



United States Avenue Burn Site Proposed Cleanup Plan

Agenda

- **Welcome**..... Mayor Edward Campbell, Gibbsboro
- **Introduction**..... Pat Seppi, EPA
- **Overview**..... Julie Nace, EPA
 - Superfund Process
 - Burn Site Contamination
 - Alternatives & Proposed Remedy
- **Questions?**



Superfund Process

Discovery of Site
Preliminary Assessment
Site Investigation



Site Proposed to National Priority List



Remedial Investigation

- Define site conditions
- Determine human and ecological risk



Feasibility Study

- Evaluate remedial alternatives using "Nine Criteria"



Superfund Process

Remedy Proposed

- Proposed Plan
- Public Comment Period



Remedy Selected

- Record of Decision
- Legal agreement for remedy



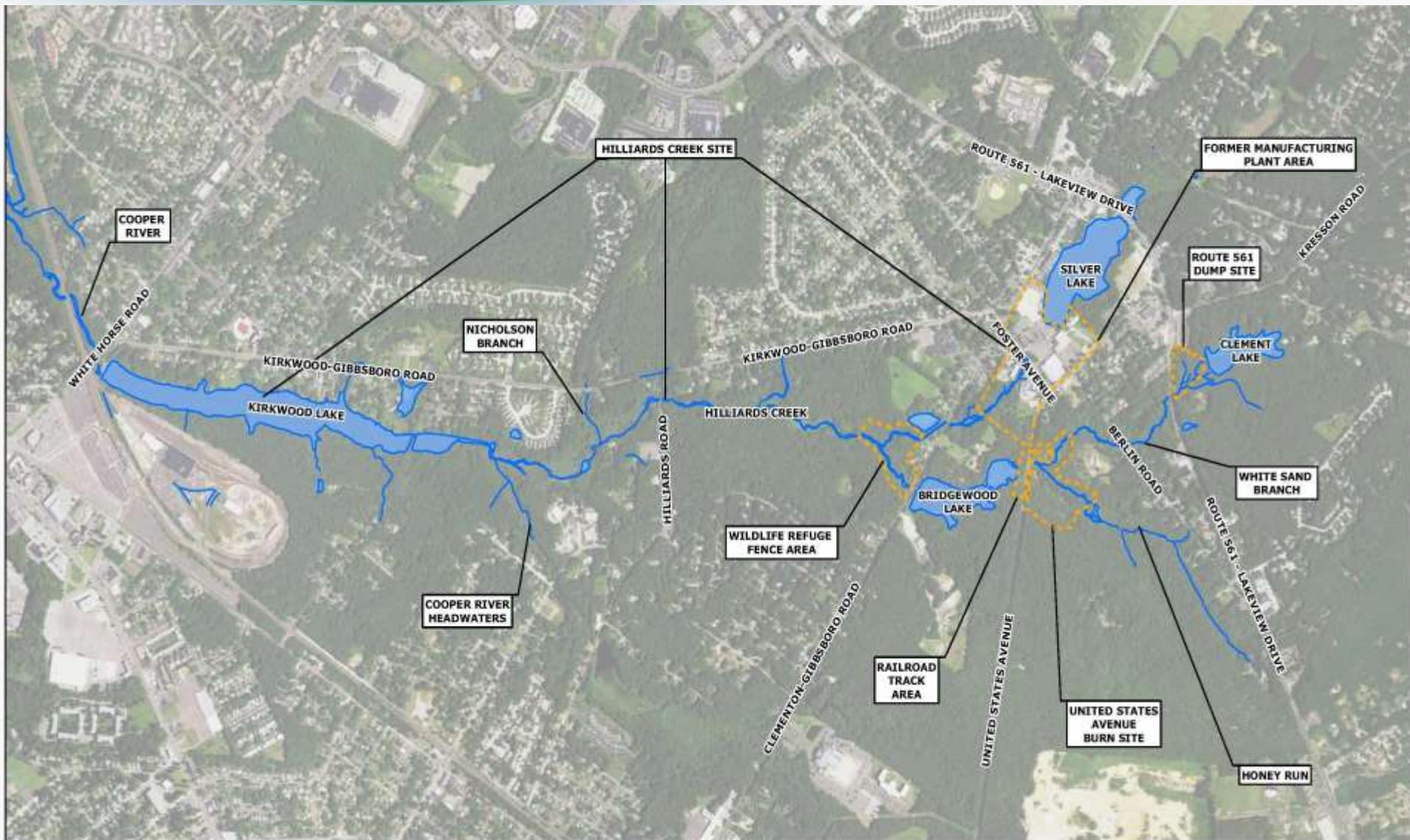
Remedy Design

