



ARSP Update

Remedial Investigation Comment Responses Summary

December 13, 2018

Public Comment Summary

★ ★ ★ DEPARTMENT
OF ENERGY &
ENVIRONMENT

DRAFT

**REMEDIAL INVESTIGATION
REPORT**

Anacostia River Sediment Project, Washington, DC

Public Comment Period
March 1 through May 14, 2018

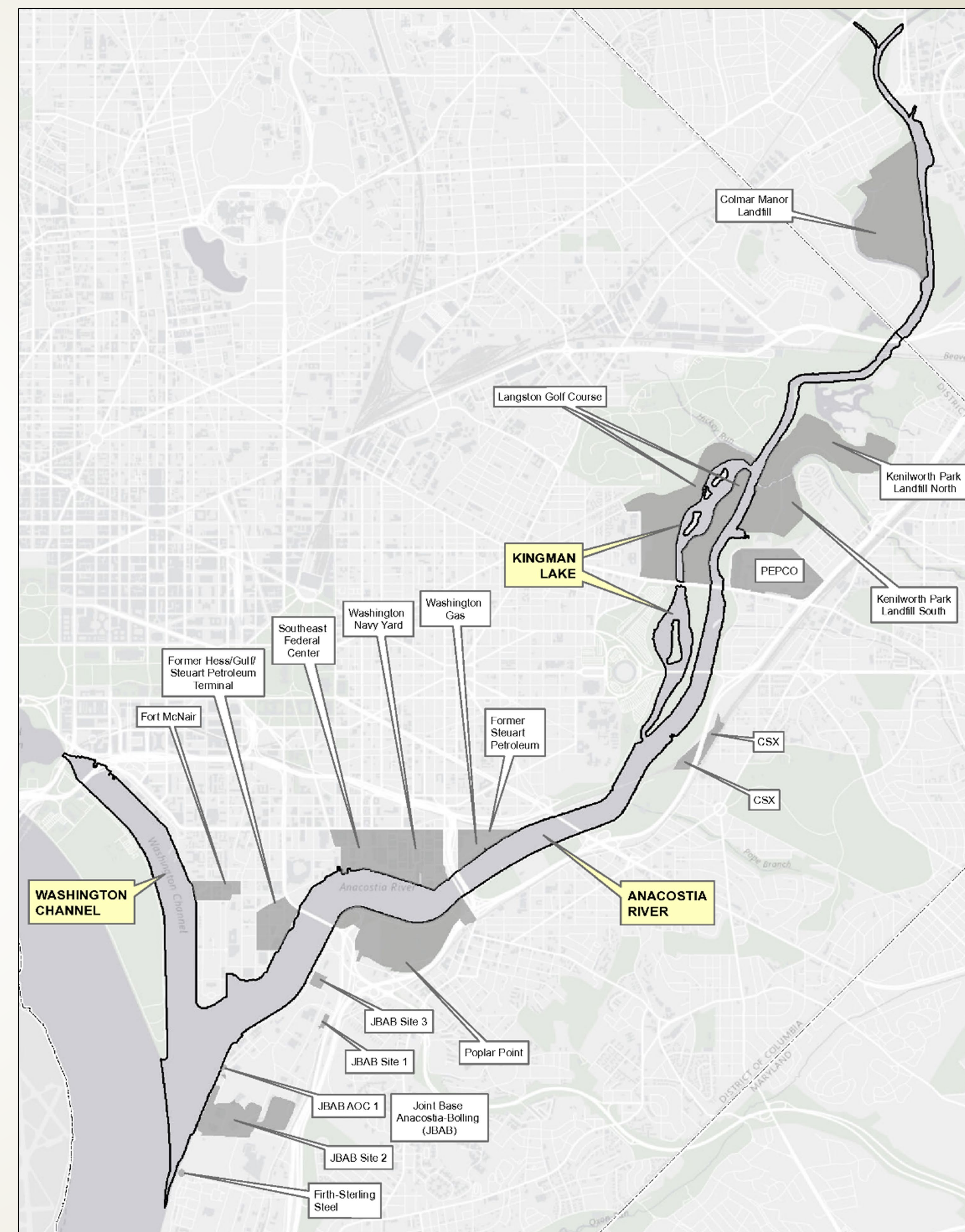
Ask the librarian to review the report
and for a comment sheet.

