

Challenges and Opportunities With Multiple Urban Dam Removals in Sequence

Kristen Coveleski, PhD, PE

Senior Water Resources Engineer/ Regional Director, Inter-Fluve





1. Efficiencies/ Opportunities



2. Challenges

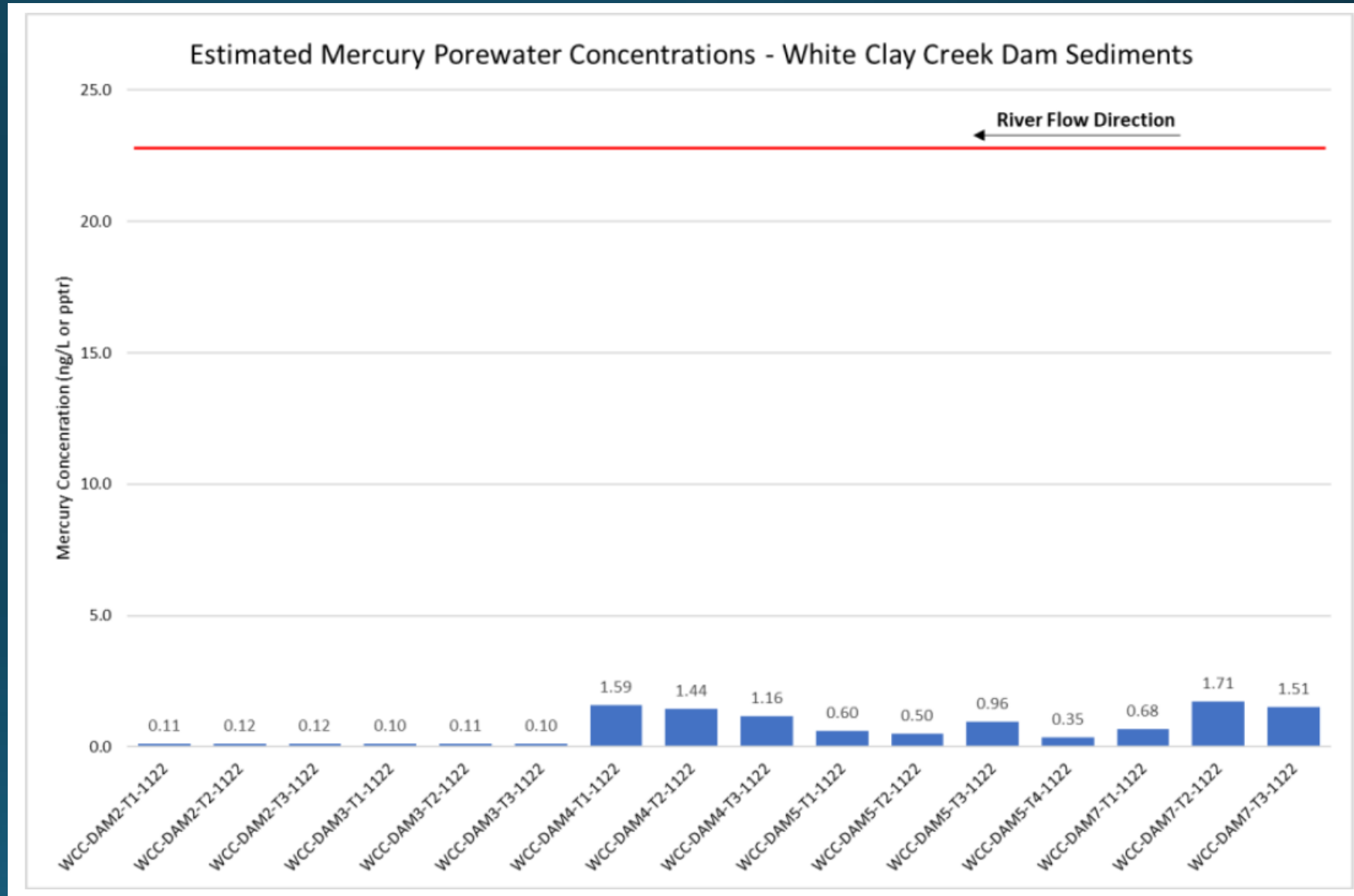


3. Examples

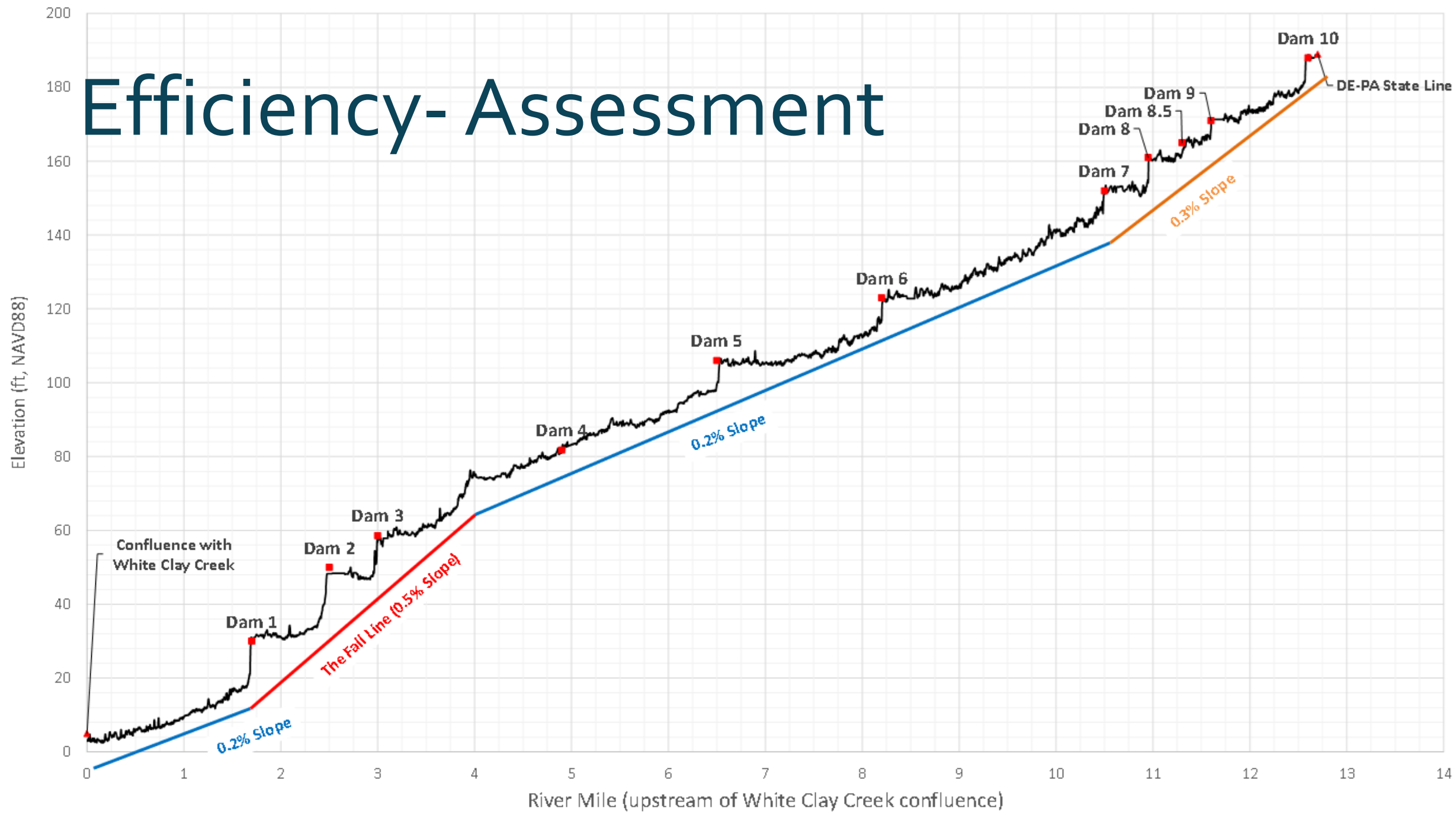
Efficiency- Field Work



Efficiency- Sediment Testing



Efficiency- Assessment



1 Find location

