WASHINGTON STATE DEPARTMENT OF ECOLOGY

Discharge Measurement Summary

Date Generated: Thu Jun 10 2010

File Information	
File Name	HC5.WAD
Start Date and Time	2010/06/02 11:01:11

Site Details	
Site Name	HC5
Operator(s)	MGW

System Information	
Sensor Type	FlowTracker
Serial #	P1789
CPU Firmware Version	3.4
Software Ver	2.11

Units	(English Units)
Distance	ft
Velocity	ft/s
Area	ft^2
Discharge	cfs

Discharge Uncertainty		
Category	ISO	Stats
Accuracy	1.0%	1.0%
Depth	0.2%	1.2%
Velocity	0.8%	3.5%
Width	0.1%	0.1%
Method	1.4%	-
# Stations	2.0%	-
Overall	**2.8%**	**3.8%**

Summary			
Averaging Int.	40	# Stations	25
Start Edge	REW	Total Width	14.200
Mean SNR	35.4 dB	Total Area	16.995
Mean Temp	52.87 °F	Mean Depth	1.197
Disch. Equation	Mid-Section	Mean Velocity	0.9582
		Total Discharge	**16.2849**

WASHINGTON STATE DEPARTMENT OF ECOLOGY

Discharge Measurement Summary

Date Generated: Thu Jun 10 2010

File Information	
File Name	HC5.WAD
Start Date and Time	2010/06/02 11:01:11

Site Details	
Site Name	HC5
Operator(s)	MGW

Measurement Results

St	Clock	Loc	Method	Depth	%Dep	MeasD	Vel	CorrFact	MeanV	Area	Flow	%Q
0	11:01	5.50	None	0.000	0.0	0.0	0.0000	1.00	0.0000	0.000	0.0000	0.0
1	*11:01*	*5.70*	*0.6*	*1.420*	*0.6*	*0.568*	*-0.0512*	*1.00*	*-0.0512*	*0.852*	*-0.0436*	*-0.3*
2	*11:03*	*6.70*	*0.8/0.2*	*1.820*	*0.2*	*1.456*	*0.2884*	*1.00*	*0.2667*	*1.638*	*0.4368*	*2.7*
2	*11:03*	*6.70*	*0.8/0.2*	*1.820*	*0.8*	*0.364*	*0.2451*					
3	11:05	7.50	0.2/0.8	1.870	0.2	1.496	0.6529	1.00	0.6447	1.215	0.7836	4.8
3	11:06	7.50	0.2/0.8	1.870	0.8	0.374	0.6365					
4	*11:09*	*8.00*	*0.2/0.6/0.8*	*1.850*	*0.2*	*1.480*	*1.2185*	*1.00*	*0.7885*	*0.925*	*0.7294*	*4.5*
4	*11:10*	*8.00*	*0.2/0.6/0.8*	*1.850*	*0.6*	*0.740*	*0.8770*					
4	*11:08*	*8.00*	*0.2/0.6/0.8*	*1.850*	*0.8*	*0.370*	*0.1814*					
5	11:12	8.50	0.2/0.6/0.8	1.800	0.2	1.440	1.4623	1.00	0.8560	0.900	0.7703	4.7
5	11:13	8.50	0.2/0.6/0.8	1.800	0.6	0.720	0.6362					
5	11:11	8.50	0.2/0.6/0.8	1.800	0.8	0.360	0.6893					
