



PHYSICAL DEVELOPMENT COMMITTEE
City Council Committee

Tuesday, December 12, 2023 | 3:00 PM
2nd Floor Training Room- City Hall
900 Church Street
Lynchburg, VA 24504

PHYSICAL DEVELOPMENT COMMITTEE AGENDA

- I. Welcome** *Councilmember Larry Taylor, Chair*
- II. Information Items**
 - II.1. College Lake Dam Removal Update**
- III. General Business**
- IV. Roll Call**
- V. Next Regular Meeting**

AGENDA ITEM SUMMARY

MEETING DATE

December 12, 2023

PRESENTED BY

Timothy Mitchell, Director of Water Resources, Erin Hawkins, Water Quality Manager

AGENDA ITEM # II.1

College Lake Dam Removal Update

RECOMMENDATION

Information Only.

SUMMARY

College Lake Dam is considered a high hazard dam and is not in compliance with the Department of Conservation and Recreation's Dam Safety Regulations. In order to comply with the regulations, either the dam would need to undergo major safety upgrades or be removed. In August 2018, the College Lake Dam over-topped and nearly failed. The City of Lynchburg recently received bids for the College Lake Dam Removal and Restoration Project and English Construction was the successful low bidder with costs coming in on budget. Staff will provide an update of the project status including purpose and goals, budget, construction activities, and long-term management.

PRIOR ACTION(S)

Previous Budget and Capital Improvement Plan authorizations.
Various City Council briefings and updates.

FISCAL IMPACT

Prior CIP appropriations totaling \$22,500,000 have been authorized by City Council. The funding sources include \$5 million in DCR Dam Safety Grants, \$10 million from Virginia Clean Water Revolving Loan Fund with an additional \$2.5 million in principal forgiveness with the remaining \$5 million in General Obligation Bonds. Total project costs including contingencies equal \$22,500,000.

CONTACT(S)

Timothy Mitchell, Director of Water Resources

ATTACHMENT(S)

1. Council PDC Mtg College Lake Update Dec 2023

REVIEWED BY



Timothy Mitchell, Director of Water Resources

Date: November 30, 2023



Gregory Patrick, Deputy City Manager

Date: December 05, 2023



Alicia Finney, Clerk of Council

Date: December 07, 2023



COLLEGE LAKE DAM REMOVAL AND RESTORATION PROJECT

Physical Development Committee

December 12, 2023



OVERVIEW

- 1. Project**
- 2. Budget**
- 3. Construction Activities**
- 4. Long-Term Management**