2 Define area

3 Confirm

Verify the area where project activities will occur

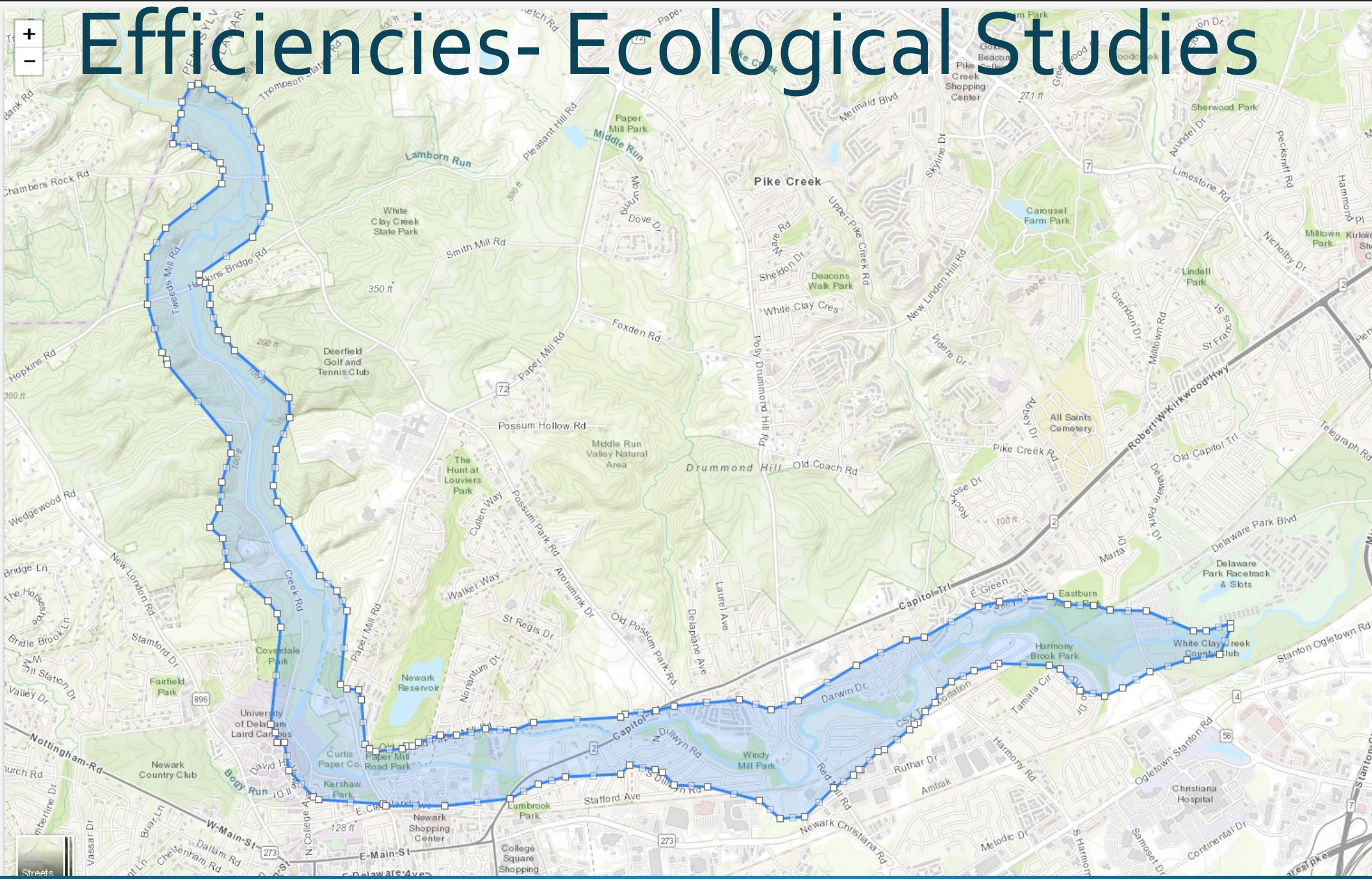
Modify the shape by clicking and dragging the vertices or clicking on a solid vertex to remove it

