LAKE ACCOTINK PARK MASTER PLAN REVISION

LAKE SUSTAINABILITY UPDATE MEETING
Sept 19, 2019



WELCOME

- INTRODUCTIONS
- PARK MASTER PLANNING PROCESS
- LAKE MANAGEMENT OPTIONS PREVIOUSLY PRESENTED
- PUBLIC INPUT SUMMARY
- ADDITIONAL LAKE MANAGEMENT STUDY
- STAFF RECOMMENDED OPTION
- BUDGET PROCESS
- NEXT STEPS



THE MASTER PLAN PROCESS

DATES

MASTER PLAN STEPS

SPRING, 2016

JI KIIVO, 2010

MARCH 2016 - APRIL 2018

MAY 2018 - CURRENT

(ANTICIPATED) NOV-FEB, 2020

(ANTICIPATED) MARCH, 2020

(ANTICIPATED) APRIL, 2020

(ANTICIPATED) MAY, 2020

(ANTICIPATED) JUNE, 2020

(ANTICIPATED) SUMMER, 2020

•RESEARCH / SITE ANALYSIS

 PUBLIC INFORMATION MEETINGS AND WORKSHOPS INCLUDING LAKE SUSTAINABILITY

•LAKE MANAGEMENT STRATEGY AND CIP PROCESS

• DRAFT PARK DEVELOPMENT CONCEPT/S WITH PUBLIC INPUT OPPORTUNITIES

• PUBLICATION OF DRAFT MP

•PUBLIC COMMENT MEETING

•30-DAY PUBLIC COMMENT PERIOD

•REVISIONS TO DRAFT MASTER PLAN

PARK AUTHORITY BOARD APPROVAL



THE MASTER PLAN PROCESS

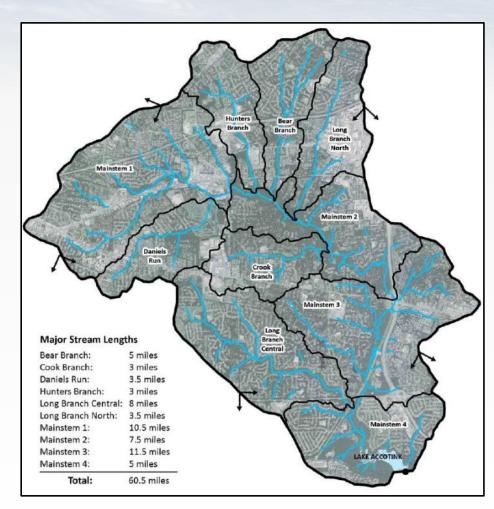
DEVELOPMENT OF MASTER PLAN TO DATE

- 5 public meetings/workshops held with community
 - Facilities, Programming & Usage
 - Natural and Cultural Resources
 - Trails
 - Lake Management
- Natural resource studies were conducted to inventory critical plant and wildlife species
- Lake Management Study Completed



LAKE MANAGEMENT

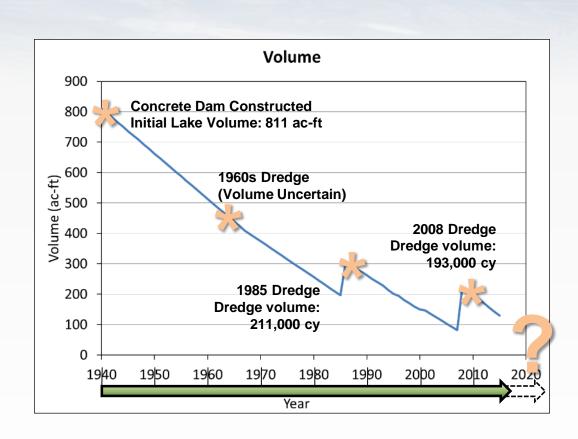
- The Lake Accotink
 Watershed encompasses
 19,626 acres or 30
 square miles with 60.5
 miles of streams.
- The current size of the lake is approximately 55 acres.





LAKE MANAGEMENT

- Lake Accotink has been dredged three times over the past 40 years.
- Previous dredging was completed in May 2008 (\$10 Mil.) and removed 193,000 CY of sediment.
- An average of 20,000 CY of sediment is deposited in the lake per year.
- The estimated average depth of the lake is 4 feet and will continue to decrease over time without intervention.