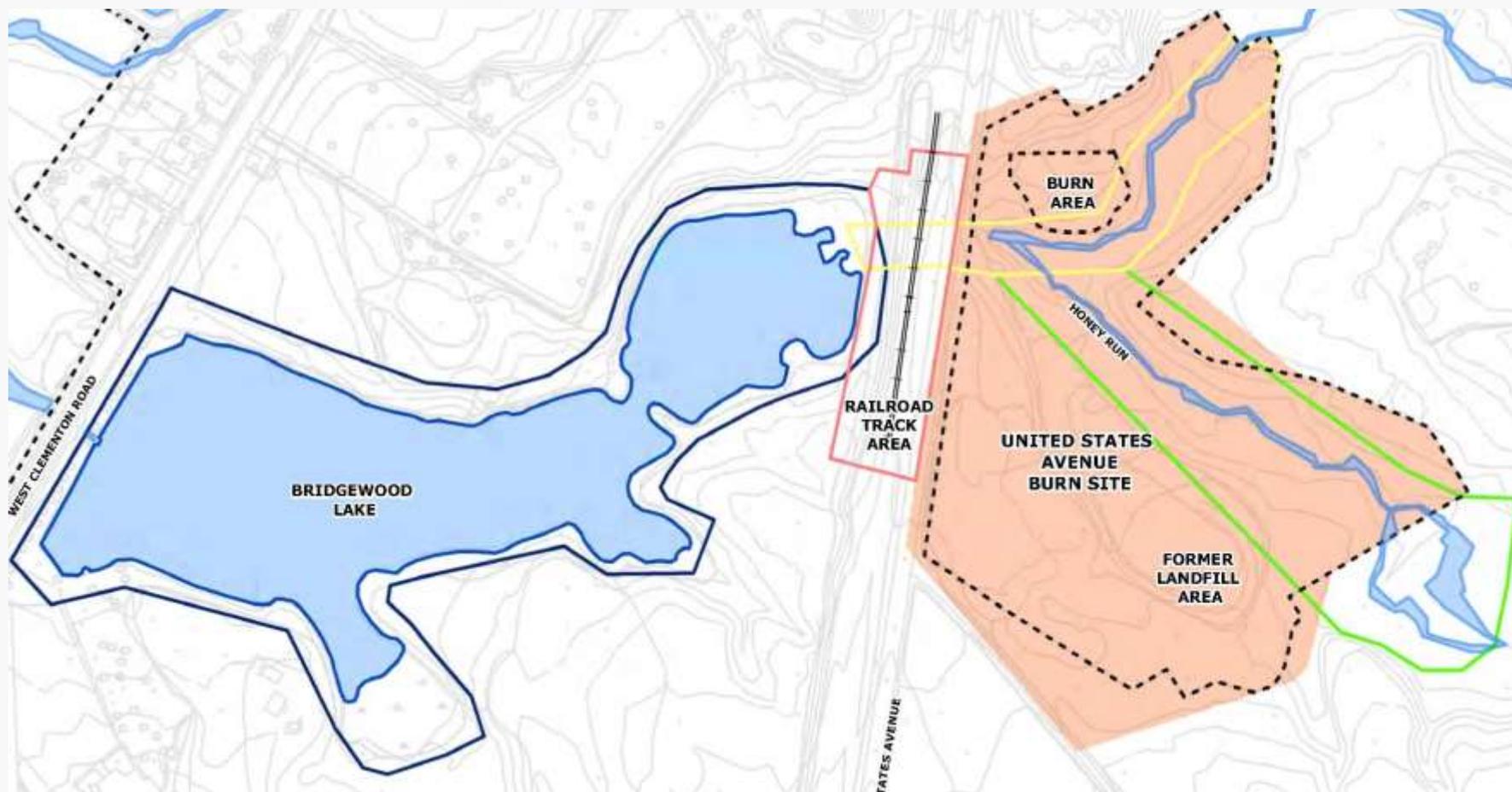
- Pre-design sampling
- Remedy design

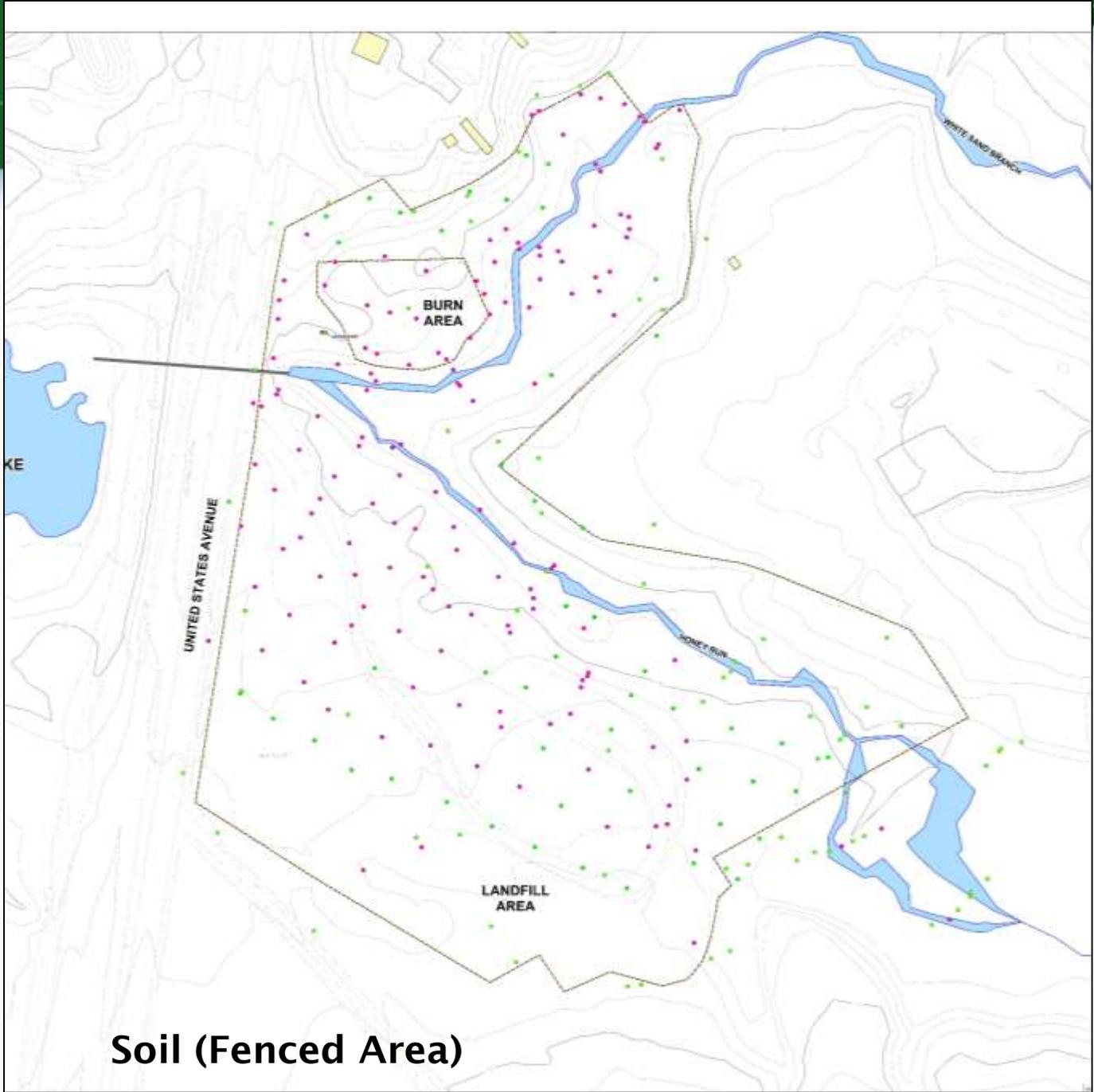


Action

- Construction and operation of remedy

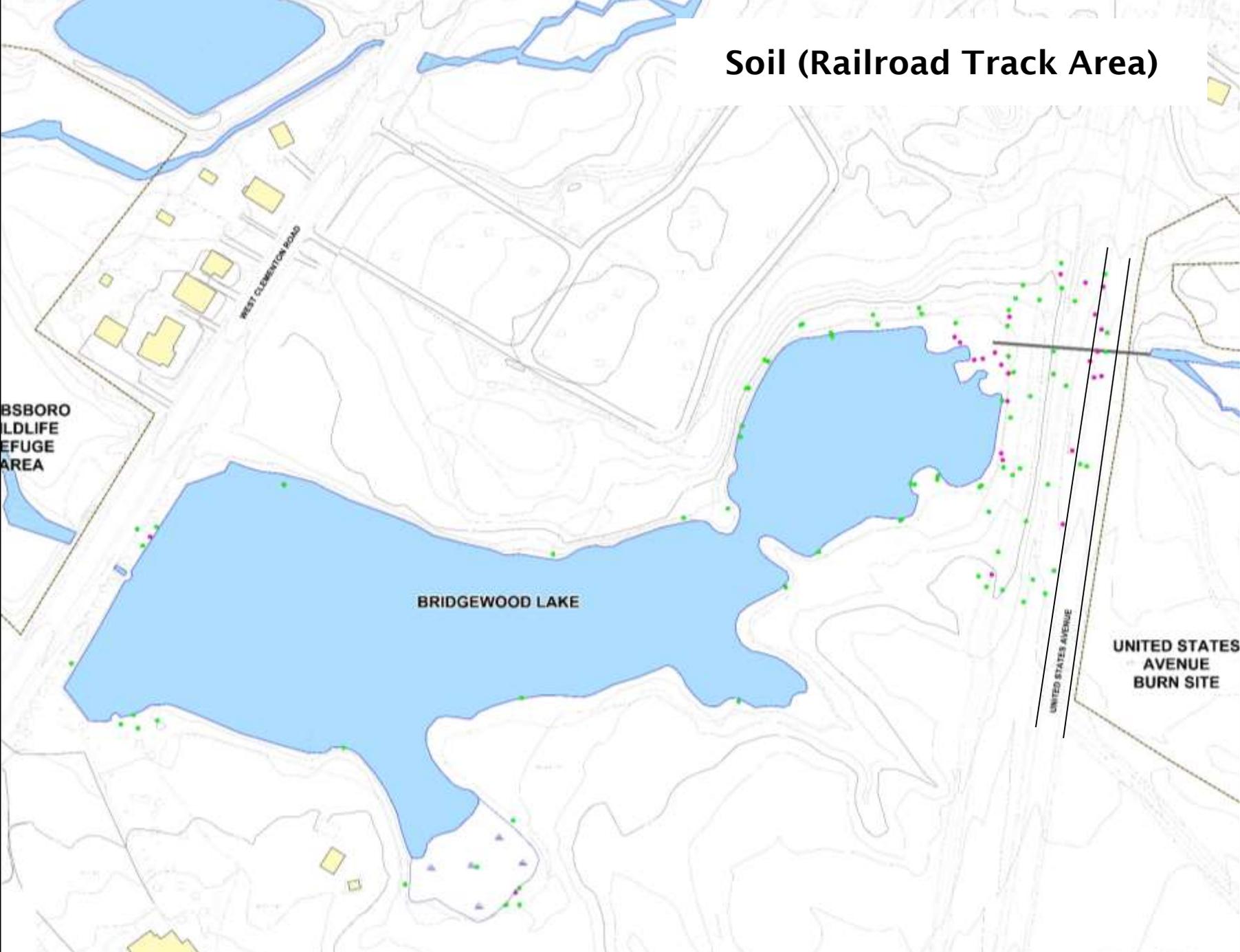






Soil (Fenced Area)

Soil (Railroad Track Area)



