



FAIRFAX COUNTY PARK AUTHORITY



M E M O R A N D U M

TO: Chairman and Members
Park Authority Board

VIA: Jai Cole, Executive Director

FROM: Laura Grape, Division Director, Resource Management

DATE: September 8, 2023

Agenda

**Resource Management Committee
(Committee of the Whole)
Wednesday, September 13, 2023 – 6:20 pm
Boardroom, Herrity Building
Chairman: Maggie Godbold
Vice Chair: Abena Aidoo Hewton**

1. Scope Approval – Natural Resource Management and Ecological Restoration Projects: Old Colchester Park and Preserve (with presentation) – Action*

*Enclosures



If accommodations and/or alternative formats are needed, please call (703) 324-8563. TTY (703) 803-3354

Board Agenda Item
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ACTION-1

Scope Approval – Natural Resource Management and Ecological Restoration Projects: Old Colchester Park and Preserve (Mount Vernon District)

ISSUE:

Approval of the project scope to implement planned natural resource management activities and Helping Our Land Heal (ecosystem restoration) projects at Old Colchester Park and Preserve.

RECOMMENDATION:

The Park Authority Executive Director recommends approval of the project scope to implement planned natural resource management activities and ecosystem restoration projects at Old Colchester Park and Preserve to manage high quality natural resources in a healthy condition and to implement forest restoration activities in areas that require treatment to restore forest ecosystem health.

TIMING:

Board approval of the project scope is requested on September 13, 2023.

BACKGROUND:

The Old Colchester Park and Preserve's natural resource management plan was developed in 2011 and has provided guidance on resource management activities for the past eleven years. Projects have been implemented with successful outcomes and require additional funding to continue and to protect investments made to date. The Vulcan fund was dedicated to natural and cultural resource management of the park's resources during its acquisition by the Park Authority in 2009. The park is classified as a resource-based park and contains state and globally rare plants and natural communities as well as a thriving population of mammals, amphibians, birds and reptiles. The scope also includes conducting forest and wetland restoration projects. These will be implemented as part of the Helping Our Land Heal Program which was developed based on the successful work from the Ellanor C. Lawrence Forest Management Pilot Project.

The scope encompasses multiple initiatives at Old Colchester Park and Preserve and complies with the park's master plan (2015) and works towards achievement of recommended actions in the natural resource management plan (2011). It also works towards achieving the following Recommended Actions in the agency-wide Natural Resource Management Plan:

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- Recommended Action 16 – Manage natural resources adaptively and holistically on a landscape scale with the ultimate goal of having naturally regenerating native plant systems and healthy native wildlife populations.
- Recommended Action 17 – Control overabundant and invasive species that negatively impact natural resources to include, but not limited to, white-tailed deer, non-native invasive species, resident Canada geese, feral animals, and forest pests.
- Recommended Action 18 – Ensure the health of existing forested areas. Where possible ensure native biodiversity and sustainable regeneration; elsewhere restore to the highest ecosystem function practicable.
- Recommended Action 19 – Enhance connectivity of parkland to provide natural corridors that allow for the movement of populations over time and preserve ecosystem function and biodiversity.

The goals of the project are to:

- Build on the past 12 years of natural resource management activities at the park guided by the park's natural resource management plan. Management activities will support recommended actions in the plan and will advance progress made to-date. Special focus is on conserving, protecting and restoring state and globally rare natural communities, vernal pool obligate wildlife, forest interior bird species and state rare tidal freshwater marsh plant species.
- Continue to control invasive species in the Coastal Plain / Piedmont Small Stream Floodplain Forest (CEGL004418) adjacent to the Occuquan River. This work has been on-going for the past eleven years since work began at the park in 2012 and has demonstrated significant progress.
- Continue to control aggressive invasive plants such as *Microstegium vimineum* and *Murdannia keisak* which threaten globally vulnerable and state rare natural communities (Coastal Plain Upland Depression Swamp – CEGL006110).
- Continue to maintain climate adapted, restored vernal pools constructed in 2014 and prevent non-native plant invasions that degrade forested habitat required for conserving healthy populations of vernal pool obligate species including spotted turtle, spotted salamander, and wood frog.
- Maintain and monitor the success of a hydrological restoration of the globally vulnerable and state rare Coastal Plain Upland Depression Swamp (CEGL006110) that was constructed in 2020 and was initiated by a hydrology study in 2015. Activities include recording and analyzing water table data; and routine maintenance of restoration water control infrastructure.
- Continue maintenance of a seven-year-old, two acre forest restoration project that began in 2016 to repair areas that were damaged by solid waste dumping by previous landowners. Activities include control of deer browse, invasive plants, tree planting and addressing encroachment on park property.

