



May 22, 2024

Big Elk Creek
Master Planning
Task Force
Meeting #2

Resource
Management



pennsylvania
DEPARTMENT OF CONSERVATION
AND NATURAL RESOURCES

Agenda

1. Welcome
2. On-site Visit Follow-up
 - a. Presentation (30 mins)
 - b. Q&A (15 mins)
3. Break
4. State Park Land Designation and Management
5. Land Protections as it relates to Big Elk Creek
6. Review and Discussion
7. Next Steps; Meeting 3 Focus



On-Site Visit Follow-Up

Jack Hill

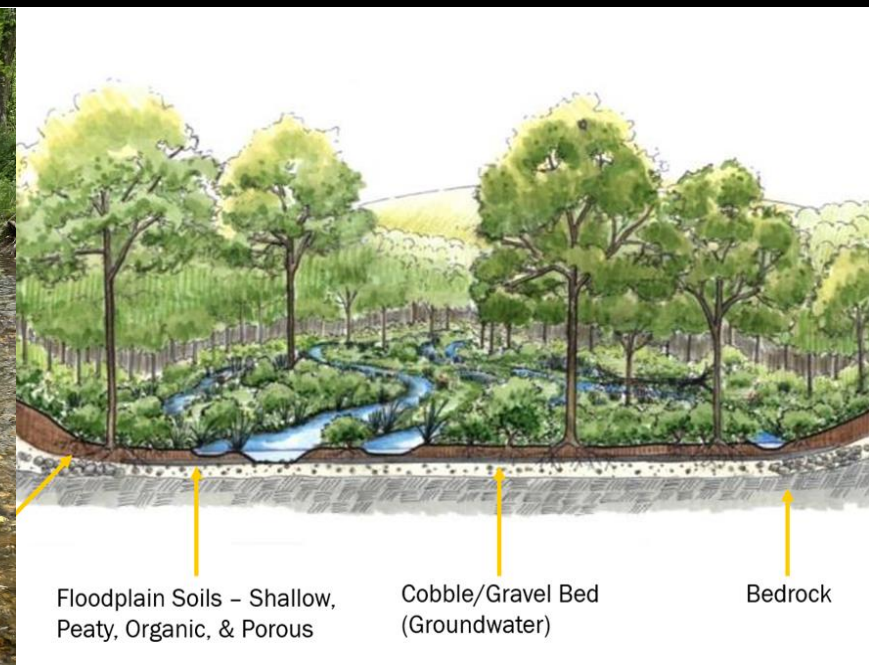
Bureau of State Parks
Resource Management



pennsylvania
DEPARTMENT OF CONSERVATION
AND NATURAL RESOURCES

Big Elk Creek State Park Aquatic Resources

Past Impacts, Present Conditions, Potential Opportunities



Big Elk Creek State Park Aquatic Resources



WETLANDS



BIG ELK CREEK



TRIBUTARIES

A lush green wetland landscape with tall grasses and a small stream, overlaid with the text "WETLAND RESOURCES". The scene is a vibrant green, with a variety of grasses and plants. In the background, there are trees and a rolling green hill under a cloudy sky. The text is centered in the middle of the image in a white, sans-serif font.