6	11:15	9.00	0.2/0.6/0.8	1.630	0.2	1.304	1.4652	1.00	0.8346	0.815	0.6802	4.2
6	11:16	9.00	0.2/0.6/0.8	1.630	0.6	0.652	0.6699					
6	11:14	9.00	0.2/0.6/0.8	1.630	0.8	0.326	0.5335					
7	*11:18*	*9.50*	*0.2/0.6/0.8*	*1.700*	*0.2*	*1.360*	*1.7067*	*1.00*	*1.1534*	*0.850*	*0.9804*	*6.0*
7	*11:19*	*9.50*	*0.2/0.6/0.8*	*1.700*	*0.6*	*0.680*	*1.0925*					
7	*11:17*	*9.50*	*0.2/0.6/0.8*	*1.700*	*0.8*	*0.340*	*0.7218*					
8	*11:21*	*10.00*	*0.8/0.2*	*1.530*	*0.2*	*1.224*	*1.7900*	*1.00*	*1.4326*	*0.765*	*1.0958*	*6.7*
8	*11:20*	*10.00*	*0.8/0.2*	*1.530*	*0.8*	*0.306*	*1.0751*					
9	*11:23*	*10.50*	*0.2/0.6/0.8*	*1.550*	*0.2*	*1.240*	*1.9446*	*1.00*	*1.4154*	*0.775*	*1.0969*	*6.7*
9	*11:24*	*10.50*	*0.2/0.6/0.8*	*1.550*	*0.6*	*0.620*	*1.4564*					
9	*11:23*	*10.50*	*0.2/0.6/0.8*	*1.550*	*0.8*	*0.310*	*0.8045*					
10	11:26	11.00	0.6	1.430	0.6	0.572	1.5502	1.00	1.5502	0.715	1.1085	6.8
11	*11:27*	*11.50*	*0.6*	*1.310*	*0.6*	*0.524*	*1.0262*	*1.00*	*1.0262*	*0.655*	*0.6722*	*4.1*
12	11:28	12.00	0.6	1.270	0.6	0.508	1.5830	1.00	1.5830	0.635	1.0052	6.2
13	11:30	12.50	0.6	1.250	0.6	0.500	1.4304	1.00	1.4304	0.625	0.8940	5.5
14	11:31	13.00	0.6	1.220	0.6	0.488	1.5387	1.00	1.5387	0.610	0.9387	5.8
15	11:32	13.50	0.6	0.980	0.6	0.392	1.7930	1.00	1.7930	0.490	0.8785	5.4
16	11:33	14.00	0.6	1.080	0.6	0.432	1.8376	1.00	1.8376	0.540	0.9924	6.1
17	11:34	14.50	0.6	1.050	0.6	0.420	1.8136	1.00	1.8136	0.525	0.9520	5.8
18	11:35	15.00	0.6	1.000	0.6	0.400	1.7382	1.00	1.7382	0.500	0.8691	5.3
19	11:36	15.50	0.6	0.880	0.6	0.352	1.5732	1.00	1.5732	0.440	0.6921	4.3
20	11:37	16.00	0.6	0.920	0.6	0.368	1.0650	1.00	1.0650	0.460	0.4899	3.0
21	11:38	16.50	0.6	0.800	0.6	0.320	0.4475	1.00	0.4475	0.400	0.1790	1.1
22	11:39	17.00	0.6	0.780	0.6	0.312	0.1421	1.00	0.1421	0.585	0.0831	0.5
23	*11:40*	*18.00*	*0.6*	*0.800*	*0.6*	*0.320*	*0.0003*	*1.00*	*0.0003*	*1.080*	*0.0004*	*0.0*
24	11:40	19.70	None	0.000	0.0	0.0	0.0000	1.00	0.0000	0.000	0.0000	0.0

Rows in italics indicate a QC warning. See the Quality Control page of this report for more information.

