

Geological Survey  
Water Resources Division

Processed by CBK

Ck'd by Kan/7

Sta. Name Mississippi before confluence

Date 05/10, 2011 Party CBR/KM4

Width 4.880 Area 171.000 Vel. 3.27 G.H. - Disch. 559.261

Profiler Water Temp. 17.42 °C at 1242 Rated area: — Index Velocity —

Profiler S/N: 11170 Mfgr: RDI Freq: 600 Firmware: 10.16 Software Ver. 2.07

Depth Cell Size	1.64	Other commands:	Profiler Depth	0.42
No. of Cells	56		Config. file	-
Blanking Distance	0.82		Deployment	tether
Water Mode	12		Moving Bed	-
Ambiguity Vel.			Moving Bed Present:	Y N
Water pings	1		Diag. Test	ADCP TEST
Bottom pings	1		Diag. Test Errors:	Y (N)

Boat/Motor Used 5B ADCP Time to WT ☐ @ \_\_\_\_\_ GPS: VTG

Mag. Var. 1) -1.4 2) \_\_\_\_\_ 3) \_\_\_\_\_ 4) \_\_\_\_\_ Avg: \_\_\_\_\_ Comp. Cal.: 0.5<sup>4</sup>

GAGE READINGS					
Time				Inside	Outside
1250	START				
1415	END				
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 clear, Hot

Wind Spd. 0-2 Dir. South

Air Temp. \_\_\_\_\_ °C at \_\_\_\_\_

Water Temp. 17.1 °C at 1242

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. PODR GPS-VTG Resolution

Cross section: LEW grass bridge abutment Rev levee

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: Reference VTG. inst 500' US of Hwy 60 bridge

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

## MEASUREMENT NOTES

LEFT BANK Sloping Vertical Other \_\_\_\_\_RIGHT BANK Sloping Vertical Other \_\_\_\_\_

Transect Number	Start			Ending		Total Discharge	Remarks
	Bank	Time	Distance	Distance	Time		
000	LEW	1250	80	100	1317	561,402	
001	REW	1318	110	80	1337	543,172	
002	LEW	1337	80	100	1357	561,940	
003	REW	1357	100	80	1413	550,529	

Notes:

Mississippi before Confluence

559,260 @ 1330

Inflow

271,490 @ 1050

Station Number: Mississippi\_US\_60\_Bridge  
Station Name: Mississippi\_Rr\_before\_Confluence

Meas. No: 2  
Date: 05/10/2011

Party: CBR/KMH	Width: 4,880 ft	Processed by: CBR
Boat/Motor: 513	Area: 171,000 ft <sup>2</sup>	Mean Velocity: 3.27 ft/s
Gage Height: 0.00 ft	G.H.Change: 0.000 ft	Discharge: 559,000 ft <sup>3</sup> /s

Area Method: Avg. Course	ADCP Depth: 0.420 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 ft <sup>2</sup>	Diff.: 0.000%
Depth Sounder: 0.000 ft	Top Est: Power (0.1667)	Control1: Unspecified	
		Control2: Unspecified	
		Control3: Unspecified	

Screening Thresholds:	ADCP:	
BT 3-Beam Solution: YES	Type/Freq.: Rio Grande/600 kHz	
WT 3-Beam Solution: NO	Serial #: 11170	Firmware: 10.16
BT Error Vel.: 0.33 ft/s	Bin Size: 50 cm	Blank: 25 cm
WT Error Vel.: 3.50 ft/s	BT Mode: 5	BT Pings: 1
BT Up Vel.: 1.00 ft/s	WT Mode: 12	WT Pings: 1
WT Up Vel.: 16.00 ft/s	WV : 254	WO : 1, 13
Use Weighted Mean Depth: YES		

Performed Diag. Test: YES  
Performed Moving Bed Test: NO  
Performed Compass Test: NO  
Meas. Location: US of 60 bridge 20' - 500'