WETLAND RESOURCES

Big Elk Creek State Park



Big Elk Creek

MARYLAND

MARYLAND





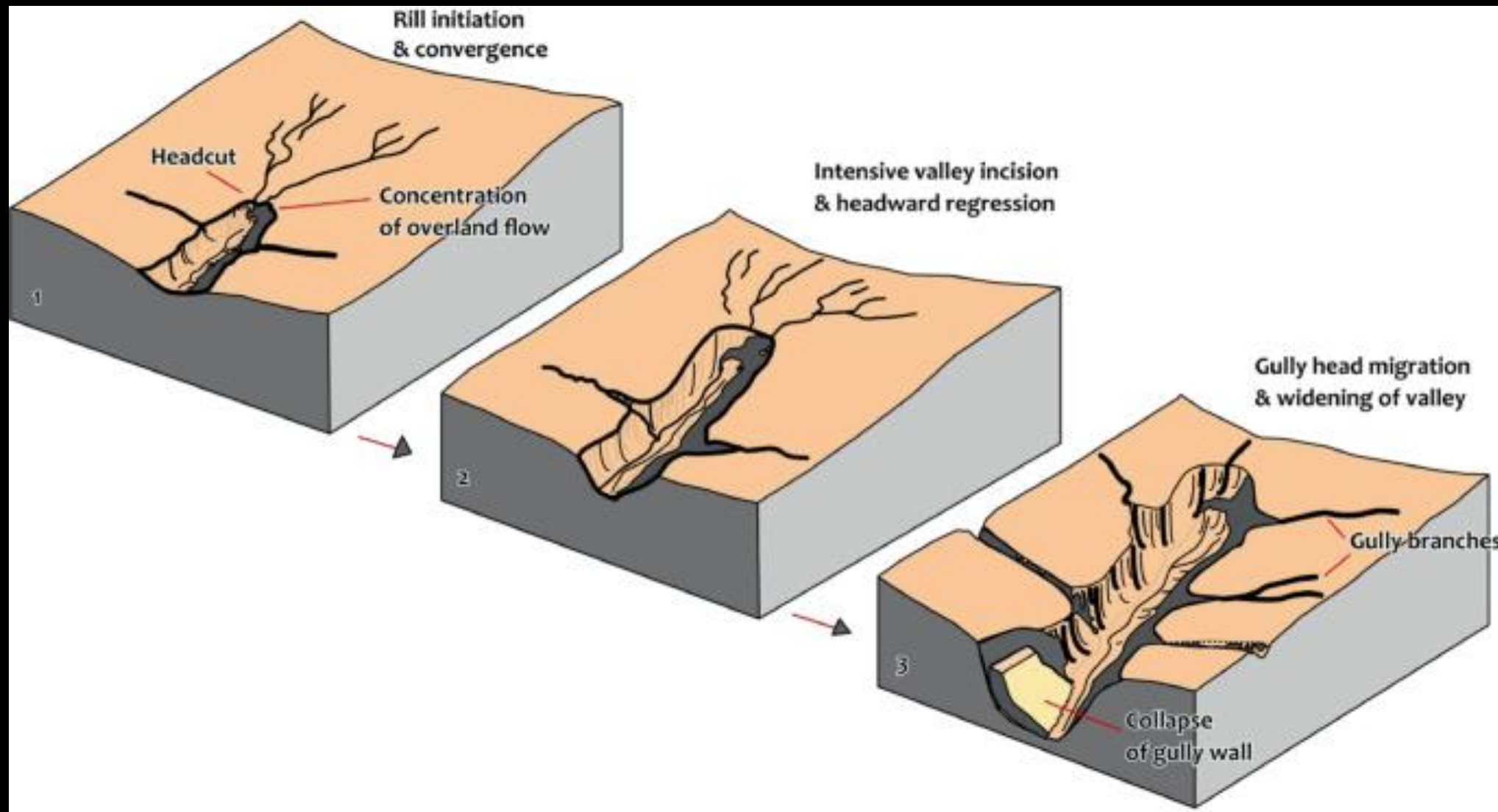




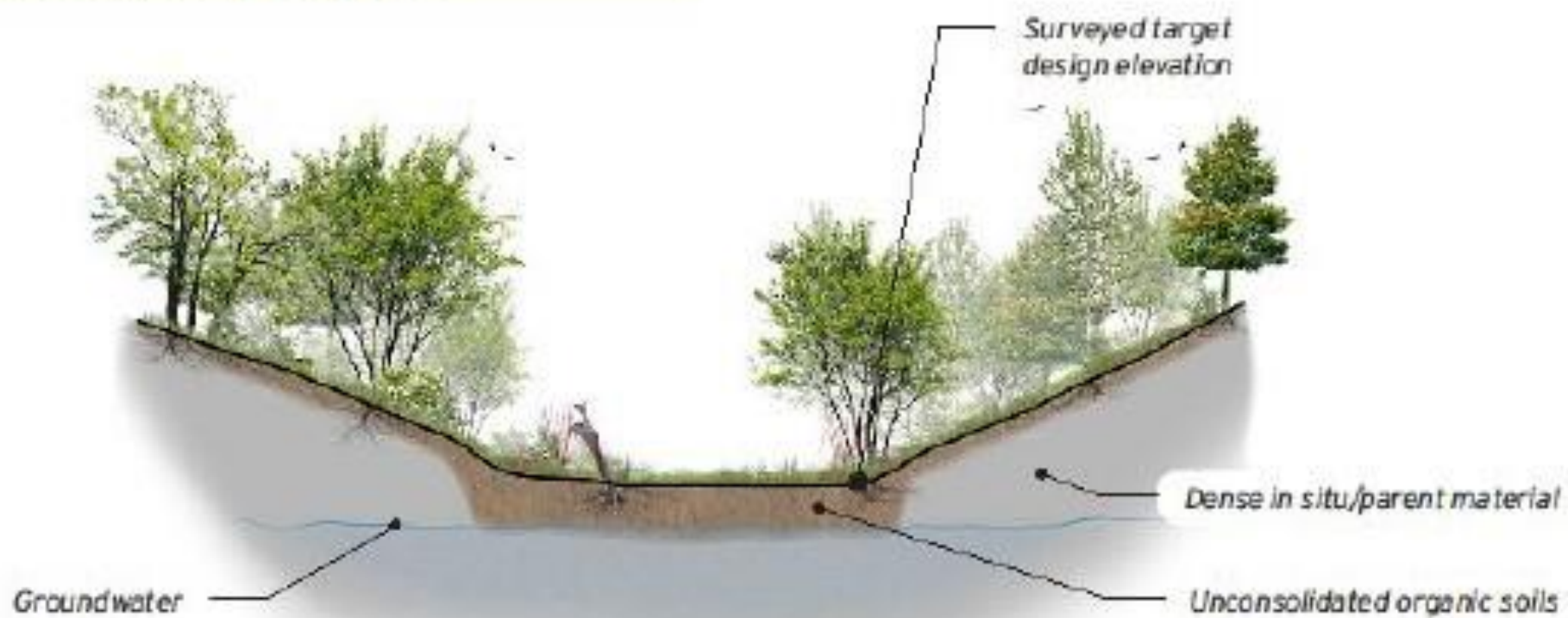




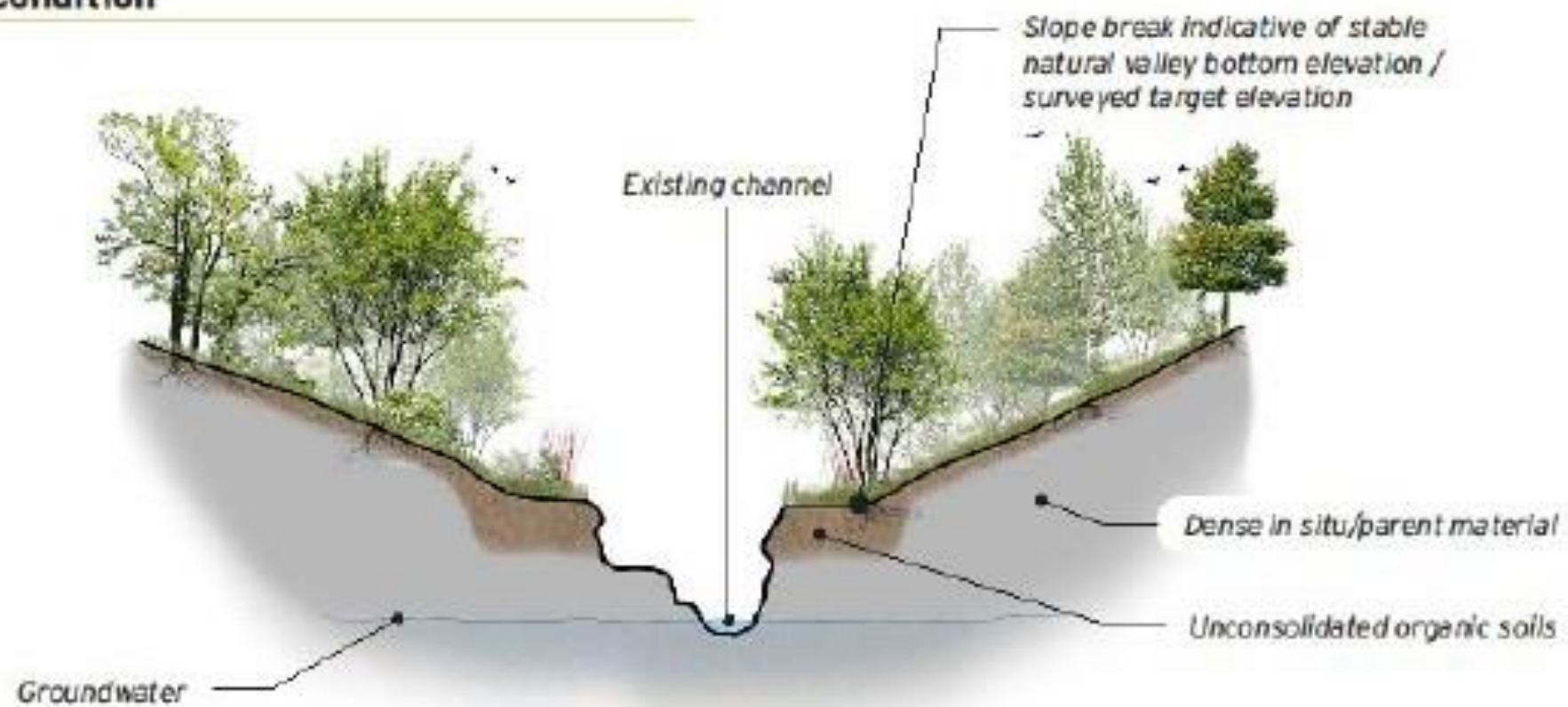




Pre-Settlement Natural Condition



Existing Condition



OPPORTUNITY

PRESERVE WETLANDS
BY STOPPING EROSION

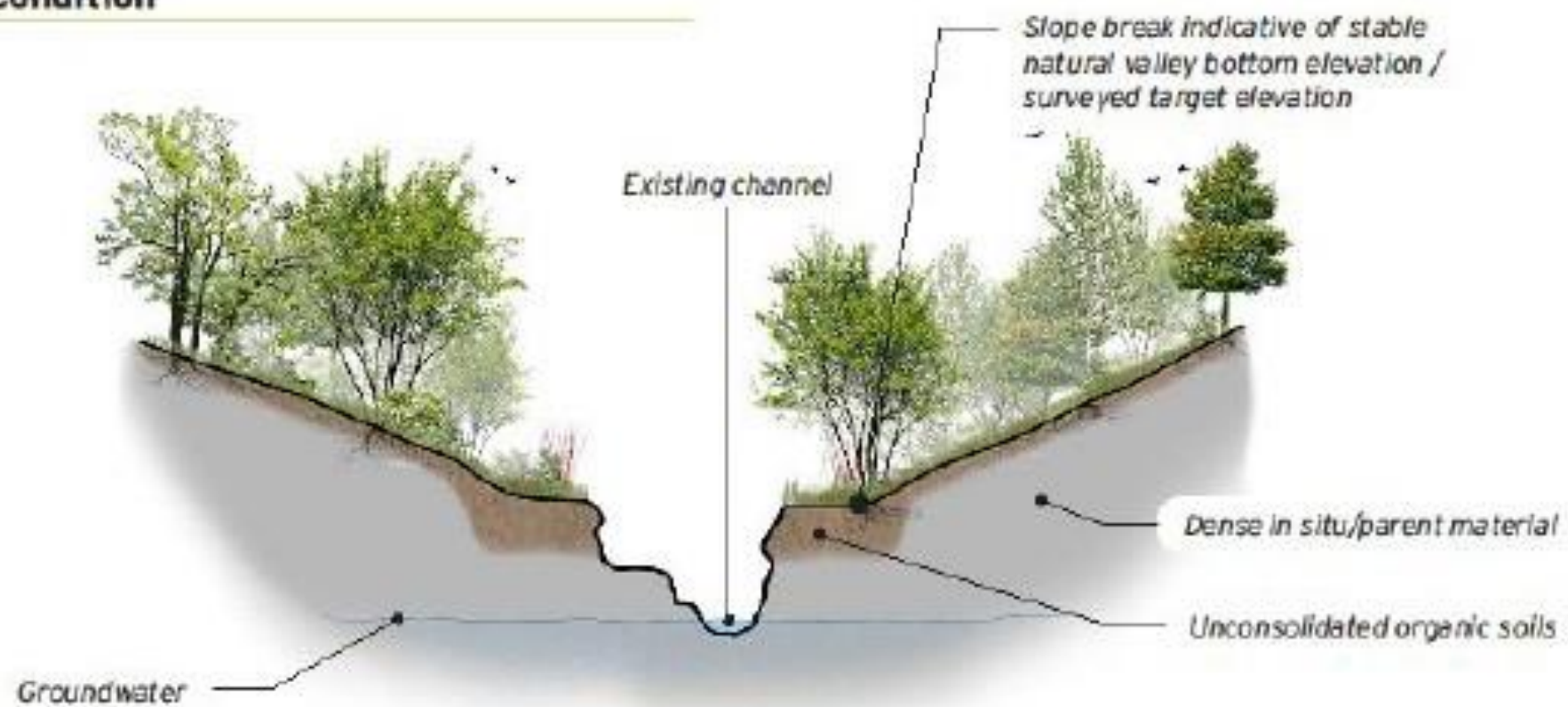


OPPORTUNITY

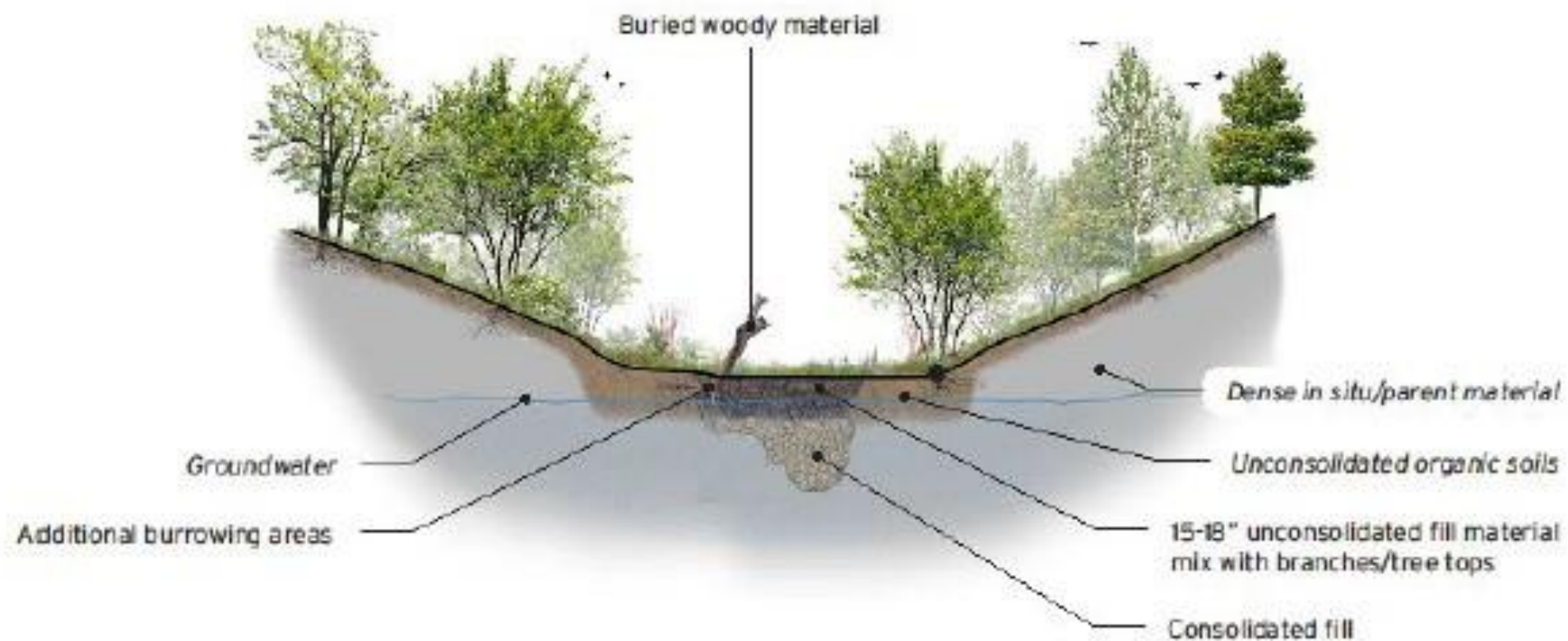
RESTORE WETLANDS
LOST TO EROSION



Existing Condition

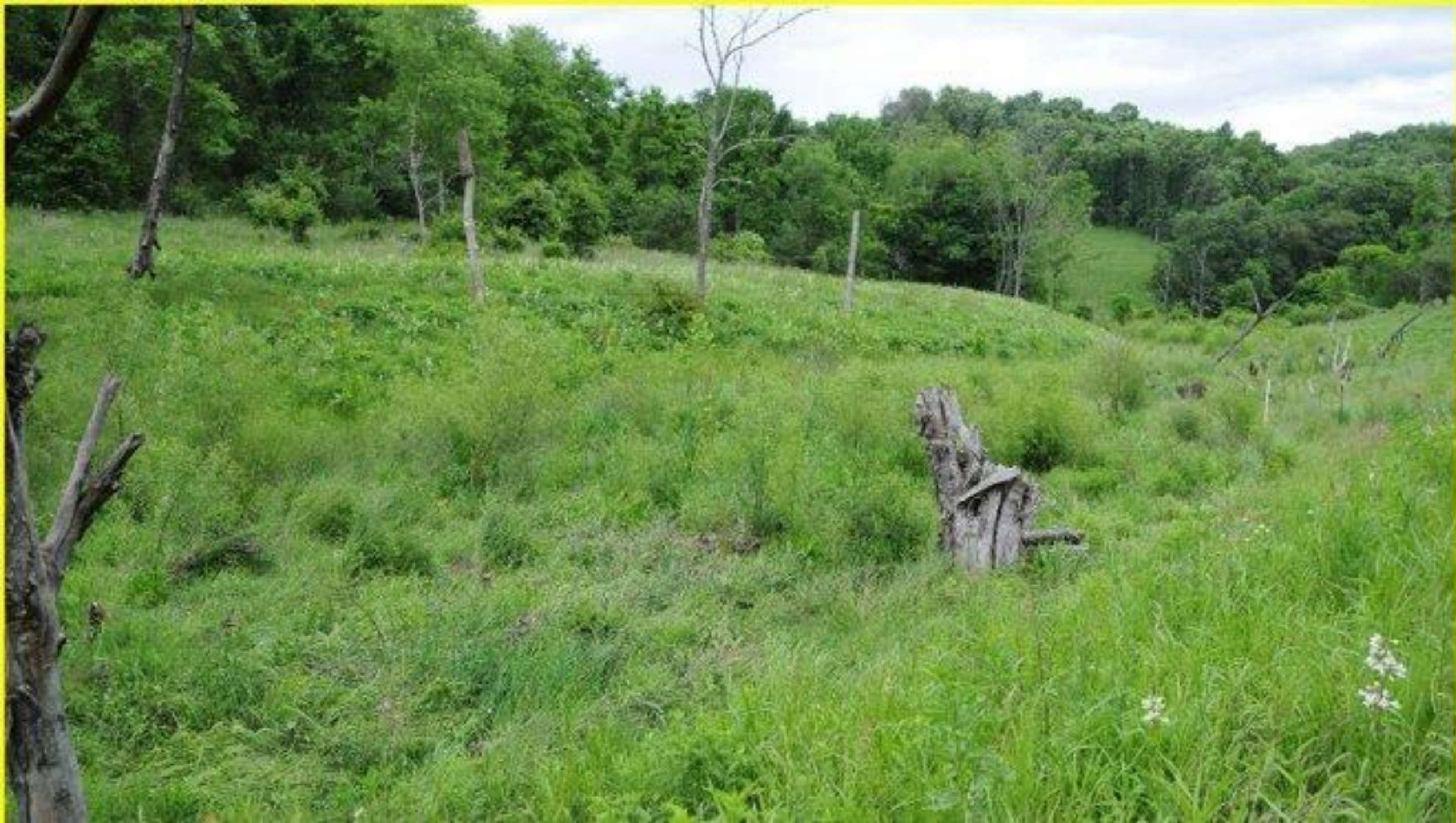


Conceptual Proposed Condition







