

UHM STORMWATER MONITORING SYSTEM SERVICING CHECKLIST



Project Description: Stormwater Monitoring

Client:

Site Location:

Date:

Time:

Instrument Description(s)

Instrument Description(s)	Model #	Serial #	Special Instructions
Isco® Flow Meter			
Isco® Automated Sampler			
YSI Water Quality Sonde			

Servicing Equipment and Supply List

Matériel Description	Qty	Units	Comments	Acq	Load
Laptop PC & Serial Cable	1	each	charged, loaded with FlowLink®, EcoWatch® software, & site file		
Housing Keys	1	each	for accessing instrument housings and gates (servicing kit)		
Isco/YSI Servicing Kit	1	each	DO membranes, O-rings, desiccant, silicone grease, tools, etc.		
Isco & YSI Manuals	1	each	flow meter, sampler, and software (pilot's case)		
Paper Towels, Q-Tips, etc.		asstd	for cleaning Isco® sampler & YSI sonde as necessary		
De-ionized Water		liters	2 L for cleaning Isco® & YSI; 12 L for YSI calibrations		
50-mL Liquinox®	1	each	for cleaning Isco® sampler & YSI as necessary		
Backpack	1	each	for carrying all matériel		
Pens, Pencils, & Clipboard		asstd	for labeling sample bottles (Sharpie®) & completing log sheets		
Isco Sampling & YSI Calib. Logs	1	each	both logs stored in plastic folder in field PC case		
Personal Watch	1	each	set to USNO or NIST master clock via W3		
Large Plastic Bags	2	each	for sample bottles, trash, & to protect PC from rain		
0.5-L or 1-L Isco Sample Bottles	24	each	cleaned, capped & placed in plastic bags		
12-VDC Battery	1	each	fully charged deep-cycle battery (check with battery checker)		
Fresh Desiccant	500	mL	fully charged (i.e., blue) in Ziplock® bag (or cartridges)		
Fresh Ant Baits	4	each	ant control		
Ziplock Sandwich Bags	2	each	for charged & exhausted desiccant		
YSI 610-DM Datalogger w/ cables	2	each	for deleting files from YSI sonde & backup (only) communications		
YSI Calibration Cup	1	each	for calibrations & to keep probes moist (servicing kit)		
New, Disposable AA Batteries	8	each	for YSI sonde (servicing kit)		
Plastic Retrieval Hook	1	each	for retrieving YSI sonde from housing (servicing kit)		
Chain-type Pipe Wrench	1	each	for removing end cap on YSI housing (servicing kit)		
YSI Calibration Kit	1	each	standards, barometer (in servicing kit), clamps, etc.		
Ring Stand with Clamps	1	each	to hold YSI sonde during calibration		
Trace-metal Sample Bottles		each	double bagged & filled with 18-MΩ DIW (for grab samples)		
Vinyl Gloves (Class 10)	3	pair	for handling Isco® bottles and collecting grab sample		

