



Task Force on the Future of Lake Accotink

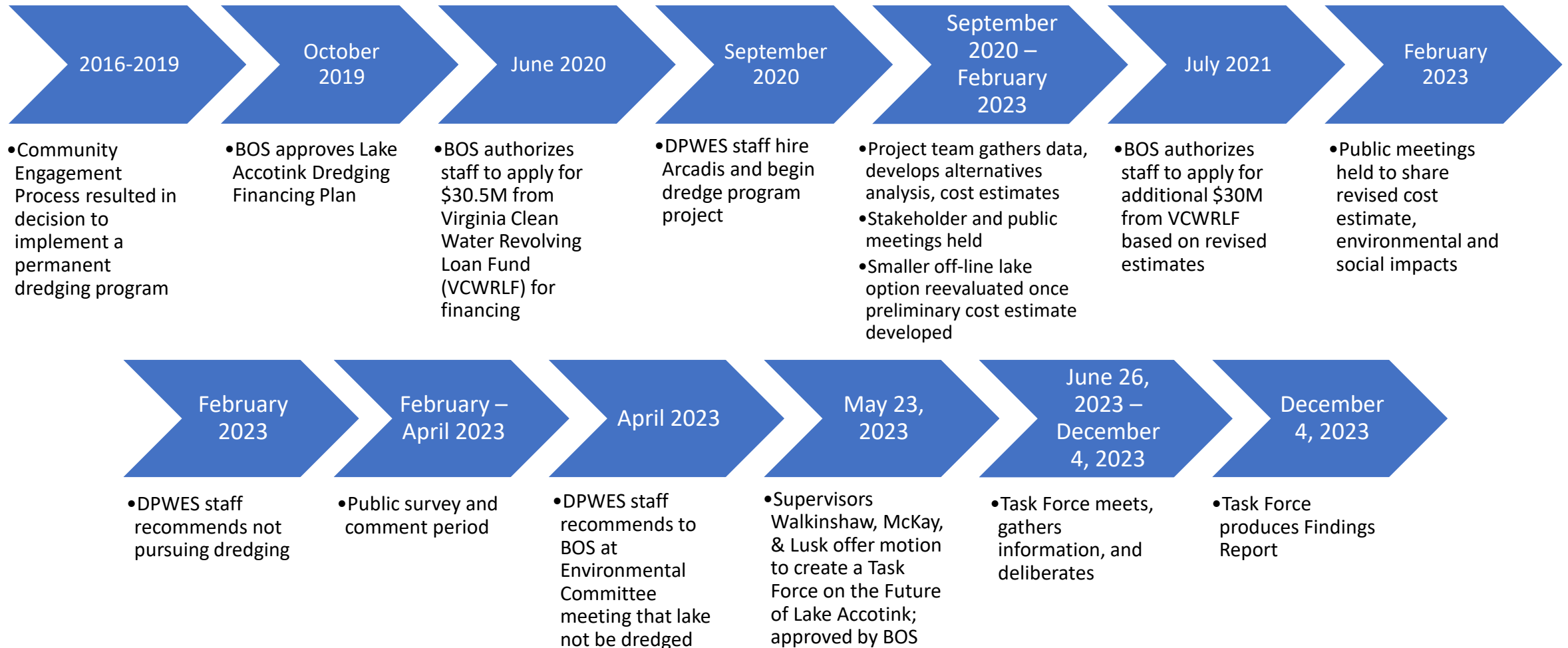
Findings Report

Sharon Bulova, Task Force Chairman

Environmental Committee

December 12, 2023

Lake Accotink Dredging Project Timeline



DPWES Staff Recommendation

- Presented to BOS Environmental Committee on April 25, 2023
- Based on cost and environmental impact findings of Arcadis' Lake Accotink Dredging Alternatives Analysis Report
- Recommendations:
 - Not dredge Lake Accotink due to significant community and environmental impacts and excessive cost
 - Refocus on resuming Master Plan process for Lake Accotink Park to:
 - create and implement an economically and environmentally sustainable plan for the park
 - provide enriching recreational, educational, and quality of life opportunities for residents
 - allow for proactive management of the landscape over time, and improve the ecosystem and wildlife habitat

