

Meas. No. _____

9-275-I
REV (10-01)

Geological Survey
Water Resources Division

Processed by SB

Acoustic Profiler Discharge Measurement Notes

Sta. No. _____ Acoustic Pionier Discharge Measurement Notes Ck'd by _____

Sta. Name INFLOW/OUTFLOW 1

Date 5/14 20 11 Party BB CR

Width 1380 Area 14700 Vel. 5.61 G.H. — Disch. 82.500

Profiler Water Temp. 18.3 °C at 1038 Rated area: _____ Index Velocity _____

Profiler S/N: 2339 Mfr: LD1 Freq: 1200 Firmware: 10.16 Software Ver: 2.07

Depth Cell Size	25	Other commands:
No. of Cells		
Blanking Distance	25	
Water Mode	12	
Ambiguity Vel.	254	
Water pings	1	
Bottom pings	1	

Profiler Depth 1.50

Config. file _____

Deployment mmB

Moving Bed 000

Moving Bed Present: ☒ (Y) ☐ (N)

Diag. Test YES

Diag. Test Errors: Y (N

Boat/Motor Used WOODRIDGE ADCP Time to WT ☐ @ _____ GPS: ☒

Mag. Var. 1) MODEL 2) _____ 3) _____ 4) _____ Avg: -1.4 Comp. Cal.: 1

[illegible]

Samples collected: water quality, sediment, biological, other: _____

Measurements documented on other sheets:
water quality, aux/base gage, other:

Rain gage serviced/calibrated _____

Weather_____

Wind Spd. _____ Dir. _____

Air Temp. _____ °C at _____

Water Temp. _____ °C at _____

Specific Cond: _____

Checkbar/chain found_____

Changed to _____ at _____

Correct _____

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: UNEVEN, SWIRLS AND MULTI-DIRECTIONAL FLOW

Cross section: CROP FIELD, MOSTLY EVEN

Control: _____

Gage operating:_____ Record removed: Y or N Filename:_____

Battery voltage: _____ Intakes/Orifice cleaned/purged: _____

Bubble-gage psi: Tank _____, Line _____; Bubble rate _____/min.

Extreme-GH indicators: max _____, min _____.

CSG checked: _____ HWM height on stick _____ Ref elev _____ HWM elev _____

Remarks: BOTTOM TRACK REFERENCE INCLUDED WITH LOOP CORRECTION

GH of zero flow = GH _____ - depth at control _____ = _____ ft. rated _____

Station Number:

Meas. No:

Station Name: Inflow/Outflow 1

Date: 05/14/2011

Party: BB,CR

Width: 1,380 ft

Processed by: BB

Boat/Motor: wooldridge

Area: 14,700 ft²

Mean Velocity: 5.61 ft/s

Gage Height: 0.00 ft

G.H.Change: 0.000 ft

Discharge: 82,500 ft³/s

Area Method: Avg. Course

ADCP Depth: 1.500 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: P

MagVar Method: Model (-1.4°)

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:

BT 3-Beam Solution: YES

Max. Vel.: 11.5 ft/s

ADCP:

