

# Key Remedy Components

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# *Conceptual Remedy*

- Description requested at last quarterly meeting
- Key components of all action alternatives:
  - Defined footprint for active and passive remedial technologies (vary according to Remedial Action Level and ability to recover)
  - Construction timeframes (vary according to emphasis removal or combined tech. and footprint)
  - Predicted duration to achieve RAOs 2-4
  - Predicted incremental attainment of RAO 1
  - Monitoring program

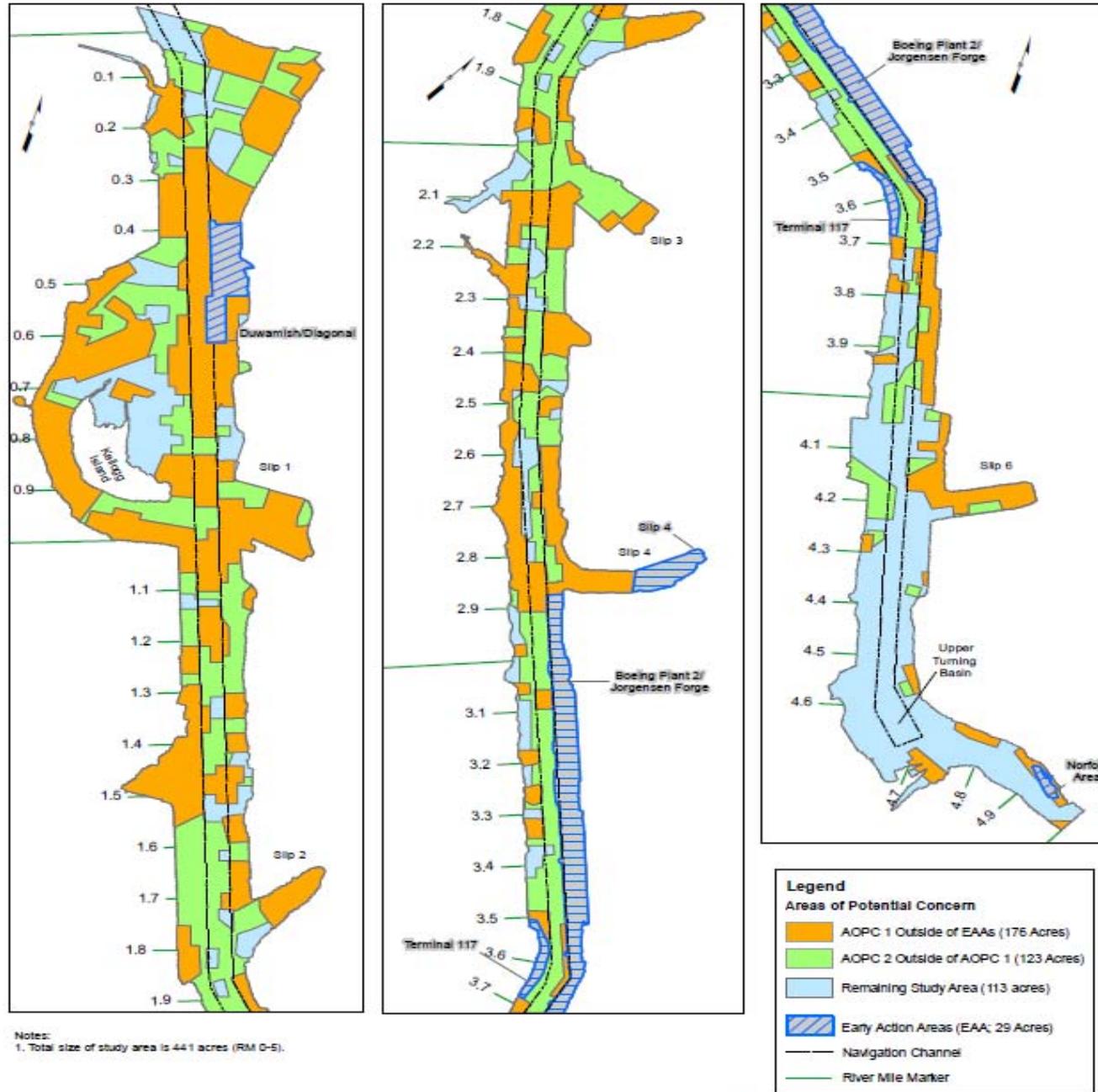
# Reference for Remedial Action Levels

Remedial Action Levels for Risk Drivers					
Alternatives	Total PCBs (µg/kg dw)	cPAHs (µg TEQ/kg dw)	Dioxins/ Furans (ng TEQ/kg dw)	Arsenic (mg/kg dw)	Benthic SMS (41 Chemicals)
Alternative 1					
Alternative 2R Alternative 2R-CAD	1,300 - 2,200; 10-yr post-construction target: 1,300	5,500			CSL to 3 CSL; 10-yr post-construction target: CSL
Alternative 3 R Alternative 3C	1,300	3,800 (site-wide) 900 (intertidal)	35 (site-wide) 28 (intertidal)	93 (site-wide) 28 (intertidal)	CSL toxicity or chemistry
Alternative 4R Alternative 4C	240 to 700; 10-yr post-construction target: 240	1,000 (site-wide) 900 (intertidal)	25	57 (site-wide) 28 (intertidal)	SQS to CSL 10-yr post-construction target: SQS
Alternative 5R Alternative 5R w/ Treatment Alternative 5C	240	1,000 (site-wide) 900 (intertidal)	25	57 (site-wide) 28 (intertidal)	SQS toxicity or chemistry
Alternative 6R Alternative 6C	100	1,000 (site-wide) 900 (intertidal)	15	15	SQS toxicity or chemistry

## *Remedial Action Objectives*

- RAO 1: protection of human health from consumption of seafood
- RAO 2: protection of human health from direct contact (clamming and beach play)
- RAO 3: protection of benthic community
- RAO 4: protection of wildlife (river otter)

Figure 1 Early Action Areas and Areas of Potential Concern



Notes:  
1. Total size of study area is 441 acres (RM C-5).