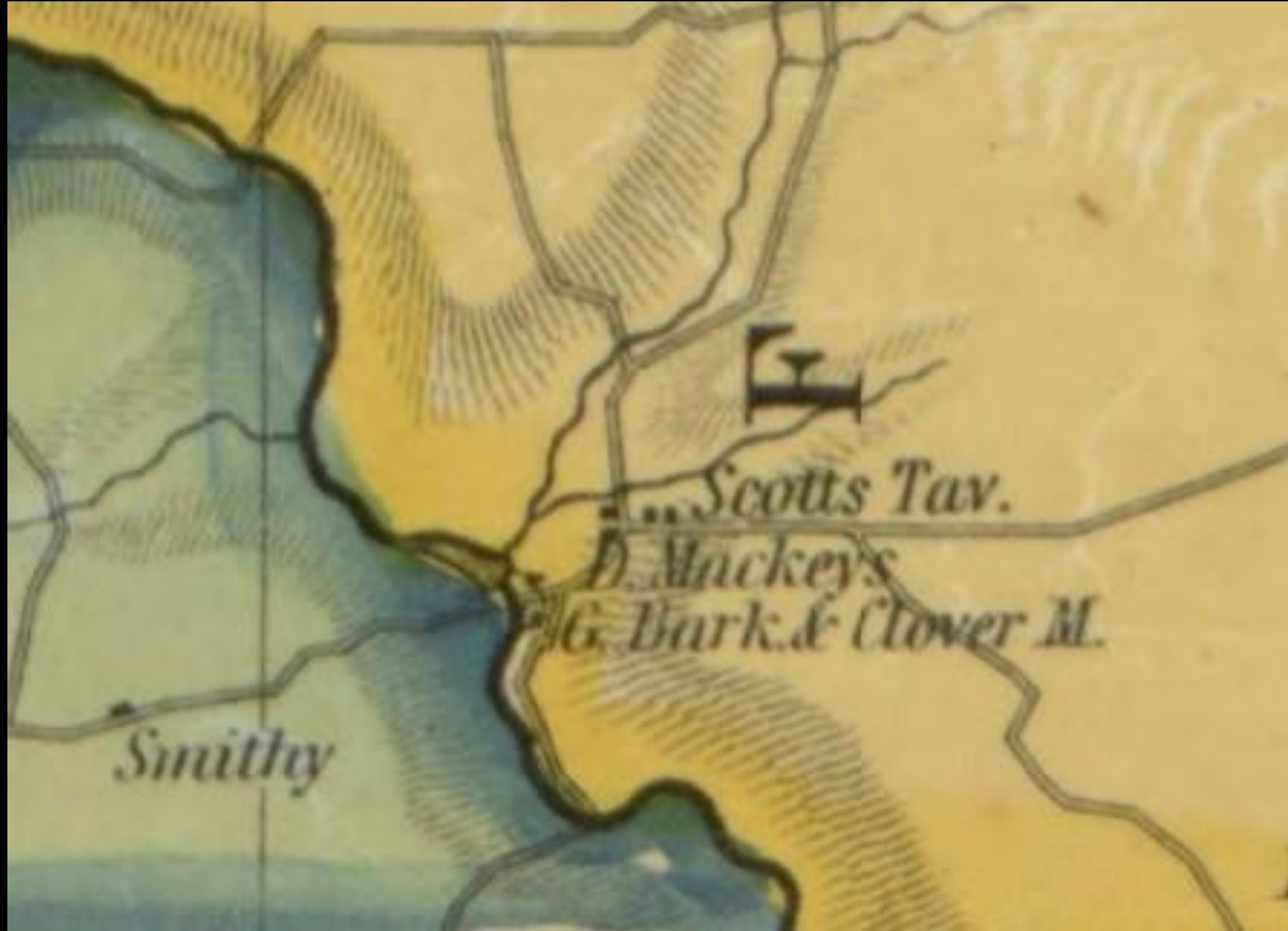




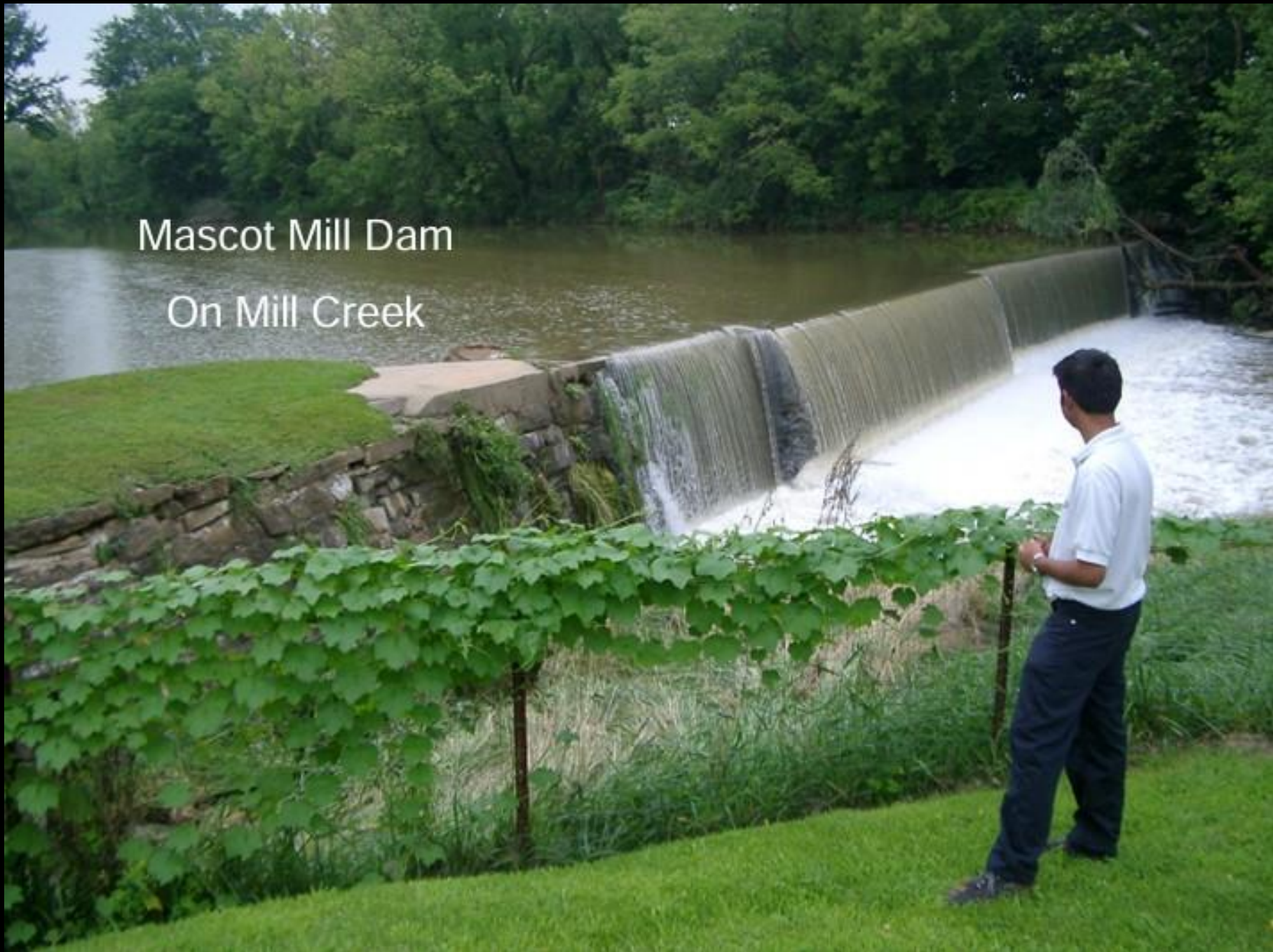


BIG ELK CREEK



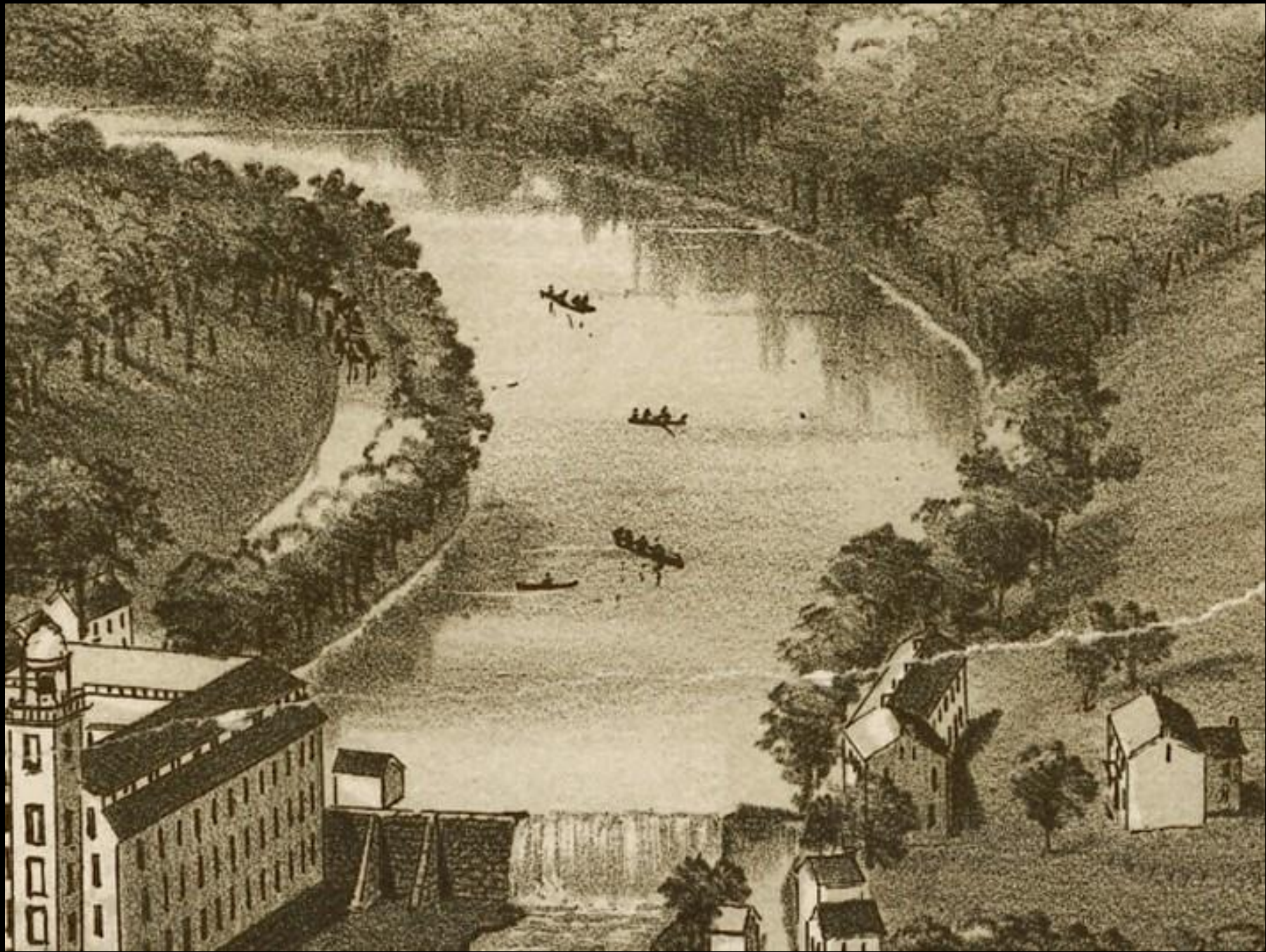


Mascot Mill Dam
On Mill Creek



Hollingworth/Evans Mill Dam Circa 1700's - 14-feet High







Furnace

Richardsons
Paper M.

Brick S.H.

D. Copes Pottery

Christian Ch.
S.H.

Shop

Kimbleville
P.O.

R

S H

Richardsons
G. & S.M.

S. H. Lawrence
Paper M.

F

Scotts Tav.

D. Mackeys
G. Bark & Clover M.

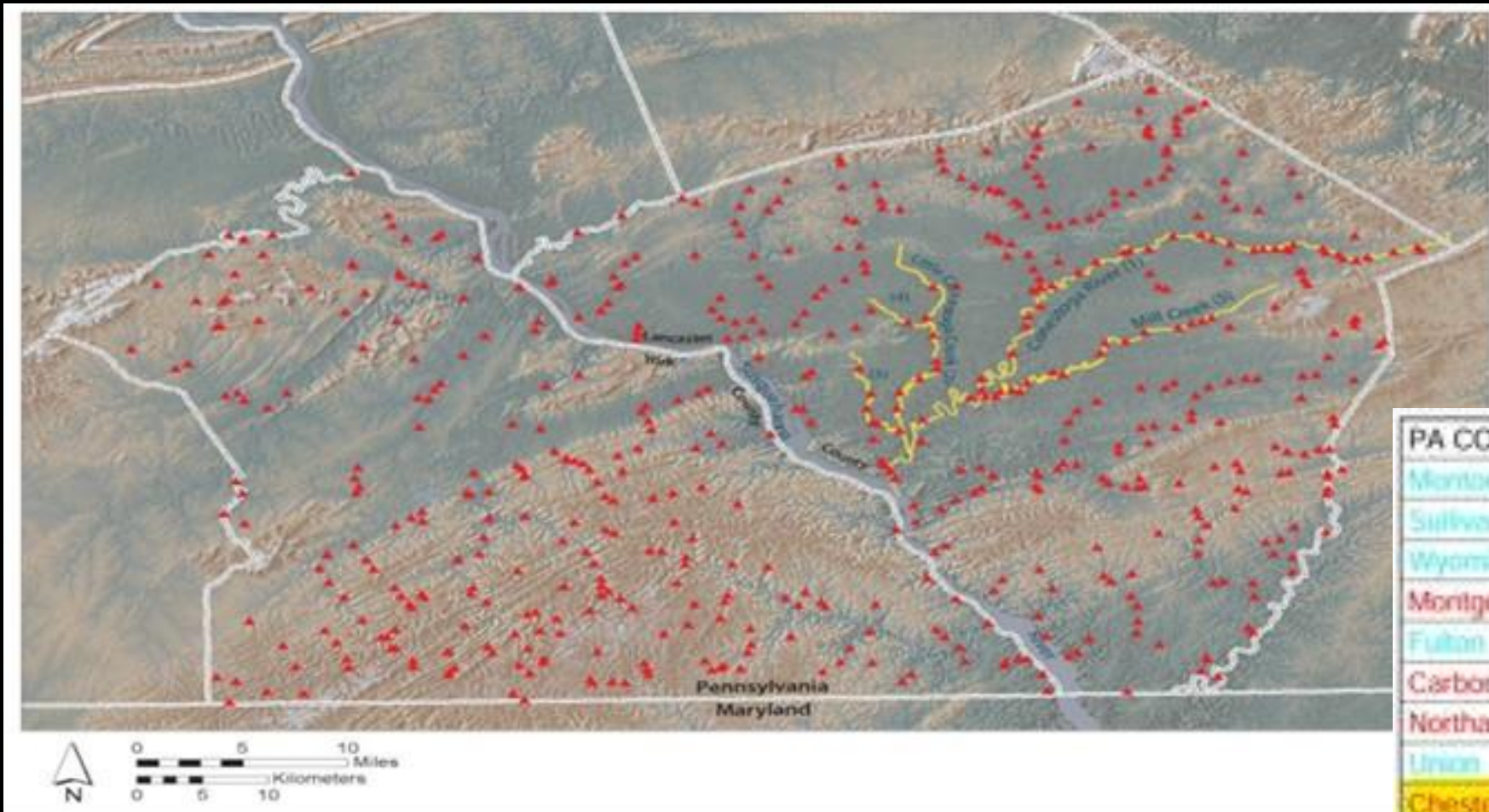
Lewisville
P.O.

S.H. Shop
Store

Smithy

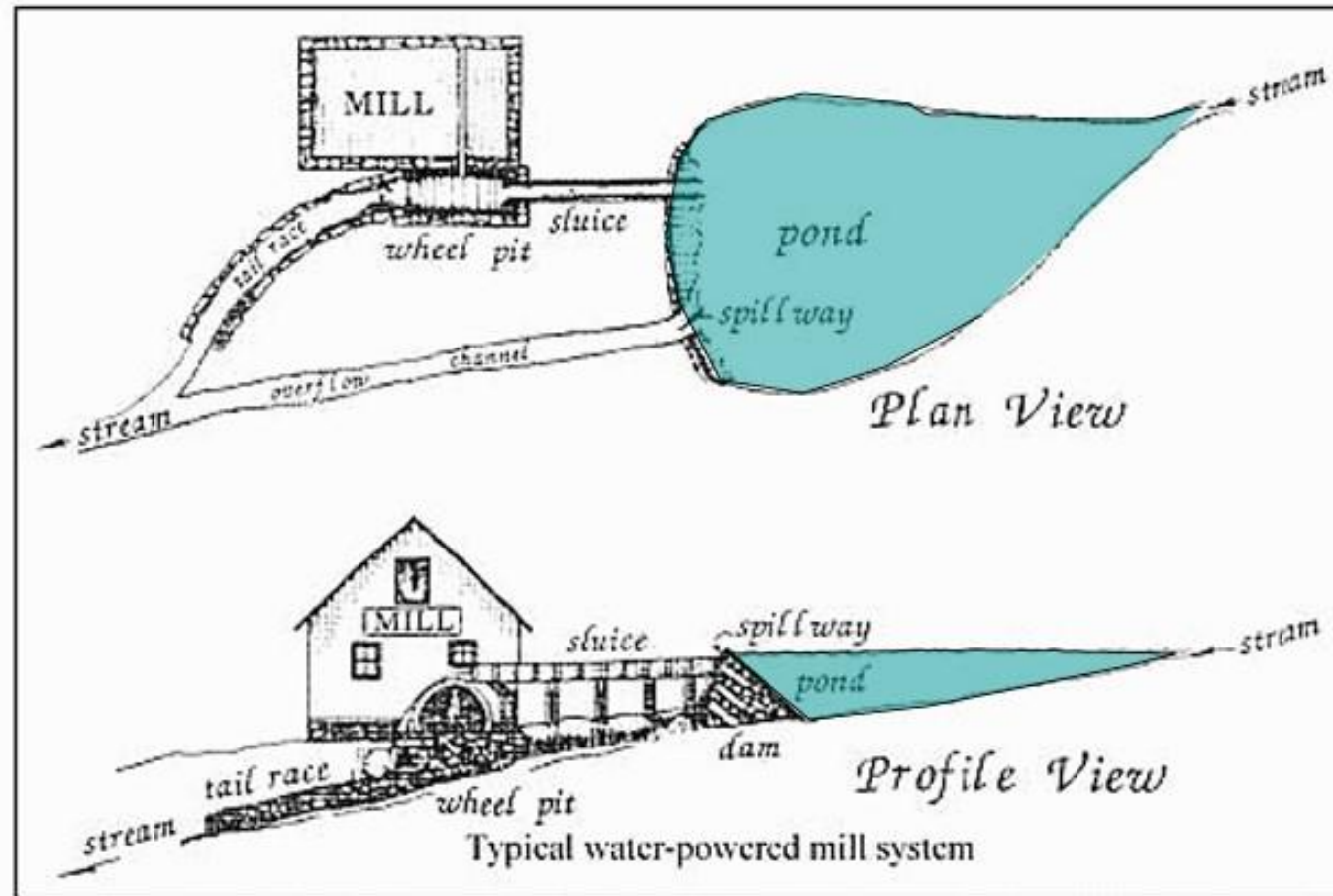
Flint Hill M.H.

