

Appendix C - Monitoring Program Cost Estimate

NPDES Phase I - BMP Evaluation Monitoring

Estimated Equipment Purchase and Yearly Permit Sampling

Field Equipment and Expenses

	City/County			Port		
	Qty	Cost	Total Cost	Qty	Cost	Total Cost
Whole Storm Water Samples						
ISCO - 6712 Composite Sampler (2 BMPS and influent/effluent/site)	8	2,795.00	22,360.00	4	2,795.00	11,180.00
Automated Flow Module - Bubble730	8	1,845.00	14,760.00	2	1,845.00	3,690.00
Rechargeable Battery	8	50.00	400.00	4	50.00	200.00
Hose	96 feet	2.00/ft	192.00	48 feet	2.00/ft	24.00
Collection Jars - 1 Liter (12/sampler)	96	2.00	192.00	48	2.00	96.00
Strainer	8	45.00	360.00	4	45.00	180.00
Mounting equipment	8	300.00	2,400.00	4	300.00	1,200.00
ISCO FlowLink5 Software	1	1,000.00	1,000.00	1	1,000.00	1,000.00
Data Transfer Unit (DTU)	1	1,000.00	1,000.00	1	1,000.00	1,000.00
Lab Bottles/Jars/Lids for chemical analyses			800.00			400.00
Subtotal Composite SW field equipment			\$ 43,464.00			\$ 18,970.00

Personnel (confined space entry requires 2 people)						
Composite sampling setup and recovery - 4 hrs/sampling event (28x/year)	2 employees	\$35/hr	7,840.00	2 employees	\$35/hr	7,840.00
Sediment trap setup and recovery - 2 hrs (2x/year)	2 employees	\$35/hr	280.00	2 employee	\$35/hr	280.00
<i>subtotal wages</i>			8,120.00			8,120.00
increase by factor of 50% for false starts/storm criteria not met			4,060.00			4,060.00
Gloves (nitrile) -1box	1 box		26.00	1 box		26.00
Subtotal Personnel			\$ 12,206.00			\$ 12,206.00

Appendix C - Monitoring Program Cost Estimate

NPDES Phase I - BMP Evaluation Monitoring

Estimated Equipment Purchase and Yearly Permit Sampling

Lab Analysis

All prices listed are for planned discounted (MEL) analyses.

Prices for samples received without proper planning/notice are doubled.

Whole Water Samples	City/County			Port		
General Chemistry	Qty	Cost	Total Cost	Qty	Cost	Total Cost
TSS	224	10.00	2,240.00	112	10.00	1,120.00
Particle Size Distribution (PSD - 4/yr)	16	350.00	5,600.00	8	350.00	2,800.00
Hardness	112	20.00	2,240.00	56	20.00	1,120.00
pH	224	10.00	2,240.00	112	10.00	1,120.00
Total Phosphorus	224	25.00	5,600.00	112	25.00	2,800.00
Orthophosphate	224	14.00	3,136.00	112	14.00	1,568.00
Metals Chemistry						
Total metals (Cu, Zn)	224	58.00	12,992.00	112	58.00	6,496.00
Dissolved metals (Cu, Zn)	224	58.00	12,992.00	112	58.00	6,496.00
Lab/Field QA/QC (additional 20% for metals and organics)			5,196.80			2,598.40
subtotal Whole Water Samples			\$ 52,236.80			\$ 26,118.40

Appendix C - Monitoring Program Cost Estimate

NPDES Phase I - BMP Evaluation Monitoring Estimated Equipment Purchase and Yearly Permit Sampling

Lab Analysis

All prices listed are for planned discounted (MEL) analyses.

Prices for samples received without proper planning/notice are doubled.

Sediment Samples

	City/County			Port		
	Qty	Cost	Total Cost	Qty	Cost	Total Cost
General Chemistry (2 samples/site +1 QA/QC)						
Percent Solids	9	10.00	90.00	5	10.00	50.00
Particle Size Distribution (PSD - 4/yr)	9	350.00	3,150.00	5	100.00	500.00
Total Volatile Solids (TVS)	9	21.00	189.00	5	21.00	105.00
Total Phosphorus	9	25.00	225.00	5	25.00	125.00

Metals Chemistry

Total metals (Cd, Cu, Pb, Zn)	8	104.00	832.00	4	104.00	416.00
-------------------------------	---	--------	--------	---	--------	--------

Organic Chemistry

TPH - Diesel (NWTPH-Dx)	8	135.00	1,080.00	4	135.00	540.00
Lab/Field QA/QC (additional 20% for metals and organics)			382.40			191.20

subtotal Sediment Samples

\$ 5,948.40

\$ 1,927.20

Estimated Costs (1 time equipment purchase & Year 1 sampling)

	City/County	Port
<i>Field Equipment</i>	43,464.00	18,970.00
<i>Personnel</i>	12,206.00	12,206.00
<i>Whole Water Lab Analyses</i>	52,236.80	26,118.40
<i>Sediment Sample Analyses</i>	5,948.40	1,927.20
Total Estimated 1st Year Costs	\$ 113,855.20	\$ 59,221.60