

Field Check List

- Sampling team, sample in pairs
- Identification- drivers license
- Signed Access letter - Blaine Public Works
- Charged Cell phone
- Hip waders, at least one sampling team member.
- Rubber boots
- Reflective Safety Vest
- Hand sanitizer
- Prepared Sample bottles
- 2 Coolers with ice
- Calibrated YSI 54
- Swiffer 2100 current meter & wading rod
- Tape measure (tenths of ft) & stakes & 2 sprung clamps to attach tape to stakes
- Calibrated catchment bucket
- Sampling bottle extension pole
- Stopwatch
- GPS
- Camera
- Field notebook, field sheets
- Chain-of custody- sheet/log

Drayton Harbor/Semiahmoo Bay Water Quality Enhancement Data Sheet

Station ID	Time	Temp °C	Flow (ft ² /sec)	Cond. (mS/cm) ^c	DO (mg/L)	DO %	pH	FC/100mL	Flow Gauge (ft)	QA#	MST	Comments
CC0.01									NA			Salinity:
CCSD									NA			Salinity:
CCSS									NA			No flow measurement
CC.10			NA						NA			
CC.10									NA			
CC.15									NA			
CC0.4			--									
CC0.8			--									
CC1.2			--									
CC1.3			--									
CC3AS												
FD												
TC1												
TC2												

Samplers : _____
 Date: _____
 Tide: _____
 Sample Run Type: _____
 Weather: _____

YSI Calibration : _____ °C
 Data Entry Initials: _____
 Data Entry QAQC Check Initials: _____
 Temperature Control (Lab): _____ °C
 Field Duplicate: _____

-- : Data to be collected on a separate date.
 NA: Not Applicable

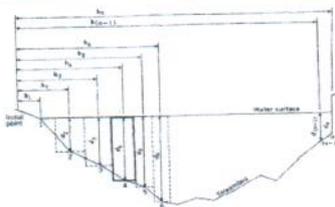
Drayton Harbor/Semiahmoo Bay Water Quality Enhancement Project

Cain Creek - Open Channel Flow Measurements

Sample Location	Staff Gauge Reading (ft), if applicable	
Date		
Time		
Weather		
Personnel		

Observation Point	Station (ft) (b _x in the diagram below)	Measured Water Depth (ft)	Velocity (ft/sec) ¹			Notes
			0.6*Depth	0.8 *Depth	0.2*Depth	
1		0	--	--	--	First station is edge of water
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						

¹If depth is <2.0 ft, measure velocity at 0.6*Depth. If depth >2.0 ft, collect velocity at 0.8 * D and 0.2 * D



EXPLANATION
 L.L.P. Observation vertical
 P₁, P₂, P₃, ... P_n Direction, or line of water, from the
 water point to the observation vertical
 h₁, h₂, h₃, ... h_n Depth of water in feet or meters, at the
 observation vertical
 Dashed lines Boundaries of subdivisions, and
 height required to calculate in text

FIGURE 41. The section sketch of midsection method of computing cross-section area for discharge measurements.

General Notes:
 Collect velocity points in consistent direction (e.g. right bank to left bank)
 Stations to be measured from consistent initial point, preferably a fence post.
 For streams less than 5 ft wide, collect every 0.3 ft
 For streams greater than 5 ft wide, collect velocity in approximately 15 to 20 equally spaced locations

Drayton Harbor/Semiahmoo Bay Culvert Flow Data Sheet

Sample Location		Staff Gauge Reading (ft) , if applicable
Date		
Time		Hydraulic Conditions
Weather		<i>Is the culvert backwatered from a down stream control?</i> Yes/No
Personnel		<i>Is the culvert completely full?</i> Yes/No
		<i>Is the upstream inlet of the culvert submerged?</i> Yes/No

Culvert Discharge Field Data

Steps:

1. Measure and record maximum water depth (ft) and top width (ft)
2. Collect and record three velocity measurements at approximately 0.6* Maximum Depth
3. If water depth is less than 6 inches, collect all velocity measurements at the deepest point.
4. If water depth is greater than 6 inches, collect measurements in the deepest point, then halfway to either side.
5. Collect two additional velocity measurements if results vary by more than 10 percent
6. Record hydraulic conditions above

Water Depth (ft)	Water Top Width (ft)

Observation	Velocity (ft/sec)	Notes	Location (circle one)
1			Left Middle Right
2			Left Middle Right
3			Left Middle Right
4			Left Middle Right
5			Left Middle Right

Drayton Harbor/Semiahmoo Bay Bucket Flow Data Sheet

Sample Location		Staff Gauge Reading (ft), if applicable
Date		
Time		
Weather		
Personnel		

Bucket Discharge Field Data

Steps:

1. Obtain calibrated bucket (e.g., 5 gallon bucket with each gallon measured and marked clearly on the inside of the bucket).
2. Place bucket under discharge.
3. Using a stopwatch, measure the time it takes to fill the bucket to a known volume (4 gallon).
4. Repeat 3 times; add 2 additional measurements if results vary more than 10 percent
5. If flows are very low, use a consistent time (min. 3 minutes)
6. To calculate discharge, multiply volume (convert to Cubic Feet) * average time. If low flow, average the volume.

