

Update: Anacostia Watershed Restoration: Prince George's County, Maryland

February 23, 2017

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Study Manager

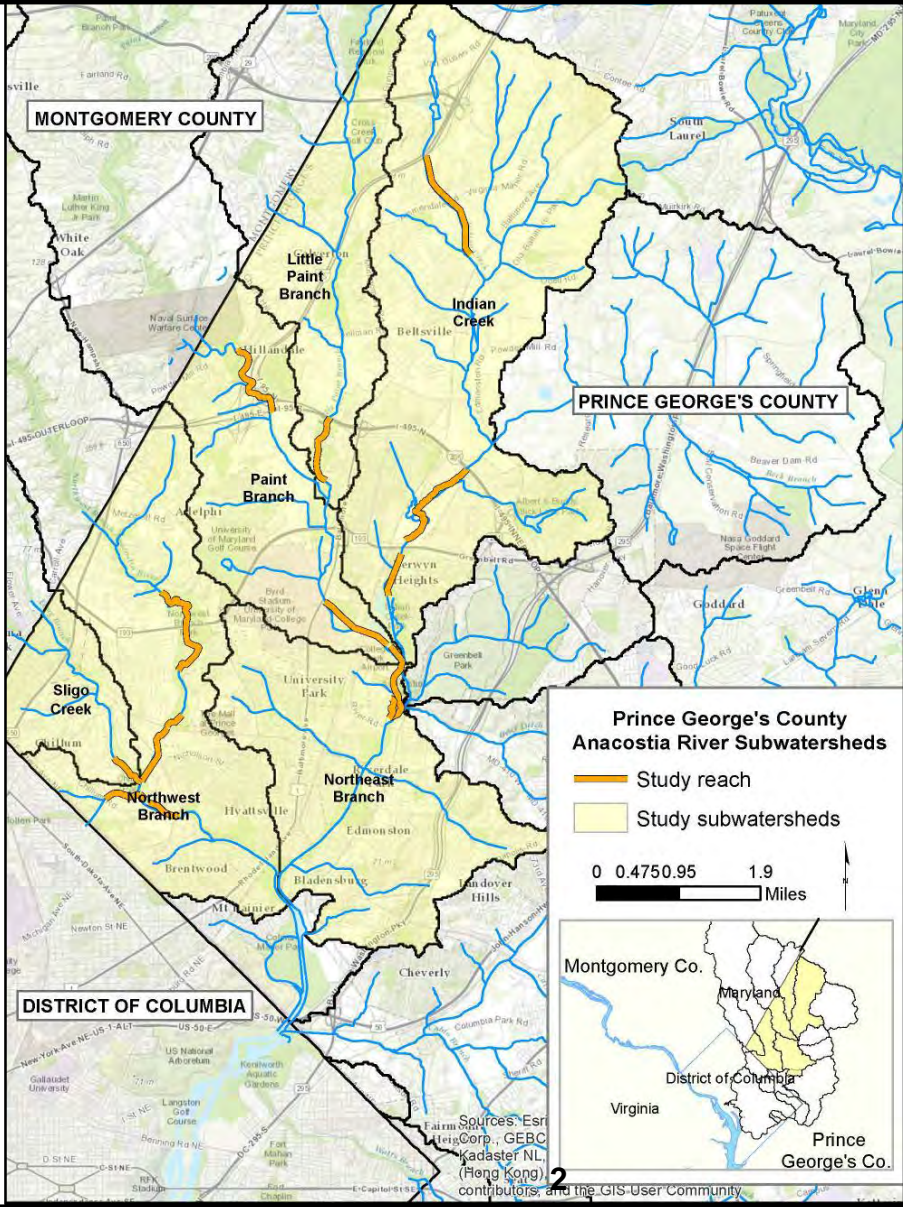
USACE
Baltimore District



US Army Corps of Engineers
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Study Area