1840 ATLAS – MILL DAMS

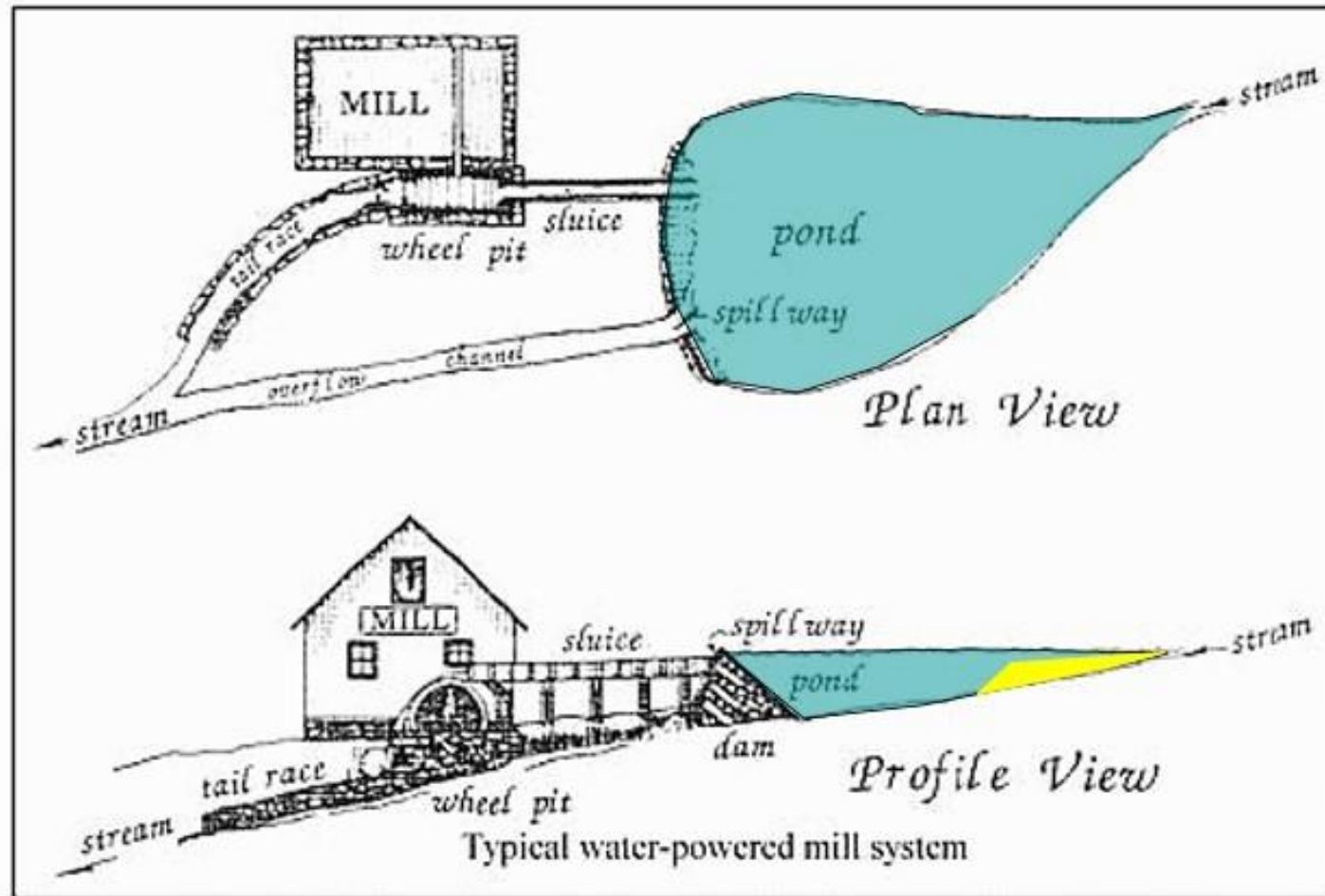


PA COUNTY	#MILLS, 1840	MILL DENSITY/SQ MI
Montour	75	0.57
Sullivan	250	0.55
Wyoming	210	0.52
Montgomery	247	0.51
Fulton	225	0.51
Carbon	185	0.48
Northampton	179	0.46
Union	150	0.43
Chester	323	0.42
Philadelphia	60	0.41
Lancaster	383	0.40
Lehigh	126	0.37

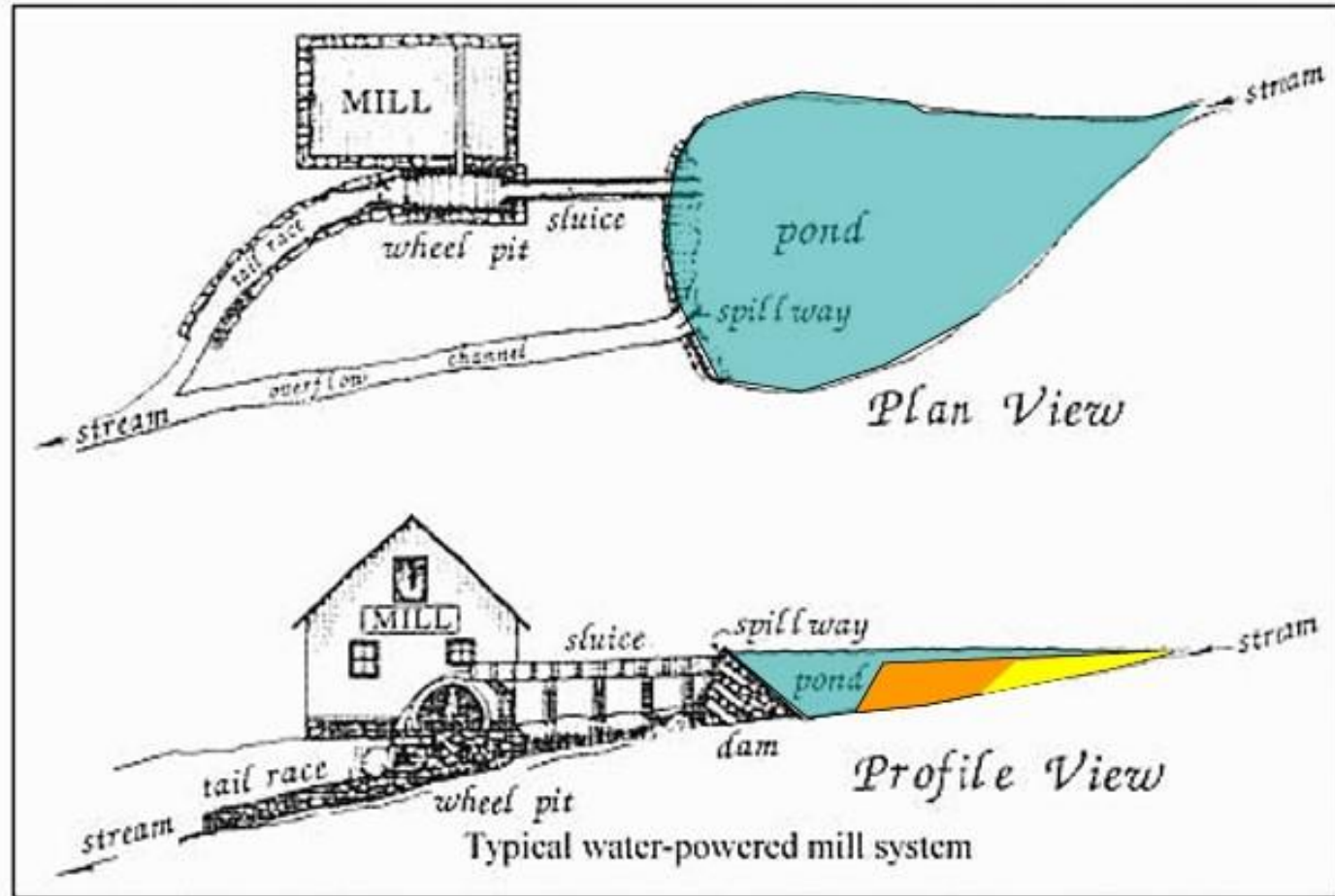
Impact of Water-Powered Mills on Sediment Storage



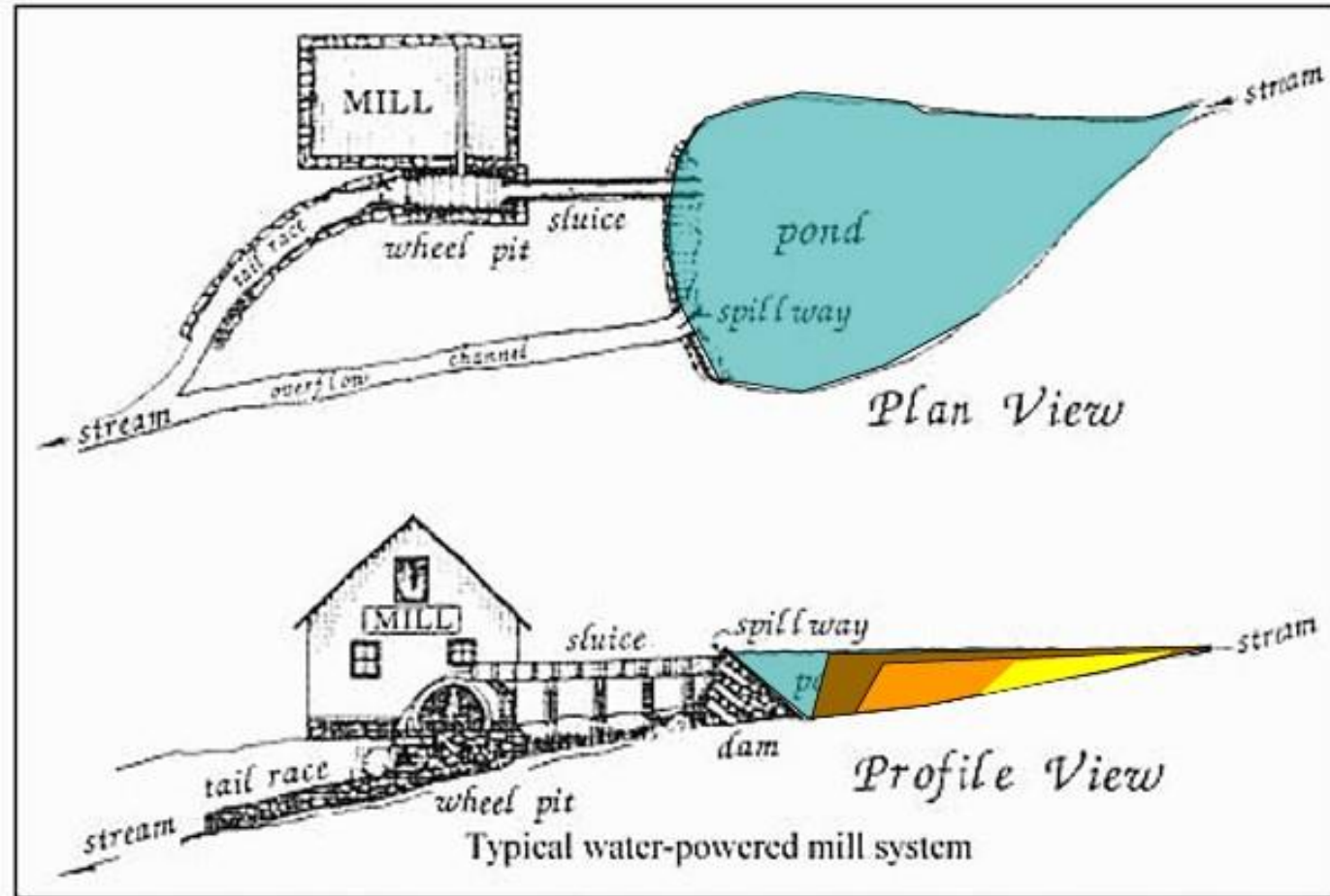
Impact of Water-Powered Mills on Sediment Storage



