FONT HILL STREAM RESTORATION – CENTENNIAL LANE WEST

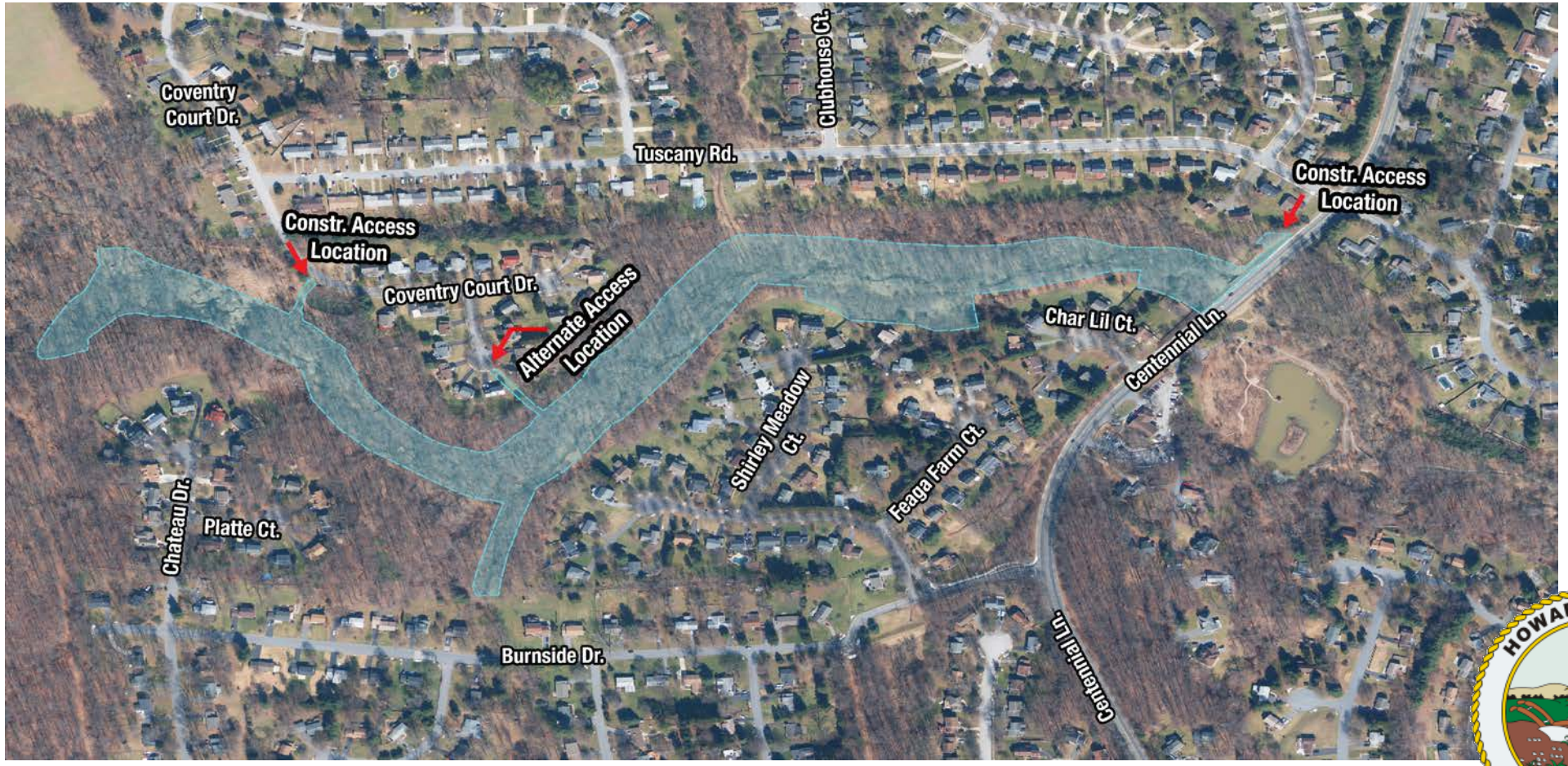
DESIGN BUILD STREAM RESTORATION PROJECT

PUBLIC MEETING - NOVEMBER 30, 2017

Agenda

- Welcome and Introductions
- Project Background
- Proposed Design
- Construction Process
- Schedule
- Question and Answer Session

Location Map



Welcome and Introductions

Brian Cleary, PE
Project Manager, Howard County

Frank Bubczyk
Stream Restoration Designer, JMT

Rick Scaffidi
Stream Restoration Contractor, EQR

Environmental Quality Resources

- Since 1991 – 26 years, 26 crews
- Hundreds of miles stream restoration
- Over 5,000 acres wetland mitigation
- Over 3,000,000 native trees planted

Johnson, Mirmiran & Thompson

- Since 1971 – 45 years, 1,400 professionals
- Over 80 Water Resources & Environmental Specialists
- Designer of the Upper Little Patuxent (ULP) Design-Build Stream Restoration

Why is Stream Restoration Needed?

