

Potomac Water-Quality Monitoring Program  
Quarterly Progress Report and Water Year 2001 Accomplishments  
U.S. Geological Survey

Reporting Period July 1, 2001 – September 30, 2001 and  
Water Year 2001

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

Project Personnel

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Southern Maryland: Jon Evans, USGS  
Western Maryland/WV: Jim Jeffries, USGS;  
John Holt plus one, MDE  
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Progress During Reporting Period

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

***Mattawoman Creek nr Pomonkey, MD (01658000)***

Three samples were collected and analyzed for nutrient and suspended-sediment concentrations, including two monthly base-flow samples and one base-flow automatic-sampler vs. cross-section-comparison sample. No base-flow sample was collected in July because the stream was at zero flow. No stormflow samples were collected this quarter.

A total of 56 samples were collected during water year 2001 at Mattawoman Creek.

***Piscataway Creek at Piscataway, MD (01653600)***

A total of 7 samples were collected and analyzed for nutrient and suspended-sediment concentrations, including three monthly base-flow and three stormflow samples, as well as one base-flow automatic-sampler vs. cross-section-comparison sample. Three storm samples were collected for MDE/CBL analyses.

A total of 57 samples were collected during water year 2001 at Piscataway Creek.

Progress During Reporting Period (continued)

***St. Clement Creek nr Clements, MD (01661050)***

A total of six samples were collected and analyzed for nutrient and suspended-sediment concentrations, including three monthly base-flow samples and three stormflow samples, as well as one base-flow automatic-sampler vs. cross-section-comparison sample. Three storm samples were collected for MDE/CBL analyses. This site remains a high priority for sample collection during storm events.

A total of 50 samples were collected during water year 2001 at St. Clements Creek.

***Zekiah Swamp Run nr Newtown, MD (01660920)***

Three monthly base-flow samples were collected and analyzed for nutrient and suspended-sediment concentrations. No stormflow samples were collected this quarter. This site remains a high priority for sample collection during storm events.

A total of 27 samples were collected during water year 2001 at Zekiah Swamp Run.

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

A total of nine samples were collected and analyzed for nutrient and suspended-sediment concentrations, including three monthly base-flow samples and six stormflow samples, as well as one stormflow replicate.

A total of 54 samples were collected during water year 2001 at Blacks Run.

***Goose Creek nr Leesburg, VA (01644000)***

Three monthly base-flow samples were collected and analyzed for nutrient and suspended-sediment concentrations. No stormflow samples were collected this quarter. This site remains a high priority for sample collection during storm events.

A total of 31 samples were collected during water year 2001 at Goose Creek.

***Potomac River at Shepherdstown, WV (01618000)***

Five samples were collected and analyzed for nutrient and suspended-sediment concentrations, including three monthly base-flow samples and one suspended-sediment blank and replicate. No stormflow samples were collected this quarter.

A total of 35 samples were collected during water year 2001 at the Shepherdstown mainstem site.

***Sideling Hill Creek nr Bellegrove, MD (01610155)***

Four samples were collected and analyzed for nutrient and suspended-sediment concentrations, including three monthly base-flow samples and one suspended-sediment replicate. No stormflow samples were collected this quarter.

A total of 48 samples were collected during water year 2001 at Sideling Hill Creek.

## Progress During Reporting Period (continued)

### **Cacapon River at Great Cacapon, WV (01611500)**

Four samples were collected and analyzed for nutrient and suspended-sediment concentrations, including three monthly base-flow samples and one suspended-sediment replicate. No stormflow samples were collected this quarter.

A total of 45 samples were collected during water year 2001 at Cacapon River.

2. Power was finally installed at the Goose Creek site in mid-August 2001, and the automatic sampler was operational at that time.
3. Mattawoman Creek went to zero flow around July 18<sup>th</sup>, and remained at zero flow intermittently throughout the reporting period. This is the first time during this project that the flow at this site went to zero, although the long-term discharge record shows no flow at times during June-September 1949-72.
4. Narendra Panday received a letter from USGS dated August 1, 2001, modifying the Memorandum of Understanding (MOU) for the project, adding \$20,000 of USGS Federal-State Cooperative Program funds to the project. The modification does not alter the amount of MDE funding agreed to in the original MOU; that amount is maintained at \$1,009,830. With the addition of this USGS funding, the total funds available to the project are now \$1,045,930.
5. The project web page was completed and made available to the public.

## Water Year 2001 Accomplishments

All water year 2001 project objectives were met, and exceeded in some instances.

1. Site installation was completed and instrumented in early Winter 2001.
2. All 9 sites were instrumented with continuous stream-stage recording devices; 8 have rain gages. All sites are real time.
3. Auto samplers were installed at 7 sites; no samplers are at the Zekiah Swamp Run or Potomac River near Shepherdstown sites.
4. Stage-discharge rating curves have been developed.
5. A total of 386 samples were collected in water year 2001 for nutrients and suspended sediment, including several quality-control samples.
6. Semi-monthly base-flow samples were collected during the spring months of March, April, and May at all 9 sampling sites.
7. Data management is ongoing; data resides in the USGS data base, and will also be in Excel spreadsheets.
9. Project web page developed: <http://md.usgs.gov/watershed/MD151/index.html>

### Plans for Next Quarter

1. Continue water-quality sample collection. St. Clements Creek and Zekiah Swamp Run in Southern Maryland and Goose Creek in Virginia are all priority sites for sample collection during storm events.
2. Collect MDE and CBL parms for selected storms at S. MD sites.
3. Finalize all water-quality and discharge data for water year 2001.
4. Plot selected water-quality data with discharge and rainfall, which will be available on the project web page.