Study Area:
Anacostia River Watershed
Prince George's County,
Maryland

Feasibility Study Purpose

- Aquatic ecosystem restoration mission area
- Builds on the Anacostia Restoration Plan (2010)
- Contributes to comprehensive watershed (Chesapeake Bay, Potomac River, and Anacostia River) restoration through interagency collaboration and integration of actions and investments

Sponsor:

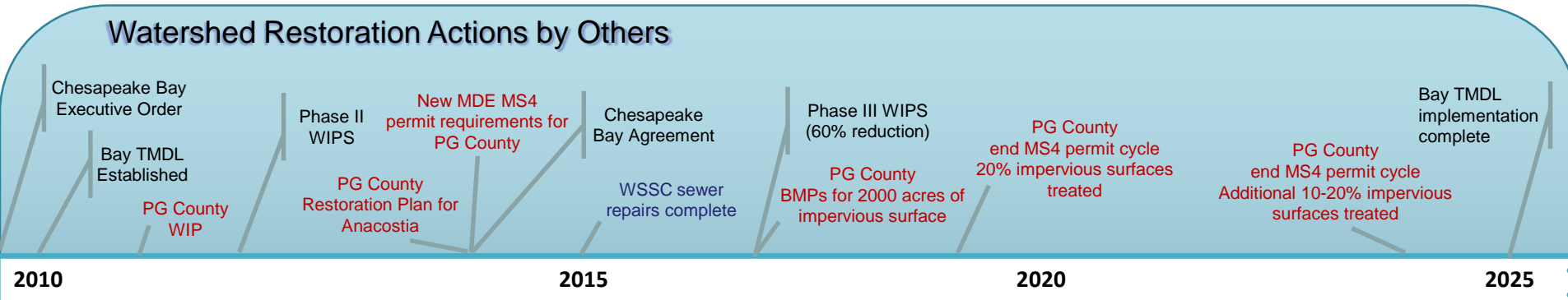
Prince George's County Department of the Environment



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Comprehensive Restoration Strategy

Watershed Restoration Actions by Others



Anacostia Restoration Plan

USACE NW Branch Sec 206 Stream Restoration

USACE Paint Branch Sec 206 Stream Restoration

USACE PG Co GI Chief's Report

USACE PG Co GI Stream Restoration Base Year

USACE PG Co GI Stream Restoration onset of benefits

Habitat Improvement: USACE

Comprehensive Watershed Restoration

Anacostia River Watershed



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Problems & Objectives

Problem:

Human alteration of the Anacostia River watershed has resulted in significant degradation of aquatic ecosystems through changes to the hydrologic regime and direct anthropogenic alteration of streams, including by USACE for flood risk management.



*Site 3 – fish blockage



*Site 5 – channel instability, erosion and scour



*Site 3 – channelization



*Site 15 – channelization, homogeneous habitat

Objectives:

1. Restore degraded in-stream physical habitat in both the Northwest and Northeast Branch subwatersheds
2. Enhance aquatic ecosystem resilience (restore fish passage and connectivity) in both the Northwest and Northeast Branch subwatersheds

Site Selection per Criteria

- 18 screened (23 miles)
- 10 selected for study (11 miles)

Management Measures Combined

- Natural Channel Design (supplemented)

