

Potomac Water-Quality Monitoring Program
Quarterly Progress Report
U.S. Geological Survey

Reporting Period January 1, 2001 – March 31, 2001

Cooperating Agencies Maryland Department of the Environment (MDE) and
U.S. Geological Survey (USGS)

Project Personnel

Brenda Feit Majedi, Project Chief, USGS

Southern Maryland: Jon Evans, USGS
Western Maryland/WVa: Jim Jeffries, USGS;
John Holt plus one, MDE
Virginia: Rick Ahlin, USGS

Progress During Reporting Period

1. The following water-quality samples were collected during this reporting period.

Zekiah Swamp Run nr Newtown, MD (01660920)

A total of 10 samples were collected and analyzed for nutrient and suspended sediment concentrations, including the monthly baseflow samples and 8 stormflow samples, including 3 stormflow replicates. In addition, one sample was collected for MDE (BOD, silica, chlorophyll-a, and DOC) and CBL parameters.

Goose Creek nr Leesburg, VA (01644000)

A total of 13 samples were collected for nutrients and suspended sediment, including the monthly base-flow samples and 4 stormflow samples, including 4 stormflow replicates, as well as 2 field blanks, 1 auto-sampler blank, and 3 comparisons of the auto sampler to the river cross section.

Potomac River at Shepherdstown, WV (01618000)

A total of 12 samples were collected and analyzed for nutrient and suspended sediment concentrations, including the monthly baseflow samples and 7 stormflow samples, including 1 stormflow replicate, as well as 1 field blank.

Progress During Reporting Period (continued)

Mattawoman Creek nr Pomonkey, MD (01658000)

A total of 36 samples were collected and analyzed for nutrient and suspended sediment concentrations, including one monthly baseflow sample and 30 stormflow samples, including 2 stormflow replicates, as well as 2 field blanks and 1 comparison of the auto sampler to the river cross section. In addition, 2 samples were collected for MDE (BOD, silica, chlorophyll-a, and DOC) and CBL parameters.

Piscataway Creek at Piscataway, MD (01653600)

A total of 31 samples were collected and analyzed for nutrient and suspended sediment concentrations, including the monthly baseflow samples and 22 stormflow samples, including 2 stormflow replicates, as well as 1 field blank, 1 auto-sampler blank, and 3 comparisons of the auto sampler to the river cross section. In addition, 2 samples were collected for MDE (BOD, silica, chlorophyll-a, and DOC) and CBL parameters.

St. Clement Creek nr Clements, MD (01661050)

A total of 20 samples were collected and analyzed for nutrient and suspended sediment concentrations, including the monthly baseflow samples and 12 stormflow samples, including 1 stormflow replicate, as well as 2 field blanks, 1 auto-sampler blank, and 2 comparisons of the auto sampler to the river cross section.

Blacks Run at Rt. 726 at Harrisonburg, VA (01621410)

A total of 23 samples were collected and analyzed for nutrient and suspended sediment concentrations, including the monthly baseflow samples and 15 stormflow samples, as well as 2 field blanks, 1 auto-sampler blank, and 2 comparisons of the auto sampler to the river cross section.

Sideling Hill Creek nr Bellegrove, MD (01610155)

A total of 29 samples were collected and analyzed for nutrient and suspended sediment concentrations, including the monthly baseflow samples and 17 stormflow samples, including 1 stormflow replicate, as well as 3 field blanks, 1 auto-sampler blank, and 2 comparisons of the auto sampler to the river cross section.

Cacapon River at Great Cacapon, WV (01611500)

A total of 27 samples were collected and analyzed for nutrient and suspended sediment concentrations, including the monthly baseflow samples and 16 stormflow samples, including 1 stormflow replicate, as well as 2 field blanks, 1 auto-sampler blank, and 2 comparisons of the auto sampler to the river cross section.

Progress During Reporting Period (continued)

2. Site installations were completed early in the reporting period, and each river station is fully operational and collecting streamflow, rainfall, and water-quality data, with the exception of Goose Creek. All stations are real-time accessible on the web pages listed below.

