



2006 Integrated Water Quality Monitoring and Assessment Report

Division of Water and Waste Management
West Virginia Department of Environmental Protection



WEST VIRGINIA INTEGRATED WATER QUALITY MONITORING AND ASSESSMENT REPORT 2006

prepared to fulfill the requirements of Sections 303(d) and 305(b) of the federal Clean Water Act for the period
of July 2003 through June 2005

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Section 1 – Introduction

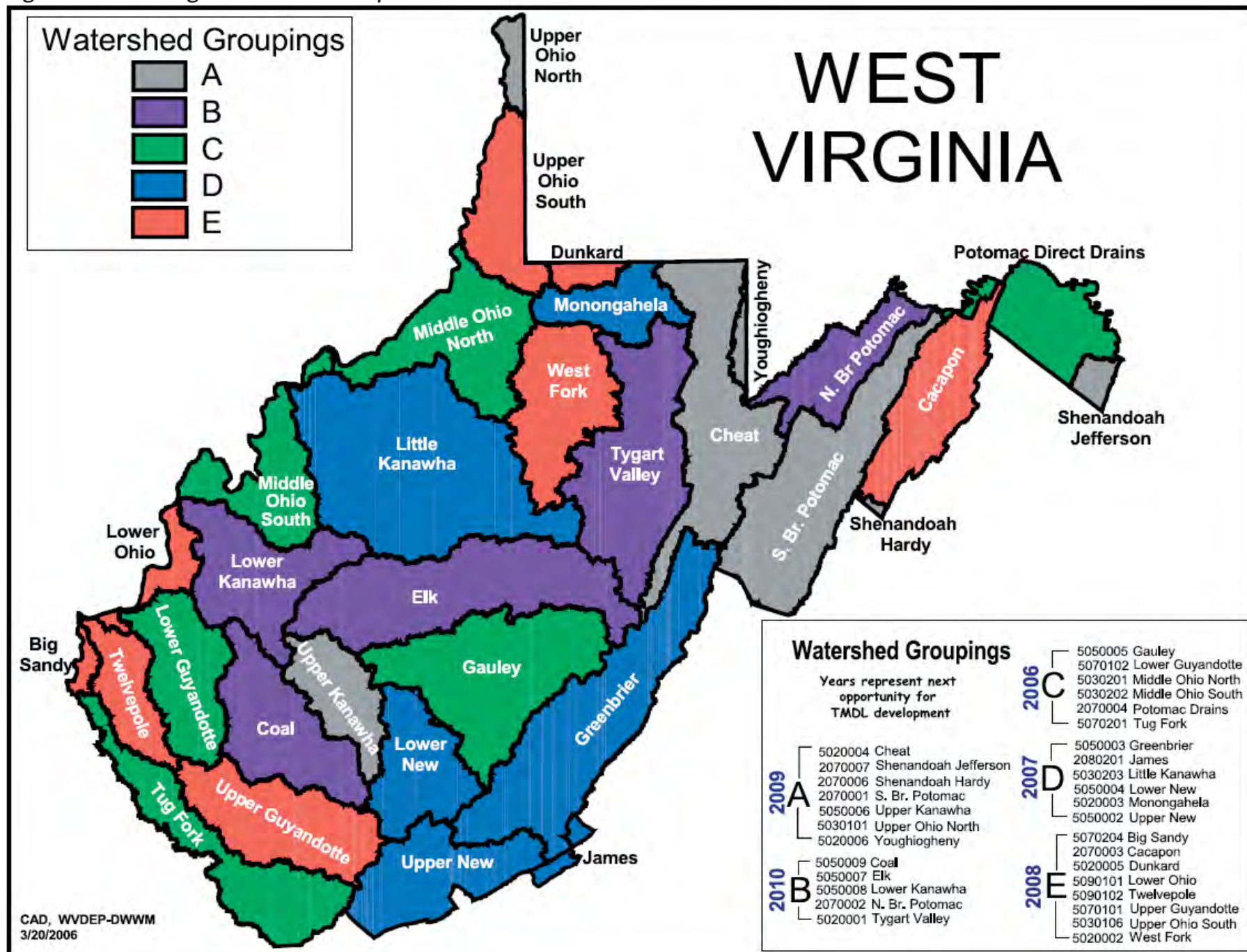
The federal Clean Water Act contains several sections requiring reporting on the quality of a state's waters. Section 305(b) requires a comprehensive biennial report and Section 303(d) requires, from time to time, a list of waters for which effluent limitations or other controls are not sufficient to meet water quality standards (impaired waters). In its regulations implementing Section 303(d), the U.S. Environmental Protection Agency (EPA) has defined "time-to-time" to mean April 1 of every even numbered year.

This document is intended to fulfill West Virginia's requirements for listing impaired waters under Section 303(d) of the Clean Water Act and the Water Quality Planning and Management Regulations, 40CFR130.7. In addition to the list of impaired waters, it explains the data evaluated in the preparation of the list and methodology used to identify impaired waterbodies. Information is provided that allows the tracking of previously listed waters that are not contained on the 2006 list. EPA has recommended that the 2006 requirements be accomplished in a single report that combines the comprehensive Section 305(b) report on water quality and the Section 303(d) List of waters that are not meeting water quality standards. The suggested format of this "Integrated Report" includes provisions for states to place their waters in one of the five categories described below:

- 💧 Category 1 – fully supporting all designated uses
- 💧 Category 2 – fully supporting some designated uses, but no or insufficient information exists to assess the other designated uses
- 💧 Category 3 – insufficient or no information exists to determine if any of the uses are being met
- 💧 Category 4 – waters that are impaired or threatened but do not need a Total Maximum Daily Load (TMDL)
 - 💧 Category 4a – waters that already have an approved TMDL but are still not meeting standards
 - 💧 Category 4b – waters that have other control mechanisms in place which are reasonably expected to return the water to meeting designated uses
 - 💧 Category 4c – waters that have been determined to be impaired, but not by a pollutant
- 💧 Category 5 – waters that have been assessed as impaired and are expected to need a TMDL

This Integrated Report is the combination of the 2006 Section 303(d) List and the 2006 Section 305(b) report. This report includes data collected and analyzed up to June 30, 2005, from the state's 32 major watersheds (Figure 1) by the Department of Environmental Protection's (DEP's) Watershed Branch and other federal, state, private and nonprofit organizations. Waters that are included on the 2006 Section 303(d) List are placed in Category 5 of this report.

