HY 00

Salmon Forever / Watershed Watch

Lab/Grab Sampling Training

9/4/99

Sign-in Sheet

Volunteer Sampling:

Sample your stream for turbidity and suspended sediment during storms
Record velocity and depth of streams , other fun stuff
Help document unhealthy sediment levels in your watershed

Lab Work:

Run samples , Prep filters , wash sample bottles , QC checks , run turbidities , sample sign in

Volunteer Coordinator:

Coordinate sampling in a watershed , train volunteers , pick up samples , run turbidities

Data Entry:

Enter data sheets into databases , enter QC results , run calculations

Name	Volunteer Interest	Watershed	E-mail	Phone #
Nathan Chaney			nec5@axe.	826-2381
Lia Alcantara	OPEN		lia@leadpipeposters.com	825-8347
Travis Gall	Sampling		tlg25@axe.humboldt	826-1086
Jesse Noell			fingerling99@epheo.com	839-7552
CLARK FENTON				826-2978
Anita Andazola			bugsouffle.yahoo.com	822-8576
KARI LOMBA			nslomba@ips.net	269.0528
Helen Tinklepaugh			htink@humboldt1.com	444-8136
EMELIA BEROL				826-1963
* Josh Israel		825-0848	cedarsnag@hotmail.com	
OUT OF VOICES				

Sed.LabVolunteer/excel

Joan Q (Courtois CF) - Redwood - Brikol and Training 10-3-99
11 cells
HY 00

Michael De Leone 18 cells
Sprowel Creek

Gul - George - Seely - Coordinator part of S. Fk Eel
12 cells

S. Fk Eel Training
10-3-99

Jesse gave out HACH Cells

5

@rbl.swrcb.ca.gov

HY 00

Salmon Forever / Watershed Watch

Lab/Grab Sampling Training

10/3/99

Sign-in Sheet

Volunteer Sampling:

Sample your stream for turbidity and suspended sediment during storms

Record velocity and depth of streams , other fun stuff

Help document unhealthy sediment levels in your watershed

Lab Work:

Run samples , Prep filters , wash sample bottles , QC checks , run turbidities , sample sign in

Volunteer Coordinator:

Coordinate sampling in a watershed , train volunteers , pick up samples , run turbidities

Data Entry:

Enter data sheets into databases , enter QC results , run calculations

Name	Volunteer Interest	Watershed	E-mail	Phone #
Joe Hiney	Sediment sampling	Sprowel Creek		707 923 3277
Michael deKlein	"	"	mdeklein@oasis.com	707 923 3413
Marilyn Haber	"	"	Marilyn@OASIS.com	707 923 2412
Cathy Miller	"	"		7074968648

8 ells

Sprowel Creek

Training Sign-in/excel

HY 00

Salmon Forever / Watershed Watch

FIELD ~~Lab/Grab~~ Sampling Training

~~10/3/99~~ 10/17/99

Sign-in Sheet

Volunteer Sampling:

Sample your stream for turbidity and suspended sediment during storms

Record velocity and depth of streams , other fun stuff

Help document unhealthy sediment levels in your watershed

Lab Work:

Run samples , Prep filters , wash sample bottles , QC checks , run turbidities , sample sign in

Volunteer Coordinator:

Coordinate sampling in a watershed , train volunteers , pick up samples , run turbidities

Data Entry:

Enter data sheets into databases , enter QC results , run calculations

Name	Volunteer Interest	Watershed	E-mail	Phone #
Michelle Anderson	sampling/lab	Jolly Giant	laper@excite.com	826-9258
Nathan Chaney	sampling/lab	Jolly Giant	chaney_nj@prodigy.net	826-2381

Campus Jolly Giant & bottles

HY 00

Salmon Forever / Watershed Watch

Grab Sampling Training

form dated ~~10/23/99~~ 11-14-99

Sign-in Sheet

Volunteer Sampling:

Sample your stream for turbidity and suspended sediment during storms

Record velocity and depth of streams , other fun stuff

Help document unhealthy sediment levels in your watershed

Watershed Coordinator:

Coordinate sampling in a watershed , train volunteers , pick up samples , run turbidities

Name	Watershed	E-mail	Phone #	Bottles/Cells
JOHN + MARNI RAPF - N. BUTTCREEK				6 Bottles/(HACH)
		johnrapf@tcoe.trinity.k12.ca.us		(Need more bottles, cork + waterproof forms)
			(530) 628-4890	
Grea[illegible]			[illegible]	
11-14-99 Jim Curry	PO 1 HF 96041		530-628-4208	12 BOTTLES
11-14-99 Kim Stokely			530-628-4609	6 Bottles
11-13-99 Bill Huber			628-5128	6 BOTTLES
11-15-99 Stacy Sebring	PO 1245 HF		628-4503	6 BOTTLES

HY 00

Salmon Forever / Watershed Watch

Grab Sampling Training

~~10/23/99~~ 1-2-00

Sign-in Sheet

Volunteer Sampling:

Sample your stream for turbidity and suspended sediment during storms

Record velocity and depth of streams , other fun stuff

Help document unhealthy sediment levels in your watershed

Watershed Coordinator:

Coordinate sampling in a watershed , train volunteers , pick up samples , run turbidities

Name	Watershed	E-mail	Phone #	Bottles/Cells
Steven DAY	SF EEL MILL creek		925-6329 272-1323	27

Salmon Forever / Watershed Watch

Grab Sampling Training

Sign-in Sheet

Date 1-29-2000 Location Mattole Community Center

Name	Watershed	E-mail	Phone #	Bottles/Cells
Maureen Roche	Hill Ck/Estuary	Salmon@humboldt.net	629-3660	
Ali Freedlund		mrc@inreach.com	629.3514	
Olympia Franklin		humboldtoly@hotmail.com	629-3394	
Telony		Telony71@hotmail.com	629-3514	
Campbell Thompson	Thompson Cr./Mattole R.		800 674 8077 x 7266	
Ellen Taylor		ellenetaylor@yahoo.com	629-3500	
David Simpson		hmpetrolia@aol.com	629-5670	
David D. Snider	Mattole River	Snider@inreach.com	629-3429	
CB Solo	Mill Cr	cbs@redwalley.net	629-3625	
Michael Evenson	Mattole R.	evenson@igc.org	629-3679	
Robert Yosha	Mattole	RYosha@hotmail.com	629 3689	

Salmon Forever / Watershed Watch

~~Creek~~ Sampling Training

LAB Sign-in Sheet

Date 3/10/00 Location SUNNY BRAE SEDIMENT LAB

Name	Watershed	E-mail	Phone #	Bottles/Cells
Yvette GARCIA		ylg1@axe.humbld.edu	822-3869	
Katherine Blackman		KLB27@axe.humboldt.edu.	825.9190	
Josh Israel		cedarsnag@hotmail.com		
Joyce King		jhking@quik.com	839-7444	

HY 00

Salmon Forever
Sunny Brae Sediment Lab

Sample Filter Drying and Weighing Proficiency Checklist

This checklist covers the proper procedure for Drying and Weighing
Suspended Sediment Filter Samples
Using a Mettler H20t Balance

Person checked CLARK FENTON Date 10-17-99 By CLARK FENTON

✓ After air-drying filters 1 hour on wire rack, placed filters in a clean pan in rows of 4 and 5 filters and heated at 105° C for 1 and 1/2 hours for sample filters and 1/2 hour for filter tares.

✓ Removed pan from oven and immediately placed in desiccator to cool for at least 1 hour for sample filters and 1/2 hour for filter tares before weighing.

✓ Zeroed balance by first full releasing scale gently and let balance settle for at least 10 seconds. Used zero knob to set zero and then return scale gently to full arrest.

✓ Zeroed balance between each weigh.

✓ Weighed a check weight before weighing filters and used weight every 10th weigh and recorded on data sheet and in Lab Check Weight book. Checked the pan for debris, and if present, gently removed it with fine brush or compressed air.

✓ Set balance gently to full release, opened dessicator, removed sample tray and transferred a row of 4 or 5 filters to another tray. Immediately put tray with remainder of filters back into dessicator and closed door. Zeroed balance and brought balance back to full arrest.

✓ Opened the sliding door and carefully placed the filter on the center of the weighing pan and then closed the door. Determined weight to tenth of a gram with half release. Set to full release and let balance stabilize for at least 10 seconds. Determined the remainder of the weight with knob and then recorded the weight on the data sheet.

✓ Opened the door and removed the filter. Closed the door.

✓ Checked the final weight against the initial weight. The final weight should be larger. If the initial weight is larger than the final weight tried to determine where the error occurred and recorded error code on data sheet.
NA

Comments: 1ST weighs of 9 standard QA filters

continued ➜

Lab Technician Weigh Checks

Lab Technician weighing proficiency shall be checked with comparison of 9 filter weighs. Lab Techs. will demonstrate proficiency weighing these standard filters before weighing sample filters. These 9 filters are used every time and represent varying suspended sediment concentrations. The Standard weight will be the one done by the Lab Manager. Lab Tech. weights of filters shall be within 1% of Standard Weight. Lab Techs shall repeat filter weighs until able to weigh within 1 % on all 9 filters.

Check Wt. 1.00010 g

Filter ID #	Standard Weight
X1265	0.20294 g
X1315	0.16013 g
X1319	0.13419
X1261	0.12421
XQC154	0.10702
X1288	0.15909
X1249	0.12414
X1283	0.12161
X1245	0.11145

Check Weight 1.00007 g

Comments 1ST 5 filters in air 8 minutes.

HY 00

Salmon Forever
Sunny Brae Sediment Lab

Sample Filter Drying and Weighing Proficiency Checklist

This checklist covers the proper procedure for Drying and Weighing
Suspended Sediment Filter Samples
Using a Mettler H20t Balance

Person checked Clark Fenton Date 11/13/99 By Anita Andazola

✓ After air-drying filters 1 hour on wire rack, placed filters in a clean pan in rows of 4 and 5 filters and heated at 105° C for 1 and 1/2 hours for sample filters and 1/2 hour for filter tares.

✓ Removed pan from oven and immediately placed in desiccator to cool for at least 1 hour for sample filters and 1/2 hour for filter tares before weighing.

✓ Zeroed balance by first full releasing scale gently and let balance settle for at least 10 seconds. Used zero knob to set zero and then return scale gently to full arrest.

✓ Zeroed balance between each weigh.

✓ Weighed a check weight before weighing filters and used weight every 10th weigh and recorded on data sheet and in Lab Check Weight book. Checked the pan for debris, and if present, gently removed it with fine brush or compressed air.

✓ Set balance gently to full release, opened dessicator, removed sample tray and transferred a row of 4 or 5 filters to another tray. Immediately put tray with remainder of filters back into dessicator and closed door. Zeroed balance and brought balance back to full arrest.

✓ Opened the sliding door and carefully placed the filter on the center of the weighing pan and then closed the door. Determined weight to tenth of a gram with half release. Set to full release and let balance stabilize for at least 10 seconds. Determined the remainder of the weight with knob and then recorded the weight on the data sheet.

✓ Opened the door and removed the filter. Closed the door.

✓ Checked the final weight against the initial weight. The final weight should be larger. If the initial weight is larger than the final weight tried to determine where the error occurred and recorded error code on data sheet.

Comments: –

Anita Andazola

continued ➜

Lab Technician Weigh Checks

Lab Technician weighing proficiency shall be checked with comparison of 9 filter weighs. Lab Techs. will demonstrate proficiency weighing these standard filters before weighing sample filters. These same 9 filters are used every time and represent varying suspended sediment concentrations. The Standard weight will be the one done by the Lab Manager. Lab Tech. weights of filters shall be within 1% of Standard Weight. Lab Techs shall repeat filter weighs until able to weigh within 1 % on all 9 filters.

Check Wt. 1.00007 g

Filter ID #	Standard Weight	Tech. Wt.	+ - 1.0% Range
X1265	0.20294 Grams	0.20292	0.20497 Grams 0.20091 Grams
X1315	0.16013 Grams	0.16010	0.16173 Grams 0.15853 Grams
X1319	0.13419 Grams	0.13435	0.13553 Grams 0.13285 Grams
X1261	0.12421 Grams	0.12436	0.12545 Grams 0.12297 Grams
XQC154	0.10702 Grams	0.10712	0.10809 Grams 0.10595 Grams
X1288	0.15909 Grams	0.15960	0.16068 Grams 0.15750 Grams
X1249	0.12414 Grams	0.12424	0.12538 Grams 0.12290 Grams
X1283	0.12161 Grams	0.12167	0.12283 Grams 0.12039 Grams
X1245	0.11145 Grams	0.11154	0.11257 Grams 0.11033 Grams

Check Weight 1.00008 g Acceptable? yes

Comments

Anita Andazola

Salmon Forever
Sunny Brae Sediment Lab

Sample Filter Drying and Weighing Proficiency Checklist

This checklist covers the proper procedure for Drying and Weighing
Suspended Sediment Filter Samples
Using a Mettler H20t Balance

Person checked ANITA ANDAZOLA Date 11-13-99 By C. FENTON

✓ After air-drying filters 1 hour on wire rack. placed filters in a clean pan in rows of 4 and 5 filters and heated at 105° C for 1 and 1/2 hours for sample filters and 1/2 hour for filter tares.

