



SURFACE WATER QUALITY STEWARDSHIP TOOLBOX

Field Audit

Volunteer water quality monitoring can be prone to protocol drift (i.e., small changes in procedures over time), particularly when groups are not sampling or re-training regularly. The purpose of this form is to provide an opportunity for groups to self-audit their field procedures or be audited by Ministry of Environment and Climate Change Strategy (ENV) staff. The form tracks completion of field audits and helps identify areas for improvements. Self-audits are recommended every 6 months, with ENV doing a check-in audit once a year or every 2 years.

Audit Date	Purpose
April 14, 2021	e.g., To observe group training and help with calibration of equipment.
Auditor(s)	Last Audit Date and by whom?
Rosie Barlak (ENV) Kristy Gabelhouse (ENV)	January 2020 self-audit – name of individual August 2019 by ENV

Group Name	Area Monitored by Group
e.g., Beaufort Watershed Stewards (BWS)	e.g., Buckley Bay to Royston
Nature of Organization	
<input type="checkbox"/> Community Group / NGO	<input type="checkbox"/> Individual
<input type="checkbox"/> Academic Institution	<input type="checkbox"/> Indigenous Group
<input type="checkbox"/> Local Government: specify _____	<input type="checkbox"/> Industry
<input type="checkbox"/> Other _____	
Mailing Address	
City and Postal Code	
Contact Name and Phone #	

Regular Locations Sampled and Monitoring Data Collected – use last page if more space required								
Waterbody	Waterbody type	Years of data	Parameters					
			pH	Temp.	Cond.	DO	Turbidity	Other
Hart Creek	Creek	2012 to present	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	



Monitoring Frequency				
<input type="checkbox"/> weekly (duration _____)	<input type="checkbox"/> 5 weekly in 30 days (summer)	<input type="checkbox"/> 5 weekly in 30 days (fall flush)	<input type="checkbox"/> 5 weekly in 30 days (freshet)	<input type="checkbox"/> monthly
<input type="checkbox"/> quarterly	<input type="checkbox"/> biannually	<input type="checkbox"/> yearly	<input type="checkbox"/> other _____	

Data Quality Assurance/Quality Control and Long-term data storage				
Do you submit your data to ENV for entry into the provincial EMS database?	<input type="checkbox"/> yes	<input type="checkbox"/> no	<input type="checkbox"/> not applicable	<input type="checkbox"/> other? _____
If no, where are data stored?	_____			
Are ENV data QAQC procedures followed prior to submission for EMS data entry or long-term data storage?	<input type="checkbox"/> yes	<input type="checkbox"/> no	<input type="checkbox"/> not applicable	<input type="checkbox"/> other? _____ _____

Equipment					
Make / Model	Type	Calibrated?	When was it last calibrated?	Calibration Form?	Record of calibrations?
e.g., YSI Pro Plus	Temp/DO/SpC	<input type="checkbox"/> yes <input type="checkbox"/> no	June 4, 2021	<input type="checkbox"/> yes <input type="checkbox"/> no	<input type="checkbox"/> yes <input type="checkbox"/> no
		<input type="checkbox"/> yes <input type="checkbox"/> no	June 4, 2021	<input type="checkbox"/> yes <input type="checkbox"/> no	<input type="checkbox"/> yes <input type="checkbox"/> no
		<input type="checkbox"/> yes <input type="checkbox"/> no	June 4, 2021	<input type="checkbox"/> yes <input type="checkbox"/> no	<input type="checkbox"/> yes <input type="checkbox"/> no
Following instrument procedures?	<input type="checkbox"/> yes	<input type="checkbox"/> no	<input type="checkbox"/> not applicable	<input type="checkbox"/> other? _____ _____	
Cleaned properly between sites?	<input type="checkbox"/> yes	<input type="checkbox"/> no	Stored properly between sites?	<input type="checkbox"/> yes	<input type="checkbox"/> no
Calibration solutions expired?	<input type="checkbox"/> yes List: _____	<input type="checkbox"/> no List: _____	Notes: _____ _____ _____		
How is equipment cleaned when finished?	<input type="checkbox"/> proper cleaning	<input type="checkbox"/> not proper? Indicate how: _____			
How is equipment stored when not in use?	<input type="checkbox"/> proper storage	<input type="checkbox"/> not proper? Indicate how: _____			
Backup Supplies? If so, list:	_____				



Training				
How often are monitors trained in field sampling procedures?	<input type="checkbox"/> biannually	<input type="checkbox"/> yearly	<input type="checkbox"/> other? _____	
Last date of training?	June 4, 2021			
Who provides training?	<input type="checkbox"/> internally trained by trained group lead	<input type="checkbox"/> training sessions by trained partner agency	<input type="checkbox"/> ENV staff	<input type="checkbox"/> other? _____ _____