Figure 1 – West Virginia Watershed Map



Section 2 – West Virginia Water Quality Standards

Water quality standards are the backbone of the 303(d) and 305(b) processes of the federal Clean Water Act. Instream data are compared with water quality standards to determine the use attainment status of streams and lakes. In West Virginia, the water quality standards are codified as 47CSR2 – Legislative Rules of the Department of Environmental Protection – Requirements Governing Water Quality Standards, and at 60CSR5 – Legislative Rules of the Department of Environmental Protection – Antidegradation Implementation Procedures. Impairment assessments conducted for the draft West Virginia 2006 303(d) List are based upon water quality standards that have received the EPA approval and are currently considered effective for Clean Water Act purposes.

A waterbody is considered impaired if it violates water quality standards or does not meet its designated uses. It is then placed on the 303(d) List and scheduled for TMDL development. Use attainment is determined by the comparison of the instream values of various water quality parameters to the numeric or narrative criteria specified for the designated use (See the Assessment Methodology section for more information on use attainment determination).

Some examples of designated uses are water contact recreation, propagation and maintenance of fish and other aquatic life, and public water supply. Designated uses are described in detail in Section 6.2 of 47CSR2 and are summarized in Table 1. Each of the designated uses has associated criteria that describe specific conditions that must be met to ensure that the water can support that use. For example, the “propagation and maintenance of fish and other aquatic life” use requires that the pH remain within the range of 6.0 to 9.0 standard units at all times. This is an example of a numeric criterion. Numeric criteria are provided in Appendix E of the water quality standards.

Numeric criteria consist of a concentration value, exposure duration and an allowable exceedance frequency. The water quality standards prescribe numeric criteria for the “propagation of fish and other aquatic life” use in two forms: acute criteria that are designed to prevent lethality, and chronic criteria that prevent retardation of growth and reproduction. The numeric criteria for acute aquatic life protection are specified as one-hour average concentrations that are not to be exceeded more than once in a three-year period. The criteria for chronic aquatic life protection are specified as four-day average concentrations that are not to be exceeded more than once in a three-year period. The exposure time criterion for human health protection is unspecified but there are no allowable exceedances.

Water quality criteria also can be written in a narrative form. For example, the water quality standards contain a provision that states that wastes, present in any waters of the state, shall not adversely alter the integrity of the waters or cause significant adverse impact to the chemical, physical, hydrologic, or biological components of aquatic ecosystems. Narrative criteria are contained in Section 3 of 47CSR2. More information regarding the use of narrative criteria for the 2006 Section 303(d) List is contained in Section 5 under the discussions of decision criteria for biological impairment data and fish consumption advisories.

Recent water quality standards revisions relative to manganese and dissolved aluminum have altered the impairment decisions reflected in the West Virginia 2004 Section 303(d) List. On June 29, 2005, EPA approved a revision that alters the zone of applicability of the manganese water quality criterion for the public water supply designated use. The criterion is now applicable only in the five-mile zone upstream of known public or

Table 1 – West Virginia Designated Uses

Category	Use Subcategory	Use Category	Description
A	Public Water	Human Health	Waters, which, after conventional treatment, are used for human consumption.
B1	Warm Water Fishery	Aquatic Life	Propagation and maintenance of fish and other aquatic life in streams or stream segments that contain populations composed of all warm water aquatic life.
B2	Trout Waters	Aquatic Life	Propagation and maintenance of fish and other aquatic life in streams or stream segments that sustain year-round trout populations. Excluded are those streams or stream segments which receive annual stockings of trout but which do not support year-round trout populations.
B4	Wetlands	Aquatic Life	Propagation and maintenance of fish and other aquatic life in wetlands. Wetlands generally include swamps, marshes, bogs and similar areas.
C	Water Contact Recreation	Human Health	Swimming, fishing, water skiing and certain types of pleasure boating such as sailing in very small craft and outboard motor boats.
D1	Irrigation	All Other	All stream segments used for irrigation.
D2	Livestock Watering	All Other	All stream segments used for livestock watering.
D3	Wildlife	All Other	All stream segments and wetlands used by wildlife.
E1	Water Transport	All Other	All stream segments modified for water transport and having permanently maintained navigation aides.
E2	Cooling Water	All Other	All stream segments having one or more users for industrial cooling.
E3	Power Production	All Other	All stream segments extending from a point 500 feet upstream from the intake to a point one-half mile below the wastewater discharge point.
E4	Industrial	All Other	All stream segments with one or more industrial users. It does not include water for cooling.

private water supply intakes used for human consumption. On January 9, 2006, EPA approved a revision that suspended the 0.087 mg/l chronic aquatic life dissolved aluminum criterion for warmwater fisheries, and replaced it with a 0.750 mg/l criterion.

The manganese revision necessitated DEP's identification of intakes and re-evaluation of prior impairment decisions. DEP secured the Bureau for Public Health's database of water supply intakes and determined locations where surface waters are currently used for human consumption. Based upon the intake location, five-mile distances were delineated in an upstream direction along watercourses to determine streams within the zone of applicability of the criterion. DEP then assessed compliance with the criterion by reviewing available information from streams within the zone.

The revised aluminum criteria are effective for Clean Water Act purposes; assessments of warmwater streams pursuant to dissolved aluminum are based on the 0.750 mg/l criterion. Trout water aluminum assessments are based on the applicable 0.087 mg/l criterion. The 2006 Section 303(d) List includes 26 waters, comprising 272 stream miles, that are impaired pursuant to the new dissolved aluminum criteria.

Ohio River Criteria

For the Ohio River, both the Ohio River Valley Water Sanitation Commission (ORSANCO) and West Virginia water quality criteria were considered, as agreed upon in the ORSANCO compact. Where both ORSANCO and West Virginia standards contain a criterion for a particular parameter, instream values were compared against the more stringent criterion. The DEP supports ORSANCO's efforts to promote consistent decisions by the various jurisdictions with authority to develop 305(b) reports and 303(d) lists for the Ohio River.



DEP's Mike Whitman sampling
Kings Creek in Hancock County.
Photo by Joe Cochran

Section 3 – Surface Water Monitoring and Assessment

This section describes West Virginia's strategy to monitor and assess the surface waters of the state. The DEP's Division of Water and Waste Management (DWWM) collects most of the state's water quality data. The Watershed Branch of DWWM is responsible for general water quality monitoring and watershed assessment. The remainder of this section describes the monitoring and assessments according to waterbody type.

Streams and Rivers

West Virginia has a comprehensive strategy for monitoring the flowing waters of the state, by far the most prevalent surface waterbody type in the state. The Watershed Branch utilizes a tiered approach, collecting data from long-term monitoring stations, targeted sites within watersheds on a rotating basin schedule, randomly selected sites, and sites chosen to further define impaired stream segments in support of TMDL development. The following paragraphs present these approaches in further detail.