✓ Removed pan from oven and immediately placed in desiccator to cool for at least 1 hour for sample filters and 1/2 hour for filter tares before weighing.

✓ Zeroed balance by first fully releasing scale gently, and let balance settle for at least 10 seconds. Used zero knob to set zero and then return at scale gently to full arrest.

✓ Zeroed balance between each weigh.

✓ Weighed a check weight before weighing filters, and used check weight every 10th weigh and recorded on data sheet and in Lab Check Weight book. Checked the pan for debris. and if present, gently removed it with fine brush or compressed air.

✓ Set balance gently to full release. opened dessicator. removed sample tray and transferred a row of 4 or 5 filters to another tray. Immediately put tray with remainder of filters back into dessicator and closed door. Zeroed balance and brought balance back to full arrest.

✓ Opened the sliding door and carefully placed the filter on the center of the weighing pan and then closed the door. Determined weight to tenth of a gram with half release. Set to full release and let balance stabilize for at least 10 seconds. Determined the remainder of the weight with knob and then recorded the weight on the data sheet.

✓ Opened the door and removed the filter. Closed the door.

✓ Checked the final weight against the initial weight. The final weight should be larger. If the initial weight is larger than the final weight tried to determine where the error occurred and recorded error code on data sheet.

Comments: _____

continued ➜

Lab Technician Weigh Checks

Lab Technician weighing proficiency shall be checked with comparison of 9 filter weighs. Lab Techs. will demonstrate proficiency weighing these standard filters before weighing sample filters. These same 9 filters are used every time and represent varying suspended sediment concentrations. The Standard weight will be the one done by the Lab Manager. Lab Tech. weights of filters shall be within 1% of Standard Weight. Lab Techs shall repeat filter weighs until able to weigh within 1 % on all 9 filters.

Check Wt. 1.00007

Filter ID #	Standard Weight	Tech. Wt.	+- 1.0% Range
X1265	0.20294 Grams	0.20310	0.20497 Grams 0.20091 Grams
X1315	0.16013 Grams	0.16021	0.16173 Grams 0.15853 Grams
X1319	0.13419 Grams	0.13433	0.13553 Grams 0.13285 Grams
X1261	0.12421 Grams	0.12431	0.12545 Grams 0.12297 Grams
XQC154	0.10702 Grams	0.10711	0.10809 Grams 0.10595 Grams
X1288	0.15909 Grams	0.15948	0.16068 Grams 0.15750 Grams
X1249	0.12414 Grams	0.12416	0.12538 Grams 0.12290 Grams
X1283	0.12161 Grams	0.12163	0.12283 Grams 0.12039 Grams
X1245	0.11145 Grams	0.11148	0.11257 Grams 0.11033 Grams

Check Weight 1.00007 Acceptable? YES

Comments Dark Scott

Salmon Forever
Sunny Brae Sediment Lab

Sample Filter Drying and Weighing Proficiency Checklist

This checklist covers the proper procedure for Drying and Weighing
Suspended Sediment Filter Samples
Using a Mettler H20t Balance

Person checked Paula Rhode Date 1-22-00 By Clark Fenton

✓ After air-drying filters 1 hour on wire rack. placed filters in a clean pan in rows of 4 and 5 filters and heated at 105° C for 1 and 1/2 hours for sample filters and 1/2 hour for filter tares.

✓ Removed pan from oven and immediately placed in desiccator to cool for at least 1 hour for sample filters and 1/2 hour for filter tares before weighing.

✓ Zeroed balance by first full releasing scale gently and let balance settle for at least 10 seconds. Used zero knob to set zero and then return scale gently to full arrest.

✓ Zeroed balance between each weigh.

✓ Weighed a check weight before weighing filters and used weight every 10th weigh and recorded on data sheet and in Lab Check Weight book. Checked the pan for debris. and if present. gently removed it with fine brush or compressed air.

✓ Set balance gently to full release. opened dessicator. removed sample tray and transferred a row of 4 or 5 filters to another tray. Immediately put tray with remainder of filters back into dessicator and closed door. Zeroed balance and brought balance back to full arrest.

✓ Opened the sliding door and carefully placed the filter on the center of the weighing pan and then closed the door. Determined weight to tenth of a gram with half release. Set to full release and let balance stabilize for at least 10 seconds. Determined the remainder of the weight with knob and then recorded the weight on the data sheet.

✓ Opened the door and removed the filter. Closed the door.

✓ Checked the final weight against the initial weight. The final weight should be larger. If the initial weight is larger than the final weight tried to determine where the error occurred and recorded error code on data sheet.

Comments: _____

continued ➜

Lab Technician Weigh Checks

Lab Technician weighing proficiency shall be checked with comparison of 9 filter weighs. Lab Techs. will demonstrate proficiency weighing these standard filters before weighing sample filters. These same 9 filters are used every time and represent varying suspended sediment concentrations. The Standard weight will be the one done by the Lab Manager. Lab Tech. weights of filters shall be within 1% of Standard Weight. Lab Techs shall repeat filter weighs until able to weigh within 1 % on all 9 filters.

Check Wt. 1.00009

Filter ID #	Standard Weight	Tech. Wt.	+- 1.0% Range
X1265	0.20294 Grams	0.20357	0.20497 Grams 0.20091 Grams
X1315	0.16013 Grams	0.16122 ~~0.1644~~ BL	0.16173 Grams 0.15853 Grams
X1319	0.13419 Grams	0.13506	0.13553 Grams 0.13285 Grams
X1261	0.12421 Grams	0.12504	0.12545 Grams 0.12297 Grams
XQC154	0.10702 Grams	0.10768	0.10809 Grams 0.10595 Grams
X1288	0.15909 Grams	0.16038	0.16068 Grams 0.15750 Grams
X1249	0.12414 Grams	0.12462	0.12538 Grams 0.12290 Grams
X1283	0.12161 Grams	0.12213	0.12283 Grams 0.12039 Grams
X1245	0.11145 Grams	0.11214	0.11257 Grams 0.11033 Grams

Check Weight 1.00004 Acceptable? ✓

Comments Check Test 1-22-00 possible Humidity effect 68% in lab

Salmon Forever
Sunny Brae Sediment Lab

Sample Filter Drying and Weighing Proficiency Checklist

This checklist covers the proper procedure for Drying and Weighing
Suspended Sediment Filter Samples
Using a Mettler H20t Balance

Person checked Michelle Anderson Date 1-03-00 By Clark Fenton

✓ After air-drying filters 1 hour on wire rack. placed filters in a clean pan in rows of 4 and 5 filters and heated at 105° C for 1 and 1/2 hours for sample filters and 1/2 hour for filter tares.

✓ Removed pan from oven and immediately placed in desiccator to cool for at least 1 hour for sample filters and 1/2 hour for filter tares before weighing.

✓ Zeroed balance by first full releasing scale gently and let balance settle for at least 10 seconds. Used zero knob to set zero and then return scale gently to full arrest.

✓ Zeroed balance between each weigh.

✓ Weighed a check weight before weighing filters and used weight every 10th weigh and recorded on data sheet and in Lab Check Weight book. Checked the pan for debris. and if present. gently removed it with fine brush or compressed air.

✓ Set balance gently to full release. opened dessicator. removed sample tray and transferred a row of 4 or 5 filters to another tray. Immediately put tray with remainder of filters back into dessicator and closed door. Zeroed balance and brought balance back to full arrest.

✓ Opened the sliding door and carefully placed the filter on the center of the weighing pan and then closed the door. Determined weight to tenth of a gram with half release. Set to full release and let balance stabilize for at least 10 seconds. Determined the remainder of the weight with knob and then recorded the weight on the data sheet.

✓ Opened the door and removed the filter. Closed the door.

✓ Checked the final weight against the initial weight. The final weight should be larger. If the initial weight is larger than the final weight tried to determine where the error occurred and recorded error code on data sheet.

Comments: _____

continued ➜

Lab Technician Weigh Checks

Lab Technician weighing proficiency shall be checked with comparison of 9 filter weighs. Lab Techs. will demonstrate proficiency weighing these standard filters before weighing sample filters. These same 9 filters are used every time and represent varying suspended sediment concentrations. The Standard weight will be the one done by the Lab Manager. Lab Tech. weights of filters shall be within 1% of Standard Weight. Lab Techs shall repeat filter weighs until able to weigh within 1 % on all 9 filters.

Check Wt. 1.00007

Filter ID #	Standard Weight	Tech. Wt.	+- 1.0% Range
X1265	0.20294 Grams	0.20360	0.20497 Grams 0.20091 Grams
X1315	0.16013 Grams	0.165990	0.16173 Grams 0.15853 Grams
X1319	0.13419 Grams	0.13505	0.13553 Grams 0.13285 Grams
X1261	0.12421 Grams	0.12500	0.12545 Grams 0.12297 Grams
XQC154	0.10702 Grams	0.0756	0.10809 Grams 0.10595 Grams
X1288	0.15909 Grams	0.16021	0.16068 Grams 0.15750 Grams
X1249	0.12414 Grams	0.12456	0.12538 Grams 0.12290 Grams
X1283	0.12161 Grams	0.12217	0.12283 Grams 0.12039 Grams
X1245	0.11145 Grams	0.11197	0.11257 Grams 0.11033 Grams

Check Weight ✓ Acceptable? 1.00006

Comments _____

0.11197

Salmon Forever
Sunny Brae Sediment Lab

Sample Filter Drying and Weighing Proficiency Checklist

This checklist covers the proper procedure for Drying and Weighing
Suspended Sediment Filter Samples
Using a Mettler H20t Balance

Person checked BEN BRAY Date 5-18-00 By C. FENTON

✓ After air-drying filters 1 hour on wire rack. placed filters in a clean pan in rows of 4 and 5 filters and heated at 105° C for 1 and 1/2 hours for sample filters and 1/2 hour for filter tares.

✓ Removed pan from oven and immediately placed in desiccator to cool for at least 1 hour for sample filters and 1/2 hour for filter tares before weighing.

✓ Zeroed balance by first full releasing scale gently and let balance settle for at least 10 seconds. Used zero knob to set zero and then return scale gently to full arrest.

✓ Zeroed balance between each weigh.

✓ Weighed a check weight before weighing filters and used weight every 10th weigh and recorded on data sheet and in Lab Check Weight book. Checked the pan for debris. and if present. gently removed it with fine brush or compressed air.

✓ Set balance gently to full release. opened dessicator. removed sample tray and transferred a row of 4 or 5 filters to another tray. Immediately put tray with remainder of filters back into dessicator and closed door. Zeroed balance and brought balance back to full arrest.

✓ Opened the sliding door and carefully placed the filter on the center of the weighing pan and then closed the door. Determined weight to tenth of a gram with half release. Set to full release and let balance stabilize for at least 10 seconds. Determined the remainder of the weight with knob and then recorded the weight on the data sheet.

✓ Opened the door and removed the filter. Closed the door.

✓ Checked the final weight against the initial weight. The final weight should be larger. If the initial weight is larger than the final weight tried to determine where the error occurred and recorded error code on data sheet.

Comments: _____

continued ➜

Lab Technician Weigh Checks

Lab Technician weighing proficiency shall be checked with comparison of 9 filter weighs. Lab Techs. will demonstrate proficiency weighing these standard filters before weighing sample filters. These same 9 filters are used every time and represent varying suspended sediment concentrations. The Standard weight will be the one done by the Lab Manager. Lab Tech. weights of filters shall be within 1% of Standard Weight. Lab Techs shall repeat filter weighs until able to weigh within 1 % on all 9 filters.