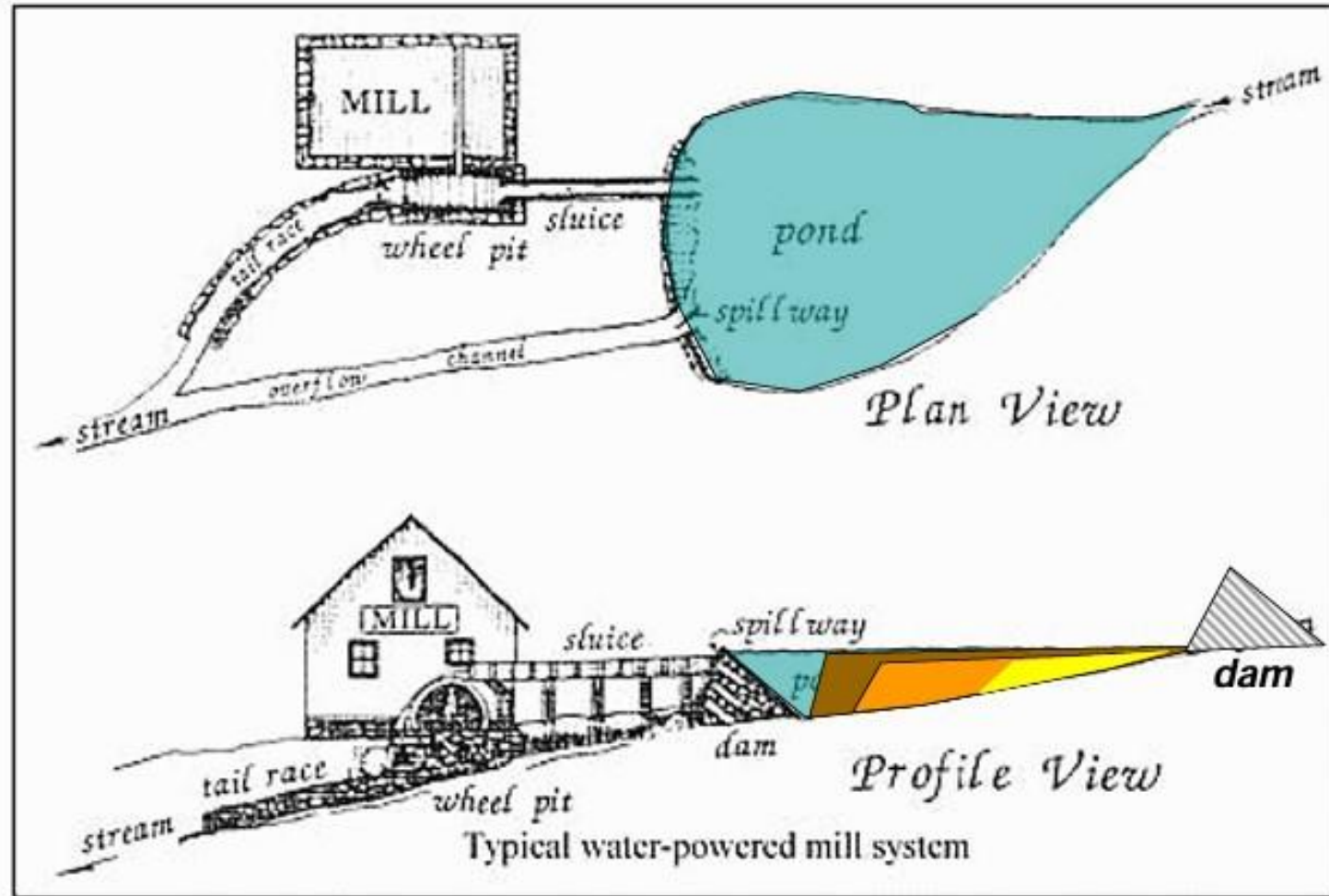
Impact of Water-Powered Mills on Sediment Storage



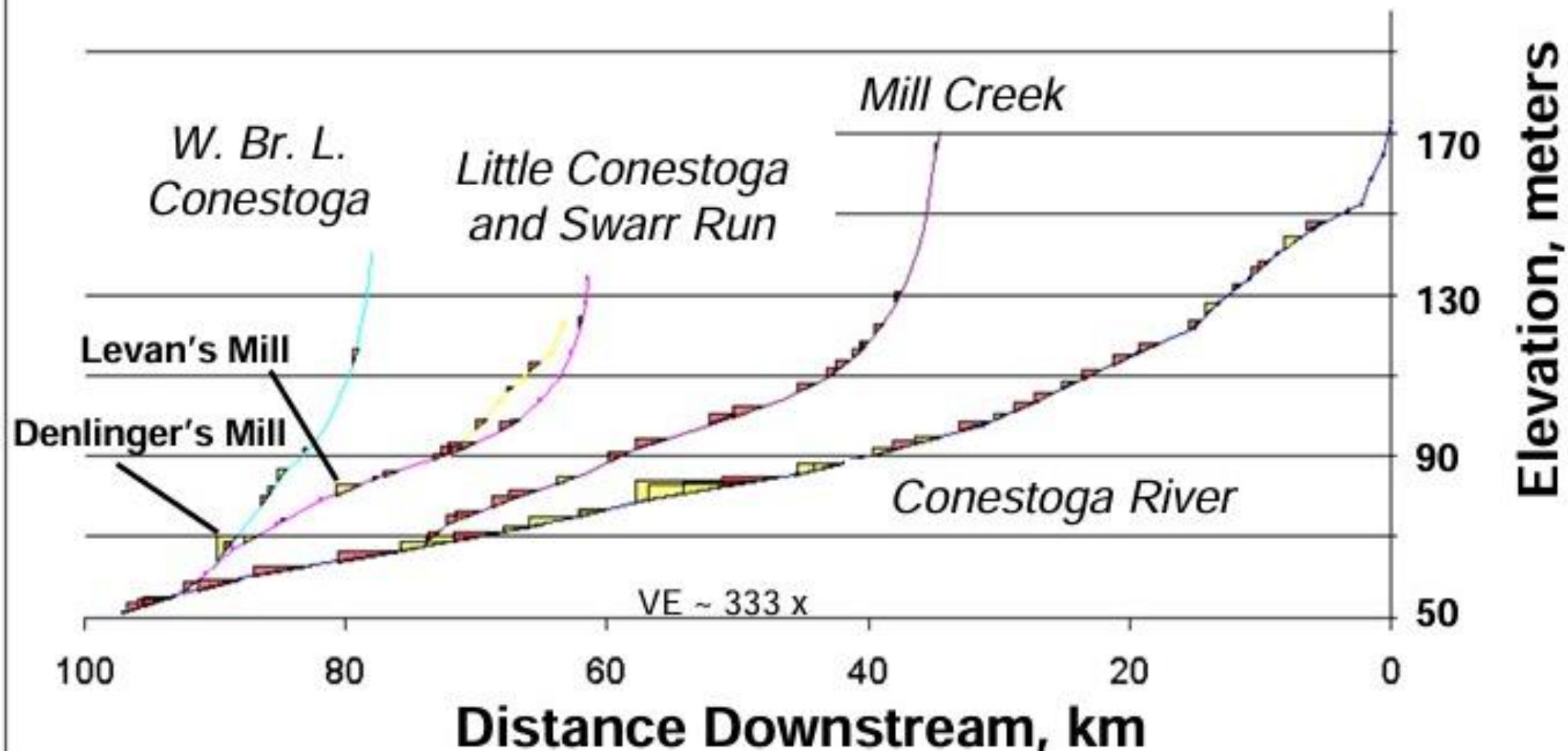
Impact of Water-Powered Mills on Sediment Storage