The ambient water quality monitoring network

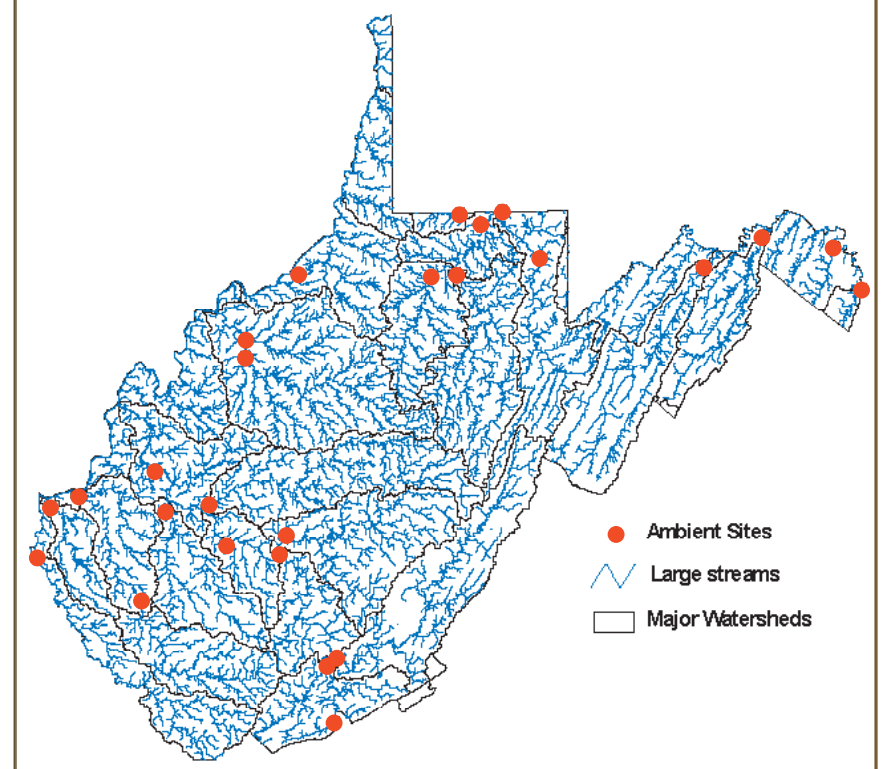
The ambient water quality monitoring network concept was established in the early 1960s. The network currently consists of 26 fixed stations that, starting in 2006, are sampled bi-monthly. Sampling stations are located at the mouths of the state's larger rivers and additional sites are situated to isolate the impacts from major industrial complexes and other potential sources of impairment. The data provides information for trend analyses, general water quality assessments and pollutant loading calculations, and allows water resources managers to quickly gauge the health of the state's major waterways.

Probabilistic (random) sampling

Probabilistic sampling began in 1997. This program utilizes sites that are selected randomly by EPA's facility in Corvallis, Ore. The data collected at these sites can be subjected to statistical analysis to provide an overall characterization of a watershed. This analysis can then be used to predict the probability of a condition occurring within a watershed. The initial probabilistic sampling cycle, which concluded in 2001, was conducted in accordance with the five-year framework cycle. Thirty sites were sampled within each watershed. A second round of probabilistic sampling, initiated in 2002, modified the framework cycle to a statewide approach. The objective for the second round is to collect 30 samples from each watershed over a five-year period (six sites are collected from each watershed annually). Importantly, at the end of the five-year cycle, each of the state's major watersheds will continue to be independently characterizable.

This departure from the framework cycle minimizes the effects of extreme conditions, such as periodic droughts and flooding and allows for

Figure 2 – West Virginia's Ambient Monitoring Sites



annual updates of statewide stream conditions. Data collection protocols are similar to those applied to watershed assessment sampling. However, probabilistic sampling includes more rigorous water quality and habitat analysis. In addition to benthos, periphyton is also collected for biological community analysis.

Targeted sampling

Targeted sampling has been a component of West Virginia's assessment toolbox since the Watershed Assessment Program's inception in late 1995.

Streams are sampled according to a five-year rotating basin approach. Sites are selected from the watersheds targeted for each particular year. Each site is subjected to a one-time evaluation of riparian and instream habitat, basic water quality parameters, and benthic macroinvertebrate and periphyton communities.

Sites are selected to meet a variety of the stakeholders' needs and include the following classifications:

- 💧 Impaired streams
- 💧 Reference (minimally impacted) streams
- 💧 Spatial trends (multiple sites on streams exceeding 15 miles in length)
- 💧 Areas of concern as identified by the public and stakeholders
- 💧 Previously unassessed streams

Pre-TMDL development sampling

As DEP started the process to assume TMDL development responsibility from EPA, the need for more and newer data in developing useful TMDLs was obvious. The objective of this effort is to collect sufficient data for TMDL modelers to develop stream restoration plans. Pre-TMDL sampling follows the framework cycle, i.e., impaired streams from watersheds in hydrologic group A will be sampled in the same year as the targeted sampling.

The 303(d) List is the basis for initial site selection and additional sites are added to allow identification of the suspected sources of impairment. Benthic macroinvertebrate sampling is conducted in 303(d) listed streams having aquatic life impairments. Assessment of water quality impaired streams is more intensive and consists of monthly sampling for parameters of concern. This method captures data under a broad variety of weather conditions and flow regimes. Pre-TMDL sampling also includes an effort to locate the specific sources of impairment, with particular attention to identify non-point land use stressors as well as any permitted facilities that may not be meeting their requirements. For more information, see TMDL Development Process – Section 10.

Biological Indicators

Benthic macroinvertebrates are collected from riffle substrate in wadeable streams and identified to genus level. This assemblage of aquatic life organisms provides a direct means of assessing the aquatic life use support and can be collected and identified cost effectively. It has the advantage over one-time water quality samples in that the benthic community is affected by and provides indications of past water quality conditions. The DEP currently uses the West Virginia Stream Condition Index, a family-level multimetric index developed specifically for use in West Virginia. This is the primary means of assessing attainment of the aquatic life use. The DEP is working in cooperation with EPA to develop a genus level index and a predictive model.