Check Wt. 1.00005

Filter ID #	Standard Weight	Tech. Wt.	+- 1.0% Range
X1265	0.20294 Grams	0.20304	0.20497 Grams 0.20091 Grams
X1315	0.16013 Grams	0.16032	0.16173 Grams 0.15853 Grams
X1319	0.13419 Grams	0.13456	0.13553 Grams 0.13285 Grams
X1261	0.12421 Grams	0.12453	0.12545 Grams 0.12297 Grams
XQC154	0.10702 Grams	0.10735	0.10809 Grams 0.10595 Grams
X1288	0.15909 Grams	0.15990	0.16068 Grams 0.15750 Grams
X1249	0.12414 Grams	0.12422	0.12538 Grams 0.12290 Grams
X1283	0.12161 Grams	0.12189	0.12283 Grams 0.12039 Grams
X1245	0.11145 Grams	0.11165	0.11257 Grams 0.11033 Grams

Check Weight 1.00008 Acceptable? yes

Comments Good Clark Fork

Salmon Forever
Sunny Brae Sediment Lab

Sample Filter Drying and Weighing Proficiency Checklist

This checklist covers the proper procedure for Drying and Weighing
Suspended Sediment Filter Samples
Using a Mettler H20t Balance

Person checked Neil Mock Date 5-31-00 By C. FENTON

✓ After air-drying filters 1 hour on wire rack. placed filters in a clean pan in rows of 4 and 5 filters and heated at 105° C for 1 and 1/2 hours for sample filters and 1/2 hour for filter tares.

✓ Removed pan from oven and immediately placed in desiccator to cool for at least 1 hour for sample filters and 1/2 hour for filter tares before weighing.

✓ Zeroed balance by first full releasing scale gently and let balance settle for at least 10 seconds. Used zero knob to set zero and then return scale gently to full arrest.

✓ Zeroed balance between each weigh.

✓ Weighed a check weight before weighing filters and used weight every 10th weigh and recorded on data sheet and in Lab Check Weight book. Checked the pan for debris. and if present. gently removed it with fine brush or compressed air.

✓ Set balance gently to full release. opened dessicator. removed sample tray and transferred a row of 4 or 5 filters to another tray. Immediately put tray with remainder of filters back into dessicator and closed door. Zeroed balance and brought balance back to full arrest.

✓ Opened the sliding door and carefully placed the filter on the center of the weighing pan and then closed the door. Determined weight to tenth of a gram with half release. Set to full release and let balance stabilize for at least 10 seconds. Determined the remainder of the weight with knob and then recorded the weight on the data sheet.

✓ Opened the door and removed the filter. Closed the door.

✓ Checked the final weight against the initial weight. The final weight should be larger. If the initial weight is larger than the final weight tried to determine where the error occurred and recorded error code on data sheet.

Comments: _____

_____

continued ➜

Lab Technician Weigh Checks

Lab Technician weighing proficiency shall be checked with comparison of 9 filter weighs. Lab Techs. will demonstrate proficiency weighing these standard filters before weighing sample filters. These same 9 filters are used every time and represent varying suspended sediment concentrations. The Standard weight will be the one done by the Lab Manager. Lab Tech. weights of filters shall be within 1% of Standard Weight. Lab Techs shall repeat filter weighs until able to weigh within 1 % on all 9 filters.

Check Wt. 1.00004

Filter ID #	Standard Weight	Tech. Wt.	+- 1.0% Range
· X1265	0.20294 Grams	0.20285	0.20497 Grams 0.20091 Grams
· X1315	0.16013 Grams	0.16016	0.16173 Grams 0.15853 Grams
· X1319	0.13419 Grams	0.13445	0.13553 Grams 0.13285 Grams
· X1261	0.12421 Grams	0.12444	0.12545 Grams 0.12297 Grams
· XQC154	0.10702 Grams	0.10732	0.10809 Grams 0.10595 Grams
· X1288	0.15909 Grams	0.15970	0.16068 Grams 0.15750 Grams
· X1249	0.12414 Grams	0.12415	0.12538 Grams 0.12290 Grams
· X1283	0.12161 Grams	0.12188	0.12283 Grams 0.12039 Grams
· X1245	0.11145 Grams	0.11179	0.11257 Grams 0.11033 Grams

Check Weight 1.00005 Acceptable? ✓

Comments Clerk Tech

HY 00

Salmon Forever
Sunny Brae Sediment Lab

Turbidity Sample Processing
Certification

This checklist outlines the proper procedures for determining the turbidity of several different types of sample containers with the HACH 2100P Turbidimeter

Person certified Paula Rhode **Date** 9-9-99 **By** Clark Fenton

Turbidity is to be run on all samples as soon as possible and recorded on sign-in sheet and data sheet
Turbidities are recorded and samples are placed back in order for ssc processing

If proceeding directly afterwards to SSC processing, weigh the total sample bottle weight before running turbidity

Use this protocol for running sample HACH cells in the HACH 2100P Turbidimeter

✓ Put 1 drop of silicone on HACH cell and wiped with black cloth, did not wipe off sample label
✓ Shook HACH cell for at least 5 seconds and then inserted HACH cell with white diamond point of cell label aligned with bar on case of HACH 2100P Turbidimeter
✓ Waited 3 seconds for air bubbles to rise before pressing read button
✓ Recorded turbidity on sign-in sheet

Use this protocol for samples in bottles other than HACH cells

✓ Shook sample bottle vigorously until no sediment is stuck to the bottom
✓ Poured shaken sample bottle water into HACH cell as soon as possible
✓ Filled HACH cell up to white label line and ran and recorded turbidity per protocol

If HACH 2100P turbidimeter reading is a flashing E7 or 1000+ then dilute the sample to get actual turbidity
Use NTU Dilution sheet to record and calculate dilution data

✓ Poured sample water in tared beaker and record as " original volume"
✓ Added appropriate dilution volume and recorded as "1st dilution volume total" and ran turbidity
✓ Continued dilutions until turbidity read and calculate actual turbidity
✓ For small dilutions poured sample water in beaker into HACH cell as soon as possible
✓ Stirred large dilutions with spoon and dipped HACH cell into beaker
✓ Ran HACH cell in HACH 2100P Turbidimeter per protocol

✓ Either poured HACH cell water back into sample bottle or proceeded to SSC processing with HACH cell and remainder of sample

Comments Clark Fenton

WY 2000

Salmon Forever
Sunny Brae Sediment Lab

Turbidity Sample Processing
Certification

This checklist outlines the proper procedures for determining the turbidity of several different types of sample containers with the HACH 2100P Turbidimeter

Person certified Michelle Anderson **Date** 10-30-99 **By** CLARK FENTON

Turbidity is to be run on all samples as soon as possible and recorded on sign-in sheet and data sheet
Turbidities are recorded and samples are placed back in order for ssc processing

If proceeding directly afterwards to SSC processing, weigh the total sample bottle weight before running turbidity

Use this protocol for running sample HACH cells in the HACH 2100P Turbidimeter

✓ Put 1 drop of silicone on HACH cell and wiped with black cloth, did not wipe off sample label
✓ Shook HACH cell for at least 5 seconds and then inserted HACH cell with white diamond point of cell label aligned with bar on case of HACH 2100P Turbidimeter
✓ Waited 2 seconds for air bubbles to rise before pressing read button
✓ Recorded turbidity on sign-in sheet

Use this protocol for samples in bottles other than HACH cells

____Shook sample bottle vigorously until no sediment is stuck to the bottom
____Poured shaken sample bottle water into HACH cell as soon as possible
____Filled HACH cell up to white label line and ran and recorded turbidity per protocol

If HACH 2100P turbidimeter reading is a flashing E3 or 1000+ then dilute the sample to get actual turbidity
Use NTU Dilution sheet to record and calculate dilution data

____Poured sample water in tared beaker and record as " original volume"
____ Added ~~appropriate~~ increments dilution volumes and recorded as "1st dilution volume total" and ran turbidity
____ Continued dilutions until turbidity read and calculate actual turbidity
____For small dilutions poured sample water from beaker into HACH cell as soon as possible
____Stirred large dilutions with spoon and dipped HACH cell into beaker
____Ran HACH cell in HACH 2100P Turbidimeter per protocol

____Either poured HACH cell water back into sample bottle or proceeded to SSC processing with HACH cell and remainder of sample

Comments JGC 10-27-99 16:00 Sample Jar

WY 2000

Salmon Forever
Sunny Brae Sediment Lab

Turbidity Sample Processing
Certification

This checklist outlines the proper procedures for determining the turbidity of several different types of sample containers with the HACH 2100P Turbidimeter

Person certified Clark Fenton **Date** 11/13/99 **By** Anita Andazola

Turbidity is to be run on all samples as soon as possible and recorded on sign-in sheet and data sheet
Turbidities are recorded and samples are placed back in order for ssc processing
If proceeding directly afterwards to SSC processing, weigh the total sample bottle weight before running turbidity

Use this protocol for running sample HACH cells in the HACH 2100P Turbidimeter

__✓__ Put 1 drop of silicone on HACH cell and wiped with black cloth, did not wipe off sample label
__✓__ Shook HACH cell for at least 5 seconds and then inserted HACH cell with white diamond point of cell label aligned with bar on case of HACH 2100P Turbidimeter
__✓__ Waited 30 seconds for air bubbles to rise before pressing read button
__✓__ Recorded turbidity on sign-in sheet

Use this protocol for samples in bottles other than HACH cells

__✓__ Shook sample bottle vigorously until no sediment is stuck to the bottom
__✓__ Poured shaken sample bottle water into HACH cell as soon as possible
__✓__ Filled HACH cell up to white label line and ran and recorded turbidity per protocol

If HACH 2100P turbidimeter reading is a flashing E3 or 1000+ then dilute the sample to get actual turbidity
Use NTU Dilution sheet to record and calculate dilution data

__✓__ Poured sample water in tared beaker and record as " original volume"
__✓__ Added appropriate dilution volume and recorded as "1st dilution volume total" and ran turbidity
__✓__ Continued dilutions until turbidity read and calculate actual turbidity
__✓__ For small dilutions poured sample water from beaker into HACH cell as soon as possible
__✓__ Stirred large dilutions with spoon and dipped HACH cell into beaker
__✓__ Ran HACH cell in HACH 2100P Turbidimeter per protocol

__✓__ Either poured HACH cell water back into sample bottle or proceeded to SSC processing with HACH cell and remainder of sample

Comments

Anita Andazola

Salmon Forever HY2000
Sunny Brae Sediment Lab

Turbidity Sample Processing
Certification

This checklist outlines the proper procedures for determining the turbidity of several different types of sample containers with the HACH 2100P Turbidimeter

Person certified ANITA ANDAZOLA **Date** 11-13-99 **By** CLARK FENTON

Turbidity is to be run on all samples as soon as possible and recorded on sign-in sheet and data sheet
Turbidities are recorded and samples are placed back in order for ssc processing
If proceeding directly afterwards to SSC processing, weigh the total sample bottle weight before running turbidity

Use this protocol for running sample HACH cells in the HACH 2100P Turbidimeter

__✓__ Put 1 drop of silicone on HACH cell and wiped with black cloth, did not wipe off sample label
__✓__ Shook HACH cell for at least 5 seconds and then inserted HACH cell with white diamond point of cell label aligned with bar on case of HACH 2100P Turbidimeter
__✓__ Waited 23 seconds for air bubbles to rise before pressing read button
__✓__ Recorded turbidity on sign-in sheet

Use this protocol for samples in bottles other than HACH cells

____ Shook sample bottle vigorously until no sediment is stuck to the bottom
____ Poured shaken sample bottle water into HACH cell as soon as possible
____ Filled HACH cell up to white label line and ran and recorded turbidity per protocol

If HACH 2100P turbidimeter reading is a flashing E3 or 1000+ then dilute the sample to get actual turbidity
Use NTU Dilution sheet to record and calculate dilution data

____ Poured sample water in tared beaker and record as " original volume"
____ Added appropriate dilution volume and recorded as "1st dilution volume total" and ran turbidity
____ Continued dilutions until turbidity read and calculate actual turbidity
____ For small dilutions poured sample water from beaker into HACH cell as soon as possible
____ Stirred large dilutions with spoon and dipped HACH cell into beaker
____ Ran HACH cell in HACH 2100P Turbidimeter per protocol

____ Either poured HACH cell water back into sample bottle or proceeded to SSC processing with HACH cell and remainder of sample

Comments

Clark Fenton

Salmon Forever
Sunny Brae Sediment Lab

HY 2000

Turbidity Sample Processing
Certification

This checklist outlines the proper procedures for determining the turbidity of several different types of sample containers with the HACH 2100P Turbidimeter