Zekiah Swamp Run nr Newtown, MD (01660920): Station is real-time accessible at http://sunweb1.er.usgs.gov/rt-cgi/gen_stn_pg?station=01660920&style=new. No automatic sampler at this station, per proposal.

Goose Creek nr Leesburg, VA (01644000): Gage house, phone, auto sampler, and rain gage installed. River-stage and rainfall data are being collected, and the station is real-time accessible at http://www-va.usgs.gov/rt-cgi/gen_stn_pg?station=01644000. Problems procuring electricity have been incurred at this site; auto sampler will be operational following installation of electricity.

Potomac River at Shepherdstown, WV (01618000): Station is real-time accessible, at http://sunweb1.er.usgs.gov/rt-cgi/gen_stn_pg?station=01618000&style=new. No automatic sampler at this station, per proposal.

Mattawoman Creek nr Pomonkey, MD (01658000): Site is fully operational; automatic sampler installed January 2001. Real time accessible at http://sunweb1.er.usgs.gov/rt-cgi/gen_stn_pg?station=01658000.

Piscataway Creek at Piscataway, MD (01653600): Site is fully operational; automatic sampler installed end of February 2001. Real time accessible at http://sunweb1.er.usgs.gov/rt-cgi/gen_stn_pg?station=01653600&style=new.

St. Clement Creek nr Clements, MD (01661050): Site is fully operational; automatic sampler installed in January 2001. Real time accessible at http://sunweb1.er.usgs.gov/rt-cgi/gen_stn_pg?station=01661050&style=new.

Blacks Run at Rt. 726 at Harrisonburg, VA (01621410): Site is fully operational; automatic sampler installed in January 2001. Real time accessible at http://www-va.usgs.gov/rt-cgi/gen_stn_pg?station=01621410.

Sideling Hill Creek nr Bellegrove, MD (01610155): Site is fully operational; automatic sampler installed in January 2001. Real time accessible at http://sunweb1.er.usgs.gov/rt-cgi/gen_stn_pg?station=01610155&style=new.

Cacapon River at Great Cacapon, WV (01611500): Site is fully operational; automatic sampler installed in January 2001. Real time accessible at http://www-wv.er.usgs.gov/rtcgi/gen_stn_pg?station=01611500&style=new.

Progress During Reporting Period (continued)

3. Decided to change to a laboratory analytical schedule with lower reporting limits for nutrients, because of censored data at most sampling sites. Beginning in January, the project began using NWQL Schedule 1119, which is about \$25 more than the schedule previously used.
4. Equipment blanks were collected from the ISCO automatic samplers before deploying in the field, with the exception of the sampler installed at Mattawoman Creek. Results show that most of the data were at or below analytical reporting limits.
5. Conducted site visits to the Virginia, Western Maryland, and West Virginia sites in mid-March, which were attended by USGS and MDE personnel.
6. Began initial development of a project web page.
7. Decided to collect semi-monthly base-flow samples during the months of March, April, and May at all 9 sampling sites.
8. Began sample collection of MDE parameters (BOD, silica, chlorophyll-a, and DOC) and CBL parameters during storm events at the four Southern Maryland sites only.
9. Purchased refrigerators for the St. Clements and Piscataway gage houses. These will be used to store all storm samples collected for MDE/CBL analysis.
10. The USGS Maryland District Safety officer visited the four southern Maryland sites. With the exception of Mattawoman Creek, cones and signs are sufficient for traffic safety. Mattawoman Creek requires a lane closure for water-quality and discharge measurements collected from the bridge.

Plans for Next Quarter

1. Continue water-quality sample collection.
2. Complete project work plan and quality-assurance/quality-control plan.
3. Have the automatic sampler operational at Goose Creek; electricity should be installed by end of May.
4. Coordinate concurrent sampling with MDE in southern Maryland, for data comparison purposes.
5. Complete project web page.
6. Install rain gage at Zekiah Swamp site and have data available on the real-time web page.