Creation of Task Force

Immediately following the Environmental Committee meeting on April 25, Supervisor Walkinshaw announced that he would ask the Board to establish a task force

Formally authorized by adoption of Board Matter with Chairman McKay and Supervisor Lusk on May 23

Membership

- Chaired by former BOS Chairman Sharon Bulova
- Included former Braddock District Supervisor John Cook
- 30 additional members including representatives of the community, environmental and nonprofit organizations, Planning Commission, representative from the Park Authority
- Support provided by County Staff and WSP-LimnoTech



Mission

- Conduct a review and develop findings on the previous studies performed by Arcadis and WSSI on the dredging plan to ensure all possible options have been considered to preserve Lake Accotink in the most sustainable, equitable, and cost-effective manner possible
- Identify relevant information needs and questions that should be addressed should the Board proceed with studying a managed wetland option or hybrid options for managed wetlands with a smaller open water feature
- Findings should consider the impacts to the environment, surrounding communities, recreational uses of the park, and financing including ongoing maintenance

Meetings

- First meeting held on June 26, 2023
- All meetings held at Government Center in person, open to public, broadcast and streamed on Fairfax County Channel 16, available on demand
- Subcommittees formed to work on producing content for the final Findings Report
 - Subcommittee 1: The Value of Lake Accotink to Lake Accotink Park and to the County
 - Subcommittee 2: Impacts of and Issues with Staff Recommendation to Not Dredge
 - Subcommittee 3: Options to Consider Other than Traditional Full Dredging
- A total of 9 full Task Force and 21 subcommittee meetings
- Final Meeting held on December 4, 2023

Subcommittee 1: The Value of Lake Accotink to Lake Accotink Park and to the County

The subcommittee was tasked to:

- Review a wide variety of data and open-source information that included testimonials from the community, community surveys, publicly-available databases and environmental studies conducted on the Lake
- The Task Force determined the value of the Lake extends beyond a summation of economic factors and needs to consider the socioeconomic, recreational and environmental factors that justify its existence.
- Summarization of Findings focused on:
 - Equity to underserved communities and to individual with disabilities
 - Environmental
 - Health
 - Sediment Trapping
 - Local Flora and fauna
 - Need for a new Public Survey



Subcommittee 2: Impacts of and Issues with Staff Recommendation to Not Dredge

The subcommittee explored two avenues of investigation :

- The cost and environmental basis for the recommendation to not dredge
- The process and authority for reaching that recommendation

Key Findings:

1. The County’s analysis of cost relied on a variety of assumptions that included a mix of dated and excessively conservative parameters. Efforts to plan the future of the area require consistent information to provide apples-to-apples comparisons for alternatives and projections.

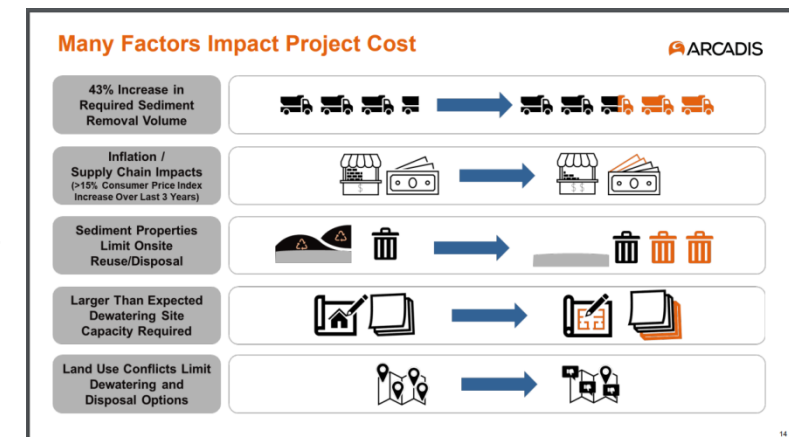
2. The subcommittee understands that this report will be used to inform the Master Plan update for Lake Accotink. The subcommittee suggests that the community be involved in this process and included in development of the Master Plan program, design goals and guidelines, and participate in design milestone deliverable reviews and analyses.