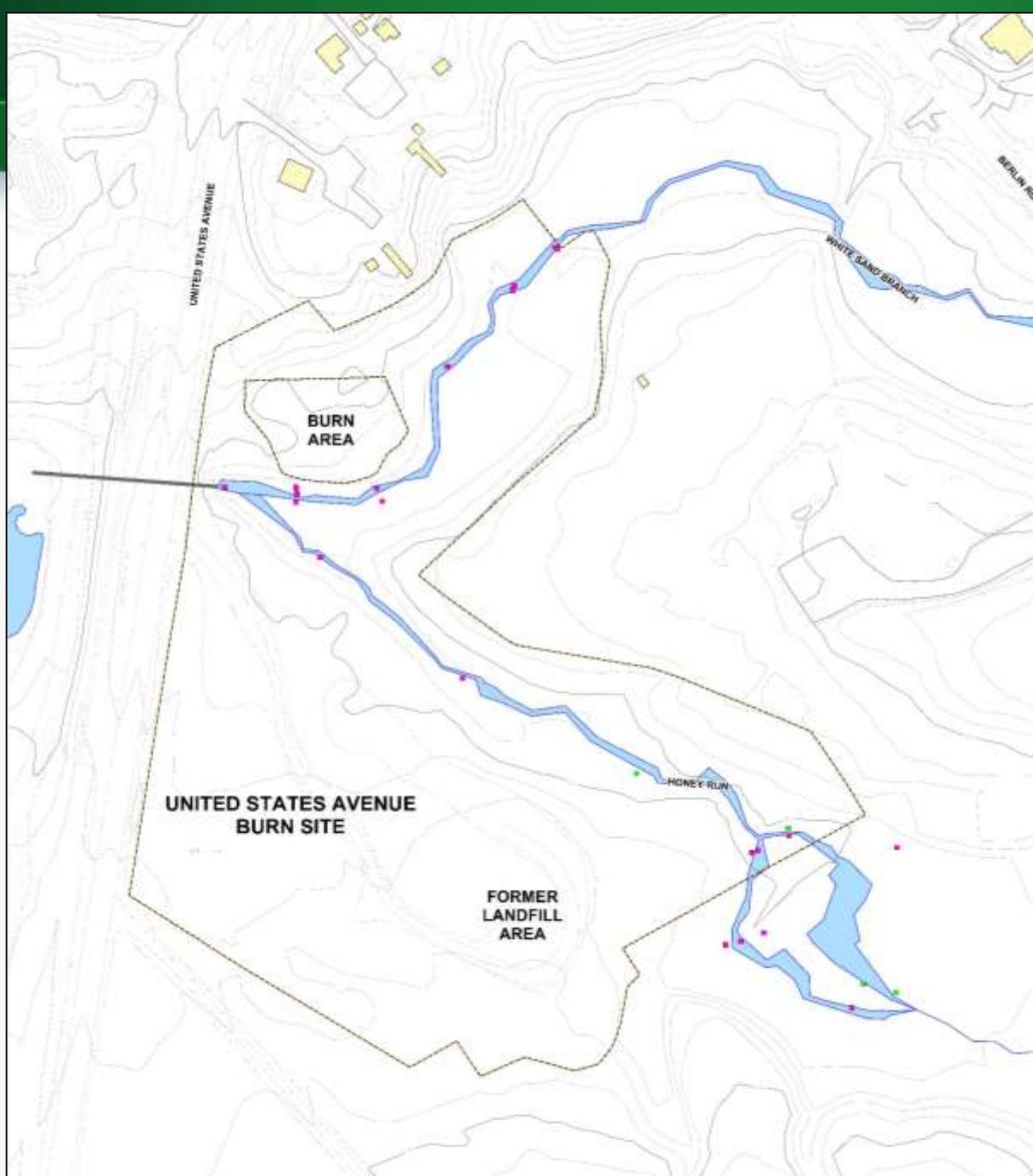
BSBORO
WILDLIFE
REFUGE
AREA

WEST CLEMENTON ROAD

BRIDGEWOOD LAKE

UNITED STATES AVENUE

UNITED STATES
AVENUE
BURN SITE



Sediment



Alternatives & Proposed Remedy:

- EPA found that the main contaminants at the site are lead and arsenic
- EPA found unacceptable risk



- Develop Remedial Action Objectives
- Evaluate alternatives



What are the Remedial Action Objectives?

- Prevent unacceptable risks to human health and the environment from ingestion of or contact with the soil and sediment
- Minimize migration contaminants found in the soil and sediment



Alternatives for Soil

Alternative 1: No Action

Alternative 2: Institutional and Engineering Controls and Monitoring*

Alternative 3: Targeted Surface Soil Excavation, Capping and Institutional Controls*

Alternative 4: Soil Removal for Human Health and Ecological Protection, Groundwater Source Control, Capping and Institutional Controls*

Alternative 5: Excavation to Depth and Institutional Controls*

* Deed notice expected



Alternatives for Sediment

- Alternative 1:** No Action
- Alternative 2:** Institutional and Engineering Controls and Monitored Natural Recovery
- Alternative 3:** Removal of Surface Sediment, Capping, and Institutional Controls
- Alternative 4:** Removal of all Sediment



How does EPA evaluate alternatives?

Type	Criteria
Threshold Criteria	<ol style="list-style-type: none">1. Overall Protection of Human Health and the Environment2. Compliance with State and Federal Regulations
Balancing Criteria	<ol style="list-style-type: none">3. Long-term effectiveness and permanence4. Reduction of Toxicity, Mobility, or Volume through treatment5. Short-term effectiveness6. Implementability7. Cost
Modifying Criteria	<ol style="list-style-type: none">8. Support Agency Acceptance9. Community Acceptance