Citizen monitoring

The fourth stream assessment project is the West Virginia Save Our Streams volunteer monitoring program. Initiated in 1989, this program encourages citizens to become involved in the improvement and protection of the state's streams. The focus is largely on nonpoint source pollution abatement. Save Our Streams has two objectives. First, it provides the state with enhanced ability to monitor and protect its surface waters through increased water quality and benthos data collection. Second, it improves water quality through educational outreach to the state's citizens. After citizens are actively involved in stream monitoring and restoration activities, they can initiate improvement projects within their own watersheds. Training workshops are conducted annually to provide quality assurance. A recent improvement in data accessibility for the program has been the development of an online Volunteer Assessment Database. As an example of the functions of the new database, volunteer stream reports are now available online at <http://www.wvdep.org/dwwm/wvsos/vad/index.htm>. Volunteer monitors can register on the database and enter their own data online, or continue to submit the information to the coordinator for a quality assurance review. The coordinator also is the database administrator, and has tools to verify the quality of the information before it is approved. The database is available for public viewing without registration. In addition, the program prepares an annual "State of Our Streams" report.

Lakes and Reservoirs

West Virginia does not make a distinction between lakes and reservoirs. By state definition, a publicly owned lake is any lake, reservoir, or pond that meets the definition of "waters of the state," is owned by a government agency or public utility, and is managed as a recreational resource for the general public.

The DEP conducted lake water quality assessments from 1989 through 1996. This program was funded by the federal Clean Lakes Program, which was phased out in 1995. With additional financial support being provided to enhance state's monitoring strategies, DEP is adding a lake monitoring component in 2006. This program will initially focus on water quality, collecting field parameters (dissolved oxygen, pH, temperature, and conductivity), nutrient data, clarity, and Chlorophyll A. Multiple sites per lake will be sampled and will include profile data for temperature and dissolved oxygen.

Many of West Virginia's largest reservoirs are controlled by the U.S. Army Corps of Engineers. Although the Corps' primary mission is to manage structures to provide navigation and flood control, the agency also is committed to water quality management. Data generated by the Corps has been used for assessment purposes.



Plum Orchard Lake
in Fayette County.
Photo by Jason Morgan

Additional lake information is available from the West Virginia Division of Natural Resources (DNR). The DNR, one of the signatory agencies in the Partnership for Statewide Watershed Management, conducts fish community surveys on many of the state's reservoirs.

Wetlands

There are no water quality assessments currently being conducted for West Virginia's wetlands. The DNR has pursued funding to develop a standard data collection and analysis protocol that incorporates water and soil quality, habitat, and biological measures. Personnel from DEP and DNR are participating in the Mid-Atlantic Wetlands Workgroup to gain insight from existing programs in surrounding states.

Table 2 – Current and Future Monitoring Activities

💧 26 Ambient sites will be monitored bi-monthly from July 2005 through June 2007
💧 A third round of probabilistic monitoring will begin in the spring of 2007. The second round of sampling was completed in June 2006. The specifics of the framework for the upcoming effort are under development.
💧 TMDL development for Group E – 242 sites were sampled from July 2005 through June 2006. (Fifteen sites from the Twelvepole Watershed, 75 sites from the Dunkard Creek Watershed, and 152 sites from the Upper Ohio River Watershed)
💧 TMDL development for Group A – 24 sites from the Youghiogheny River Watershed were sampled from July 2005 through June 2006 and 207 sites will be sampled from the Cheat River Watershed from July 2006 through June 2007. Another 111 sources of acidic mine discharges have been identified in the Cheat Watershed and will be sampled under varying conditions.
💧 Group E Targeted Sampling – 257 targeted sites on 146 streams were sampled.
💧 Group A Targeted Sampling – Approximately 200 sites will be sampled during the 2006 summer sampling season.
💧 Lakes – Ten lakes within Group A will be sampled four times during the 2006 growing season (May through October) and Group B Lakes will be sampled in 2007.

Section 4 – Data Management

Assessed Data

All readily available data was used during the evaluation process. The agency sought water quality information from various state and federal agencies, colleges and universities, private individuals, businesses, organizations and others. News releases and public notices were published in state newspapers and letters were sent to state colleges and universities soliciting data for the list. Specific requests for data were made to state and federal agencies known by DEP to be generators of water quality data. Table 3 identifies the entities that contributed water quality data. DEP's staff reviewed data from external sources to ensure that collection and analytical methods, quality assurance and quality control and method detection levels were consistent with approved procedures.

Table 3 – Data Providers for the 2006 303(d) List and Integrated Report

Massey Energy Co. - Green Valley	Massey Energy Co. - Peerless Eagle	USDA Forest Service
Mettiki Coal Corp. - Short Creek Coal	PC West Virginia Synthetic	Buckhannon River Watershed Association
Alpha Coal and Coastal Coal	Massey Energy Co. - Alex Energy	United States Army Corps of Engineers
Allegheny Energy Supply	Indian Ridge Watershed	United States Geological Survey
West Virginia Wesleyan College	Koppers, Inc.	United States Environmental Protection Agency
Friends of the Cacapon River	National Park Service	West Virginia Department of Environmental Protection
Friends of Deckers Creek	Penn Virginia Operating Company, LLC	West Virginia Division of Natural Resources
Guardians of West Fork Watershed	Plateau Action Network	West Virginia Department of Agriculture
Heizer/Manila Watershed Organization	Tetra Tech, Inc.	Massey Energy Co. - New Land Leasing Co.
Orchard Coal Company - Beckley	ORSANCO	Cacapon Institute

Analytical methodology is normally limited to the procedures contained in the federal regulations of 40CFR136. In limited instances, where 40CFR136 does not include sampling or analytical techniques for a particular pollutant, or where 40CFR136 techniques cannot effectively characterize water quality, results obtained from alternative, scientifically-defensible analytical methodologies have been accepted. Although it is a primary consideration in the evaluation of the acceptability of monitoring results, monitoring and analysis pursuant to 40CFR136 approved methods is not mandated for Section 303(d) or 305(b) processes. 40CFR136 does not always contain approved methods for parameters with water quality criteria. In such instances, monitoring and analysis under other scientifically valid methodologies may be appropriate. For example, “free cyanide” is commonly required in NPDES permits to be analyzed by the method for weak acid dissociable cyanide contained in “Standard Methods;” water

quality data is similarly qualified. In other scenarios, 40CFR136 methods may not provide the analytical sensitivity necessary for assessment, and data from alternative scientifically defensible methodologies may be accepted.

Assessment decisions are made using the most accurate and recent data available to the agency. For the stream quality assessment, DEP generally used water quality data generated between July 2000 and June 2005. The use of data more than five years old is intentionally limited. In the absence of new information, previous assessments are carried forward even if the data becomes older than five years. Additionally, if a water quality criteria change is approved which affects an older assessment the new assessment will only reflect the current criteria.

