☆ U.S. GPO: 2004 - 669-644

+1.94' Sh.

9-275-I
REV (10-01)

U.S. DEPARTMENT OF THE INTERIOR
Geological Survey
Water Resources Division
Acoustic Profiler Discharge Measurement Notes

ENTERED

Meas. No. 981
Processed by JGS
Ck'd by DCM

Sta. No 08114000
Sta. Name Brazos Rv. @ Richmond X
Date June 01, 2007 Party JGS / JDB
Width 421 Area 13,700 Vel. 5.23 G.H. 40.76 Disch. 71,600
Profiler Water Temp. ____ °C at ____ Rated area: ____ Index Velocity ____
Profiler S/N: 2967 Mfgr: RDI Freq 1200 KHz Firmware 10.14 Software Ver. 10.06

Depth Cell Size	25 cm	Other commands:	
No. of Cells	—		
Blanking Distance	25 cm		
Water Mode	1		
Ambiguity Vel.	175		
Water pings	1		
Bottom pings	1		

Profiler Depth 1.0
Config. file 060107.
Deployment jon
Moving Bed yes
Moving Bed Present: (Y) N
Diag. Test 2926.0 70601093118
Diag. Test Errors: Y (N)

Boat/Motor Used ____ ADCP Time to WT ☐ @ ____ GPS: ____
Mag. Var. 1) ____ 2) ____ 3) ____ 4) ____ Avg: ____ Comp. Cal.: ____

GAGE READINGS

Time				radar	Inside	Outside
~~1608~~						~~41.80~~
~~0737~~				40.61	40.47	~~74.14~~
0737					∓ 0.3	
0930 (S)				40.75		
0945 (F)				40.77		
11.47				40.88	40.81	~~40.8~~
					±.05	
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 12.68
Weather clr, hot
Wind Spd. ____ Dir. ____
Air Temp. ____ °C at ____
Water Temp. ____ °C at ____
Specific. Cond: ____
Checkbar/chain found 74.14
Changed to ____ at ____
Correct ____

Wading, cable, ice, boat, upstr., downstr., side bridge, 100 ft., mi. upstr., downstr. of gage.
Measurement rated: excellent (2%), good (5%), fair (8%), poor (>8%) based on following conditions:
Flow: highly elevated rapid flow
Cross section: sand
Control: channel bed + banks, heavy debris
Gage operating: yes Record removed: Y or N Filename: —
Battery voltage: 14.0 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: Win I Files

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

Sheet No. ____ of ____ sheets

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							moving bottom test
001	RT	0938	60	40	0940	65019	
002	LT	0940	40	60	0942	67104	
003	RT	0942	60	40	0943	66070	
004	LT	0943	40	60	0945	70244	
							$\bar{Q}$ = 67100
							with moving bed LC program
							Q = 71,600

Notes: heavy debris in channel.

COMPUTATION NOTES

Beginning		Ending		Discharge					
Ensemble number	Distance added	Ensemble number	Distance added	Estimated	Measured	Estimated			Total
				Top	Middle	Bottom	Left	Right	
				Mean				Mean	

Estimation Method Top_____ Bottom_____

Power Law Exponent:_____

Range (max-min)÷Mean (%) :_____

Measured Q as percent of total _____

LC Version 1.2, December 5, 2006

Processed on: 13-Jun-2007

Loop File: 060107000t.000

Distance Made Good (ft)	Loop Time (sec)	Moving Bed Velocity (ft/s)	Moving Bed Direction (degrees)	Flow Direction (degrees)	Estimated Percent Correction (percent)
53.34	129.80	0.41	308.81	129.74	8.24

Loop Indicates a Moving Bed -- Select transects to be corrrected

Deployment Name: 060107

File Number	Original Discharge cfs	Adjusted Discharge cfs
001	65267.40	70259.83
002	67104.60	71567.65
003	66070.40	70448.85
004	70228.90	74237.76
Average	67167.82	71628.52

Station No.: 08114000
Station Name: Brazos Rv @ Richmond, Tx

Meas. No: 981
Date: 06/01/2007

Party:	JGS/JDB	Width:	421 ft	Processed by:	JGS
Boat/Motor:	jon/25	Area:	13,700 ft²	Mean Velocity:	~~4.90~~ ft/s 5.23
Gage Height:	40.76 ft	G.H.Change:	0.02	Discharge:	~~67,200~~ ft³/s 71,600

Area Method:	Avg. Course	ADCP Depth:	1.00 ft	Index Vel.:	0.00 ft/s	Rating No.:	15
Nav. Method:	DGPS	Shore Ens.:	10	Adj.Mean Vel:	0.00 ft/s	Qm Rating:	F
MagVar Method:	Model (4.2°)	Top Est:	Power (0.1667)	Rated Area:	0.000 ft²	% Diff:	0.0%
Depth Sounder:	Not Used	Bottom Est:	Power (0.1667)	Control:	Heavy Debris		

Screening Thresholds:				ADCP:			
BT 3-Beam Solution:	ON	Max. Vel.:	9.98 ft/s	Type/Freq.:	Rio Grande / 1200 kHz		
WT 3-Beam Solution:	OFF	Max. Depth:	36.4 ft	Serial #:	2962	Firmware:	10.14
BT Error Vel.:	0.33 ft/s	Mean Depth:	32.6 ft	Bin Size:	25 cm	Blank:	25 cm
WT Error Vel.:	3.50 ft/s	% Meas.:	70.99%	BT Mode:	5	BT Pings:	1
BT Up Vel.:	1.00 ft/s	Water Temp.:	None	WT Mode:	1	WT Pings:	1
WT Up Vel.:	10.00 ft/s	ADCP Temp.:	75.8 °F	WV:	175		

Diag. Test: 2962.070601093347.txt
Moving Bed Test: 060107000r.000
Compass Test: CompCal.2962.070601093118.txt
Meas. Location: DS side of bridge

Filename Prefix: 060107
Software: 10.06.00

Tr.#		Edge D.		#Ens	Discharge						Width	Area	Time		Mean Vel.		% Bad		
		L	R		Top	Middle	Bottom	Left	Right	Total			Start	End	Boat	Water	Ens.	Bins	
001	R	40	60	122	5242	47158	3687	2971	6209	65267	419	13465	09:39	09:41	3.28	4.85	10	1	U
002	L	40	60	99	5005	47229	3502	2481	8888	67105	416	13846	09:41	09:42	3.84	4.85	3	0	U
003	R	40	60	78	5202	47270	3735	4761	5102	66070	425	13558	09:43	09:44	5.06	4.87	5	3	U
004	L	40	60	93	5290	49070	3697	2851	9322	70229	422	13937	09:44	09:45	4.00	5.04	1	0	U
Mean		40	60	98	5185	47682	3655	3266	7380	67168	421	13702	**Total**	00:06	4.05	4.90	5	1	
SDev		0	0	18	125	927	104	1018	2050	2175	4	226			0.74	0.09			
R/M%		0	0	44.9	5.5	4.0	6.4	69.8	57.2	7.4	2.1	3.4			44.05	3.93			

Remarks:

U - transect is unlocked