

Phase 1 Interim Measures Update

Former DuPont Waynesboro Site - AOC 4

South River Science Team Spring Meeting

April 10, 2019



Overview

- The Mercury Story
- Collaboration for Remedy Selection
- Interim Measures Approach
- Shiloh Baptist Church BMA Update
- North Park Design



Waynesboro, VA Fibers Plant

DuPont 1929 - 2004

INVISTA 2004 – 2018

A&AT 2018 - Present



The South River Mercury Story



1976:
Mercury discovered
on-site and in fish; fish
consumption advisory
established

1984:
DuPont funds 100-year
monitoring program

2005 - 2012:
Extensive field
investigations

2014:
South River
enters into
regulatory
process

1930 1940 1950

1960 1970

1980

1990

2000

2010

2016 ★

2020

1929-1950
Mercuric sulfate used in
acetate rayon fiber
production



1982:
Studies
predict fish
improvement
in 20 years

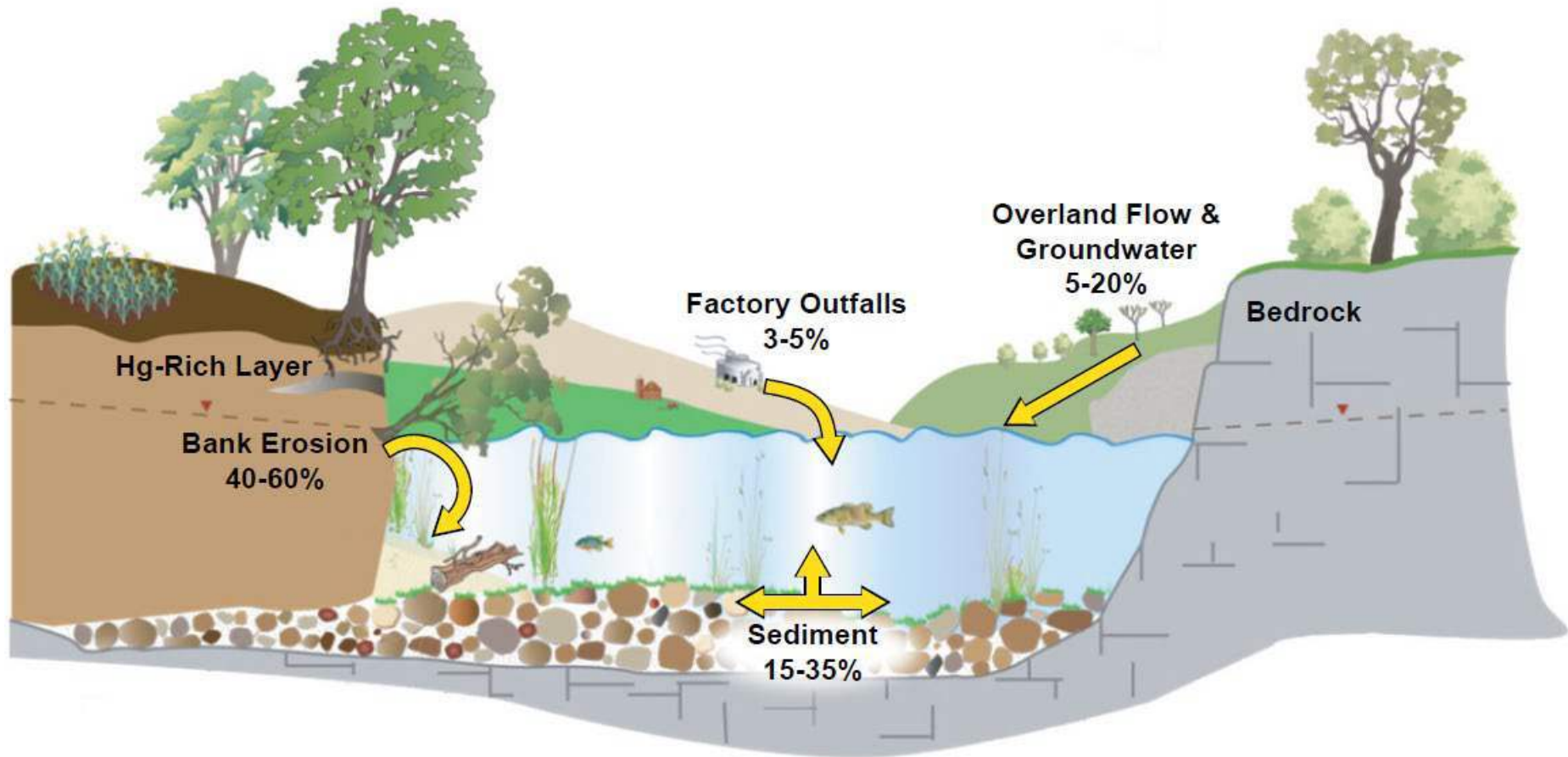
1999:
Fish tissue
levels are not
decreasing as
predicted

2001:
south river
SCIENCE TEAM
DuPont and Virginia
Department of
Environmental
Quality launch
collaborative effort

2014:
Baseline
monitoring
begins

2016-2020
Phase 1 Interim Measures
Construction

AOC 4 Conceptual Site Model



Fish Consumption Advisory

- 25-mile consumption ban on fish, except stocked trout
- 100+ mile consumption advisory (2 meals/month)
- Unable to remove fish advisory established in 1976

¡ADVERTENCIA!

