

Meas. No. _____

**Geological Survey
Water Resources Division**

Processed by 55

Ck'd by_____

Sta. No. _____

Sta. Name MISSISSIPPI RIVER ABOVE CAIRO

Date 5/14, 20 11 Party BB, CR

Width 9,440 Area 214,000 Vel. 2.42 G.H. — Disch. 519,000

Profiler Water Temp. 18.8 °C at 1600 Rated area: _____ Index Velocity _____

Profiler S/N: 551 Mfg: 1201 Freq: 600 Firmware: 10.16 Software Ver: 2.07

Depth Cell Size	50	Other commands:	
No. of Cells			
Blanking Distance	25		
Water Mode	12		
Ambiguity Vel.	254		
Water pings	1		
Bottom pings	1		

Profiler Depth 2.40

Config. file _____

Deployment MANNED BOAT

Moving Bed No TEST

Moving Bed Present: Y N

Diag. Test YES

Diag. Test Errors: Y N

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

Mag. Var. 1) MODEL 2) _____ 3) _____ 4) _____ Avg: -1.5 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 SOME SWINGS & SURGES

Cross section: UNEVEN MUD, GRAVEL, TREES & BRUSH

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 REFERENCE INCLUDED NOT USED DUE TO DIRECTIONAL
ISSUES

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

Station Number:
Station Name: Mississippi River above Cairo

Meas. No:
Date: 05/14/2011

Party: BB,CR	Width: 9,440 ft	Processed by:
Boat/Motor: wooldridge/honda 130	Area: 214,000 ft²	Mean Velocity: 2.42 ft/s
Gage Height: 0.00 ft	G.H.Change: 0.000 ft	Discharge: 519,000 ft³/s

Area Method: Avg. Course	ADCP Depth: 2.400 ft	Index Vel.: 0.00 ft/s	Rating No.: 1
Nav. Method: Bottom Track <i>NO LOOP TEST</i>	Shore Ens.:10	Adj.Mean Vel: 0.00 ft/s	Qm Rating: P
MagVar Method: None (-1.5°) <i>DONE</i>	Bottom Est: Power (0.1667)	Rated Area: 0.000 ft²	Diff.: 0.000%
Depth Sounder: Not Used <i>THIS IS MORE CONSISTENT Qm HOWEVER COMPARED TO GPS NUMBERS</i>	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 #: 551 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.: 10.00 ft/s	WV : 254 WO : 1, 11*
Use Weighted Mean Depth: YES	
Max. Vel.: 7.56 ft/s	
Max. Depth: 67.3 ft	
Mean Depth: 22.7 ft	
% Meas.: 75.60	
Water Temp.: None	
ADCP Temp.: 18.8 °C	

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

Project Name: mississippiabovecairo1.n
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	250	561	1525	65542	389229	52217	6309	622	513919	9442	213312	15:48	16:04	9.48	2.41	10	2	
001	R	248	538	1898	66100	395606	51213	10967	296	524182	9428	214998	16:05	16:21	9.06	2.44	6	1	
Mean		249	549	1711	65821	392417	51715	8638	459	519051	9435	214155	Total	00:32	9.27	2.42	8	1	
SDev		1	16	264	395	4509	710	3294	231	7257	9.3	1191.9				0.29	0.02		
SD/M		0.01	0.03	0.15	0.01	0.01	0.01	0.38	0.50	0.01	0.00	0.01				0.03	0.01		

Remarks:

* - value not consistent for all transects

Station Number:

Meas. No:

Station Name: Mississippi River above Cairo

Date: 05/14/2011

Party: BB,CR

Width: 9,470 ft

Processed by:

Boat/Motor: wooldridge/honda 130

Area: 215,000 ft²

Mean Velocity: 2.12 ft/s

Gage Height: 0.00 ft

G.H.Change: 0.000 ft

Discharge: 457,000 ft³/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: P

MagVar Method: None (-1.5°)

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.: 10.3 ft/s

ADCP:

WT 3-Beam Solution: NO

Max. Depth: 67.3 ft

Type/Freq.: Rio Grande/600 kHz

BT Error Vel.: 0.33 ft/s*

Mean Depth: 22.7 ft

Serial #: 551

Firmware: 10.16

WT Error Vel.: 3.50 ft/s

% Meas.: 78.11

Bin Size: 50 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.: 18.8 °C

WT Mode: 12

WT Pings: 1

Use Weighted Mean Depth: YES

WV : 254

WO : 1, 11*

Performed Diag. Test: YES

Project Name: mississippiabovecairo1.r

Performed Moving Bed Test: NO

Software: 2.07

Performed Compass Test: YES

Meas. Location: above cairo

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	250	561	1525	43224	333156	38825	5609	-382	420432	9465	213847	15:48	16:04	9.50	1.97	6	2	
001	R	248	538	1898	56162	380414	45744	10882	-111	493091	9479	216295	16:05	16:21	9.10	2.28	1	1	
Mean		249	549	1711	49693	356785	42285	8246	-246	456762	9472	215071	Total	00:32	9.30	2.12	4	1	
SDev		1	16	264	9149	33416	4892	3729	192	51378	10.1	1731.4				0.29	0.22		
SD/M		0.01	0.03	0.15	0.18	0.09	0.12	0.45	0.78	0.11	0.00	0.01				0.03	0.10		