DOEE Contact:
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- Remedial Investigation Report Public Comment Period- March 31 through May 14
- 557 comments received on RI, HHRA, and ERA
- 18 organizations commented including:
 - Non-governmental organizations
 - Government agencies
 - Commercial entities
 - 1 Private citizen

Major Comment Themes

- Fish Datasets used for the HHRA
- Fish Ingestion Rate
- Risk Range Definition
- Benthic Toxicity Uncertainty
- Background Sediment Definition
- Sources of Contamination
- Forensics Analysis Dataset



Fish Datasets Used for HHRA

5

► RI Report- Four Fish Datasets Evaluated

- Tidal Anacostia fish fillet samples collected in 2013 (Pinkney 2014)
- Tidal Anacostia whole body fish samples used to calculate risk in the ERA to birds and mammals collected in 2014
- Potomac River fish fillets collected in 2013 (Pinkney 2014)
- Nontidal Anacostia River fish fillet and whole fish samples collected in 2016

► Reviewer Comments

- Sample size too small (Anacostia fillets)
- Dataset too old (Anacostia fillets)
- Lack of co-located fish and sediment samples
- Potomac River fillets – elevated concentrations relative to sediment concentrations



► Response to Comments

- Tidal Anacostia fish fillet dataset (2013) is considered sufficient since for evaluation of risk as it is consistent with fish advisory
- Potomac River fish fillet dataset (2013) – not considered quantitatively (may reflect site impacts, different collection area from Potomac River sediment)
- Future monitoring to address uncertainties
- Study now in progress to evaluate linkage between concentrations in forage fish and proximate surface sediment

Comment 13, 101, 102, 104,
248, 250, 288

Fish Ingestion Rate

- ▶ **RI Report:** Subsistence fish ingestion rate in the HHRA reflected EPA 2002 estimate for general population (142 grams/day)
- ▶ **Reviewer Comments:** 142 grams/day too conservative and will drive down sediment cleanup levels.
- ▶ **Response to Comments:** DOEE is considering a lower fish consumption rate for the subsistence angler that is more representative of the Anacostia River