Aviso de salud sobre el consumo de pescado

*Puede que los peces contengan altos niveles de mercurio.
El mercurio puede ser peligroso para la salud.*

Río Sur (South River): Se puede comer la trucha.
No se debe comer otros tipos de pescados.

Parte Sur del Río Shenandoah (South Fork Shenandoah River):
Se puede comer hasta dos porciones (de ½ libra,
o el tamaño de una mano) de pescados al mes.

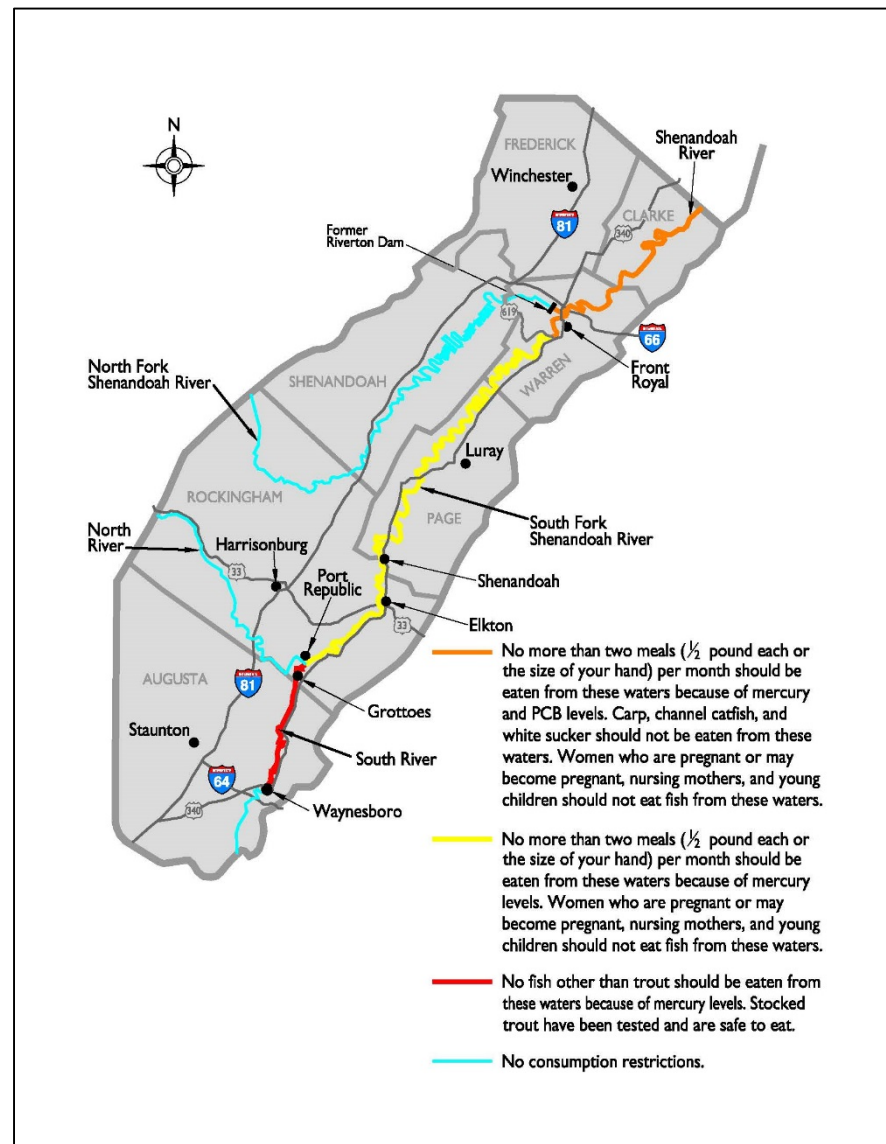
Pero las mujeres en edad fértil, las mujeres embarazadas,
las madres lactantes, y los niños pequeños **no** deben comer
los pescados de aquí.

¿Preguntas?

Llame al Departamento de Salud (540-332-7830).



south river
SCIENCE TEAM



A topographic map of the San Francisco Bay Area. The map shows the San Francisco Peninsula, the Golden Gate Bridge, and the surrounding hills. A red rectangle highlights the area of San Francisco, which is the focus of the subsequent images. The map includes labels for various locations such as San Francisco, San Jose, and the Golden Gate Bridge. The terrain is shown with green shading for hills and brown lines for roads and railways. The water of the bay is shown in blue. The map is oriented with North at the top.



