

Meas. No. _____

REV-(10-01)

Geological Survey
Water Resources Division

Processed by BIB

Ck'd by_____

Sta. No. 111 Acoustic Profiler Discharge Measurement Notes Ck'd by

Sta. Name INFLOW/OUTFLOW 1

Date 5/16, 2011 Party BB, CR

Width 1460 Area 12,900 Vel. 6.73 G.H. — Disch. 87,100

Profiler Water Temp. 19.4 °C at 1540 Rated area: _____ Index Velocity _____

Profiler S/N: 2339 Mfg: R01 Freq: 1200 Firmware: 10.16 Software Ver: 2.07

Profiler Depth 1.80

Depth Cell Size	25	Other commands:	Profiler Depth 1.80
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No. of Cells _____ Config. file _____

Blanking Distance	25	Deployment	mmb
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Water Mode	17	Moving Bed	000
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Ambiguity Vel.	7.54	Moving Bed Present:	(Y) N
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Water pings	/	Diag Test	YES
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[illegible]

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

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

GAGE READINGS						
Time					Inside	Outside
Weighed MGH						
GH correction						
Correct MGH						

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, 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: 05/16/2011

Party: BB,CR

Width: 1,460 ft

Processed by: BB

Boat/Motor: wooldridge

Area: 12,900 ft²

Mean Velocity: 6.73 ft/s

Gage Height: 0.00 ft

G.H.Change: 0.000 ft

Discharge: 87,100 ft³/s

Area Method: Avg. Course

ADCP Depth: 1.800 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.: 13.3 ft/s

ADCP:

WT 3-Beam Solution: NO

Max. Depth: 11.6 ft

Type/Freq.: Rio Grande/1200 kHz

BT Error Vel.: 0.33 ft/s

Mean Depth: 8.86 ft

Serial #: 2339

Firmware: 10.16

WT Error Vel.: 3.50 ft/s

% Meas.: 46.81

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.: 18.4 °C

WT Mode: 12

WT Pings: 1

Use Weighted Mean Depth: YES

WV : 254

WO : 1, 7

Performed Diag. Test: YES

Project Name: breachinflow6.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	99	92	794	35512	42628	13265	-120	70.0	91354	1482	13019	15:39	15:46	4.67	7.02	1	1
001	L	99	76	761	31844	38909	12296	-88.6	-132	82828	1437	12843	15:46	15:53	5.10	6.45	1	1
Mean		99	84	777	33678	40768	12780	-104	-31.1	87091	1460	12931	Total	00:14	4.89	6.73	1	1
SDev		0	11	23	2593	2630	685	22.2	143	6029	31.6	124.7			0.30	0.40		
SD/M		0.00	0.13	0.03	0.08	0.06	0.05	0.21	4.59	0.07	0.02	0.01			0.06	0.06		

Remarks:

Station Number:

Meas. No:

Station Name: Inflow/Outflow 1

Date: 05/16/2011

Party: BB,CR

Width: 1,450 ft

Processed by: BB

Boat/Motor: wooldridge

Area: 12,800 ft²Mean Velocity: ~~6.28 ft/s~~ 6.68

Gage Height: 0.00 ft

G.H.Change: 0.000 ft

Discharge: ~~80,000 ft³/s~~ 85,564

Area Method: Avg. Course

ADCP Depth: 1.800 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 (-1.4°)

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.: 12.2 ft/s

Type/Freq.: Rio Grande/1200 kHz

WT 3-Beam Solution: NO

Max. Depth: 11.6 ft

Serial #: 2339

Firmware: 10.16

BT Error Vel.: 0.33 ft/s

Mean Depth: 8.85 ft

Bin Size: 25 cm

Blank: 25 cm

WT Error Vel.: 3.50 ft/s

% Meas.: 46.67

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.: 18.4 °C

WV : 254

WO : 1, 7

Use Weighted Mean Depth: YES

Performed Diag. Test: YES

Project Name: breachinflow6.mmt

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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	99	92	794	31826	38265	11967	-127	82.7	82014	1378	11962	15:39	15:46	4.72	6.86	21	1
001	L	99	76	761	30130	36430	11670	-78.3	-125	78028	1514	13666	15:46	15:53	5.14	5.71	20	1
Mean		99	84	777	30978	37348	11819	-103	-21.2	80021	1446	12814	Total	00:14	4.93	6.28	20	1
SDev		0	11	23	1199	1297	210	34.6	147	2819	96.3	1204.6			0.30	0.81		
SD/M		0.00	0.13	0.03	0.04	0.03	0.02	0.34	6.92	0.04	0.07	0.09			0.06	0.13		

Remarks:

LC Version 3.20, July 8, 2010

Processed on: 14-Jun-2011

Loop File: breachinflow600011-05-16LBTASC.TXT

Distance Made Good (ft)	Loop Time (sec)	Moving Bed Velocity (ft/s)	Moving Bed Direction (degrees)	Flow Direction (degrees)	Estimated Percent Correction (percent)
220.26	702.93	0.31	211.08	51.65	7.42

Percent Bad Bottom Track: 20.1

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: 1.3 deg

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

File Name	Original Discharge cfs	Adjusted Discharge cfs
breachinflow600011-05-16ASC.TXT	82013.80	87563.20
breachinflow600111-05-16ASC.TXT	78027.50	83566.22
Average	80020.65	85564.71