



41 Hutchins Drive
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**TABLE A
 CAPISIC BROOK MONITORING PLAN OVERVIEW AND ANALYTICAL COSTS FOR CSO 42, 43 ABATEMENT BMP**

Monitoring Phase	Evaluation Technique	Monitoring Activity	Location	Schedule		Biomonitoring Stations	Number of Laboratory Analyses							Number of Field Analyses			
				Stormflow	Baseflow		Metals (Total and Dissolved)	TN	TP (Dissolved)	Chlorides	Ions, alkalinity, DOC	TSS	Hardness	E. coli	DO	Temperature	Conductivity
BASELINE MONITORING																	
(one year prior to final abatement implementation)	Flow monitoring	Flow monitoring	Existing Locations	Continuous	Year-round												
	Streamwater chemical sampling	Stormflow and baseflow sampling	256, Cap-1	March, July, October	January, July		10	5	5	5	2	5	2	2	5	5	5
	Stream Assessment	Geomorphological Assessment	Cap-1, Cap-2		July												
		Habitat Assessment	Cap-1, Cap-2			July											
		Physical Characterization Assessment	Cap-1, Cap-2		July												
	Macroinvertebrate Sampling	Rock bag biomonitoring	Cap-1, Cap-2		July	2											
	Precipitation vs. Flow Analyses	Precipitation monitoring or data acquisition	Cap-1, Cap-2	Year-round	Year-round												
BMP ANNUAL PERFORMANCE MONITORING																	
(post-construction)	Flow monitoring	Flow monitoring	Existing Locations	Continuous	Year-round												
	Streamwater chemical sampling	Stormflow and baseflow sampling	256, Cap-1; 0257 (July only)	March, July, October	January, July		12	6	6	6	3	6	6	2	6	6	6
BMP TRI-ANNUAL PERFORMANCE MONITORING																	
(post-construction)	Flow monitoring	Flow monitoring	Existing Locations	Continuous	Year-round												
	Streamwater chemical sampling	Stormflow and baseflow sampling	256, Cap-1; 0257 (July only)	March, July, October	January, July		12	6	6	6	3	6	6	2	6	6	6
	Stream Assessment	Geomorphological Assessment	Cap-1		Tri-annual, on DEP schedule												
		Habitat Assessment protocol	Cap-1			Tri-annual, on DEP schedule											
		Physical Characterization Assessment	Cap-1		Tri-annual, on DEP schedule												
	Macroinvertebrate Sampling	Rock bag biomonitoring	Cap-1 (DEP: 0256, 0257)		July; on DEP sched	1											
	Precipitation vs. Flow Analyses	Precipitation monitoring or data acquisition	Cap-1, Cap-2	Year-round	Year-round												

ANALYTICAL COSTS:

Cost per Analyses:	\$2,550	\$100	\$40	\$25	\$10	\$30	\$10	\$5	\$20
Baseline, total per analyses:	\$5,100	\$1,000	\$200	\$125	\$50	\$60	\$50	\$10	\$40
CSO Annual, total per analyses:	\$0	\$1,200	\$240	\$150	\$60	\$90	\$60	\$30	\$40
Tri-annual, total per analyses:	\$2,550	\$1,200	\$240	\$150	\$60	\$90	\$60	\$30	\$40
Total Baseline:	\$6,635								
Total Annual:	\$1,870								
Total Tri-annual:	\$4,420								

Notes:
 Costs based on Katahdin Labs, 2009 price list.
 Metals analysis consists of aluminum, cadmium, chromium, copper, nickel, lead, and zinc. :
 TN = Total nitrogen. Cost reflects separate TKN and nitrate + nitrite analyses.
 TP = total phosphorus.
 Ions = Calcium, magnesium, potassium, sodium
 DOC = dissolved organic carbon.
 Costs based on Katahdin Analytical, 2011-12.



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**TABLE B
CAPSIC BROOK MONITORING PLAN OVERVIEW AND ANALYTICAL COSTS FOR SAGAMORE VILLAGE BMP**

Monitoring Phase	Evaluation Technique	Monitoring Activity	Location	Schedule		Number of Laboratory Analyses										Number of Field Analyses			
				Stormflow	Baseflow	Biomonitoring Stations	Metals (Total and Dissolved)	TN	TP (Dissolved)	Chlorides	Ions, alkalinity, DOC	TSS	Hardness	E. coli	DO	Temperature	Conductivity	pH	
BASELINE MONITORING																			
(one year prior to BMP implementation)	Flow monitoring	Flow monitoring	Western Tributary	Continuous	Year-round														
	Streamwater chemical sampling	Stormflow and baseflow sampling	WT-up, WT-2	March, July, October	January, July	10	5	5	5	2	5	2	2	5	5	5			
	Stream Assessment	Geomorphological Assessment	Cap-2			July													
		Habitat Assessment protocol	Cap-2			July													
		Physical Characterization Assessment	Cap-2			July													
	Macroinvertebrate Sampling	Rock bag biomonitoring	Cap-2			July	2												
Precipitation vs. Flow Analyses	Precipitation monitoring or data acquisition	WT-up, WT-2	Year-round	Year-round															
BMP ANNUAL PERFORMANCE MONITORING																			
Flow monitoring	Flow monitoring	Flow monitoring	Existing Locations	Continuous	Year-round														
	Streamwater chemical sampling	Stormflow and baseflow sampling	WT-up, WT-2	March, July, October	January, July	10	5	5	5	2	5	2	2	5	5	5			
BMP TRI-ANNUAL PERFORMANCE MONITORING																			
Flow monitoring	Flow monitoring	Flow monitoring	Existing Locations	Continuous	Year-round														
	Streamwater chemical sampling	Stormflow and baseflow sampling	WT-up, WT-2	March, July, October	January, July	10	5	5	5	2	5	2	2	5	5	5			
Stream Assessment	Geomorphological Assessment	Cap-2			Tri-annual, on DEP schedule														
	Habitat Assessment protocol	Cap-2			Tri-annual, on DEP schedule														
	Physical Characterization Assessment	Cap-2			Tri-annual, on DEP schedule														
Macroinvertebrate Sampling	Rock bag biomonitoring	Cap-2			July, on DEP schedule	1													
Precipitation vs. Flow Analyses	Precipitation monitoring or data acquisition	WT-up, WT-2	Year-round	Year-round															

