

Appendix G
Massachusetts Small MS4 Permit Monitoring Requirements
For Discharges into Impaired Waters

Pollutant Causing Impairment	Monitoring Parameter
Aluminum	Aluminum, Total
Ammonia (Un-ionized)	Ammonia – Nitrogen
Arsenic	Arsenic, Total
Cadmium	Cadmium, Total
Chlordane	NMR
Chloride	Chloride
Chromium (total)	Chromium, Total
Copper	Copper, Total
DDT	NMR
DEHP (Di-sec-octyl phthalate)	NMR
Dioxin (including 2,3,7,8-TCDD)	NMR
Dioxin (2,3,7,8-Tetrachlorodibenzo-p-dioxin only)	NMR
Lead	Lead, Total
Mercury in Water Column	NMR unless potentially present such (e.g., salvage yards crushing vehicles with Hg switches)
Nitrogen (Total)	Nitrogen, Total
Pentachlorophenol (PCP)	NMR
Petroleum Hydrocarbons	Oil and Grease
Phosphorus (Total)	Phosphorus, Total
Polychlorinated biphenyls	NMR
Polycyclic Aromatic Hydrocarbons (PAHs) (Aquatic Ecosystems)	PAHs
Sulfide-Hydrogen Sulfide	NMR
Mercury in Fish Tissue	NMR
PCB in Fish Tissue	NMR
Total Dissolved Solids	Total Dissolved Solids
Total Suspended Solids (TSS)	Total Suspended Solids
Turbidity	Total Suspended Solids and Turbidity
Secchi disk transparency	Total Suspended Solids
Sediment Screening Value (Exceedence)	Total Suspended Solids
Sedimentation/Siltation	Total Suspended Solids
Bottom Deposits	Total Suspended Solids

Color	NMR
pH, High	pH
pH, Low	pH
Taste and Odor	NMR
Temperature, water	NMR
Salinity	Specific Conductance
<i>Enterococcus</i>	<i>Enterococcus</i>
<i>Escherichia coli</i>	<i>E. coli</i>
Fecal Coliform	Fecal Coliform
Organic Enrichment (Sewage) Biological Indicators	<i>Enterococcus</i> (marine waters) or <i>E. coli</i> (freshwater)
Debris/Floatables/Trash	NMR
Foam/Flocs/Scum/Oil Slicks	Contact MassDEP
Oil and Grease	Oil and Grease
Chlorophyll-a	Total Phosphorus (freshwater)
	Total Nitrogen (marine waters)
Nutrient/Eutrophication Biological Indicators	Total Phosphorus (freshwater)
	Total Nitrogen (marine waters)
Dissolved oxygen saturation / Oxygen, Dissolved	Dissolved Oxygen
	Temperature
	BOD ₅
	Total Phosphorus (freshwater)
	Total Nitrogen (marine waters)
Excess Algal Growth	Total Phosphorus (freshwater)
	Total Nitrogen (marine waters)
Aquatic Plants (Macrophytes)	NMR
Abnormal Fish deformities, erosions, lesions, tumors (DELTS)	NMR
Abnormal Fish Histology (Lesions)	NMR
Estuarine Bioassessments	NMR
Fishes Bioassessments	NMR
Aquatic Macroinvertebrate Bioassessments	NMR
Combined Biota/Habitat Bioassessments	NMR
Habitat Assessment (Streams)	NMR
Lack of a coldwater assemblage	NMR
Fish Kills	NMR
Whole Effluent Toxicity (WET)	NMR

Ambient Bioassays -- Chronic Aquatic Toxicity	NMR
Sediment Bioassays -- Acute Toxicity Freshwater	NMR
Sediment Bioassays -- Chronic Toxicity Freshwater	NMR
Fish-Passage Barrier	NMR
Alteration in stream-side or littoral vegetative covers	NMR
Low flow alterations	NMR
Other flow regime alterations	NMR
Physical substrate habitat alterations	NMR
Other anthropogenic substrate alterations	NMR
Non-Native Aquatic Plants	NMR
Eurasian Water Milfoil, Myriophyllum spicatum	NMR
Zebra mussel, Dreissena polymorph	NMR
Other	NMR

Notes:

Approved method(s) for each parameter can be found in 40 CFR §§136

“NMR” indicates no monitoring required

“Total Phosphorus (freshwater)” indicates monitoring required for total phosphorus where stormwater discharges to a water body that is freshwater

“Total Nitrogen (marine water)” indicates monitoring required for total nitrogen where stormwater discharges to a water body that is a marine or estuarine water