

9-275-1 U.S. DEPARTMENT OF THE INTERIOR Geological Survey Water Resources Division
REV (10-01) Acoustic Profiler Discharge Measurement Notes
Sta. No. 37000008912601 Party RA/CR
Sta. Name MISSISSIPPI RIVER ABOVE CAIRO
Date 5/5 2011 Area 253.12 Vel. 2.99 G.H. 754.00
Width 94.40 Profiler Water Temp. 14.9 °C at Rated area
Profiler S/N: 1127 Mfg: RD1 Freq. 600 Firmware: 10.14 Software Ver. 2.04
Depth Cell Size 50 cm Other commands:
No. of Cells 72
Blanking Distance 25 cm
Water Mode 1
Ambiguity Vel. 254
Water pings 1
Bottom pings 1
Boat/Motor Used QW WORKS EKFADCP Time to WT @
Mag. Var. 1) 2) 3) 4) MDT-Avg: 1.3 Comp. Cal:
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. 14.9 °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, TURBULENT
Cross section. EUN SAND CHANNEL, TREES, ROCKS, LEVEE BANK
Control: CHANNEL
Gage operating: Record removed: Y or N Filename:
Battery voltage: Intakes/Intake 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: TWO TRANSDUCERS FOR TIME
GH of zero flow = GH - depth at control = ft., rated
Sheet No. of sheets

Performed Moving Bed Test: NO YES 002
Performed Compass Test: YES
Meas. Location:

Software: 2.04

rs. mm

Party: RA/CR	Width: 2,120 ft	Processed by:
Boat/Motor: QWboat	Area: 127,000 ft ²	Mean Velocity: 4.76 ft/s
Gage Height: 0.00 ft	G.H.Change: 0.000 ft	Discharge: 603,000 ft ³ /s

Area Method: Avg. Course	ADCP Depth: 2.400 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: U
MagVar Method: Model (-1.3°)	Bottom Est: Power (0.1667)	Rated Area: 0.000 ft ²	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.: 13.6 ft/s	Type/Freq.: Rio Grande / 600 kHz
WT 3-Beam Solution: NO	Max. Depth: 72.2 ft	Serial #: 1127 Firmware: 10.16
BT Error Vel.: 0.33 ft/s	Mean Depth: 59.8 ft	Bin Size: 50 cm Blank: 25 cm
WT Error Vel.: 3.50 ft/s	% Meas.: 81.82	BT Mode: 5 BT Pings: 1
BT Up Vel.: 1.00 ft/s	Water Temp.: None	WT Mode: 1 WT Pings: 1
WT Up Vel.: 10.00 ft/s	ADCP Temp.: 15.0 °C	WV : 254
Use Weighted Mean Depth: YES		

Performed Diag. Test: NO
 Performed Moving Bed Test: NO
 Performed Compass Test: YES
 Meas. Location:

Project Name: Mississippi above Thurs_.mmt
 Software: 2.08

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	L	240	0	643	47609	498973	51138	13757	0.000	611477	2137	127571	13:35	13:41	5.64	4.79	0	0	#
001	R	195	0	441	47146	488399	50682	9080	0.000	595308	2104	126014	14:09	14:13	8.26	4.72	0	0	
Mean		218	0	542	47378	493686	50910	11418	0.000	603392	2121	126792	Total	00:37	6.95	4.76	0	0	
SDev		32	0	143	327	7477	323	3307	0.000	11433	23.9	1101.5			1.86	0.05			
SD/M		0.15	0.00	0.26	0.01	0.02	0.01	0.29	0.00	0.02	0.01	0.01			0.27	0.01			

Remarks: This mmt subsectioned by TAK on 2/14/12 to determine main channel vs overflow
 for the purpose of estimating overflow on other dates.

Party: RA/CR	Width: 7,320 ft	Processed by:
Boat/Motor: QWboat	Area: 127,000 ft ²	Mean Velocity: 1.22 ft/s
Gage Height: 0.00 ft	G.H.Change: 0.000 ft	Discharge: 154,000 ft ³ /s

Area Method: Avg. Course	ADCP Depth: 2.400 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: U
MagVar Method: Model (-1.3°)	Bottom Est: Power (0.1667)	Rated Area: 0.000 ft ²	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.: 9.46 ft/s	Type/Freq.: Rio Grande / 600 kHz	
WT 3-Beam Solution: NO	Max. Depth: 48.8 ft	Serial #: 1127	Firmware: 10.16
BT Error Vel.: 0.33 ft/s	Mean Depth: 17.3 ft	Bin Size: 50 cm	Blank: 25 cm
WT Error Vel.: 3.50 ft/s	% Meas.: 55.14	BT Mode: 5	BT Pings: 1
BT Up Vel.: 1.00 ft/s	Water Temp.: None	WT Mode: 1	WT Pings: 1
WT Up Vel.: 10.00 ft/s	ADCP Temp.: 14.9 °C	WV : 254	
Use Weighted Mean Depth: YES			

Performed Diag. Test: NO
 Performed Moving Bed Test: NO
 Performed Compass Test: YES
 Meas. Location:

Project Name: Mississippi above Thurs_.mmt
 Software: 2.08

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	L	0	545	1656	43737	83362	24290	0.000	634	152023	7318	127778	13:41	13:56	8.02	1.19	0	1
001	R	0	545	1499	44726	86794	24564	0.000	465	156549	7326	125798	13:56	14:09	8.71	1.24	0	2
Mean		0	545	1577	44232	85078	24427	0.000	550	154286	7322	126788	Total	00:27	8.37	1.22	0	1
SDev		0	0	111	699	2427	194	0.000	119	3200	6.1	1400.5			0.49	0.04		
SD/M		0.00	0.00	0.07	0.02	0.03	0.01	0.00	0.22	0.02	0.00	0.01			0.06	0.03		

Remarks: This mmt subsectioned by TAK on 2/14/12 to determine main channel vs overflow
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