Improve Ecology

- Plant Trees, Remove Invasive Species
- Pollinators, Birds, and Other Wildlife

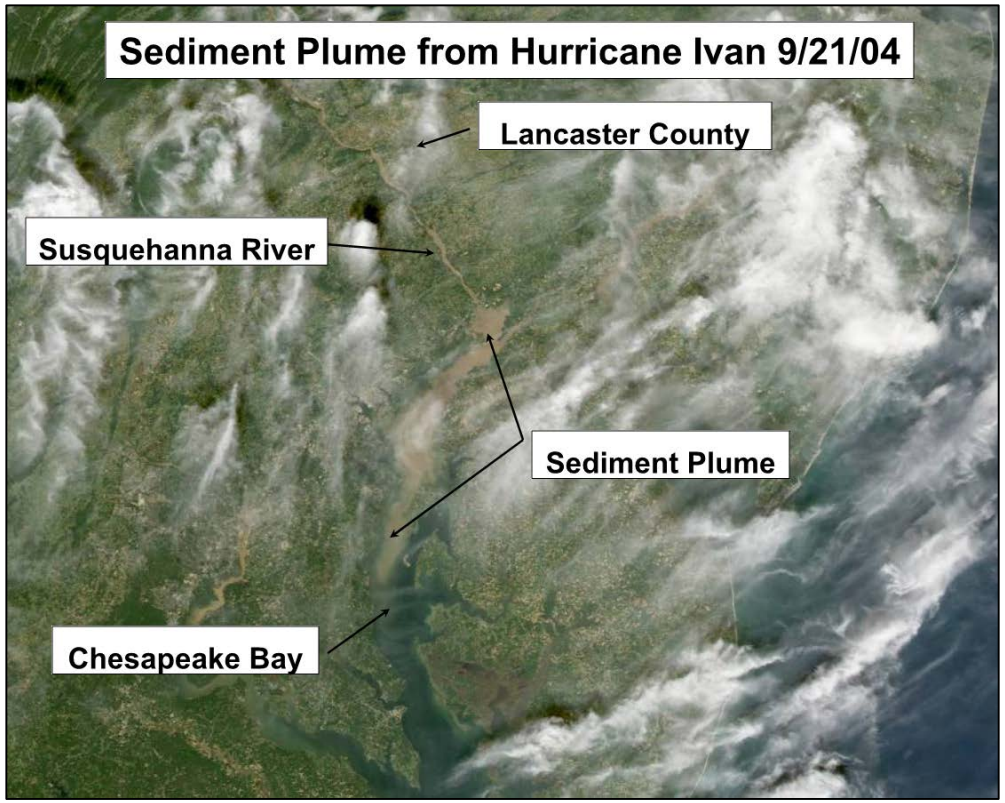
Chesapeake Bay TMDL

- Reduce Sediment and Nutrient Pollution

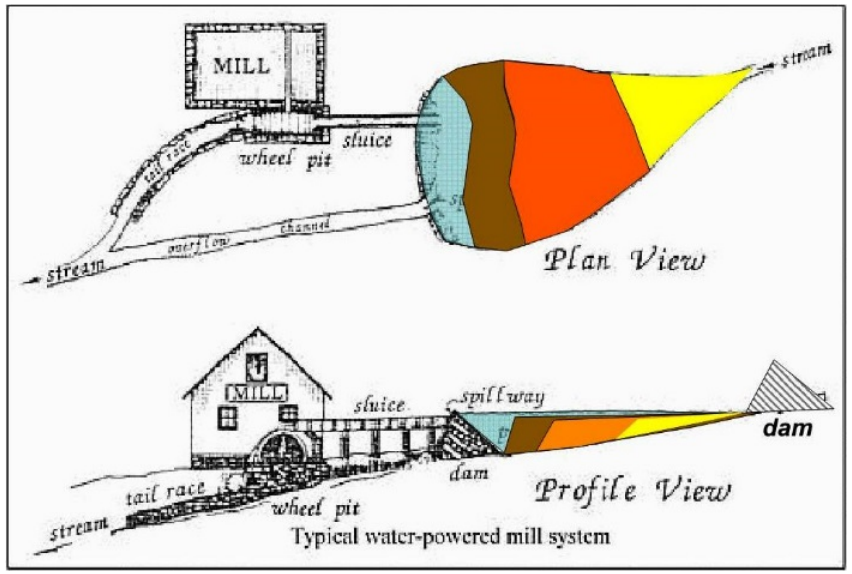
Flooding

- Lower or Maintain 100-year Floodplain Elevation
- Reduce Flood Velocity Improve Ecology