AREA: 2.85 mi²

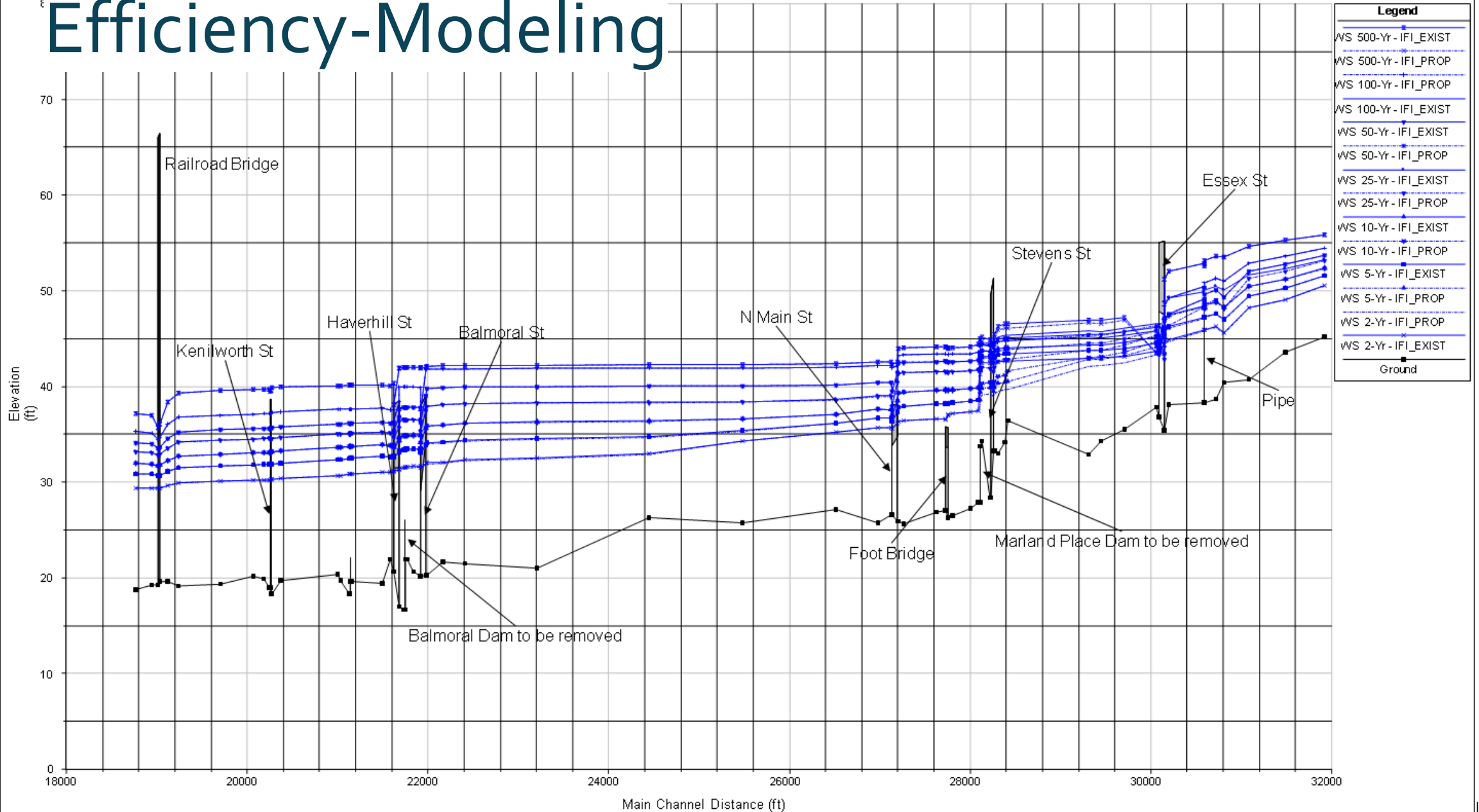
CONTINUE

START OVER

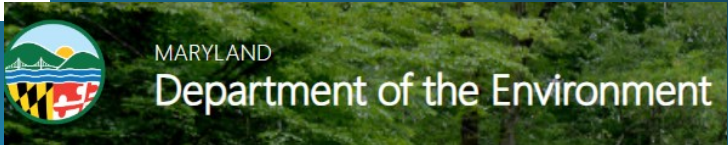
Efficiencies- Ecological Studies



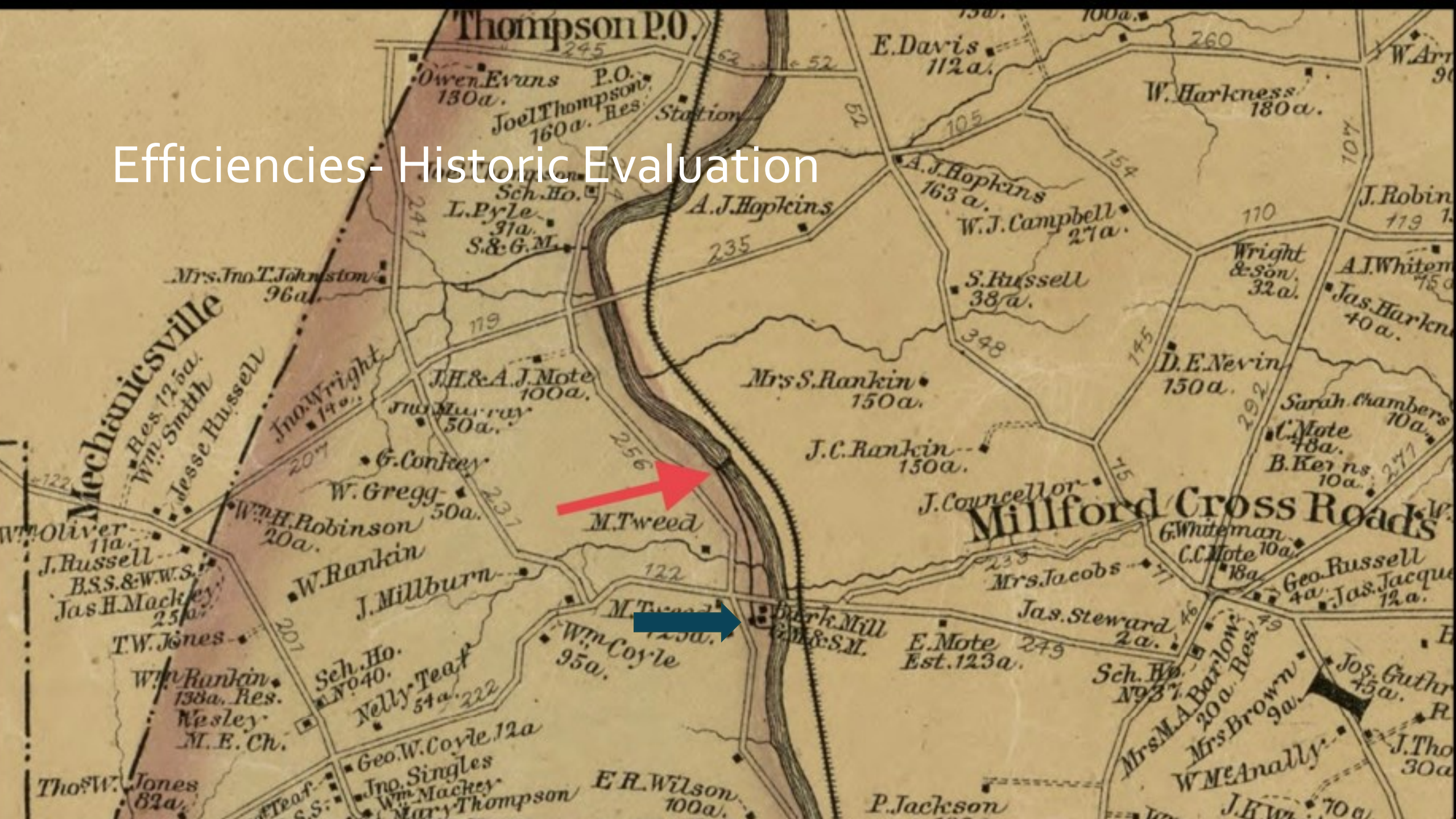
Efficiency-Modeling



Efficiencies- Permitting



Efficiencies- Historic Evaluation



Efficiencies- Public Outreach



Challenges/ Opportunities- Funding



Dam Removal Funding in the Infrastructure Investment and Jobs Act

NOOKSACK RIVER, WASHINGTON
DANIEL NYLEN

Why Remove Dams?