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- Continue maintenance of an eight-year-old, nine acre forest management project that began in 2015 to increase landscape scale diversity of oak and hickory forests that are transitioning to less diverse forests because of fire exclusion and heavy deer browse. Activities include promotion of oak and hickory seedlings, control of deer herbivory and invasive plants.
- Restore approximately 4 acres of forest intersecting with culturally significant sites that will both improve forest health and improve technical and interpretive access to cultural resources. Existing conditions in this area consist of dense thickets of non-native invasive vines and shrubs that actively damage the forest canopy and prevent regeneration of trees. Specific forest community types will be determined through site analysis during the project design phase.
- Utilize prescribed burning to reduce wildfire risk and to promote native plants and biological diversity in forest communities that were damaged by clearing activity that was conducted by previous landowners. Future burns will build upon the positive results of a previous burn held in 2017.
- Design and construct low impact living shoreline techniques to conserve state rare plants (*Bulboschoenus fluviatilis*) in the tidal freshwater marsh community along the Occoquan River. The marsh is suffering from gradual erosion processes that threaten to remove substrate required for wetland plant occupancy of the marsh. Living shoreline techniques will prevent further erosion and rebuild sections of substrate that have been lost.

The project area proposed for forest restoration is identified in the Ecological Restoration Project Map, enclosed as Attachment 2.

The projects will commence in the first quarter of fiscal year 2024 with an approximate duration of 60 months and anticipated completion date of June 30, 2028. Any surplus funds will be reinvested in natural resource management projects at the park.

FISCAL IMPACT:

Based on the scope cost estimate, funding in the amount of \$300,000 is necessary to conduct the scope (Attachment 1). Funding is available in the amount of \$600,000 in PR-000032, Vulcan Fund.

ENCLOSED DOCUMENTS:

Attachment 1: Cost Estimate for natural resource management and Helping Our Land Heal Forest Restoration Projects

Attachment 2: Map of Helping Our Land Heal Forest Restoration Projects

Attachment 3: Helping Our Land Heal Forest Restoration Projects Existing and Desired Conditions Photos

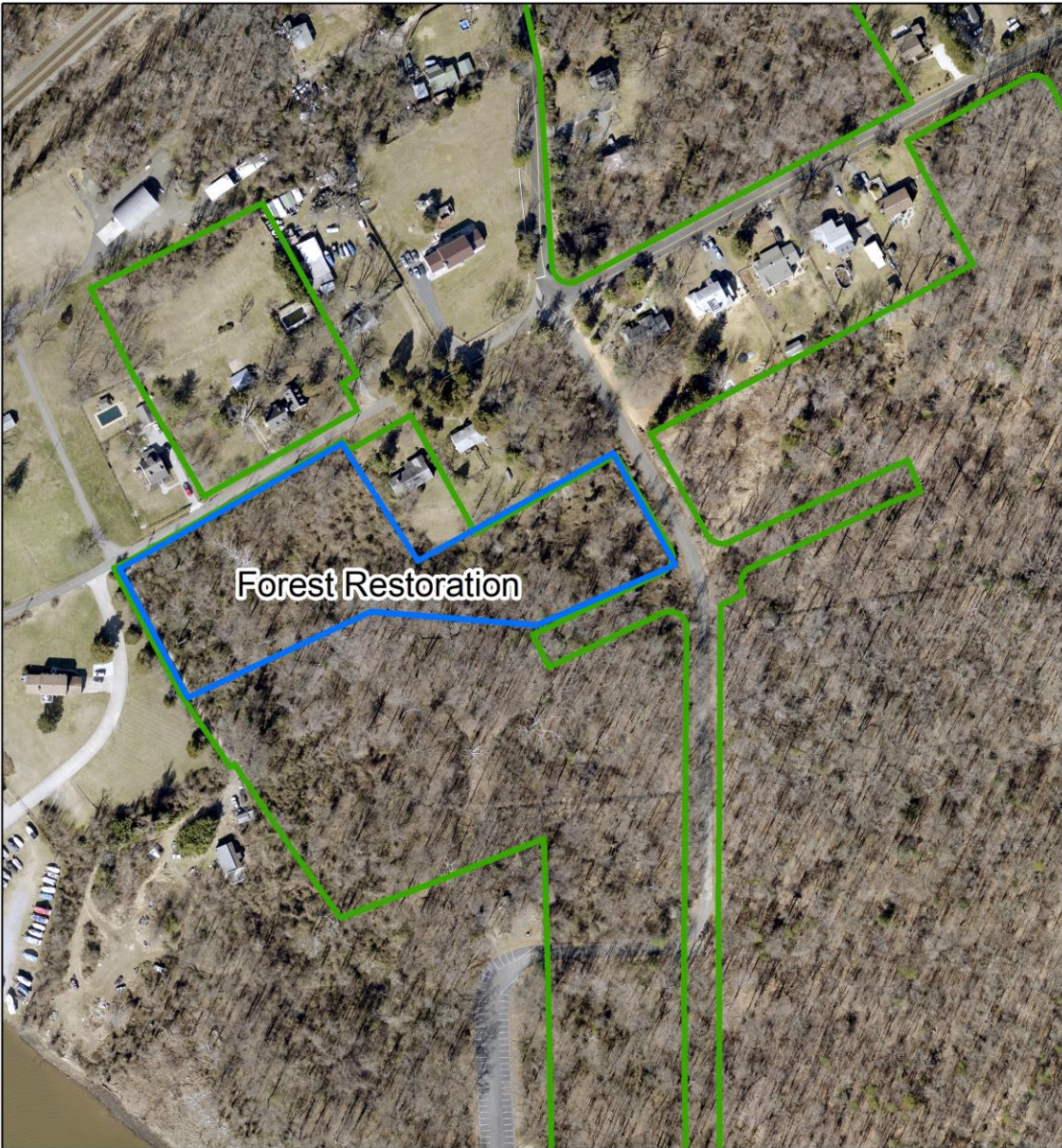
STAFF:

