

TABLE 3.3C
BIOLOGICAL INDICATORS
COST COMPARISON

INDICATOR/ BASIS FOR COST	IMPLEMENTATION COST	NOTES
<p>(12) <i>Fish Assemblage Analyses</i></p> <ul style="list-style-type: none"> • Per sample, per site cost • Three staff members per site (one intern) • Includes overhead expenses (supplies, vehicles, travel, utilities, maintenance, rent, computers, printing, and equipment) • Includes data analysis and preparation of summary report 	<p>\$400 to \$475 per sample, per site</p>	<p>Based on methodology of Karr's IBI (1986). Cost for first or second order stream (only one electrofishing shocker required) For start-up costs add: electrofishing equipment, computer(s), and basic field gear (e.g., hip waders, fish holding buckets, etc.).</p>
<p>(13) <i>Macro-Invertebrate Assemblage</i></p> <ul style="list-style-type: none"> • Per sample, per site cost • Two staff members required per site • Includes overhead expenses (supplies, vehicles, travel, utilities, maintenance, rent, computers, printing, and equipment) • Includes sub-sample analysis, identification to genus level, and preparation of summary report 	<p>\$500 to \$600 per sample, per site</p>	<p>Based on RBP protocol III, and sampling to genus level. Cost for 200 individual sub-sample count For start-up costs add: Microscope, kick-screen sampler(s), glassware, preservative, and computer(s).</p>
<p>(14) <i>Single Species Indicator</i></p> <ul style="list-style-type: none"> • Per sample, per site cost • Two field staff members required per site • Includes overhead expenses (supplies, vehicles, travel, utilities, maintenance, rent, computers, printing, and equipment) • Includes data analysis and preparation of summary report 	<p>\$375 to \$425 per sample, per site</p>	<p>Based on fish electro-shocking surveys of trout or salmon. For start-up costs add: Electrofishing equipment, computer(s) and basic field gear.</p>
<p>(15) <i>Composite Indicators</i></p> <ul style="list-style-type: none"> • Per sample, per site cost • Two field staff members required per site • assumes at least two biological indicators investigated per site • Includes overhead expenses (supplies, vehicles, travel, utilities, maintenance, rent, computers, printing, and equipment) • Includes data analysis and preparation of summary report 	<p>\$900 to \$1,075 per sample, per site.</p>	<p>Based on combining fish and macro-invertebrate sampling at one site. For start-up costs add: Equipment referenced under fish and macro-invertebrates.</p>

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(16) <i>Other Biological Indicators</i> <ul style="list-style-type: none"> • Per sample cost, lake site • Two staff members required per sample • Phytoplankton community sampling costs • Includes overhead expenses (supplies, vehicles, travel, utilities, maintenance, rent, printing, and equipment) • Includes data analysis and preparation of summary report 	\$340 - \$420 per sample, per lake	Based on single index sampling for phytoplankton only. Multi-metric protocols, incorporating habitat assessments (requiring at least two trips per sample and two or more sample locations) cost between \$1,800 to \$2,200 per assessment (excluding start-up costs).