Remarks:

* - value not consistent for all transects

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

Party: BB,CR	Width: 2,140 ft	Processed by:
Boat/Motor: wooldridge/honda 130	Area: 117,000 ft²	Mean Velocity: 3.83 ft/s
Gage Height: 0.00 ft	G.H.Change: 0.000 ft	Discharge: 447,000 ft³/s

Area Method: Avg. Course	ADCP Depth: 2.400 ft	Index Vel.: 0.00 ft/s	Rating No.: 1
Nav. Method: Bottom Track	Shore Ens.:10	Adj.Mean Vel: 0.00 ft/s	Qm Rating: P
MagVar Method: None (-1.5°)	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:		ADCP:	
BT 3-Beam Solution: YES	Max. Vel.: 7.56 ft/s	Type/Freq.: Rio Grande / 600 kHz	
WT 3-Beam Solution: NO	Max. Depth: 67.3 ft	Serial #: 551	Firmware: 10.16
BT Error Vel.: 0.33 ft/s	Mean Depth: 54.5 ft	Bin Size: 50 cm	Blank: 25 cm
WT Error Vel.: 3.50 ft/s	% Meas.: 81.17	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.: 18.9 °C	WV : 254	WO : 1, 11*
Use Weighted Mean Depth: YES			

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

Project Name: mississippiabovecairo1 - Copy.r
 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	250	0	367	38153	362491	38431	6309	0.000	445383	2159	116597	15:48	15:52	8.49	3.82	1	0
001	R	248	0	430	37575	363243	36905	10967	0.000	448690	2128	117130	16:17	16:21	8.69	3.83	2	0
Mean		249	0	398	37864	362867	37668	8638	0.000	447037	2143	116863	Total	00:32	8.59	3.83	2	0
SDev		1	0	45	408	531	1079	3294	0.000	2338	21.5	377.0			0.14	0.01		
SD/M		0.01	0.00	0.11	0.01	0.00	0.03	0.38	0.00	0.01	0.01	0.00			0.02	0.00		

Remarks: This mmt subsectioned by TAK on 2/15/12 to determine main channel vs overflow
 for the purpose of estimating overflow on other dates.

- transect has been subsectioned

* - value not consistent for all transects

Station Name: Mississippi River above Cairo OVERFLOW

Date: 05/14/2011

Party: BB,CR	Width: 7,290 ft	Processed by:
Boat/Motor: wooldridge/honda 130	Area: 97,300 ft ²	Mean Velocity: 0.740 ft/s
Gage Height: 0.00 ft	G.H.Change: 0.000 ft	Discharge: 72,000 ft ³ /s

Area Method: Avg. Course	ADCP Depth: 2.400 ft	Index Vel.: 0.00 ft/s	Rating No.: 1
Nav. Method: Bottom Track	Shore Ens.:10	Adj.Mean Vel: 0.00 ft/s	Qm Rating: P
MagVar Method: None (-1.5°)	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.: 4.38 ft/s	Type/Freq.: Rio Grande / 600 kHz	
WT 3-Beam Solution: NO	Max. Depth: 44.0 ft	Serial #: 551	Firmware: 10.16
BT Error Vel.: 0.33 ft/s	Mean Depth: 13.3 ft	Bin Size: 50 cm	Blank: 25 cm
WT Error Vel.: 3.50 ft/s	% Meas.: 41.04	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.: 18.8 °C	WV : 254	WO : 1, 11*
Use Weighted Mean Depth: YES			

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

Project Name: mississippiabovecairo1_overflow
 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	561	1159	27390	26738	13786	0.000	622	68536	7283	96731	15:52	16:04	9.80	0.71	12	8	#
001	R	0	538	1469	28516	32358	14302	0.000	296	75472	7297	97864	16:05	16:17	9.17	0.77	8	2	
Mean		0	549	1314	27953	29548	14044	0.000	459	72004	7290	97297	Total	00:25	9.48	0.74	10	5	
SDev		0	16	219	796	3974	365	0.000	231	4905	9.5	801.0			0.45	0.04			
SD/M		0.00	0.03	0.17	0.03	0.13	0.03	0.00	0.50	0.07	0.00	0.01			0.05	0.06			

Remarks: This mmt subsectioned by TAK on 2/15/12 to determine main channel vs overflow
 for the purpose of estimating overflow on other dates.

- transect has been subsectioned

* - value not consistent for all transects