

Lake Accotink Task Force

Wetland Management Option Questions and Areas of Discovery

This document was drafted based on questions and comments received from the public during the February 2023 Lake Accotink dredging project meetings and following the community survey which was open through April 1, 2023. It was updated to reflect input and feedback from the Task Force on July 24 through August 7, 2023 (in RED) and additional Task Force member comments at the August 14, 2023 meeting (highlighted in yellow).

1. What will happen to the lake if nothing is done?
 - a. Mud Flats:
 - i. Will the lake fill in and become a mudflat and how long would that take?
 - ii. Will "mud flats" dry and become windborne?
 - iii. Under a managed wetland option, would mud flats ever develop?
 - b. Will there be quicksand that poses a risk to park users?
 - c. Will there be nuisances such as mosquitos, odors, etc.?
 - d. Will it become overrun with invasive species?
 - e. Will flood risk increase?

2. Is managing the lake as a wetland a viable or potentially desirable option?
 - a. What is a stream/wetland complex? How is it different than what we typically think of as wetlands?
 - b. What is required to develop a plan to manage the lake footprint as a wetland?
 - c. What might it look like?
 - d. How long will it take to create a managed wetland that is a community asset providing environmental and recreational benefits?
 - e. Will a managed wetland be "overcome" by storm pulses and sediment loading with emphasis on extreme events?
 - f. Will a wetland have a less cooling effect on the environment than an eight-foot or more depth lake? Will a wetland create a heat island?
 - g. Would managed wetlands have different regulatory requirements than a lake, and if so, summarize them?
 - h. What is the cost to design, permit, and construct and maintain a managed wetland?

3. Could a managed wetland option include open water areas?
 - a. Where might open water be located?
 - b. What type of open water could be maintained?
 - c. How large and deep could an open water feature be?
 - d. Would an open water feature need to be dredged periodically?
 - e. How could an open water ("lake") area be sized to maximize the open water but minimize impacts from any necessary maintenance dredging operations to include:
 - i. Eliminate or reduce the need for pipelines and offsite processing areas,
 - ii. Utilize existing open spaces in Lake Accotink Park for operations,
 - iii. Maximizing the extent to which dredged sediment can be kept and used onsite,
and

7. What are the sediment loads within Accotink Creek and how will they change?
- a. What are the current sediment loads in Accotink Creek and what are the likely trends for sediment generation in the future?
 - b. What loads are leaving the lake in its current condition?
 - c. How will these loads change if no action were taken?
 - d. What would the loads leaving the lake be like if the lake were managed as a wetland?
 - e. What would the sediment loads be in Accotink Creek if the dam were removed?
 - f. How will these loads affect downstream resources:
 - i. How will they impact instream fauna?
 - ii. How much sediment could be expected to be captured by the floodplains?
 - iii. How might these loads affect Gunston Cove?
 - iv. How could these effects be mitigated?
 - g. What regulatory implications are there for Fairfax County due to increased sediment loads downstream of Lake Accotink and how much could mitigating these increased loads cost?
8. Other:
- a. Account for climate change in modeling and analysis of options.
 - b. Conduct differential carbon footprint analysis of managed wetland, hybrid wetland – open water, and full dredge options.
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Separate Question for the Fairfax County Office of the County Attorney and Risk Management Division:

Will there be any changes the County's liability for taking no action or creating a managed wetland versus managing Lake Accotink as an open body of water?

Separate Question for DPWES Staff:

Can Monch Farm Park near Edsall Road be modified and used to process dredge spoils?