ATTACHMENT A

HAWK CREEK STREAM FLOW MONITORING DATA

WASHINGTON STATE DEPARTMENT OF ECOLOGY

Discharge Measurement Summary

Date Generated: Thu Nov 19 2009

File Information	
File Name	HC1.WAD
Start Date and Time	2009/10/14 08:27:45

Site Details	
Site Name	HC1
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%	1.6%
Velocity	3.3%	2.6%
Width	0.1%	0.1%
Method	1.7%	-
# Stations	2.0%	-
Overall	**4.4%**	**3.2%**

Summary			
Averaging Int.	40	# Stations	26
Start Edge	REW	Total Width	13.100
Mean SNR	18.5 dB	Total Area	11.358
Mean Temp	39.22 °F	Mean Depth	0.867
Disch. Equation	Mid-Section	Mean Velocity	0.1684
		Total Discharge	**1.9122**

Measurement Results

St	Clock	Loc	Method	Depth	%Dep	MeasD	Vel	CorrFact	MeanV	Area	Flow	%Q
0	08:27	5.40	None	0.000	0.0	0.0	0.0000	1.00	0.0000	0.000	0.0000	0.0
1	*08:27*	*6.40*	*0.6*	*0.550*	*0.6*	*0.220*	*0.0184*	*1.00*	*0.0184*	*0.440*	*0.0081*	*0.4*
2	*08:29*	*7.00*	*0.6*	*1.140*	*0.6*	*0.456*	*0.0922*	*1.00*	*0.0922*	*0.684*	*0.0631*	*3.3*
3	08:30	7.60	0.6	1.100	0.6	0.440	0.1667	1.00	0.1667	0.660	0.1100	5.8
4	08:31	8.20	0.6	1.110	0.6	0.444	0.2835	1.00	0.2835	0.499	0.1416	7.4
5	08:32	8.50	0.6	1.000	0.6	0.400	0.3140	1.00	0.3140	0.300	0.0942	4.9
6	08:33	8.80	0.6	1.030	0.6	0.412	0.3455	1.00	0.3455	0.309	0.1067	5.6
7	08:34	9.10	0.6	1.030	0.6	0.412	0.3563	1.00	0.3563	0.309	0.1100	5.8
8	08:35	9.40	0.6	1.120	0.6	0.448	0.3671	1.00	0.3671	0.336	0.1233	6.4
9	08:36	9.70	0.6	1.100	0.6	0.440	0.3622	1.00	0.3622	0.330	0.1195	6.2
10	08:37	10.00	0.6	1.120	0.6	0.448	0.3287	1.00	0.3287	0.336	0.1104	5.8
11	08:38	10.30	0.6	1.220	0.6	0.488	0.2789	1.00	0.2789	0.366	0.1020	5.3
12	08:39	10.60	0.6	1.270	0.6	0.508	0.2405	1.00	0.2405	0.381	0.0916	4.8
13	08:40	10.90	0.6	1.270	0.6	0.508	0.3054	1.00	0.3054	0.381	0.1163	6.1
14	08:41	11.20	0.6	1.210	0.6	0.484	0.2569	1.00	0.2569	0.363	0.0932	4.9
15	*08:42*	*11.50*	*0.6*	*1.200*	*0.6*	*0.480*	*0.2566*	*1.00*	*0.2566*	*0.360*	*0.0923*	*4.8*
16	*08:43*	*11.80*	*0.6*	*1.120*	*0.6*	*0.448*	*0.2139*	*1.00*	*0.2139*	*0.393*	*0.0840*	*4.4*
17	*08:44*	*12.20*	*0.6*	*1.100*	*0.6*	*0.440*	*0.1768*	*1.00*	*0.1768*	*0.442*	*0.0781*	*4.1*
18	*08:45*	*12.60*	*0.6*	*0.980*	*0.6*	*0.392*	*0.1946*	*1.00*	*0.1946*	*0.394*	*0.0766*	*4.0*
19	*08:47*	*13.00*	*0.6*	*1.010*	*0.6*	*0.404*	*0.1247*	*1.00*	*0.1247*	*0.454*	*0.0565*	*3.0*
20	*08:48*	*13.50*	*0.6*	*0.980*	*0.6*	*0.392*	*0.0686*	*1.00*	*0.0686*	*0.733*	*0.0503*	*2.6*
21	*08:49*	*14.50*	*0.6*	*1.000*	*0.6*	*0.400*	*0.0541*	*1.00*	*0.0541*	*1.000*	*0.0541*	*2.8*
22	08:50	15.50	0.6	0.820	0.6	0.328	0.0384	1.00	0.0384	0.820	0.0315	1.6
23	*08:51*	*16.50*	*0.6*	*0.770*	*0.6*	*0.308*	*-0.0016*	*1.00*	*-0.0016*	*0.770*	*-0.0013*	*-0.1*
24	*08:53*	*17.50*	*Input V*	*0.300*	*0.0*	*0.000*	*0.0000*	*1.00*	*0.0000*	*0.300*	*0.0000*	*0.0*
25	08:53	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.

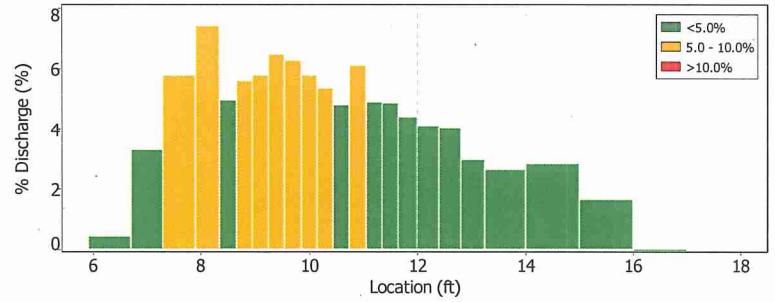
WASHINGTON STATE DEPARTMENT OF ECOLOGY

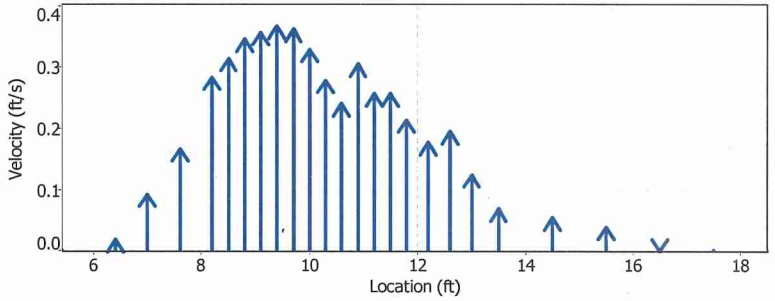
Discharge Measurement Summary

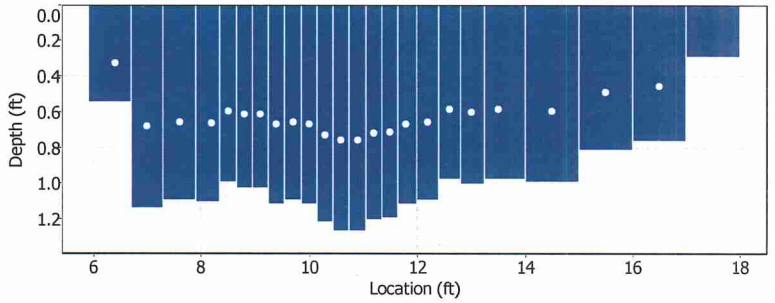
Date Generated: Thu Nov 19 2009

File Information
File Name HC1.WAD
Start Date and Time 2009/10/14 08:27:45

Site Details
Site Name HC1
Operator(s) MGW







WASHINGTON STATE DEPARTMENT OF ECOLOGY

Discharge Measurement Summary

Date Generated: Thu Nov 19 2009

File Information		Site Details	
File Name	HC1.WAD	Site Name	HC1
Start Date and Time	2009/10/14 08:27:45	Operator(s)	MGW

Quality Control

St	Loc	%Dep	Message
1	6.40	0.6	High SNR variation during measurement: 6.9,4.3
2	7.00	0.6	High angle: 26
15	11.50	0.6	High angle: -21
16	11.80	0.6	High angle: -23
17	12.20	0.6	High angle: -23
18	12.60	0.6	High angle: -21
19	13.00	0.6	High angle: -33
20	13.50	0.6	High angle: -40
21	14.50	0.6	High angle: -34
		0.6	Boundary QC is Good; possible boundary interference
23	16.50	0.6	Low SNR: 0.8,3.0
		0.6	SNR (1.9) is different from typical SNR (19.3)
		0.6	High standard error: 0.081
		0.6	Boundary QC is Fair; possible boundary interference
24	17.50	0.0	Low SNR: 0.0,0.0
		0.0	SNR (0.0) is different from typical SNR (19.3)
		0.0	High standard error: 0.000

WASHINGTON STATE DEPARTMENT OF ECOLOGY

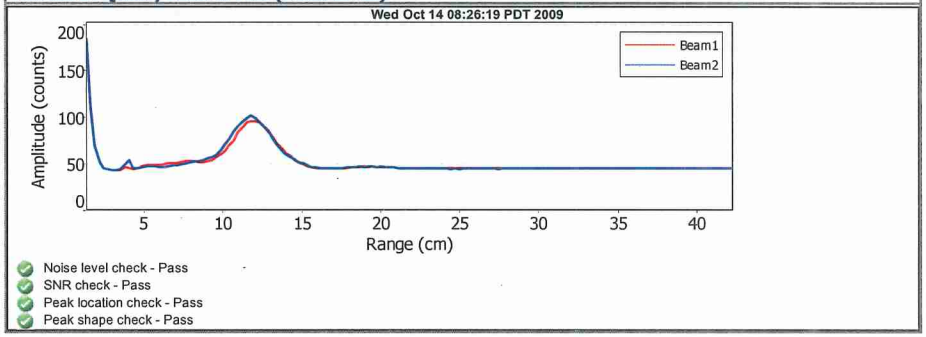
Discharge Measurement Summary

Date Generated: Thu Nov 19 2009

File Information
File Name HC1.WAD
Start Date and Time 2009/10/14 08:27:45

Site Details
Site Name HC1
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 Nov 19 2009

File Information	
File Name	HC3.WAD
Start Date and Time	2009/10/14 09:55:09

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	0.4%	2.2%
Velocity	1.5%	9.9%
Width	0.1%	0.1%
Method	1.8%	-
# Stations	2.0%	-
Overall	**3.3%**	**10.2%**

Summary			
Averaging Int.	40	# Stations	25
Start Edge	REW	Total Width	9.400
Mean SNR	32.5 dB	Total Area	4.910
Mean Temp	47.54 °F	Mean Depth	0.522
Disch. Equation	Mid-Section	Mean Velocity	1.0694
		Total Discharge	**5.2510**