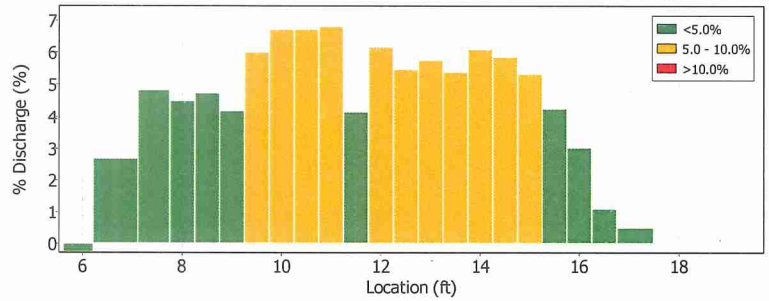
WASHINGTON STATE DEPARTMENT OF ECOLOGY

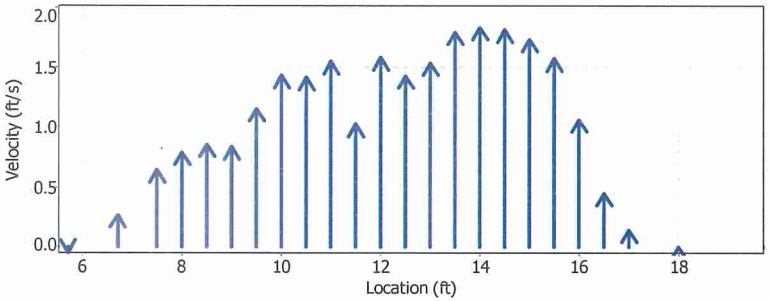
Discharge Measurement Summary

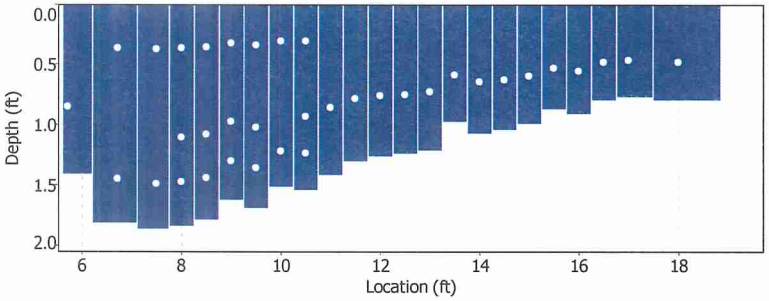
Date Generated: Thu Jun 10 2010

File Information	
File Name	HC5.WAD
Start Date and Time	2010/06/02 11:01:11

Site Details	
Site Name	HC5
Operator(s)	MGW







WASHINGTON STATE DEPARTMENT OF ECOLOGY

Discharge Measurement Summary

Date Generated: Thu Jun 10 2010

File Information
File Name HC5.WAD
Start Date and Time 2010/06/02 11:01:11

Site Details
Site Name HC5
Operator(s) MGW

Quality Control

St	Loc	%Dep	Message
1	5.70	0.6	High angle: 157
2	6.70	0.8	High angle: -27
4	8.00	0.8	High angle: 21
		0.8	High SNR variation during measurement: 6.0,2.1
7	9.50	0.8	High angle: -22
8	10.00	0.8	High angle: -23
9	10.50	0.8	High standard error: 0.060
11	11.50	0.6	High standard error: 0.053
23	18.00	0.6	SNR (64.5) is different from typical SNR (35.4)

WASHINGTON STATE DEPARTMENT OF ECOLOGY

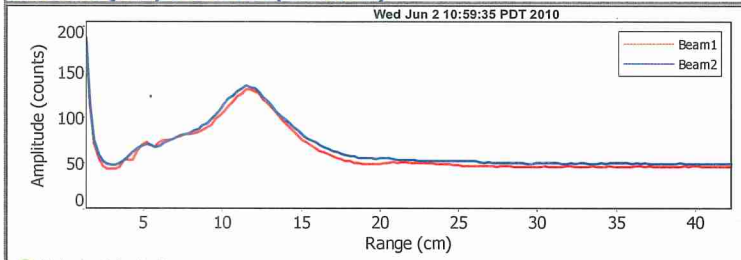
Discharge Measurement Summary

Date Generated: Thu Jun 10 2010

File Information	
File Name	HC5.WAD
Start Date and Time	2010/06/02 11:01:11

Site Details	
Site Name	HC5
Operator(s)	MGW

Automatic Quality Control Test (BeamCheck)



- Noise level check - Pass
- SNR check - Pass
- Peak location check - Pass
- Peak shape check - Pass

WASHINGTON STATE DEPARTMENT OF ECOLOGY

Discharge Measurement Summary

Date Generated: Thu Jun 10 2010

File Information	
File Name	HC3.WAD
Start Date and Time	2010/06/02 10:14:49

Site Details	
Site Name	HC3
Operator(s)	MGW

System Information	
Sensor Type	FlowTracker
Serial #	P1789
CPU Firmware Version	3.4
Software Ver	2.11