3. Stream restoration above and below Lake Accotink will be important to support the future health of the Lake or its alternative. Stream restoration should include those areas where the erosion/turbulence issues are the greatest, not just where access is easiest and County-owned lands are available.

Dredge Program Cost ARCADIS

Category	Opinion of Probable Cost ^(a)	Notes:
Base Dredge Event^(a)		<p>(a) The opinions of probable cost presented herein are based on Arcadis' experience, vendor estimates, and Fairfax County staff input. These opinions of probable cost have been prepared for the purpose of comparing potential alternatives and are based on available information from site investigations and the anticipated dredge program scope. These opinions of probable cost are AACE Class 4 level and expected to be within -30% to +50% of the actual project cost. Changes in cost elements are likely to occur as a result of new information and data collected during an engineering design phase, selection of dewatering site location, and determination of final disposal location. Utilization of this cost information beyond the stated purpose is not recommended.</p> <p>(b) The base dredge event is assumed to include removal of 500,000 cubic yards of sediment from Lake Accotink and be completed over a three-year period from 2024 to 2026. Costs shown were developed in 2022 dollars and escalated to the mid-point of construction (2023) using a 5% annual inflation factor. Costs are shown to the nearest \$0.1M.</p> <p>(c) Cost assumes dewatering site constructed at the Wakefield Park Maintenance Facility location.</p> <p>(d) Cost shown assumes transportation and disposal to Luck Ecosystems.</p> <p>(e) Maintenance dredging events are expected to continue in perpetuity but only the first four maintenance dredging cycles are shown. The costs presented herein assume \$30.0M (in 2022 dollars) per maintenance dredging event and are escalated to the applicable event year using a 5% annual inflation factor and completion of the first maintenance dredge in 2031.</p>
Dewatering Site & Permanent Pipeline Construction ^(c)	\$13.0M (\$9.1M to \$19.5M)	
Dredging	\$23.0M (\$16.1M to \$34.6M)	
Material Processing	\$24.9M (\$17.4M to \$37.3M)	
Transportation & Disposal ^(d)	\$34.4M (\$24.1M to \$51.6M)	
Total for Base Dredge	\$95.3M (\$66.7M to \$143.0M)	
Maintenance Dredging Events^(e)		
Event 1 (Year 5 Post-Base Dredge)	\$46.5M	
Event 2 (Year 10 Post-Base Dredge)	\$59.4M	
Event 3 (Year 15 Post-Base Dredge)	\$96.8M	
Event 4 (Year 20 Post-Base Dredge)	\$123.5M	

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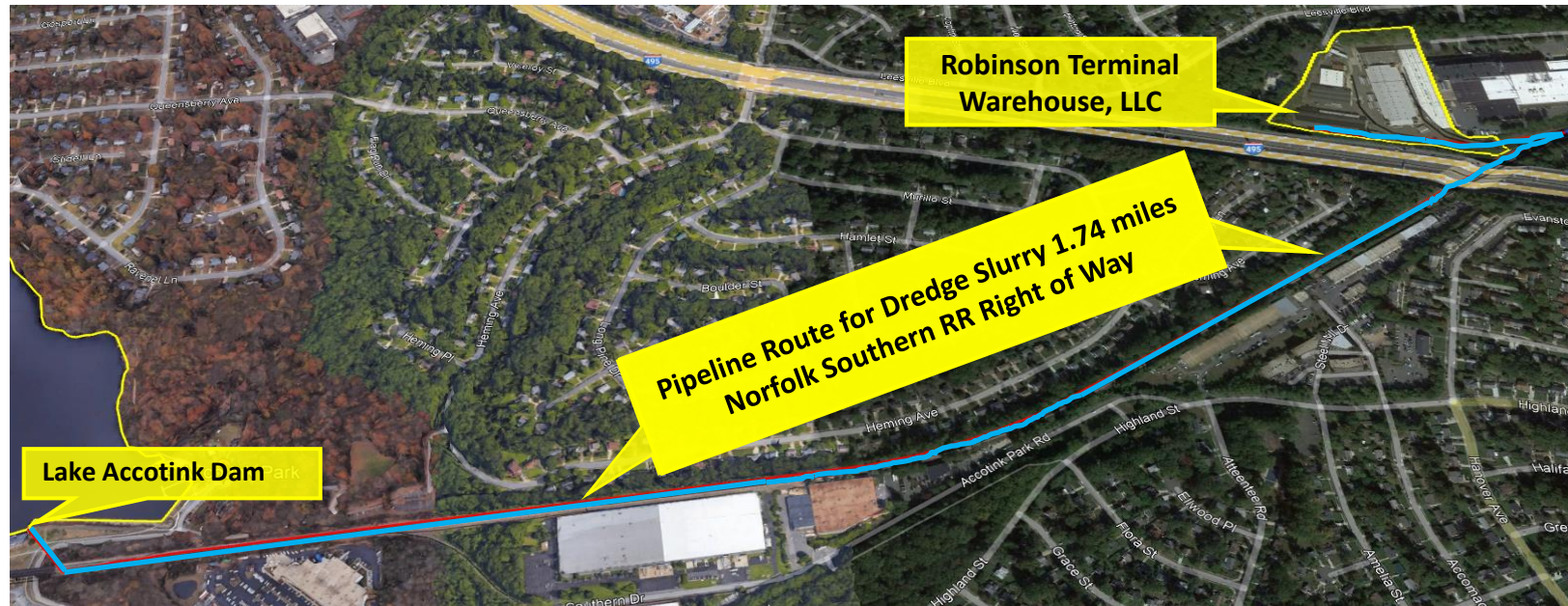
Subcommittee 3: Options to Consider Other than Traditional Full Dredging