Measurement Results

St	Clock	Loc	Method	Depth	%Dep	MeasD	Vel	CorrFact	MeanV	Area	Flow	%Q
0	09:55	4.00	None	0.000	0.0	0.0	0.0000	1.00	0.0000	0.000	0.0000	0.0
1	09:55	4.70	0.6	0.550	0.6	0.220	0.0095	1.00	0.0095	0.302	0.0029	0.1
2	*09:56*	*5.10*	*0.6*	*0.500*	*0.6*	*0.200*	*0.4820*	*1.00*	*0.4820*	*0.200*	*0.0964*	*1.8*
3	*09:59*	*5.50*	*0.6*	*0.610*	*0.6*	*0.244*	*0.2782*	*1.00*	*0.2782*	*0.244*	*0.0679*	*1.3*
4	10:01	5.90	0.6	0.690	0.6	0.276	1.9672	1.00	1.9672	0.276	0.5428	10.3
5	*10:02*	*6.30*	*0.6*	*0.570*	*0.6*	*0.228*	*0.6434*	*1.00*	*0.6434*	*0.228*	*0.1466*	*2.8*
6	*10:03*	*6.70*	*0.6*	*0.500*	*0.6*	*0.200*	*1.0164*	*1.00*	*1.0164*	*0.200*	*0.2032*	*3.9*
7	10:04	7.10	0.6	0.520	0.6	0.208	1.9636	1.00	1.9636	0.182	0.3574	6.8
8	*10:05*	*7.40*	*0.6*	*0.510*	*0.6*	*0.204*	*1.5827*	*1.00*	*1.5827*	*0.153*	*0.2422*	*4.6*
9	*10:06*	*7.70*	*0.6*	*0.730*	*0.6*	*0.292*	*1.0594*	*1.00*	*1.0594*	*0.219*	*0.2322*	*4.4*
10	*10:07*	*8.00*	*0.6*	*0.650*	*0.6*	*0.260*	*1.7165*	*1.00*	*1.7165*	*0.195*	*0.3349*	*6.4*
11	*10:08*	*8.30*	*0.6*	*0.500*	*0.6*	*0.200*	*1.5240*	*1.00*	*1.5240*	*0.150*	*0.2287*	*4.4*
12	*10:10*	*8.60*	*0.6*	*0.580*	*0.6*	*0.232*	*1.0666*	*1.00*	*1.0666*	*0.174*	*0.1857*	*3.5*
13	*10:11*	*8.90*	*0.6*	*0.570*	*0.6*	*0.228*	*1.8691*	*1.00*	*1.8691*	*0.171*	*0.3198*	*6.1*
14	10:12	9.20	0.6	0.620	0.6	0.248	1.0584	1.00	1.0584	0.186	0.1970	3.8
15	*10:13*	*9.50*	*0.6*	*0.600*	*0.6*	*0.240*	*0.9938*	*1.00*	*0.9938*	*0.180*	*0.1790*	*3.4*
16	10:14	9.80	0.6	0.580	0.6	0.232	1.1312	1.00	1.1312	0.174	0.1970	3.8
17	*10:15*	*10.10*	*0.6*	*0.610*	*0.6*	*0.244*	*0.9485*	*1.00*	*0.9485*	*0.183*	*0.1737*	*3.3*
18	*10:18*	*10.40*	*0.6*	*0.660*	*0.6*	*0.264*	*0.4150*	*1.00*	*0.4150*	*0.230*	*0.0956*	*1.8*
19	*10:19*	*10.80*	*0.6*	*0.620*	*0.6*	*0.248*	*1.4117*	*1.00*	*1.4117*	*0.247*	*0.3484*	*6.6*
20	10:20	11.20	0.6	0.520	0.6	0.208	1.4770	1.00	1.4770	0.207	0.3057	5.8
21	*10:21*	*11.60*	*0.6*	*0.580*	*0.6*	*0.232*	*0.9295*	*1.00*	*0.9295*	*0.233*	*0.2162*	*4.1*
22	*10:23*	*12.00*	*0.6*	*0.490*	*0.6*	*0.196*	*-1.4160*	*-1.00*	*1.4160*	*0.344*	*0.4873*	*9.3*
23	*10:24*	*13.00*	*0.6*	*0.330*	*0.6*	*0.132*	*-0.3911*	*-1.00*	*0.3911*	*0.231*	*0.0903*	*1.7*
24	10:24	13.40	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.

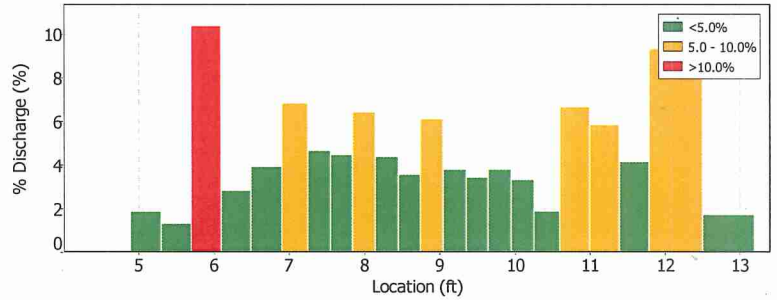
WASHINGTON STATE DEPARTMENT OF ECOLOGY

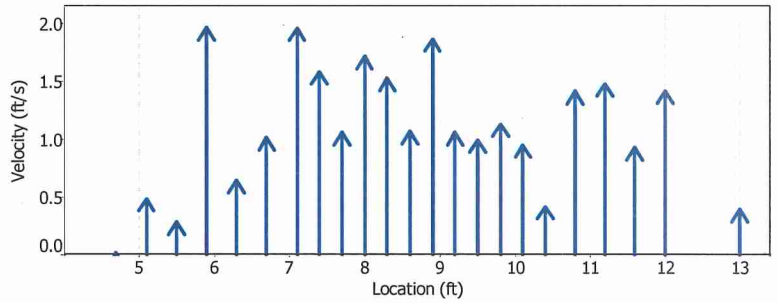
Discharge Measurement Summary

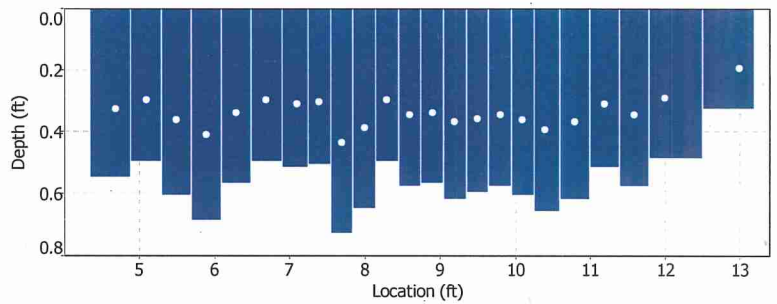
Date Generated: Thu Nov 19 2009

File Information
File Name HC3.WAD
Start Date and Time 2009/10/14 09:55:09

Site Details
Site Name HC3
Operator(s) MGW







WASHINGTON STATE DEPARTMENT OF ECOLOGY

Discharge Measurement Summary

Date Generated: Thu Nov 19 2009

File Information		Site Details	
File Name	HC3.WAD	Site Name	HC3
Start Date and Time	2009/10/14 09:55:09	Operator(s)	MGW

Quality Control

St	Loc	%Dep	Message
2	5.10	0.6	High angle: 21
		0.6	High SNR variation during measurement: 5.6,5.6
3	5.50	0.6	High SNR variation during measurement: 6.9,8.2
		0.6	Boundary QC is Fair; possible boundary interference
5	6.30	0.6	High standard error: 0.108
6	6.70	0.6	High standard error: 0.124
8	7.40	0.6	High number of spikes: 6
9	7.70	0.6	High standard error: 0.081
10	8.00	0.6	Boundary QC is Fair; possible boundary interference
11	8.30	0.6	High standard error: 0.098
12	8.60	0.6	High standard error: 0.101
13	8.90	0.6	High standard error: 0.102
15	9.50	0.6	High standard error: 0.094
17	10.10	0.6	High standard error: 0.088
		0.6	Boundary QC is Fair; possible boundary interference
18	10.40	0.6	High angle: 27
19	10.80	0.6	High standard error: 0.115
21	11.60	0.6	High SNR variation during measurement: 9.0,12.9
		0.6	High standard error: 0.108
22	12.00	0.6	High angle: -165
23	13.00	0.6	High angle: -135

WASHINGTON STATE DEPARTMENT OF ECOLOGY

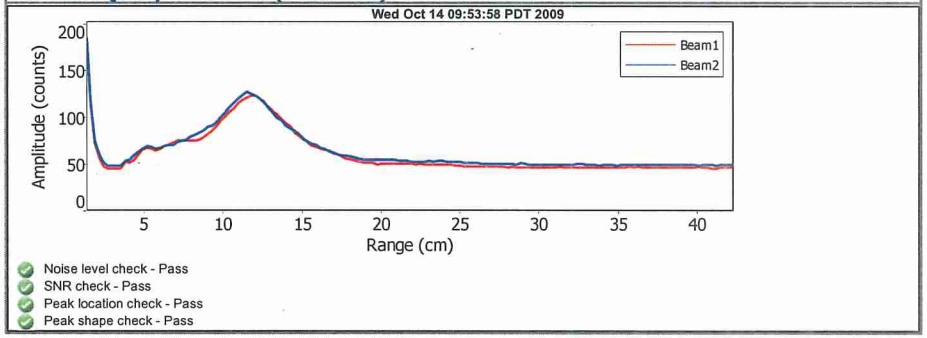
Discharge Measurement Summary

Date Generated: Thu Nov 19 2009

File Information
File Name HC3.WAD
Start Date and Time 2009/10/14 09:55:09

Site Details
Site Name HC3
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 Nov 19 2009

File Information	
File Name	HC5.WAD
Start Date and Time	2009/10/14 11:40:29

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	0.1%	1.0%
Velocity	0.7%	5.6%
Width	0.1%	0.1%
Method	1.4%	-
# Stations	2.0%	-
Overall	**2.8%**	**5.7%**

Summary			
Averaging Int.	40	# Stations	25
Start Edge	REW	Total Width	13.600
Mean SNR	29.0 dB	Total Area	15.641
Mean Temp	48.10 °F	Mean Depth	1.150
Disch. Equation	Mid-Section	Mean Velocity	0.6631
		Total Discharge	**10.3710**

