



Lake Elkhorn Stream Restoration

Project Status

Presented by:

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Wetland Studies and Solutions, Inc.

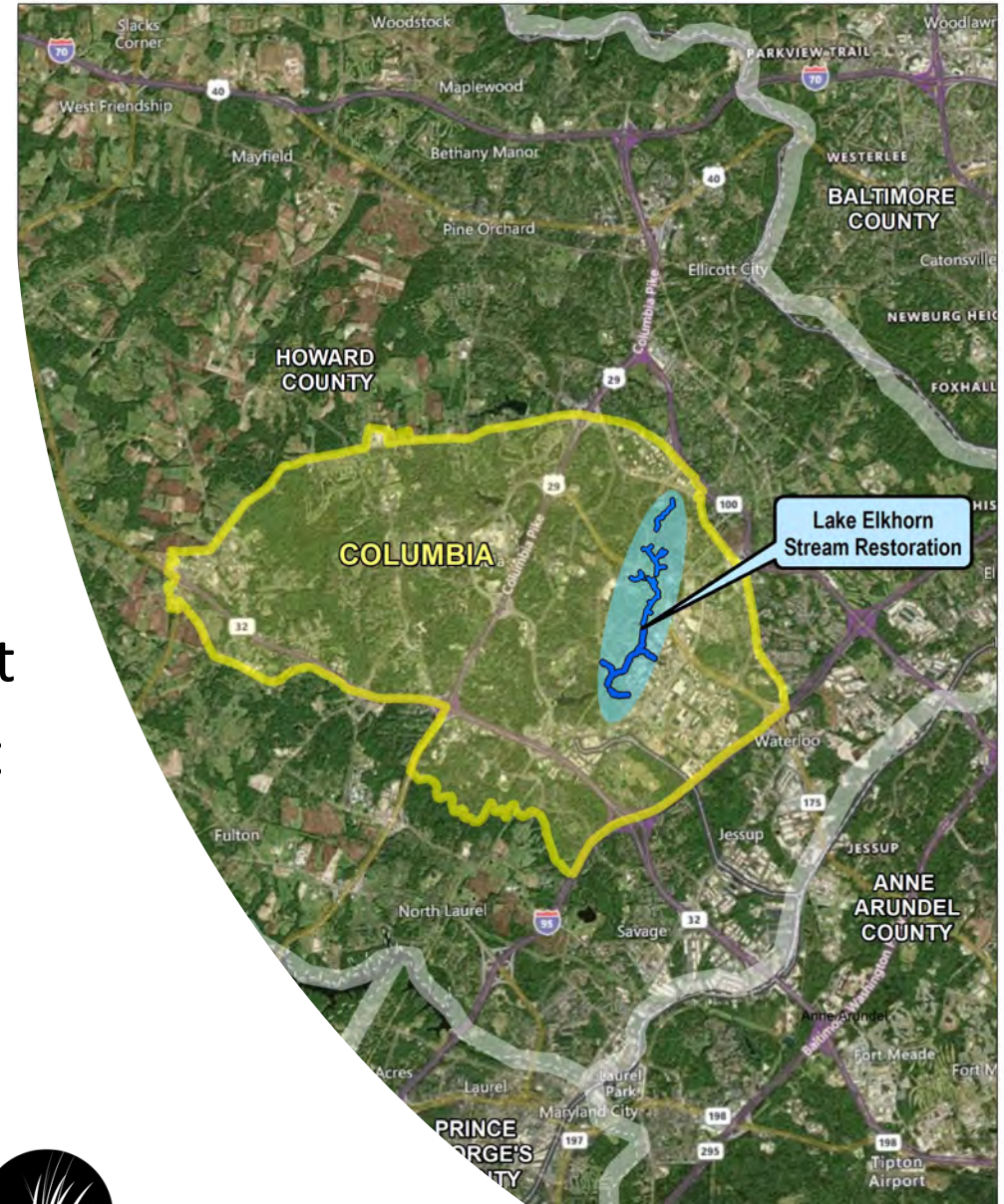


Project Overview

- +33,000 linear feet of stream restoration
- Establish a stream mitigation bank in the Lake Elkhorn watershed
- Place streams and riparian buffer in a perpetual easement
- Allocate a percentage of credit sales to CA for long term monitoring and maintenance

