

Table 1. Potential List of PHSP Pre-Design Studies

FOR SETTLEMENT PURPOSES ONLY -- SUBJECT TO RULE 408 FRE

Potential Pre-RD Scope Item		Purpose	Estimated Costs	
#	Task		Best Estimate	Reasonable Worst Case
Pre-Design Field Studies				
1	Site-wide bathymetry survey	Evaluate elevation changes, inform decision tree and recovery potential	\$300,000	\$390,000
2	Surface sediment sampling, site-wide & upriver	Re-baseline SWAC, MNR changes, revise footprint, update background conditions	\$3,223,000	\$3,867,600
3	Fish Tissue Sampling, site-wide & upriver	Re-baseline current conditions, evaluate tissue changes, recalculate current risks	\$677,200	\$1,015,800
4	Surface water sampling	Re-baseline the river, evaluate changes, input into risk calculations	\$1,425,812	\$2,281,300
5	Subsurface Sediment cores	Refine SMA volume calculations and SMA footprint	\$1,466,400	\$2,199,600
6	Fish Acoustic Tracking Study (USACE)	Inform Smallmouth bass (SMB) fish sampling locations; validate home range assumption; re-calculate risk; inform Institutional Controls	\$747,500	\$1,121,300
7	Camera Survey of Anglers	Re-evaluate exposure and risk; inform Phase 2 Fisher User Study design; inform Institutional controls	\$200,000	\$300,000
8	Background porewater sampling for metals	Refine porewater background for naturally-occurring metals (As and Mn)	\$159,000	\$238,500
9	Sediment traps	Evaluate incoming mobil sediment load; 2 upstream transects, 2 samples per transect, 3 events	\$330,000	\$462,000
SUBTOTAL COSTS for Data Collection (QAPP, Field, Analysis, Data Validation, Database Management)			\$8,528,912	\$11,876,100
Technical Analyses / Reporting				
	Focused Work Plan development for AOC	Path to update the CSM and satisfy DQOs; geostats	\$300,000	\$500,000
	Project Database	Build project database with RI/FS and recent post FS data	\$280,000	\$560,000
	FSP, QAPP, DQMP, HASP, data validation, data management, etc.	Describe how the work will be conducted, worker safety for hazards posed by the Work (built in to the costs above)	\$0	\$0
	Pre-RD Remedial Footprint Report	Evaluate active footprint, remedy revision through ROD decision tree, remedy costs, refine volumes	\$575,000	\$1,000,000
	PDI Evaluation Report	Refine SWACS, evaluate MNR changes, current risks, baseline conditions, and upstream/background levels	\$1,175,000	\$1,905,000
	Expert Panel	4 experts to provide 3rd party review of approach, results, and findings	\$200,000	\$400,000
SUBTOTAL COSTS (BALLPARK) for Data Analysis			\$2,530,000	\$4,365,000
<i>Management / Meetings (9%, 12%)</i>			<i>\$995,302</i>	<i>\$1,948,932</i>
<i>Contingency Costs (15%, 20%)</i>			<i>\$1,658,837</i>	<i>\$3,248,220</i>
<i>Oversight costs for DEQ, EPA (capped cost offer, 28%)</i>			<i>\$1,550,000</i>	<i>\$4,547,508</i>
Estimated TOTAL Costs for Phase 1 Pre-Design Studies			\$15,260,000	\$25,990,000

Note 1: Surface Sediment Sampling scope includes 580 site samples for unbiased and SMA program

Note 2: The 28% oversight costs reflects similar rates used at other R10 sites.