Measurement Results

St	Clock	Loc	Method	Depth	%Dep	MeasD	Vel	CorrFact	MeanV	Area	Flow	%Q
0	11:40	4.40	None	1.620	0.0	0.0	0.0000	1.00	0.0017	0.486	0.0008	0.0
1	*11:40*	*5.00*	*0.2/0.6/0.8*	*1.700*	*0.2*	*1.360*	*-0.0522*	*1.00*	*0.0017*	*1.020*	*0.0018*	*0.0*
1	*11:42*	*5.00*	*0.2/0.6/0.8*	*1.700*	*0.6*	*0.680*	*-0.0036*					
1	*11:41*	*5.00*	*0.2/0.6/0.8*	*1.700*	*0.8*	*0.340*	*0.0663*					
2	11:44	5.60	0.2/0.6/0.8	1.810	0.2	1.448	0.2001	1.00	0.3583	1.086	0.3892	3.8
2	11:46	5.60	0.2/0.6/0.8	1.810	0.6	0.724	0.4032					
2	11:45	5.60	0.2/0.6/0.8	1.810	0.8	0.362	0.4268					
3	11:48	6.20	0.8/0.2	1.810	0.2	1.448	0.6831	1.00	0.5671	1.086	0.6159	5.9
3	11:47	6.20	0.8/0.2	1.810	0.8	0.362	0.4511					
4	11:49	6.80	0.2/0.8	1.730	0.2	1.384	1.0541	1.00	0.7925	1.038	0.8227	7.9
4	11:50	6.80	0.2/0.8	1.730	0.8	0.346	0.5308					
5	*11:52*	*7.40*	*0.2/0.6/0.8*	*1.720*	*0.2*	*1.376*	*1.3780*	*1.00*	*1.0316*	*1.032*	*1.0648*	*10.3*
5	*11:53*	*7.40*	*0.2/0.6/0.8*	*1.720*	*0.6*	*0.688*	*1.1263*					
5	*11:51*	*7.40*	*0.2/0.6/0.8*	*1.720*	*0.8*	*0.344*	*0.4957*					
6	*11:55*	*8.00*	*0.2/0.6/0.8*	*1.550*	*0.2*	*1.240*	*1.4606*	*1.00*	*0.6580*	*0.697*	*0.4587*	*4.4*
6	*11:56*	*8.00*	*0.2/0.6/0.8*	*1.550*	*0.6*	*0.620*	*0.5692*					
6	*11:55*	*8.00*	*0.2/0.6/0.8*	*1.550*	*0.8*	*0.310*	*0.0328*					
7	11:58	8.30	0.6	1.460	0.6	0.584	1.4505	1.00	1.4505	0.437	0.6343	6.1
8	*11:59*	*8.60*	*0.6*	*1.400*	*0.6*	*0.560*	*1.5443*	*1.00*	*1.5443*	*0.419*	*0.6476*	*6.2*
9	12:00	8.90	0.6	1.220	0.6	0.488	1.6247	1.00	1.6247	0.365	0.5938	5.7
10	12:01	9.20	0.6	1.170	0.6	0.468	1.5896	1.00	1.5896	0.350	0.5571	5.4
11	12:03	9.50	0.6	1.120	0.6	0.448	1.4711	1.00	1.4711	0.336	0.4936	4.8
12	12:04	9.80	0.6	1.300	0.6	0.520	1.4491	1.00	1.4491	0.389	0.5642	5.4
13	12:05	10.10	0.6	1.100	0.6	0.440	1.2864	1.00	1.2864	0.330	0.4239	4.1
14	12:07	10.40	0.6	1.200	0.6	0.480	1.3501	1.00	1.3501	0.359	0.4853	4.7
15	12:08	10.70	0.6	1.130	0.6	0.452	1.2579	1.00	1.2579	0.338	0.4257	4.1
16	12:09	11.00	0.6	1.130	0.6	0.452	1.1017	1.00	1.1017	0.398	0.4380	4.2
17	12:10	11.40	0.6	1.100	0.6	0.440	1.1440	1.00	1.1440	0.445	0.5087	4.9
18	12:11	11.80	0.6	1.100	0.6	0.440	0.7795	1.00	0.7795	0.495	0.3859	3.7
19	12:12	12.30	0.6	1.100	0.6	0.440	0.7244	1.00	0.7244	0.545	0.3951	3.8
20	12:13	12.80	0.6	1.000	0.6	0.400	0.5515	1.00	0.5515	0.500	0.2758	2.7
21	12:15	13.30	0.6	0.880	0.6	0.352	0.2762	1.00	0.2762	0.662	0.1828	1.8
22	*12:16*	*14.30*	*0.6*	*0.860*	*0.6*	*0.344*	*0.0013*	*1.00*	*0.0013*	*1.161*	*0.0015*	*0.0*
23	*12:17*	*16.00*	*0.6*	*0.900*	*0.6*	*0.360*	*0.0023*	*1.00*	*0.0023*	*1.665*	*0.0038*	*0.0*
24	12:17	18.00	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.

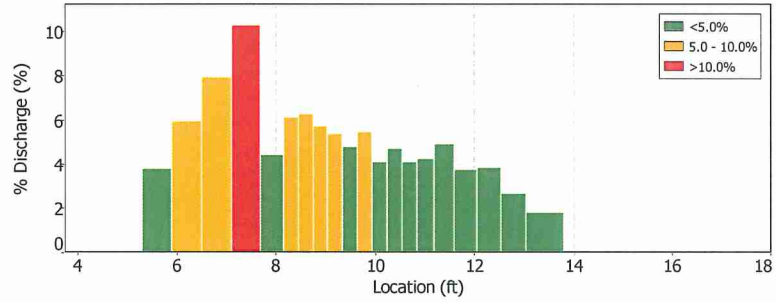
WASHINGTON STATE DEPARTMENT OF ECOLOGY

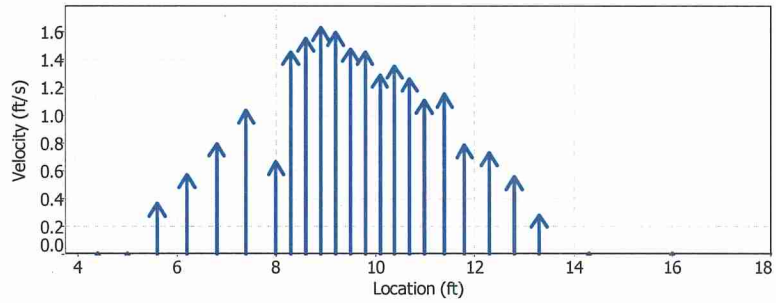
Discharge Measurement Summary

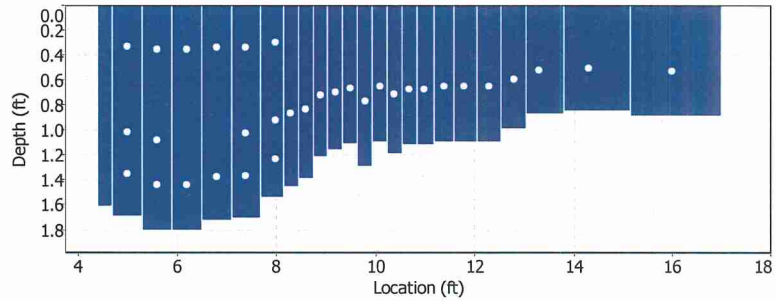
Date Generated: Thu Nov 19 2009

File Information
File Name HC5.WAD
Start Date and Time 2009/10/14 11:40:29

Site Details
Site Name HC5
Operator(s) MGW







WASHINGTON STATE DEPARTMENT OF ECOLOGY

Discharge Measurement Summary

Date Generated: Thu Nov 19 2009

File Information		Site Details	
File Name	HC5.WAD	Site Name	HC5
Start Date and Time	2009/10/14 11:40:29	Operator(s)	MGW

Quality Control

St	Loc	%Dep	Message
1	5.00	0.2	High angle: -179
5	7.40	0.6	High number of spikes: 5
		0.8	High angle: 22
		0.8	High standard error: 0.048
6	8.00	0.6	High standard error: 0.073
		0.8	High angle: 81
		0.8	High standard error: 0.046
8	8.60	0.6	High number of spikes: 5
22	14.30	0.6	SNR (41.1) is different from typical SNR (29.0)
		0.6	High SNR variation during measurement: 15.0,10.3
		0.6	Boundary QC is Good; possible boundary interference
23	16.00	0.6	High SNR variation during measurement: 5.2,8.6

WASHINGTON STATE DEPARTMENT OF ECOLOGY

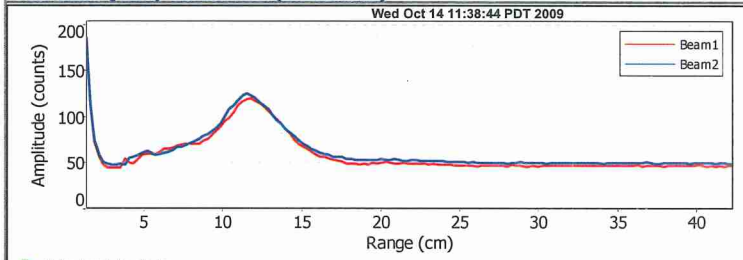
Discharge Measurement Summary

Date Generated: Thu Nov 19 2009

File Information
File Name HC5.WAD
Start Date and Time 2009/10/14 11:40:29

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: Tue Feb 2 2010

File Information	
File Name	HC1.WAD
Start Date and Time	2010/01/11 10:20:09

Site Details	
Site Name	HC1
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%	1.1%
Velocity	1.6%	5.4%
Width	0.1%	0.1%
Method	1.3%	-
# Stations	2.3%	-
Overall	**3.2%**	**5.6%**

Summary			
Averaging Int.	40	# Stations	22
Start Edge	REW	Total Width	12.700
Mean SNR	25.8 dB	Total Area	14.217
Mean Temp	35.65 °F	Mean Depth	1.119
Disch. Equation	Mid-Section	Mean Velocity	0.2292
		Total Discharge	**3.2590**

Measurement Results

St	Clock	Loc	Method	Depth	%Dep	MeasD	Vel	CorrFact	MeanV	Area	Flow	%Q
0	10:20	4.50	None	0.000	0.0	0.0	0.0000	1.00	0.0000	0.000	0.0000	0.0
1	*10:20*	*6.00*	*0.6*	*0.670*	*0.6*	*0.268*	*0.0295*	*1.00*	*0.0295*	*1.005*	*0.0297*	*0.9*
2	*10:21*	*7.50*	*0.6*	*0.940*	*0.6*	*0.376*	*-0.0259*	*1.00*	*-0.0259*	*1.410*	*-0.0365*	*-1.1*
3	*10:22*	*9.00*	*0.6*	*0.910*	*0.6*	*0.364*	*-0.0062*	*1.00*	*-0.0062*	*1.365*	*-0.0085*	*-0.3*
4	*10:23*	*10.50*	*0.6*	*1.100*	*0.6*	*0.440*	*0.0387*	*1.00*	*0.0387*	*1.100*	*0.0426*	*1.3*
5	*10:24*	*11.00*	*0.6*	*1.100*	*0.6*	*0.440*	*0.1250*	*1.00*	*0.1250*	*0.495*	*0.0619*	*1.9*
6	*10:25*	*11.40*	*0.6*	*1.120*	*0.6*	*0.448*	*0.1847*	*1.00*	*0.1847*	*0.448*	*0.0827*	*2.5*
7	*10:27*	*11.80*	*0.6*	*1.340*	*0.6*	*0.536*	*0.4570*	*1.00*	*0.4570*	*0.536*	*0.2449*	*7.5*
8	10:28	12.20	0.6	1.480	0.6	0.592	0.5495	1.00	0.5495	0.518	0.2847	8.7
9	10:29	12.50	0.2/0.8	1.530	0.2	1.224	0.8100	1.00	0.7311	0.459	0.3358	10.3
9	10:30	12.50	0.2/0.8	1.530	0.8	0.306	0.6522					
10	*10:32*	*12.80*	*0.8/0.2*	*1.670*	*0.2*	*1.336*	*0.8337*	*1.00*	*0.6288*	*0.501*	*0.3152*	*9.7*
10	*10:31*	*12.80*	*0.8/0.2*	*1.670*	*0.8*	*0.334*	*0.4239*					
11	*10:33*	*13.10*	*0.2/0.8*	*1.800*	*0.2*	*1.440*	*0.7556*	*1.00*	*0.5407*	*0.540*	*0.2921*	*9.0*
11	*10:35*	*13.10*	*0.2/0.8*	*1.800*	*0.8*	*0.360*	*0.3258*					
12	*10:37*	*13.40*	*0.8/0.2*	*1.700*	*0.2*	*1.360*	*0.6903*	*1.00*	*0.6073*	*0.510*	*0.3099*	*9.5*
12	*10:36*	*13.40*	*0.8/0.2*	*1.700*	*0.8*	*0.340*	*0.5243*					
13	*10:38*	*13.70*	*0.2/0.8*	*1.880*	*0.2*	*1.504*	*0.5945*	*1.00*	*0.6350*	*0.564*	*0.3584*	*11.0*
13	*10:39*	*13.70*	*0.2/0.8*	*1.880*	*0.8*	*0.376*	*0.6755*					
14	*10:41*	*14.00*	*0.8/0.2*	*1.890*	*0.2*	*1.512*	*0.3960*	*1.00*	*0.4700*	*0.567*	*0.2667*	*8.2*
14	*10:40*	*14.00*	*0.8/0.2*	*1.890*	*0.8*	*0.378*	*0.5440*					
15	*10:43*	*14.30*	*0.2/0.8*	*1.790*	*0.2*	*1.432*	*0.2963*	*1.00*	*0.3880*	*0.537*	*0.2085*	*6.4*
15	*10:44*	*14.30*	*0.2/0.8*	*1.790*	*0.8*	*0.358*	*0.4797*					
16	10:46	14.60	0.8/0.2	1.800	0.2	1.440	0.2730	1.00	0.3307	0.629	0.2080	6.4
16	10:45	14.60	0.8/0.2	1.800	0.8	0.360	0.3885					
17	*10:47*	*15.00*	*0.2/0.8*	*1.800*	*0.2*	*1.440*	*0.2172*	*1.00*	*0.2239*	*0.809*	*0.1811*	*5.6*
17	*10:48*	*15.00*	*0.2/0.8*	*1.800*	*0.8*	*0.360*	*0.2306*					
18	*10:50*	*15.50*	*0.8/0.2*	*1.630*	*0.2*	*1.304*	*0.1391*	*1.00*	*0.1301*	*0.815*	*0.1060*	*3.3*
18	*10:49*	*15.50*	*0.8/0.2*	*1.630*	*0.8*	*0.326*	*0.1211*					
19	10:52	16.00	0.6	1.350	0.6	0.540	-0.0121	1.00	-0.0121	0.675	-0.0082	-0.3
20	*10:53*	*16.50*	*0.6*	*1.220*	*0.6*	*0.488*	*-0.0217*	*1.00*	*-0.0217*	*0.732*	*-0.0159*	*-0.5*
21	10:53	17.20	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.