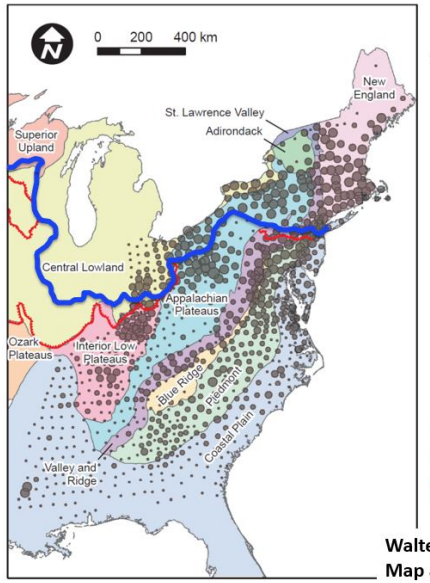
Why is Stream Restoration Needed?



Past Impacts



Typical water-powered mill system



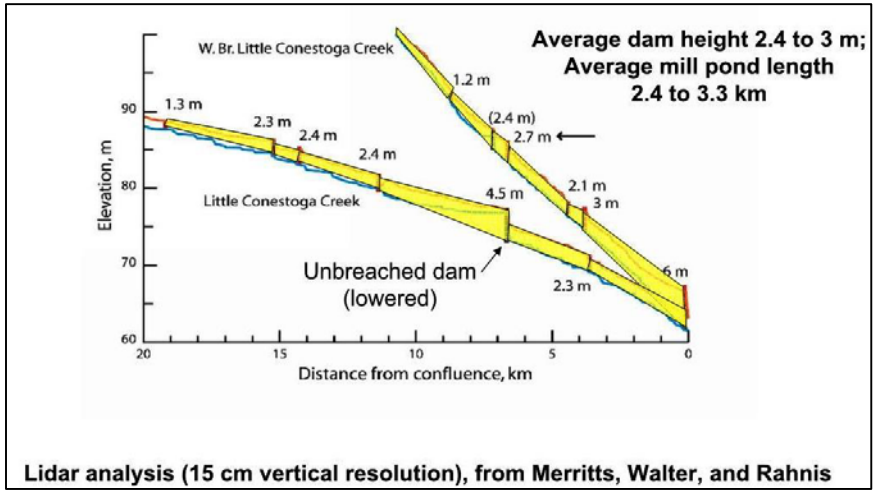
Mill Density 1840 US Census
~65,000 Water-powered Mills

Glacial Limits
Pre-Wisconsin
Wisconsin

Mills per 100 sq-km (# counties)
0.0 - 2.1 (299)
2.1 - 4.8 (258)
4.8 - 8.8 (170)
8.8 - 23.6 (108)
23.6 - 61.2 (1)

"There is no neighborhood in any part of the United States without a water gristmill." **Thomas Jefferson, 1786**

Walter and Merritts compilation, 2008, *Science*
Map and GIS database by M. Rahnis