Units	(English Units)
Distance	ft
Velocity	ft/s
Area	ft^2
Discharge	cfs

Discharge Uncertainty		
Category	ISO	Stats
Accuracy	1.0%	1.0%
Depth	0.1%	1.7%
Velocity	0.6%	1.9%
Width	0.1%	0.1%
Method	1.8%	-
# Stations	2.0%	-
Overall	**2.9%**	**2.8%**

Summary			
Averaging Int.	40	# Stations	25
Start Edge	REW	Total Width	25.300
Mean SNR	29.2 dB	Total Area	21.968
Mean Temp	51.22 °F	Mean Depth	0.868
Disch. Equation	Mid-Section	Mean Velocity	0.3438
		Total Discharge	**7.5531**

Measurement Results

St	Clock	Loc	Method	Depth	%Dep	MeasD	Vel	CorrFact	MeanV	Area	Flow	%Q
0	10:14	8.00	None	0.000	0.0	0.0	0.0000	1.00	0.0000	0.000	0.0000	0.0
1	*10:14*	*10.00*	*0.6*	*0.200*	*0.6*	*0.080*	*0.1417*	*1.00*	*0.1417*	*0.350*	*0.0496*	*0.7*
2	10:15	11.50	0.6	0.260	0.6	0.104	0.2264	1.00	0.2264	0.390	0.0882	1.2
3	10:16	13.00	0.6	0.420	0.6	0.168	0.2172	1.00	0.2172	0.525	0.1140	1.5
4	10:18	14.00	0.6	0.510	0.6	0.204	0.3058	1.00	0.3058	0.510	0.1559	2.1
5	10:19	15.00	0.6	0.500	0.6	0.200	0.2972	1.00	0.2972	0.500	0.1486	2.0
6	10:20	16.00	0.6	0.820	0.6	0.328	0.3091	1.00	0.3091	0.820	0.2534	3.4
7	10:21	17.00	0.6	1.020	0.6	0.408	0.3015	1.00	0.3015	1.020	0.3075	4.1
8	10:22	18.00	0.6	1.000	0.6	0.400	0.3064	1.00	0.3064	1.000	0.3064	4.1
9	10:23	19.00	0.6	1.110	0.6	0.444	0.4049	1.00	0.4049	1.110	0.4494	5.9
10	10:24	20.00	0.6	1.030	0.6	0.412	0.4131	1.00	0.4131	1.030	0.4254	5.6
11	10:25	21.00	0.6	1.260	0.6	0.504	0.4734	1.00	0.4734	1.260	0.5964	7.9
12	10:26	22.00	0.6	1.120	0.6	0.448	0.4337	1.00	0.4337	1.120	0.4858	6.4
13	10:27	23.00	0.6	1.120	0.6	0.448	0.3625	1.00	0.3625	1.120	0.4061	5.4
14	10:28	24.00	0.6	1.200	0.6	0.480	0.3448	1.00	0.3448	1.200	0.4138	5.5
15	10:29	25.00	0.6	1.200	0.6	0.480	0.3156	1.00	0.3156	1.200	0.3788	5.0
16	10:30	26.00	0.6	1.100	0.6	0.440	0.4026	1.00	0.4026	1.100	0.4428	5.9
17	10:31	27.00	0.6	1.200	0.6	0.480	0.4478	1.00	0.4478	1.200	0.5375	7.1
18	10:32	28.00	0.6	1.380	0.6	0.552	0.4042	1.00	0.4042	1.380	0.5578	7.4
19	10:33	29.00	0.6	1.200	0.6	0.480	0.3576	1.00	0.3576	1.200	0.4292	5.7
20	10:34	30.00	0.6	1.200	0.6	0.480	0.3346	1.00	0.3346	1.200	0.4016	5.3
21	*10:35*	*31.00*	*0.6*	*1.200*	*0.6*	*0.480*	*0.3143*	*1.00*	*0.3143*	*1.200*	*0.3772*	*5.0*
22	10:36	32.00	0.6	1.000	0.6	0.400	0.2270	1.00	0.2270	1.000	0.2270	3.0
23	*10:37*	*33.00*	*0.6*	*0.820*	*0.6*	*0.328*	*0.0010*	*1.00*	*0.0010*	*0.533*	*0.0005*	*0.0*
24	10:37	33.30	None	0.000	0.0	0.0	0.0000	1.00	0.0000	0.000	0.0000	0.0

Rows in italics indicate a QC warning. See the Quality Control page of this report for more information.