LAKE MANAGEMENT

	MANAGEMENT OPTIONS	DESCRIPTION
OPT A	NO DIRECT MANAGEMENT	Allow lake to continue to fill with silt.
OPT B	INITIAL DREDGE WITH MAINTENANCE DREDING	Initial dredge to restore lake to average 8 ft depth with maintenance dredging program to maintain lake depth.
OPT C	INITIAL DREDGE WITH FOREBAY & MAINTENANCE DREDGING	Initial dredge to restore lake to average 8 ft depth and the creation of a forebay.
OPT E	STREAM WITH RECLAIMED LAND	Restoration of Accotink Creek to its form prior to being dammed.
OPT F	STREAM WITH SMALLER LAKE	Existing dam would be modified to form a single stream channel and the landscape would be sculpted to retain a smaller lake for recreational purposes.

^{*}Option D "Beaver Dams" was previously removed from consideration due to a one-time limited sediment removal benefit.



PUBLIC ENGAGEMENT SUMMARY

Lake Management Outreach

April 30, 2018 - The lake management options were shared with the community and a questionnaire was circulated to solicit input on the lake management options.

Community Input

- 1,310 responses were received via the questionnaire. 90% of respondents favored having a lake with 65% in favor of retaining the existing footprint of the lake through dredging.
- Additionally Save Lake Accotink, a non-profit organization, collected 4,168 signatures on a petition in favor of dredging the lake and constructing a forebay.
- Cardinal Forest HOA which adjoins Lake According submitted a letter in support of a dredging option.



ADDITIONAL LAKE MANAGEMENT CONSIDERATIONS

- Wet Dredge Permitting Requirements, Logistical Considerations For Full Dredge & Maintenance Dredge of Forebay
- Dry Dredge Explore Feasibility Including Construction of a Possible Permanent Access Road
- Dredging Access Routes Explore Accotink Park Road, Hemming Avenue, Rolling Road, Ravenel Lane, Inverchapel Road, CCT Head of Lake to Braddock Road, CCT Ravensworth Farm Swim Club, Railroad Spurs and Other Options.
- Forebay Alternative Locations Current Lake Footprint, Upstream from Current Lake Footprint, Downstream of Braddock Road/Confluence of Accotink Creek & Long Branch, Wakefield Park Upstream of Braddock Road.
- Spoil Handling & Processing Explore Options for Drying Wet Dredge Material Prior To Final Disposal Including Potential Processing Locations Including Lake Accotink Park, Wakefield Park, Virginia Concrete Plant, Howrey Field.
- Local Disposal Of Dredged Spoils Explore Options for Disposal Sites Including Lake Accotink Park, Utility Easements in Wakefield Park, Private Land Near Danbury Forest Feasibility Including Construction of a Possible Permanent Access Road.
- Transport By Rail Explore Use of Existing Railroad Line and Rail Transportation For Disposal of Dredged Material Lake Dredge & Maintenance of Forebay Feasibility Including Construction of a Possible Permanent Access Road



ADDITIONAL LAKE MANAGEMENT CONSIDERATIONS

Truck Transportation – Explore Feasibility of Disposal of Dredged Material Locally By Truck.

With Each Option – Develop Permitting Requirements, Detailed Costs & Any Time Constraints



RECOMMENDED DREDGING STRATEGY

Description

- Dredge to restore lake to average 8 ft depth
- Pump sediment to Wakefield Park for dewatering and disposal
- Haul sediment to closed quarry using Braddock Road to Capital Beltway.
- Fund maintenance dredging program to maintain lake
- Retains aesthetic and recreation value of the lake

Dredging Cost: \$ 30,500,000

Periodic Maintenance Cost Annualized: \$2,013,000

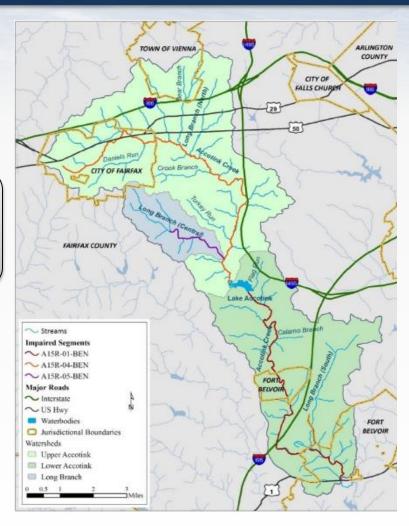
30 Year Lifecycle Dam Repair: \$4,700,000





RECOMMENDED DREDGING STRATEGY

The lake currently removes sediment equivalent to restoring 33 miles of stream at a cost of \$230 million.