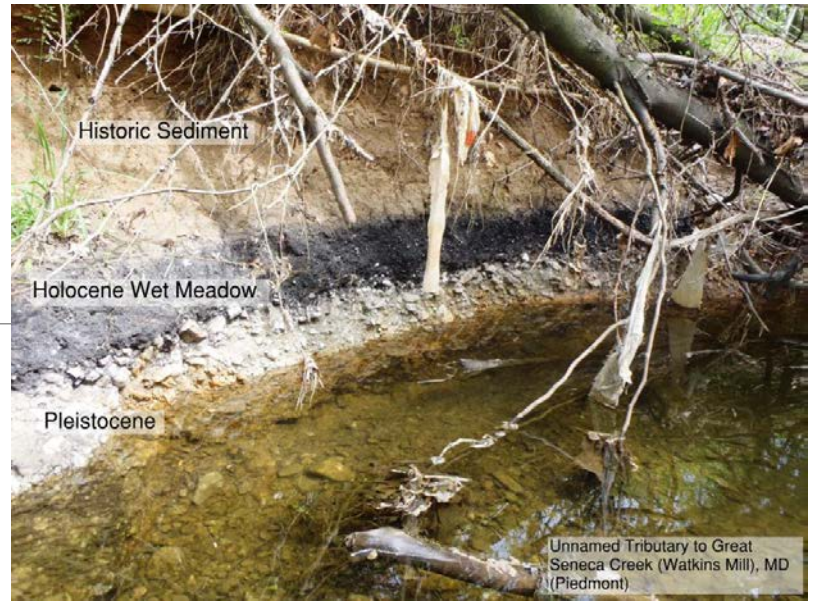
Average dam height 2.4 to 3 m;
Average mill pond length
2.4 to 3.3 km