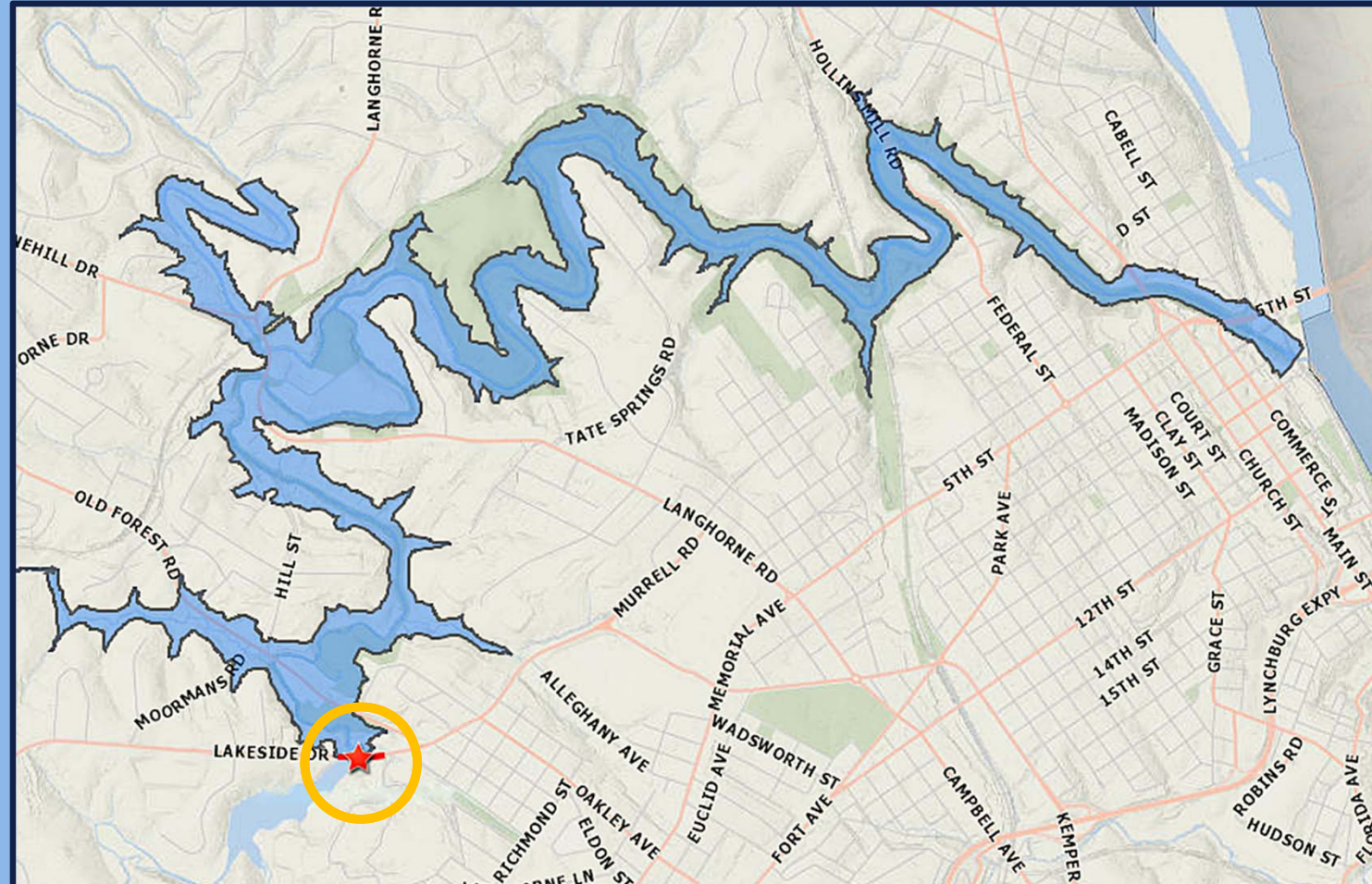
Project Overview

REMOVE RESTORE RECONNECT

PROJECT OVERVIEW

PROJECT PURPOSE AND GOALS

- Removal of a high-hazard dam to provide protection of life, property, and the environment.
- Preserve floodplain capacity and coordination with FEMA on current mapping.



PROJECT OVERVIEW

PROJECT PURPOSE AND GOALS

- Manage historical sediment accumulated behind the dam in a way that minimizes downstream water quality impacts.
- Restore Blackwater Creek and its adjacent tributaries that have been impacted by the dam.
- Provide wetland restoration and establishment opportunities in the former and adjacent floodplain.