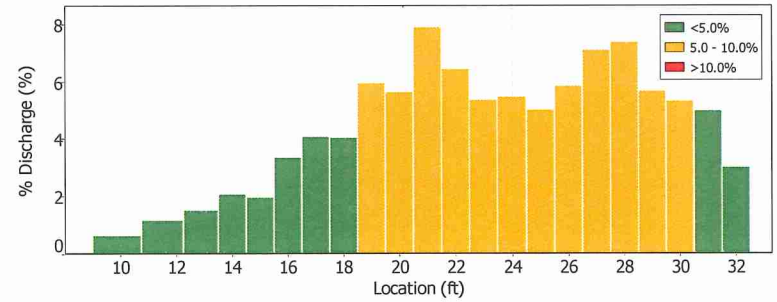
WASHINGTON STATE DEPARTMENT OF ECOLOGY

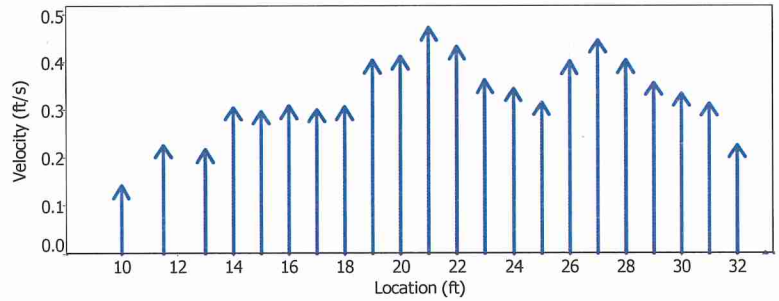
Discharge Measurement Summary

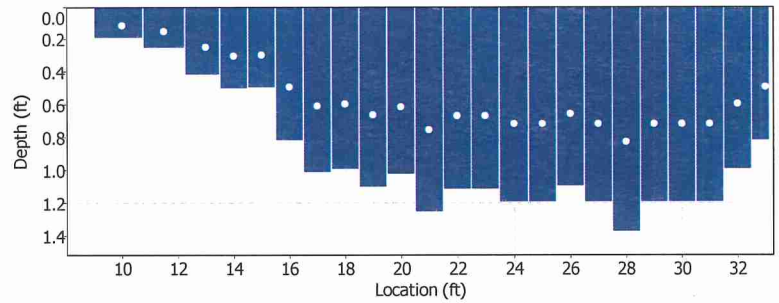
Date Generated: Thu Jun 10 2010

File Information
File Name HC3.WAD
Start Date and Time 2010/06/02 10:14:49

Site Details
Site Name HC3
Operator(s) MGW







WASHINGTON STATE DEPARTMENT OF ECOLOGY

Discharge Measurement Summary

Date Generated: Thu Jun 10 2010

File Information		Site Details	
File Name	HC3.WAD	Site Name	HC3
Start Date and Time	2010/06/02 10:14:49	Operator(s)	MGW

Quality Control

St	Loc	%Dep	Message
1	10.00	0.6	High angle: 20
		0.6	Boundary QC is Good; possible boundary interference
21	31.00	0.6	High angle: -27
23	33.00	0.6	High differences in beam SNR: 46.4,34.4
		0.6	SNR (40.4) is different from typical SNR (29.2)
		0.6	High SNR variation during measurement: 5.6,4.3

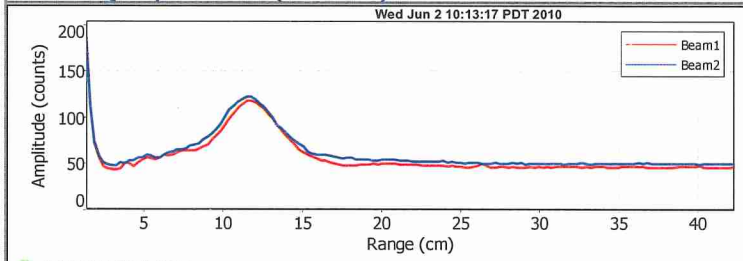
WASHINGTON STATE DEPARTMENT OF ECOLOGY

Discharge Measurement Summary

Date Generated: Thu Jun 10 2010

File Information		Site Details	
File Name	HC3.WAD	Site Name	HC3
Start Date and Time	2010/06/02 10:14:49	Operator(s)	MGW

