9-275-I	10/24/08	U.S. DEPARTMENT OF THE INTERIOR	Meas. No.	13
Station Number		*U.S. Geological Survey*	Processed by	SS
363740089180601		**ADCP Discharge Measurement Notes**	Checked by	TL

Station Name	INFLOW OUTFLOW #1		
Date	5-19 , 20 11	Party	FSS / TL

Width	Area / Rated Area	Velocity	Index Vel.	Gage Height	Discharge
2170	14200 /	5.42	—	—	76700

Gage Height Change	Meas. plots	From rating	Shift	ADCP Sync'd to WT
~~in~~ hrs.	~~% diff~~	No.: —	—	Y at _____ or N

ADCP Mfr / Model / Frequency	Serial No.	Firmware	Software
RDI / RIO / 1200	2339	10.16	2.07

Boat/Motors Used	GPS Used	ADCP Depth	Diag. Test / Errors?
MOWSC WOODBRIDGE	TRIMB AG	1.0	☑ Y or N

Compass Calib. & Total Error	Mag. Var	MagVar Method	Moving Bed?
Y or N / .4	-1.6	On-site (Model) Previous	Y or (N)

Meas. Water Temp	ADCP Water Temp	Weather / Air Temp	Wind Speed / Dir.
17.9 °F (C) at	18.7 °F (C) at	MC WARM °F / C	0-5 SE

Gage Readings							Site Conditions	
Time					Inside	Outside	Max Water Depth	8.80
							Max Water Speed	/
1246	(S)						Max Boat Speed	
							Water Mode	12
1327	(F)						Bottom Mode	5
							Streambed material	
							Salinity	
							ppt at	
Weighted MGH							Checkbar found	
GH corrections							Checkbar changed to:	
Correct MGH							at	

Wading, cable, ice, (boat) upstr., downstr., side bridge		ft., mi. upstr., downstr. of gage
Measurement rated:	excellent (2%), good (5%), ~~fair (8%)~~, poor (>8%)	based on following conditions
Flow	FAIRLY EVEN	
Cross section:	FAIRLY EVEN - SAND	
Control:	—	

Gage operating:	Y or N	Record removed:	Y or N	Filename:	
Battery voltage	V	Intakes/Orifice cleaned/purged:			
Bubble-gage psi:	Tank	Line	Bubble rate	/ min	
Extreme-GH indicators:	Max	Min	CSG Checked	Y or N	
HWM on stick	Ref elev.	HWM elevation			
GH of zero flow = GH	- depth at control	=	ft, Rated=		
Sheet No.	of	sheets			

Station Number: Meas. No:

Station Name: Inflow/Outflow #1 Middle Breach Date: 05/19/2011

Party: ESS/TL	Width: 2,170 ft	Processed by: ESS
Boat/Motor: MO WSC Wldrdg	Area: 14,200 ft²	Mean Velocity: 5.42 ft/s
Gage Height: 0.00 ft	G.H.Change: 0.000 ft	Discharge: 76,700 ft³/s

Area Method: Avg. Course	ADCP Depth: 1.000 ft	Index Vel.: 0.00 ft/s	Rating No.: 1
Nav. Method: DGPS	Shore Ens.:10	Adj.Mean Vel: 0.00 ft/s	Qm Rating: F
MagVar Method: Model (-1.6°)	Bottom Est: Power (0.1667)	Rated Area: 0.000 ft²	Diff.: 0.000%
Depth Sounder: Not Used	Top Est: Power (0.1667)	Control1: Unspecified	
		Control2: Unspecified	
		Control3: Unspecified	

Screening Thresholds:		ADCP:	
BT 3-Beam Solution: YES	Max. Vel.: 8.80 ft/s	Type/Freq.: Rio Grande/1200 kHz	
WT 3-Beam Solution: NO	Max. Depth: 9.01 ft	Serial #: 2339	Firmware: 10.16
BT Error Vel.: 0.33 ft/s	Mean Depth: 6.53 ft	Bin Size: 25 cm	Blank: 25 cm
WT Error Vel.: 3.50 ft/s	% Meas.: 37.36	BT Mode: 5	BT Pings: 1
BT Up Vel.: 1.00 ft/s	Water Temp.: 17.9 °C	WT Mode: 12	WT Pings: 1
WT Up Vel.: 6.00 ft/s	ADCP Temp.: 18.3 °C	WV : 175	WO : 1, 8
Use Weighted Mean Depth: YES			

Performed Diag. Test: YES

Performed Moving Bed Test: YES

Performed Compass Test: YES

Meas. Location:

Project Name: Inflow Outflow #1 05_19_11_

Software: 2.07

Tr.#		Edge Distance L	Edge Distance R	#Ens.	Discharge Top	Discharge Middle	Discharge Bottom	Discharge Left	Discharge Right	Discharge Total	Width	Area	Time Start	Time End	Mean Vel. Boat	Mean Vel. Water	% Bad Ens.	% Bad Bins
000	R	103	215	884	32819	29072	16098	-197	480	78273	2300	14862	12:46	12:55	5.74	5.27	7	0
001	L	66	150	1101	31271	28707	15291	-100	488	75658	2199	14304	12:56	13:07	5.03	5.29	11	0
002	R	70	148	889	32326	28858	15655	-192	-151	76496	2112	13686	13:07	13:16	6.12	5.59	7	0
003	L	68	137	1098	32212	27941	15884	-147	341	76231	2067	13815	13:16	13:27	5.07	5.52	8	0
Mean		77	163	993	32157	28645	15732	-159	289	76664	2170	14167	**Total**	00:41	5.49	5.42	8	0
SDev		18	35	123	647	492	345	45.1	301	1128	102.6	534.3			0.53	0.16		
SD/M		0.23	0.22	0.12	0.02	0.02	0.02	0.28	1.04	0.01	0.05	0.04			0.10	0.03		

Remarks:

LC Version 3.20, July 8, 2010

Processed on: 16-Jun-2011

Loop File: Inflow Outflow #1 05_19_11_0_004_LBT_ASC.TXT

Distance Made Good (ft)	Loop Time (sec)	Moving Bed Velocity (ft/s)	Moving Bed Direction (degrees)	Flow Direction (degrees)	Estimated Percent Correction (percent)
111.09	627.82	0.18	149.89	66.24	4.93

Percent Bad Bottom Track: 14.6

WARNING: Percentage of bad bottom track values exceeds 5.
Loop may not be accurate. Please review data.

Difference in flow direction between out and back sections: 11.2 deg

WARNING: Difference in flow direction between out and back sections of loop exceeds 5 degrees. This may indicated an inaccurate compass and the loop may not be accurate. Please review data.

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Loop Closure Error not in Upstream Direction -- No Correction Recommended

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