

| | | | | | | | |
|--|-------------------|---|---------------------------------|--|-----------------------------------|-------------------------------|---|
| 9-275-I | 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 | | 1500 ft Gap Outflow | | | | | |
| Date | | 06-04 | , 20 | 11 | Party | BR/ZM | |
| Width | Area / Rated Area | Velocity | Index Vel. | Gage Height | Discharge | | |
| 1503 | 10,169 | 1.59 | — | — | 29870 | | |
| 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 | | |
| RS M9 | | | 2010 | 1.50 | 2.50 | | |
| Boat/Motors Used | | GPS Used | ADCP Depth | Diag. Test / Errors? | | | |
| | | NO | 0.3 | <input checked="" type="checkbox"/> Y or <input checked="" type="checkbox"/> N | | | |
| Compass Calib. & Total Error | | Mag. Var | MagVar Method | | Moving Bed? | | |
| <input checked="" type="radio"/> Y or N | | M1Q9 | -1.3 | | On-site <u>Mode</u> Previous | | <input checked="" type="radio"/> Y or N |
| Meas. Water Temp | | ADCP Water Temp | Weather / Air Temp | | Wind Speed / Dir. | | |
| 80 °F / C at | | 82 °F / C at | °F / C | | | | |
| Gage Readings | | | | | Site Conditions | | |
| Time | | | | Inside | Outside | Max Water Depth | |
| | | | | | | Max Water Speed | |
| 0905 | | | | | | Max Boat Speed | |
| | | | | | | Water Mode | |
| | | | | | | Bottom Mode | |
| 0931 | | | | | | 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 | | | | | | | |
| Cross section: | | | | | | | |
| 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 | | Refelev. | | HWM elevation | | | |
| GH of zero flow = GH | | - depth at control | | = | ft. | Rated= | |
| Sheet No. | | | | of | sheets | | |

Discharge Measurement Summary

Date Measured: Saturday, June 04, 2011

| Site Information | | Measurement Information | |
|------------------|-------------|-------------------------|---------|
| Site Name | 1500 ft gap | 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 | Bottom-Track with LC | Left Method | Sloped Bank | Width (ft) | 1,502.56 |
| Depth Reference | Vertical Beam | Right Method | Sloped Bank | Area (ft2) | 10,169.4 |
| Coordinate System | ENU | Top Fit Type | Power Fit | Total Q (cfs) | 20,870.391 |
| | | 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 | 9:05:18 AM | 0:06:04 | 83.1 | 1,531.89 | 1,484.23 | 1,502.79 | 10,172.9 | 4.208 | 1.622 | 2.87 | 0.55 | 1,476.21 | 12,346.94 | 2,671.60 | 16,498.175 | 21,499.590 | 74.8 |
| 3 | L | 9:11:42 AM | 0:05:55 | 81.4 | 1,511.49 | 1,475.58 | 1,499.58 | 10,439.6 | 4.258 | 1.557 | 2.96 | 0.90 | 1,490.54 | 12,141.23 | 2,622.16 | 16,257.783 | 20,753.896 | 74.7 |
| 5 | R | 9:20:37 AM | 0:05:57 | 83.4 | 1,551.29 | 1,474.65 | 1,498.65 | 10,109.1 | 4.345 | 1.544 | 1.80 | 0.13 | 1,439.84 | 11,460.47 | 2,710.89 | 15,613.129 | 20,322.296 | 73.4 |
| 6 | L | 9:26:54 AM | 0:05:33 | 81.6 | 1,532.91 | 1,485.20 | 1,509.20 | 9,955.9 | 4.603 | 1.630 | 2.04 | 1.67 | 1,545.94 | 11,819.79 | 2,855.84 | 16,225.275 | 20,905.786 | 72.8 |
| | | | Mean | 82.4 | 1,531.90 | 1,479.92 | 1,502.56 | 10,169.4 | 4.354 | 1.588 | 2.42 | 0.81 | 1,488.13 | 11,942.10 | 2,715.12 | 16,148.591 | 20,870.391 | 73.9 |
| | | | Std Dev | 0.9 | 14.08 | 4.82 | 4.13 | 174.8 | 0.152 | 0.038 | 0.51 | 0.56 | 38.15 | 335.59 | 87.11 | 326.624 | 421.640 | 0.8 |
| | | | COV | 0.0 | 0.009 | 0.003 | 0.003 | 0.017 | 0.035 | 0.024 | 0.209 | 0.692 | 0.026 | 0.028 | 0.032 | 0.020 | 0.020 | 0.011 |

Exposure Time: 0:23:29

Tr2=20110604090518.riv; Tr3=20110604091142.riv; Tr5=20110604092037.riv; Tr6=20110604092654.riv;

| Comments |
|---|
| Tr2=20110604090518.riv - ; Tr3=20110604091142.riv - ; Tr5=20110604092037.riv - ; Tr6=20110604092654.riv - ; |

| Loop Method | | | | | |
|--|-----------|---------------------|----------------------|----------------|------------------------------|
| DMG | Loop Time | Moving Bed Velocity | Moving Bed Direction | Flow Direction | Estimated Percent Correction |
| 188.08 | 661 | 0.28 | 88.55 | 262.67 | 19.61 |
| File Name: Loop_20110604085402.riv | | | | | |
| Percent Bad Bottom Track: 0.5. | | | | | |
| Difference in flow direction between out and back sections: 4.9 deg. | | | | | |
| Loop Indicates a Moving Bed | | | | | |

| Compass Calibration |
|---------------------|
| Not Loaded |

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

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

Report generated using SonTek RiverSurveyor Live v2.50