping the pond full at all times. As evaporation occurs during the heat of the summer, the well would have the ability to top off the pond, keeping it a consistent depth and helping keep the water cooler by holding more oxygen. Granite curbing installed all the way around pond will also help control water level and prevent geese from entering. Need a means to circulate water as there is no natural circulation: drawing water in from an intake pipe, filtering it through a sand filter and then circulating it via pipes throughout pond will keep the water circulating. The only water that would enter pond would be from a well or rain: redirect water from courthouse roof away from pond and add a curb along Greenleaf Street to prevent stormwater from reaching the pond. Possibly add islands to help maintain balance of a healthy pond and support aquatic life. Also investigating using old fire system as a way to help lower pond when needed: still in investigative stage.

Question: Assume this will all pass muster with state levels? Response: Will be meeting with Con Com to have those discussions. There will be a permitting process beyond the city. Question: What happens if well goes dry? Response: test for 72 hrs. to get rate. If it did go dry for any reason, City would have to get emergency water, although water from the well would only be used to top the pond off, it would not be a constant flow. Question: Does existing fountain do anything? Response: Helps a little with aeration. Important historically and aesthetically but not a huge water quality benefit. Question: Are items listed ranked? Response: Order in which it should be built, but all are important. Question: Concerned permitting will be a lengthy process, including Army Core of Engineers. Response: Would like to do some homework on this. Question: Council approved \$216,000 for design. How long to get to that point? Response: \$216,000 is for design & permitting. Goal to start construction in 2023. Question: Do you need biodiversity piece in there? Response: Benefit to having plants and animals in the pond to balance pond. Basically, this is a water feature that we are trying to make into an artificial pond, maintenance would be higher without them. Question: When do we get an estimate on maintenance? Response: Frog Pond would take roughly ½ man hrs. it takes to maintain Atkinson Pond and 1/3 the man hours it takes to maintain Inn St fountain. Estimate \$10-15,000 per yr. for electrical costs, which we hope to generate from paddle boating activity to help defray the cost. Question: Abutters or residents are not at any risk that they would be harmed from 'forever chemicals' because of this well? Response: Still doing some research on placement of well to ensure it is a good location, but don't foresee any problems City could face. Question: Have you looked at City well locations in relation to conflict for this well? Response: next step.

Mtg adjourned 7:30pm.