Lidar analysis (15 cm vertical resolution), from Merritts, Walter, and Rahnis

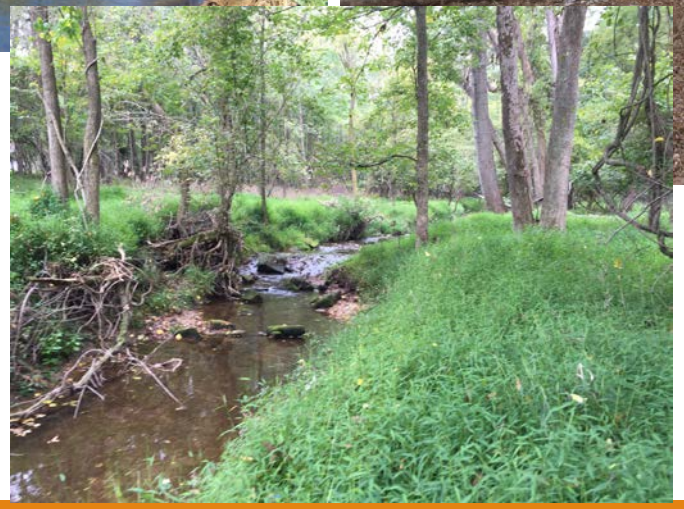
Past Impacts

Few (if any) local, unimpacted systems remaining

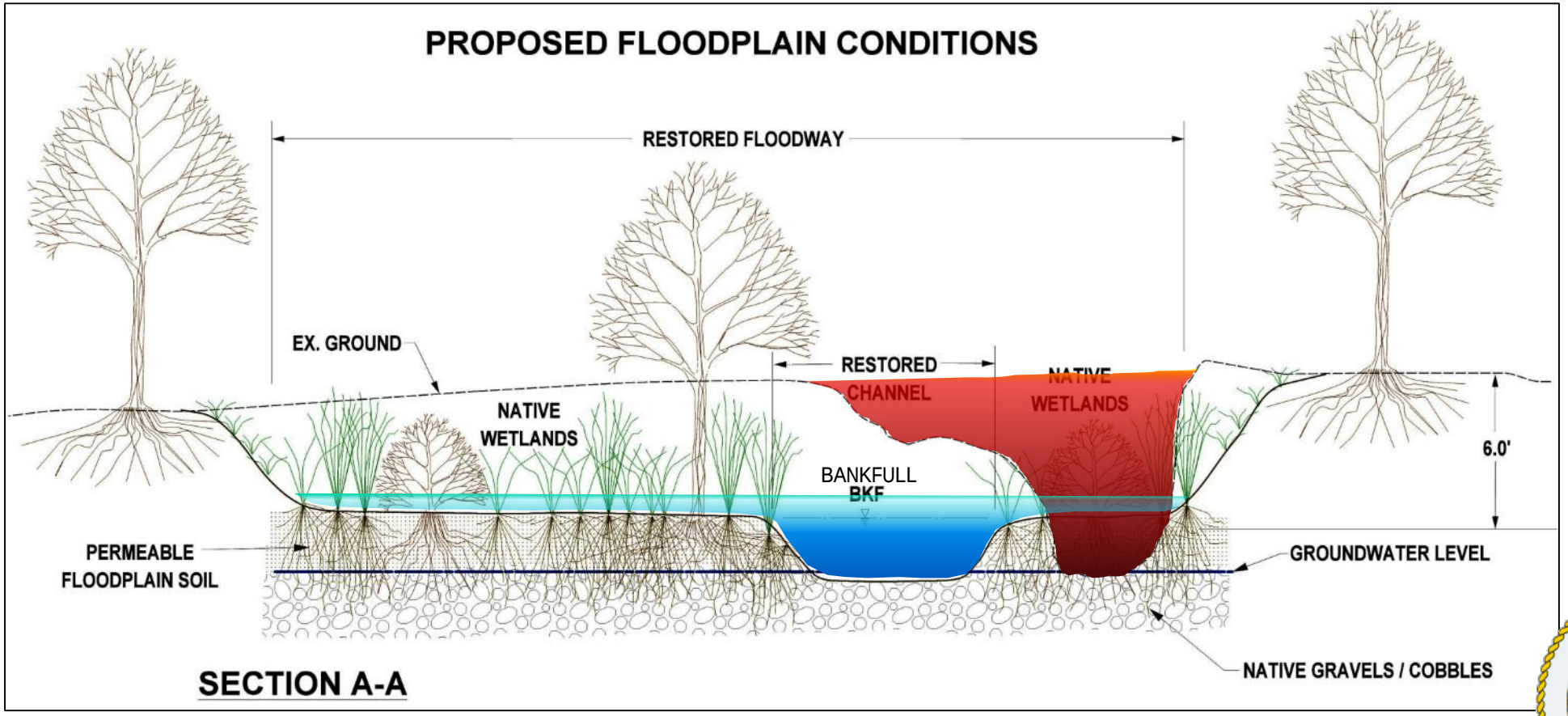
The Evidence



Why is Stream Restoration Needed?



Proposed Design



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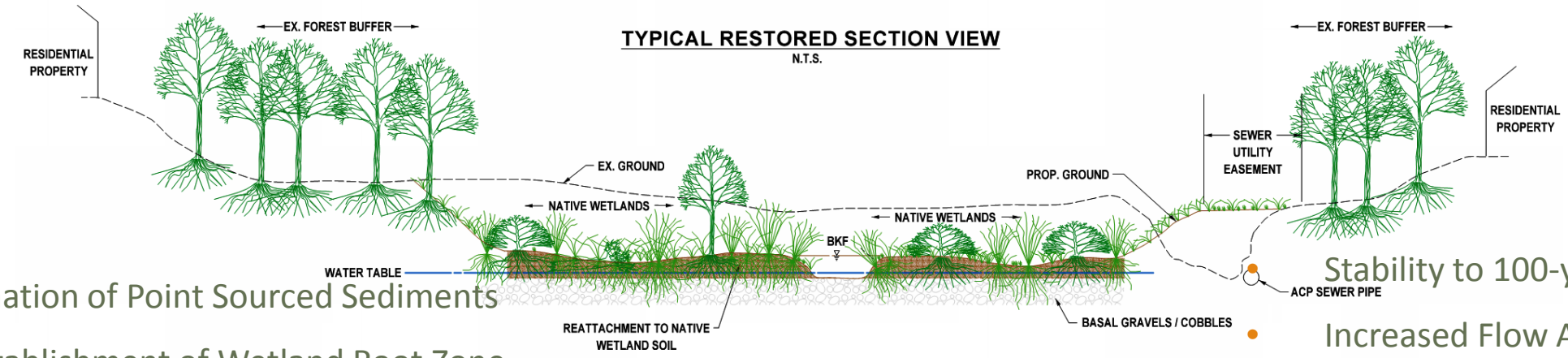


- Elimination of Point Sourced Sediments
- Re-establishment of Wetland Root Zone
- Wetland Enhancement/Creation
- Increased Hydraulic Recharge
- Hyporheic Connection

- Repurposing of Renewable Resources
- In stream facet restoration and habitat
- Thermal buffering
- Carbon Sequestering
- Substrate Restoration

- Stability to 100-year event
- Increased Flow Attenuation
- Floodplain & Channel Diversity
- Significant Nutrient Reductions
- Aesthetic and Educational Value

Restoration?