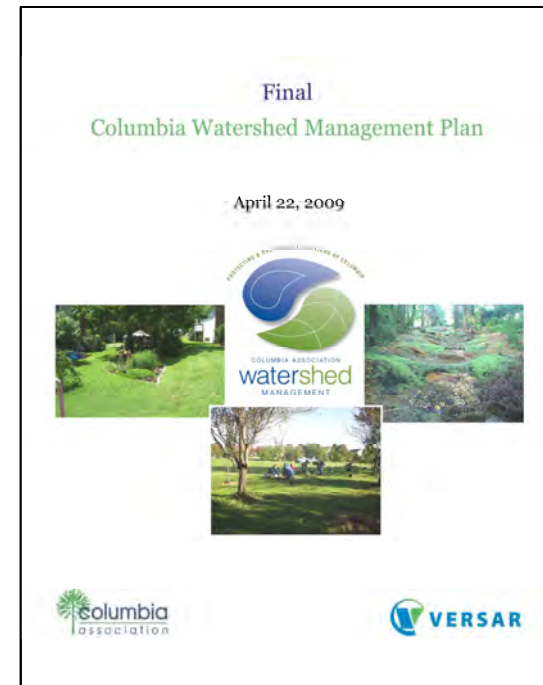
Location Map

Columbia, Maryland



Why Columbia?

- Published studies have identified impairments
 - Columbia Watershed Management Plan, April 22, 2009
 - Countywide Implementation Strategy, December 2015
- Degrading streams located in preserved corridors
- Downstream sedimentation (ends up in lakes)
- Includes entire watershed
- Mitigation Demand



Eroded stream Downstream of High Torr Hill



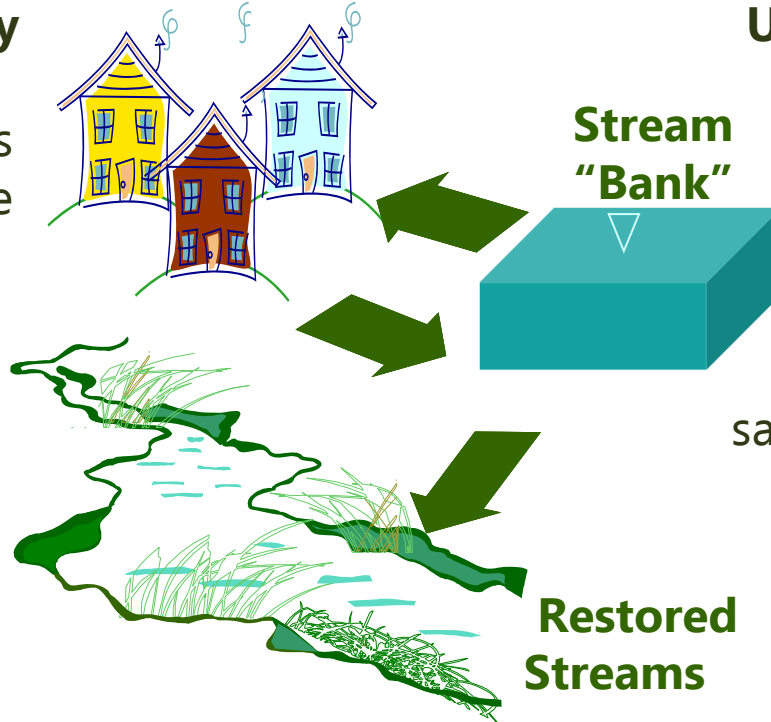
Eroded Stream Downstream of Tamar Dr



What Is A Mitigation Bank

A Public Works Agency or private landowner needs to impact streams on their property. In the past, they would have had to restore streams as compensation, either on- or off-site.

**Public Works /
Landowner**



Under the market-oriented system, they can go to a "bank" created by a Bank Sponsor who has obtained credit for restoring impaired streams elsewhere in the same portion of the rivershed & physiographic province.