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Jai Cole, Executive Director
Sara Baldwin, Deputy Director/COO
Aimee L. Vosper, Deputy Director/CBD
Laura Grape, Director, Resource Management Division
John Burke, Manager, Natural Resources Branch
Kimberly Eckert, Director, Park Operations Division
Brendon Hanafin, Director, Planning and Development Division
Nicole Varnes, Financial Management Branch

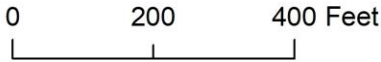
**Natural Resource Management Plan Implementation
Old Colchester Park and Preserve
Scope Cost Estimates**

| | |
|---|------------------|
| Project Administration | \$30,000 |
| Site Design and Planning | \$25,000 |
| Archaeology | \$5,000 |
| Implementation, Establishment and Close-out | <u>\$240,000</u> |
| Total | \$300,000 |



Legend

 Parks (Park Authority)



**Old Colchester Park and Preserve
Proposed Forest Restoration**

**Old Colchester Park and Preserve Forest Restoration Project:
Existing and Desired Conditions Photos**

Existing Conditions: Invasive vines preventing tree regeneration and harming mature trees. Vines also prevent access to cultural resource sites for study and interpretation.



Desired Conditions: Regenerating hardwood forest free of invasive plants.



Natural Resource Management Plan Implementation at Old Colchester Park and Preserve