Examples of Eroding Riverbanks

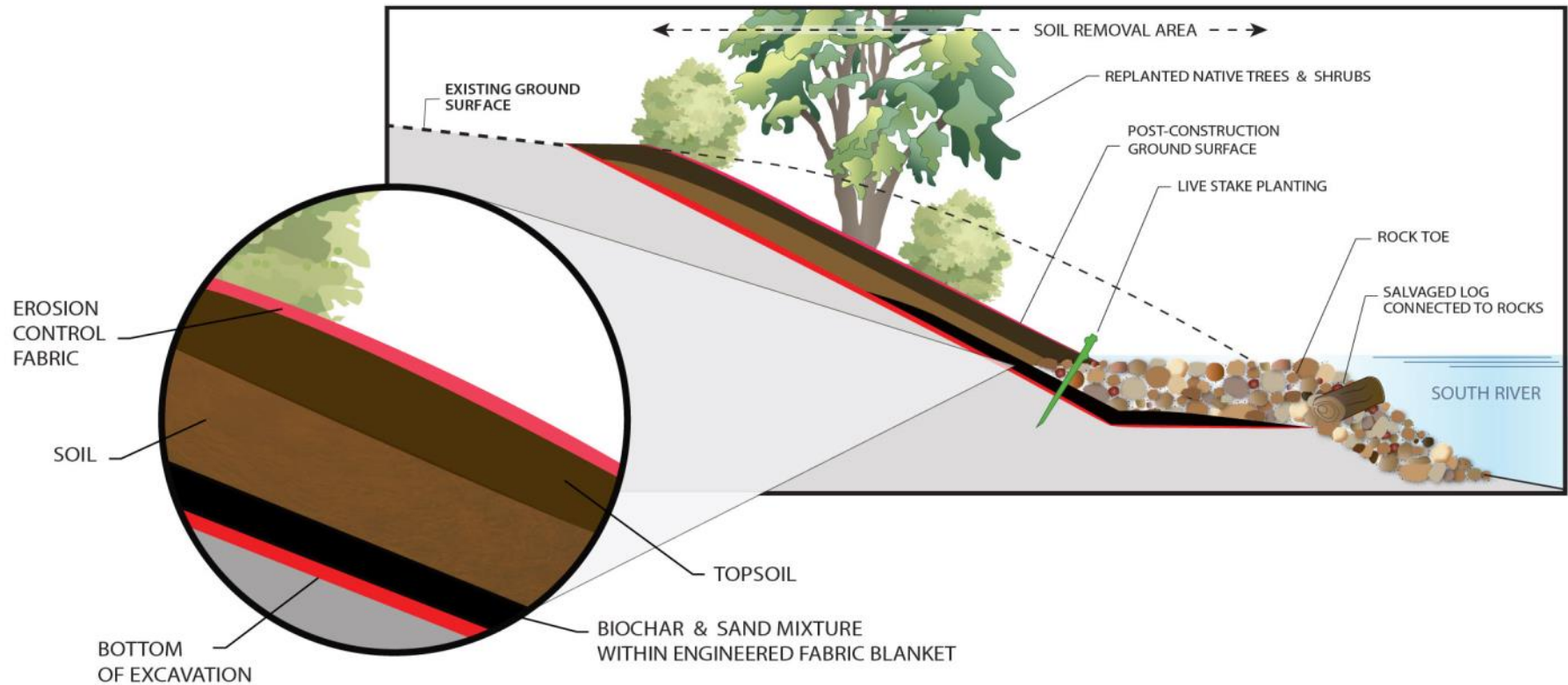


Remedial Design Criteria

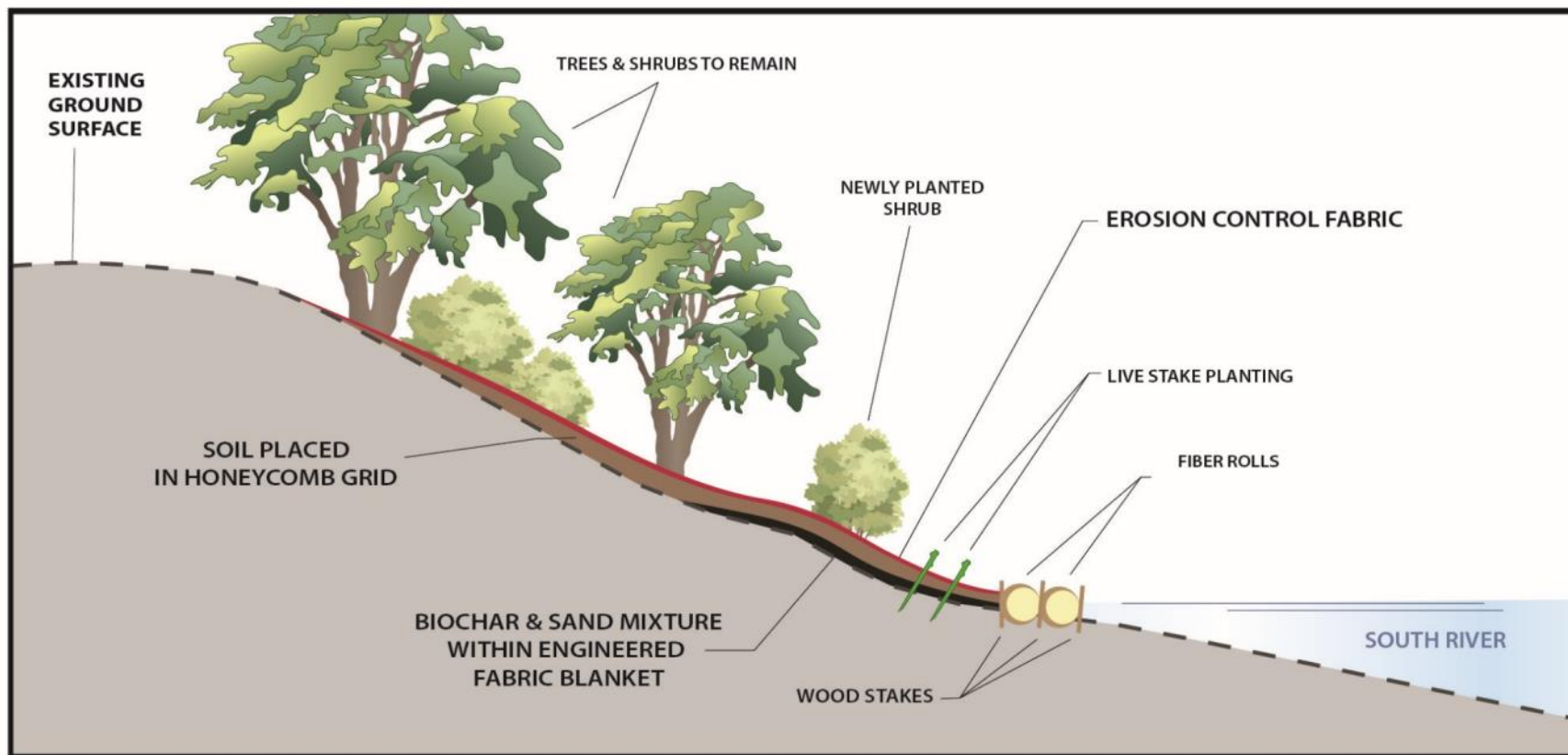
- Reduce mercury loading
- Maintain/improve habitat
- Minimize disruption
- Use proven/effective methods
- Address landowner concerns