Waters are not deemed impaired based upon water quality data collected when stream flow conditions are less than 7Q10 flow (the seven consecutive day average low flow that recurs at a 10-year interval) or within regulatory mixing zones. Waters are not deemed impaired based upon “not-detected” analytical results from methodologies that have detection limits not sensitive enough to confirm criteria compliance.

Water Analysis Database – WapBase

DEP has generated the majority of the available water quality data. Currently all targeted, probabilistic, and pre-TMDL development monitoring data is contained in an in-house database (WapBase). WapBase houses most of the water quality, habitat, watershed characteristics, macroinvertebrate data (both raw data and calculated metrics) and supporting information collected by DEP’s Watershed Assessment Section.

External Data Providers

Data submitted from sources outside of the Watershed Assessment Section were considered in the development of this report, including data from other DEP programs. The data providers table is on the previous page.

Once data was submitted, DEP performed the following:

- 💧 Determined data quality and quantity
- 💧 Formatted data for evaluation
- 💧 Determined stream codes and mile points (sample site locations)
- 💧 Used qualified data from external sources to make assessment decisions

Section 5 – Use Assessment Procedures

The primary focus of the Integrated Report is to assess water quality information and determine if the designated uses of state waters are supported. After use assessment, waters are placed into one of five categories as described in the introduction. Section 5 first describes the various protocols used to determine use impairment and place waters on the Section 303(d) List. It then describes the protocols to categorize the remaining waters where uses have not been determined to be impaired. If a water has any impaired use, it is placed in Category 5. Other waters may be placed in Category 1, 2, or 3, depending upon the available water quality data.



Sediment causes problems for aquatic life and overall stream health.
Photo by Mike Ong

Listing Decision for Numeric Water Quality Criteria

The EPA's most recent guidance for assessment and listing encourages decision criteria commensurate with the implementation provisions of a state's water quality standards, such as the concentration value, exposure duration and allowable exceedance frequency as described in the Water Quality Standards section. Previously, EPA has encouraged 303(d) listing decisions relative to numeric water quality criteria to be based primarily upon the frequency of exceedance of the numeric criteria and the "10-percent rule." Usually, if more than 10 percent of the observed values exceeded the concentration value of an applicable numeric criterion, then the water was considered impaired and placed on the 303(d) List.

Typically, if an ample data set exists and exceedances of chronic aquatic life protection and/or human health protection criteria occur more than 10 percent of the time, the water is considered to be impaired. If the rate of exceedance demonstrated is less than or equal to 10 percent, then the water is considered to be meeting the designated use under evaluation. Ample data sets are defined as sets with 20 or more distinct observations. If fewer than 20 samples per station or representative area exist and three

or more values exceed a criterion value, then the water also is considered to be impaired. For this scenario (three observed violations), if additional non-exceeding monitoring results were available that would increase the data set size to 20 observations, a greater than 10 percent exceedance frequency would still exist.

Under West Virginia Water Quality Standards, acute aquatic life protection criteria have associated exposure durations of one hour and may be exceeded once every three years. The normal practice of "grab-sampling" ambient waters is generally consistent with the one-hour exposure duration specified in the standards. Therefore, a direct application of the allowable exceedance frequency provided in the standards is made when assessing impairment relative to acute aquatic life protection criteria. If two or more exceedances of acute criteria are observed in any three-year period, the water is considered to be impaired.

If the data being evaluated is generated as part of a comprehensive network being monitored for a specific purpose, the data may be assigned a higher level of assessment quality, and the “10-percent rule” may be applied with confidence to data sets containing less than 20 observations per station. The primary example of an intensified monitoring program that generates higher assessment quality data is that which is conducted by DEP to support TMDL development. The pre-TMDL monitoring format includes flow measurement and monthly water quality monitoring for one year at multiple locations throughout a watershed. Information is generated over a range of stream flow conditions and in all seasons. Habitat assessment and biological monitoring is performed in conjunction with water quality monitoring. The information generated under this format is among the most comprehensive available for assessing water quality. Upon conclusion of monitoring, it is then necessary for agency personnel to make a definitive judgment relative to impairment. In most instances, application of the “10-percent rule” to the pre-TMDL monitoring data sets result in the classification of waters as impaired if two or more exceedances of a criterion are demonstrated.

Table 4 summarizes the criteria used to make 303(d) impairment decisions relative to numeric water quality criteria.

Some streams have water quality data available at multiple locations. Segmentation of these streams is necessary to determine its impairments by applying the decision criteria to the available water quality data at each monitoring station. If available data at a particular station

Table 4 – Numeric Water Quality Decision Criteria for Listing of Impaired Waters

Water Quality Criteria	Impairment Thresholds	Exceptions
Acute Aquatic Life Protection (Use Category B)	The water is impaired if two exceedances of acute aquatic life protection numeric criteria occur within any three-year period.	If, in the most recent three-year period, no exceedances of criteria are evidenced and at least 12 monitoring results are available, then the water is not considered impaired.
Chronic Aquatic Life Protection (Use Category B) Human Health Protection (Use Categories A and C)	<p>The water is impaired if a greater than 10% frequency of exceedance is demonstrated in an ample dataset (20 or more available observations).</p> <p>The water is impaired if three exceedances of criteria occur with less than 20 available monitoring results.</p> <p>The water is impaired if a greater than 10% frequency of exceedance is demonstrated with less than 20 available observations, if the data being evaluated is of high assessment quality (> two violations)</p>	If, for waters with regularly scheduled monitoring, in the most recent two-year period, no exceedances of criteria are evidenced and at least eight (8) observations are available, then the water is not considered impaired.

indicates impairment, the water is considered impaired both upstream and downstream until a station with available data indicates a nonimpaired condition. In limited circumstances, deviation from that segmentation approach occurred through the application of professional judgment. Most cases of deviation involved an abundance of water quality information at multiple locations in a waterbody, where DEP determined that an integrated

whole waterbody approach resulted in a more representative assessment of existing conditions. Other cases involved targeted or incidental monitoring of a specific streamflow condition at certain locations in a waterbody, and a lack of monitoring of that condition at other locations. DEP determined that water quality results from the monitored site would similarly exist at unmonitored locations, rather than labeling some sections impaired and others “supporting” based upon strict adherence to the segmentation procedure.

DEP does not intend to interpret the impacts of a single pollution event as representative of the current condition of a water if it is known that the problems have been abated. Similarly, the DEP does not intend to interpret the results of clustered monitoring of a single event as being representative of water quality conditions for longer time periods. Data sets are screened for excessive clustering of monitoring, in space or time, to avoid misinterpretation.