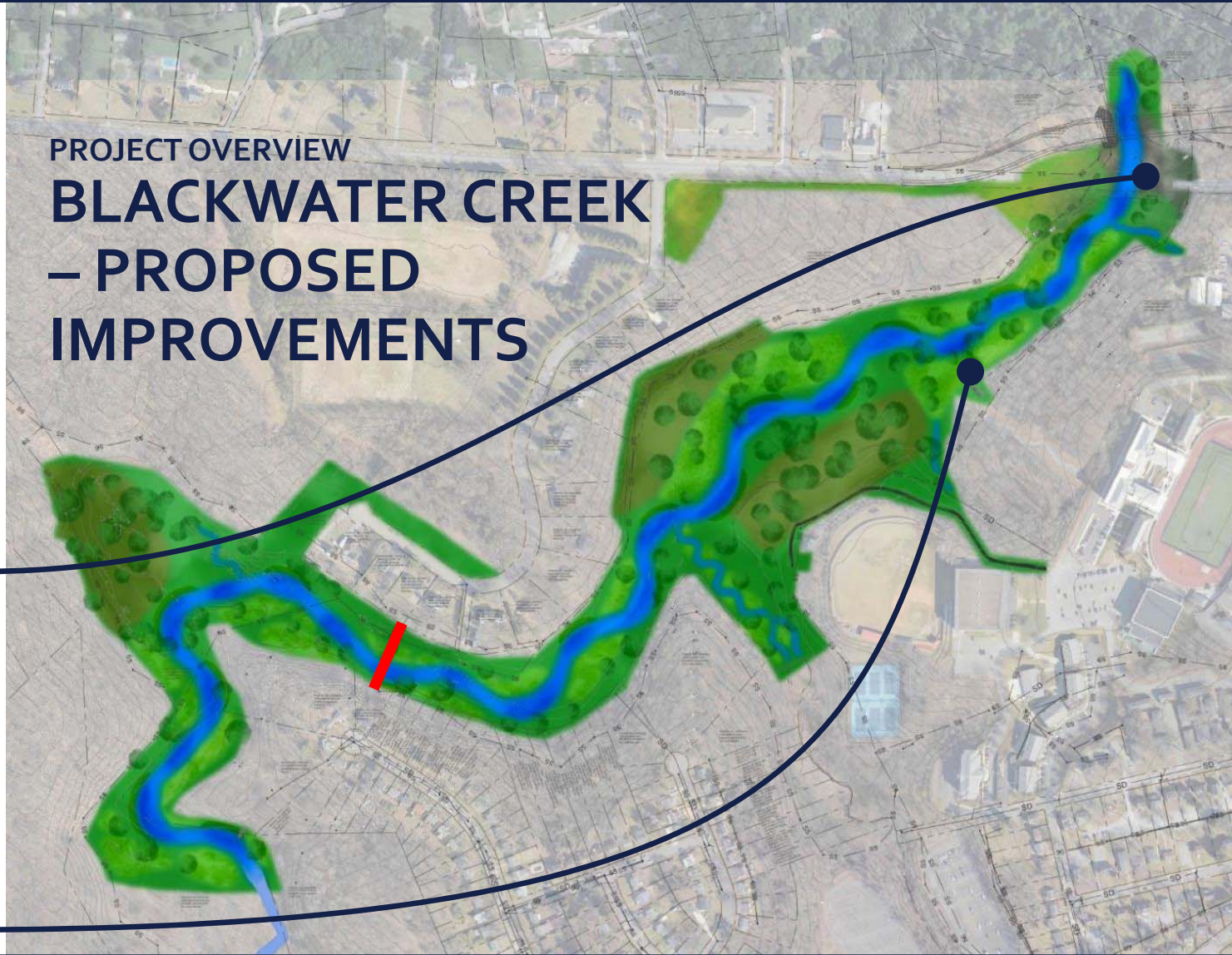




Armored cascade grade control

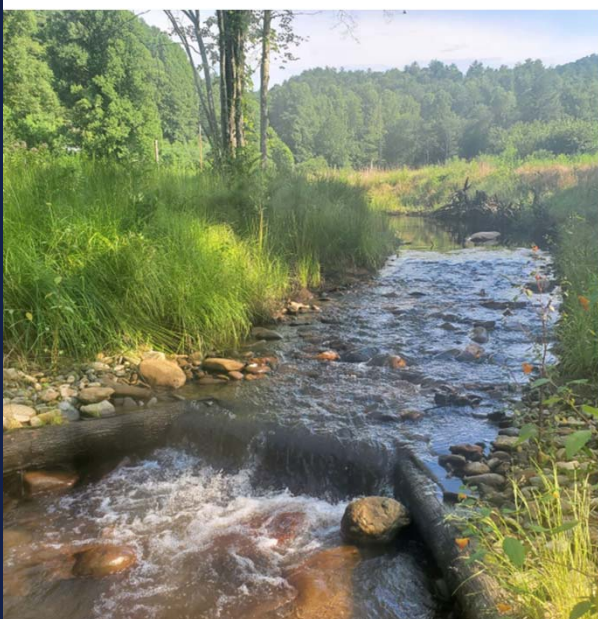


Toe wood bank protection

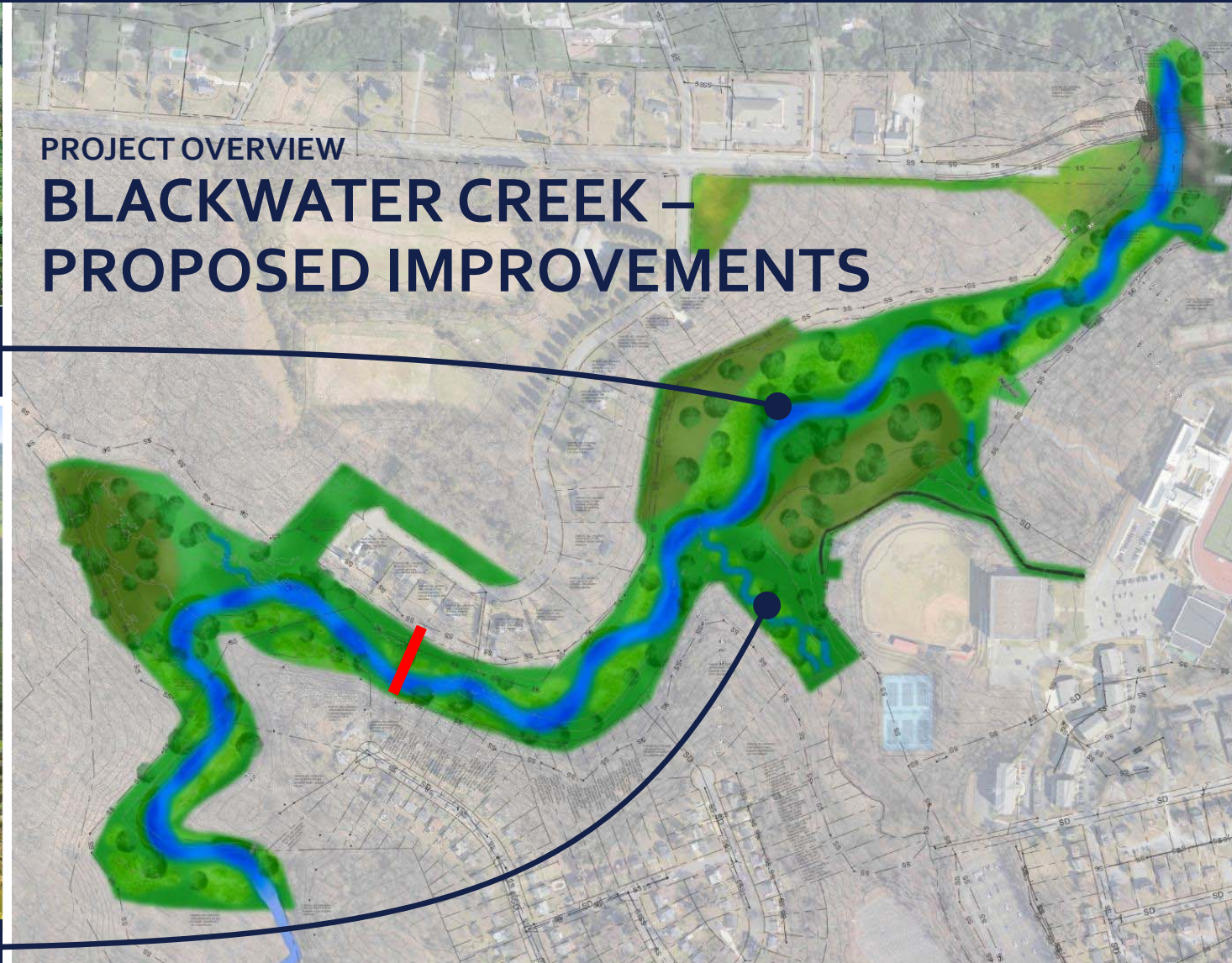


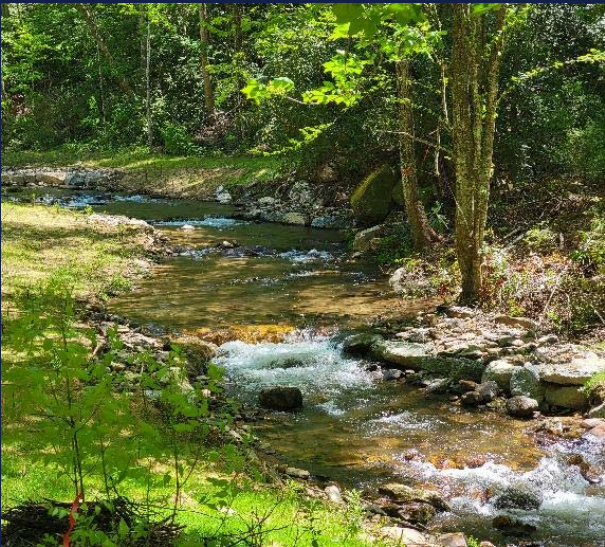


Increased meandering
of Blackwater Creek



Log cross vane grade control

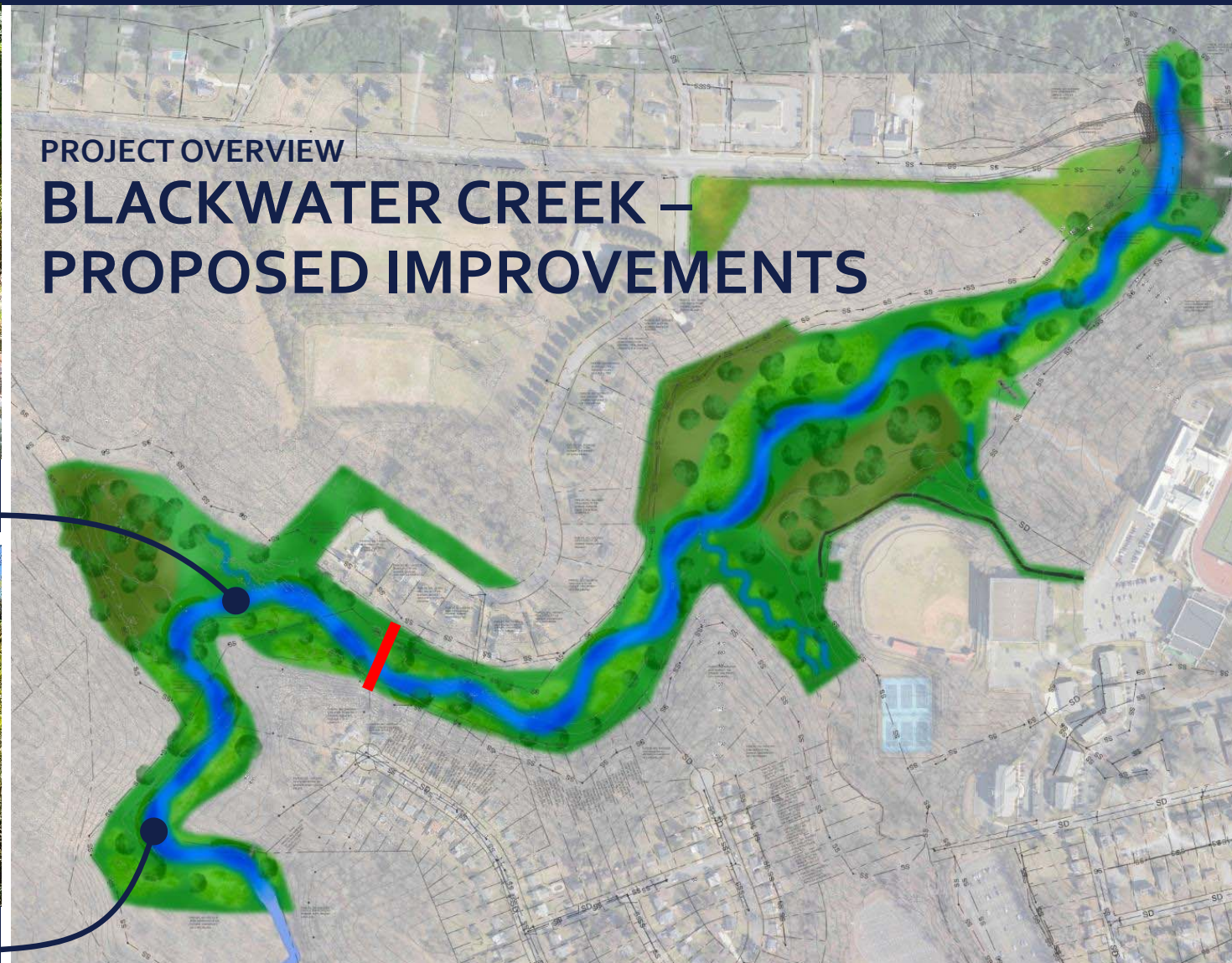


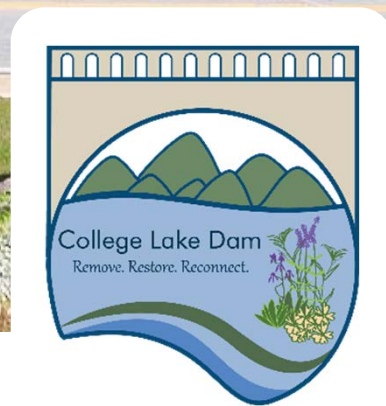
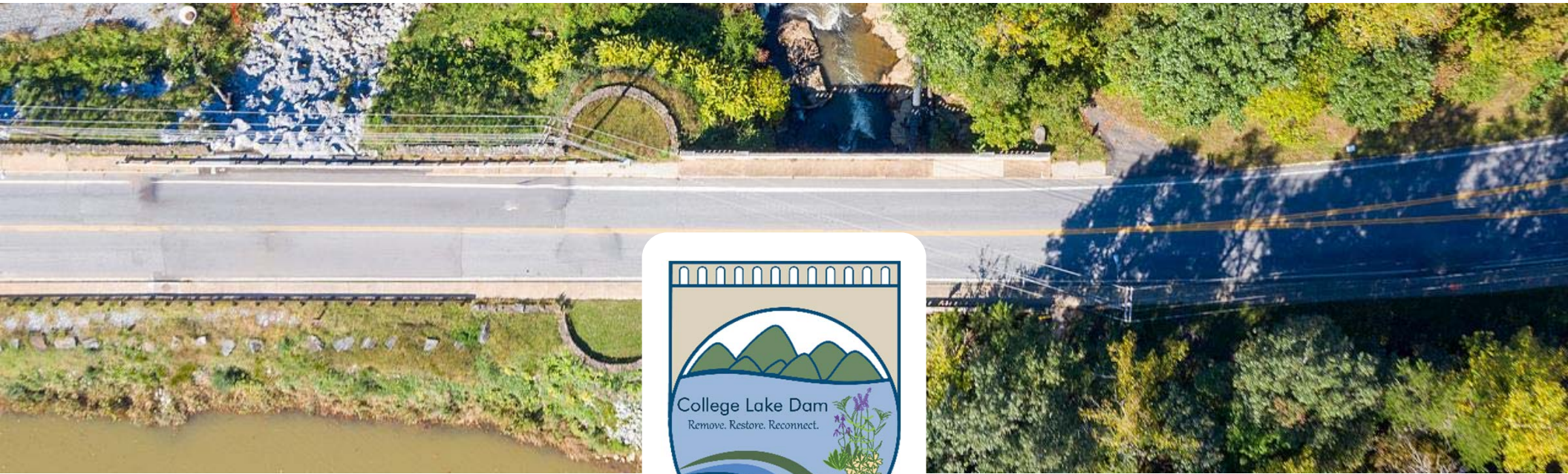


Boulder grade control vane



Dense native vegetation





Budget