Impact of Water-Powered Mills on Sediment Storage

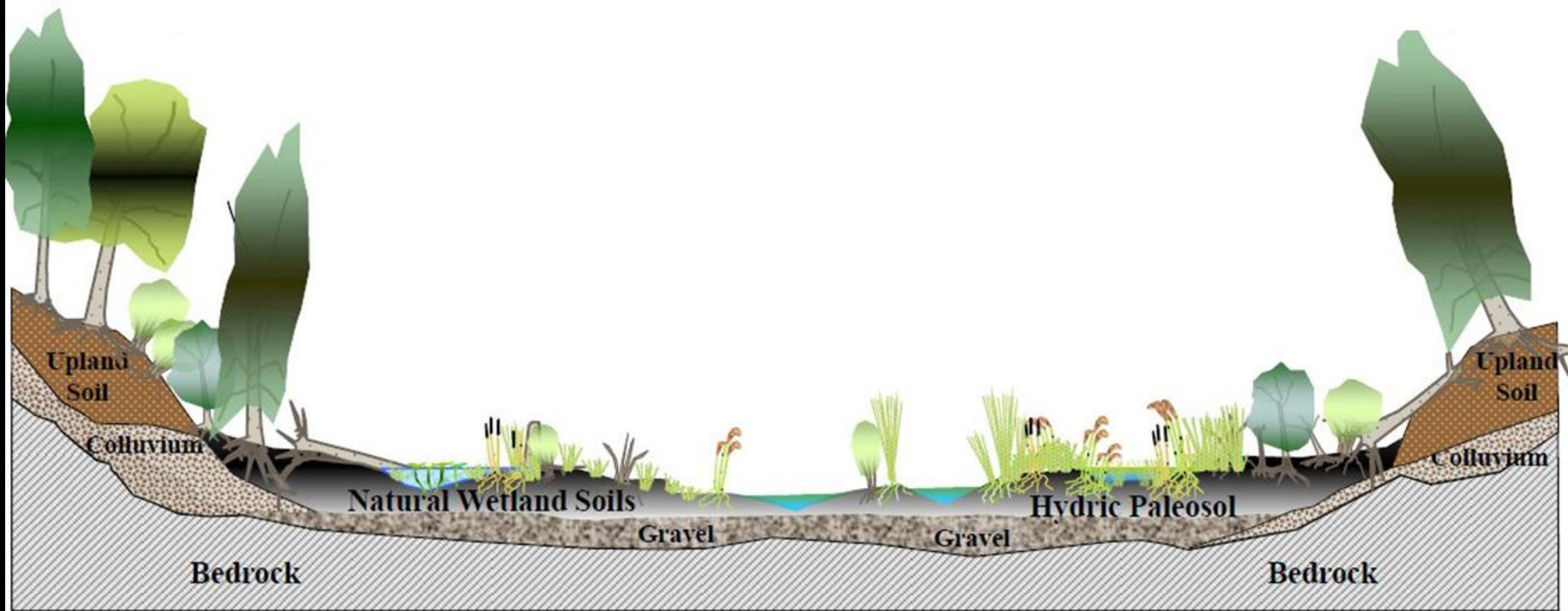


Mill Ponds, Lancaster Piedmont, PA

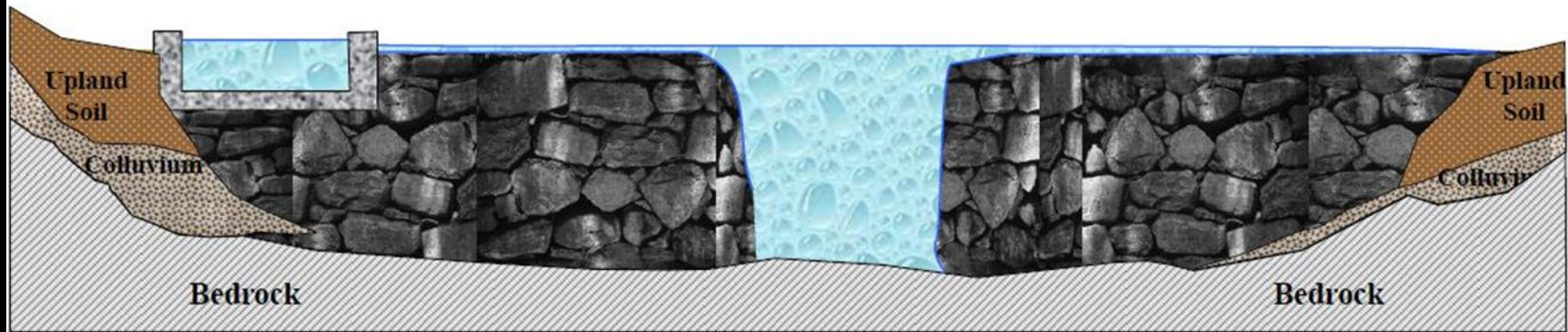




Typical Valley Cross Section- Before Dams



Typical Reservoir and Valley Cross Section

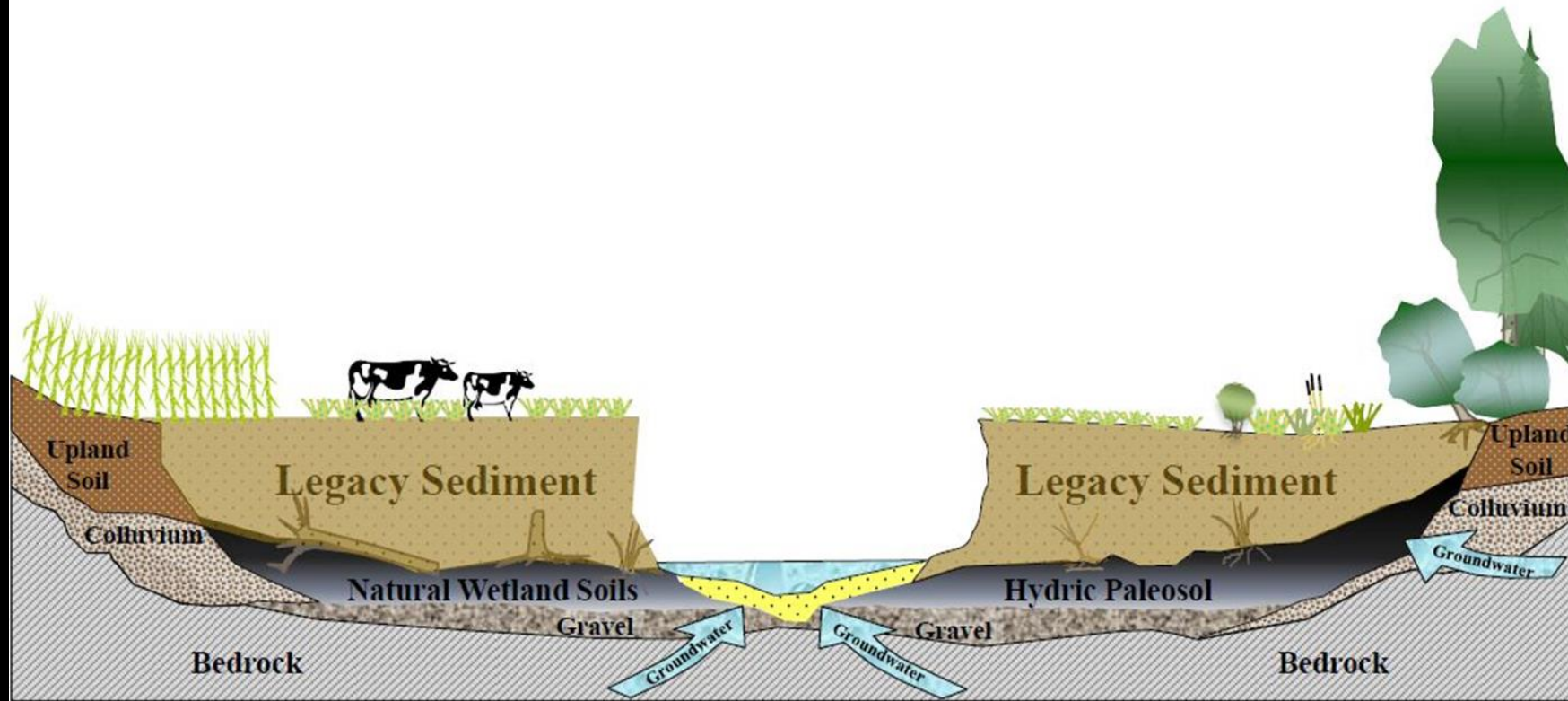


Typical Reservoir and Valley Cross Section

Riparian Zone



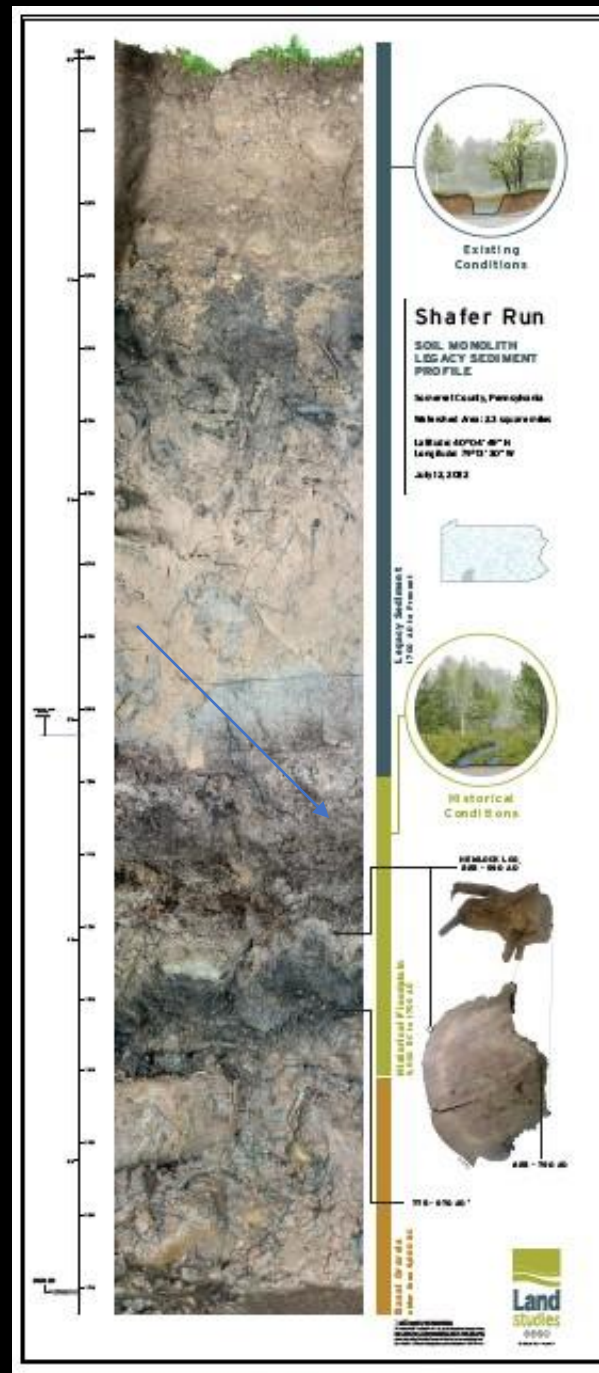
Typical Reservoir and Valley Cross Section



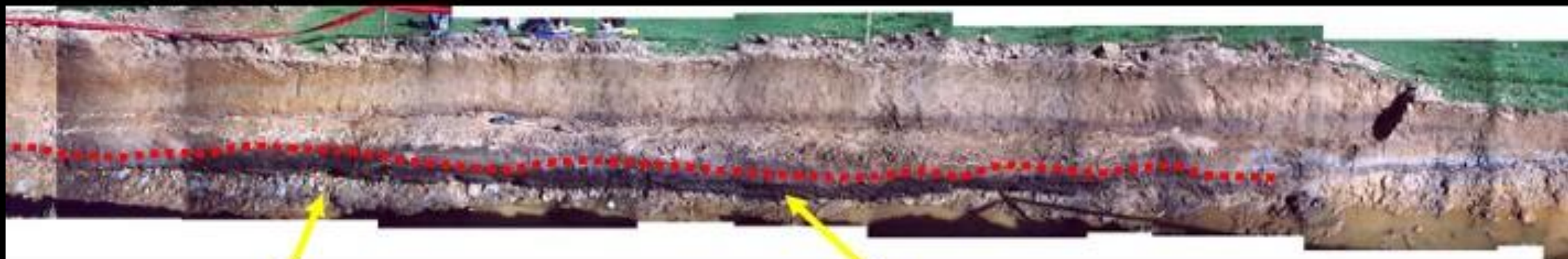
Mill Dam Sediments
1700 - Present

Original Floodplain Soils
9,000 BC to 1700 AD

Valley Bottom Gravels
Older than 9,000 BC



Buried Hemlock Tree
790 AD



Basal angular gravel layer
>1000 to 9000 yrs BP

Peat 380 ± 60 yrs BP



Roots extend to groundwater

Floodplain Soils – Shallow, Peaty, Organic, & Porous

Cobble/Gravel Bed (Groundwater)

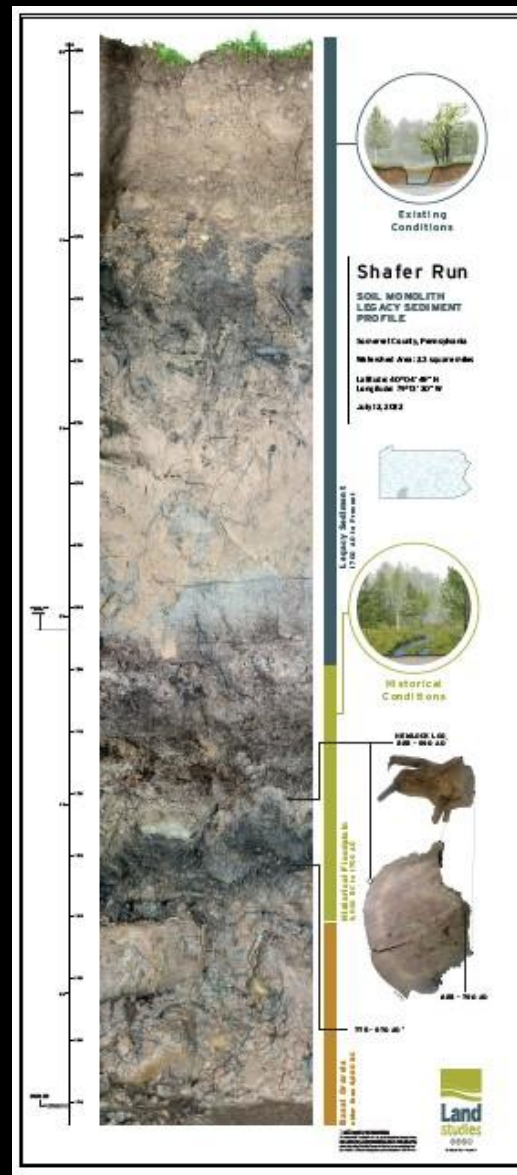
Bedrock





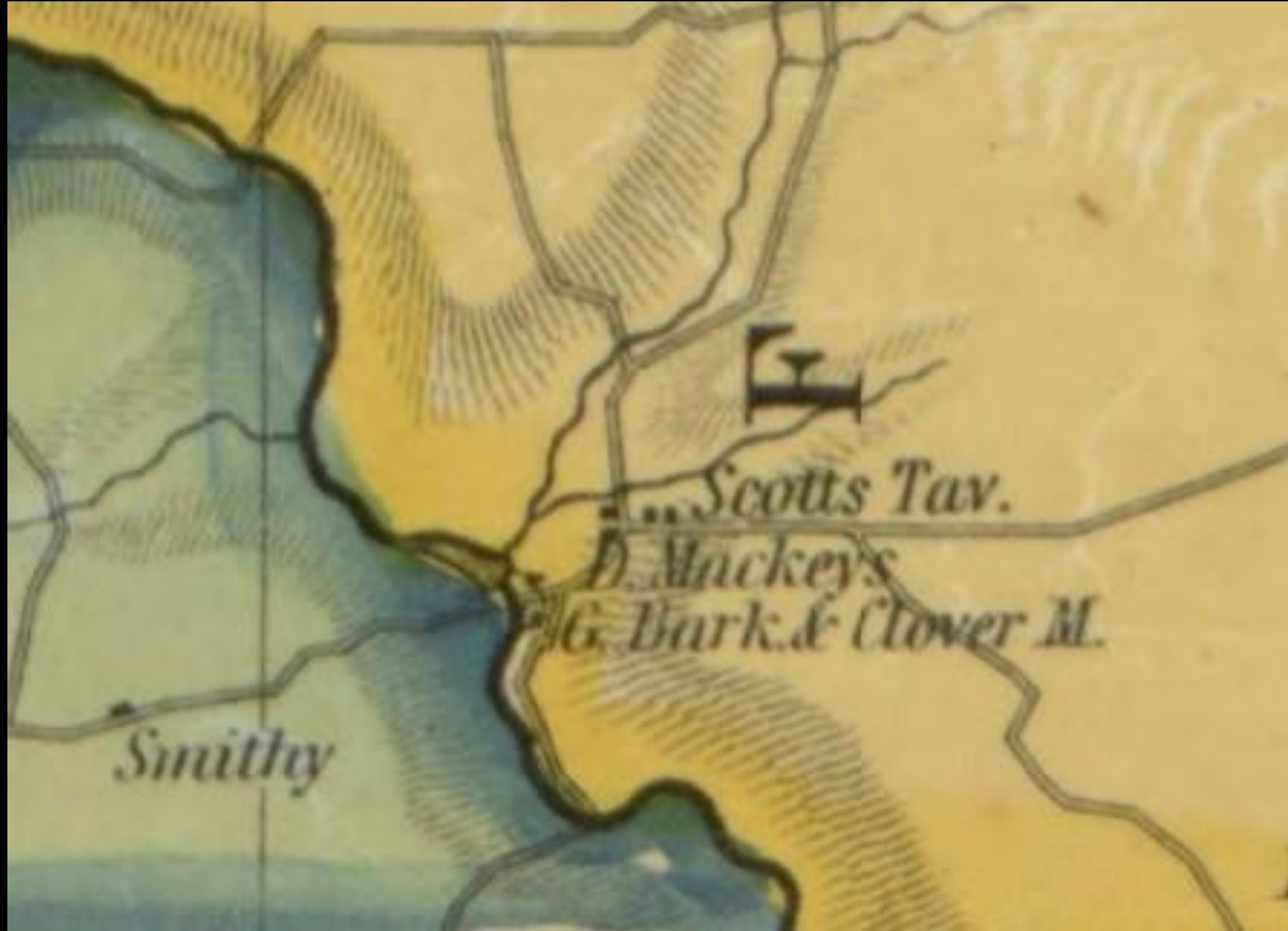
OPPORTUNITY

VISUALIZE HISTORIC LANDSCAPE VIA SOIL MONOLITHS



A photograph of a stream flowing through a lush, green landscape. The stream is the central focus, winding through dense vegetation and trees. The water appears slightly turbid. The surrounding area is filled with various types of green plants, including tall grasses and shrubs. In the background, there are more trees and a cloudy sky. The word "TRIBUTARIES" is overlaid in large, white, sans-serif capital letters in the center of the image.

TRIBUTARIES



Smithy

F

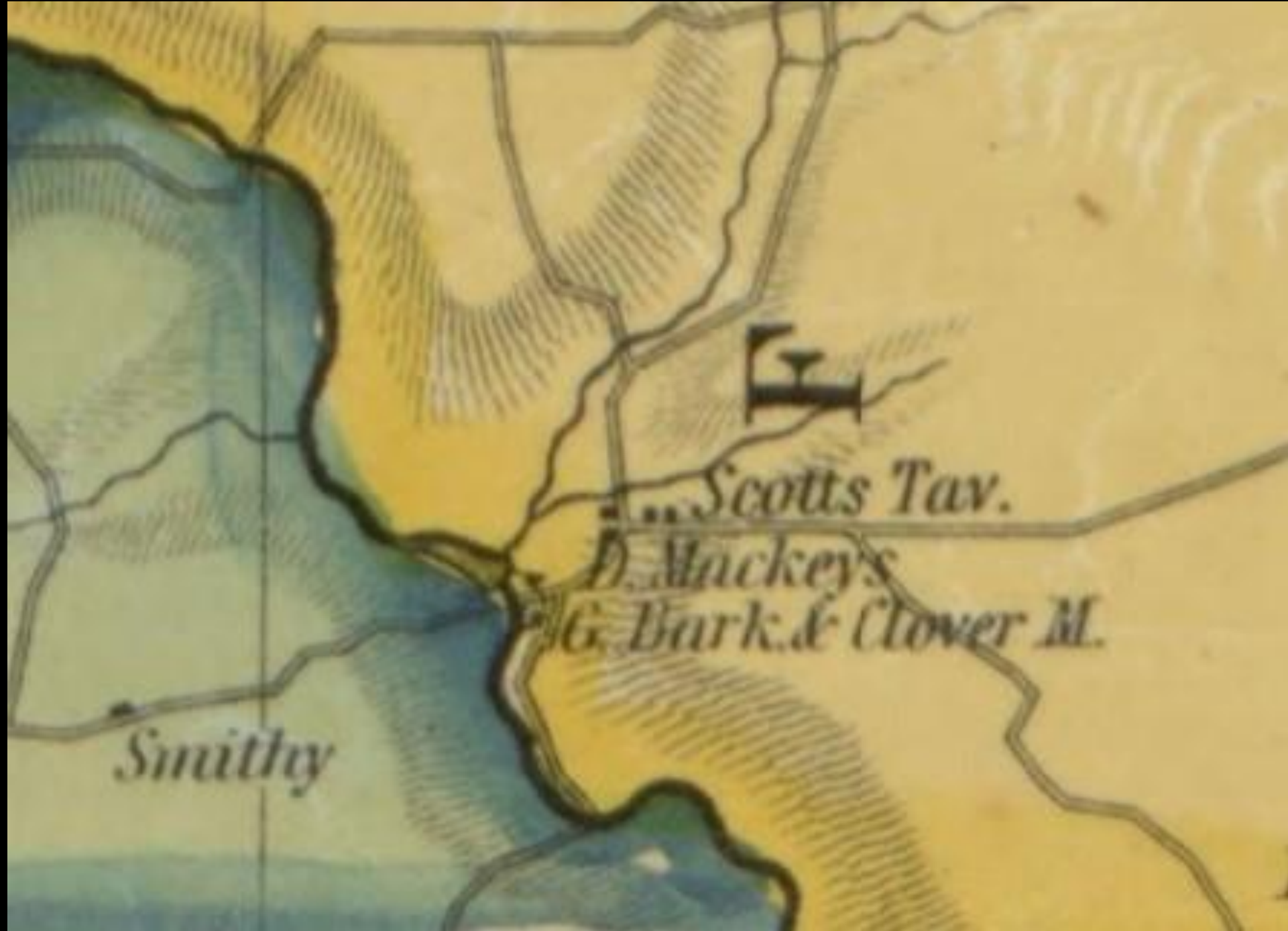
Scotts Tav.