Contaminated Soil Removal Approach



Contaminated Soil Capping Approach



Construction Sequence



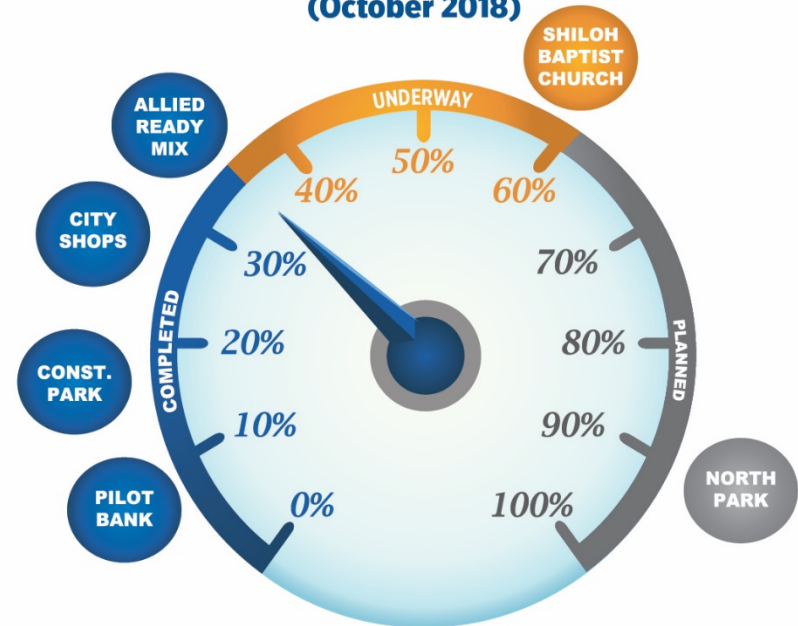
- 1) Design implementability and safety review
- 2) Site access and clearing
- 3) Cofferdam installation
- 4) Contaminated soil removal
- 5) Bank stabilization
- 6) Site restoration (planting and habitat features)