ANALYTICAL COSTS:

Cost per Analyses:	\$2,550	\$100	\$40	\$25	\$10	\$30	\$10	\$5	\$20
Baseline, total per analyses:	\$5,100	\$1,000	\$200	\$125	\$50	\$60	\$50	\$10	\$40
CSO Annual, total per analyses:	\$0	\$1,000	\$200	\$125	\$50	\$60	\$50	\$10	\$40
Tri-annual, total per analyses:	\$2,550	\$1,000	\$200	\$125	\$50	\$60	\$50	\$10	\$40

Total Baseline: \$6,635

Total Annual: \$1,535

Total Tri-annual: \$4,085

Notes:
Costs based on Katahdin Labs, 2009 price list.
Metals analysis consists of aluminum, cadmium, chromium, copper, nickel, lead, and zinc. :
TN = Total nitrogen. Cost reflects separate TKN and nitrate + nitrite analyses.
TP = total phosphorus.
Ions = Calcium, magnesium, potassium, sodium
DOC = dissolved organic carbon.
Costs based on Katahdin Analytical, 2011-12.



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**TABLE C
 CAPIASIC BROOK MONITORING PLAN OVERVIEW AND ANALYTICAL COSTS FOR WESTERN TRIBUTARY**

Note: Plan assumes that BMP is completed after the Sagamore Village BMP.

Monitoring Phase	Evaluation Technique	Monitoring Activity	Location	Schedule		Biomonitoring Stations	Number of Laboratory Analyses							Number of Field Analyses			
				Stormflow	Baseflow		Metals (Total and Dissolved)	TN	TP Dissolved	Chlorides	Ions, alkalinity, DOC	TSS	Hardness	E. coli	DO	Temperature	Conductivity
BASELINE MONITORING																	
(one year prior to BMP implementation)	Flow monitoring	Flow monitoring	None additional	Continuous	Year-round												
	Streamwater chemical sampling	Stormflow and baseflow sampling	WT-1	March, July, October	January, July	10	5	5	5	2	5	2	2	5	5	5	5
	Stream Assessment	Geomorphological Assessment	Cap-2			July											
		Habitat Assessment	Cap-2			July											
		Physical Characterization Assessment	Cap-2			July											
	Macroinvertebrate Sampling	Rock bag biomonitoring	None additional			July	2										
Precipitation vs. Flow Analyses	Precipitation monitoring or data acquisition	None additional		Year-round	Year-round												
BMP ANNUAL PERFORMANCE MONITORING																	
	Flow monitoring	Flow monitoring	None additional	Continuous	Year-round												
	Streamwater chemical sampling	Stormflow and baseflow sampling	WT-1	March, July, October	January, July	10	5	5	5	2	5	2	2	5	5	5	5
BMP TRI-ANNUAL PERFORMANCE MONITORING																	
	Flow monitoring	Flow monitoring	None additional	Continuous	Year-round												
	Streamwater chemical sampling	Stormflow and baseflow sampling	WT-1	March, July, October	January, July	10	5	5	5	2	5	2	2	5	5	5	5
Stream Assessment	Geomorphological Assessment	Habitat Assessment	None additional														
		Habitat Assessment protocol	None additional														
	Physical Characterization Assessment	None additional															
Macroinvertebrate Sampling	Rock bag biomonitoring	None additional				1											
Precipitation vs. Flow Analyses	Precipitation monitoring or data acquisition	None additional															

ANALYTICAL COSTS:

Cost per Analyses:	\$2,550	\$100	\$40	\$25	\$10	\$30	\$10	\$5	\$20
Baseline, total per analyses:	\$5,100	\$1,000	\$200	\$125	\$50	\$60	\$50	\$10	\$40
CSO Annual, total per analyses:	\$0	\$1,000	\$200	\$125	\$50	\$60	\$50	\$10	\$40
Tri-annual, total per analyses:	\$2,550	\$1,000	\$200	\$125	\$50	\$60	\$50	\$10	\$40
Total Baseline:	\$6,635								
Total Annual:	\$1,535								
Total Tri-annual:	\$4,085								

Notes:
 Costs based on Katahdin Labs, 2009 price list.
 Metals analysis consists of aluminum, cadmium, chromium, copper, nickel, lead, and zinc. :
 TN = Total nitrogen. Cost reflects separate TKN and nitrate + nitrite analyses.
 TP = total phosphorus.
 Ions = Calcium, magnesium, potassium, sodium
 DOC = dissolved organic carbon.
 Costs based on Katahdin Analytical, 2011-12.