- Explore and make findings of potential future(s) for Lake Accotink other than the full dredging called for in the 2019 plan or the recommendation not to dredge put forward by DPWES.
- The Task Force finds that a smaller lake, in the range of 20 to 40 acres, can preserve a significant open water feature with a program of regular maintenance dredging. The Task Force further finds that most, if not all, of the dredge spoils in an initial dredge should remain on-site in Lake Accotink Park to the maximum extent feasible.
- The Task Force also finds that some combination of a managed wetland and a grassland are viable options for the portions of the original 110-acre lake that have already, or will in the near to mid-future, fill in.
- Kayak trails and other recreation options could accompany a managed wetland/grassland and a smaller lake. The Task Force stayed within the limits of its mission.



Addendum: Dewatering and Transportation Hub Opportunities at Robinson Terminal Should be Revisited with Dredging Alternatives

- Eliminates destruction of mature tree canopy along Accotink Creek and within Wakefield Park.
- Eliminates daily heavy truck traffic in residential neighborhoods.
- Reduces the carbon footprint of transporting dried dredge materials by 87%.
- Significant transportation cost reductions from rail-optimized per-ton-per-mile savings.
- Washington Post management (the property owner) informed DPWES they were not interested in allowing the use of Robinson Terminal for dewatering and transportation operations. However, the Task Force finds this option should be re-evaluated with any future dredging alternative.



Summary of Findings

- Amenities and activities at Lake Accotink are not readily available at other nearby parks, which is especially important as the park is surrounded by and serves communities with a high degree of cultural and economic diversity, unlike any other County lakefront parks.
- When considering sustainable alternatives, a smaller lake is feasible as part of a stream/lake complex, but a full dredge needs to be reevaluated and compared against alternatives under consideration. However, a plan that includes maintenance dredging with any lake option, and an invasive species management plan in all options, will be essential.
- The Lake Accotink dam is 80 years old and any solutions to the lake must take into account preserving future options to replace, repair, or remove the dam.
- The park's facilities need attention and the larger issue of dredging stalled the Master Plan process. Identifying the desired experiences, amenities, and activities at Lake Accotink Park will inform the alternatives. It is a finding of the Task Force that the community should be at the table during such discussions.
- The Task Force finds that conditions within the watershed continue to change and the lake continues to fill with sediment. The Task Force agrees that a decision about a general approach now will allow the Master Plan process to move forward while continued technical study of alternatives runs in tandem.



Questions?

Lake Accotink Task Force Website: www.fairfaxcounty.gov/topics/lake-accotink-task-force