D. Mackeys

G. Bark. & Clover M.



Big Elk Creek State Park













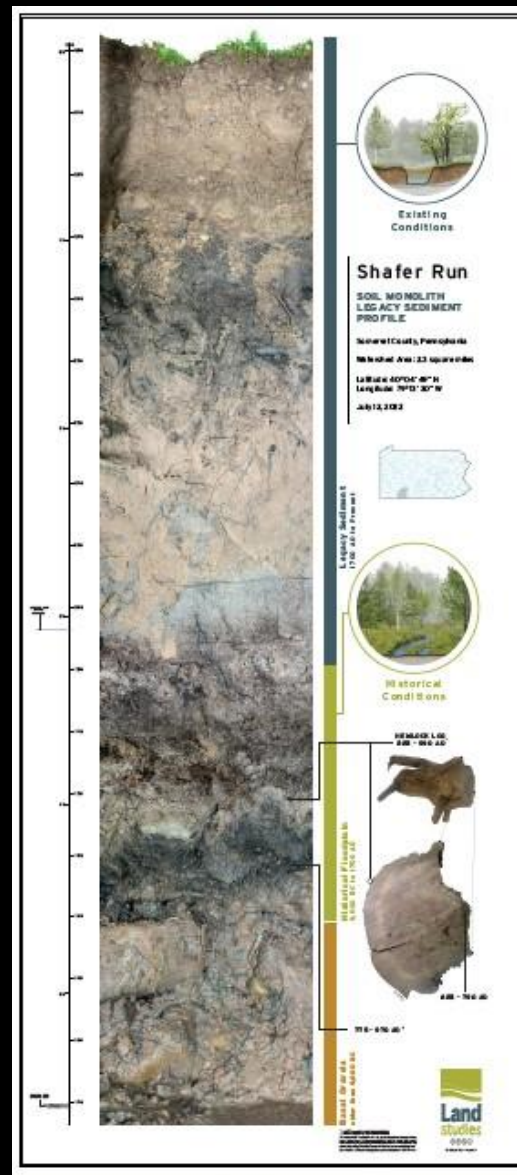






OPPORTUNITY

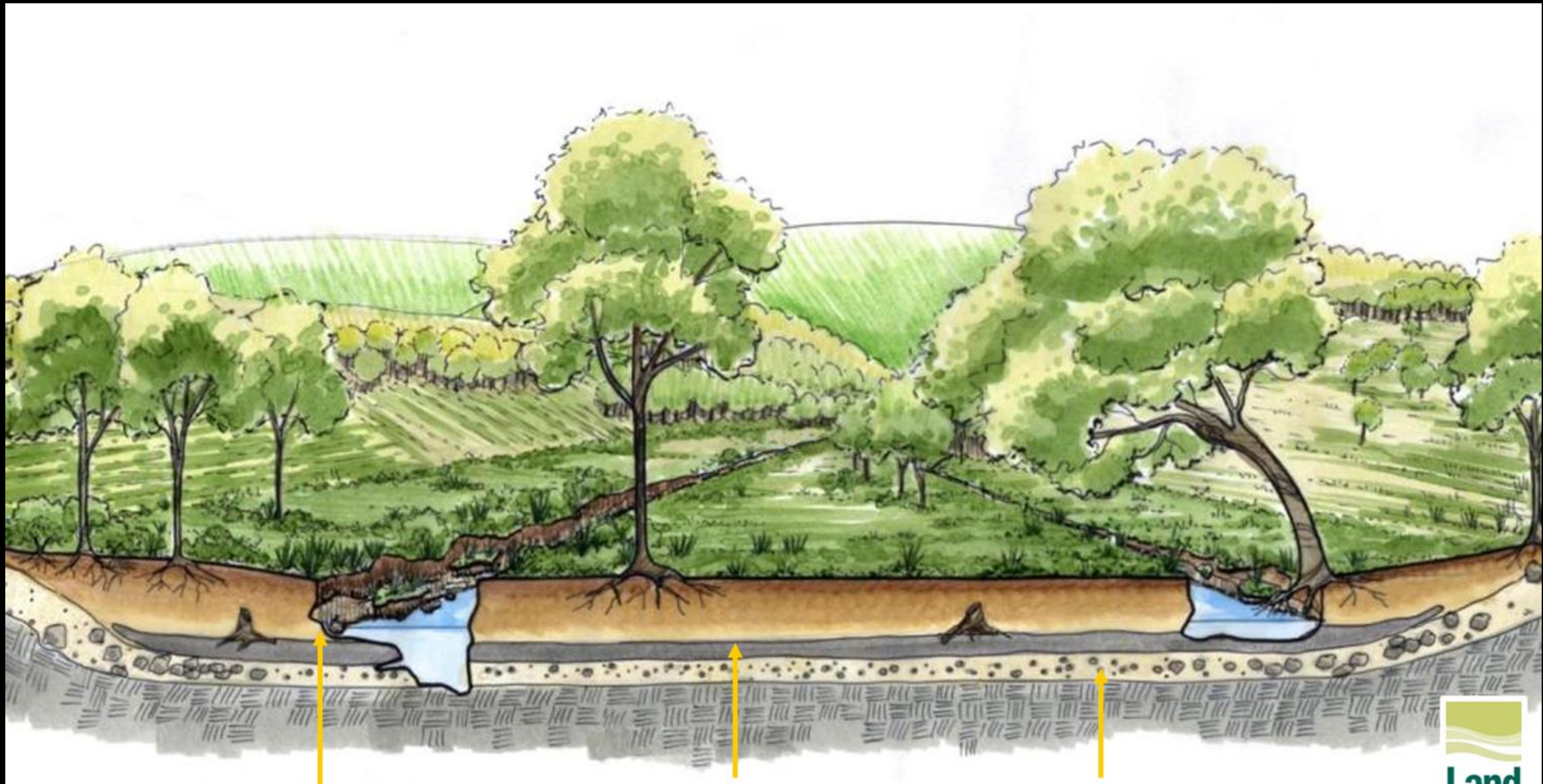
VISUALIZE HISTORIC LANDSCAPE VIA SOIL MONOLITHS



OPPORTUNITY

COMPREHENSIVE
FLOODPLAIN
RESTORATION





Historical Floodplain Soils

Cobble/Gravel Bed

Bedrock





Roots extend to groundwater

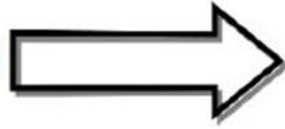
Floodplain Soils – Shallow, Peaty, Organic, & Porous

Cobble/Gravel Bed (Groundwater)

Bedrock

Big Spring Run, Lancaster County PA

Typical Existing Conditions



Restoration

9/13/2011

07/27/2012



Big Spring Run, Lancaster County PA



Courtesy Telemonitor, Inc.

September 18, 2012 @ 3:30 PM

Post-Restoration

Big Spring Run, Lancaster County PA



Courtesy Telemonitor, Inc.

September 18, 2012 @ 4:00 PM

Post-Restoration

Big Spring Run, Lancaster County PA



Courtesy Telemonitor, Inc.

September 18, 2012 @ 4:30 PM

Post-Restoration

Big Spring Run, Lancaster County PA



Courtesy Telemonitor, Inc.

September 18, 2012 @ 5:00 PM

Post-Restoration

Big Spring Run, Lancaster County PA



Courtesy Telemonitor, Inc.

September 18, 2012 @ 7:15 PM

Post-Restoration

Big Spring Run, Lancaster County PA



Courtesy Telemonitor, Inc.

September 18, 2012 @ 8:30 PM

Post-Restoration

Big Spring Run, Lancaster County PA



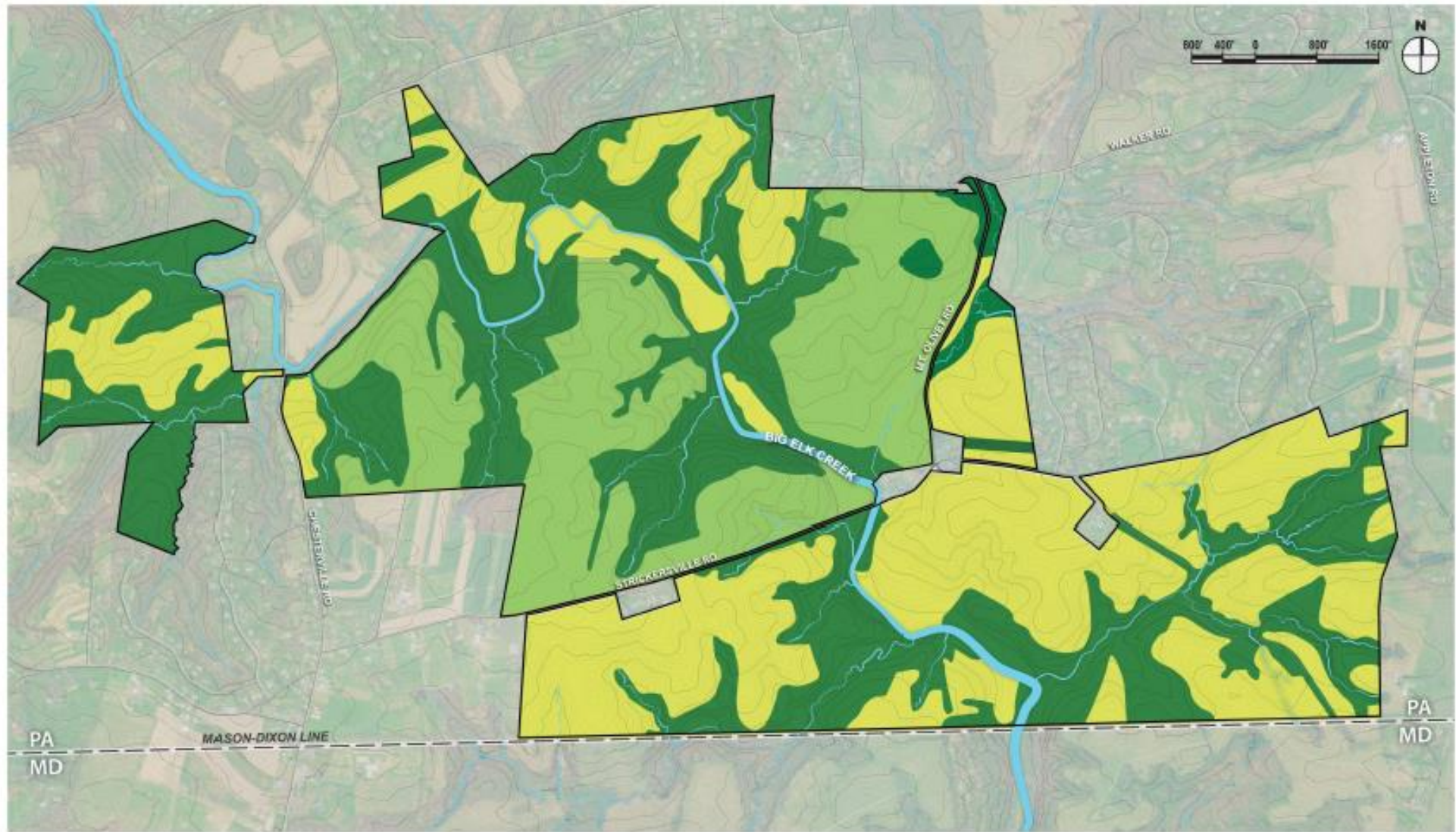
Courtesy Telemonitor, Inc.

September 20, 2012 @ 10:00 AM

Post-Restoration

A photograph of a river flowing through a dense forest. The water is a murky, brownish-green color. The banks are lined with lush green trees and bushes. The sky is overcast with grey clouds. The word "QUESTIONS?" is written in large, white, sans-serif capital letters across the center of the image.

QUESTIONS?