Automatic Quality Control Test (BeamCheck)



- Noise level check - Pass
- SNR check - Pass
- Peak location check - Pass
- Peak shape check - Pass

WASHINGTON STATE DEPARTMENT OF ECOLOGY

Discharge Measurement Summary

Date Generated: Thu Jun 10 2010

File Information	
File Name	HC1.WAD
Start Date and Time	2010/06/02 08:58:40

Site Details	
Site Name	HC1
Operator(s)	AKA

System Information	
Sensor Type	FlowTracker
Serial #	P1789
CPU Firmware Version	3.4
Software Ver	2.11

Units	(English Units)
Distance	ft
Velocity	ft/s
Area	ft^2
Discharge	cfs

Discharge Uncertainty		
Category	ISO	Stats
Accuracy	1.0%	1.0%
Depth	0.1%	1.5%
Velocity	1.1%	4.7%
Width	0.1%	0.1%
Method	1.1%	-
# Stations	2.2%	-
Overall	**2.9%**	**5.0%**

Summary			
Averaging Int.	40	# Stations	24
Start Edge	REW	Total Width	14.400
Mean SNR	34.3 dB	Total Area	16.219
Mean Temp	55.26 °F	Mean Depth	1.126
Disch. Equation	Mid-Section	Mean Velocity	0.2045
		Total Discharge	**3.3171**