Alternatives Formulated

- Combinations of stream sites for Northwest and Northeast Branches

Cost Effectiveness Analysis

- Parametric costs
- Benefits – MBSS Physical Habitat Index

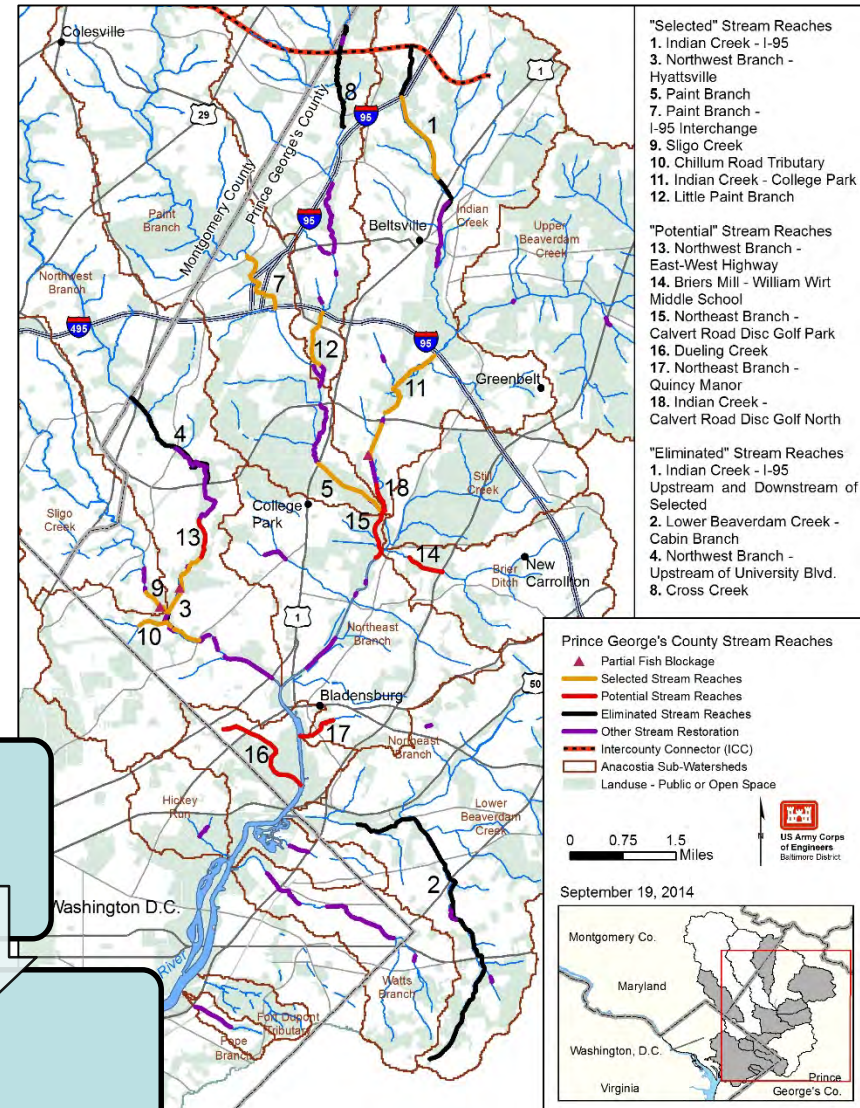
Plan Evaluation and Comparison

- CE/ICA, Planning Objectives, USACE Criteria

Tentatively Selected Plan

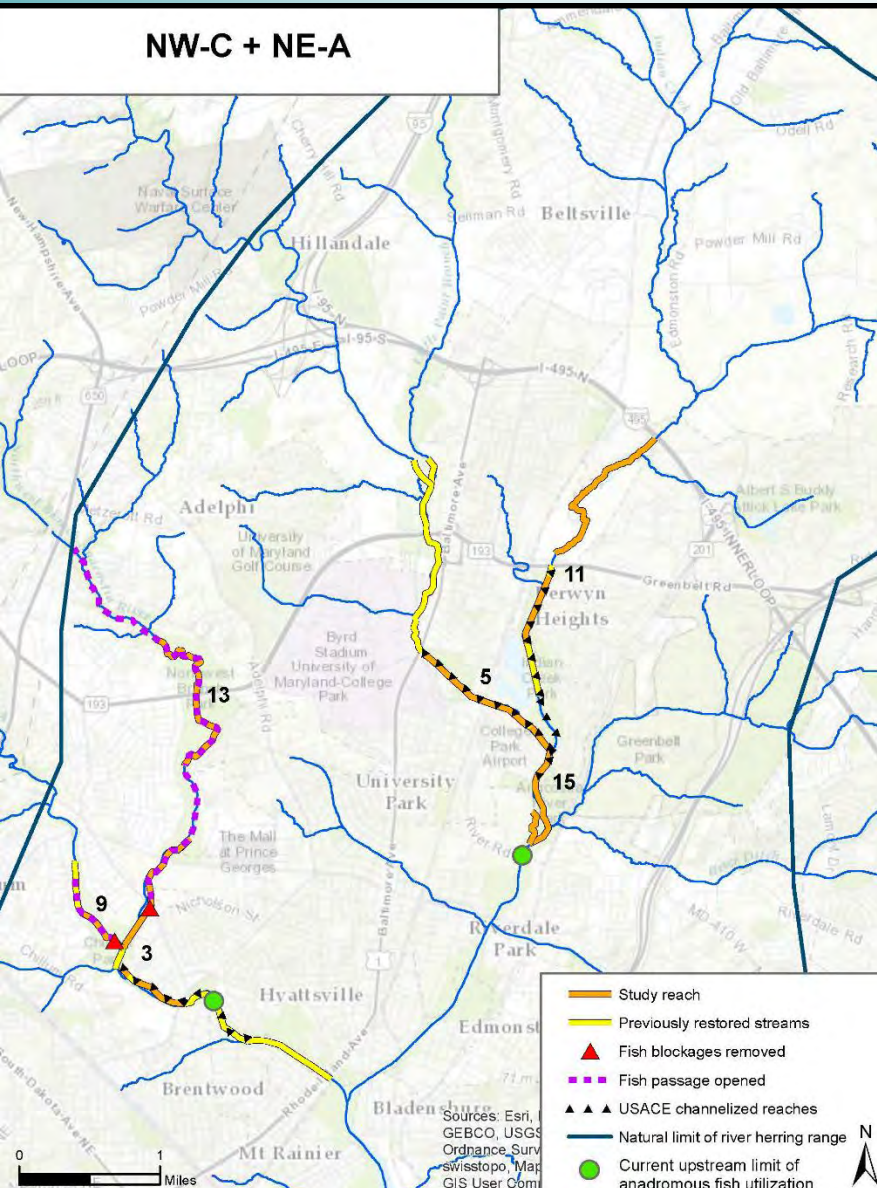
- Six stream sites

Plan Formulation



Site selection process (18 sites screened)

Tentatively Selected Plan



Includes six stream sites:

- Northwest Branch: 3, 9, 13
- Northeast Branch: 15, 5, 11

Restores:

- 7 miles of in-stream habitat (orange)
- 4 miles of fish passage (purple dashed)

Connects:

- 13 miles of restored habitat (yellow)

Restores:

- All four sites damaged by USACE FRM project from 1970s (black triangles)

Enhances prior Federal investments by connecting to previous USACE restoration projects

Meets planning objectives, addresses problems and opportunities:

- Ameliorates fish blockages
- Increases habitat availability
- Increases habitat suitability