More than 90,000 inventoried dams block rivers and streams of the United States. While many still serve public or private needs for flood risk management, water supply, industry/agriculture, or hydropower, many others have become uneconomical or obsolete. With the average age of American dams at 60 years old, many dams, regardless of functionality, are in desperate need of attention for repairs or upgrades to meet safety standards. Selective removal of dams, particularly those that have become outdated or unsafe, can be an economical and effective solution for eliminating dam-owner liability, improving river health, enhancing public safety and quality of life, and boosting economic development and recreational opportunities.

What's Funded?

The Infrastructure Investment and Jobs Act (IIJA) is funding several federal programs to address our nation's dam infrastructure and remove obsolete dams to restore the health of our nation's rivers. This funding requires the consent of the dam owner to remove a dam and excludes federal hydropower dams. Of those dams that are eligible, prioritization is for projects that pose a significant public safety hazard and those whose removal will provide significant ecological value.

Dam Removal

NOAA - Community Based Restoration Grant Program

\$400 million

The National Oceanic and Atmospheric Administration (NOAA) provides funding to restore fish passage through the removal of dams (in-stream barriers). NOAA distributes funds through competitive grant cycles. Eligibility: institution of higher education, non-profit, commercial (for-profit) organizations, US territories, state or local governments, and Indian Tribes. www.fisheries.noaa.gov/grant/restoring-fish-passage-through-barrier-removal-grants

US Fish & Wildlife Service - National Fish Passage Program

\$200 million

The National Fish Passage Program of the U.S. Fish and Wildlife Services (USFWS) works with communities to restore rivers and conserve aquatic resources by removing dams and other in-stream barriers. USFWS accepts proposals year-round. Eligibility: institution of higher education, non-profit, commercial (for profit) organizations, U.S. territories, state or local governments, Indian Tribes, and individuals. www.fws.gov/program/national-fish-passage

FEMA - National Dam Safety Program - Dam Removal

\$75 million

The Federal Emergency Management Agency's (FEMA) National Dam Safety Program provides grants to State Dam Safety Agencies to reduce the public safety risks associated with dams. FEMA funds the removal of eligible dams through the High Hazard Potential Dam Rehabilitation Grant Program. Proposals must be submitted through a State Administrative Agency. Eligibility: States or territories with a dam safety program. Non-profits and non-federal governments are eligible to be sub-recipients. FEMA received an additional \$725 million through the IIJA for dam safety, which can also include dam removal. www.fema.gov/emergency-managers/risk-management/dam-safety/rehabilitation-high-hazard-potential-dams

US Army Corps of Engineers - Section 206 Aquatic Ecosystem Restoration Program

\$115 million

The U.S. Army Corps of Engineers (USACE) provides funding for dam removal through the Aquatic Ecosystem Restoration Program. Proposals are accepted on a rolling basis by contacting your local USACE office. There is no cost share requirement for USACE's IIJA dam removal funds. Eligibility: Non-federal entities can request USACE assistance under the 206 program and enter into a cooperative agreement. www.usace.army.mil/Missions/Locations

US Forest Service

\$10 million

The IIJA provided funding for the Forest Service to remove non-hydropower federal dams and for providing technical

Challenges/ Opportunities- Sequence of Removals



Challenges/Opportunities- Sediment Management



Challenges-Political



Challenges- Public Opinion

LOCAL

Wilmington council vote clears way for Brandywine dam removal. Opponents vow to fight on



[Anitra Johnson](#)

Delaware News Journal

Published 4:38 a.m. ET Feb. 5, 2024

WATERSHED

'Who owns the river?': Wilmington residents call for historic dam protection while environmentalists work to protect fish species

Residents of a gated community in Delaware say they're worried they could lose their beloved waterfall, and a piece of history, if a dam is removed to protect fish species.