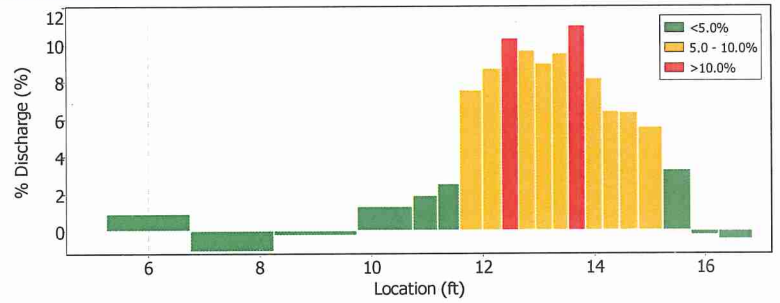
WASHINGTON STATE DEPARTMENT OF ECOLOGY

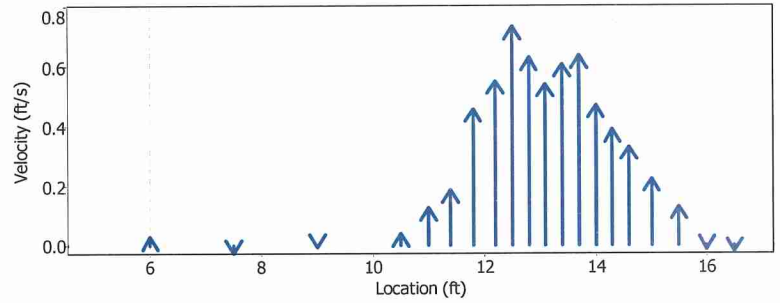
Discharge Measurement Summary

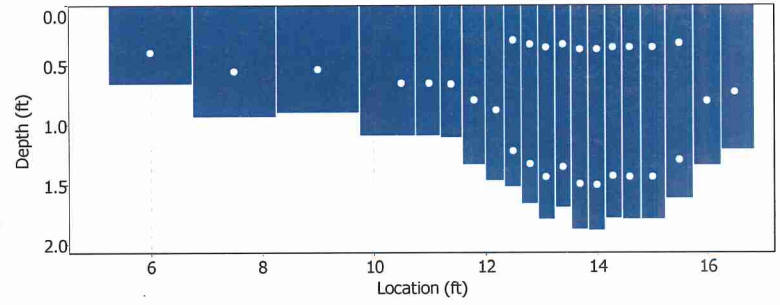
Date Generated: Tue Feb 2 2010

File Information
File Name HC1.WAD
Start Date and Time 2010/01/11 10:20:09

Site Details
Site Name HC1
Operator(s) MGW







WASHINGTON STATE DEPARTMENT OF ECOLOGY

Discharge Measurement Summary

Date Generated: Tue Feb 2 2010

File Information		Site Details	
File Name	HC1.WAD	Site Name	HC1
Start Date and Time	2010/01/11 10:20:09	Operator(s)	MGW

Quality Control

St	Loc	%Dep	Message
1	6.00	0.6	High differences in beam SNR: 33.1,44.7
		0.6	SNR (38.9) is different from typical SNR (25.8)
		0.6	High SNR variation during measurement: 5.2,4.7
2	7.50	0.6	High angle: 131
		0.6	SNR (47.1) is different from typical SNR (25.8)
3	9.00	0.6	SNR (44.9) is different from typical SNR (25.8)
4	10.50	0.6	High angle: 45
		0.6	SNR (44.1) is different from typical SNR (25.8)
5	11.00	0.6	High angle: 35
		0.6	SNR (40.6) is different from typical SNR (25.8)
6	11.40	0.6	High angle: 25
		0.6	SNR (41.1) is different from typical SNR (25.8)
		0.6	High SNR variation during measurement: 7.7,7.7
7	11.80	0.6	High SNR variation during measurement: 4.7,5.2
10	12.80	0.8	High standard error: 0.040
11	13.10	0.2	High standard error: 0.048
		0.8	High standard error: 0.039
12	13.40	0.8	High standard error: 0.041
13	13.70	0.8	High standard error: 0.039
14	14.00	0.8	High standard error: 0.036
15	14.30	0.8	High angle: 27
17	15.00	0.2	High angle: 22
		0.8	High angle: 27
18	15.50	0.8	High angle: 52
20	16.50	0.6	High angle: 111
		0.6	Boundary QC is Poor; possible boundary interference

WASHINGTON STATE DEPARTMENT OF ECOLOGY

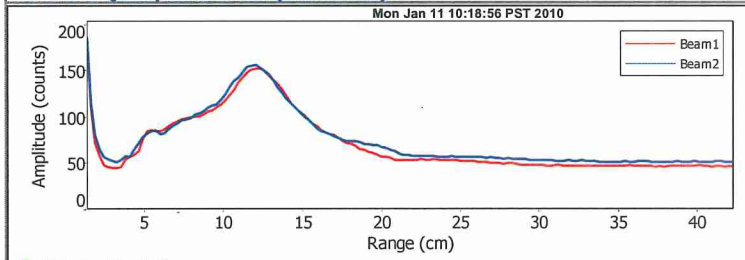
Discharge Measurement Summary

Date Generated: Tue Feb 2 2010

File Information
File Name HC1.WAD
Start Date and Time 2010/01/11 10:20:09

Site Details
Site Name HC1
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: Tue Feb 2 2010

File Information	
File Name	HC3.WAD
Start Date and Time	2010/01/11 11:33:54

Site Details	
Site Name	HC2
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%	1.6%
Velocity	0.8%	3.7%
Width	0.1%	0.1%
Method	1.7%	-
# Stations	2.0%	-
Overall	**2.9%**	**4.2%**

Summary			
Averaging Int.	40	# Stations	25
Start Edge	REW	Total Width	27.200
Mean SNR	34.0 dB	Total Area	23.456
Mean Temp	43.71 °F	Mean Depth	0.862
Disch. Equation	Mid-Section	Mean Velocity	0.3239
		Total Discharge	**7.5975**

Measurement Results

St	Clock	Loc	Method	Depth	%Dep	MeasD	Vel	CorrFact	MeanV	Area	Flow	%Q
0	11:33	5.00	None	0.000	0.0	0.0	0.0000	1.00	0.0000	0.000	0.0000	0.0
1	11:33	8.00	0.6	0.320	0.6	0.128	0.1886	1.00	0.1886	0.720	0.1358	1.8
2	11:34	9.50	0.6	0.320	0.6	0.128	0.2615	1.00	0.2615	0.480	0.1255	1.7
3	11:36	11.00	0.6	0.600	0.6	0.240	0.1621	1.00	0.1621	0.810	0.1313	1.7
4	11:37	12.20	0.6	0.670	0.6	0.268	0.2923	1.00	0.2923	0.804	0.2350	3.1
5	11:38	13.40	0.6	0.880	0.6	0.352	0.3645	1.00	0.3645	0.968	0.3528	4.6
6	11:39	14.40	0.6	1.000	0.6	0.400	0.3156	1.00	0.3156	1.000	0.3155	4.2
7	11:40	15.40	0.6	1.150	0.6	0.460	0.3471	1.00	0.3471	1.150	0.3990	5.3
8	11:41	16.40	0.6	1.120	0.6	0.448	0.2559	1.00	0.2559	1.120	0.2865	3.8
9	11:42	17.40	0.6	1.150	0.6	0.460	0.3461	1.00	0.3461	1.150	0.3979	5.2
10	11:43	18.40	0.6	1.100	0.6	0.440	0.3802	1.00	0.3802	1.100	0.4182	5.5
11	11:44	19.40	0.6	1.230	0.6	0.492	0.4242	1.00	0.4242	1.230	0.5216	6.9
12	11:45	20.40	0.6	1.110	0.6	0.444	0.4213	1.00	0.4213	1.110	0.4674	6.2
13	11:47	21.40	0.6	1.210	0.6	0.484	0.3602	1.00	0.3602	1.210	0.4357	5.7
14	11:48	22.40	0.6	1.110	0.6	0.444	0.2982	1.00	0.2982	1.110	0.3309	4.4
15	11:49	23.40	0.6	1.030	0.6	0.412	0.3550	1.00	0.3550	1.030	0.3655	4.8
16	11:50	24.40	0.6	1.230	0.6	0.492	0.3091	1.00	0.3091	1.230	0.3800	5.0
17	11:51	25.40	0.6	1.190	0.6	0.476	0.3556	1.00	0.3556	1.190	0.4231	5.6
18	11:52	26.40	0.6	1.170	0.6	0.468	0.3842	1.00	0.3842	1.170	0.4493	5.9
19	11:54	27.40	0.6	1.310	0.6	0.524	0.2762	1.00	0.2762	1.310	0.3618	4.8
20	11:55	28.40	0.6	1.100	0.6	0.440	0.3573	1.00	0.3573	1.100	0.3929	5.2
21	11:56	29.40	0.6	0.970	0.6	0.388	0.4879	1.00	0.4879	0.972	0.4744	6.2
22	11:57	30.40	0.6	0.970	0.6	0.388	0.2533	1.00	0.2533	0.779	0.1972	2.6
23	*11:59*	*31.00*	*0.6*	*0.800*	*0.6*	*0.320*	*0.0003*	*1.00*	*0.0003*	*0.720*	*0.0002*	*0.0*
24	11:59	32.20	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.