Person certified Jesse Noel **Date** 11-16-99 **By** C. Fenton

Turbidity is to be run on all samples as soon as possible and recorded on sign-in sheet and data sheet
Turbidities are recorded and samples are placed back in order for ssc processing

If proceeding directly afterwards to SSC processing, weigh the total sample bottle weight before running turbidity

Use this protocol for running sample HACH cells in the HACH 2100P Turbidimeter

✓ Put 1 drop of silicone on HACH cell and wiped with black cloth, did not wipe off sample label
✓ Shook HACH cell for at least 5 seconds and then inserted HACH cell with white diamond point of cell label aligned with bar on case of HACH 2100P Turbidimeter
✓ Waited 2 seconds for air bubbles to rise before pressing read button
✓ Recorded turbidity on sign-in sheet

Use this protocol for samples in bottles other than HACH cells

____Shook sample bottle vigorously until no sediment is stuck to the bottom
____Poured shaken sample bottle water into HACH cell as soon as possible
____Filled HACH cell up to white label line and ran and recorded turbidity per protocol

If HACH 2100P turbidimeter reading is a flashing E7 or 1000+ then dilute the sample to get actual turbidity
Use NTU Dilution sheet to record and calculate dilution data

____Poured sample water in tared beaker and record as " original volume"
____ Added appropriate dilution volume and recorded as "1st dilution volume total" and ran turbidity
____ Continued dilutions until turbidity read and calculate actual turbidity
____For small dilutions poured sample water from beaker into HACH cell as soon as possible
____Stirred large dilutions with spoon and dipped HACH cell into beaker
____Ran HACH cell in HACH 2100P Turbidimeter per protocol

____Either poured HACH cell water back into sample bottle or proceeded to SSC processing with HACH cell and remainder of sample

Comments Clark Fenton

Salmon Forever
Sunny Brae Sediment Lab

HY 2000

Turbidity Sample Processing
Certification

This checklist outlines the proper procedures for determining the turbidity of several different types of sample containers with the HACH 2100P Turbidimeter

Person certified George Nolen **Date** 1-4-2000 C.F. **By** CLARK FENTON

Turbidity is to be run on all samples as soon as possible and recorded on sign-in sheet and data sheet
Turbidities are recorded and samples are placed back in order for ssc processing

If proceeding directly afterwards to SSC processing, weigh the total sample bottle weight before running turbidity

Use this protocol for running sample HACH cells in the HACH 2100P Turbidimeter

✓ Put 1 drop of silicone on HACH cell and wiped with black cloth, did not wipe off sample label
✓ Shook HACH cell for at least 5 seconds and then inserted HACH cell with white diamond point of cell label aligned with bar on case of HACH 2100P Turbidimeter
✓ Waited 3 seconds for air bubbles to rise before pressing read button
✓ Recorded turbidity on sign-in sheet

Use this protocol for samples in bottles other than HACH cells

____Shook sample bottle vigorously until no sediment is stuck to the bottom
____Poured shaken sample bottle water into HACH cell as soon as possible
____Filled HACH cell up to white label line and ran and recorded turbidity per protocol

If HACH 2100P turbidimeter reading is a flashing E7 or 1000+ then dilute the sample to get actual turbidity
Use NTU Dilution sheet to record and calculate dilution data

____Poured sample water in tared beaker and record as " original volume"
____ Added appropriate dilution volume and recorded as "1st dilution volume total" and ran turbidity
____ Continued dilutions until turbidity read and calculate actual turbidity
____For small dilutions poured sample water in beaker into HACH cell as soon as possible
____Stirred large dilutions with spoon and dipped HACH cell into beaker
____Ran HACH cell in HACH 2100P Turbidimeter per protocol

____Either poured HACH cell water back into sample bottle or proceeded to SSC processing with HACH cell and remainder of sample

Comments Clark Fenton

HY 00

Salmon Forever
Sunny Brae Sediment Lab

Turbidity Sample Processing
Certification

This checklist outlines the proper procedures for determining the turbidity of several different types of sample containers with the HACH 2100P Turbidimeter

Person certified Joyce King **Date** 1-16-00 **By** CLARK FENTON

Turbidity is to be run on all samples as soon as possible and recorded on sign-in sheet and data sheet
Turbidities are recorded and samples are placed back in order for ssc processing

If proceeding directly afterwards to SSC processing, weigh the total sample bottle weight before running turbidity

Use this protocol for running sample HACH cells in the HACH 2100P Turbidimeter

✓ Put 1 drop of silicone on HACH cell and wiped with black cloth, did not wipe off sample label
✓ Shook HACH cell for at least 5 seconds and then inserted HACH cell with white diamond point of cell label aligned with bar on case of HACH 2100P Turbidimeter
✓ Waited 3 seconds for air bubbles to rise before pressing read button
✓ Recorded turbidity on sign-in sheet

Use this protocol for samples in bottles other than HACH cells

✓ Shook sample bottle vigorously until no sediment is stuck to the bottom
✓ Poured shaken sample bottle water into HACH cell as soon as possible
✓ Filled HACH cell up to white label line and ran and recorded turbidity per protocol

If HACH 2100P turbidimeter reading is a flashing E7 or 1000+ then dilute the sample to get actual turbidity
Use NTU Dilution sheet to record and calculate dilution data

___ Poured sample water in tared beaker and record as " original volume"
___ Added appropriate dilution volume and recorded as "1st dilution volume total" and ran turbidity
___ Continued dilutions until turbidity read and calculate actual turbidity
___ For small dilutions poured sample water in beaker into HACH cell as soon as possible
___ Stirred large dilutions with spoon and dipped HACH cell into beaker
___ Ran HACH cell in HACH 2100P Turbidimeter per protocol

___ Either poured HACH cell water back into sample bottle or proceeded to SSC processing with HACH cell and remainder of sample

Comments Boll Co 1-15-00 21:05

HY 00

Salmon Forever / Sunny Brae Sediment Lab
Turbidity Sample Processing Proficiency

This checklist outlines the proper procedures for determining the turbidity of several different types of sample containers with the HACH 2100P Turbidimeter

Sampler EMELIA BEROL **Date** 2-28-00 **Certified By** CLARK FENTON

Turbidity is to be run on all samples as soon as possible and recorded on sign-in sheet and data sheet
Turbidities are recorded and samples are placed back in order for ssc processing
If proceeding directly afterwards to SSC processing, weigh the total sample bottle weight before running turbidity

Use this protocol for running sample HACH cells in the HACH 2100P Turbidimeter

✓ Put 1 drop of silicone on HACH cell and wiped with black cloth, did not wipe off sample label
✓ Shook HACH cell for at least 5 seconds and then inserted HACH cell with white diamond point of cell label aligned with bar on case of HACH 2100P Turbidimeter
✓ Waited 2 seconds for air bubbles to rise before pressing read button
✓ Recorded turbidity on sign-in sheet

Use this protocol for samples in bottles other than HACH cells

✓ Shook sample bottle vigorously until no sediment is stuck to the bottom
✓ Poured shaken sample bottle water into HACH cell as soon as possible
✓ Filled HACH cell up to white label line and ran and recorded turbidity per protocol

If HACH 2100P turbidimeter reading is a flashing E3 or 1000+ then dilute the sample to get actual turbidity
Use NTU Dilution sheet to record and calculate dilution data. See directions in SOP

____ Poured sample water in tared beaker and record as " original volume"
____ Added appropriate dilution volume and recorded as "1st dilution volume total" and ran turbidity
____ Continued dilutions until turbidity read and calculate actual turbidity
____ For small dilutions poured sample water from beaker into HACH cell as soon as possible
____ Stirred large dilutions with spoon and dipped HACH cell into beaker
____ Ran HACH cell in HACH 2100P Turbidimeter per protocol

____ Either poured HACH cell water back into sample bottle or proceeded to SSC processing with HACH cell and remainder of sample

Comments

_____

_____

_____

Salmon Forever
Sunny Brae Sediment Lab

HY00

Turbidity Sample Processing
Certification

This checklist outlines the proper procedures for determining the turbidity of several different types of sample containers with the HACH 2100P Turbidimeter

Person certified Gabe ZINGARO **Date** 3-1-00 **By** C. FENTON

Turbidity is to be run on all samples as soon as possible and recorded on sign-in sheet and data sheet
Turbidities are recorded and samples are placed back in order for ssc processing

If proceeding directly afterwards to SSC processing, weigh the total sample bottle weight before running turbidity

Use this protocol for running sample HACH cells in the HACH 2100P Turbidimeter

✓ Put 1 drop of silicone on HACH cell and wiped with black cloth, did not wipe off sample label
✓ Shook HACH cell for at least 5 seconds and then inserted HACH cell with white diamond point of cell label aligned with bar on case of HACH 2100P Turbidimeter
✓ Waited 3 seconds for air bubbles to rise before pressing read button
✓ Recorded turbidity on sign-in sheet

Use this protocol for samples in bottles other than HACH cells

✓ Shook sample bottle vigorously until no sediment is stuck to the bottom
✓ Poured shaken sample bottle water into HACH cell as soon as possible
✓ Filled HACH cell up to white label line and ran and recorded turbidity per protocol

If HACH 2100P turbidimeter reading is a flashing E7 or 1000+ then dilute the sample to get actual turbidity
Use NTU Dilution sheet to record and calculate dilution data

____ Poured sample water in tared beaker and record as " original volume"
____ Added appropriate dilution volume and recorded as "1st dilution volume total" and ran turbidity
____ Continued dilutions until turbidity read and calculate actual turbidity
____ For small dilutions poured sample water in beaker into HACH cell as soon as possible
____ Stirred large dilutions with spoon and dipped HACH cell into beaker
____ Ran HACH cell in HACH 2100P Turbidimeter per protocol

____ Either poured HACH cell water back into sample bottle or proceeded to SSC processing with HACH cell and remainder of sample

Comments Sign-Ins ≠ 3-1-00 Clark Fenton

HY00

Salmon Forever
Sunny Brae Sediment Lab

Turbidity Sample Processing
Certification

This checklist outlines the proper procedures for determining the turbidity of several different types of sample containers with the HACH 2100P Turbidimeter

Person certified Katherine Blackman **Date** 3-18-00 **By** C. F.

Turbidity is to be run on all samples as soon as possible and recorded on sign-in sheet and data sheet
Turbidities are recorded and samples are placed back in order for ssc processing

If proceeding directly afterwards to SSC processing, weigh the total sample bottle weight before running turbidity

Use this protocol for running sample HACH cells in the HACH 2100P Turbidimeter

✓ Put 1 drop of silicone on HACH cell and wiped with black cloth, did not wipe off sample label
✓ Shook HACH cell for at least 5 seconds and then inserted HACH cell with white diamond point of cell label aligned with bar on case of HACH 2100P Turbidimeter
✓ Waited 3 seconds for air bubbles to rise before pressing read button
✓ Recorded turbidity on sign-in sheet

Use this protocol for samples in bottles other than HACH cells

____Shook sample bottle vigorously until no sediment is stuck to the bottom
____Poured shaken sample bottle water into HACH cell as soon as possible
____Filled HACH cell up to white label line and ran and recorded turbidity per protocol

If HACH 2100P turbidimeter reading is a flashing E7 or 1000+ then dilute the sample to get actual turbidity
Use NTU Dilution sheet to record and calculate dilution data

____Poured sample water in tared beaker and record as " original volume"
____ Added appropriate dilution volume and recorded as "1st dilution volume total" and ran turbidity
____ Continued dilutions until turbidity read and calculate actual turbidity
____For small dilutions poured sample water in beaker into HACH cell as soon as possible
____Stirred large dilutions with spoon and dipped HACH cell into beaker
____Ran HACH cell in HACH 2100P Turbidimeter per protocol

____Either poured HACH cell water back into sample bottle or proceeded to SSC processing with HACH cell and remainder of sample

Comments Clark Smith

HY00

Salmon Forever / Sunny Brae Sediment Lab
Turbidity Sample Processing Proficiency

This checklist outlines the proper procedures for determining the turbidity of several different types of sample containers with the HACH 2100P Turbidimeter

Sampler YVETTE GARCIA **Date** 4-3-00 **Certified By** CLARK FENTON

Turbidity is to be run on all samples as soon as possible and recorded on sign-in sheet and data sheet
Turbidities are recorded and samples are placed back in order for ssc processing
If proceeding directly afterwards to SSC processing, weigh the total sample bottle weight before running turbidity

Use this protocol for running sample HACH cells in the HACH 2100P Turbidimeter

✓ Put 1 drop of silicone on HACH cell and wiped with black cloth, did not wipe off sample label
✓ Shook HACH cell for at least 5 seconds and then inserted HACH cell with white diamond point of cell label aligned with bar on case of HACH 2100P Turbidimeter
✓ Waited 2 seconds for air bubbles to rise before pressing read button
✓ Recorded turbidity on sign-in sheet

Use this protocol for samples in bottles other than HACH cells

____Shook sample bottle vigorously until no sediment is stuck to the bottom
____Poured shaken sample bottle water into HACH cell as soon as possible
____Filled HACH cell up to white label line and ran and recorded turbidity per protocol

If HACH 2100P turbidimeter reading is a flashing E3 or 1000+ then dilute the sample to get actual turbidity
Use NTU Dilution sheet to record and calculate dilution data. See directions in SOP

____Poured sample water in tared beaker and record as " original volume"
____ Added appropriate dilution volume and recorded as "1st dilution volume total" and ran turbidity
____ Continued dilutions until turbidity read and calculate actual turbidity
____For small dilutions poured sample water from beaker into HACH cell as soon as possible
____Stirred large dilutions with spoon and dipped HACH cell into beaker
____Ran HACH cell in HACH 2100P Turbidimeter per protocol

____Either poured HACH cell water back into sample bottle or proceeded to SSC processing with HACH cell and remainder of sample

Comments Ran KRW's 3-12-00....