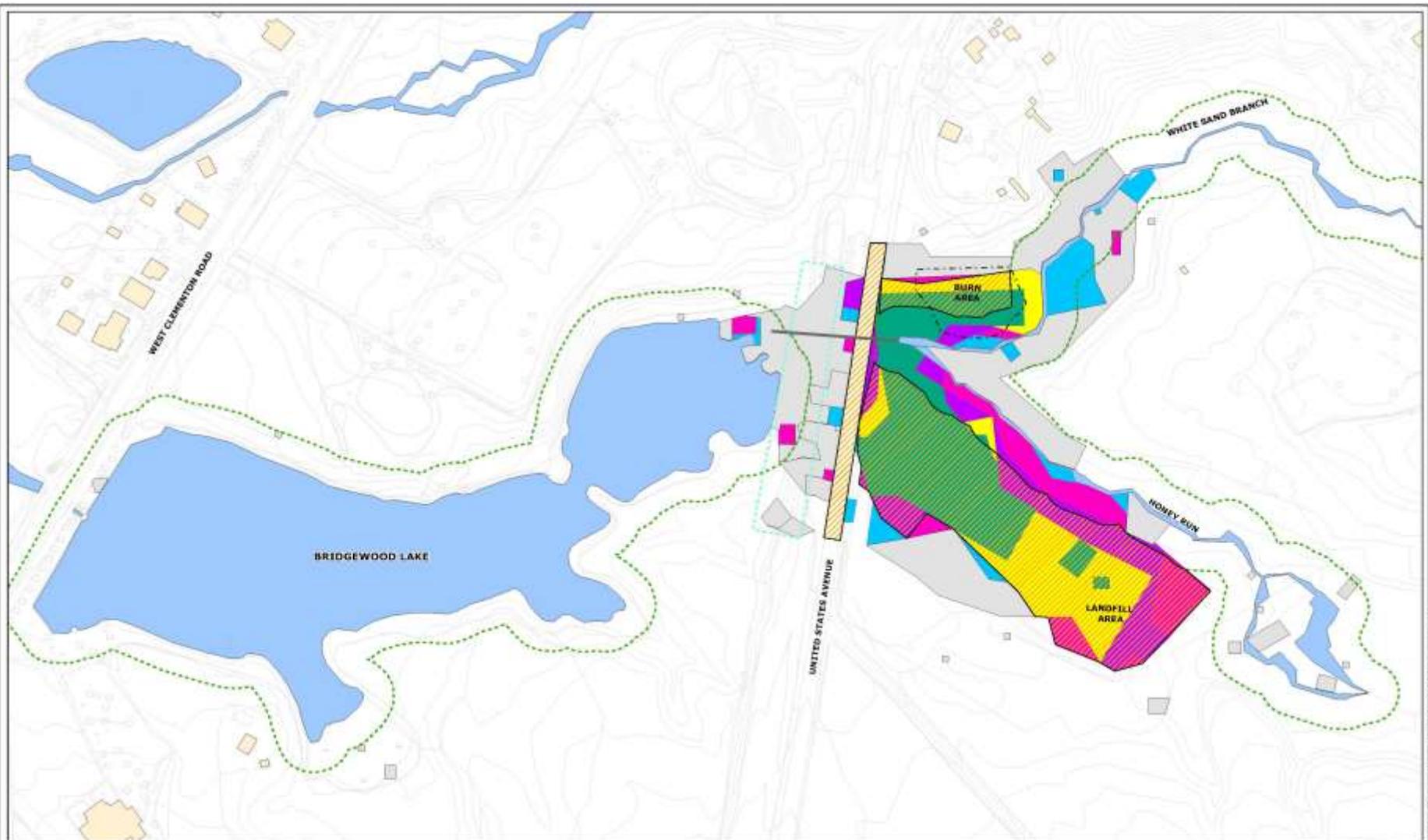
Comparison of Soil Alternatives

	1 No Action	2 Institutional and Engineering Controls	3 Surface Soil Removal and Cap	4 Excavation to 12 feet with Cap	5 Excavation to 18 feet
Protective	No	No	Yes	Yes	Yes
Compliance	No	No	Yes	Yes	Yes
Long-term effectiveness	x	x	Least	Most	Most
Reduction of Toxicity	x	x	No	No	No
Short-term effectiveness	x	x	Least risk	Moderate risk	Higher risk
Implementability	x	x	Easiest	Moderate	Difficult
Cost	\$0	\$563,790	\$6.6 million	\$19 million	\$26 million



Soil Alternative 4:
Excavation, Capping, and Institutional Controls

- Excavation to 12 feet
- Capping where necessary
- Deed notices
- Estimated Cost: \$19 million
- Estimated Timeframe: 8 Months



LEGEND

-  PUBLIC ACCESS AREA
-  RIPARIAN BUFFER (50 FEET)
-  FENCE BOUNDARY
-  AREAS TO BE CAPPED TO ADDRESS RDCSRs
-  APPROXIMATE LOCATION OF CULVERT BENEATH U.S. AVENUE

REMOVAL AREAS

-  2 FT EXCAVATION DEPTH
-  4 FT EXCAVATION DEPTH
-  6 FT EXCAVATION DEPTH
-  8 FT EXCAVATION DEPTH
-  10 FT EXCAVATION DEPTH
-  12 FT EXCAVATION DEPTH