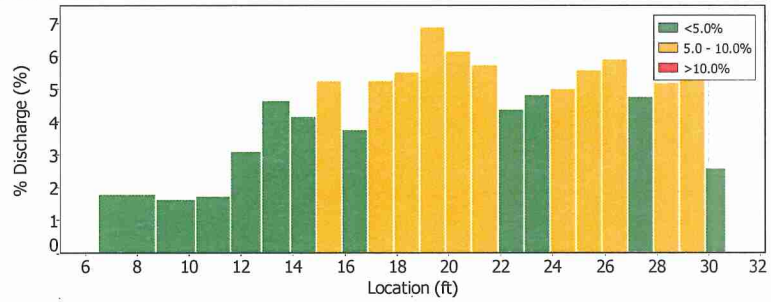
WASHINGTON STATE DEPARTMENT OF ECOLOGY

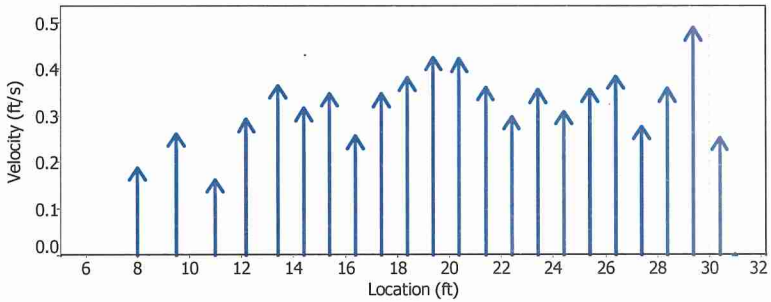
Discharge Measurement Summary

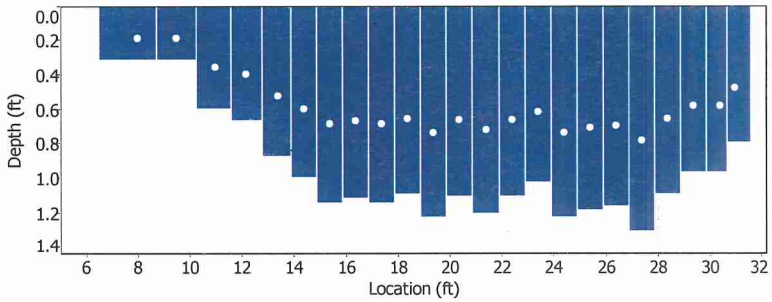
Date Generated: Tue Feb 2 2010

File Information
File Name HC3.WAD
Start Date and Time 2010/01/11 11:33:54

Site Details
Site Name HC2
Operator(s) MGW







WASHINGTON STATE DEPARTMENT OF ECOLOGY

Discharge Measurement Summary

Date Generated: Tue Feb 2 2010

File Information		Site Details	
File Name	HC3.WAD	Site Name	HC2
Start Date and Time	2010/01/11 11:33:54	Operator(s)	MGW

Quality Control

St	Loc	%Dep	Message
23	31.00	0.6	SNR (57.0) is different from typical SNR (34.0)
		0.6	High SNR variation during measurement: 2.6,5.2
		0.6	Boundary QC is Good; possible boundary interference

WASHINGTON STATE DEPARTMENT OF ECOLOGY

Discharge Measurement Summary

Date Generated: Tue Feb 2 2010

File Information

File Name HC3.WAD

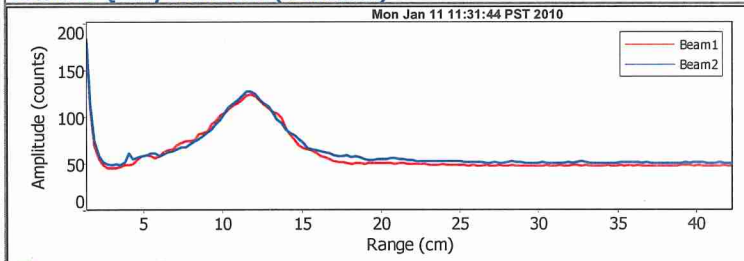
Start Date and Time 2010/01/11 11:33:54

Site Details

Site Name HC2

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: Tue Feb 2 2010

File Information	
File Name	HC5.WAD
Start Date and Time	2010/01/11 12:24:57

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%	1.1%
Velocity	0.8%	2.7%
Width	0.1%	0.1%
Method	1.7%	-
# Stations	2.0%	-
Overall	**2.9%**	**3.0%**

Summary			
Averaging Int.	40	# Stations	26
Start Edge	REW	Total Width	13.295
Mean SNR	32.2 dB	Total Area	11.643
Mean Temp	41.87 °F	Mean Depth	0.876
Disch. Equation	Mid-Section	Mean Velocity	1.1333
		Total Discharge	**13.1940**

Measurement Results

St	Clock	Loc	Method	Depth	%Dep	MeasD	Vel	CorrFact	MeanV	Area	Flow	%Q
0	12:24	4.70	None	0.000	0.0	0.0	0.0000	1.00	0.0000	0.000	0.0000	0.0
1	12:24	6.00	0.6	1.130	0.6	0.452	0.0449	1.00	0.0449	1.299	0.0584	0.4
2	12:26	7.00	0.6	1.270	0.6	0.508	0.4888	1.00	0.4888	0.889	0.4346	3.3
3	12:27	7.40	0.6	1.200	0.6	0.480	0.5978	1.00	0.5978	0.480	0.2869	2.2
4	12:28	7.80	0.6	1.270	0.6	0.508	0.8504	1.00	0.8504	0.508	0.4319	3.3
5	12:29	8.20	0.6	1.180	0.6	0.472	0.9741	1.00	0.9741	0.472	0.4597	3.5
6	12:30	8.60	0.6	1.110	0.6	0.444	1.1099	1.00	1.1099	0.444	0.4927	3.7
7	12:31	9.00	0.6	1.200	0.6	0.480	1.3770	1.00	1.3770	0.480	0.6609	5.0
8	12:32	9.40	0.6	1.300	0.6	0.520	1.6759	1.00	1.6759	0.520	0.8712	6.6
9	12:33	9.80	0.6	1.320	0.6	0.528	1.9879	1.00	1.9879	0.528	1.0493	8.0
10	12:34	10.20	0.6	1.300	0.6	0.520	2.1969	1.00	2.1969	0.520	1.1421	8.7
11	12:35	10.60	0.6	1.320	0.6	0.528	2.0417	1.00	2.0417	0.528	1.0777	8.2
12	12:36	11.00	0.6	1.120	0.6	0.448	1.7684	1.00	1.7684	0.448	0.7922	6.0
13	12:37	11.40	0.6	1.200	0.6	0.480	1.6004	1.00	1.6004	0.480	0.7681	5.8
14	*12:38*	*11.80*	*0.6*	*1.100*	*0.6*	*0.440*	*1.4085*	*1.00*	*1.4085*	*0.440*	*0.6197*	*4.7*
15	*12:39*	*12.20*	*0.6*	*1.000*	*0.6*	*0.400*	*1.4068*	*1.00*	*1.4068*	*0.400*	*0.5626*	*4.3*
16	12:41	12.60	0.6	0.900	0.6	0.360	1.5584	1.00	1.5584	0.360	0.5609	4.3
17	12:41	13.00	0.6	0.800	0.6	0.320	1.4085	1.00	1.4085	0.360	0.5075	3.8
18	12:43	13.50	0.6	0.650	0.6	0.260	1.5279	1.00	1.5279	0.326	0.4975	3.8
19	12:44	14.00	0.6	0.600	0.6	0.240	1.7024	1.00	1.7024	0.301	0.5118	3.9
20	*12:45*	*14.50*	*0.6*	*0.580*	*0.6*	*0.232*	*1.2139*	*1.00*	*1.2139*	*0.291*	*0.3528*	*2.7*
21	12:46	15.00	0.6	0.580	0.6	0.232	1.3448	1.00	1.3448	0.291	0.3908	3.0
22	12:47	15.50	0.6	0.620	0.6	0.248	1.3097	1.00	1.3097	0.311	0.4069	3.1
23	12:48	16.00	0.6	0.670	0.6	0.268	0.5118	1.00	0.5118	0.501	0.2565	1.9
24	*12:49*	*17.00*	*0.6*	*0.470*	*0.6*	*0.188*	*0.0030*	*1.00*	*0.0030*	*0.468*	*0.0014*	*0.0*
25	12:49	18.00	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.

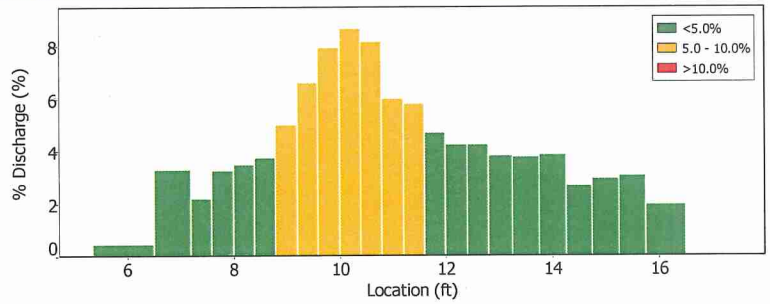
WASHINGTON STATE DEPARTMENT OF ECOLOGY

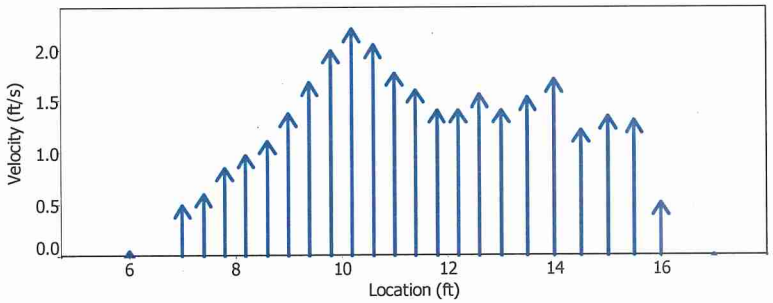
Discharge Measurement Summary

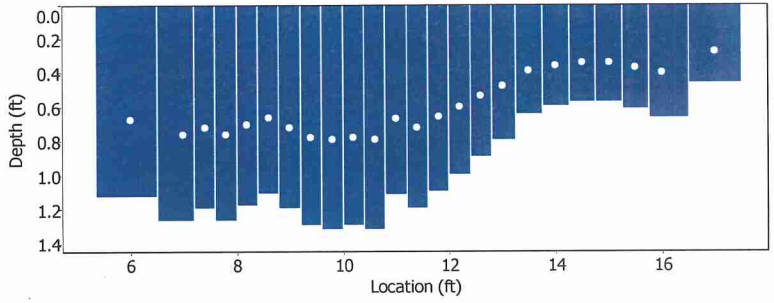
Date Generated: Tue Feb 2 2010

File Information
File Name HC5.WAD
Start Date and Time 2010/01/11 12:24:57

Site Details
Site Name HC5
Operator(s) MGW







WASHINGTON STATE DEPARTMENT OF ECOLOGY

Discharge Measurement Summary

Date Generated: Tue Feb 2 2010

File Information		Site Details	
File Name	HC5.WAD	Site Name	HC5
Start Date and Time	2010/01/11 12:24:57	Operator(s)	MGW

Quality Control

St	Loc	%Dep	Message
14	11.80	0.6	High standard error: 0.075
15	12.20	0.6	High number of spikes: 5
20	14.50	0.6	High number of spikes: 5
24	17.00	0.6	High number of spikes: 6
		0.6	SNR (51.4) is different from typical SNR (32.2)
		0.6	High SNR variation during measurement: 7.3,9.9

WASHINGTON STATE DEPARTMENT OF ECOLOGY

Discharge Measurement Summary

Date Generated: Tue Feb 2 2010

File Information

File Name HC5.WAD

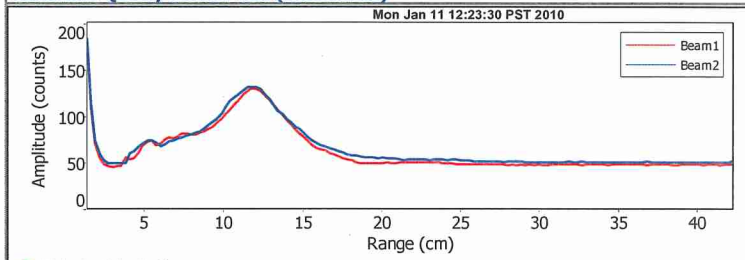
Start Date and Time 2010/01/11 12:24:57

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: Tue Apr 6 2010

File Information	
File Name	HC1.WAD
Start Date and Time	2010/03/30 08:44:59

Site Details	
Site Name	HC1
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%	1.3%
Velocity	1.1%	6.3%
Width	0.1%	0.1%
Method	1.4%	-
# Stations	2.3%	-
Overall	**3.1%**	**6.5%**