Phase 1 Interim Measures Status

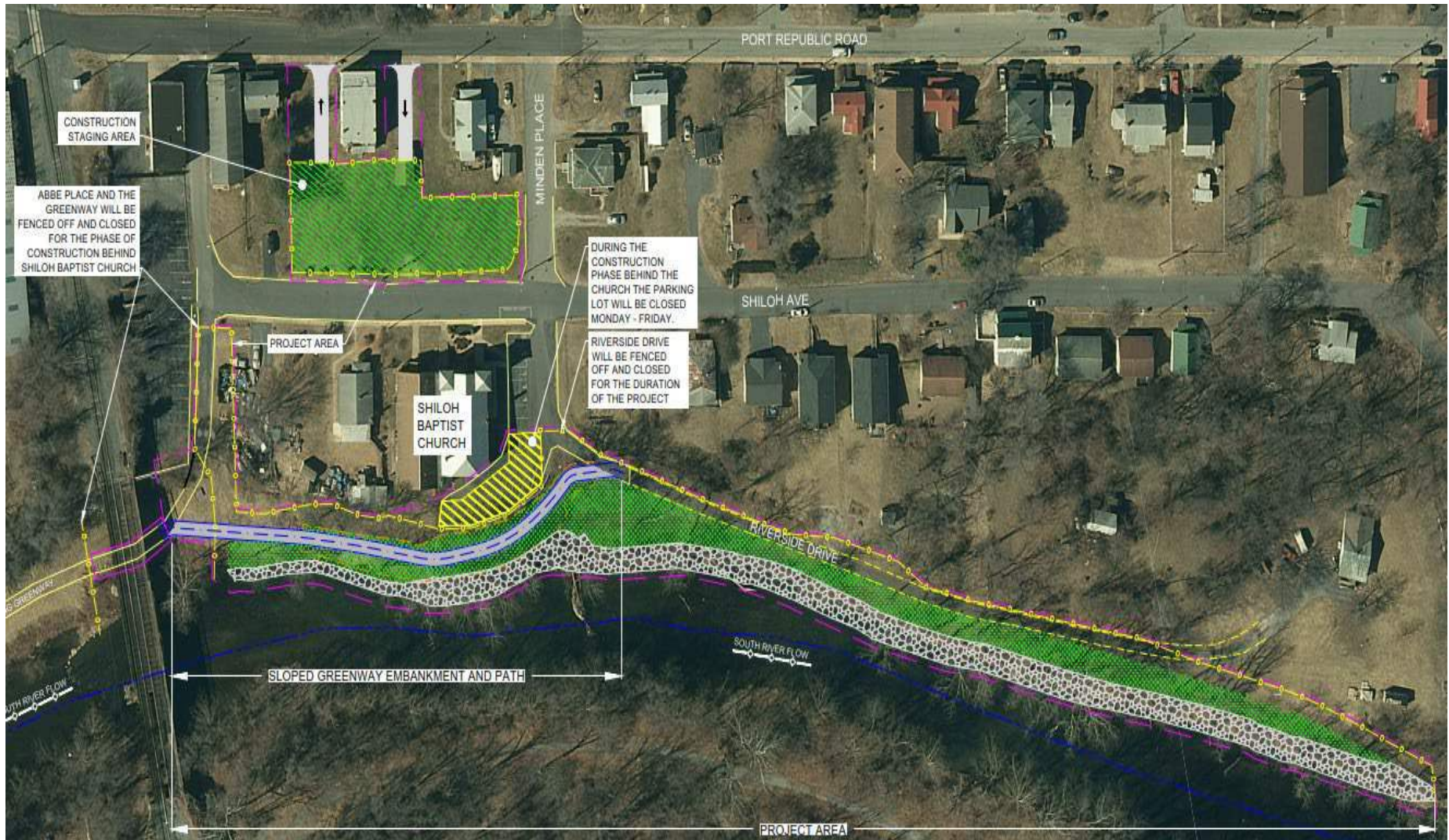


**Estimated Percent of Mercury Input Reduced to Date
(October 2018)**

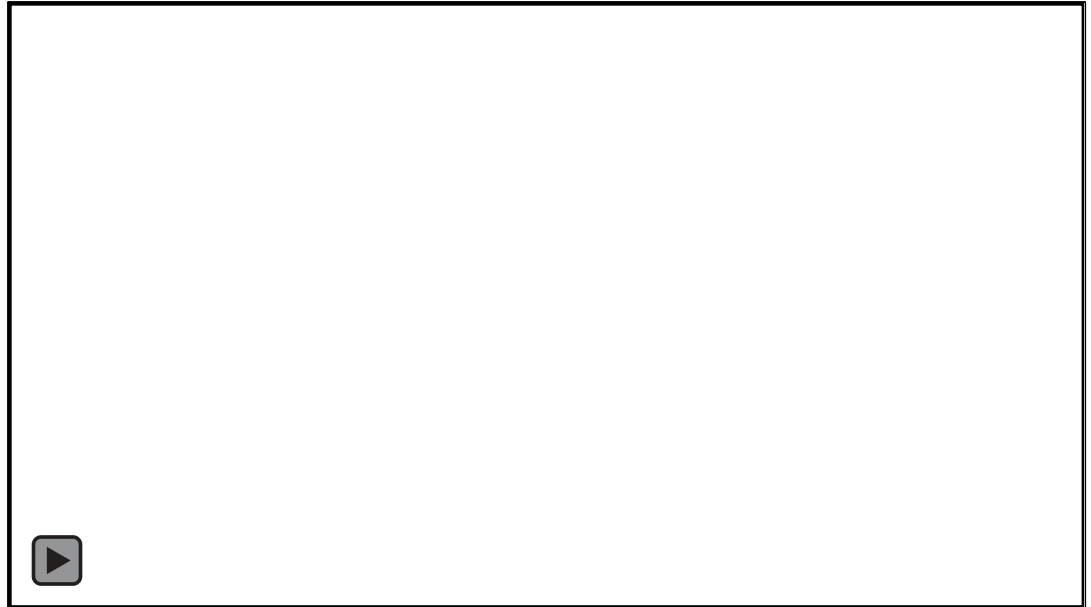


It is estimated that the erosion of six South River riverbanks contributes appreciable mercury to the river each year. The goal of the remediation work is to stop the erosion of these riverbanks and, in doing so, reduce the mercury input into the South River by 90%.

