

CAT 36-37.40  
LON 89-18-06

9-275-1	10/24/08	U.S. DEPARTMENT OF THE INTERIOR U.S. Geological Survey				Meas. No.	15
Station Number		ADCP Discharge Measurement Notes				Processed by	SS
363740099/80601						Checked by	
Station Name		INFLOW OUTFLOW #1 NR NEW MADRID					
Date	5-21-2011	Party	BSS/TL		Gage Height	Discharge	
Width	Area/Rated Area	Velocity	Index Vel.				
970	11600	4.39					50700
Gage Height Change	Meas. plots	From rating	Shift	ADCP Sync'd to WT			
in	hrs.	% diff	No.	at		or N	
ADCP Mfr / Model / Frequency		Serial No.	Firmware				
SONTEK / M9/3MH, 1MH		1456	1.50	2.50			
Boat/Motors Used		GPS Used	ADCP Depth	Diag. Test / Errors?			
MIDWATER BLAZER		SONTEK M9	1.4	Y or N			
Compass Calib. & Total Error		Mag. Var	MagVar Method	Moving Bed?			
Dor N		M1209	-1.4	On-site (Model) Previous			
Meas. Water Temp		ADCP Water Temp	Weather / Air Temp	Wind Speed / Dir.			
19.9 °C		19.9 °F / 68	MS WARM	°F / C		10-20 SSW	
Gage Readings							
Time	Inside		Outside		Site Conditions		
					Max Water Depth		
					Max Water Speed		
					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 boat upstr., downstr., side bridge							
Measurement rated: excellent (2%), good (5%), fair (8%), poor (10%) 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/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: Saturday, May 21, 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)	1.40 ✓
Serial Number	1456	Salinity (ppt)	0.0
Firmware Version	1.50	Magnetic Declination (deg)	-1.4
Software Version	2.50		
			Distance ft
			Velocity ft/s
			Area ft2
			Discharge cfs
			Temperature degF

Discharge Calculation Settings				Discharge Results	
Track Reference	Bottom-Track	Left Method	Sloped Bank	Width (ft)	971.46
Depth Reference	Vertical Beam	Right Method	Sloped Bank	Area (ft2)	11,581.1
Coordinate System	ENU	Top Fit Type	Power Fit	Mean Speed (ft/s)	4.392
		Bottom Fit Type	Power Fit	Total Q (cfs)	50,738.576

Measurement Results																	
Tr	Time		Distance				Mean Vel		Discharge							% Measured	
#	Time	Duration	Temp.	Track	DMG	Width	Area	Boat	Water	Left	Right	Top	Middle	Bottom	Total	LCTotal	
2 R	12:38:28 PM	0:07:29	66.9	1,105.38	918.08	1,083.08	12,647.7	2.462	4.096	77.54	109.69	9,185.16	34,793.97	7,861.27	51,808.268	--	67.2
3 L	12:52:22 PM	0:05:32	67.0	1,084.91	783.39	943.39	10,900.5	3.268	4.627	78.61	154.77	9,087.03	33,636.45	7,640.96	50,440.592	--	66.7
4 R	12:58:59 PM	0:07:26	66.5	1,006.00	772.74	927.74	11,485.3	2.256	4.416	58.48	136.09	9,143.70	33,307.63	8,073.44	50,719.333	--	65.7
5 L	1:06:49 PM	0:06:34	66.8	1,058.68	782.64	931.64	11,290.7	2.687	4.427	86.79	152.03	9,113.42	32,866.93	7,766.95	49,986.127	--	65.8
	Mean		66.8	1,063.74	814.21	971.46	11,581.1	2.668	4.392	36.05	83.30	9,132.33	33,651.24	7,835.66	50,738.576	0.000	66.3
	Std Dev		0.2	37.22	60.12	64.70	650.8	0.378	0.190	66.98	111.65	36.51	714.02	157.97	670.743	0.000	0.6
	COV		0.0	0.035	0.074	0.067	0.056	0.142	0.043	1.858	1.340	0.004	0.021	0.020	0.013	0.000	0.009

Exposure Time: 0:27:01

Tr2=20110521123827r.rivr; Tr3=20110521125220r.rivr; Tr4=20110521125858r.rivr; Tr5=20110521130647r.rivr;

Comments
Tr2=20110521123827r.rivr - ; Tr3=20110521125220r.rivr - ; Tr4=20110521125858r.rivr - ; Tr5=20110521130647r.rivr - ;

Loop Method					
DMG	Loop Time	Moving Bed Velocity	Moving Bed Direction	Flow Direction	Estimated Percent Correction
155.68	370	0.42	305.42	79.64	11.17

File Name: Loop\_20110521123055r.rivr

Percent Bad Bottom Track: 4.1.

Difference in flow direction between out and back sections: 2.2 deg.

Loop Closure Error not in Upstream Direction -- No Correction Recommended.

Compass Calibration
File Name: CompassCal20110521122601.txt
Results: PASS
Score is excellent.
Magnetic interference is fairly low.
Calibration score: M12.00Q9

System Test
File Name: SystemTest20110521122503.txt
System Test: PASS

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

Report generated using SonTek RiverSurveyor Live v2.50