COUNTY CIP PROCESS

- Extensive public process conducted as part of Park Master Plan
- Community input supports maintaining lake as a recreational facility
- The park is visited by over 300,000 patrons annually
- FY 2020 FY 2024 Adopted Capital Improvement Program identifies \$50 Million order of magnitude estimate for lake dredging
- April 30, 2019 Board of Supervisors FY 2020— FY 2021 Budget Guidance Item directed staff to update CIP recommendations to refine options, timeline, and appropriate funding mechanisms to address Lake Accotink.

https://www.fairfaxcounty.gov/budget/sites/budget/files/assets/documents/fy2020/adopted/cip.pdf



BUDGETING PROCESS

Virginia Clean Water Revolving Loan Fund ("Fund")

- Department of Environmental Quality (DEQ) program administrator of the Fund; Virginia Resources Authority (VRA) is financial manager of the Fund
- DEQ indicated in March 2019 the Lake Accotink project is eligible for funding; all qualifying projects receive an interest rate reduction of 1% below municipal market rates
- DEQ confirmed the County's dedicated source of stormwater revenue (\$3.25 per \$100 of Assessed Value) provides for an additional interest rate reduction of 1% below municipal market rates
- Flexibility in debt service repayment through project completion
- Loan would be subject to the approval of the State Water Control Board
- Full year debt service for the entire \$30.5m estimated at \$1.5M/year per current market conditions
- Anticipated debt service would begin in FY 2025/2026, and will be included in future STW service district budgets

Fairfax County Economic Development Authority

- Fallback option to pursue project financing
- Previous examples of projects financed include Merrifield Center, Public Safety Headquarters, and Lewinsville Center



BUDGETING PROCESS

Oct 29, 2019

Jan 31, 2020

March 31, 2020

June 30, 2020

Sept 30, 2020

Jan 31, 2021

March 1, 2025

March 1, 2029

BOS Meeting Scope and Funding Strategy for Approval

Award Consultant Contract for Design & Permitting

Submit Request for VCWRLF Loan

Park Authority Complete Master Plan

State Approve VCWRLF Loan

Award Dredging Contract

Complete Dredging

Complete Permit Compliance Monitoring



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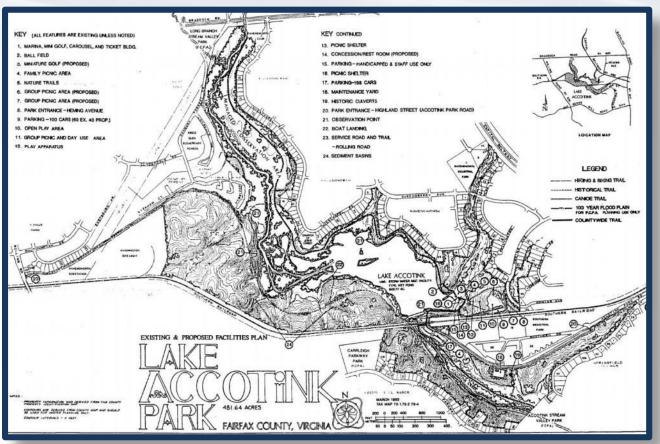
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CURRENT APPROVED MASTER PLAN





WRITTEN REPORT

- ESTABLISHES PARK PURPOSE AND CLASSIFICATION
- DESCRIBES EXISTING CONDITIONS AND CONSTRAINTS
- DESCRIBES THE DESIRED VISITOR EXPERIENCE
- DESCRIBES THE PARK FEATURES
- IDENTIFIES DESIGN CONCERNS TO BE
 ADDRESSED AT DEVELOPMENT STAGE



CONCEPTUAL DEVELOPMENT PLAN

- CONCEPTUAL SITE LAYOUT
- GRAPHICALLY SHOWS GENERAL LOCATION OF RECOMMENDED
 FACILITIES & USE AREAS
- CONCEPTUAL SITE DESIGN,
 NOT AN ENGINEERED SITE PLAN





CONTACT INFORMATION



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Please visit the project website:

https://www.fairfaxcounty.gov/parks/planning-development/lakeaccotink