SITE LEGEND

LAND COVER & VEGETATION

- DECIDUOUS FOREST**
 Appalachian Oak Forest, characterized by Northern White and Red Oaks (Quercus alba & Q. rubra), includes areas of Floodplain Forest
- CROPLAND**
 Land dedicated to agricultural production (e.g., corn and soybeans)
- GRASSLAND**
 Land managed by yearly rotational mowing

**BIG ELK CREEK STATE PARK
 EXISTING SITE CONDITIONS
 LANDCOVER & VEGETATION**

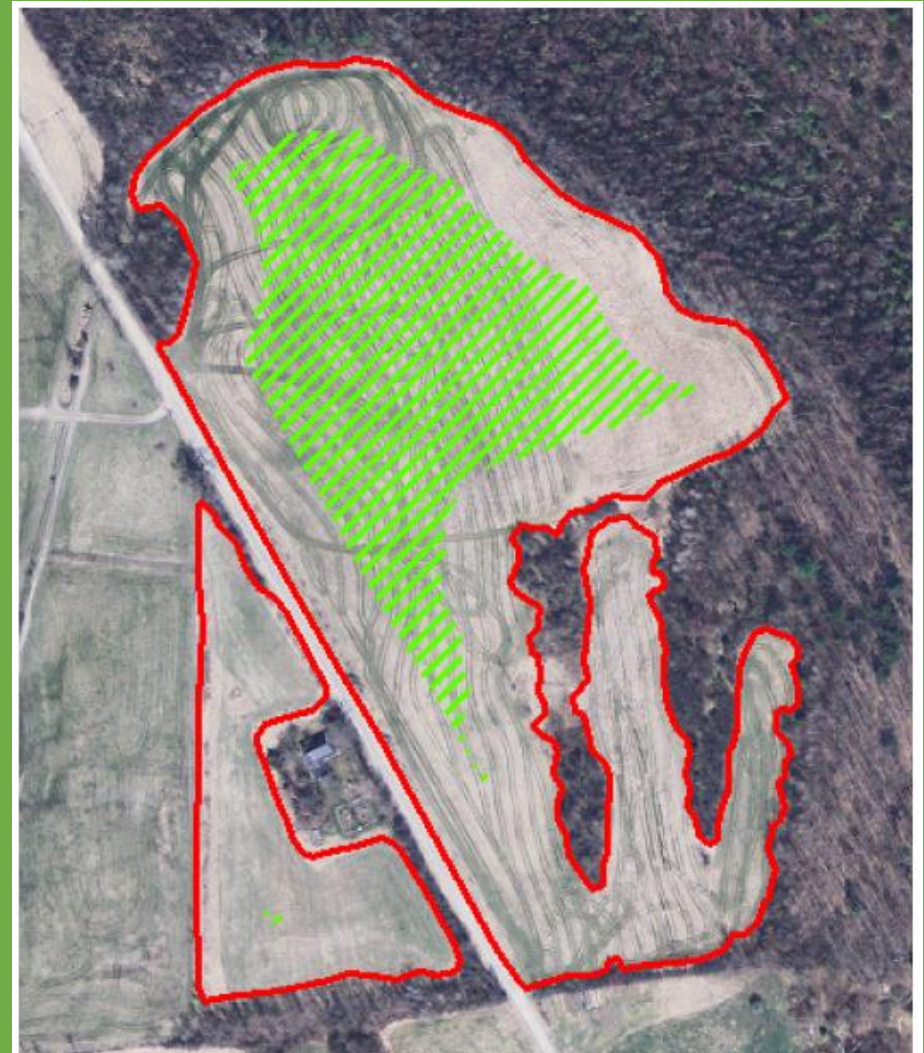
Habitat Considerations

Eastern Meadowlark &
Grasshopper Sparrow
60+ acres

Vesper Sparrow

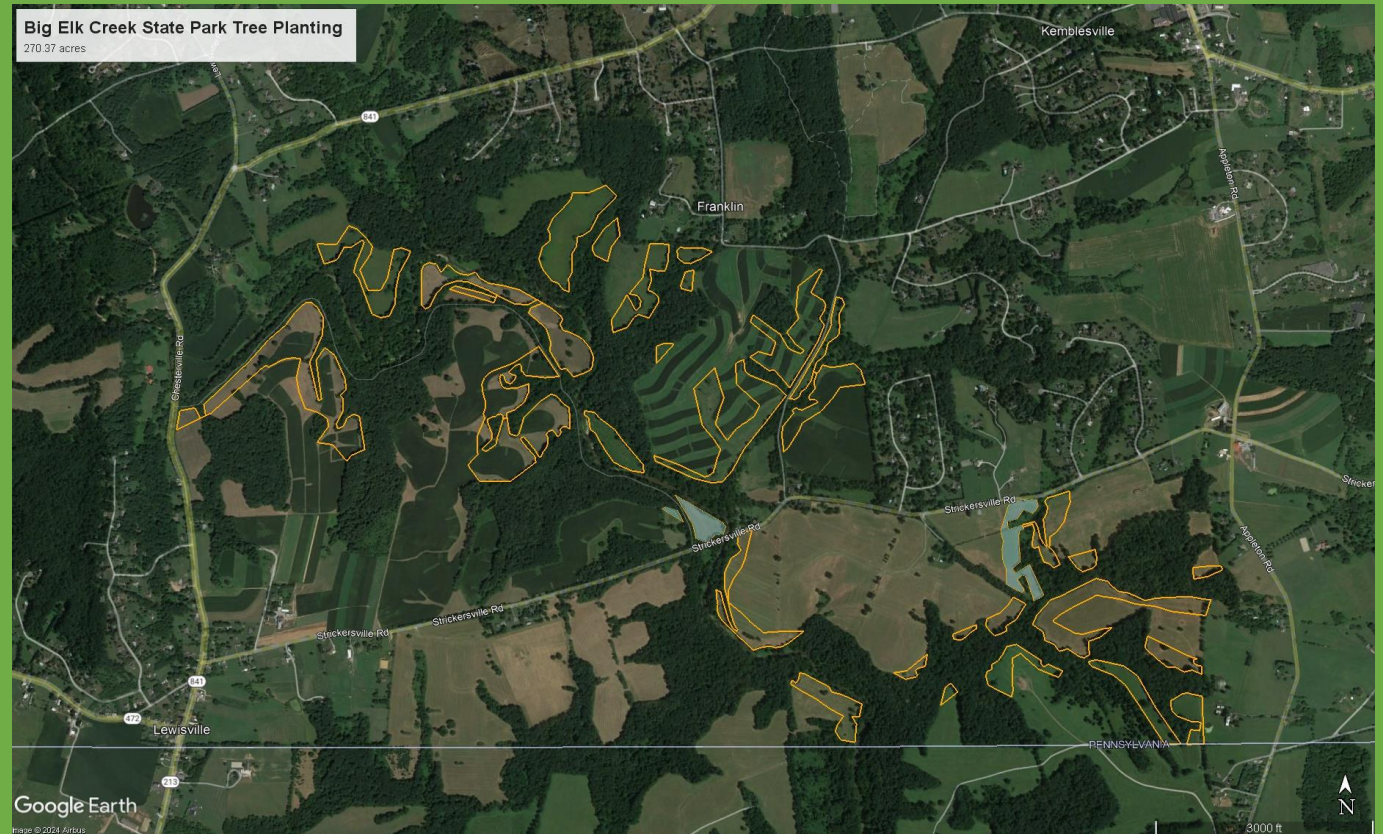
Bobolink
10+ acres

15+ acres



Riparian Buffer

- ~272 acres forest buffer
300' from perennial
streams
74,750 trees and shrubs
- ~ 80 acres meadow
- Adjusted to accommodate species of
concern
- Excessive sediment still impacts stream
habitat, but buffers slow storm water
runoff and filter liter and pollutants



Definition of a Pennsylvania State Park

Legislative Mandate – Act 18, Section 303 State Parks

Pennsylvania's public natural resources are to be conserved and maintained for the use and benefit of all its citizens as guaranteed by section 27 of Article I of the Constitution of Pennsylvania.

(2) For the purpose of promoting healthful outdoor recreation and education and making available for such use natural areas of unusual scenic beauty, especially such as provide impressive views, waterfalls, gorges, creeks, caves or other unique and interesting features, to acquire, in the name of the Commonwealth, by purchase, gift, lease or condemnation, any lands which in the judgment of the department should be held, controlled, protected, maintained and utilized as State park lands. Such lands may be purchased or accepted, subject to the conditions of any such lease and subject to such reservations, if any, of mineral rights, rights-of-way or other encumbrances as the department may deem not inconsistent with such holdings. However, the amount expended for the acquisition of lands for State park purposes shall not be more than the amount specifically appropriated for such purposes.

(3) To see that conveniences and facilities for the transportation, shelter, comfort and education of people shall be so designed and constructed as to retain, so far as may be, the naturalistic appearance of State park areas, surroundings and approaches, and conceal the hand of man as ordinarily visible in urban, industrial and commercial activities.

A Pennsylvania State Park

- A state park is a designated area of land protected and managed by the Department of Conservation and Natural Resources, Bureau of State Parks, for the purpose of conserving natural resources, providing recreational opportunities, and educating the public about the environment and local history.
- Pennsylvania State Parks offer a wide range of outdoor activities including, but not limited to, hiking, bicycling, camping, fishing, picnicking, and wildlife observation. State parks vary in size and features, but they all share the common goals of conserving natural landscapes, educating the public about the nature, and promoting outdoor recreation for the enjoyment of visitors.

Unique Designations of State Parks

- Out of 124 state parks, some have unique designations including:
 - Conservation Area
 - Environmental Education Center (EE Center)
 - Historic Park
 - Preserve

Unique Designations of State Parks

State Parks: Conservation Area

- PA Code 44.1 (adopted 2001), Definition of a Conservation Area
 - A conservation area is a designation for land that has been **donated** to the Department and managed by the Department for the purposes of preserving open space, conserving natural resources, and providing an opportunity for passive, non-motorized, low-density outdoor recreation and environmental education activities.
- PA Code 44.4, Management
 - (a) Conservation areas will be actively managed to protect natural resources.
 - (b) The following are examples of possible uses of conservation areas:
 - (1) Protection of habitats of species of special concern.
 - (5) Outdoor classrooms for schools and environmental education and interpretation programs.
 - (8) Demonstration areas for forest management practices.
 - (c) Conservation areas will be open to the public. Recreational facilities and activities will be limited to passive, non-motorized, low-density uses such as hiking, bird watching, fishing, and hunting.

Unique Designations of State Parks

- State Parks: **Environmental Education Center (EE Centers)**
 - EE Centers in the Bureau of State Parks provide a diverse and complex year-round program focusing on core functions of school programming, teacher training, and community outreach.
 - Major program emphasis is outreach to the formal educational and local community vs serving park visitors. The educational community consists of: schools (pre-K through college), teacher/educator professional development, and special populations associated with learning.

Unique Designations of State Parks

State Parks: **Historic Park**

Only one in the system: Washington Crossing Historic Park (Bucks County)

Washington Crossing was designated as an Historic Park at the time the park was transferred from PHMC to DCNR. The Bureau of State Parks opted to keep the name to reflect the practical and historical mission of the park.

Unique Designations of State Parks

State Parks: Preserve

- Only one in the system: White Clay Creek Preserve (Chester County)
- *PA House Resolution 250, June 1984*
- Whereas, E. I. du Pont de Nemours and Company owns approximately 1,234 acres of land along White Clay Creek in Chester County, Pennsylvania, and approximately 528 acres of land, contiguous with aforesaid land, in New Castle County, Delaware, which it desires to **donate** to the respective states in perpetuity for the park for **low intensity outdoor recreational use** of the citizens of Pennsylvania and Delaware ; therefore be it RESOLVED (the Senate concurring), That the General Assembly hereby supports the acceptance, by the Department of Environmental Resources for the Commonwealth, of a gift from E. I. du Pont de Nemours and Company of approximately 1,234 acres of land along White Clay Creek in Chester County, Pennsylvania, for use in perpetuity as a park for low intensity outdoor recreational use to be administered by the Department of Environmental Resources or its designee and to be known as the White Clay Creek Preserve, it being understood that the General Assembly of Delaware intends to pass a resolution similar to this.

Unique Designations of State Parks

Because there is no specific statutory authority, White Clay Creek Preserve's name informs our management plan and operations for the site:

- It is thought that White Clay Creek Preserve received its name for two reasons: 1) To reflect the wishes of E. I. du Pont de Nemours and Company to see the property open to the public for “low intensity outdoor recreational use”; 2) so that the lands in both Pennsylvania and Delaware have the same name, reflecting the continuity of the tract and management approach.
- Today, White Clay Creek Preserve is managed for low-intensity outdoor recreation to include public use for activities: hiking, bicycling, fishing, picnicking, and wildlife observation.

Land Protections as it relates to Big Elk Creek

Declaration of Covenants, Conditions and Restrictions by the Conservation Fund. Effective December 23, 2009

ARTICLE II – RESTRICTIONS RUNNING TO THE BENEFIT OF THE COUNTY AS REQUIRED UNDER THE PRESERVATION PARTNERSHIP PROGRAM

- A. The use of the Property as defined in this Declaration shall be restricted to open space, agricultural, forestal, park, recreation, natural resource conservation, or public access purposes, including but not limited to such purposes and uses authorized for state park land pursuant to the Conservation and Natural Resources Act, 71 P.S. Section 1340.101-1103, as amended from time to time (all such authorized purposes and uses, the “Open Space Purposes”).
- B. Specifically prohibited are:
- (i) The disposal on or under the Property of sewage effluent generated off-site, including off-site generated sewage effluent at any stage of treatment or post-treatment using any technology. This prohibition includes, but is not limited to, spray or drip irrigation;
 - (ii) Cellular towers;
 - (iii) The conveyance of surface or groundwater resources from the Property for commercial or consumptive purposes (including public or private companies or authorities); and
 - (iv) The placement on site of any composting materials, waste products, or any other similar items that are generated off site, for any reason including disposal or processing.

Land Protections as it relates to Big Elk Creek

- The Land and Water Conservation Fund
 - The Land and Water Conservation Fund (LWCF) was established by Congress in 1964 to fulfill a bipartisan commitment to safeguard our natural areas, water resources and cultural heritage, and to provide recreation opportunities to all Americans. Using zero taxpayer dollars, the LWCF invests earnings from offshore oil and gas leasing to help strengthen communities, preserve our history and protect our national endowment of lands and waters.
 - The State Side of the LWCF provides matching grants to States and local governments for the acquisition and development of public outdoor recreation areas and facilities. Grants have supported purchase and protection of 3 million acres of recreation lands and over 29,000 projects to develop basic recreation facilities in every State and territory of the nation.

Land Protections as it relates to Big Elk Creek

- The parcels referred to as Strawbridge 2 & 3 were utilized as replacement land, receiving LWCF status, to compensate for 28 different non-state park properties it was removed from.
- The reference in LWCF documentation to passive recreation is to equate it to the use of the lands that were converted / had LWCF protection removed from them.
- It was not intended as restrictive that Strawbridge could only be for hiking, hunting, and wildlife watching, only that since converted lands were mostly passive use and the use of Strawbridge 2 & 3 at the time was similar, the Strawbridge parcels were acceptable as 'replacement land'.

Review and Discussion

Next Steps; Meeting 3 Focus

- Meeting #2 transcript will be available to the Task Force for review by June 5.
 - Edits to the transcript are due from the Task Force on June 12 and it will be posted to the website by June 14.
- **Meeting #3 topic = Park Services, Visitor Satisfaction and Safety**
 - Agenda items for 6:00-9:00 PM portion of meeting: Due June 19
 - Optional Pre-Meeting Field Visit: July 1 at 2:30 PM
 - Meeting #3 is scheduled for: July 1 from 6:00-9:00 PM at White Clay