The decision of whether to place a waterbody on the 303(d) List must be driven by sound science whether the decision is based on a review of water quality monitoring data or on values obtained from sophisticated water quality modeling efforts. The Clean Water Act recognizes both types of assessment as valid and appropriate. Certain waters are included on the 2006 303(d) List based upon modeling results associated with TMDL development. All such waters are currently in the final stages of TMDL development and modeling of their baseline condition indicates that pollutant reductions from existing sources are needed to ensure compliance with water quality criteria. In the majority of cases, water quality monitoring and predictive modeling reach consistent conclusions regarding the impairment status of waterbodies. In other cases, monitoring data may not be available, may not have been obtained at critical conditions or locations, or may not reflect the conditions that would exist if point sources were discharging at their permit limits.

Evaluation of the results of predictive modeling is mandated by 40CFR130.7(b)(5)(ii) and the prediction of impairment through modeling is validated by applicable federal guidance for 303(d) listing. Where predictive modeling indicates that discharge in accordance with existing permit limits would cause violation of water quality criteria, the designated use of the water quality may be classified as “threatened,” thereby subjecting it to 303(d) listing and TMDL development pursuant to 40CFR130.7(b)(5).

Evaluation of Fecal Coliform Numeric Criteria

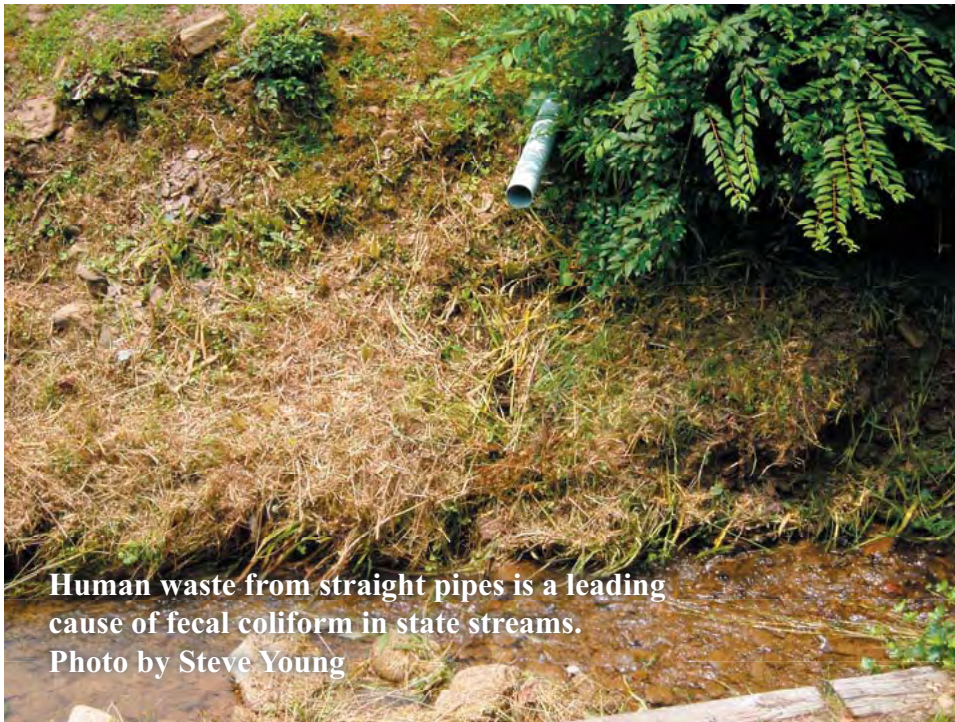
Fecal coliform assessments were based on the previously described decision criteria for numeric water quality criteria. Given the complexity of this particular criteria, most assessments are performed by comparing observations to the “maximum daily” criterion value of 400 counts/100ml. Evaluation of the monthly geometric mean fecal coliform criterion (200 counts/100ml) occurs only where five or more individual sample results are available within a calendar month.

Numeric fecal coliform water quality criteria are applicable to the Water Contact Recreation and Public Water Supply designated uses. Section 8.12 of Appendix E of the West Virginia Water Quality Standards states:

Maximum allowable level of fecal coliform content for Primary Contact Recreation shall not exceed 200/100ml as a monthly geometric mean based on not less than five samples per month; nor to exceed 400/100ml in more than 10 percent of all samples taken during the month.

A practical difficulty exists in accurate assessment of criteria compliance due to the resource commitment that would be necessary to perform monitoring at a sufficient frequency to make determinations using the geometric mean criteria, since the monthly geometric mean criterion is conditioned upon the availability of at least five distinct sample results in a month. The “maximum daily” criterion is not conditioned by a minimum sample set requirement, but practical use of the apparent 10 percent exceedance allowance would involve at least 10 samples per month.

The most frequent and regular fecal coliform water quality monitoring conducted by the Watershed Assessment Section is once per month. That monitoring frequency precludes assessment of the monthly geometric mean criterion and hampers accurate assessment of the maximum daily criterion. Due to limited resources, more frequent fecal coliform monitoring could only be accomplished by significantly reducing the number of West Virginia streams and/or stations where water quality assessments are performed. The DEP does not consider that to be a reasonable alternative.



Human waste from straight pipes is a leading cause of fecal coliform in state streams.

Photo by Steve Young

The DEP uses the following protocols when making assessments relative to fecal coliform numeric criteria:

- 💧 No assessments are based upon the monthly geometric mean criterion (200 counts/100ml) unless an available data set includes monitoring at five per month or greater frequency. When data sets are available, the listing decision criteria for numeric water quality criteria are applied, considering each monthly geometric mean as an available monitoring result.

- 💧 The listing decision criteria are applied to the maximum daily criterion (400 counts/100ml) and available individual monitoring results, but without the monthly prejudice. For example, if twice per month monitoring is conducted for a year and two results in two separate months are greater than 400, the stream would be assessed as fully supporting (2/24 – 8.3 percent rate of exceedance) rather than insufficient data (two months per 12 months exceedance). If five samples per month monitoring is conducted for one year and four daily results greater than 400 are measured in four different months, the stream would be assessed as fully supporting (4/60 – 6.7 percent rate of exceedance) rather than

nonsupporting (four months per 12 months exceedance), provided that the monthly geometric means were below the 200 counts/100 ml criteria.

The decision criteria does not provide for 303(d) listing of waters with severely limited data sets and exceedance (i.e., one sample in a five-year period > 400 counts/100ml). Such waters would be classified as having insufficient data available for use assessment. DEP will target these “fecal one-hit” waters for additional monitoring by incorporating them into the pre-TMDL monitoring plans at the next opportunity for TMDL development in their watershed. Where the intensified pre-TMDL monitoring (monthly sampling for one year) indicates impairment, TMDL development will be immediately initiated, even though the water may not be included in Category 5 of the current Integrated Report.