Clark Fenton

HY 00

Salmon Forever / Sunny Brae Sediment Lab
Turbidity Sample Processing Proficiency

This checklist outlines the proper procedures for determining the turbidity of several different types of sample containers with the HACH 2100P Turbidimeter

Sampler Josh Israel **Date** 4-5-00 **Certified By** Clark Fenton

Turbidity is to be run on all samples as soon as possible and recorded on sign-in sheet and data sheet
Turbidities are recorded and samples are placed back in order for ssc processing
If proceeding directly afterwards to SSC processing, weigh the total sample bottle weight before running turbidity

Use this protocol for running sample HACH cells in the HACH 2100P Turbidimeter

✓ Put 1 drop of silicone on HACH cell and wiped with black cloth, did not wipe off sample label
✓ Shook HACH cell for at least 5 seconds and then inserted HACH cell with white diamond point of cell
✓ label aligned with bar on case of HACH 2100P Turbidimeter
___ Waited 2 seconds for air bubbles to rise before pressing read button
✓ Recorded turbidity on sign-in sheet

Use this protocol for samples in bottles other than HACH cells

___ Shook sample bottle vigorously until no sediment is stuck to the bottom
___ Poured shaken sample bottle water into HACH cell as soon as possible
___ Filled HACH cell up to white label line and ran and recorded turbidity per protocol

If HACH 2100P turbidimeter reading is a flashing E3 or 1000+ then dilute the sample to get actual turbidity
Use NTU Dilution sheet to record and calculate dilution data. See directions in SOP

___ Poured sample water in tared beaker and record as " original volume"
___ Added appropriate dilution volume and recorded as "1st dilution volume total" and ran turbidity
___ Continued dilutions until turbidity read and calculate actual turbidity
___ For small dilutions poured sample water from beaker into HACH cell as soon as possible
___ Stirred large dilutions with spoon and dipped HACH cell into beaker
___ Ran HACH cell in HACH 2100P Turbidimeter per protocol

___ Either poured HACH cell water back into sample bottle or proceeded to SSC processing with HACH cell and remainder of sample

Comments Ran old SFELK & compare

Clark Fenton

HY 00

Salmon Forever
Sunny Brae Sediment Lab

Turbidity Sample Processing
Certification

This checklist outlines the proper procedures for determining the turbidity of several different types of sample containers with the HACH 2100P Turbidimeter

Person certified Barbara Wendweiler **Date** 4-5-00 **By** CLARK FENTON

Turbidity is to be run on all samples as soon as possible and recorded on sign-in sheet and data sheet
Turbidities are recorded and samples are placed back in order for ssc processing

If proceeding directly afterwards to SSC processing, weigh the total sample bottle weight before running turbidity

Use this protocol for running sample HACH cells in the HACH 2100P Turbidimeter

✓ Put 1 drop of silicone on HACH cell and wiped with black cloth, did not wipe off sample label
✓ Shook HACH cell for at least 5 seconds and then inserted HACH cell with white diamond point of cell label aligned with bar on case of HACH 2100P Turbidimeter
✓ Waited 3 seconds for air bubbles to rise before pressing read button
✓ Recorded turbidity on sign-in sheet

Use this protocol for samples in bottles other than HACH cells

____Shook sample bottle vigorously until no sediment is stuck to the bottom
____Poured shaken sample bottle water into HACH cell as soon as possible
____Filled HACH cell up to white label line and ran and recorded turbidity per protocol

If HACH 2100P turbidimeter reading is a flashing E7 or 1000+ then dilute the sample to get actual turbidity
Use NTU Dilution sheet to record and calculate dilution data

____Poured sample water in tared beaker and record as " original volume"
____ Added appropriate dilution volume and recorded as "1st dilution volume total" and ran turbidity
____ Continued dilutions until turbidity read and calculate actual turbidity
____For small dilutions poured sample water in beaker into HACH cell as soon as possible
____Stirred large dilutions with spoon and dipped HACH cell into beaker
____Ran HACH cell in HACH 2100P Turbidimeter per protocol

____Either poured HACH cell water back into sample bottle or proceeded to SSC processing with HACH cell and remainder of sample

Comments Clark Fenton

HY2000

Salmon Forever
Sunny Brae Sediment Lab

Suspended Sediment Sample Processing Certification

This checklist covers the proper procedure for processing suspended sediment samples.

Person certified Michelle Anderson Date 10-30-99 By C. Fenton

- ✓ Filled out headings properly on appropriate suspended sediment concentration data sheet
- ✓ Examined sample identification and matched with sign in sheet – recorded any identification discrepancies and transferred sample info to data sheet
- ✓ Weighed and recorded Total bottle weight to the nearest 0.1 of a gram on data sheet
- ✓ Wrote down starting filter # on data sheet and QC filters & subsequent filters for that sample
- ✓ Handled filters with forceps and placed filter fuzzy side down on glass support and turn on vacuum
- ✓ Wet filter with distilled water and checked for holes
- ✓ Clamped on glass funnel
- ✓ Poured sample without shaking first into funnel
- ✓ Washed sample cap into funnel
- ✓ Washed interior and outer neck of sample container into funnel
- ✓ Washed any sediment from sides of funnel down onto filter
- ✓ Unclamped funnel with vacuum on and rinsed any sediment on bottom of funnel onto filter
- ✓ Turned off vacuum and transferred filter to drying rack. Picked off organics
- ✓ Allowed at least an hour for all filters to air dry on rack before putting on tray
- ✓ Put tray into 105 ^{0} C oven to dry for at least 0.5 hour for tare filters and 1.5 hours for samples
- ✓ Weighed empty bottle and cap and recorded Tare Bottle weight on data sheet
- ✓ Recorded appropriate Quality Codes
- ✓ Used common sense and safe procedures
- ✓ Put red mark on sign in sheet next to completed sample

Comments Strongs Crk 2-6-98 #2

HY2000

Salmon Forever
Sunny Brae Sediment Lab

Suspended Sediment Sample Processing Certification

This checklist covers the proper procedure to process suspended sediment samples

Person certified ANITA ANDAZOLA Date 11-13-99 By CLARK FENTON

✓ Filled out headings properly on appropriate suspended sediment concentration data sheet

✓ Examined sample identification and matched with sign in sheet – recorded any identification discrepancies and recorded info on data sheet

✓ Weighed and recorded Total bottle weight with cap on to the nearest 0.1 of a gram on data sheet

✓ Checked volume mark on bottle and responded appropriately

✓ Wrote down QC filter # and sample filter #'s on data sheet

✓ Handled filters with forceps and placed filter fuzzy side down on glass support and turn on vacuum
✓ Wet filter with distilled water and checked for holes
✓ Clamped on glass funnel
✓ Poured sample without shaking first into funnel
✓ Washed sample cap into funnel
✓ Washed interior and outer neck of sample container into funnel
✓ Washed any sediment from sides of funnel down onto filter
✓ Unclamped funnel with vacuum on and rinsed any sediment on bottom of funnel onto filter
✓ Turned off vacuum and transferred filter to drying rack to dry

✓ Weighed empty bottle and cap and recorded Tare Bottle weight to nearest 0.1 gram

✓ Allowed filters to air dry on rack at least one hour before putting on tray

✓ Put filters into 105 ^{0} C oven to dry for at least 0.5 hour for tare filters and 1.5 hours for samples

✓ Followed SSC Protocol and recorded appropriate Quality Codes

✓ Put red mark on sign in sheet next to completed sample

✓ Used common sense and safe procedures

Comments _____

Clark Fenton

WY 2000

Salmon Forever
Sunny Brae Sediment Lab

Suspended Sediment Sample Processing Certification

This checklist covers the proper procedure to process suspended sediment samples

Person certified Clark Fenton Date 11/13/99 By Anita Andazola

✓ Filled out headings properly on appropriate suspended sediment concentration data sheet

✓ Examined sample identification and matched with sign in sheet – recorded any identification discrepancies and recorded info on data sheet

✓ Weighed and recorded Total bottle weight with cap on to the nearest 0.1 of a gram on data sheet

✓ Checked volume mark on bottle and responded appropriately

✓ Wrote down QC filter # and sample filter #'s on data sheet

✓ Handled filters with forceps and placed filter fuzzy side down on glass support and turn on vacuum

✓ Wet filter with distilled water and checked for holes

✓ Clamped on glass funnel

✓ Poured sample without shaking first into funnel

✓ Washed sample cap into funnel

✓ Washed interior and outer neck of sample container into funnel

✓ Washed any sediment from sides of funnel down onto filter

✓ Unclamped funnel with vacuum on and rinsed any sediment on bottom of funnel onto filter

✓ Turned off vacuum and transferred filter to drying rack to dry

✓ Weighed empty bottle and cap and recorded Tare Bottle weight to nearest 0.1 gram

✓ Allowed filters to air dry on rack at least one hour before putting on tray

✓ Put filters into 105 ^{0} C oven to dry for at least 0.5 hour for tare filters and 1.5 hours for samples

✓ Followed SSC Protocol and recorded appropriate Quality Codes

✓ Put red mark on sign in sheet next to completed sample

✓ Used common sense and safe procedures

Comments _____

Anita Andazola

HY00

Salmon Forever
Sunny Brae Sediment Lab

Suspended Sediment Sample Processing Certification

This checklist covers the proper procedure for processing suspended sediment samples.

Person certified Paula Rhode Date 12-12-99 By C. Fouts

- ✓ Filled out headings properly on appropriate suspended sediment concentration data sheet
- ✓ Examined sample identification and matched with sign in sheet – recorded any identification discrepancies and transferred sample info to data sheet
- ✓ Weighed and recorded Total bottle weight to the nearest 0.1 of a gram on data sheet
- ✓ Wrote down starting filter # on data sheet and QC filters & subsequent filters for that sample
- ✓ Handled filters with forceps and placed filter fuzzy side down on glass support and turn on vacuum
- ✓ Wet filter with distilled water and checked for holes
- ✓ Poured sample without shaking first into funnel
- ✓ Washed sample cap into funnel
- ✓ Washed interior and outer neck of sample container into funnel
- ✓ Washed any sediment from sides of funnel down onto filter
- ✓ Unclamped funnel with vacuum on and rinsed any sediment on bottom of funnel onto filter
- ✓ Allowed at least an hour for all filters to air dry on rack before putting on tray
- ✓ Put tray into 105 ^{0} C oven to dry for at least 0.5 hour for tare filters and 1.5 hours for samples
- ✓ Weighed empty bottle and cap and recorded Tare Bottle weight on data sheet
- ✓ Recorded appropriate Quality Codes
- ✓ Used common sense and safe procedures
- ✓ Put red mark on sign in sheet next to completed sample

Comments Data Sheet 12-2-99

HY00

Salmon Forever
Sunny Brae Sediment Lab

Suspended Sediment Sample Processing Certification

This checklist covers the proper procedure for processing suspended sediment samples.

