

9-275-1	10/24/08	U.S. DEPARTMENT OF THE INTERIOR U.S. Geological Survey				Meas. No.	17
Station Number		ADCP Discharge Measurement Notes				Processed by	SS
363740085180601						Checked by	SS
Station Name		IN FLOW OUT FLOW #1 NR NEW MADRID					
Date	5-24-2011	Party	ESS/TL	Gage Height	Discharge		
Width	Area/Rated Area	Velocity	Index Vel.				
843	12700	2.28			28900		
Gage Height Change	Meas. plots	From rating	Shift	ADCP Sync'd to WT			
	hrs.	% diff	No.				
ADCP Mfr / Model / Frequency		Serial No.	Firmware	Software			
SONTEK / M9 / 3MHz / MH		1155	1.50	2.50			
Boat/Motors Used		GPS Used	ADCP Depth	Diag. Test / Errors?			
MOUSE KAZER		SONTEK M9	1.25	Y or N			
Compass Calib. & Total Error		Mag. Var	MagVar Method	Moving Bed?			
Or N M609 - 1.4			On-site Model / Previous	Y or N			
Meas. Water Temp		ADCP Water Temp	Weather / Air Temp	Wind Speed / Dir.			
20.6 °F @ 10m		20.9 °F @ 10m	PC WARM	5-10 S			
Gage Readings				Site Conditions			
Time		Inside	Outside	Max Water Depth			
1525	(S)			Max Water Speed			
1609	(F)			Max Boat Speed			
				Water Mode			
				Bottom Mode			
				Streambed material			
				Salinity			
				ppt at			
Weighted MGH				Checkbar found			
GH corrections				Checkbar changed to:			
Correct MGH				at			
Wading, cable, ice (both) 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	FAIRLY EVEN						
Cross section:	EVEN						
Control:							
Gage operating:	Y or N	Record removed:	Y or N	Filename:			
Battery voltage		V	Intakes/Orifices 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: Tuesday, May 24, 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)	843.68
Depth Reference	Vertical Beam	Right Method	Sloped Bank	Area (ft2)	12,672.6
Coordinate System	ENU	Top Fit Type	Power Fit	Total Q (cfs)	28,927.998
		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	3:48:13 PM	0:04:07	70.4	865.96	741.01	871.01	12,450.8	3.506	1.895	-94.97	64.57	1,949.25	17,508.22	4,161.45	23,588.527	28,328.416	74.2
3	L	3:53:17 PM	0:03:19	70.8	665.38	598.56	695.56	15,676.4	3.344	1.558	151.34	41.74	1,549.05	18,951.44	4,033.64	24,424.522	31,354.318	77.6
4	R	3:57:58 PM	0:04:53	69.7	931.78	803.63	925.63	11,531.6	3.180	2.087	13.97	65.10	2,167.54	17,715.38	4,105.92	24,067.907	28,698.354	73.6
5	L	4:04:07 PM	0:05:06	70.1	901.99	758.53	882.53	11,031.5	2.948	2.033	108.06	63.69	2,062.76	16,520.20	3,672.62	22,427.331	27,330.905	73.7
		Mean	70.3	841.28	725.43	843.68	12,672.6	3.244	1.893	-31.07	58.77	1,932.15	17,673.81	3,993.41	23,627.073	28,927.998	74.8	
		Std Dev	0.4	104.20	76.73	87.91	1,807.4	0.206	0.206	99.92	9.85	234.27	864.91	190.67	753.513	1,487.445	1.6	
		COV	0.0	0.124	0.106	0.104	0.143	0.064	0.109	-3.216	0.168	0.121	0.049	0.048	0.032	0.051	0.022	

Exposure Time: 0:17:25

Tr2=20110524154811r.rivr; Tr3=20110524155316r.rivr; Tr4=20110524155756r.rivr; Tr5=20110524160404r.rivr;

## Comments

Tr2=20110524154811r.rivr - ; Tr3=20110524155316r.rivr - ; Tr4=20110524155756r.rivr - ; Tr5=20110524160404r.rivr - ;

## Loop Method

DMG	Loop Time	Moving Bed Velocity	Moving Bed Direction	Flow Direction	Estimated Percent Correction
141.11	336	0.42	246.00	67.25	22.75

File Name: Loop\_20110524161018r.rivr

Percent Bad Bottom Track: 0.6.

Difference in flow direction between out and back sections: 6.4 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: CompassCal20110524152124.bt

Results: PASS

Score is excellent.

Magnetic interference is very low.

Calibration score: M6.00Q9

## System Test

File Name: SystemTest20110524092046.bt

System Test: PASS

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

Report generated using SonTek RiverSurveyor Live v2.50