

| | | | | | | | |
|---|-------------------|--|--------------------|-----------------|---|----------------------|-----------------|
| 9-275-1 | 10/24/08 | U.S. DEPARTMENT OF THE INTERIOR U.S. Geological Survey | | | | Meas. No. | |
| Station Number | | ADCP Discharge Measurement Notes | | | | Processed by | |
| | | | | | | Checked by | |
| Station Name <u>Inflow/Outflow 2</u> | | | | | | | |
| Date | | <u>06-02</u> | <u>20</u> | Party | <u>BR/ZM</u> | | |
| Width | Area / Rated Area | Velocity | Index Vel. | Gage Height | Discharge | | |
| <u>89.5</u> | <u>313</u> | <u>2.23</u> | <u> </u> | <u> </u> | <u>695.9</u> | | |
| Gage Height Change | | Meas. plots | From rating | Shift | ADCP Sync'd to WT | | |
| in hrs. | | % diff | No.: | | Y at <u> </u> or N | | |
| ADCP Mfr / Model / Frequency | | | Serial No. | Firmware | Software | | |
| <u>RS M9</u> | | | <u>2010</u> | <u>1.50</u> | <u>2.50</u> | | |
| Boat/Motors Used | | | GPS Used | ADCP Depth | Diag. Test / Errors? | | |
| | | | <u>GGA</u> | <u>0.3</u> | <input checked="" type="checkbox"/> Y or <u>(N)</u> | | |
| Compass Calib. & Total Error | | Mag. Var | MagVar Method | | Moving Bed? | | |
| <u>(Y) or N</u> | | <u>M099</u> | <u>-1.3</u> | | On-site <u>Model</u> Previous | | Y or <u>(N)</u> |
| Meas. Water Temp | | ADCP Water Temp | Weather / Air Temp | | Wind Speed / Dir. | | |
| <u>80</u> °F / C at | | <u>81</u> °F / C at | | | °F / C | | |
| Gage Readings | | | | Site Conditions | | | |
| Time | | | | Inside | Outside | Max Water Depth | |
| | | | | | | Max Water Speed | |
| <u>0902</u> | | | | | | Max Boat Speed | |
| | | | | | | Water Mode | |
| <u>0910</u> | | | | | | Bottom Mode | |
| | | | | | | Streambed material | |
| | | | | | | Salinity | |
| | | | | | | ppt at | |
| Weighted MGH | | | | | | Checkbar found | |
| GH corrections | | | | | | Checkbar changed to: | |
| Correct MGH | | | | | | at | |
| Wading, cable, ice, <u>boat</u> upstr., downstr., side bridge | | | | | ft., mi. upstr., downstr. of gage | | |
| Measurement rated: | | <u>excellent (2%), good (5%), fair (8%), poor (>8%)</u> | | | based on following conditions | | |
| Flow | | | | | | | |
| Cross section: | | | | | | | |
| Control: | | | | | | | |
| Gage operating: | <u>Y or N</u> | Record removed: | <u>Y or N</u> | Filename: | | | |
| Battery voltage | <u>V</u> | Intakes/Orifice cleaned/purged: | | | | | |
| Bubble-gage psi: | Tank | | Line | | Bubble rate | / min | |
| Extreme-GH indicators: | | Max | | Min | | CSG Checked | <u>Y or N</u> |
| 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, June 02, 2011

| Site Information | | Measurement Information | |
|------------------|------------------|-------------------------|---------|
| Site Name | inflow/outflow 2 | Party | bcr/zwm |
| Station Number | | Boat/Motor | |
| Location | | Meas. Number | |

| System Information | | System Setup | | Units | |
|--------------------|-------|----------------------------|------|-------------|------|
| System Type | RS-M9 | Transducer Depth (ft) | 0.30 | Distance | ft |
| Serial Number | 2010 | Salinity (ppt) | 0.0 | Velocity | ft/s |
| Firmware Version | 1.50 | Magnetic Declination (deg) | -1.3 | Area | ft2 |
| Software Version | 2.50 | | | Discharge | cfs |
| | | | | Temperature | degF |