Safety Equipment – check all that apply				
<input type="checkbox"/> reflective vest?	<input type="checkbox"/> wading stick?	<input type="checkbox"/> first aid kit?	<input type="checkbox"/> navigation device or map?	<input type="checkbox"/> cell phone/radio?
<input type="checkbox"/> sturdy footwear? wading boots?	<input type="checkbox"/> appropriate clothing?	<input type="checkbox"/> personal flotation device?	<input type="checkbox"/> sunscreen? bug spray?	<input type="checkbox"/> drinking water?
<input type="checkbox"/> protection from weather (raincoat, sunhat, other)?	<input type="checkbox"/> PPE for forestry roads (hardhat, VHF radio)?	<input type="checkbox"/> nitrile gloves?	<input type="checkbox"/> throw bag?	<input type="checkbox"/> bear spray?
<input type="checkbox"/> hand sanitizer?	<input type="checkbox"/> handwashing station?	<input type="checkbox"/> other?	<input type="checkbox"/> other?	<input type="checkbox"/> other?
Safety Planning				
<input type="checkbox"/> Safety plan in place?	<input type="checkbox"/> check in procedure?	<input type="checkbox"/> ≥ 2 people sampling?	<input type="checkbox"/> vehicle parked correctly/safely?	<input type="checkbox"/> water safety followed?
Tailgate meeting (site hazard ID)?	<input type="checkbox"/> yes	<input type="checkbox"/> no		<input type="checkbox"/> other? _____
Weather and stream conditions checked beforehand?	<input type="checkbox"/> yes	<input type="checkbox"/> no		<input type="checkbox"/> other? _____
Forestry road driving and radio call procedures followed?	<input type="checkbox"/> yes	<input type="checkbox"/> no	<input type="checkbox"/> not applicable	<input type="checkbox"/> other? _____
Permission to transit and sample on private property?	<input type="checkbox"/> yes	<input type="checkbox"/> no	<input type="checkbox"/> not applicable	<input type="checkbox"/> other? _____
List additional safety protocols:				



Sampling Procedures				
Does the sampling follow BC Field Sampling Manual protocols?	<input type="checkbox"/> yes	<input type="checkbox"/> no	<input type="checkbox"/> not applicable	<input type="checkbox"/> other? _____
Placement of YSI? In good water flow? Submerged? Not aerated? Away from optical interference (silt, weeds)?	<input type="checkbox"/> yes	<input type="checkbox"/> no	<input type="checkbox"/> not applicable	<input type="checkbox"/> other? _____
Waiting recommended time (meter dependent) for reading?	<input type="checkbox"/> yes	<input type="checkbox"/> no	<input type="checkbox"/> not applicable	<input type="checkbox"/> other? _____
Avoid walking in water upstream of sample site and disturbing sediment before and during sampling?	<input type="checkbox"/> yes	<input type="checkbox"/> no	<input type="checkbox"/> not applicable	<input type="checkbox"/> other? _____
Are meter readings and/or grab samples collected upstream of any water disturbance?	<input type="checkbox"/> yes	<input type="checkbox"/> no	<input type="checkbox"/> not applicable	<input type="checkbox"/> other? _____
Are readings checked against typical range of readings for site?	<input type="checkbox"/> yes	<input type="checkbox"/> no	<input type="checkbox"/> not applicable	<input type="checkbox"/> other? _____
If out of range with no obvious reason, troubleshoot/recalibration of equipment occurs?	<input type="checkbox"/> yes	<input type="checkbox"/> no	<input type="checkbox"/> not applicable	<input type="checkbox"/> other? _____
Additional notes?				

Field Notes				
Were sampler's names/sampling organization indicated?	<input type="checkbox"/> yes	<input type="checkbox"/> no	<input type="checkbox"/> not applicable	<input type="checkbox"/> other? _____
Weather conditions indicated?	<input type="checkbox"/> yes	<input type="checkbox"/> no	<input type="checkbox"/> not applicable	<input type="checkbox"/> other? _____
Date and Time in 24-hour clock (yyyy-mm-dd hh:mm)? and listing time zone (e.g., PST or PDST)?	<input type="checkbox"/> yes	<input type="checkbox"/> no	<input type="checkbox"/> not applicable	<input type="checkbox"/> other? _____
Parameters listed and correct units indicated?	<input type="checkbox"/> yes	<input type="checkbox"/> no	<input type="checkbox"/> not applicable	<input type="checkbox"/> other? _____
Full proper name of site with EMS ID?	<input type="checkbox"/> yes	<input type="checkbox"/> no	<input type="checkbox"/> not applicable	<input type="checkbox"/> other? _____
Waterbody conditions noted as per field observation protocols?	<input type="checkbox"/> yes	<input type="checkbox"/> no	<input type="checkbox"/> not applicable	<input type="checkbox"/> other? _____
Details noted that might affect sampling?	<input type="checkbox"/> yes	<input type="checkbox"/> no	<input type="checkbox"/> not applicable	<input type="checkbox"/> other? _____
Changes noted since last time? In stream, in riparian area, in access?	<input type="checkbox"/> yes	<input type="checkbox"/> no	<input type="checkbox"/> not applicable	<input type="checkbox"/> other? _____
Can you read the field notes?	<input type="checkbox"/> yes	<input type="checkbox"/> no	<input type="checkbox"/> not applicable	<input type="checkbox"/> other? _____