Soil Alternative 4



Comparison of Sediment Alternatives

	1 No Action	2 Institutional and Engineering Controls	3 Removal of Surface Sediment and Cap	4 Removal of All Sediment
Protective	No	No	Yes	Yes
Compliant	No	No	Yes	Yes
Long-term effectiveness	x	x	Least	Most
Reduction of Toxicity	x	x	No	No
Short-term effectiveness	x	x	Moderate risks	Slightly more risks
Implementability	x	x	Similar	Similar
Cost	\$0	\$508,595	\$2.1 million	\$1.7 million

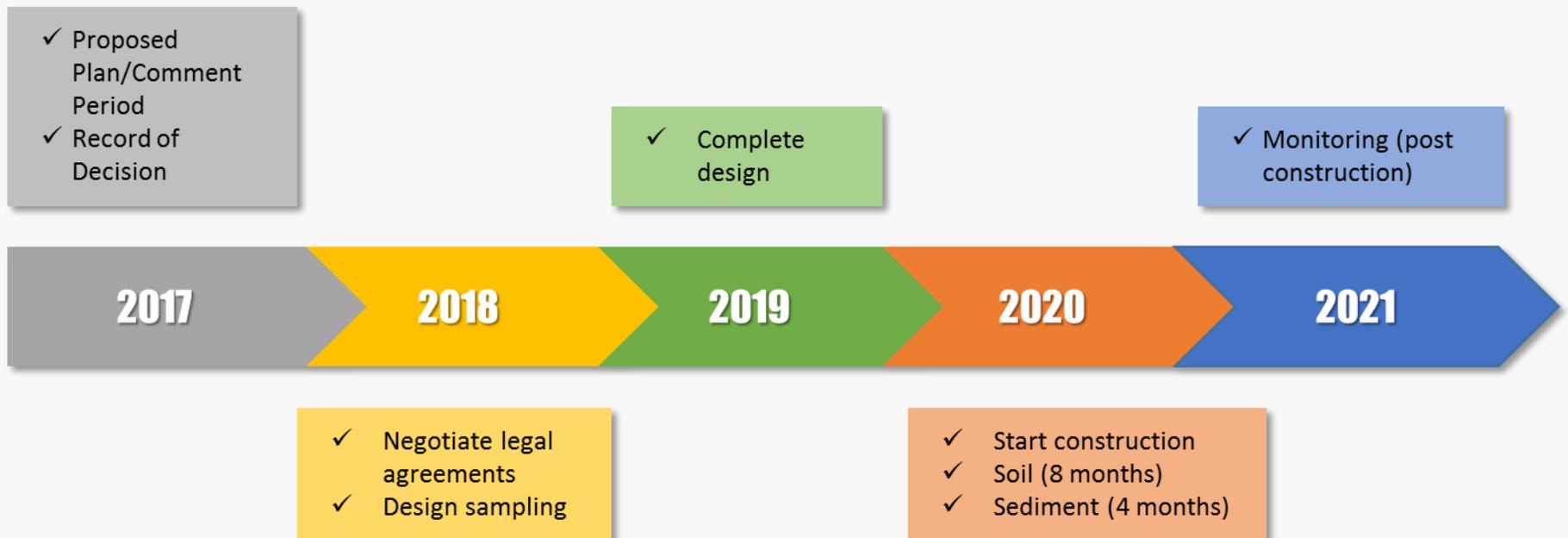


Alternative 4: Removal of All Sediment

- Removal of all contaminated sediment
- Estimated Cost: \$1.7 Million
- Estimated Timeframe: 4 months



Estimated Timeline





30-Day Public Comment Period
July 27 – August 28, 2017

Administrative Record available at:
Gibbsboro Borough Hall/Library
49 Kirkwood Road
(856) 435-3656

www.epa.gov/superfund/us-avenue-burn

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