FAIRFAX COUNTY PARK AUTHORITY BOARD MEETING

SEPTEMBER 13, 2023



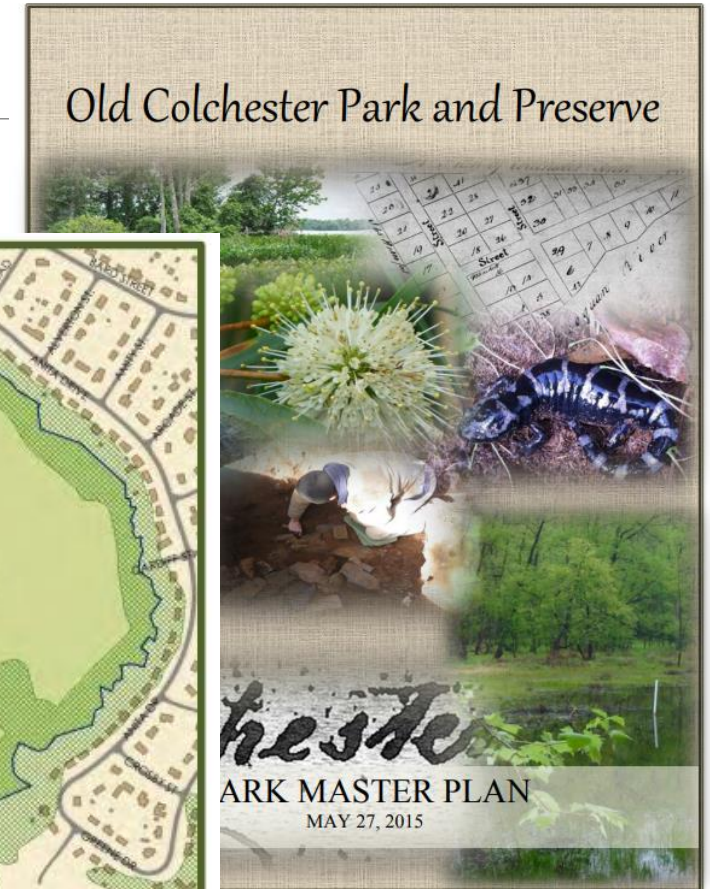
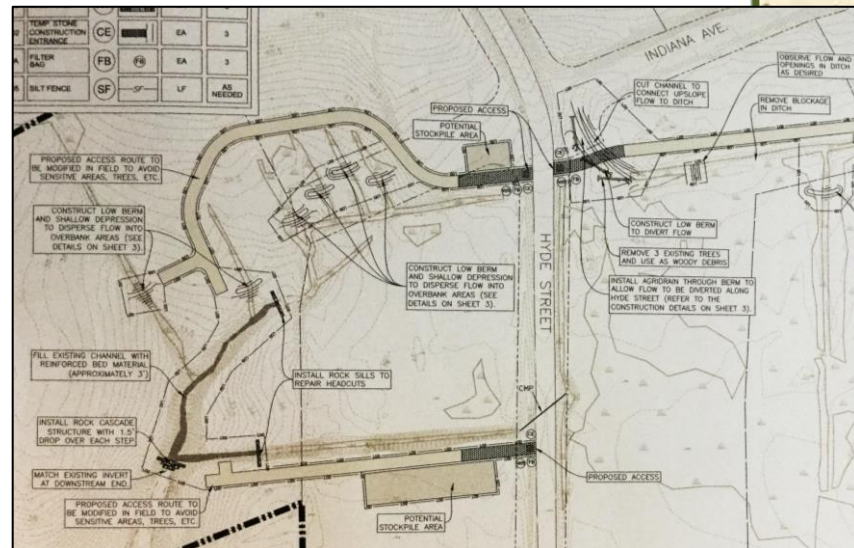
Background – Old Colchester Park and Preserve

Master Plan (2015)

Natural Resource Management Plan (2011)

Extensive Cultural Resource Analysis

Wetland Hydrology Study (2015)



2011 to Present: Implementation of NRMP

Focal areas:

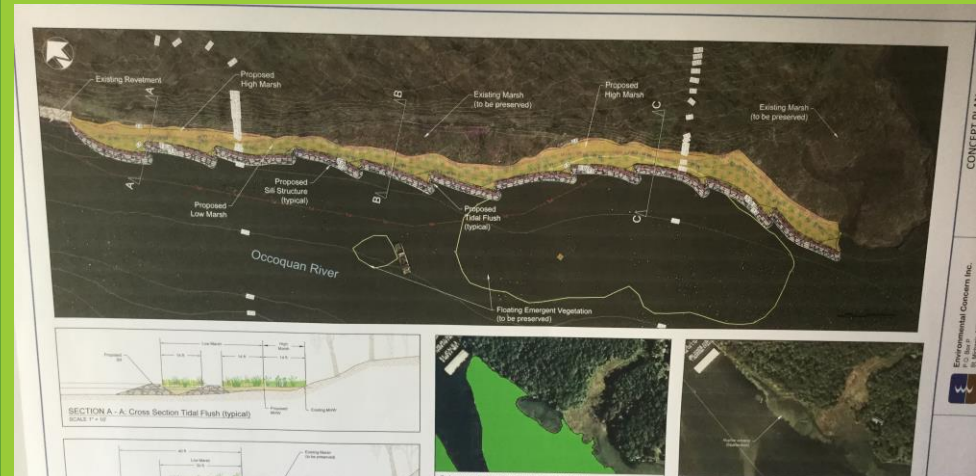
- Amphibian populations
- Rare wetland communities
 - Hydrologic restoration
- Forest management
 - Bio-diversity
 - Forest restoration
- Invasive plant control



Funding Proposal: Continue Implementation

Focal areas:

- Monitoring:
 - Amphibian populations
 - Wetland hydrology
- Forest management and diversity
- Deer exclosures
- Invasive plant control
- Feasibility for Living Shoreline – Scoping and Planning



Funding Proposal: Forest Restoration

- 4 acres
- Forest Structure
- Invasive Plants
- Intersects Colchester Town Site
- Improve Access to Cultural Resources





Acknowledgements

- Park Authority Board
- Board of Supervisors

Questions?