WASHINGTON STATE DEPARTMENT OF ECOLOGY

Discharge Measurement Summary

Date Generated: Thu Jun 10 2010

File Information	
File Name	HC1.WAD
Start Date and Time	2010/06/02 08:58:40

Site Details	
Site Name	HC1
Operator(s)	AKA

Measurement Results

St	Clock	Loc	Method	Depth	%Dep	MeasD	Vel	CorrFact	MeanV	Area	Flow	%Q
0	08:58	4.10	None	0.000	0.0	0.0	0.0000	1.00	0.0000	0.000	0.0000	0.0
1	*08:58*	*6.00*	*0.6*	*0.820*	*0.6*	*0.328*	*0.0036*	*1.00*	*0.0036*	*1.394*	*0.0050*	*0.2*
2	*09:00*	*7.50*	*0.6*	*1.000*	*0.6*	*0.400*	*-0.0269*	*1.00*	*-0.0269*	*1.250*	*-0.0336*	*-1.0*
3	09:01	8.50	0.6	1.000	0.6	0.400	-0.0026	1.00	-0.0026	1.000	-0.0026	-0.1
4	*09:02*	*9.50*	*0.6*	*1.180*	*0.6*	*0.472*	*-0.0085*	*1.00*	*-0.0085*	*1.180*	*-0.0101*	*-0.3*
5	*09:04*	*10.50*	*0.6*	*1.280*	*0.6*	*0.512*	*0.0180*	*1.00*	*0.0180*	*0.960*	*0.0173*	*0.5*
6	09:05	11.00	0.6	1.120	0.6	0.448	0.2234	1.00	0.2234	0.504	0.1126	3.4
7	09:06	11.40	0.6	1.110	0.6	0.444	0.2907	1.00	0.2907	0.444	0.1290	3.9
8	09:07	11.80	0.6	1.210	0.6	0.484	0.3852	1.00	0.3852	0.484	0.1864	5.6
9	09:09	12.20	0.8/0.2	1.530	0.2	1.224	0.5240	1.00	0.5166	0.612	0.3161	9.5
9	09:08	12.20	0.8/0.2	1.530	0.8	0.306	0.5092					
10	09:10	12.60	0.2/0.6/0.8	1.620	0.2	1.296	0.5213	1.00	0.5829	0.648	0.3777	11.4
10	09:12	12.60	0.2/0.6/0.8	1.620	0.6	0.648	0.5846					
10	09:11	12.60	0.2/0.6/0.8	1.620	0.8	0.324	0.6411					
11	09:15	13.00	0.8/0.2	1.700	0.2	1.360	0.6473	1.00	0.6302	0.595	0.3751	11.3
11	09:14	13.00	0.8/0.2	1.700	0.8	0.340	0.6132					
12	*09:16*	*13.30*	*0.2/0.8*	*1.730*	*0.2*	*1.384*	*0.6526*	*1.00*	*0.5479*	*0.519*	*0.2845*	*8.6*
12	*09:17*	*13.30*	*0.2/0.8*	*1.730*	*0.8*	*0.346*	*0.4432*					
13	*09:19*	*13.60*	*0.2/0.6/0.8*	*1.920*	*0.2*	*1.536*	*0.6119*	*1.00*	*0.4756*	*0.576*	*0.2741*	*8.3*
13	*09:20*	*13.60*	*0.2/0.6/0.8*	*1.920*	*0.6*	*0.768*	*0.5026*					
13	*09:18*	*13.60*	*0.2/0.6/0.8*	*1.920*	*0.8*	*0.384*	*0.2854*					
14	09:22	13.90	0.2/0.6/0.8	1.980	0.2	1.584	0.5945	1.00	0.4897	0.594	0.2911	8.8
14	09:23	13.90	0.2/0.6/0.8	1.980	0.6	0.792	0.5636					
14	09:21	13.90	0.2/0.6/0.8	1.980	0.8	0.396	0.2369					
15	09:26	14.20	0.8/0.2	1.930	0.2	1.544	0.5387	1.00	0.4072	0.579	0.2359	7.1
15	09:25	14.20	0.8/0.2	1.930	0.8	0.386	0.2756					
16	09:27	14.50	0.2/0.8	1.860	0.2	1.488	0.4790	1.00	0.4380	0.558	0.2445	7.4
16	09:28	14.50	0.2/0.8	1.860	0.8	0.372	0.3970					
17	*09:31*	*14.80*	*0.8/0.2*	*1.730*	*0.2*	*1.384*	*0.4177*	*1.00*	*0.3866*	*0.519*	*0.2008*	*6.1*
17	*09:30*	*14.80*	*0.8/0.2*	*1.730*	*0.8*	*0.346*	*0.3556*					
18	09:32	15.10	0.2/0.8	1.600	0.2	1.280	0.3107	1.00	0.2756	0.559	0.1541	4.6
18	09:33	15.10	0.2/0.8	1.600	0.8	0.320	0.2405					
19	*09:35*	*15.50*	*0.8/0.2*	*1.600*	*0.2*	*1.280*	*0.2730*	*1.00*	*0.2215*	*0.719*	*0.1593*	*4.8*
19	*09:34*	*15.50*	*0.8/0.2*	*1.600*	*0.8*	*0.320*	*0.1699*					
20	09:36	16.00	0.6	1.210	0.6	0.484	0.0850	1.00	0.0850	0.907	0.0771	2.3
21	*09:37*	*17.00*	*0.6*	*1.150*	*0.6*	*0.460*	*-0.0673*	*1.00*	*-0.0673*	*1.150*	*-0.0773*	*-2.3*
22	*09:40*	*18.00*	*Input V*	*0.620*	*0.0*	*0.000*	*0.0000*	*1.00*	*0.0000*	*0.465*	*0.0000*	*0.0*
23	09:40	18.50	None	0.000	0.0	0.0	0.0000	1.00	0.0000	0.000	0.0000	0.0

Rows in italics indicate a QC warning. See the Quality Control page of this report for more information.