Person certified Jesse Noel Date 2-18-00 By C. Fenton

___ Filled out headings properly on appropriate suspended sediment concentration data sheet

___ Examined sample identification and matched with sign in sheet – recorded any identification discrepancies and transferred sample info to data sheet

___ Weighed and recorded Total bottle weight to the nearest 0.1 of a gram on data sheet

___ Wrote down starting filter # on data sheet and QC filters & subsequent filters for that sample

___ Handled filters with forceps and placed filter fuzzy side down on glass support and turn on vacuum

___ Wet filter with distilled water and checked for holes

___ Clamped on glass funnel

___ Poured sample without shaking first into funnel

___ Washed sample cap into funnel

___ Washed interior and outer neck of sample container into funnel

___ Washed any sediment from sides of funnel down onto filter

___ Unclamped funnel with vacuum on and rinsed any sediment on bottom of funnel onto filter

___ Turned off vacuum and transferred filter to drying rack.

___ Allowed at least an hour for all filters to air dry on rack before putting on tray

___ Put tray into 105 ^{0} C oven to dry for at least 0.5 hour for tare filters and 1.5 hours for samples

___ Weighed empty bottle and cap and recorded Tare Bottle weight on data sheet

___ Recorded appropriate Quality Codes

___ Used common sense and safe procedures

___ Put red mark on sign in sheet next to completed sample

Comments _____

HY00

Salmon Forever
Sunny Brae Sediment Lab

Suspended Sediment Sample Processing Certification

This checklist covers the proper procedure for processing suspended sediment samples.

Person certified GABE ZINGARO Date 3-4-00 By CLARK FENTON

✓ Filled out headings properly on appropriate suspended sediment concentration data sheet

✓ Examined sample identification and matched with sign in sheet – recorded any identification discrepancies and transferred sample info to data sheet

✓ Weighed and recorded Total bottle weight to the nearest 0.1 of a gram on data sheet

✓ Wrote down starting filter # on data sheet and QC filters & subsequent filters for that sample (QC FILTERS THEN ...)

✓ Handled filters with forceps and placed filter fuzzy side down on glass support and turn on vacuum

✓ Wet filter with distilled water and checked for holes

✓ Clamped on glass funnel

✓ Poured sample without shaking first into funnel

✓ Washed sample cap into funnel

✓ Washed interior and outer neck of sample container into funnel

✓ Washed any sediment from sides of funnel down onto filter

✓ Unclamped funnel with vacuum on and rinsed any sediment on bottom of funnel onto filter

✓ Turned off vacuum and transferred filter to drying rack.

✓ Allowed at least an hour for all filters to air dry on rack before putting on tray

✓ Put tray into 105 ^{0} C oven to dry for at least 0.5 hour for tare filters and 1.5 hours for samples

✓ Weighed empty bottle and cap and recorded Tare Bottle weight on data sheet

✓ Recorded appropriate Quality Codes

✓ Used common sense and safe procedures

✓ Put red mark on sign in sheet next to completed sample

Comments SFE SAMPLES 1-25-00

HY 00

Salmon Forever
Sunny Brae Sediment Lab

Suspended Sediment Sample Processing Certification

This checklist covers the proper procedure for processing suspended sediment samples.

Person certified Harriet Hill Date 4-23-00 By CLARK FENTON

- ✓ Filled out headings properly on appropriate suspended sediment concentration data sheet
- ✓ Examined sample identification and matched with sign in sheet – recorded any identification discrepancies and transferred sample info to data sheet
- ✓ Weighed and recorded Total bottle weight to the nearest 0.1 of a gram on data sheet
- ✓ Wrote down starting filter # on data sheet and QC filters & subsequent filters for that sample
- ✓ Handled filters with forceps and placed filter fuzzy side down on glass support and turn on vacuum
- ✓ Wet filter with distilled water and checked for holes
- ✓ Poured sample without shaking first into funnel
- ✓ Washed sample cap into funnel
- ✓ Washed interior and outer neck of sample container into funnel
- ✓ Washed any sediment from sides of funnel down onto filter
- ✓ Unclamped funnel with vacuum on and rinsed any sediment on bottom of funnel onto filter
- ✓ Allowed at least an hour for all filters to air dry on rack before putting on tray
- ✓ Put tray into 105 ^{0} C oven to dry for at least 0.5 hour for tare filters and 1.5 hours for samples
- ✓ Weighed empty bottle and cap and recorded Tare Bottle weight on data sheet
- ✓ Recorded appropriate Quality Codes
- ✓ Used common sense and safe procedures
- ✓ Put red mark on sign in sheet next to completed sample

Comments Clay Check samples. Ran w/ C.F.

Clark Fenton

HY00

Salmon Forever
Sunny Brae Sediment Lab

Suspended Sediment Sample Processing Certification

This checklist covers the proper procedure for processing suspended sediment samples.

Person certified Jill Gayheart Date 5-31-00 By C. FENTON

X Filled out headings properly on appropriate suspended sediment concentration data sheet

X Examined sample identification and matched with sign in sheet – recorded any identification discrepancies and transferred sample info to data sheet

X Weighed and recorded Total bottle weight to the nearest 0.1 of a gram on data sheet

X Wrote down starting filter # on data sheet and QC filters & subsequent filters for that sample

X Handled filters with forceps and placed filter fuzzy side down on glass support and turn on vacuum

X Wet filter with distilled water and checked for holes

X Poured sample without shaking first into funnel

X Washed sample cap into funnel

X Washed interior and outer neck of sample container into funnel

X Washed any sediment from sides of funnel down onto filter

X Unclamped funnel with vacuum on and rinsed any sediment on bottom of funnel onto filter

___ Allowed at least an hour for all filters to air dry on rack before putting on tray

___ Put tray into 105 ^{0} C oven to dry for at least 0.5 hour for tare filters and 1.5 hours for samples

___ Weighed empty bottle and cap and recorded Tare Bottle weight on data sheet

___ Recorded appropriate Quality Codes

___ Used common sense and safe procedures

___ Put red mark on sign in sheet next to completed sample

Comments _____

HY 00

Salmon Forever
Sunny Brae Sediment Lab

Suspended Sediment Sample Processing Certification

This checklist covers the proper procedure for processing suspended sediment samples.

Person certified LISA GAGNON Date 6-8-00 By C. FENTON

✓ Filled out headings properly on appropriate suspended sediment concentration data sheet

✓ Examined sample identification and matched with sign in sheet – recorded any identification discrepancies and transferred sample info to data sheet

✓ Weighed and recorded Total bottle weight to the nearest 0.1 of a gram on data sheet

✓ Wrote down starting filter # on data sheet and QC filters & subsequent filters for that sample

✓ Handled filters with forceps and placed filter fuzzy side down on glass support and turn on vacuum

✓ Wet filter with distilled water and checked for holes

✓ Poured sample without shaking first into funnel

✓ Washed sample cap into funnel

✓ Washed interior and outer neck of sample container into funnel

✓ Washed any sediment from sides of funnel down onto filter

✓ Unclamped funnel with vacuum on and rinsed any sediment on bottom of funnel onto filter

✓ Allowed at least an hour for all filters to air dry on rack before putting on tray

✓ Put tray into 105 ^{0} C oven to dry for at least 0.5 hour for tare filters and 1.5 hours for samples

✓ Weighed empty bottle and cap and recorded Tare Bottle weight on data sheet

✓ Recorded appropriate Quality Codes

✓ Used common sense and safe procedures

✓ Put red mark on sign in sheet next to completed sample

Comments DUMP 20 FTR Clark Fenton

HY 00

Salmon Forever / Sunny Brae Sediment Lab
Discharge Measurement Proficiency

This checklist outlines the proper procedures for collecting data with a Price AA or a Pygmy current meter for determining the discharge of creeks and streams and recording pertinent information.

Sampler Clark Fenton **Date** 2-14-00 **Certified By** Jesse Kell

Setting Up:

X Be aware of never wading deeper than your waist. Always have a partner nearby. Look out for debris coming downstream. ROPE UP IN FAST WATER

X Current Meter, Headphones, Top Set Rod, Data Sheet, Stopwatch, Measuring Tape, Spikes

X Tried to measure discharge on the falling limb of the hydrograph or with flow at a steady stage
Selected a stream reach optimally with:

X 1. A straight reach, with a uniform depth and as rectangular of a channel morphology as possible.
X 2. A streambed free of large rocks, weeds, and obstructions which would create turbulence.
X 3. A site with an existing cross section and stable stream bottom.

X Set up a tape measure extending behind the left bank to beyond the right bank.
Used a cloth or fiberglass tape and use spikes to secure either end so the tape is tight across the stream.
Set up the tape perpendicular to the direction of flow.

X Determined and recorded on the data sheet the points on the tape measure of the Right-edge-of Water (REW) and LEW looking downstream.

X Determined and recorded on the data sheet the dead right-edge-of Water (DREW) and DLEW. This can also be called zero velocity right and zero velocity left.

X Determined spacing of the subsections or cells. Start measurements half the width of a cell from zero velocity edge of water.

X Used appropriate meter and method for conditions

X Checked spin duration. 1.25 MINUTES

Taking Measurements:

X Stood holding top set rod in a position that least affected the velocity of water passing the meter. Held the wading rod at the tag line (tape measure line) stood 1 to 3 inches downstream of the tag line and 12 or more inches from the wading rod.

X Read depth of water on hex rod correctly.

X Counted revolutions made by meter in 40 to 70 second increments, usually just over 40 seconds.

X Started stopwatch simultaneously with the end of the first click, starting counting with zero.

__X__ Stopped the stopwatch at the end of a click after at least 40 seconds.

_____ If the stage is rising or falling rapidly, switched to 20-second measurements at 3-foot spacing.

Bridge Use: A-55 Sounding Reel and Crane:

__X__ The Columbus weight was lowered until the horizontal fins are level with the water surface.

__X__ The A-55 depth-measuring reel was zeroed out and the weight is lowered until it touches bottom.

__X__ The depth of water was read off the reel and a chart is consulted for the proper depth of the current meter. The weight is raised to the proper depth and velocity measurements begin.

Recording Data:

__X__ The name of stream and exact location, any rebar point and/or photopoint.

_____ Who did the measurements?

_____ The date, type of meter suspension (top set rod or crane), and meter id #.

__X__ The distance points on the tape measure of the REW and LEW.

__X__ The distance points of DREW (dead right edge of water) and DLEW or zero velocity.

__X__ The distance point on the tape measure of each measurement.

__X__ Starting and finishing time of the measurement.

__X__ Recorded stage heights from a staff plate and corresponding times when staff plates are read (at least at beginning and end of measurement). Also record any electronic stage levels at the same time.

__X__ Recorded measurement method (0.6 depth from bottom position or others).

__X__ Recorded velocity measurement time to the nearest tenth of a second and number of revolutions.

__NA__ If flow was not at right angles to the measuring tapeline, measured the angle of flow and recorded it.

_____ The spin duration check results.

__X__ Whether it was a rising or falling stage.

__X__ Cleaned meter after each day's use.

Comments DISCHARGE at 11:57 2-14-00 Jesse Noell

HY 00

Salmon Forever / Sunny Brae Sediment Lab
Discharge Measurement Proficiency

This checklist outlines the proper procedures for collecting data with a Price AA or a Pygmy current meter for determining the discharge of creeks and streams and recording pertinent information.

Sampler Jesse Noel **Date** 2-14-00 **Certified By** Clark Fenton

Setting Up:

✓ Be aware of never wading deeper than your waist. Always have a partner nearby. Look out for debris coming downstream.

✓ Current Meter, Headphones, Top Set Rod, Data Sheet, Stopwatch, Measuring Tape, Spikes

✓ Tried to measure discharge on the falling limb of the hydrograph or with flow at a steady stage. Selected a stream reach optimally with:

1. A straight reach, with a uniform depth and as rectangular of a channel morphology as possible.
2. A streambed free of large rocks, weeds, and obstructions which would create turbulence.
3. A site with an existing cross section and stable stream bottom.

✓ Set up a tape measure extending behind the left bank to beyond the right bank. Used a cloth or fiberglass tape and use spikes to secure either end so the tape is tight across the stream. Set up the tape perpendicular to the direction of flow.

✓ Determined and recorded on the data sheet the points on the tape measure of the Right-edge-of Water (REW) and LEW looking downstream.

✓ Determined and recorded on the data sheet the dead right-edge-of Water (DREW) and DLEW. This can also be called zero velocity right and zero velocity left.

✓ Determined spacing of the subsections or cells. Start measurements half the width of a cell from zero velocity edge of water.

✓ Used appropriate meter and method for conditions

✓ Checked spin duration.

Taking Measurements:

✓ Stood holding top set rod in a position that least affected the velocity of water passing the meter. Held the wading rod at the tag line (tape measure line) stood 1 to 3 inches downstream of the tag line and 12 or more inches from the wading rod.