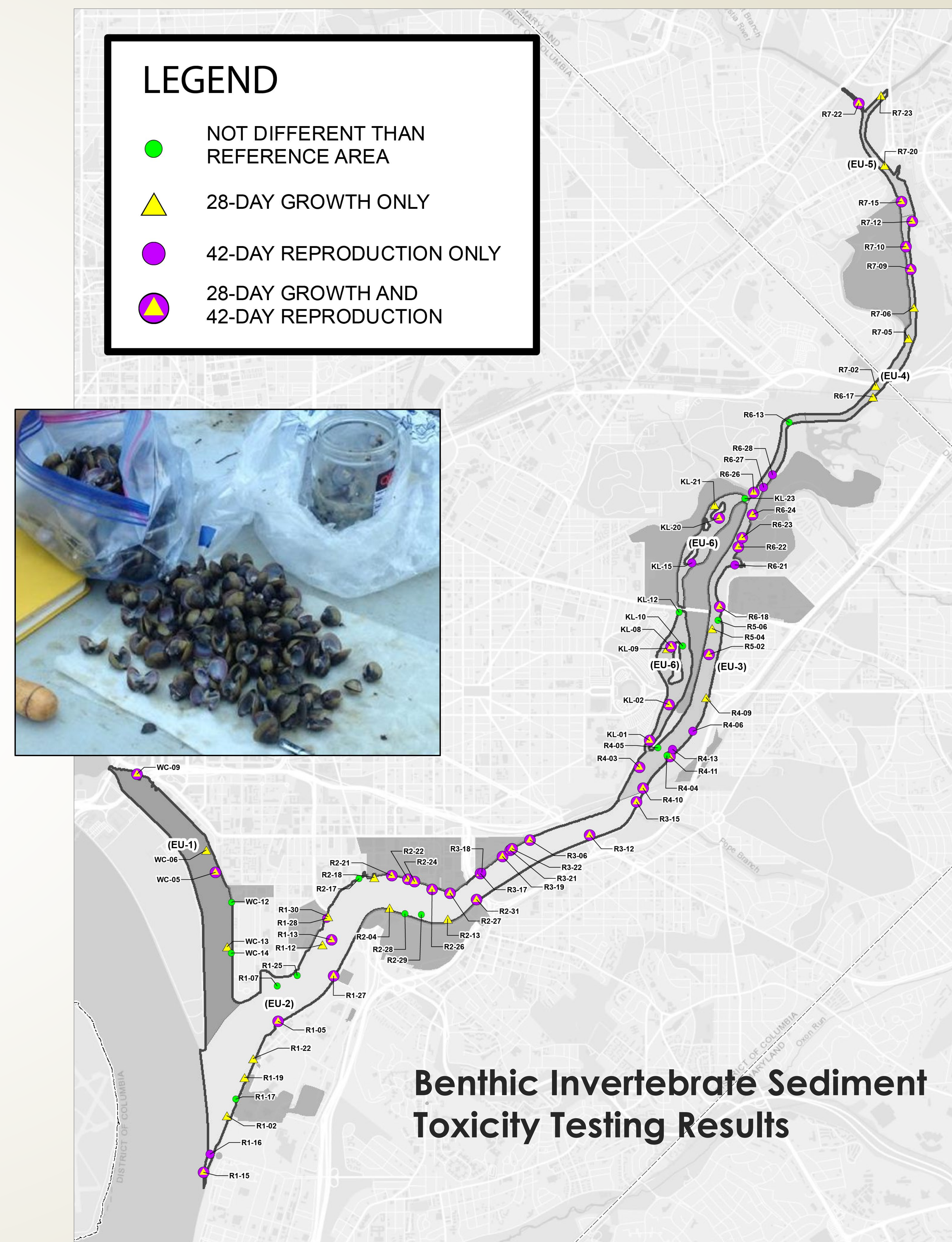
Comments 103 251,
357, 378

Risk Range Definition

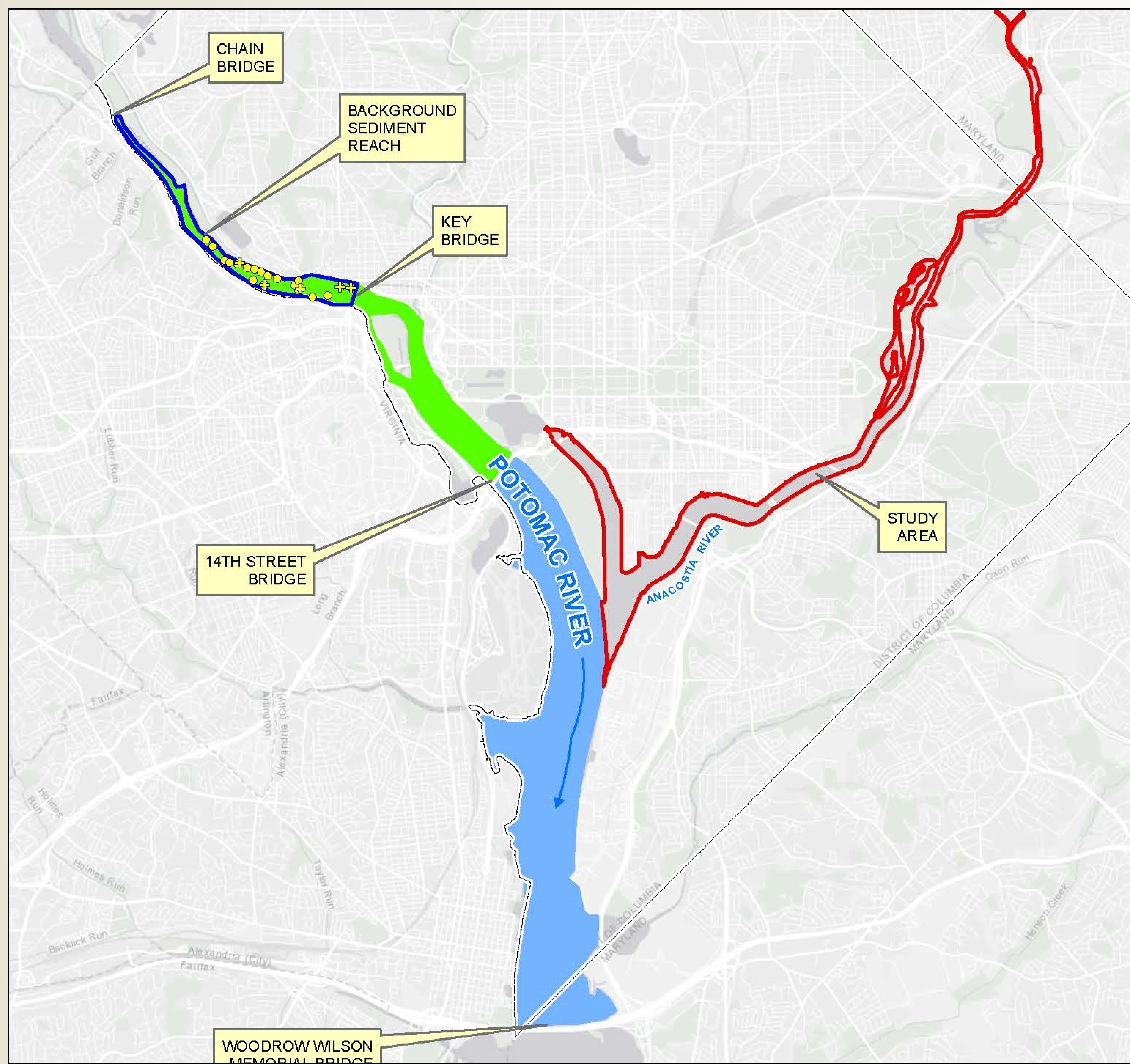
- ▶ EPA's National Contingency Plan defines the risk range for human health as cancer risks 1E-06 to 1E-04 and non-cancer hazards not exceeding 1.
- ▶ Risks greater than 1E-04, hazards greater than 1, and unacceptable ecological risks were identified. RI identified human health COCs as those chemicals with cancer risks \geq 1E-06 and/or hazards greater than 1.
- ▶ EPA states a preference for cleanups achieving the lower end of the risk range (1E-06), although cleanup anywhere within the acceptable range is consistent with guidance.
- ▶ **Reviewer Comments:**
 - ▶ Cancer risks should be defined as greater than 1E-06
 - ▶ Cancer risks less than 1E-04 should not be identified
 - ▶ The 1E-06 risk threshold for defining COCs overstates the risk
- ▶ **Response to Comments:**
 - ▶ RI will continue to identify human health COCs as those chemicals with cancer risks \geq 1E-06 and/or hazards greater than 1.
 - ▶ The RI Report and risk assessments will be revised to ensure consistency regarding risk range discussion.

Uncertainty Regarding Benthic Toxicity Drivers

- ▶ **RI Report:** Results of laboratory bioassays indicate surface sediment toxicity to test organisms
 - ▶ Analyzed broad range of metals and organic chemicals in sediment
 - ▶ Toxicity not well correlated with any chemical or physical stressor (singly or in combination)
- ▶ **Reviewer Comments**
 - ▶ Inability to identify causal factors for toxicity is a major data gap
- ▶ **Response to Comments**
 - ▶ Uncertainty in the causal factors of invertebrate toxicity is not an obstacle to evaluating remedial actions in the FS
 - ▶ Risk to ecological receptors will be reduced by remediation of sediments to meet cleanup goals derived for human consumption of fish



Background Sediment Definition



- **RI Report:** Background sediment from Potomac River
 - Influenced by the same urban area and not directly influenced by hazardous substance release site(s)
 - Subject to same tidal influences
 - Grain size and TOC in the Potomac River reference samples similar to Anacostia River
 - BTV calculation and use is consistent with EPA guidance
- **Reviewer Comments**
 - Watersheds are very different
 - Not upstream of the study area
 - May result in unachievable cleanup goals
- **Comment Response**
 - Potomac River is the current best option
 - Nontidal tributary sampling is currently underway and results will be considered and may be used to refine the existing background concentrations