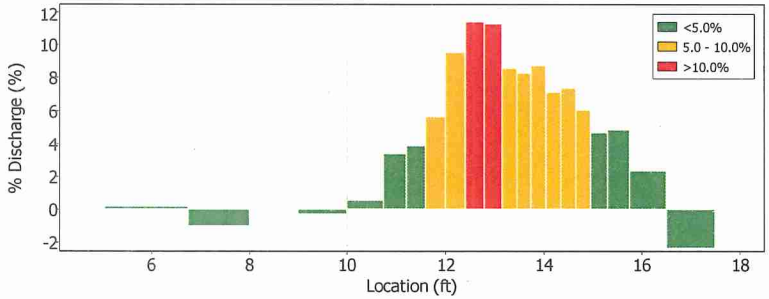
WASHINGTON STATE DEPARTMENT OF ECOLOGY

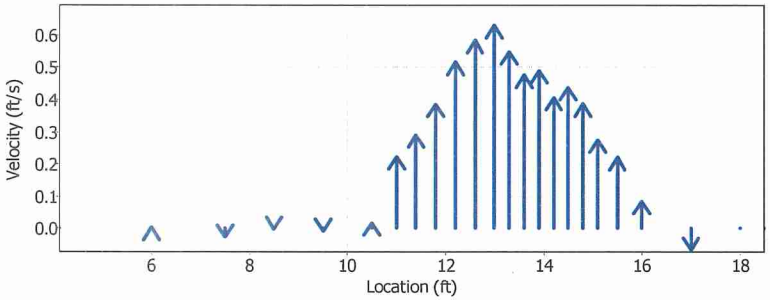
Discharge Measurement Summary

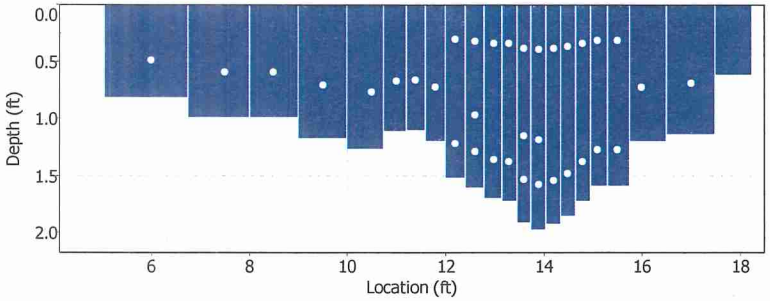
Date Generated: Thu Jun 10 2010

File Information	
File Name	HC1.WAD
Start Date and Time	2010/06/02 08:58:40

Site Details	
Site Name	HC1
Operator(s)	AKA







WASHINGTON STATE DEPARTMENT OF ECOLOGY

Discharge Measurement Summary

Date Generated: Thu Jun 10 2010

File Information
File Name HC1.WAD
Start Date and Time 2010/06/02 08:58:40

Site Details
Site Name HC1
Operator(s) AKA

Quality Control

St	Loc	%Dep	Message
1	6.00	0.6	SNR (50.9) is different from typical SNR (36.0)
2	7.50	0.6	High angle: 165
		0.6	SNR (55.5) is different from typical SNR (36.0)
4	9.50	0.6	SNR (49.4) is different from typical SNR (36.0)
5	10.50	0.6	SNR (47.0) is different from typical SNR (36.0)
12	13.30	0.8	High standard error: 0.030
13	13.60	0.6	High standard error: 0.029
17	14.80	0.2	High standard error: 0.031
		0.8	High angle: 23
19	15.50	0.8	High angle: 27
21	17.00	0.6	High angle: -154
22	18.00	0.0	Low SNR: 0.0,0.0
		0.0	SNR (0.0) is different from typical SNR (36.0)
		0.0	High standard error: 0.000

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Discharge Measurement Summary

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File Information	
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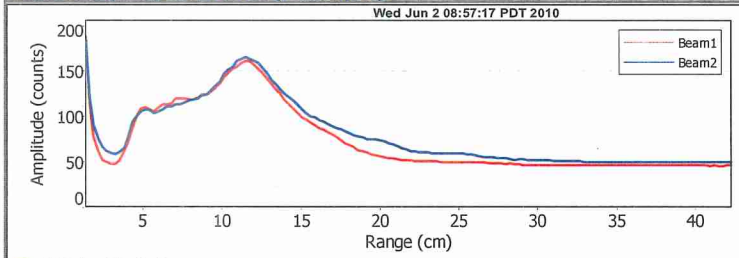
Start Date and Time	2010/06/02 08:58:40

Site Details	
Site Name	HC1
Operator(s)	AKA

Automatic Quality Control Test (BeamCheck)



- Noise level check - Pass
- SNR check - Pass
- Peak location check - Pass
- Peak shape check - Pass