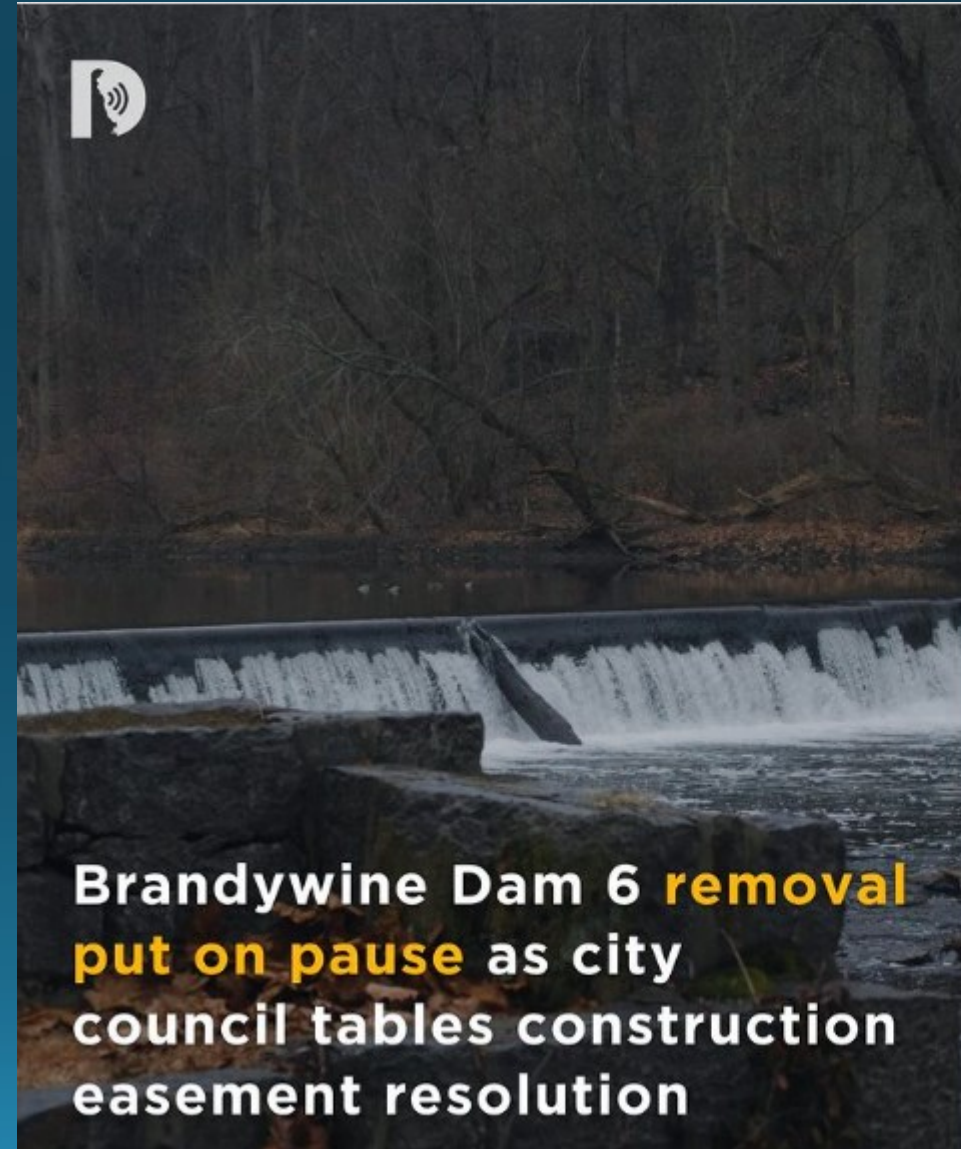


By [Zoë Read](#) · Updated Mar. 21, 2024 3:57 pm

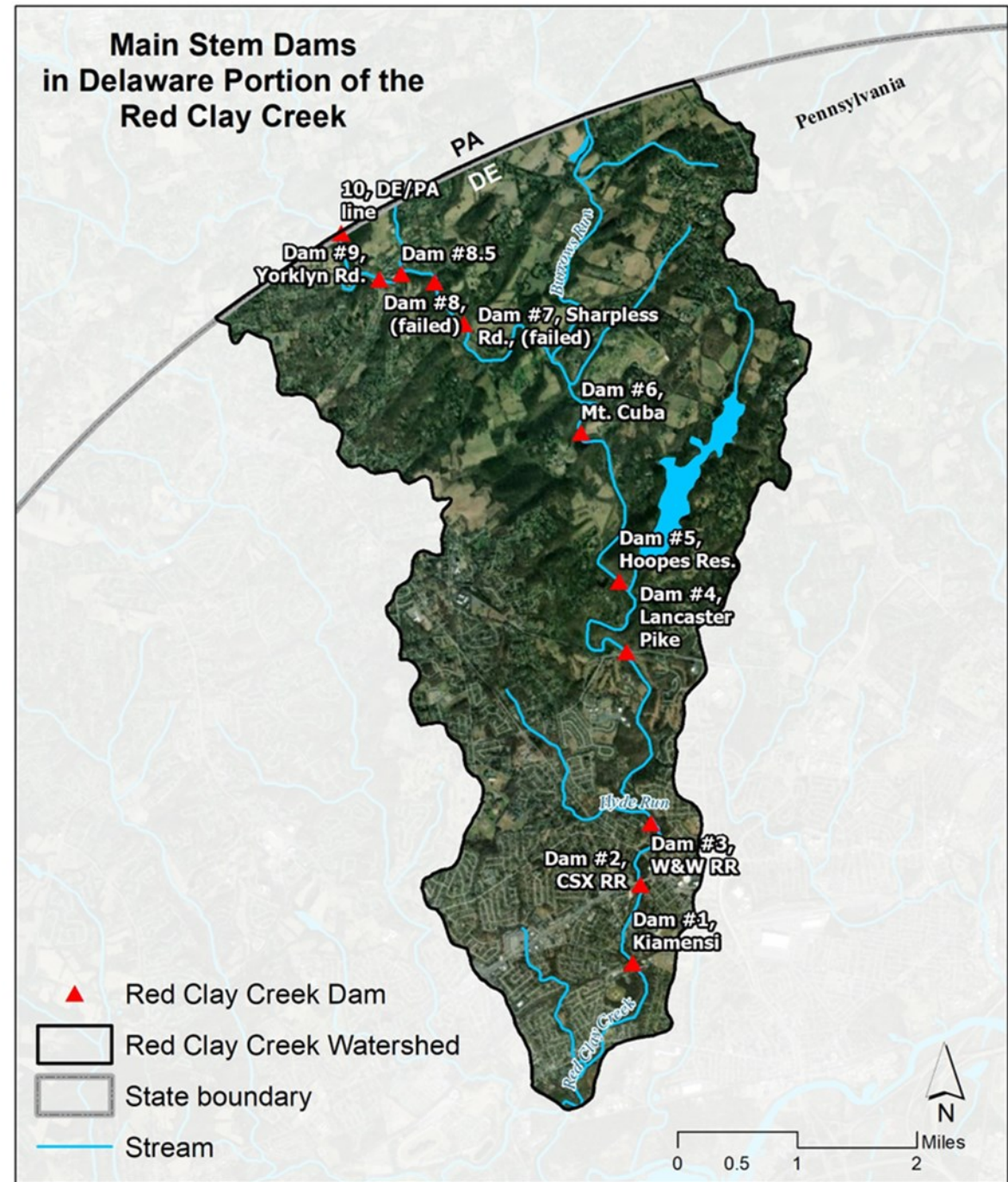
▶ Listen 4:41



Brandywine Dam 6 **removal** put on pause as city council tables construction easement resolution



Challenges- Dam Ownership





Thank you!

Kristen Coveleski, PhD, PE
Inter-Fluve
kcoveleski@interfluve.com