REMOVE RESTORE RECONNECT

BUDGET OVERVIEW

Project Costs	
Engineering	\$1,809,716.76
Land Acq/ROW	\$62,559
Construction Administration	\$1,587,680.80
Construction Base Bid	\$17,478,495.35
Misc	\$35,572.68
Contingency	\$1,525,975.41
Total	22,500,000.00

■ Funding Sources

- \$5M DCR Dam Safety Grant
- \$10M Virginia Clean Water Revolving Loan Fund + \$2.5M Principal Forgiveness
- General Fund





Construction Activities

REMOVE RESTORE RECONNECT

CONSTRUCTION ACTIVITIES

CONTRACTOR INTRODUCTION

Primary contractor: W. C. English, Incorporated

- Subcontractor: Resource Environmental Solutions

Contractor qualifications:

- Lynchburg company with local resources.
- Experts in mass excavation.
- Experience with dewatering.
- Experience with erosion and sediment controls.
- Experts in stream and wetland restoration.
- Knowledgeable about history of College Lake and Dam as well as stakeholder concerns.



CONSTRUCTION ACTIVITIES

CONSTRUCTION SCHEDULE



CONSTRUCTION ACTIVITIES

ANTICIPATED DAILY SCHEDULE

Monday – Friday

- Work to be conducted 24-hours a day on infrequent occasion for impacts to dam itself (breaching and dewatering installation).
- Expected hours: 7 AM – 5/6 PM

Saturdays and Sundays

- Limited to required 24-hour operations for dam breaching and dewatering installation.
- Limited to adhere to schedule and to overcome any delays.

Holidays

- Work will be halted on the following holidays: Veterans Day, Thanksgiving Day, Christmas Day, New Years Day, etc.