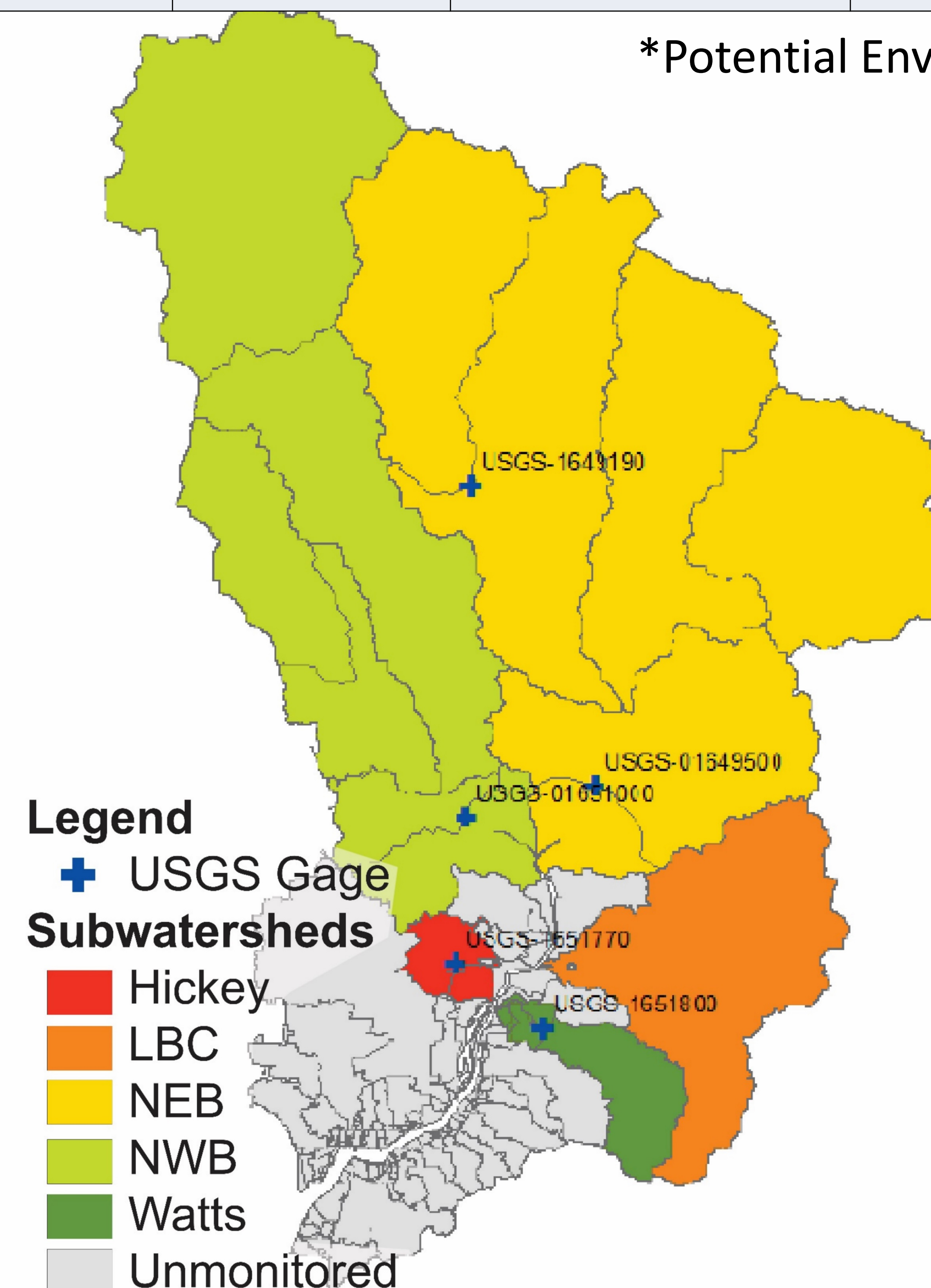
Sources of Contamination

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- ▶ **RI Report:** Source evaluation based on proximity of elevated concentrations to potential sources
- ▶ **Reviewer Comments**
 - ▶ Detailed source characterization evaluations are needed in the RI Report
- ▶ **Comment Response**
 - ▶ RI will continue to document nature and extent and potential sources based on proximity
 - ▶ FS Appendices present detailed source evaluation
 - ▶ Surface Water Modeling Report
 - ▶ ARSP Tributary Study Report
 - ▶ Manhole Investigation Report
 - ▶ Groundwater Modeling Report
 - ▶ Contaminant Source Assessment Report
 - ▶ USGS/FWS/UMBC Tributary Study Report – compare with ARSP surface water model