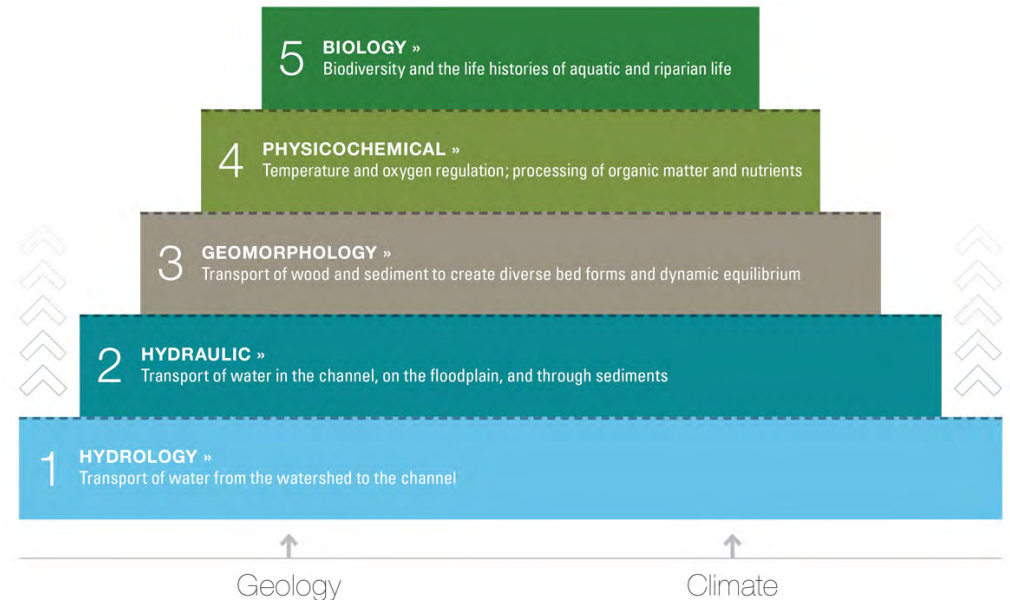
By purchasing stream credits from the Bank Sponsor, the mitigation requirements of a permit for stream impacts is satisfied. Stream restorers use this pooled money to create much larger, well-designed, & ecologically valuable conservation projects.

Adapted from The Washington Post, February 15, 1996



Project Goals

- Provide functional uplift
- Create a stable stream channel
- Mitigate/slow flood flows
- Increase evapotranspiration
- Temperature mitigation
- Improve riparian condition/habitat
- Restore local groundwater levels
- Reduce pollutant loading: (TP, TN, & TSS)
- Preserve green corridors & improve habitat connection
- Downstream sediment reduction: REDUCE SEDIMENTATION IN CA LAKES & DREDGING COSTS



Project Schedule*

Bank Regulatory Approvals

- Prospectus (ongoing – expected Spring/Summer 2022)
- Mitigation Banking Instrument (MBI) (Spring/Summer 2023)

Design and Permitting

- Start Spring/Summer 2022
 - Concept Plan will be concurrent with the MBI development
 - Final Plan(s) and Permit will be after MBI approval

Construction

- Spring/Summer 2024

* Dates shown are approximate



Work Completed

- Prospectus submitted (July 2021)
 - Currently under Interagency Review Team (IRT) Review
- 6-Inch C.I. LIDAR Topo
- Fish Survey
- Functional Stream Assessment

- Limited Existing Conditions Survey
 - Upstream of Jackson Pond
 - Fall 2020
 - Wetland Delineation
 - Forest Stand Delineation
 - Existing Conditions Survey
 - Utility Survey



Conducting a Wetland Delineation



Lake Elkhorn Functional Assessment

What Are You Seeing?

Flagging:

- Pink: Wetland(s) and Waters of the United States (i.e. stream) boundaries
- Red: Specimen Trees (trees $\geq 30''$ diameter at breast height, (dbh, diameter measured at 4.5' off the ground) identified as part of the FSD
- Orange: Survey traverse and elevation benchmarks
- Blue: Limit of tree survey (trees $\geq 12''$ dbh)

Tree Tags (and tree survey):

- Trees $\geq 12''$ dbh
- Within approx. 50 feet of each stream bank (on CA property)
- ID'd, tagged, assessed health, & survey located
- Assigned ID number for future reference
- For planning purposes
- Does NOT mean a tree is being removed



Opportunities for Public Comment/Review

Scheduled:

- 10/26/2021 (virtual): Columbia Association Public Information Session on watershed planning and history
- 11/02/2021 (in-person): Columbia Association /WSSI Public Information Session on the Lake Elkhorn project

Pending:

- MDE/USACE Public Hearing
 - Will be 30-day advance notice
- During Plan Development
 - 3 meetings per Reach (Existing, Concept, and Final)

Continuous:

- Project Website*: marylandmitigationbank.com
- Project Email*: lakeelkhorn@davey.com

*Website and Email will be live on Friday 10/8/2021