✓ Read depth of water on hex rod correctly.

✓ Counted revolutions made by meter in 40 to 70 second increments, usually just over 40 seconds.

✓ Started stopwatch simultaneously with the end of the first click, starting counting with zero.

___ Stopped the stopwatch at the end of a click after at least 40 seconds.

___ If the stage is rising or falling rapidly, switched to 20-second measurements at 3-foot spacing.

Bridge Use: A-55 Sounding Reel and Crane:

___ The Columbus weight was lowered until the horizontal fins are level with the water surface.

___ The A-55 depth-measuring reel was zeroed out and the weight is lowered until it touches bottom.

___ The depth of water was read off the reel and a chart is consulted for the proper depth of the current meter. The weight is raised to the proper depth and velocity measurements begin.

Recording Data:

___ The name of stream and exact location, any rebar point and/or photopoint.

___ Who did the measurements?

___ The date, type of meter suspension (top set rod or crane), and meter id #.

___ The distance points on the tape measure of the REW and LEW.

___ The distance points of DREW (dead right edge of water) and DLEW or zero velocity.

___ The distance point on the tape measure of each measurement.

___ Starting and finishing time of the measurement.

___ Recorded stage heights from a staff plate and corresponding times when staff plates are read (at least at beginning and end of measurement). Also record any electronic stage levels at the same time.

___ Recorded measurement method (0.6 depth from bottom position or others).

___ Recorded velocity measurement time to the nearest tenth of a second and number of revolutions.

___ If flow was not at right angles to the measuring tapeline, measured the angle of flow and recorded it.

___ The spin duration check results.

___ Whether it was a rising or falling stage.

___ Cleaned meter after each day's use.

Comments Discharge @ 14:20 FAR

___ Mark Saltes

HY 00

Salmon Forever / Sunny Brae Sediment Lab
Stream Sampling Certification

This checklist covers the proper way to collect samples of water for turbidity and suspended sediment concentration and pertinent information.

Sampler Joyce King Date 1-15-00

By Jene Noell

1. Equipment

___ Sample containers properly cleaned.
___ Stopwatch
___ Pencil
___ Rite in the Rain note paper (field data sheet).
___ Tape measure (used plastic or fiberglass to resist rust).

2. Safety

___ Established a safe path to the site: streambanks are soft and slippery.
___ Never waded into water deeper than knees.
___ Took a friend to monitor at night.
___ Trusted judgement above all else - no sample is worth personal injury.

3. Sampling location

Streambank:
___ If possible, sampled the main current near the center of the stream. The outside curve of the river is often a good place to sample since the main current tends to hug this bank.
___ In shallow stretches, carefully waded into the center current to collect the sample.

Culvert:
___ Sampled culvert outflow if access is safe, (the flow here is well mixed)

Bridge:
___ Sampled the main flow section by lowering a bottle on a weighted string or tape measure into flow several inches.

4. Sampling Procedure

A. Grab Sampling with Plastic Bottles / HACH Cells

___ Removed the cap from the bottle just before sampling. Avoided touching the insid of the bottle or the cap.

___ Wading: Tried to disturb as little bottom sediment as possible. Careful not to colle water that has sediment from bottom disturbance. Stood facing upstream. Collected th water sample on upstream side, in front.

___ Held the bottle near its base and plunged it (opening downward) below the water surface. If using an extension pole, removed the cap, affixed the bottle and plunged it into the upstream waters.

___ Collected water sample 2 to 6 inches beneath the surface or mid-way between the surface and the bottom if the river reach is shallow.

___ Turned the submerged bottle into the current and upward and away.

___ Left a small air space in sample bottle. Recapped the bottle carefully, rememberec not to touch or contaminate the inside.

___ Labeled the bottle with the site location, sampling date and time.

Recorded on rite-in-rain note paper or field data sheet:

___ Recorded sampling date, time and location .

___ Recorded fast and slow strand floating object time and distance.

___ Recorded stage.

___ Recorded whether flow is on the rising or falling limb of the hydrograph.

B. DH-48 / Depth Integrated Sampling / Wading Rod

___ Sampled at 5 to 15 representative spacings across the stream.

___ Graphed the cross-section water depth and width of the stream.

Recorded on rite-in-rain note paper or field data sheet:

___ Recorded sampling date, time and location.

___ Recorded fast and slow strand floating object time and distance.

___ Recorded dead water strand edges.

___ Recorded stage.

___ Recorded whether flow is on the rising or falling limb of the hydrograph.

C. Velocity Measurements w / floating object

___ Straight, uniform stream reach.

___ Reach long enough to give velocities in the 6-12 second range at high flow.

___ Graphed the cross-section water depth and width of the stream.

___ Established benchmark reference for cross-section, if new site.

___ Elapsed time for object to traverse velocity section taken to nearest 0.1 second

___ Distance of velocity section measured to nearest inch.

___ Object time and distance measured in fast strand flow and slow strand flow.

___ Strand widths recorded.

D. Stage Measurements / Staff Plate

___ Read stage to nearest 0.1 of a foot or nearest inch.
___ Staff plate or bridge rail or culvert invert correlated to crossection.
___ Staff plate isn't under water at high flow and is protected from debris.

5. Recording Data

___ Location
___ Date
___ Time
___ Note date, time, and approximate elapsed time since start of rain.
___ Note staff/stage gauge water level (or distance down from the bridge guardrail).
___ Time and distance of floating object in fast and or slow strand
___ Estimated width of velocity strands, dead water, total wetted creek width.
___ RR or RL if sampled at one side.

6. Proper Labeling

Bottle:

___ Location, Date, and Time.
___ Velocity and Distance and Stage if possible on bottle.

7. Storing the Sample

___ Kept in a dark and cool place and / or refrigerated.
___ Returned to the Sunny Brae Sediment Lab for turbidity analysis within 48 hours if possible.

Comments: _____

_____

_____

HY00 12-10-99 HH

Salmon Forever / Sunny Brae Sediment Lab
Stream Sampling Certification

This checklist covers the proper way to collect samples of water for turbidity and suspended sediment concentration analysis and pertinent information.

Sampler LISA COOK Date 12-10-99 Certified By CLARK FELTON

1. Equipment

- ✓ Sample containers that are properly cleaned.
- ✓ Stopwatch
- ✓ Pencil
- ✓ Rite in the Rain note paper or field data sheet.
- ✓ Tape measure (used plastic or fiberglass to resist rust).

2. Safety

- ✓ Established a safe path to the site: streambanks are soft and slippery.
- ___ Never waded into water deeper than knees.
- ___ Took a friend to monitor at night.
- ___ Trusted judgement above all else - no sample is worth personal injury.

3. Sampling location

Streambank:

___ If possible, sampled the main current near the center of the stream. The outside curve of the river is often a good place to sample since the main current tends to hug this bank.

Culvert:

___ Sampled culvert outflow if access is safe, (the flow here is well mixed)

Bridge:

✓ Sampled the main flow section by lowering a bottle on a weighted string or tape measure or plastic pipe into flow several inches.

4. Sampling Procedure

A. Grab Sampling with Plastic Bottles / HACH Cells

- ✓ Removed the cap from the bottle just before sampling. Avoided touching the inside of the bottle or the cap.
- ___ Wading: Tried to disturb as little bottom sediment as possible. Careful not to collect water that has sediment from bottom disturbance. Stood facing upstream. Collected the water sample on upstream side, in front.
- ✓ Held the bottle near its base and plunged it (opening downward) below the water surface. If using an extension pole, removed the cap, affixed the bottle and plunged it into the upstream waters.
- ✓ Collected water sample 2 to 6 inches beneath the surface or mid-way between the surface and the bottom if the river reach is shallow.
- ✓ Turned the submerged bottle's mouth into the current and upward and away.
- ✓ Left a small air space in sample bottle. Using plastic bottles, **fill bottle only 2/3**. Recapped the bottle carefully, remembered not to touch or contaminate the inside.
- ✓ **Marked the volume level with a mark on a piece of tape on the side of the bottle.**
- ✓ Labeled the bottle with the site location, sampling date and time.

Recorded on rite-in-rain note paper or field data sheet:

- ✓ Recorded sampling date, time and location.
- ✓ Recorded fast and slow strand floating object time and distance.
- ✓ Recorded stage from staff plate or other benchmark.
- ✓ Recorded whether flow is on the rising or falling limb of the hydrograph.

B. DH-48 / Depth Integrated Sampling / Wading Rod
___ Sampled at 5 to 15 representative spacings across the stream.
___ Sampled at same steady rate down and up water column.
___ Graphed the cross-section water depth and width of the stream.
Recorded on rite-in-rain note paper or field data sheet:
___ Recorded sampling date, time and location.
___ Recorded Bottles # 1 of 3, 2 of 3 etc...
___ Recorded fast and slow strand floating object time and distance.
___ Recorded dead water strand edges.
___ Recorded stage and which side sampling started - River Left (RL) or River Right (RR).
___ Recorded whether flow is on the rising or falling limb of the hydrograph.

C. Velocity Measurements w / floating object
✓ Straight, uniform stream reach.
✓ Reach long enough to give velocities in the 6-12 second range at high flow.
___ Graphed the cross-section water depth and width of the stream.
___ Established benchmark reference for cross-section, if new site.
___ Elapsed time for object to traverse velocity section taken to nearest 0.1 second
✓ Distance of velocity section measured to nearest inch.
___ Object time and distance measured in fast strand flow and slow strand flow.
___ Strand widths recorded.

sec
V = 7.5" per 26' = 3.47 F/S
7.0' per 26' = 3.71 F/S

D. Stage Measurements / Staff Plate
✓ Read stage to nearest 0.1 of a foot or nearest inch.
✓ Staff plate or bridge rail or culvert invert correlated to crossection.
✓ Staff plate isn't under water at high flow and is protected from debris.

5. Recording Data
✓ Location
✓ Date
✓ Time
✓ Note date, time, and approximate elapsed time since start of rain.
✓ Note staff/stage gauge water level (or distance down from the bridge guardrail).
✓ Time and distance of floating object in fast and or slow strand
✓ Estimated width of velocity strands, dead water, total wetted creek width.
___ RR or RL if sampled at one side.

6. Proper Bottle Labeling
Bottle:
✓ Location, Date, and Time.
___ Velocity and Distance and Stage and sampled by if possible on bottle.
7. Storing the Sample
✓ Kept in a dark and cool place and / or refrigerated.
✓ Returned to the Sunny Brae Sediment Lab for turbidity analysis within 48 hours if possible. I GOT 14'5"

Comments: 13' 4" STAGE MEASURED AT UPSTREAM RAIL
N. NOTCH ON RAIL/TOP CORRELATE WITH
SSC/TURBIDITY/JEL - HH DISCH, 99 12 10
TISA - ORANGE PEEL 7.5 sec & 7.0 sec FOR 26.0
NEXT TO SOUTH ABUTMENT

Bridge # 4C-49 Howard Hts RD
PM 0.01

HY 00 12-10-99 HH

Salmon Forever / Sunny Brae Sediment Lab
Stream Sampling Certification

This checklist covers the proper way to collect samples of water for turbidity and suspended sediment concentration analysis and pertinent information.

Sampler Bob Loudon Date 12-10-99 Certified By Clark Fenton

1. Equipment

✓ Sample containers that are properly cleaned.
✓ Stopwatch
✓ Pencil
✓ Rite in the Rain note paper or field data sheet.
✓ Tape measure (used plastic or fiberglass to resist rust).

2. Safety

___ Established a safe path to the site: streambanks are soft and slippery.
___ Never waded into water deeper than knees.
___ Took a friend to monitor at night.
___ Trusted judgement above all else - no sample is worth personal injury.

3. Sampling location
Streambank:
___ If possible, sampled the main current near the center of the stream. The outside curve of the river is often a good place to sample since the main current tends to hug this bank.

Culvert:
___ Sampled culvert outflow if access is safe, (the flow here is well mixed)

Bridge:
✓ Sampled the main flow section by lowering a bottle on a weighted string or tape measure or plastic pipe into flow several inches.

