9-275-I
REV (10-01)

U.S. DEPARTMENT OF THE INTERIOR
Geological Survey
Water Resources Division
Acoustic Profiler Discharge Measurement Notes

Meas. No. _____
Processed by BB
Ck'd by _____

Sta. No _____
Sta. Name NEW MADRID FLOODWAY OUTFLOW
Date 5/15 . 20 11 Party BB, CR
Width 15,500 Area 294,000 Vel. .979 G.H. — Disch. 288,000
Profiler Water Temp. 17.7 °C at 1145 Rated area: _____ Index Velocity _____
Profiler S/N 2339 Mfgr: RDI 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.	170		
Water pings	1		
Bottom pings	1		

Profiler Depth 160
Config. file _____
Deployment MMB
Moving Bed 000
Moving Bed Present: Y (N)
Diag. Test YES
Diag. Test Errors: Y (N)

Boat/Motor Used WOOLDRIDGE ADCP Time to WT ☐ @ _____ GPS: ✓
Mag. Var. 1) MODEL 2) _____ 3) _____ 4) _____ Avg: -1.73 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: MOSTLY EVEN
Cross section: FARMLAND, TREES, BRUSH, UNEVEN
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: GPS DATA INCONSISTENT / DIRECTIONAL ISSUES

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

Sheet No. 1 of 3 sheets

Station Number:
Station Name: New Madrid Floodway Outflow

Meas. No:
Date: 05/15/2011

Party: BB,CR
Boat/Motor: wooldridge
Gage Height: 0.00 ft

Width: 15,500 ft
Area: 294,000 ft²
G.H.Change: 0.000 ft

Processed by: BB
Mean Velocity: 0.979 ft/s
Discharge: 288,000 ft³/s

Area Method: Avg. Course
Nav. Method: Bottom Track NO CORRECTION RECOMMENDED
MagVar Method: None (-1.6°)
Depth Sounder: Not Used

ADCP Depth: 1.600 ft
Shore Ens.:10
Bottom Est: Power (0.1667)
Top Est: Power (0.1667)

Index Vel.: 0.00 ft/s
Adj.Mean Vel: 0.00 ft/s
Rated Area: 0.000 ft²
Control1: Unspecified
Control2: Unspecified
Control3: Unspecified

Rating No.: 1
Qm Rating: P
Diff.: 0.000%

Screening Thresholds:
BT 3-Beam Solution: YES
WT 3-Beam Solution: NO
BT Error Vel.: 0.33 ft/s
WT Error Vel.: 32.81 ft/s
BT Up Vel.: 32.81 ft/s
WT Up Vel.: 32.81 ft/s
Use Weighted Mean Depth: NO

Max. Vel.: 5.14 ft/s
Max. Depth: 42.3 ft
Mean Depth: 19.0 ft
% Meas.: 67.33
Water Temp.: None
ADCP Temp.: 17.7 °C

ADCP:
Type/Freq.: Rio Grande/1200 kHz
Serial #:
Bin Size: 25 cm
BT Mode: 5
WT Mode: 12
WV : 170

Firmware: 10.16
Blank: 25 cm
BT Pings: 1
WT Pings: 1
WO : 1, 4

Performed Diag. Test: NO
Performed Moving Bed Test: NO
Performed Compass Test: NO
Meas. Location: near new madrid

Project Name: newmadridoutflow6000
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
001	R	132	121	3536	59187	196288	36541	121	617	292754	15468	294270	11:26	11:55	9.11	0.99	0	1
002	L	135	145	3386	56542	190884	34139	157	539	282261	15454	293044	11:55	12:23	9.54	0.96	0	1
Mean		134	133	3461	57864	193586	35340	139	578	287507	15461	293657	**Total**	00:56	9.33	0.98	0	1
SDev		2	17	106	1870	3821	1699	25.6	55.3	7420	9.8	866.7			0.30	0.02		
SD/M		0.02	0.13	0.03	0.03	0.02	0.05	0.18	0.10	0.03	0.00	0.00			0.03	0.02		

Remarks:

LC Version 3.20, July 8, 2010

Processed on: 15-May-2011

Loop File: newmadridoutflow600011-05-15_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)
215.09	3411.42	0.06	171.28	212.58	5.79

Percent Bad Bottom Track: 0.2

Difference in flow direction between out and back sections: 1.3 deg

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

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