Evaluation of pH Numeric Water Quality Criteria Data

For the 2006 303(d) List, the DEP evaluated all recent (July 2000 – June 2005) pH water quality data under the previously described listing criteria requirements for numeric water quality criteria. Waters were identified as impaired for pH if the data exceeded listing requirements criteria or if the water was previously listed and insufficient new data were available to reassess the water. The impaired lengths of certain streams were adjusted to recognize ongoing limestone treatment operations that have resulted in the attainment of the pH criterion in the treated segments.

Narrative Water Quality Criteria – Biological Impairment Data

The narrative water quality criterion of 46CSR1 – 3.2.i. prohibits the presence of wastes in state waters that cause or contribute to significant adverse impact to the chemical, physical, hydrologic and biological components of aquatic ecosystems. Streams are listed as biologically impaired based on a survey of their benthic macroinvertebrate community. Benthic macroinvertebrate communities are rated using a multimetric index developed for use in wadeable streams of West Virginia. The West Virginia Stream Condition Index (WVSCI) is composed of six metrics that were selected to maximize discrimination between streams with known impairments and reference streams. Streams with WVSCI scores of less than 60.6 are considered biologically impaired and included on the 303(d) List. Benthic macroinvertebrates are collected with a 500 mm mesh rectangular dip net. The kick sample is collected from the 1.0 m² area of substrate. Identifications are completed for a 200-organism subsample. The WVSCI was developed from data using these methods. Streams are listed as being biologically impaired only if the data was comparable (i.e., collected utilizing the same methods used to develop the WVSCI, adequate flow in riffle/run habitat, and within the current index period of April through October).

Streams with low biological scores are listed as having an unknown source/cause of impairment on the 303(d) List and most are listed, by default, for their entire length. It is doubtful that the entire length of every stream is impaired, but without further data, the exact length of impairment is unknown. Each listed stream will be revisited prior to TMDL development. The additional assessments performed in the pre-TMDL monitoring effort will better define the impaired length. The causative stressor(s) of the impairment and the contributing sources of pollution also will be identified during the TMDL development process. If the stressor identification process demonstrates that the biological impairment is not caused by a pollutant, then no TMDL will be developed.

Certain biologically impaired streams have been evaluated but they were not immediately placed on the 303(d) List or in Category 5. The impairment source for these streams has been linked to a pollutant for which a TMDL has already been developed. An example scenario would be a low biological score on a stream that has a TMDL developed for mine drainage. If the pollutant reductions specified by the TMDL are achieved, the biological community would likely restore itself. In these cases, after careful evaluation, the stream was not listed or placed in Category 5 because the full implementation of an existing TMDL is expected to correct the problem. If implementation of the TMDL resolves the pollutant specific impairment but biological scores remain low, then the biological impairment would be listed and the stream would return to Category 5.

Narrative Water Quality Criteria – Fish Consumption Advisories

The narrative water quality criterion of 47CSR2 – 3.2.e prohibits the presence of materials in concentrations that are harmful, hazardous or toxic to man, animal or aquatic life in state waters. Fish consumption advisories are used to inform the public about potential health risks associated with eating fish from West Virginia's streams. The DEP, DNR, and the Bureau for Public Health have collaborated on fish contamination issues since the 1980s; however, an executive order by the governor in 2000 mandated a formal collaborative process to issue fish consumption advisories. Fish

consumption advisories are developed and issued in accordance with an interagency agreement. In the absence of specific body-burden criteria, the presence of contaminants in fish tissue in amounts equivalent to a two meal per month advisory is considered sufficient evidence of impairment.

Risk-based principles are used to determine whether fish consumption advisories are necessary. These advisories are used as a public education tool to help citizens make informed decisions about eating fish caught in state streams. The risk-based approach estimates the probability of adverse health effects and provides a statement on the health risk facing the angler and high-risk groups including women of childbearing age and children. West Virginia's fish consumption advisories include guidelines on the number of meals to eat and information on proper fish preparation to further minimize risk.

There are currently waterbody-specific fish consumption advisories on 13 state streams and two lakes for a variety of fish species and contaminants. Additionally, there is a general statewide advisory that recommends limiting the consumption of certain sport-caught fish from all West Virginia waters in relation to low-level mercury and/or polychlorinated biphenyl (PCB) contamination. The statewide advisory provides species-specific recommendations ranging from one meal per week to one meal per month.

The listing of waters based on fish consumption advisories is strongly supported by EPA. For PCBs, waters are considered impaired if at least one monitoring result for tissue from a commonly consumed species exceeds the two meal per month advisory trigger. In regard to mercury, West Virginia water quality standards contain a numeric body-burden criterion for methylmercury in fish tissue. The criterion for protection of public water supply and water contact recreation designated uses is 0.5 µg/g. In the Ohio River, the applicable ORSANCO body-burden criterion is 0.3 µg/g. Fish tissue mercury impairment decisions are based upon a direct comparison of available observations to the body-burden criteria.

Categorization of Nonimpaired Waters

The following paragraphs describe protocols used to determine use support and to place waters in either Category 1, 2, or 3.

Use support

Stream segments that support **all** of the designated uses are placed in Category 1. This section describes the guidelines used by the DEP to demonstrate use-support for each of the designated uses.

Not all parameters with applicable numeric criteria must be monitored to determine use support. A supporting assessment is made if certain mandatory parameters have been monitored and those results demonstrate compliance with criteria. If monitoring results are available for “non-mandatory” parameters, they also must indicate compliance with the criteria for those parameters if a fully supporting assessment is made. For limited data sets (less than 20 samples per station), no criteria exceedances can be evident. If 20 samples per station or more are available, then compliance would be determined by application of the listing criteria (i.e., less than 10 percent exceedance rate for chronic aquatic life and human health criteria, less than two violations of acute criteria in a three-year period, no violations in the most recent two- or three-year period, as applicable).

Category B (aquatic life) designated uses

For this use to be supported, biomonitoring must have been performed and results must show a WVSCI score > 68.0. Also, there must not be any exceedance of any other aquatic life protection water quality criteria (less than 20 samples per station) or any exceedance of listing criteria (20 samples per station or more).

The WVSCI methodology can be applied only to wadeable streams. Most nonwadeable streams are part of the Ambient Water Quality Monitoring Network and are sampled quarterly for a variety of pollutant parameters. If no exceedance of listing criteria (for aquatic life criteria) is demonstrated and no other information demonstrates adverse impact to aquatic ecosystems, then the aquatic life use is considered supported.