4. Sampling Procedure

A. Grab Sampling with Plastic Bottles / HACH Cells
✓ Removed the cap from the bottle just before sampling. Avoided touching the inside of the bottle or the cap.
___ Wading: Tried to disturb as little bottom sediment as possible. Careful not to collect water that has sediment from bottom disturbance. Stood facing upstream. Collected the water sample on upstream side, in front.
___ Held the bottle near its base and plunged it (opening downward) below the water surface. If using an extension pole, removed the cap, affixed the bottle and plunged it into the upstream waters.
___ Collected water sample 2 to 6 inches beneath the surface or mid-way between the surface and the bottom if the river reach is shallow.
✓ Turned the submerged bottle's mouth into the current and upward and away.
___ Left a small air space in sample bottle. Using plastic bottles, **fill bottle only 2/3**. Recapped the bottle carefully, remembered not to touch or contaminate the inside.
✓ **Marked the volume level with a mark on a piece of tape on the side of the bottle.**
✓ Labeled the bottle with the site location, sampling date and time.

Recorded on rite-in-rain note paper or field data sheet:
✓ Recorded sampling date, time and location.
___ Recorded fast and slow strand floating object time and distance.
___ Recorded stage from staff plate or other benchmark.
___ Recorded whether flow is on the rising or falling limb of the hydrograph.

B. DH-48 / Depth Integrated Sampling / Wading Rod
___ Sampled at 5 to 15 representative spacings across the stream.
___ Sampled at same steady rate down and up water column.
___ Graphed the cross-section water depth and width of the stream.
Recorded on rite-in-rain note paper or field data sheet:
___ Recorded sampling date, time and location.
___ Recorded Bottles # 1 of 3, 2 of 3 etc..
___ Recorded fast and slow strand floating object time and distance.
___ Recorded dead water strand edges.
___ Recorded stage and which side sampling started - River Left (RL) or River Right (RR).
___ Recorded whether flow is on the rising or falling limb of the hydrograph.

C. Velocity Measurements w / floating object
V = 26.0' per 7.1 sec = 3.66 F/S
✓ Straight, uniform stream reach.
✓ Reach long enough to give velocities in the 6-12 second range at high flow.
___ Graphed the cross-section water depth and width of the stream.
✓ Established benchmark reference for cross-section, if new site.
✓ Elapsed time for object to traverse velocity section taken to nearest 0.1 second
✓ Distance of velocity section measured to nearest inch.
___ Object time and distance measured in fast strand flow and slow strand flow.
___ Strand widths recorded.

D. Stage Measurements / Staff Plate
✓ Read stage to nearest 0.1 of a foot or nearest inch.
✓ Staff plate or bridge rail or culvert invert correlated to crossection.
✓ Staff plate isn't under water at high flow and is protected from debris.

5. Recording Data
✓ Location
✓ Date
✓ Time
✓ Note date, time, and approximate elapsed time since start of rain.
✓ Note staff/stage gauge water level (or distance down from the bridge guardrail).
___ Time and distance of floating object in fast and or slow strand
___ Estimated width of velocity strands, dead water, total wetted creek width.
___ RR or RL if sampled at one side.

6. Proper Bottle Labeling
Bottle:
✓ Location, Date, and Time.
___ Velocity and Distance and Stage and sampled by if possible on bottle.

7. Storing the Sample
✓ Kept in a dark and cool place and / or refrigerated.
✓ Returned to the Sunny Brae Sediment Lab for turbidity analysis within 48 hours if possible.

Comments: 173.0" = 14'5" 8' 8" comes over road → STAGE AT WHICH HH ROAD IS COVERED
I got 14' 5" STAGE
Sample downstream side - HI STRAND
~~West~~ Notch South Notch - Top rail - upstream side
~~S~~ JUST NEXT TO SOUTH ABUTMENT

Bridge # 4C-49 HOWARD HTS RD PM 0.01

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Salmon Forever / Sunny Brae Sediment Lab
Stream Sampling Certification

This checklist covers the proper way to collect samples of water for turbidity and suspended sediment concentration and pertinent information.

Sampler Ralph Kraus Date 12-3-99

By C. FENTON 17:20

3J305 PM 3.38 – ELK RIVER RD 4C-57

1. Equipment

✓ Sample containers properly cleaned.
✓ Stopwatch
✓ Pencil
✓ Rite in the Rain note paper (field data sheet).
✓ Tape measure (used plastic or fiberglass to resist rust).

2. Safety

NA

___ Established a safe path to the site: streambanks are soft and slippery.
___ Never waded into water deeper than knees.
___ Took a friend to monitor at night.
___ Trusted judgement above all else - no sample is worth personal injury.

3. Sampling location

Streambank:
___ If possible, sampled the main current near the center of the stream. The outside curve of the river is often a good place to sample since the main current tends to hug this bank.
___ In shallow stretches, carefully waded into the center current to collect the sample.

Culvert:
___ Sampled culvert outflow if access is safe, (the flow here is well mixed)

Bridge:
X Sampled the main flow section by lowering a bottle on a weighted string or tape measure into flow several inches.

Notch – upstream SIDE MID BRIDGE – TOP OF CONCRETE RAIL

white disc on end – water depth

4. Sampling Procedure

string w/ bottle attached

A. Grab Sampling with Plastic Bottles / HACH Cells

___ Removed the cap from the bottle ~~just before~~ sampling. Avoided touching the inside of the bottle or the cap.

___ Wading: Tried to disturb as little bottom sediment as possible. Careful not to collect water that has sediment from bottom disturbance. Stood facing upstream. Collected the water sample on upstream side, in front.

___ Held the bottle near its base and plunged it (opening downward) below the water surface. If using an extension pole, removed the cap, affixed the bottle and plunged it into the upstream waters.

___ Collected water sample 2 to 6 inches beneath the surface or mid-way between the surface and the bottom if the river reach is shallow.

___ Turned the submerged bottle into the current and upward and away.

___ Left a small air space in sample bottle. Recapped the bottle carefully, remembered not to touch or contaminate the inside.

___ Labeled the bottle with the site location, sampling date and time.

Recorded on rite-in-rain note paper or field data sheet:

___ Recorded sampling date, time and location .

___ Recorded fast and slow strand floating object time and distance.

___ Recorded stage.

___ Recorded whether flow is on the rising or falling limb of the hydrograph.

B. DH-48 / Depth Integrated Sampling / Wading Rod

___ Sampled at 5 to 15 representative spacings across the stream.

___ Graphed the cross-section water depth and width of the stream.

Recorded on rite-in-rain note paper or field data sheet:

___ Recorded sampling date, time and location.

___ Recorded fast and slow strand floating object time and distance.

___ Recorded dead water strand edges.

___ Recorded stage.

___ Recorded whether flow is on the rising or falling limb of the hydrograph.

C. Velocity Measurements w / floating object

___ Straight, uniform stream reach.

___ Reach long enough to give velocities in the 6-12 second range at high flow.

___ Graphed the cross-section water depth and width of the stream.

___ Established benchmark reference for cross-section, if new site.

___ Elapsed time for object to traverse velocity section taken to nearest 0.1 second

___ Distance of velocity section measured to nearest inch.

___ Object time and distance measured in fast strand flow and slow strand flow.

___ Strand widths recorded.

off rail

D. Stage Measurements / Staff Plate
__✓ Read stage to nearest 0.1 of a foot or nearest inch.
___ Staff plate or bridge rail or culvert invert correlated to crossection.
___ Staff plate isn't under water at high flow and is protected from debris.

5. Recording Data
___ Location
___ Date
___ Time
___ Note date, time, and approximate elapsed time since start of rain.
___ Note staff/stage gauge water level (or distance down from the bridge guardrail).
___ Time and distance of floating object in fast and or slow strand
___ Estimated width of velocity strands, dead water, total wetted creek width.
___ RR or RL if sampled at one side.

6. Proper Labeling
Bottle:
___ Location, Date, and Time.
___ Velocity and Distance and Stage if possible on bottle.

7. Storing the Sample
___ Kept in a dark and cool place and / or refrigerated.
___ Returned to the Sunny Brae Sediment Lab for turbidity analysis within 48 hours if possible.

Comments: _____

_____

_____

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Salmon Forever / Sunny Brae Sediment Lab
Stream Sampling Certification

This checklist covers the proper way to collect samples of water for turbidity and suspended sediment concentration and pertinent information.

Sampler CLARK FENTON Date 11/30/99

By Jesse Nowell

1. Equipment

___ Sample containers properly cleaned.
___ Stopwatch
___ Pencil
___ Rite in the Rain note paper (field data sheet).
___ Tape measure (used plastic or fiberglass to resist rust).

2. Safety

___ Established a safe path to the site: streambanks are soft and slippery.
___ Never waded into water deeper than knees.
___ Took a friend to monitor at night.
___ Trusted judgement above all else - no sample is worth personal injury.

3. Sampling location

Streambank:
___ If possible, sampled the main current near the center of the stream. The outside curve of the river is often a good place to sample since the main current tends to hug this bank.
___ In shallow stretches, carefully waded into the center current to collect the sample.

Culvert:
___ Sampled culvert outflow if access is safe, (the flow here is well mixed)

Bridge:
___ Sampled the main flow section by lowering a bottle on a weighted string or tape measure into flow several inches.

4. Sampling Procedure

A. Grab Sampling with Plastic Bottles / HACH Cells

___ Removed the cap from the bottle just before sampling. Avoided touching the insid of the bottle or the cap.

___ Wading: Tried to disturb as little bottom sediment as possible. Careful not to colle water that has sediment from bottom disturbance. Stood facing upstream. Collected th water sample on upstream side, in front.

___ Held the bottle near its base and plunged it (opening downward) below the water surface. If using an extension pole, removed the cap, affixed the bottle and plunged it into the upstream waters.

___ Collected water sample 2 to 6 inches beneath the surface or mid-way between the surface and the bottom if the river reach is shallow.

___ Turned the submerged bottle into the current and upward and away.

___ Left a small air space in sample bottle. Recapped the bottle carefully, rememberec not to touch or contaminate the inside.

___ Labeled the bottle with the site location, sampling date and time.

Recorded on rite-in-rain note paper or field data sheet:

___ Recorded sampling date, time and location .

___ Recorded fast and slow strand floating object time and distance.

___ Recorded stage.

___ Recorded whether flow is on the rising or falling limb of the hydrograph.

B. DH-48 / Depth Integrated Sampling / Wading Rod

___ Sampled at 5 to 15 representative spacings across the stream.

___ Graphed the cross-section water depth and width of the stream.

Recorded on rite-in-rain note paper or field data sheet:

___ Recorded sampling date, time and location.

___ Recorded fast and slow strand floating object time and distance.

___ Recorded dead water strand edges.

___ Recorded stage.

___ Recorded whether flow is on the rising or falling limb of the hydrograph.

C. Velocity Measurements w / floating object

___ Straight, uniform stream reach.

___ Reach long enough to give velocities in the 6-12 second range at high flow.

___ Graphed the cross-section water depth and width of the stream.

___ Established benchmark reference for cross-section, if new site.

___ Elapsed time for object to traverse velocity section taken to nearest 0.1 second

___ Distance of velocity section measured to nearest inch.

___ Object time and distance measured in fast strand flow and slow strand flow.

___ Strand widths recorded.

D. Stage Measurements / Staff Plate

___ Read stage to nearest 0.1 of a foot or nearest inch.
___ Staff plate or bridge rail or culvert invert correlated to crossection.
___ Staff plate isn't under water at high flow and is protected from debris.

5. Recording Data

___ Location
___ Date
___ Time
___ Note date, time, and approximate elapsed time since start of rain.
___ Note staff/stage gauge water level (or distance down from the bridge guardrail).
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___ RR or RL if sampled at one side.

6. Proper Labeling

Bottle:

___ Location, Date, and Time.
___ Velocity and Distance and Stage if possible on bottle.

7. Storing the Sample

___ Kept in a dark and cool place and / or refrigerated.
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Comments: _____

_____

_____

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Comments: _____

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Salmon Forever / Sunny Brae Sediment Lab
Stream Sampling Certification

This checklist covers the proper way to collect samples of water for turbidity and suspended sediment concentration and pertinent information.

Sampler Jesse Noell Date 11-30-99

By Clark Fait

1. Equipment

___ Sample containers properly cleaned.
___ Stopwatch
___ Pencil
___ Rite in the Rain note paper (field data sheet).
___ Tape measure (used plastic or fiberglass to resist rust).

2. Safety

___ Established a safe path to the site: streambanks are soft and slippery.
___ Never waded into water deeper than knees.
___ Took a friend to monitor at night.
___ Trusted judgement above all else - no sample is worth personal injury.

3. Sampling location

Streambank:
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___ Sampled culvert outflow if access is safe, (the flow here is well mixed)

Bridge:
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4. Sampling Procedure

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B. DH-48 / Depth Integrated Sampling / Wading Rod

___ Sampled at 5 to 15 representative spacings across the stream.

___ Graphed the cross-section water depth and width of the stream.

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