Management Measures



J-hook

Fish passage



Nested cross veins

Post-Restoration



Log vein

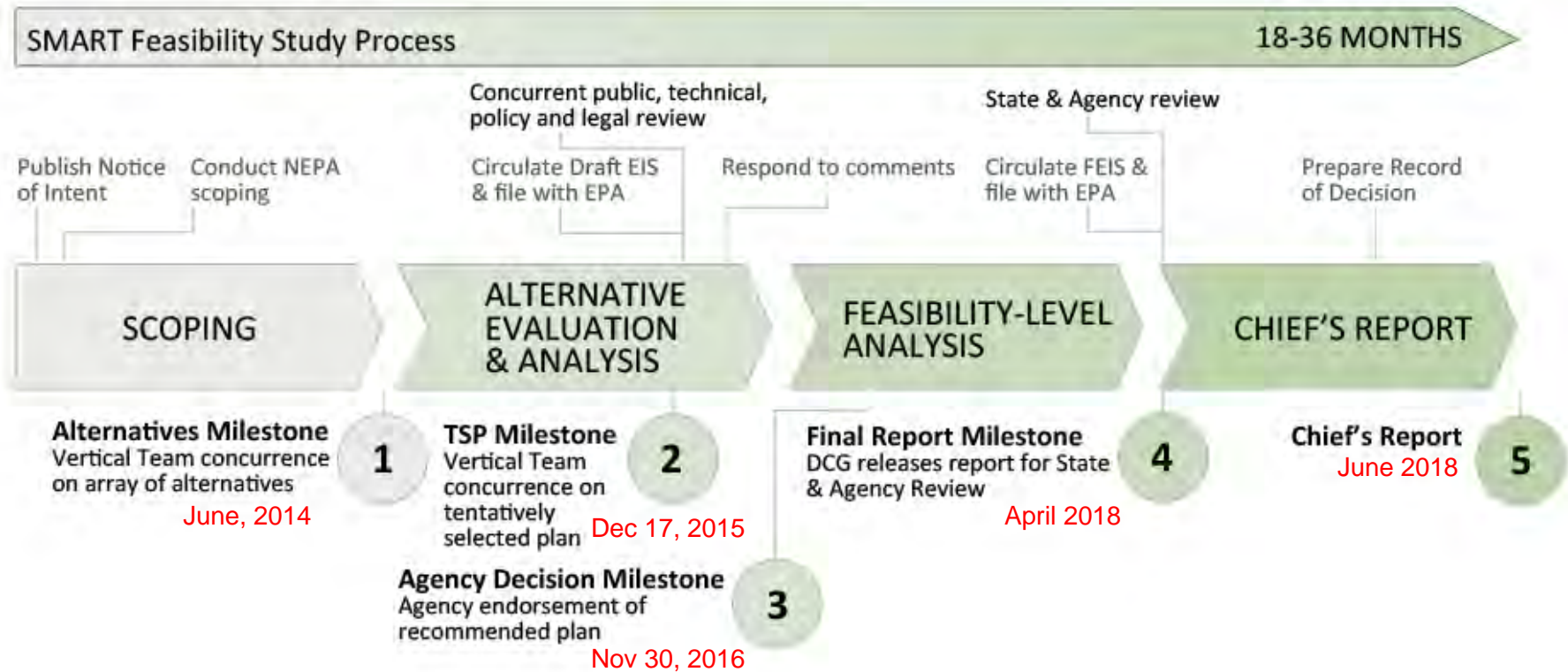
Feasibility-Level Design Phase

- **Draft Feasibility Report** with the **Tentatively Selected Plan** and conceptual designs and costs released for public review in June 2016; concurrent internal reviews
- **Agency Decision Milestone** to gain agency endorsement of the recommended plan held on November 30, 2016
- Currently in **Feasibility-Level Design Phase**
 - Advance design to feasibility-level
 - Run HEC-RAS model for water surface elevation, flood risk
 - Run SIAM (Sediment Impact Assessment Model) to evaluate sediment transport
 - Develop feasibility-level costs
 - Respond to comments on Draft Report
 - Complete agency coordination and environmental compliance
 - Finalize Feasibility Report



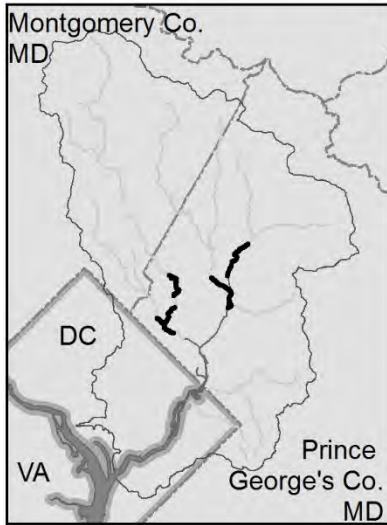
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Schedule



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Questions?



Recommended Plan: NW-C + NE-A

- 7 miles of stream restored
- 4 miles of anadromous fish passage opened
- 13 miles of restored habitat connected

Cost: \$40,694,000 (Federal: \$26,451,000; non-Federal: \$14,243,000)

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