Project Name: Mississippi\_R\_before\_Conflue  
Software: 2.07

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	80	100	2260	31463	506132	40254	2777	778	581403	4722	165885	12:50	13:17	3.49	3.50	0	1	
001	R	80	110	1560	31940	468569	39504	906	2255	543173	4951	172637	13:18	13:37	4.88	3.15	1	1	
002	L	80	100	1660	30688	490033	38567	1465	1188	561940	4977	171354	13:37	13:57	4.67	3.28	1	2	
003	R	80	100	1353	32008	477355	39105	1381	680	550529	4851	174942	13:57	14:13	5.49	3.15	1	1	
Mean		80	103	1708	31525	485522	39358	1632	1225	559261	4875	171204	Total	01:23	4.63	3.27	1	1	
SDev		0	5	389	608	16322	710	802	721	16659	115.5	3844.5				0.84	0.17		
SD/M		0.00	0.05	0.23	0.02	0.03	0.02	0.49	0.59	0.03	0.02	0.02				0.18	0.05		

Remarks: VTG reference.

Party: CBR/KMH	Width: 2,300 ft	Processed by:
Boat/Motor: 513	Area: 141,000 ft <sup>2</sup>	Mean Velocity: 3.51 ft/s
Gage Height: 0.00 ft	G.H.Change: 0.000 ft	Discharge: 493,000 ft <sup>3</sup> /s

Area Method: Avg. Course	ADCP Depth: 0.420 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 (-1.4°)	Bottom Est: Power (0.1667)	Rated Area: 0.000 ft <sup>2</sup>	Diff.: 0.000%
Depth Sounder: 0.000 ft	Top Est: Power (0.1667)	Control1: Unspecified	
		Control2: Unspecified	
		Control3: Unspecified	

Screening Thresholds:		ADCP:	
BT 3-Beam Solution: YES	Max. Vel.: 17.5 ft/s	Type/Freq.: Rio Grande / 600 kHz	
WT 3-Beam Solution: NO	Max. Depth: 74.1 ft	Serial #: 11170	Firmware: 10.16
BT Error Vel.: 0.33 ft/s*	Mean Depth: 61.2 ft	Bin Size: 50 cm	Blank: 25 cm
WT Error Vel.: 3.50 ft/s	% Meas.: 89.51	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.: 16.00 ft/s	ADCP Temp.: 62.3 °F	WV : 254	WO : 1, 13
Use Weighted Mean Depth: YES			

Performed Diag. Test: YES	Project Name: mississippi_r_before_confluence
Performed Moving Bed Test: NO	Software: 2.08
Performed Compass Test: NO	
Meas. Location: US of U.S. of 60 bridge	

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	0	1163	22662	467564	32768	0.000	0.000	522993	2269	135705	12:56	13:10	3.19	3.85	1	1
001	R	0	0	546	20524	421460	29599	0.000	0.000	471583	2266	141917	13:24	13:31	6.14	3.32	0	1
002	L	0	0	775	20085	442138	29427	0.000	0.000	491651	2265	137275	13:42	13:52	4.50	3.58	1	1
003	R	0	0	481	21862	435679	30133	0.000	0.000	487673	2402	148328	14:03	14:09	7.23	3.29	6	1
<b>Mean</b>		0	0	741	21283	441710	30482	0.000	0.000	493475	2301	140806	<b>Total</b>	01:12	5.27	3.51	2	1
<b>SDev</b>		0	0	308	1190	19279	1553	0.000	0.000	21506	67.8	5665.6			1.78	0.26		
<b>SD/M</b>		0.00	0.00	0.42	0.06	0.04	0.05	0.00	0.00	0.04	0.03	0.04			0.34	0.08		

**Remarks:** This mmt subsectioned by TAK on 2/17/12 to determine main channel vs overflow for the purpose of estimating overflow on other dates.  
Endpoints close to tree lines chosen for MAIN channel subsections using 0 ft edges.  
Overflow computed as OVERFLOW = TOTAL - MAIN.

# - transect has been subsectioned

\* - value not consistent for all transects

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