| Discharge Calculation Settings | | | | Discharge Results | |
|--------------------------------|--------------|-----------------|-------------|-------------------|---------|
| Track Reference | GPS-GGA | Left Method | Sloped Bank | Width (ft) | 89.49 |
| Depth Reference | Bottom-Track | Right Method | Sloped Bank | Area (ft2) | 313.4 |
| Coordinate System | ENU | Top Fit Type | Power Fit | Mean Speed (ft/s) | 2.232 |
| | | Bottom Fit Type | Power Fit | Total Q (cfs) | 695.921 |

| 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 | Measured |
| 2 L | 9:02:24 AM | 0:01:30 | 80.9 | 120.11 | 92.83 | 103.39 | 341.2 | 1.335 | 2.118 | 9.57 | 0.83 | 102.89 | 510.63 | 98.75 | 722.680 | -- | 70.7 |
| 3 R | 9:04:37 AM | 0:01:20 | 80.9 | 92.73 | 74.97 | 85.53 | 332.8 | 1.159 | 2.042 | 18.95 | 7.15 | 80.41 | 443.87 | 129.11 | 679.493 | -- | 65.3 |
| 4 L | 9:06:24 AM | 0:01:15 | 81.1 | 90.95 | 74.39 | 84.95 | 280.8 | 1.213 | 2.456 | 14.57 | 8.46 | 95.88 | 478.87 | 91.95 | 689.734 | -- | 69.4 |
| 5 R | 9:08:01 AM | 0:01:01 | 81.1 | 82.66 | 73.52 | 84.08 | 299.0 | 1.355 | 2.314 | 18.41 | 9.65 | 83.48 | 466.59 | 113.64 | 691.778 | -- | 67.4 |
| | | Mean | 81.0 | 96.61 | 78.93 | 89.49 | 313.4 | 1.265 | 2.232 | 15.38 | 6.52 | 90.67 | 474.99 | 108.36 | 695.921 | 0.000 | 68.2 |
| | | Std Dev | 0.1 | 14.09 | 8.04 | 8.04 | 24.6 | 0.082 | 0.163 | 3.75 | 3.40 | 9.13 | 24.11 | 14.32 | 16.135 | 0.000 | 2.0 |
| | | COV | 0.0 | 0.146 | 0.102 | 0.090 | 0.078 | 0.065 | 0.073 | 0.244 | 0.522 | 0.101 | 0.051 | 0.132 | 0.023 | 0.000 | 0.030 |

Exposure Time: 0:05:06

Tr2=20110602090223.riv; Tr3=20110602090436.riv; Tr4=20110602090622.riv; Tr5=20110602090800.riv;

| Comments |
|---|
| Tr2=20110602090223.riv - ; Tr3=20110602090436.riv - ; Tr4=20110602090622.riv - ; Tr5=20110602090800.riv - ; |

| Loop Method | | | | | |
|--|-----------|---------------------|----------------------|----------------|------------------------------|
| DMG | Loop Time | Moving Bed Velocity | Moving Bed Direction | Flow Direction | Estimated Percent Correction |
| 1.92 | 55 | 0.03 | 249.21 | 237.61 | 1.18 |
| File Name: Loop_20110602090115.riv | | | | | |
| Percent Bad Bottom Track: 1.8. | | | | | |
| Difference in flow direction between out and back sections: 2.3 deg. | | | | | |
| Loop Closure Error not in Upstream Direction -- No Correction Recommended. | | | | | |

| Compass Calibration |
|---|
| File Name: CompassCal20110602080706.txt |
| Results: PASS |
| Score is excellent. |
| Magnetic interference is very low. |
| Calibration score: M0.00Q9 |

| System Test |
|-------------|
| Not Loaded |