9-275-I	10/24/08	U.S. DEPARTMENT OF THE INTERIOR	Meas. No.	18
Station Number		U.S. Geological Survey	Processed by	SS
363740089180601		ADCP Discharge Measurement Notes	Checked by	

Station Name	INFLOW OUTFLOW #1 NR NEW MADRID		
Date	5-26 , 20 11	Party	ESS / TL

Width	Area / Rated Area	Velocity	Index Vel.	Gage Height	Discharge
867	9860	1.96	—	—	19300

Gage Height Change	Meas. plots	From rating	Shift	ADCP Sync'd to WT
~~in~~ hrs.	~~% diff~~	No.: —	—	(Y) at ____ or N

ADCP Mfr / Model / Frequency	Serial No.	Firmware	Software
SONTEK / M9 / 3MH, 1MH	1155	1.50	2.50

Boat/Motors Used	GPS Used	ADCP Depth	Diag. Test / Errors?
MO WSC BLAZER	SONTEK M9	.25	☒ Y or (N)

Compass Calib. & Total Error	Mag. Var	MagVar Method	Moving Bed?
(Y) or N M4 Q9	-1.4	On-site (Model) Previous	(Y) or N

Meas. Water Temp	ADCP Water Temp	Weather / Air Temp	Wind Speed / Dir.
19.7 °F/(C) at	19.8 °F/(C) at	OVC WARM °F/C	10-20 W

Gage Readings							Site Conditions	
Time					Inside	Outside	Max Water Depth	
							Max Water Speed	
1010	(S)						Max Boat Speed	
							Water Mode	
1034	(F)						Bottom Mode	
							Streambed material	
							Salinity	
							ppt at	
Weighted MGH							Checkbar found	
GH corrections							Checkbar changed to:	
Correct MGH							at	

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	EVEN
Cross section:	EVEN
Control:	—

Gage operating:	Y or N	Record removed:	Y or N	Filename:	
Battery voltage	V	Intakes/Orifice cleaned/purged:			

Bubble-gage psi:	Tank		Line		Bubble rate	/ min
Extreme-GH indicators:	Max		Min		CSG Checked	Y or N
HWM on stick		Ref elev.		HWM elevation		
GH of zero flow = GH		- depth at control		=	ft, Rated=	

Sheet No.		of		sheets

Discharge Measurement Summary

Date Measured: Thursday, May 26, 2011

Site Information		Measurement Information	
Site Name	Inflow Outflow #1	Party	ESS/TL
Station Number		Boat/Motor	MO WSC Blazer
Location	Nr New Madrid	Meas. Number	

System Information		System Setup		Units	
System Type	RS-M9	Transducer Depth (ft)	0.25	Distance	ft
Serial Number	1155	Salinity (ppt)	0.0	Velocity	ft/s
Firmware Version	1.50	Magnetic Declination (deg)	-1.4	Area	ft2
Software Version	2.50			Discharge	cfs
				Temperature	degF

Discharge Calculation Settings				Discharge Results	
Track Reference	Bottom-Track with LC	Left Method	Sloped Bank	Width (ft)	866.55
Depth Reference	Vertical Beam	Right Method	Sloped Bank	Area (ft2)	9,860.6
Coordinate System	ENU	Top Fit Type	Power Fit	Total Q (cfs)	19,309.664
		Bottom Fit Type	Power Fit		

Measurement Results

Tr		Time			Distance				Mean Vel		Discharge						%
#		Time	Duration	Temp.	Track	DMG	Width	Area	Boat	Water	Left	Right	Top	Middle	Bottom	Total	LCTotal	Measured
2	R	10:10:39 AM	0:05:58	67.6	1,066.04	738.95	878.95	7,995.1	2.978	2.315	48.51	41.93	2,016.60	13,360.14	3,042.55	18,509.730	19,686.779	72.2
3	L	10:17:11 AM	0:05:12	68.1	821.58	646.93	764.93	10,593.6	2.633	1.668	191.27	29.95	1,680.67	12,930.82	2,837.33	17,670.044	19,100.705	73.2
4	R	10:22:56 AM	0:05:09	67.8	940.00	775.82	919.82	10,415.2	3.042	1.800	13.55	24.16	1,670.13	14,013.18	3,028.38	18,749.396	20,252.728	74.7
5	L	10:28:32 AM	0:06:02	68.2	931.68	778.48	902.48	10,438.7	2.574	1.604	2.26	40.97	1,719.98	12,365.18	2,613.22	16,741.621	18,198.442	73.9
			Mean	67.9	939.82	735.05	866.55	9,860.6	2.807	1.847	63.90	34.25	1,771.84	13,167.33	2,880.37	17,917.698	19,309.664	73.5
			Std Dev	0.2	86.57	53.22	60.43	1,079.2	0.206	0.280	75.49	7.49	142.52	602.50	174.23	788.466	759.945	0.9
			COV	0.0	0.092	0.072	0.070	0.109	0.073	0.151	1.181	0.219	0.080	0.046	0.060	0.044	0.039	0.013

Exposure Time: 0:22:21

Tr2=20110526101038r.rivr; Tr3=20110526101710r.rivr; Tr4=20110526102255r.rivr; Tr5=20110526102831r.rivr;

Comments

Tr2=20110526101038r.rivr - ; Tr3=20110526101710r.rivr - ; Tr4=20110526102255r.rivr - ; Tr5=20110526102831r.rivr - ;

Loop Method

DMG	Loop Time	Moving Bed Velocity	Moving Bed Direction	Flow Direction	Estimated Percent Correction
60.75	403	0.15	251.05	70.74	9.43

File Name: Loop_20110526100303r.rivr

Percent Bad Bottom Track: 0.5.

Difference in flow direction between out and back sections: 6.3 deg.

WARNING: Difference in flow direction between out and back sections of loop exceeds 5 degrees. This may indicate an inaccurate compass and the loop may not be accurate. Please review data.

Loop Indicates a Moving Bed

Compass Calibration

File Name: CompassCal20110526095909.txt

Results: PASS
Score is excellent.
Magnetic interference is very low.

Calibration score: M4.00Q9

System Test

File Name: SystemTest20110526100229.txt

System Test: PASS

Parameters and settings marked with a * are not constant for all files.

Report generated using SonTek RiverSurveyor Live v2.50