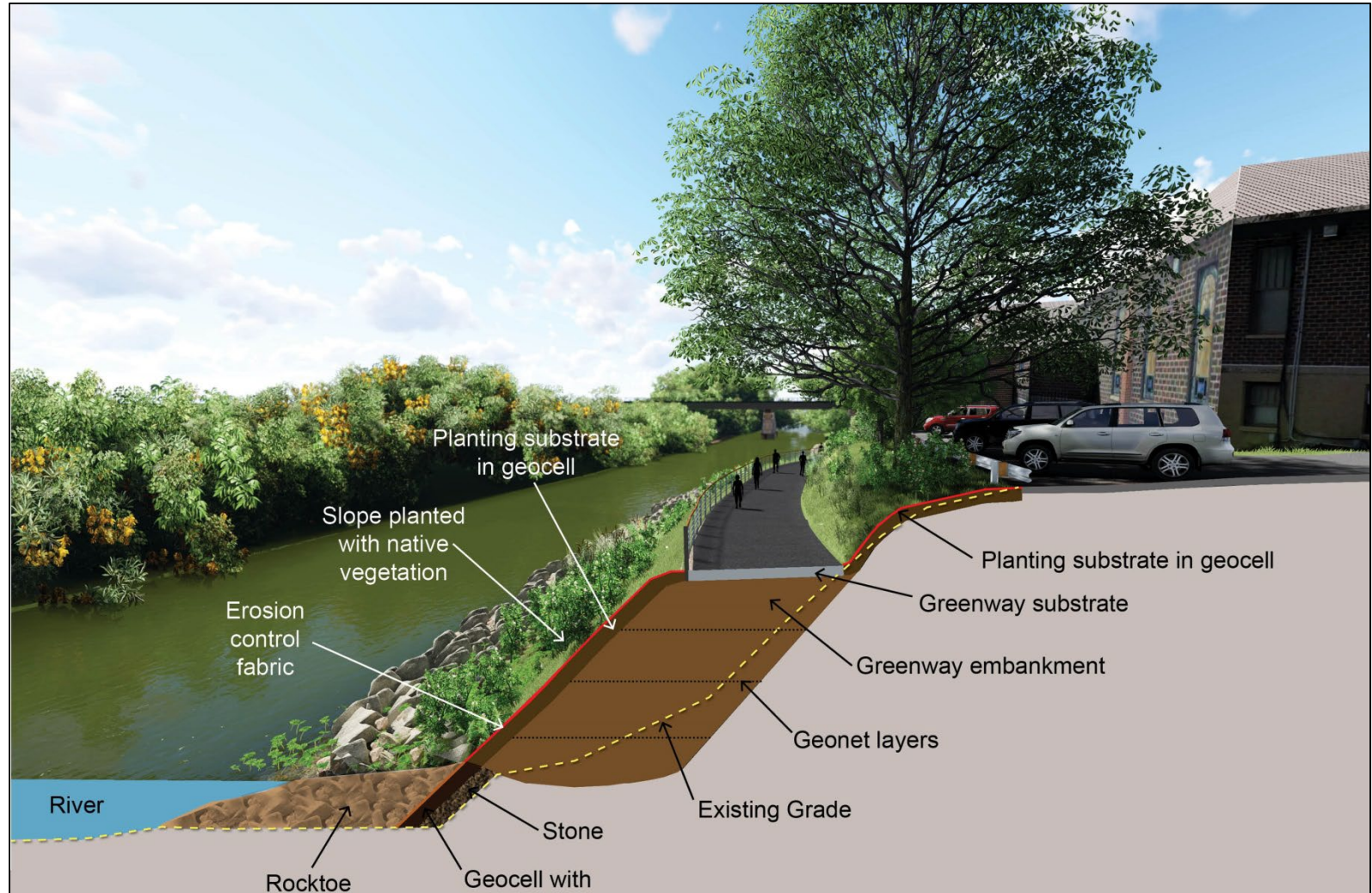
Shiloh Baptist Church BMA



Greenway Trail Concept



Shiloh Baptist Church BMA





Clearing/Grubbing

Coffer Dam Installation



Excavation of Impacted Soil



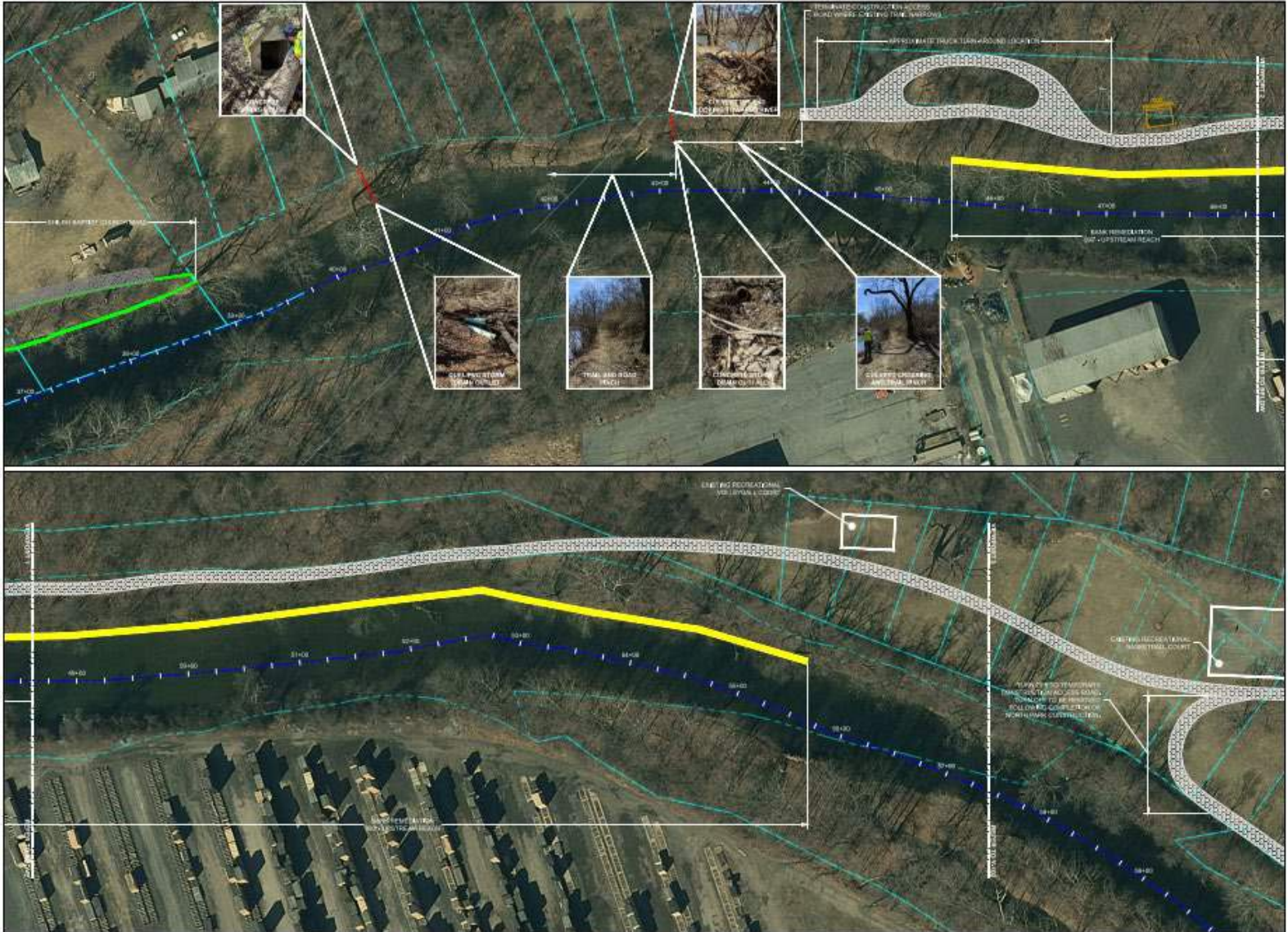
Greenway Embankment Preparation



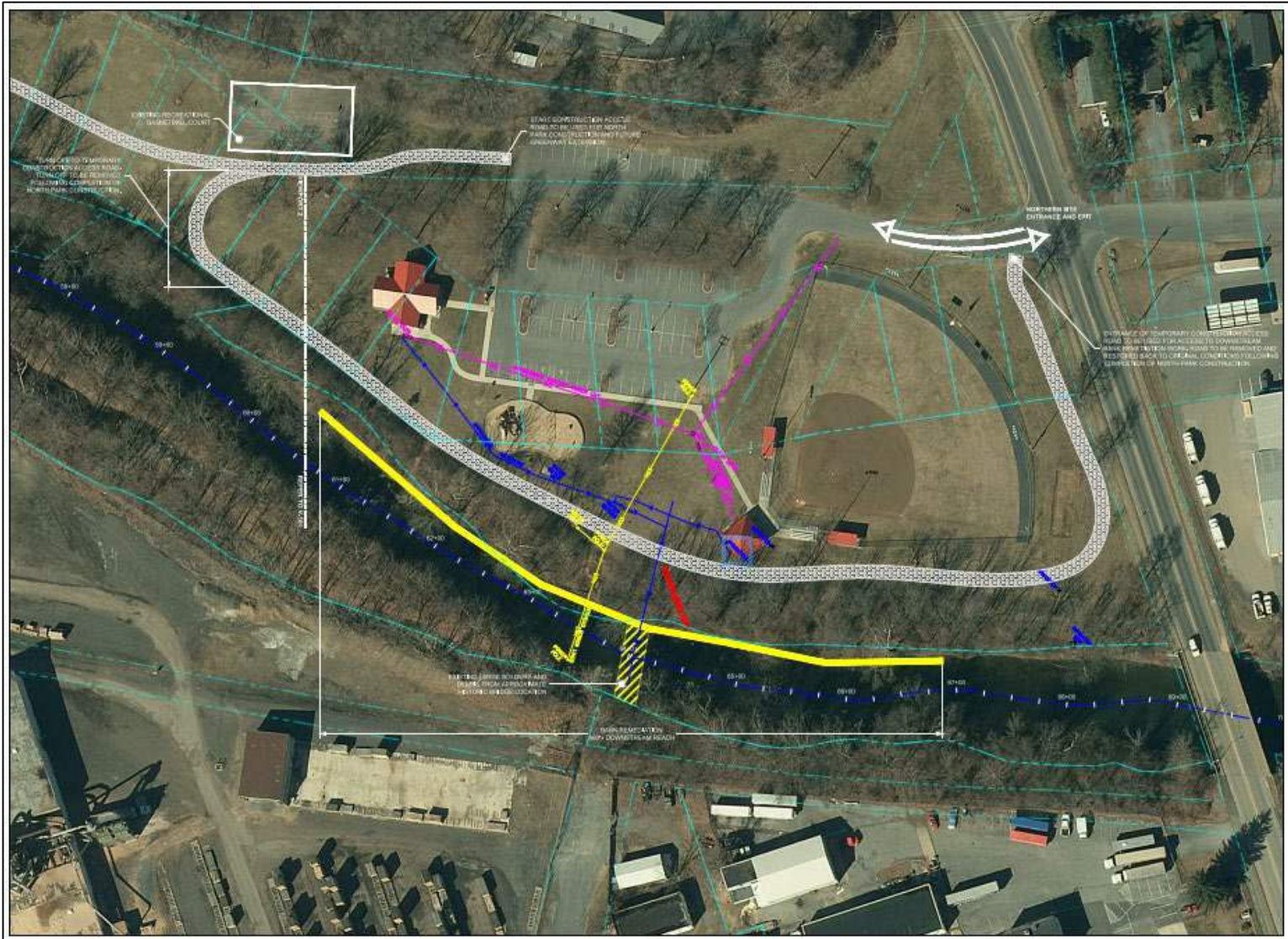