## Reference for Remediation Footprint

- To be refined in Remedial Design
- Remedial footprint may increase or decrease in size

# *Key Technology Considerations*

- Active or passive technology adoption
  - Depends on recovery category (1, 2, 3 – decreasing likelihood of recontamination if not remediated)
  - Depth of residual contamination
  - Predicted sediment recovery rates
  - Feasibility of in-situ or ex-situ treatment
  - Pilot testing for activated carbon amendment will occur in support of in-situ treatment during ENR
  - Logistic concerns (e.g., overwater structures)
  - Availability of equipment and disposal facilities

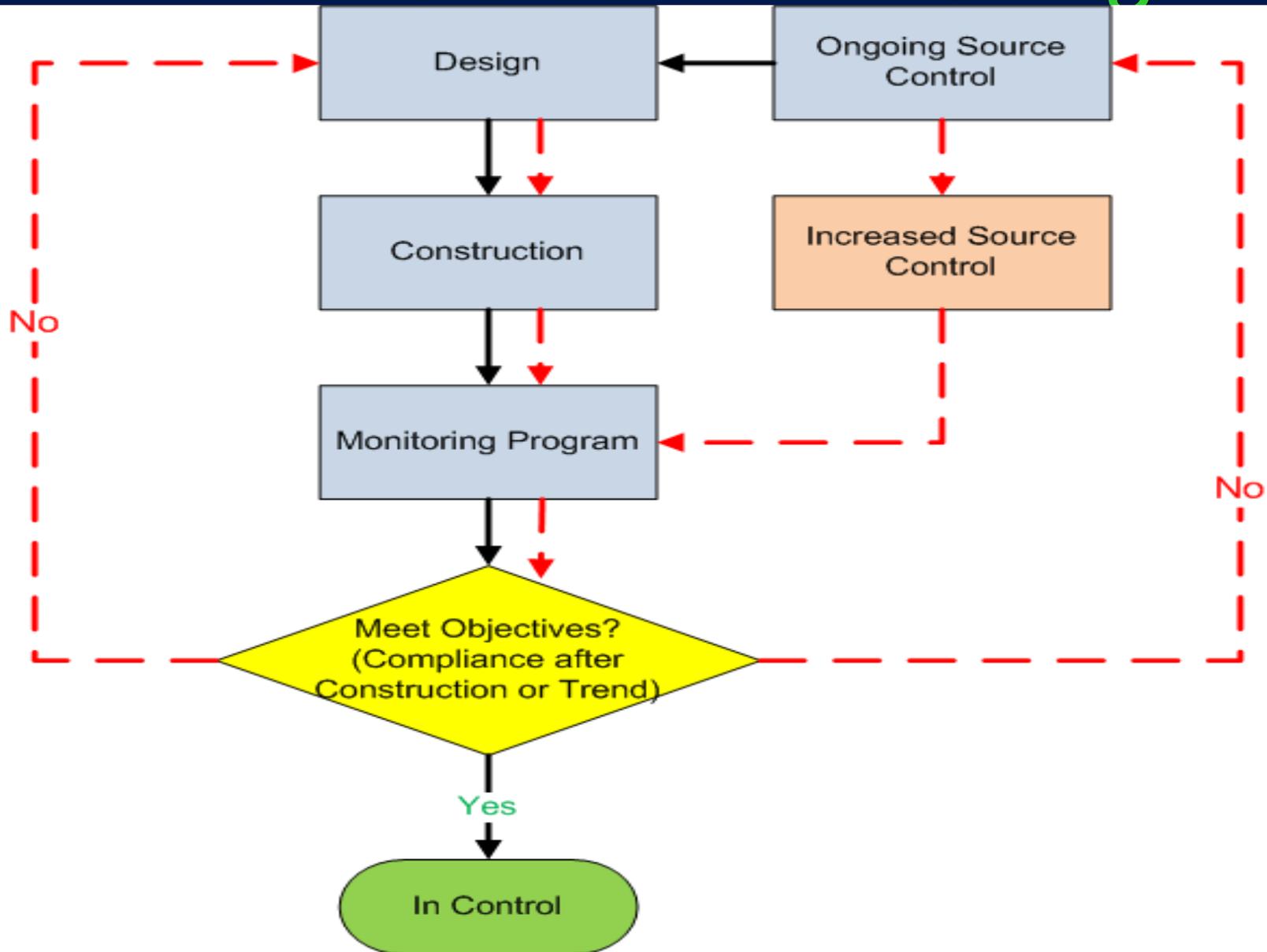
## *Time to Completion and Attaining RAOs*

- Objective is to reduce risk as far as practicable as soon as possible (short- and long-term protectiveness)
- FS predictions figure in alternative evaluation, balancing amount of sediment removed vs time to attain RAOs
- Record of Decision (ROD) will establish attainment goals and milestones

# *Monitoring Program & Goals*

- RAOs 2, 3, and 4 are easier to directly measure and anticipated to be met relatively soon
- RAO 1 trends (following construction) will be used to measure progress using multiple lines of evidence:
  - Sediment
  - Suspended sediment (inflows)
  - Surface water
  - Tissue
  - Contaminant Bioavailability (e.g., tissue “surrogates”)

# Iterative Decision-making



# *Monitoring Program Path Forward*

- Decisions depend upon a robust, river-wide monitoring program
- ROD will state decisions to be made and multiple lines of evidence to be provided
- Remedial Design to detail the data acquisition process and afford opportunity for discussions of data acquisition options