Summary

Averaging Int.	40	# Stations	22
Start Edge	REW	Total Width	13.999
Mean SNR	30.4 dB	Total Area	16.603
Mean Temp	42.90 °F	Mean Depth	1.186
Disch. Equation	Mid-Section	Mean Velocity	0.3141
		Total Discharge	**5.2151**

Measurement Results

St	Clock	Loc	Method	Depth	%Dep	MeasD	Vel	CorrFact	MeanV	Area	Flow	%Q
0	08:44	5.00	None	0.000	0.0	0.0	0.0000	1.00	0.0000	0.000	0.0000	0.0
1	*08:44*	*7.00*	*0.6*	*0.750*	*0.6*	*0.300*	*0.0148*	*1.00*	*0.0148*	*1.313*	*0.0194*	*0.4*
2	*08:46*	*8.50*	*0.6*	*1.180*	*0.6*	*0.472*	*0.0164*	*1.00*	*0.0164*	*1.475*	*0.0242*	*0.5*
3	*08:47*	*9.50*	*0.6*	*1.100*	*0.6*	*0.440*	*-0.0207*	*1.00*	*-0.0207*	*1.100*	*-0.0227*	*-0.4*
4	*08:49*	*10.50*	*0.6*	*1.060*	*0.6*	*0.424*	*-0.0531*	*1.00*	*-0.0531*	*0.795*	*-0.0423*	*-0.8*
5	*08:50*	*11.00*	*0.6*	*1.150*	*0.6*	*0.460*	*0.1358*	*1.00*	*0.1358*	*0.575*	*0.0781*	*1.5*
6	08:51	11.50	0.6	1.300	0.6	0.520	0.3720	1.00	0.3720	0.650	0.2418	4.6
7	08:52	12.00	0.6	1.300	0.6	0.520	0.7352	1.00	0.7352	0.585	0.4300	8.2
8	08:53	12.40	0.6	1.200	0.6	0.480	0.8251	1.00	0.8251	0.480	0.3960	7.6
9	08:54	12.80	0.6	1.400	0.6	0.560	0.8301	1.00	0.8301	0.560	0.4647	8.9
10	08:55	13.20	0.2/0.8	1.530	0.2	1.224	0.9629	1.00	0.9596	0.612	0.5872	11.3
10	08:56	13.20	0.2/0.8	1.530	0.8	0.306	0.9564					
11	08:58	13.60	0.8/0.2	1.650	0.2	1.320	1.0082	1.00	0.9872	0.660	0.6514	12.5
11	08:58	13.60	0.8/0.2	1.650	0.8	0.330	0.9662					
12	09:00	14.00	0.2/0.8	1.800	0.2	1.440	0.8320	1.00	0.8742	0.720	0.6293	12.1
12	09:01	14.00	0.2/0.8	1.800	0.8	0.360	0.9163					
13	*09:04*	*14.40*	*0.8/0.2*	*2.030*	*0.2*	*1.624*	*0.5394*	*1.00*	*0.4308*	*0.812*	*0.3497*	*6.7*
13	*09:03*	*14.40*	*0.8/0.2*	*2.030*	*0.8*	*0.406*	*0.3222*					
14	*09:05*	*14.80*	*0.2/0.8*	*2.000*	*0.2*	*1.600*	*0.5095*	*1.00*	*0.5285*	*0.800*	*0.4228*	*8.1*
14	*09:06*	*14.80*	*0.2/0.8*	*2.000*	*0.8*	*0.400*	*0.5476*					
15	*09:09*	*15.20*	*0.8/0.2*	*1.920*	*0.2*	*1.536*	*0.2592*	*1.00*	*0.3898*	*0.768*	*0.2993*	*5.7*
15	*09:08*	*15.20*	*0.8/0.2*	*1.920*	*0.8*	*0.384*	*0.5203*					
16	*09:10*	*15.60*	*0.2/0.6/0.8*	*1.840*	*0.2*	*1.472*	*0.1713*	*1.00*	*0.4244*	*0.736*	*0.3123*	*6.0*
16	*09:12*	*15.60*	*0.2/0.6/0.8*	*1.840*	*0.6*	*0.736*	*0.5784*					
16	*09:11*	*15.60*	*0.2/0.6/0.8*	*1.840*	*0.8*	*0.368*	*0.3694*					
17	*09:14*	*16.00*	*0.2/0.6/0.8*	*1.790*	*0.2*	*1.432*	*0.2434*	*1.00*	*0.3659*	*0.806*	*0.2949*	*5.7*
17	*09:16*	*16.00*	*0.2/0.6/0.8*	*1.790*	*0.6*	*0.716*	*0.4423*					
17	*09:15*	*16.00*	*0.2/0.6/0.8*	*1.790*	*0.8*	*0.358*	*0.3356*					
18	*09:19*	*16.50*	*0.2/0.8*	*1.550*	*0.2*	*1.240*	*0.1178*	*1.00*	*0.1332*	*0.776*	*0.1034*	*2.0*
18	*09:20*	*16.50*	*0.2/0.8*	*1.550*	*0.8*	*0.310*	*0.1486*					
19	*09:22*	*17.00*	*0.8/0.2*	*1.510*	*0.2*	*1.208*	*-0.0351*	*1.00*	*-0.0218*	*1.132*	*-0.0247*	*-0.5*
19	*09:21*	*17.00*	*0.8/0.2*	*1.510*	*0.8*	*0.302*	*-0.0085*					
20	*09:23*	*18.00*	*0.6*	*1.250*	*0.6*	*0.500*	*0.0003*	*1.00*	*0.0003*	*1.249*	*0.0004*	*0.0*
21	09:23	19.00	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.

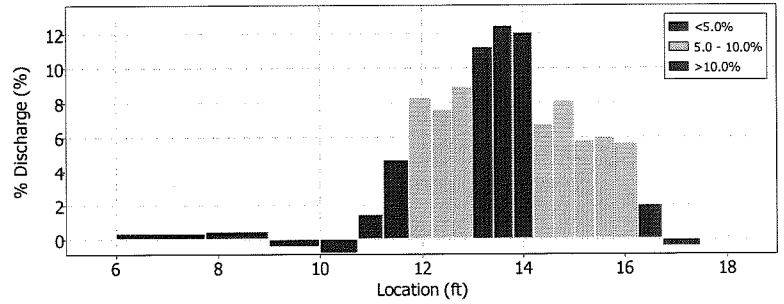
WASHINGTON STATE DEPARTMENT OF ECOLOGY

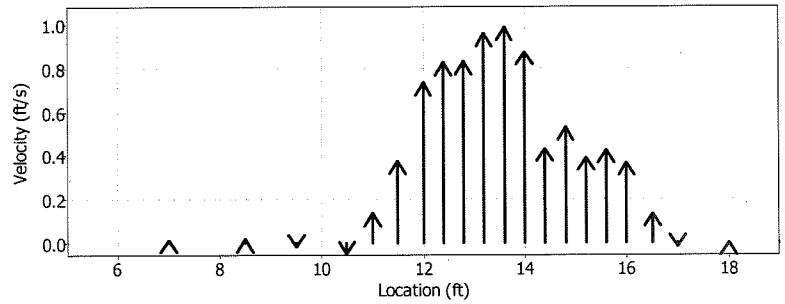
Discharge Measurement Summary

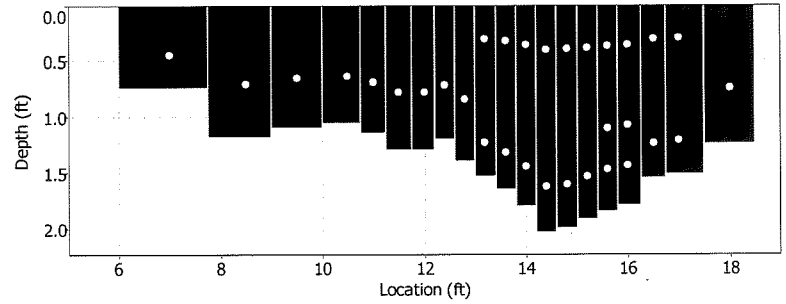
Date Generated: Tue Apr 6 2010

File Information
File Name HC1.WAD
Start Date and Time 2010/03/30 08:44:59

Site Details
Site Name HC1
Operator(s) MGW







WASHINGTON STATE DEPARTMENT OF ECOLOGY

Discharge Measurement Summary

Date Generated: Tue Apr 6 2010

File Information		Site Details	
File Name	HC1.WAD	Site Name	HC1
Start Date and Time	2010/03/30 08:44:59	Operator(s)	MGW

Quality Control

St	Loc	%Dep	Message
1	7.00	0.6	SNR (43.4) is different from typical SNR (30.4)
		0.6	High SNR variation during measurement: 8.6,7.7
2	8.50	0.6	High SNR variation during measurement: 6.5,6.9
3	9.50	0.6	High angle: 116
		0.6	SNR (48.6) is different from typical SNR (30.4)
4	10.50	0.6	High angle: 134
		0.6	SNR (46.2) is different from typical SNR (30.4)
5	11.00	0.6	High angle: 25
		0.6	SNR (41.1) is different from typical SNR (30.4)
13	14.40	0.2	High standard error: 0.041
14	14.80	0.8	High standard error: 0.035
15	15.20	0.8	High angle: 22
16	15.60	0.8	High angle: 27
17	16.00	0.8	High angle: 27
		0.8	High standard error: 0.034
18	16.50	0.8	High angle: 28
19	17.00	0.2	High angle: 179
		0.8	High SNR variation during measurement: 9.0,6.9
20	18.00	0.6	SNR (52.2) is different from typical SNR (30.4)
		0.6	High SNR variation during measurement: 7.3,4.7

WASHINGTON STATE DEPARTMENT OF ECOLOGY

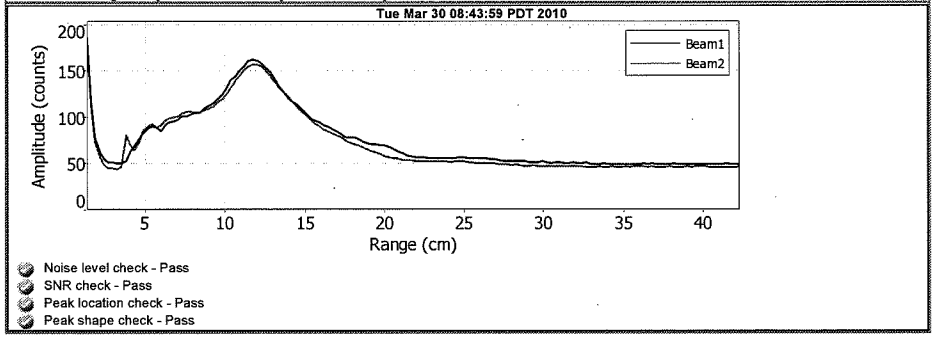
Discharge Measurement Summary

Date Generated: Tue Apr 6 2010

File Information
File Name HC1.WAD
Start Date and Time 2010/03/30 08:44:59

Site Details
Site Name HC1
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: Tue Apr 6 2010

File Information		Site Details	
File Name	HC3.WAD	Site Name	HC3
Start Date and Time	2010/03/30 09:54:28	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%	0.8%
Velocity	0.7%	2.7%
Width	0.1%	0.1%
Method	1.8%	-
# Stations	2.1%	-
Overall	**3.0%**	**3.0%**