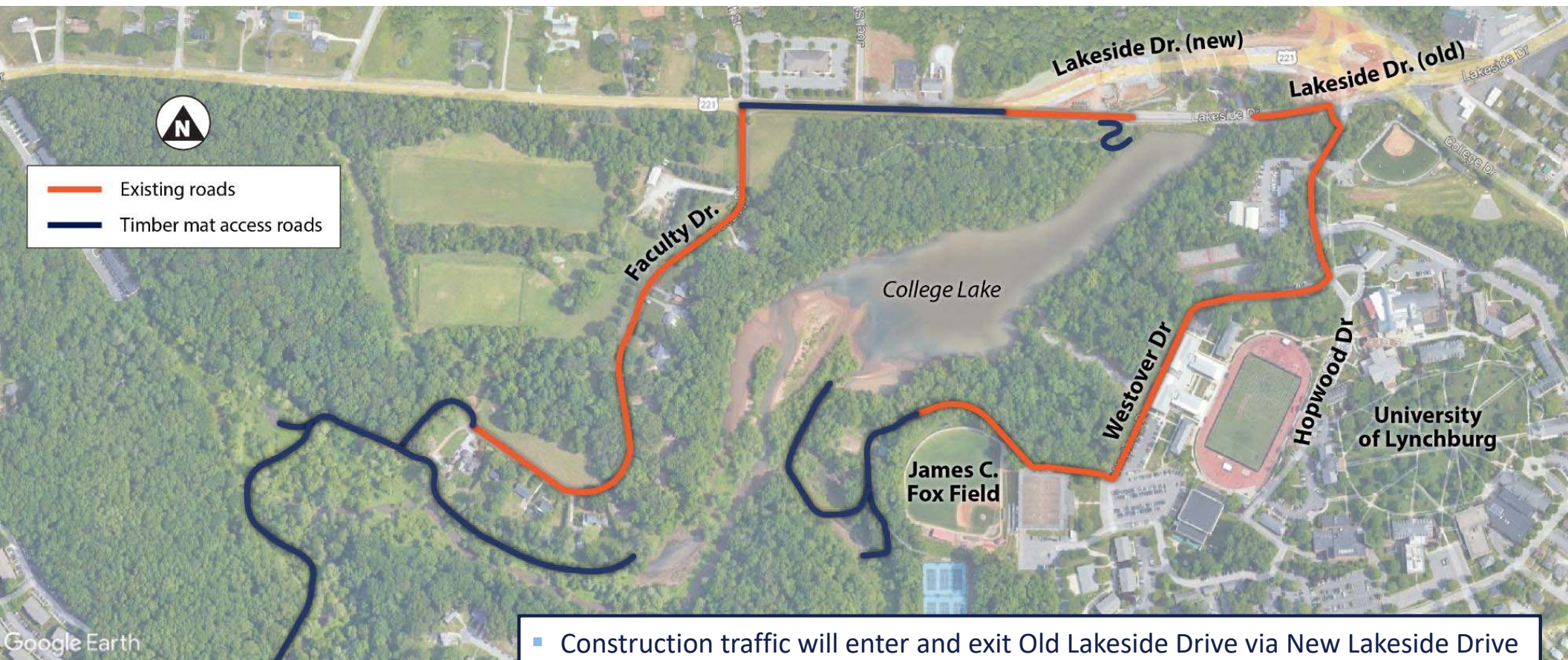


CONSTRUCTION ACTIVITIES

CONSTRUCTION SIGNAGE

- During construction, Creekside Trail will be closed from Lakeside Drive to Shirley Road.
- Signage will be posted for duration of project.
- Close coordination with Parks & Recreation and the University of Lynchburg.





CONSTRUCTION ACTIVITIES

CONSTRUCTION TRAFFIC

- Construction traffic will enter and exit Old Lakeside Drive via New Lakeside Drive on the west and Hopwood Drive on the east.
- Construction traffic will utilize Faculty Drive's dead end for access to site.
- Construction traffic will utilize Hopwood Drive and Westover Drive on University of Lynchburg campus for site access by Wake Field House and Fox Field.
- Routes to be refined as construction progresses.

CONSTRUCTION ACTIVITIES **DEWATERING**

- Flexible water level management to facilitate sediment management upstream
- Slow, controlled rate of dewatering
- Targeted seasonal dewatering



CONSTRUCTION ACTIVITIES

RESTORATION & SEDIMENT MANAGEMENT



Sediment traps will be constructed to capture and transport sediment to permanent stockpile areas



Impounded sediment will be removed by mechanical methods with specialized equipment

CONSTRUCTION ACTIVITIES

EXPECTED SITE CONDITIONS DURING CONSTRUCTION

During construction, you may notice:

- Unpleasant odor
- Construction noise
- Unattractive view
- Murky water



CONSTRUCTION ACTIVITIES

SEDIMENT STOCKPILES

- Sediment may be stored on site in designated, convenient stockpiles.
- Stockpiles are designed to blend into the valley and will be planted with natural vegetation.
- Stockpiles will consist of up to approximately 150,000 cubic yards spread across potentially 3 stockpile locations.



