

Table 3. Details for Sampling Biota and Water Quality Parameters. Water Quality Grab sample information presented here is based on laboratories used during the 2018 field season, the State of Maine Health and Environmental Testing Laboratory (HETL), and in-house DEP processing. Preservation and holding times subject to change.

Parameter	Sampling techniques	Sample area/volume	Sample preservation Maximum holding time	Analysis location	SOP in App. D	Quality Control Procedures
BIOTA:						
Macroinvertebrates	Artificial Substrate; dipnet measured sweep	100-m reach; 1m	95% Ethanol; 5 years	Field; MDEP - Augusta; taxonomist	i, vii	Check pick 1 in 10 samples; taxonomists maintain reference collections
Algae	Periphytometer, natural substrate, phytoplankton	100-m reach; 1L	M3; 5 years	Field; MDEP - Augusta; taxonomist	vi	Taxonomist maintains reference collections of digital images
Macrophytes	Rake sweep; visual survey	1m; 5m radius plot	Plant press; indefinitely if added to herbarium	Field; MDEP - Portland	xi	Voucher specimens; photographic record
Fish	Backpack electroshock unit; seine	50m reach; variable	N/A	Field	xii	Voucher specimens; photographic record

WATER QUALITY:

Dissolved oxygen	Hand held meter	--	--	Field	ii	Calibrate field meter according to SOP
Specific conductance	Hand held meter	--	--	Field		Calibrate field meter according to SOP
Temperature (instantaneous)						
pH						
Temperature (continuous)	HOBO Water Temp Pro	--	--	Record in field; download onto office computer using HOBO Ware Pro	v	Perform Precision test according to SOP.
Flow velocity (average)	Global flow meter	--	--	Field	iii	Calibrate field meter according to SOP.
Nutrients - TKN	Grab sample	237 ml	4°C; 24 h to preservation (H2SO4), 28 d	HETL	iv	Lab: 1 duplicate per 10 samples; spike sample; blank sample.
- NO3+NO2-N		237 ml	acidify (H2SO4), <6°C; 28 d		iv	
- NH3-N		237 ml	<6°C; 24 h		iv	
- Total-P		125 ml	4°C; 48 h to preservation, 28 d		iv	
- OPO4-P		237 ml	4°C; 48 h		iv	

Table 3, continued

Parameter	Sampling techniques	Sample area/volume	Sample preservation Maximum holding time	Analysis location	SOP in App. D	Quality Control Procedures
Chlorophyll <i>a</i>	Grab sample	1 L	4°C, buffer with MgCO ₃ ; filter within 24 h or freeze within 48 h, freeze filter; 28 d	HETL	iv	<u>Lab</u> : 1 duplicate per 10 samples; blank sample.
Total Suspended Solids	Grab sample	500 ml	4°C; 7 d	HETL	iv	<u>Lab</u> : 1 duplicate per 10 samples; blank.
Total Dissolved Solids	Grab sample	250 ml	4+/-2°C; 7 d	HETL	iv	<u>Lab</u> : 1 duplicate per 10 samples; blank.
Dissolved Organic Carbon	Grab sample	250 ml	acidify (H ₂ SO ₄),+ 4°C; 28 d	HETL	iv	<u>Lab</u> : 1 duplicate per 20 samples; spike sample; blank.
Chloride	Grab sample	237 ml	28 d	HETL	iv	<u>Lab</u> : 1 duplicate per 10 samples; spike sample; blank sample.
Alkalinity (CaCO ₃)	Grab sample	500 mL	2-6°C; 14 d	DEP in house	iv	<u>Lab</u> : 1 duplicate per 10 samples; blank sample.
True Color	Grab sample	237 mL	4°C; 28 d	HETL	iv	<u>Lab</u> : 1 duplicate per 10 samples; spike sample; blank sample.
Silicon, dissolved silica	Grab sample	250 mL	4°C; 7 d	HETL	iv	<u>Lab</u> : 1 duplicate per 10 samples; spike sample; blank; check sample.