- Reduce the amount of imported / unnatural materials
- Reduced costs – quarry shortages
- Ease of construction
- Least carbon emissions and climate-resilient design of the approaches, focusing on restoration with native geology

Approx. $1.5 million restoration

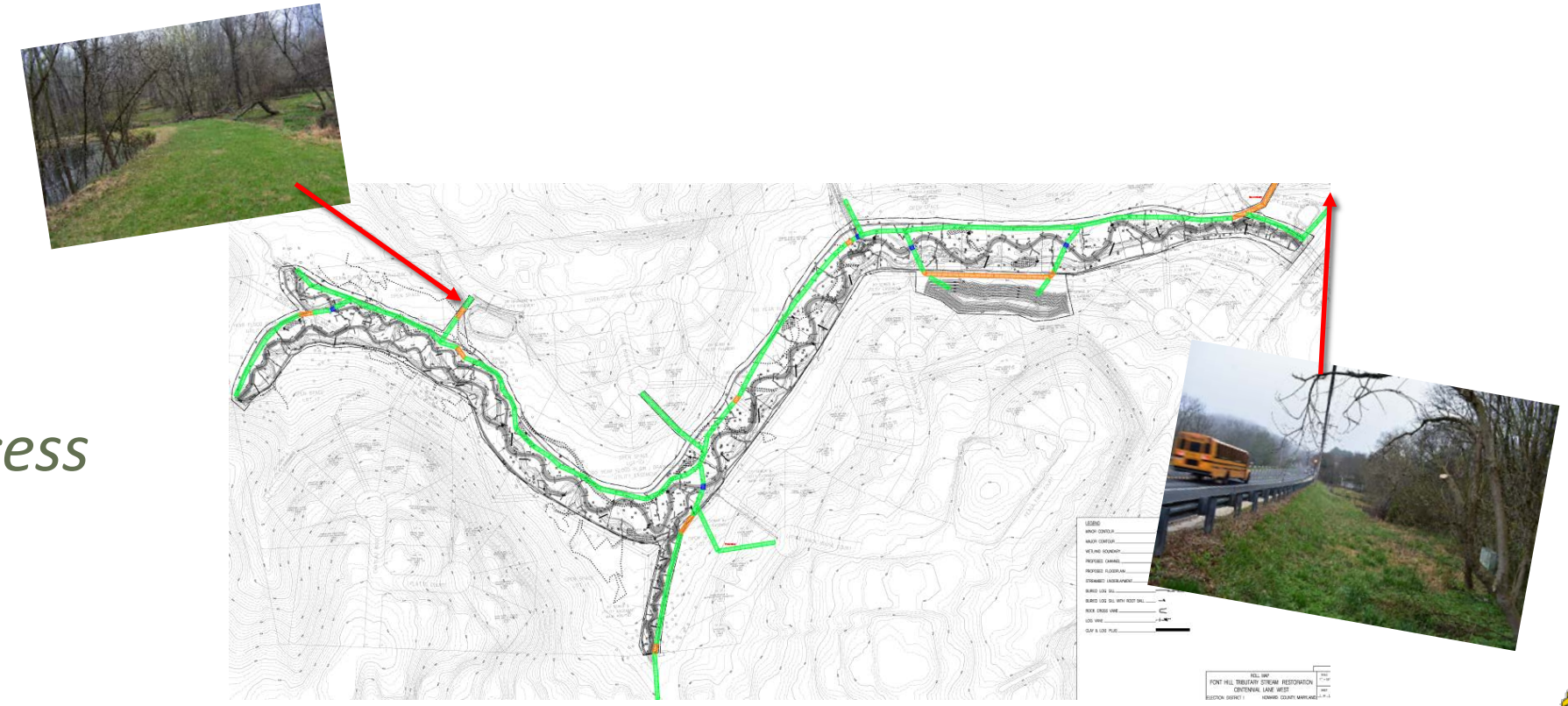
Upper Little Patuxent Stream Restoration

Upper Little Patuxent Stream Restoration

Proposed Design

Construction Process

Access



Construction Process

What to Expect:

- Safe and efficient construction process
- Work starting at Centennial Lane
- Process is phased to minimize disturbance and time in each section
- Significant buffer remains between the residents and construction operation
- Site is kept clean, and follows all local, state, and federal regulations

Construction Process

Project: Nash Run

Construction Equipment

Construction Process

Project: Dead Run

Stabilize active channel at the end of each day

Construction Process

Project: Nash Run

Minimize noise, vibration, and dust

Construction Process

Project: Scotts Level Branch

Typical Construction Hours: 7 a.m. – 5 p.m. weekdays

Construction Process

Project: Goose Creek

Tree removal and replanting

Project Schedule

Item	Timeframe
Public Comment Period	Now - December 15, 2017
Next Design Milestone	March 2018
Next Public Meeting	Spring/Summer 2018
Construction	September 2018

Questions?

Contact Us

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https://www.howardcountymd.gov/Departments/Public-Works/Bureau-Of-Environmental-Services/Stormwater-Management