Erosion control matting and coir logs will stabilize stockpiles and slow run-off



Post construction



30 days post construction

CONSTRUCTION ACTIVITIES

DAM REMOVAL

- Install dewatering system & dewater College Lake.
- Excavate dam breach creating 15ft wide stream channel (24-hour continuous operation).
- Continue dam excavation to final stream elevations and complete removal of earthen dam.
- Stabilize slopes and create proposed stream and banks per design.



CONSTRUCTION ACTIVITIES

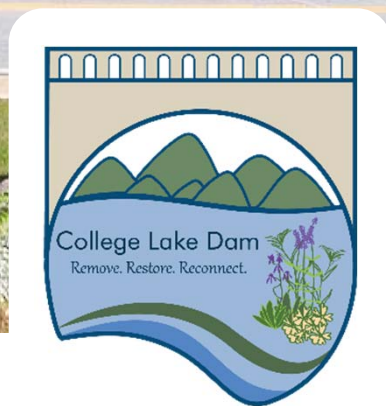
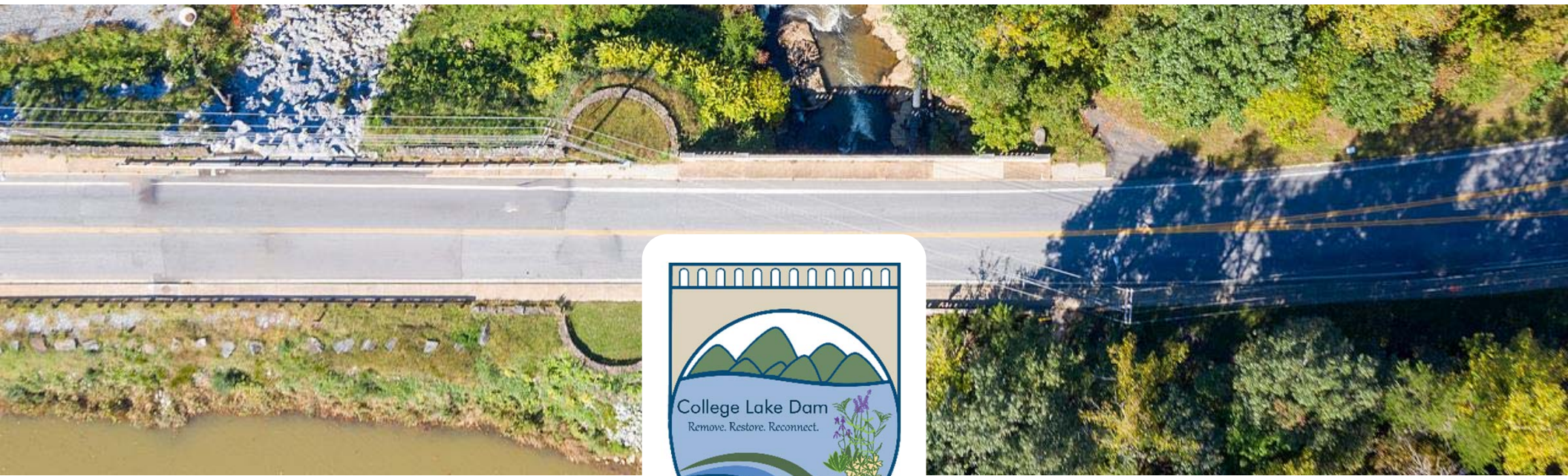
MONITORING & CONSTRUCTION OVERSIGHT



Cellular alert monitoring of dissolved oxygen and turbidity



Construction operations will be observed by engineers specializing in stream restoration, sediment management, dam removal, and geotechnical engineering



Long-Term Management

REMOVE RESTORE RECONNECT

LONG-TERM MANAGEMENT **COMPLIANCE MONITORING**

- Annual monitoring of physical stream and wetland stability
- Minimum of 5 years required by USACE
- Perpetual Stewardship will remain with the University