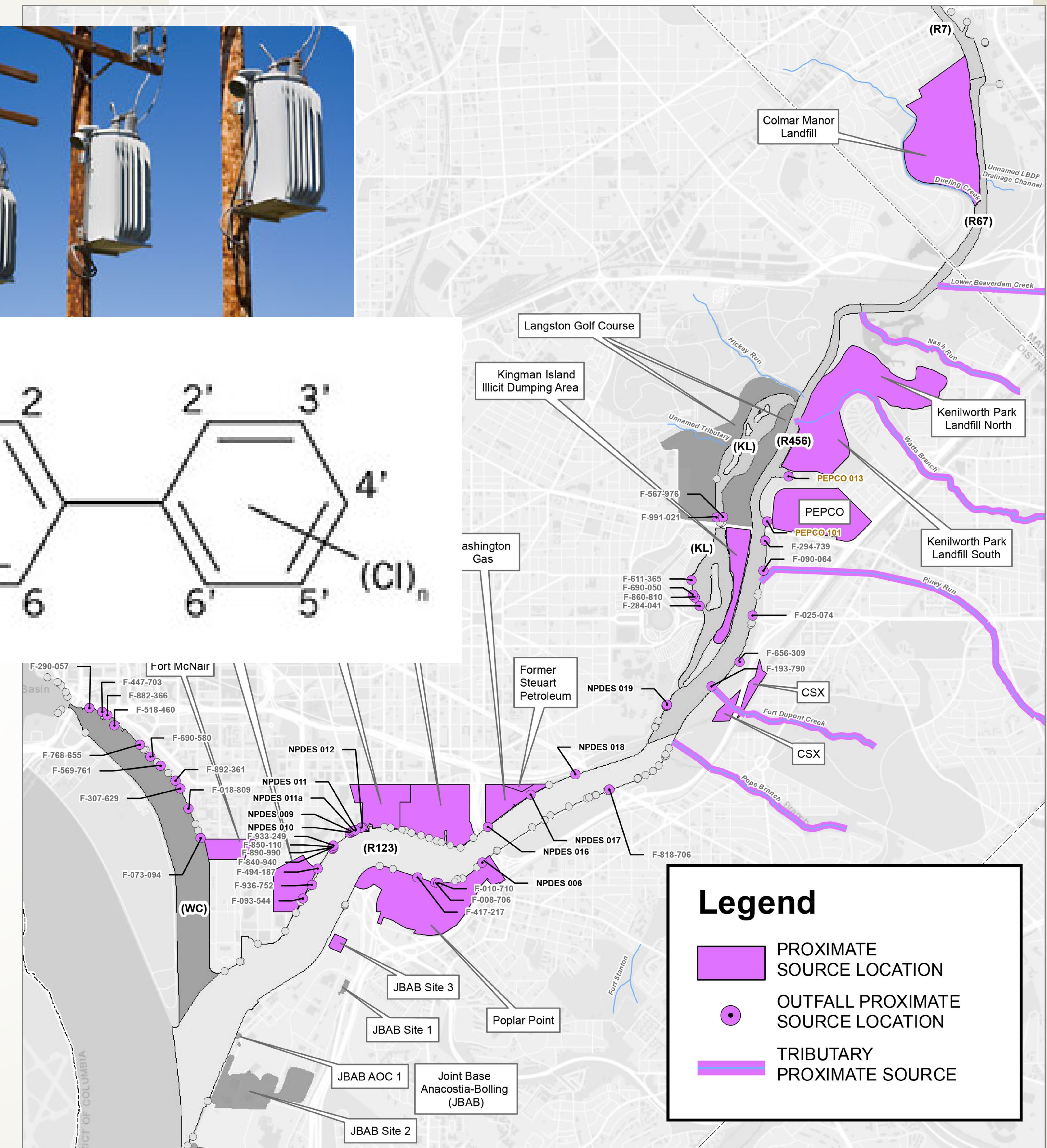
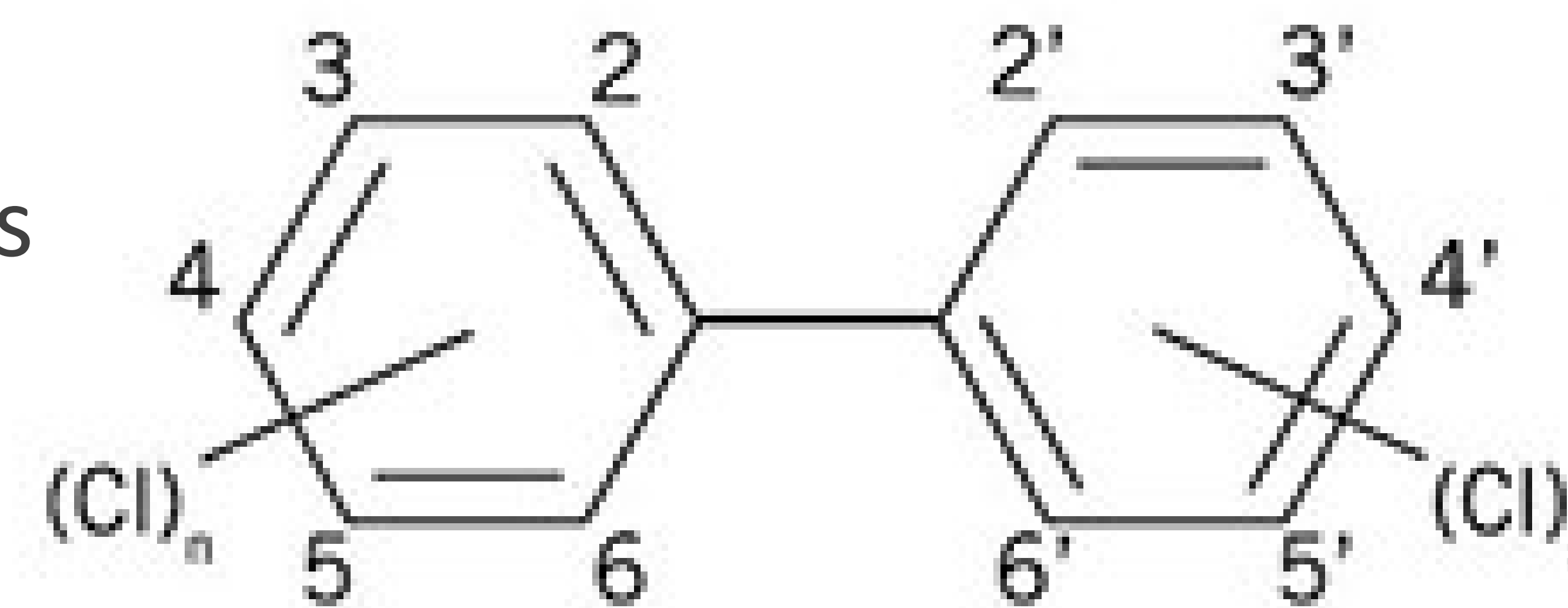
Reach	Potential Source				Total
	PECSes	Tributaries	MS4	CSS	
7	0	2	12	0	14
67	1	3	1	0	5
456	3	4	11	2	20
123	7	4	27	14	52
Washington Channel	1	0	17	0	18
Kingman Lake	2	1	5	0	8
Total	14	14	73	16	

*Potential Environmental Cleanup Sites



Forensics Analysis Dataset

- **RI Report:** Generated forensic dataset during RI sampling
- **Reviewer comment**
 - RI report must leverage forensic data to evaluate sources
- **Comment response**
 - FS report will present source characterization based on lines of evidence
 - **Contaminant Source Assessment Report**
 - An objective and quantitative evaluation of the available forensic data
 - Additional line of evidence complementing surface water, tributary, outfall, PECS groundwater, and proximate sediment
 - FS Report appendix



Comment 186, 188, 191,
260, 459, 461, 464