WT 3-Beam Solution: NO

Max. Depth: 13.2 ft

Type/Freq.: Rio Grande/1200 kHz

BT Error Vel.: 0.33 ft/s*

Mean Depth: 10.7 ft

Serial #: 2339

Firmware: 10.16

WT Error Vel.: 3.50 ft/s

% Meas.: 56.10

Bin Size: 25 cm

Blank: 25 cm

BT Up Vel.: 1.00 ft/s

Water Temp.: None

BT Mode: 5

BT Pings: 1

WT Up Vel.: 10.00 ft/s

ADCP Temp.: 18.3 °C

WT Mode: 12

WT Pings: 1

Use Weighted Mean Depth: YES

WV : 254

WO : 1, 7

Performed Diag. Test: YES

Project Name: breachinflow4.mmt

Performed Moving Bed Test: YES

Software: 2.07

Performed Compass Test: YES

Meas. Location: at breach

Tr.#		Edge Distance		#Ens.	Discharge						Width	Area	Time		Mean Vel.		% Bad	
		L	R		Top	Middle	Bottom	Left	Right	Total			Start	End	Boat	Water	Ens.	Bins
000	R	72	55	732	24865	46010	10841	-116	-29.5	81571	1378	14747	10:35	10:41	5.66	5.53	0	1
001	L	72	67	608	25491	46606	11426	96.3	-106	83514	1380	14670	10:41	10:46	7.37	5.69	4	1
Mean		72	61	670	25178	46308	11133	-9.62	-67.6	82542	1379	14709	Total	00:11	6.51	5.61	2	1
SDev		0	8	88	443	422	414	150	53.9	1374	1.3	54.7			1.21	0.11		
SD/M		0.00	0.14	0.13	0.02	0.01	0.04	15.57	0.80	0.02	0.00	0.00			0.19	0.02		

Remarks:

* - value not consistent for all transects

Station Number:

Meas. No:

Station Name: Inflow/Outflow 1

Date: 05/14/2011

Party: BB,CR

Width: 1,390 ft

Processed by: BB

Boat/Motor: wooldridge

Area: 14,700 ft²Mean Velocity: ~~4.75~~ ft/s **5.55**

Gage Height: 0.00 ft

G.H.Change: 0.000 ft

Discharge: ~~69,800~~ ft³/s **81,604**

Area Method: Avg. Course

ADCP Depth: 1.500 ft

Index Vel.: 0.00 ft/s

Rating No.: 1

Nav. Method: Bottom Track **LOOP CORRECTED**

Shore Ens.: 10

Adj. Mean Vel: 0.00 ft/s

Qm Rating: P

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:

BT 3-Beam Solution: YES

Max. Vel.: 10.2 ft/s

Type/Freq.: Rio Grande/1200 kHz

WT 3-Beam Solution: NO

Max. Depth: 13.2 ft

Serial #: 2339

Firmware: 10.16

BT Error Vel.: 0.33 ft/s

Mean Depth: 10.6 ft

Bin Size: 25 cm

Blank: 25 cm

WT Error Vel.: 3.50 ft/s

% Meas.: 56.24

BT Mode: 5

BT Pings: 1

BT Up Vel.: 1.00 ft/s

Water Temp.: None

WT Mode: 12

WT Pings: 1

WT Up Vel.: 10.00 ft/s

ADCP Temp.: 18.3 °C

WV : 254

WO : 1, 7

Use Weighted Mean Depth: YES

Performed Diag. Test: YES

Project Name: breachinflow4.mmt

Performed Moving Bed Test: YES

Software: 2.07

Performed Compass Test: YES

Meas. Location: at breach

Tr.#		Edge Distance		#Ens.	Discharge						Width	Area	Time		Mean Vel.		% Bad	
		L	R		Top	Middle	Bottom	Left	Right	Total			Start	End	Boat	Water	Ens.	Bins
000	R	72	55	732	21503	39822	9357	-66.3	-45.9	70569	1315	13958	10:35	10:41	5.69	5.06	18	1
001	L	72	67	608	21189	38734	9249	82.4	-147	69108	1454	15518	10:41	10:46	7.40	4.45	23	1
Mean		72	61	670	21346	39278	9303	8.05	-96.5	69839	1385	14738	Total	00:11	6.54	4.75	21	1
SDev		0	8	88	222	769	76.0	105	71.5	1034	98.3	1103.0			1.21	0.43		
SD/M		0.00	0.14	0.13	0.01	0.02	0.01	13.05	0.74	0.01	0.07	0.07			0.18	0.09		

Remarks:

LC Version 3.20, July 8, 2010

Processed on: 14-Jun-2011

Loop File: breachinflow400011-05-14LBTASC.TXT

Distance Made Good (ft)	Loop Time (sec)	Moving Bed Velocity (ft/s)	Moving Bed Direction (degrees)	Flow Direction (degrees)	Estimated Percent Correction (percent)
139.27	253.49	0.55	224.86	59.61	26.18

Percent Bad Bottom Track: 24.5

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: 1.0 deg

Loop Indicates a Moving Bed -- Select transects to be corrected

File Name	Original Discharge cfs	Adjusted Discharge cfs
breachinflow400011-05-14ASC.TXT	70569.30	82124.38
breachinflow400111-05-14ASC.TXT	69107.60	81084.64
Average	69838.45	81604.51