Summary

Averaging Int.	40	# Stations	24
Start Edge	REW	Total Width	24.000
Mean SNR	25.6 dB	Total Area	22.918
Mean Temp	46.25 °F	Mean Depth	0.955
Disch. Equation	Mid-Section	Mean Velocity	0.4590
		Total Discharge	**10.5198**

Measurement Results

St	Clock	Loc	Method	Depth	%Dep	MeasD	Vel	CorrFact	MeanV	Area	Flow	%Q
0	09:54	5.00	None	0.000	0.0	0.0	0.0000	1.00	0.0000	0.000	0.0000	0.0
1	09:54	7.50	0.6	0.200	0.6	0.080	0.1604	1.00	0.1604	0.350	0.0562	0.5
2	09:55	8.50	0.6	0.480	0.6	0.192	0.2995	1.00	0.2995	0.480	0.1438	1.4
3	09:56	9.50	0.6	0.610	0.6	0.244	0.3868	1.00	0.3868	0.610	0.2359	2.2
4	09:57	10.50	0.6	0.740	0.6	0.296	0.4396	1.00	0.4396	0.740	0.3254	3.1
5	09:58	11.50	0.6	0.840	0.6	0.336	0.4984	1.00	0.4984	0.840	0.4186	4.0
6	09:59	12.50	0.6	0.910	0.6	0.364	0.5059	1.00	0.5059	0.910	0.4604	4.4
7	10:00	13.50	0.6	0.980	0.6	0.392	0.4400	1.00	0.4400	0.980	0.4312	4.1
8	10:01	14.50	0.6	1.100	0.6	0.440	0.5591	1.00	0.5591	1.100	0.6150	5.8
9	10:02	15.50	0.6	1.290	0.6	0.516	0.5404	1.00	0.5404	1.290	0.6971	6.6
10	10:04	16.50	0.6	1.230	0.6	0.492	0.4193	1.00	0.4193	1.230	0.5157	4.9
11	10:05	17.50	0.6	1.200	0.6	0.480	0.5745	1.00	0.5745	1.200	0.6894	6.6
12	10:06	18.50	0.6	1.230	0.6	0.492	0.4551	1.00	0.4551	1.230	0.5597	5.3
13	10:07	19.50	0.6	1.120	0.6	0.448	0.3927	1.00	0.3927	1.120	0.4399	4.2
14	10:08	20.50	0.6	1.140	0.6	0.456	0.4275	1.00	0.4275	1.140	0.4874	4.6
15	10:09	21.50	0.6	1.250	0.6	0.500	0.4967	1.00	0.4967	1.250	0.6209	5.9
16	10:10	22.50	0.6	1.300	0.6	0.520	0.5420	1.00	0.5420	1.300	0.7045	6.7
17	10:11	23.50	0.6	1.400	0.6	0.560	0.5797	1.00	0.5797	1.400	0.8116	7.7
18	10:12	24.50	0.6	1.430	0.6	0.572	0.4692	1.00	0.4692	1.430	0.6710	6.4
19	10:14	25.50	0.6	1.400	0.6	0.560	0.5653	1.00	0.5653	1.400	0.7914	7.5
20	10:15	26.50	0.6	1.280	0.6	0.512	0.4767	1.00	0.4767	1.280	0.6101	5.8
21	10:16	27.50	0.6	1.000	0.6	0.400	0.2106	1.00	0.2106	1.000	0.2106	2.0
22	*10:17*	*28.50*	*0.6*	*0.850*	*0.6*	*0.340*	*0.0377*	*1.00*	*0.0377*	*0.638*	*0.0241*	*0.2*
23	10:17	29.00	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.

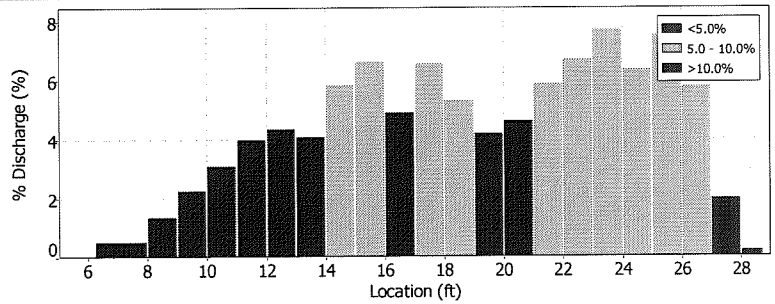
WASHINGTON STATE DEPARTMENT OF ECOLOGY

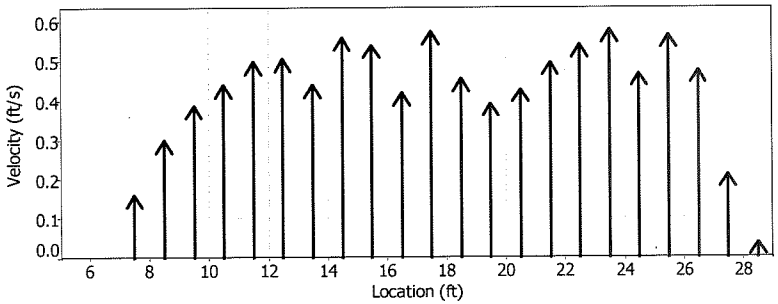
Discharge Measurement Summary

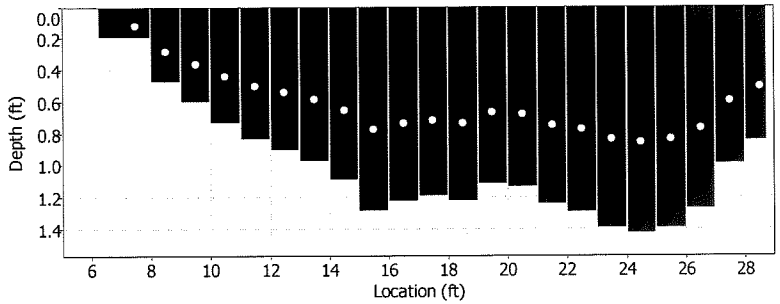
Date Generated: Tue Apr 6 2010

File Information
File Name HC3.WAD
Start Date and Time 2010/03/30 09:54:28

Site Details
Site Name HC3
Operator(s) MGW







WASHINGTON STATE DEPARTMENT OF ECOLOGY

Discharge Measurement Summary

Date Generated: Tue Apr 6 2010

File Information		Site Details	
File Name	HC3.WAD	Site Name	HC3
Start Date and Time	2010/03/30 09:54:28	Operator(s)	MGW

Quality Control

St	Loc	%Dep	Message
22	28.50	0.6	High angle: -27
		0.6	High SNR variation during measurement: 9.0,6.0
		0.6	Boundary QC is Fair; possible boundary interference

WASHINGTON STATE DEPARTMENT OF ECOLOGY

Discharge Measurement Summary

Date Generated: Tue Apr 6 2010

File Information

File Name HC3.WAD

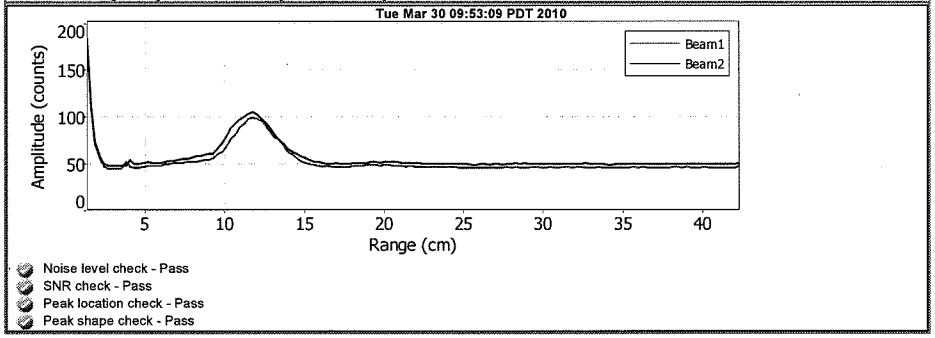
Start Date and Time 2010/03/30 09:54:28

Site Details

Site Name HC3

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: Tue Apr 6 2010

File Information

File Name	HC5.WAD
Start Date and Time	2010/03/30 10:43:09

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	0.1%	1.0%
Velocity	0.7%	4.8%
Width	0.1%	0.1%
Method	1.4%	-
# Stations	2.0%	-
Overall	**2.8%**	**5.0%**

Summary

Averaging Int.	40	# Stations	26
Start Edge	REW	Total Width	14.000
Mean SNR	33.3 dB	Total Area	17.715
Mean Temp	46.09 °F	Mean Depth	1.265
Disch. Equation	Mid-Section	Mean Velocity	1.0731
		Total Discharge	**19.0095**

Measurement Results

St	Clock	Loc	Method	Depth	%Dep	MeasD	Vel	CorrFact	MeanV	Area	Flow	%Q
0	10:43	5.00	None	0.000	0.0	0.0	0.0000	1.00	0.0000	0.000	0.0000	0.0
1	10:43	6.00	0.6	1.420	0.6	0.568	0.0079	1.00	0.0079	1.420	0.0112	0.1
2	*10:44*	*7.00*	*0.2/0.8*	*1.870*	*0.2*	*1.496*	*0.1332*	*1.00*	*0.2021*	*1.403*	*0.2835*	*1.5*
2	*10:45*	*7.00*	*0.2/0.8*	*1.870*	*0.8*	*0.374*	*0.2710*					
3	*10:47*	*7.50*	*0.8/0.2*	*1.900*	*0.2*	*1.520*	*0.1791*	*1.00*	*0.2779*	*0.950*	*0.2640*	*1.4*
3	*10:46*	*7.50*	*0.8/0.2*	*1.900*	*0.8*	*0.380*	*0.3766*					
4	*10:48*	*8.00*	*0.2/0.8*	*1.700*	*0.2*	*1.360*	*0.2290*	*1.00*	*0.3791*	*0.850*	*0.3223*	*1.7*
4	*10:49*	*8.00*	*0.2/0.8*	*1.700*	*0.8*	*0.340*	*0.5292*					
5	*10:52*	*8.50*	*0.8/0.2*	*1.500*	*0.2*	*1.200*	*0.6657*	*1.00*	*0.8273*	*0.750*	*0.6204*	*3.3*
5	*10:51*	*8.50*	*0.8/0.2*	*1.500*	*0.8*	*0.300*	*0.9888*					
6	*10:53*	*9.00*	*0.2/0.8*	*1.710*	*0.2*	*1.368*	*1.4341*	*1.00*	*1.3056*	*0.855*	*1.1163*	*5.9*
6	*10:54*	*9.00*	*0.2/0.8*	*1.710*	*0.8*	*0.342*	*1.1772*					
7	*10:56*	*9.50*	*0.8/0.2*	*1.710*	*0.2*	*1.368*	*1.8822*	*1.00*	*1.5284*	*0.855*	*1.3067*	*6.9*
7	*10:55*	*9.50*	*0.8/0.2*	*1.710*	*0.8*	*0.342*	*1.1745*					
8	*10:57*	*10.00*	*0.2/0.8*	*1.710*	*0.2*	*1.368*	*2.0348*	*1.00*	*1.4432*	*0.855*	*1.2340*	*6.5*
8	*10:58*	*10.00*	*0.2/0.8*	*1.710*	*0.8*	*0.342*	*0.8517*					
9	*11:00*	*10.50*	*0.8/0.2*	*1.620*	*0.2*	*1.296*	*2.0062*	*1.00*	*1.3752*	*0.810*	*1.1139*	*5.9*
9	*10:59*	*10.50*	*0.8/0.2*	*1.620*	*0.8*	*0.324*	*0.7441*					
10	*11:01*	*11.00*	*0.2/0.8*	*1.570*	*0.2*	*1.256*	*2.0515*	*1.00*	*1.5305*	*0.785*	*1.2014*	*6.3*
10	*11:02*	*11.00*	*0.2/0.8*	*1.570*	*0.8*	*0.314*	*1.0095*					
11	11:03	11.50	0.6	1.430	0.6	0.572	1.6302	1.00	1.6302	0.715	1.1657	6.1
12	11:04	12.00	0.6	1.320	0.6	0.528	1.9341	1.00	1.9341	0.660	1.2764	6.7
13	*11:06*	*12.50*	*0.6*	*1.320*	*0.6*	*0.528*	*1.4728*	*1.00*	*1.4728*	*0.660*	*0.9719*	*5.1*
14	11:07	13.00	0.6	1.260	0.6	0.504	1.7244	1.00	1.7244	0.630	1.0862	5.7
15	11:08	13.50	0.6	1.250	0.6	0.500	1.6007	1.00	1.6007	0.625	1.0005	5.3
16	11:09	14.00	0.6	1.200	0.6	0.480	1.3809	1.00	1.3809	0.600	0.8286	4.4
17	11:10	14.50	0.6	1.120	0.6	0.448	1.5837	1.00	1.5837	0.560	0.8869	4.7
18	11:11	15.00	0.6	1.150	0.6	0.460	1.4820	1.00	1.4820	0.575	0.8521	4.5
19	11:12	15.50	0.6	1.100	0.6	0.440	1.4934	1.00	1.4934	0.550	0.8214	4.3
20	11:13	16.00	0.6	1.100	0.6	0.440	1.7231	1.00	1.7231	0.550	0.9478	5.0
21	11:14	16.50	0.6	1.000	0.6	0.400	1.8077	1.00	1.8077	0.500	0.9039	4.8
22	*11:16*	*17.00*	*0.6*	*1.000*	*0.6*	*0.400*	*0.6660*	*1.00*	*0.6660*	*0.500*	*0.3330*	*1.8*
23	*11:17*	*17.50*	*0.6*	*0.900*	*0.6*	*0.360*	*-1.0256*	*-1.00*	*1.0256*	*0.450*	*0.4615*	*2.4*
24	*11:19*	*18.00*	*Input V*	*0.810*	*0.0*	*0.000*	*0.0000*	*1.00*	*0.0000*	*0.608*	*0.0000*	*0.0*
25	11:19	19.00	None	0.000	0.0	0.0	0.0000	1.00	0.0000	0.000	0.0000	0.0