Observation	Volume (_____)	Time to fill (min:sec)	Notes
1			
2			
3			
4			
5			

Sample Custody & Analysis Required Form

Form Effective Date: July 2005

EPA Manchester Laboratory, 7411 Beach Drive East, Port Orchard, WA 98366, 360-871-8700

Revision 1

Project Name		Project Code		Method of Shipment/Carrier		Airbill Number (if known prior to sealing)			
Account Code		EPA Project Manifest/Phone number		Check all that apply		<input type="checkbox"/> Enforce/Custody <input type="checkbox"/> Possible Toxic/Hazardous <input type="checkbox"/> Data Confidential			
Sampler Names (Print & Sign), Mark (R) after name of principal recorder: AI SB AS BA BE B CD CA CR CO Cu Fe Pb Mg Mn Mo Ni K Sa Ag Na Sn Tl V Zn (see reverse for more to add/circle)		Matrix Codes: 10 Water/Liquid (Total) 20 Water/Liquid (Filtered) 40 Sediment/Soil/Schd/Bulk 70 Tissue 80 Oil/Solvent 44 Air filter 42 Wipe/Swab 00		1. PCBs apply to be 100% (100 um)		2. Enter the number of containers for each preservative type followed by the appropriate preservation code P: A - HCl B - NaOH C - H ₂ SO ₄ D - H ₂ SO ₄ E - Na ₂ S ₂ O ₈ F - ascorbic acid, then HCl G - Na ₂ S ₂ O ₈ + EDTA H - EDTA I - No chemical preservation J - Bottles pre-preserved at lab K - To be preserved at the lab L - ascorbic acid, then HCl M - Na ₂ S ₂ O ₈ if required by plan N - O - P - Q - R - S - T - U - V - W - X - Y - Z -		<input type="checkbox"/> Check here if the cooler is used <input type="checkbox"/> Enter the letter or range of letters on each container for each group of containers with the same preservative type. Each container for each unique sample number must have a unique letter on it.	
Sampler's comments for the laboratory: 		Matrix: ① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⑩ ⑪ ⑫ ⑬ ⑭ ⑮ ⑯ ⑰ ⑱ ⑲ ⑳ ㉑ ㉒ ㉓ ㉔ ㉕ ㉖ ㉗ ㉘ ㉙ ㉚ ㉛ ㉜ ㉝ ㉞ ㉟ ㊱ ㊲ ㊳ ㊴ ㊵ ㊶ ㊷ ㊸ ㊹ ㊺ ㊻ ㊼ ㊽ ㊾ ㊿		Sampler Initials: _____		Sample/Station Description/Field Measurements: _____			
EPA Sample number Yr. Mo. Day Time	Sequence Yr. Mo. Day Time	Matrix ① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⑩ ⑪ ⑫ ⑬ ⑭ ⑮ ⑯ ⑰ ⑱ ⑲ ⑳ ㉑ ㉒ ㉓ ㉔ ㉕ ㉖ ㉗ ㉘ ㉙ ㉚ ㉛ ㉜ ㉝ ㉞ ㉟ ㊱ ㊲ ㊳ ㊴ ㊵ ㊶ ㊷ ㊸ ㊹ ㊺ ㊻ ㊼ ㊽ ㊾ ㊿	Sampler Initials	Sample/Station Description/Field Measurements	Receiving Laboratory Information Condition of Samples upon Receipt at Lab:				
Chain of Custody Record		Date Time		Received by (Signature)		Date Time			
Requisitioned by (Signature)		Date Time		Received by (Signature)		Date Time			
Requisitioned by (Signature)		Date Time		Received by Mobile Lab for Field Analysis (Signature)		Date Time			
Shipped by (Signature)		Date Time		Received for Lab by (Signature)		Date Time			
Custody Seals Intact:		<input type="checkbox"/> yes		<input type="checkbox"/> no		<input type="checkbox"/> none			
Distribution: White - Laboratory Copy Yellow - Regional Sample Control Center (RSCC) Copy; Pink - Field or Office Copy									