

9-275-1 U.S. DEPARTMENT OF THE INTERIOR Meas. No. 0
REV (10-01) Geological Survey
Sta. No. 370000087 12-26-01 Water Resources Division
Sta. Name MISSISSIPPI RIVER ABOVE CAGRO Acoustic Profiler Discharge Measurement Notes
Date 5/10/2011 Party RA/CR Disch. 689,000
Width 95.0 Area 234,002 Vel. 2.69 GH
Profiler Water Temp 14.5 °C at Rated area:
Profiler S/N 11170 Mgr. C.D.I. Freq. 400 Firmware 2.1.1 Software Ver. 2.04
Depth Cell Size 50 cm Other commands:
No. of Cells 64
Blanking Distance 25 cm
Water Mode 1
Ambiguity Vel. 254
Water pings 1
Bottom pings 1
Boat/Motor Used WOODSKIE ADCP Time to WT 30 @
Mag. Var. 1) 2) 3) 4) Model-Avg. -1.9 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 14.5 °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 TURB.
Cross section: SAND CHANNEL, TREES AT OVERBANK
Control: CMANUEL
Gage operating: Record removed: Y or N Filename:
Battery voltage: Intakes/Office cleaned/purged:
Bubble-gage psi: Tank Line Bubble rate /min.
Extreme-GH indicators: max min
CSG checked: HWM height on stick Reflev HWM elev
Remarks: NO M.B. AND 2 TRANSDUCERS DOUB TO TIME
GH of zero flow = GH - depth at control = ft. rated
Sheet No. of sheets

Performed Moving Bed Test: NO
Performed Compass Test: YES

Party: RA/CR	Width: 2,160 ft	Processed by:
Boat/Motor: Workskiff	Area: 127,000 ft ²	Mean Velocity: 4.35 ft/s
Gage Height: 0.00 ft	G.H.Change: 0.000 ft	Discharge: 555,000 ft ³ /s

Area Method: Avg. Course	ADCP Depth: 1.250 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 (-1.9°)	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.: 9.15 ft/s	Type/Freq.: Rio Grande / 600 kHz	
WT 3-Beam Solution: NO	Max. Depth: 71.8 ft	Serial #: 11170	Firmware: 10.16
BT Error Vel.: 0.33 ft/s	Mean Depth: 59.1 ft	Bin Size: 50 cm	Blank: 25 cm
WT Error Vel.: 3.50 ft/s	% Meas.: 82.68	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.: 14.4 °C	WV : 254	
Use Weighted Mean Depth: YES			

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

Project Name: Mississippi above Cairo Fri_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	246	0	626	33674	470909	56248	8616	0.000	569447	2161	127781	10:43	10:48	6.06	4.46	1	1
001	R	255	0	485	31793	446290	52523	9280	0.000	539886	2156	127150	11:16	11:20	7.75	4.25	0	1
Mean		251	0	555	32734	458599	54386	8948	0.000	554667	2158	127466	Total	00:37	6.90	4.35	1	1
SDev		6	0	100	1330	17408	2634	469	0.000	20903	3.3	445.7			1.20	0.15		
SD/M		0.03	0.00	0.18	0.04	0.04	0.05	0.05	0.00	0.04	0.00	0.00			0.17	0.03		

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: 7,350 ft	Processed by:
Boat/Motor: Workskiff	Area: 129,000 ft ²	Mean Velocity: 1.04 ft/s
Gage Height: 0.00 ft	G.H.Change: 0.000 ft	Discharge: 134,000 ft ³ /s

Area Method: Avg. Course	ADCP Depth: 1.250 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 (-1.9°)	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.: 4.67 ft/s	Type/Freq.: Rio Grande / 600 kHz	
WT 3-Beam Solution: NO	Max. Depth: 48.7 ft	Serial #: 11170	Firmware: 10.16
BT Error Vel.: 0.33 ft/s	Mean Depth: 17.6 ft	Bin Size: 50 cm	Blank: 25 cm
WT Error Vel.: 3.50 ft/s	% Meas.: 60.80	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.: 14.5 °C	WV : 254	
Use Weighted Mean Depth: YES			

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

Project Name: Mississippi above Cairo Fri_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	560	1770	30307	87414	24298	0.000	1622	143641	7346	129730	10:48	11:03	7.86	1.11	0	1
001	R	0	560	1538	27187	75785	21393	0.000	395	124760	7359	128491	11:03	11:16	8.90	0.97	1	2
Mean		0	560	1654	28747	81600	22846	0.000	1008	134200	7352	129111	Total	00:27	8.38	1.04	1	2
SDev		0	0	164	2206	8223	2054	0.000	867	13350	9.1	876.5			0.74	0.10		
SD/M		0.00	0.00	0.10	0.08	0.10	0.09	0.00	0.86	0.10	0.00	0.01			0.09	0.09		

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.

- transect has been subsectioned

Discharge for transects in *italics* have a total Q more than 5% from the mean