UHM STORMWATER MONITORING SYSTEM SERVICING CHECKLIST



Project Description: Stormwater Monitoring		Client:	
Site Location:	Date:	Time:	
14	When interrogation is complete HANGUP		
15	Go to REPORT , begin with last servicing date & view SAMPLE REPORT		
🔄 16	Record bottle #s and sample dates and times on Isco® Sampling Record		
17	Go to GRAPH and check hydrograph to see if sampler should have triggered but did not		
18	EXIT FlowLink®, disconnect cable, and stow PC; replace connector cap		
19	If battery is OK, go to Step #23, if not, go to Step #20		
🔄 20	If battery voltage is < 11.0 VDC or <1/3, shut off (1) sampler then (2) flow meter		
21	Replace 12-VDC, deep-cycle battery, make sure polarity is correct		
🔄 22	Turn on flow meter, then sampler (in this order or sampler will start sampling)		
23	If removed from box, place flowmeter back in box & make sure lines & cables are OK		
24	Pull Isco® sampler from housing, remove cover, & check status of sampler (fatal error?)		
🔄 25	Check Isco sampler time against watch, adjust if necessary, and record times	Time:	Reset to:
🔄 26	Remove top of sampler and record number of bottles in sampler:		
27	If sampler OK and no samples collected, go to Step #43, otherwise go to Step #28		
🔄 28	Switch Isco® sampler to STANDBY by pressing STOP		
29	Remove top part of sampler to check sample bottles		
30	Don clean gloves		
31	Cap bottles (caps will be in a clean Ziplock® bag inside center of sampler)		
32	If not labeled, label bottles 1 through 24 (or at least up to the last full bottle); refer to base #		
33	Compare sample #s with those recorded in Step #16		
34	Move lifting straps out of way, remove locking ring, & remove filled sample bottles		
35	Clean base of Isco® sampler, especially if ants have accumulated in base		
36	Insert fresh capped bottles (empty bottles may be left in place & augmented with new)	Total # of Bottles:	
37	Re-insert locking ring (if there are <24 bottles, use foam rubber to <i>fill in</i>)		
38	Carefully place lifting straps, if present, back into base but away from bottle mouths		
39	If your gloves have been compromised, don clean gloves		
40	Remove caps and place in clean Ziplock® bag		
41	Place top of sampler onto base and close latches		
🔄 42	Press START SAMPLING, START (at Bottle # ____?) and ENTER (do not forget this)		
43	Ignore "Sampler Inhibited" message (means sampler is waiting for flow meter)	or "Waiting for Triggering Event"	
44	Replace cover on sampler, do not pinch lines or wires, & carefully lower sampler into box		
45	Insert fresh ant baits in box (to control the ants) as necessary		
46	Close and lock box		

UHM STORMWATER MONITORING SYSTEM SERVICING CHECKLIST



Project Description: Stormwater Monitoring

Client:

Site Location:

Date:

Time:

YSI SONDE

1	Unlock lock and remove cap and lock (usually the chain pipe wrench is required)				
2	Use retrieval hook to remove sonde from housing				
3	Fill calibration cup with small amount of water and replace probe guard with cup				
4	Remove cap and replace all 8 AA batteries and replace cap after greasing O-rings				
5	Remove connector plug				
6	Connect sonde to PC loaded with EcoWatch® using appropriate cables				
7	CONNECT (sonde icon) then type MENU				
8	Select FILE ⇒ UPLOAD ⇒ file name ⇒ PROCEED ⇒ PC6000				
9	Wait for data to upload to PC, then exit communications (with sonde) window				
10	When finished, disconnect cable from PC to sonde (this protects the downloaded data)				
11	Open data file & check the data to see if there are any apparent problems with probes				
12	Change graph title to indicate station & start time of record (e.g., WK113099)			File Name:	
13	Rename file to match graph title (this will prevent inadvertent overwriting of data file)				
14	Connect 610-DM datalogger to sonde (Note: spare 610-DM in pilot's case)				
15	Select POWER ⇒ ESC ⇒ DEPLOY SONDE ⇒ FILE ⇒ DELETE to delete file				
16	If calibrating YSI, go to Step #17, if not, go to Step #22				
17	Press ESC to step back in menu until CALIBRATE is an option				
18	Remove calibration cup and clean probes with 18-MΩ DIW & paper towels				
19	Place sonde in clamp on ring stand to facilitate calibration				
20	Record calibration information on YSI Calibration Log; note start time here				
21	Replace calibration cap containing a small amount of (18-MΩ DIW)				
22	Check YSI time against watch, adjust if necessary, and record times			Time:	Reset to:
23	ESC ⇒ RUN ⇒ UNATTENDED ⇒ START LOGGING ⇒ YES ⇒ ESC ⇒ POWER				
24	Disconnect cables and replace connector plug (IMPORTANT)				
25	Wait for wiper on turbidity probe to activate indicating that sonde is logging data				
26	At YSI housing, remove calibration cap & replace with probe guard				
27	Place sonde in housing with retrieval hook				
28	Thread lock through housing & bale on sonde & lock				
29	Replace housing cap (finger tight only)				

SAMPLES (if any), DATA REDUCTION, ANALYSIS, AND QC

1	Use label tape & Sharpie® pen, label each bottle with station # (e.g., WK-##), date, & time of each sample				
---	--	--	--	--	--