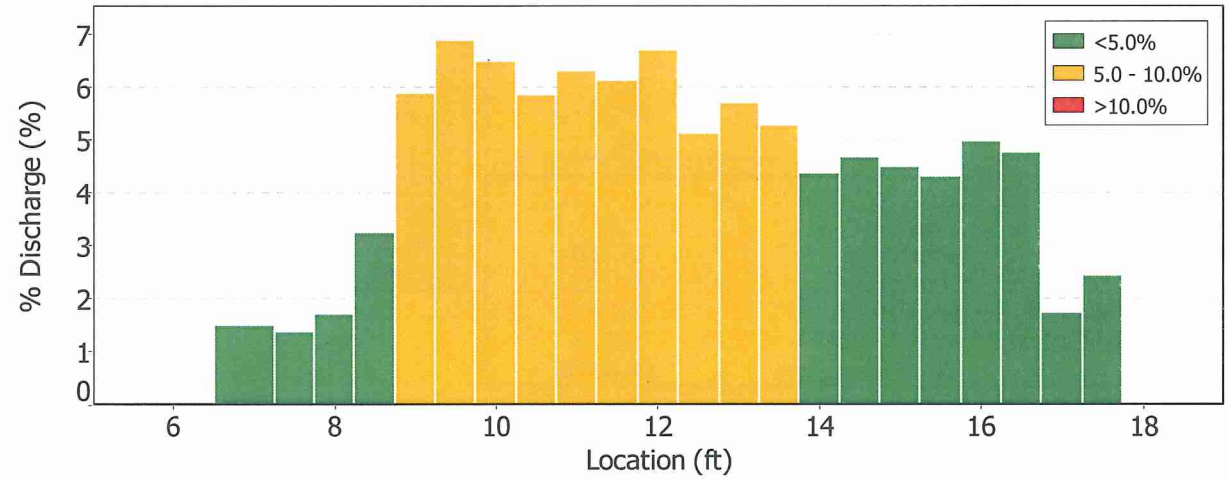
Rows in italics indicate a QC warning. See the Quality Control page of this report for more information.

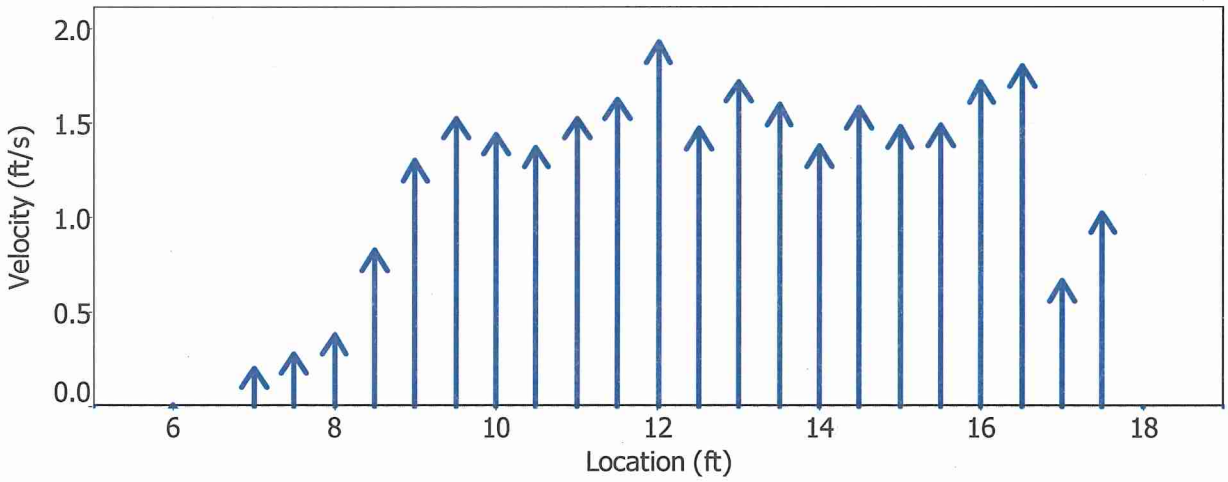
WASHINGTON STATE DEPARTMENT OF ECOLOGY

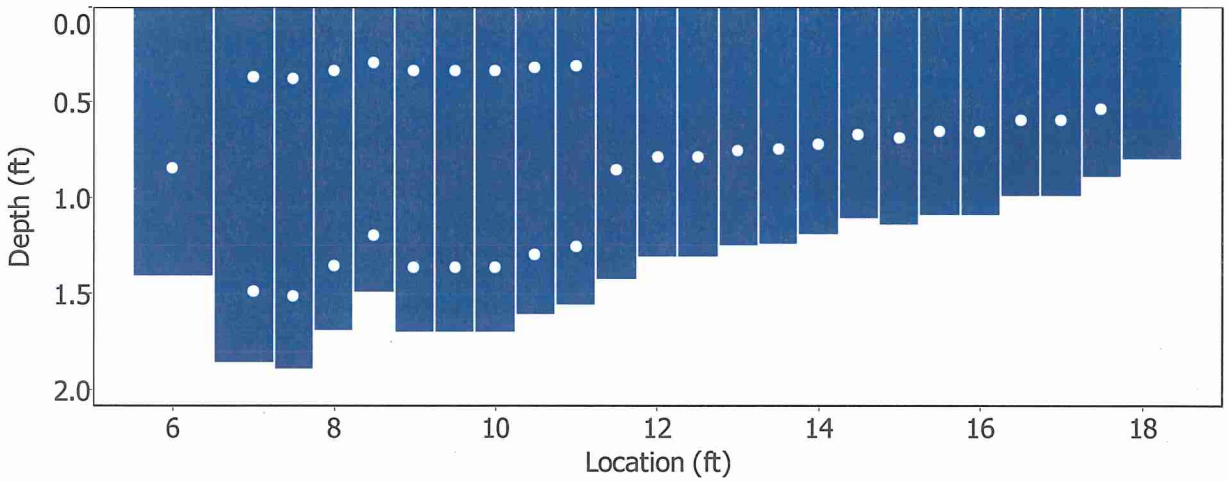
Discharge Measurement Summary

Date Generated: Tue Apr 6 2010

File Information		Site Details	
File Name	HC5.WAD	Site Name	HC5
Start Date and Time	2010/03/30 10:43:09	Operator(s)	MGW







WASHINGTON STATE DEPARTMENT OF ECOLOGY

Discharge Measurement Summary

Date Generated: Tue Apr 6 2010

File Information	
File Name	HC5.WAD
Start Date and Time	2010/03/30 10:43:09

Site Details	
Site Name	HC5
Operator(s)	MGW

Quality Control

St	Loc	%Dep	Message
2	7.00	0.8	High angle: -27
3	7.50	0.8	High angle: -47
4	8.00	0.8	High angle: -42
5	8.50	0.8	High angle: -27
6	9.00	0.8	High angle: -27
7	9.50	0.2	High number of spikes: 5
		0.8	High standard error: 0.087
8	10.00	0.8	High standard error: 0.058
9	10.50	0.8	High standard error: 0.094
10	11.00	0.8	High standard error: 0.058
13	12.50	0.6	High standard error: 0.097
22	17.00	0.6	High SNR variation during measurement: 3.4,5.2
		0.6	Boundary QC is Good; possible boundary interference
23	17.50	0.6	High angle: 176
24	18.00	0.0	Low SNR: 0.0,0.0
		0.0	SNR (0.0) is different from typical SNR (34.7)
		0.0	High standard error: 0.000

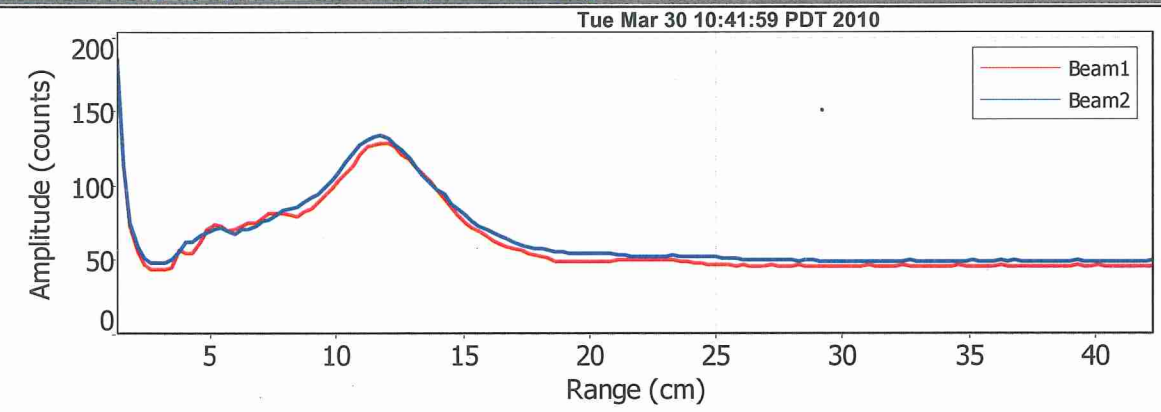
WASHINGTON STATE DEPARTMENT OF ECOLOGY

Discharge Measurement Summary

Date Generated: Tue Apr 6 2010

File Information		Site Details	
File Name	HC5.WAD	Site Name	HC5
Start Date and Time	2010/03/30 10:43:09	Operator(s)	MGW

Automatic Quality Control Test (BeamCheck)



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