Greenway Embankment Construction



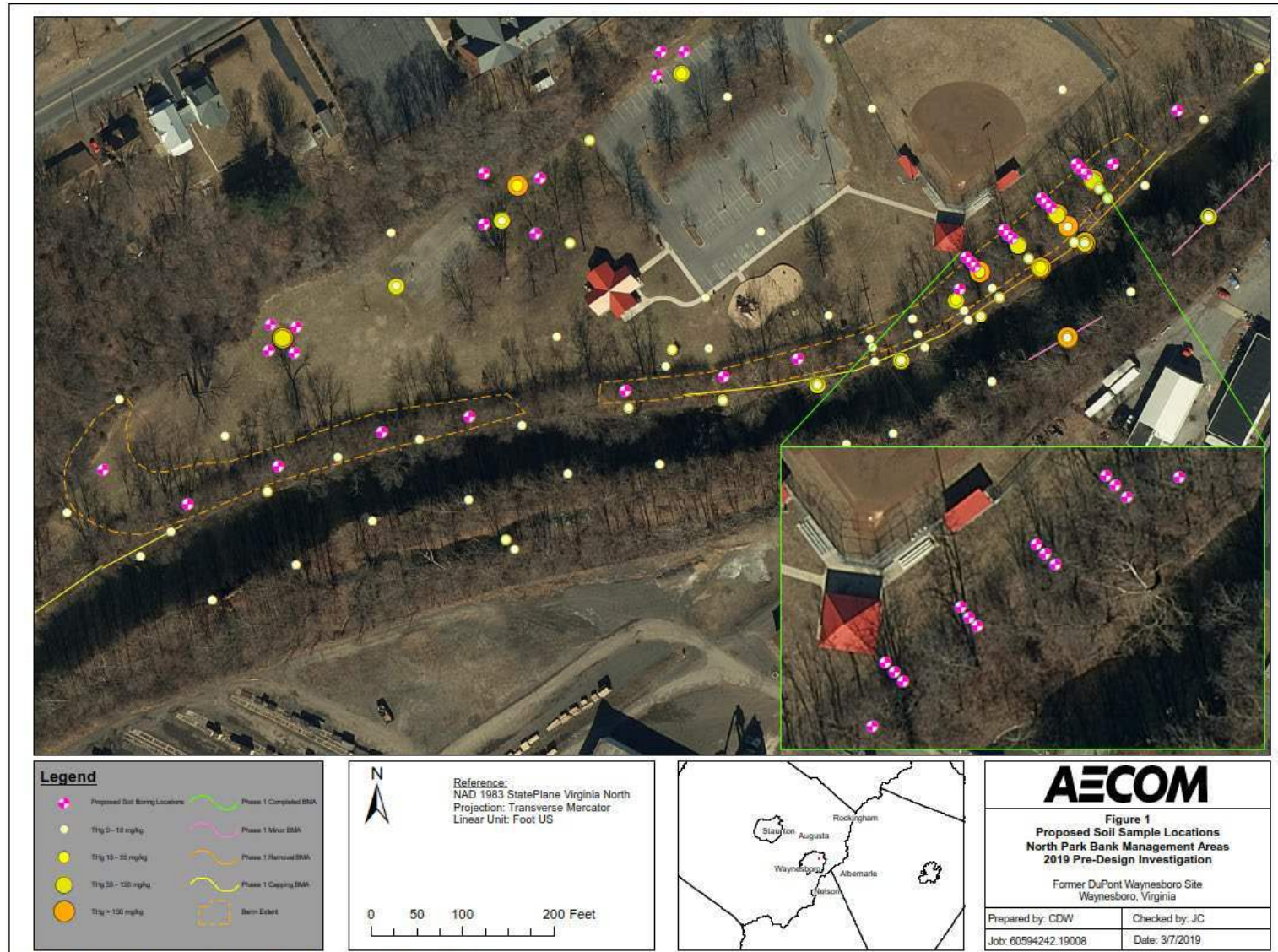
What's Next? North Park BMAs



North Park BMAs



North Park Pre-design Investigations



Path Forward

- Submit JPA & 60% Design Package – Spring 2019
- 90% Design Package Summer 2019
- Construction following Shiloh Baptist Church completion



Phase 1 IM Summary



Nearly **2,500 feet** of riverbanks have been remediated to date



Steps providing **river access** and improved **Greenway Trail** connectivity



Construction crews have logged **23,000+** safe work hours



5,600+ monitoring samples collected to date



Thank You!