Category A (public water supply) and C (contact recreation) designated uses

For these uses to be supported, at least one fecal coliform monitoring result less than 400 counts/100ml must be available. Also, there must not be any exceedance of any other human health protection water quality criteria (less than 20 samples per station) or any exceedance of listing criteria (20 samples per station or more) for the uses to be supported.

Category D (agriculture and wildlife) and E (water supply industrial, water transport, cooling and power) designated uses

For these uses to be supported, pH and dissolved oxygen must have been monitored and results must indicate compliance with criteria. Also, there must not be any exceedance of any other Category D and E water quality criteria (less than 20 samples per station) or any exceedance of listing criteria (20 samples per station or more).

Insufficient data and not assessed

Stream segments without sufficient data to determine use support or impairment may be placed in either Category 2 or 3. Category 2 houses waters with some uses determined to be supported, but lacking sufficient information to assess other uses. Waters are placed in Category 3 if insufficient or no information exists to determine if any of the uses are being met.

The use is not assessed when there is some water quality data available, but not enough to conclude that the use is fully supporting or not supporting. The following situations produce an insufficient data designation:

- 💧 Instream monitoring results demonstrated criteria exceedances, but at a frequency insufficient to deem the use impaired (see Table 4)
- 💧 Water quality data is available for some parameters but is not available for mandatory parameters
- 💧 Biological assessment returned a gray result (WVSCI score between 60.6 and 68.0)

A use is not assessed if a stream has not been sampled within the last 15 years for any parameter that has an applicable water quality criteria for the use being evaluated.

Section 6 – Assessment Results

This section contains the results from all the data that has been assessed for West Virginia waterbodies. Table 5 shows a summary of the classification of West Virginia waters under the five “Integrated Report” categories (see page 5). The results reveal that 30% of West Virginia’s stream miles are in either Category 1 or 2 (fully supporting all or some assessed uses). Category 3, streams with no data available, makes up 39% of stream miles, the largest percentage of the five categories. However, that number is somewhat deceiving. The streams with no data are typically small unnamed tributaries, which usually contribute to the larger waterbodies which have been assessed. All major waterways in the state, such as the Kanawha, Monongahela and Little Kanawha rivers, have data and have been assessed and placed into one of the other four categories. Fewer than one-third of West Virginia’s streams are impaired and fall into either Category 4 or 5.

Since the lists of Category 1, Category 2 and Category 3 waters are quite large, they have not been published with this report but can be viewed on the DEP’s Web site, www.wvdep.org (type in Category in the “search DEP”). Hard copies of Category 1, 2 and/or 3 lists can be obtained by contacting agency personnel at (304) 926-0495 (TTY/TDD (304) 926-0489). Category 4 and 5 waterbodies are included as supplements, located in back of this document.

Category 5 includes 1,131 impaired stream segments, covering approximately 6,595 stream miles, as identified on West Virginia’s 2006 Section 303(d) List. This number has increased from 6,315 miles of impaired streams identified on the 2004 list. The rise is largely due to an increase in the DEP’s monitoring of known or suspected impaired waters. This monitoring was performed in support of TMDL development. EPA approval of in-process TMDLs in the Coal, North Branch Potomac and Lower Kanawha watersheds is anticipated in September 2006 and will result in the transfer of approximately 185 impaired streams in Supplement B-1 from Category 5 to Category 4.

Table 6 contains a detailed breakdown of use support specific to the use categories for West Virginia waters as set forth in the Water Quality Standards (47CSR2).

Table 5 – 2006 Category Summary Report for West Virginia

LAKES					
Type	CATEGORY	# of lakes	% lakes	acres	% acres
Lake	1	28	23	1257	6
Lake	2	40	33	3860	19
Lake	3	33	28	32	0
Lake	4a	8	7	177	1
Lake	5	11	9	15036	74
	TOTAL	120	100	20363	100
STREAMS					
Type	CATEGORY	# of stream segments	% stream segments	miles of streams	% miles
Stream	1	719	7	2237	7
Stream	2	1771	16	6813	23
Stream	3	6613	61	11658	39
Stream	4a	655	6	2758	9
Stream	4b	2	0	2	0
Stream	4c	39	0	44	0
Stream	5	1131	10	6595	22
	TOTAL	10930	100	30107	100

Table 6 – West Virginia Individual Use Support Summary

LAKES																		
Designated Use	Number of Lakes	Size (acres)	Fully Supporting				Insufficient Data				Not Assessed				Not Supporting			
			#	%	Acres	%	#	%	Acres	%	#	%	Acres	%	#	%	Acres	%
A - Public Water	120	20363	28	23	1257	6	42	35	6530	32	34	28	102	1	16	13	12473	61
B1 - Warm Water Fishery	101	15024	27	27	1267	8	27	27	6101	41	39	39	7478	50	8	8	177	1
B2 - Troutwater	19	5339	12	63	1014	19	5	26	125	2	2	11	4200	79	0	0	0	0
C - Contact Recreation	120	20363	66	55	4068	20	2	2	1049	5	40	33	201	1	12	10	15044	74
D - Agriculture and Wildlife	120	20363	66	55	4068	20	5	4	4439	22	48	40	11847	58	1	1	8	<1
E -Industrial	120	20363	66	55	4068	20	5	4	4439	22	48	40	11847	58	1	1	8	<1
Total	120	20363																
STREAMS																		
Designated Use	Number of Stream Segments	Size (miles)	Fully Supporting				Insufficient Data				Not Assessed				Not Supporting			
			#	%	Miles	%	#	%	Miles	%	#	%	Miles	%	#	%	Miles	%
A - Public Water	10930	30109	1329	12	4594	15	1727	16	7423	25	6615	61	11660	39	1259	12	6431	21
B1 - Warm Water Fishery	10346	26538	1023	10	3126	12	1354	13	5555	21	6529	63	11447	43	1440	14	6410	24
B2 - Troutwater	584	3571	213	36	1105	31	156	27	1358	38	94	16	238	7	121	21	870	24
C - Contact Recreation	10930	30109	1718	16	6176	21	1648	15	7020	23	6636	61	11697	39	928	8	5215	17
D - Agriculture and Wildlife	10930	30109	3427	31	15143	50	379	3	1454	5	6657	61	11767	39	467	4	1745	6
E -Industrial	10930	30109	3427	31	15143	50	379	3	1454	5	6657	61	11767	39	467	4	1745	6
Total	10930	30109																

The most common impairments of West Virginia waters are:

- 💧 Exceedance of numeric water quality criteria for pollutants associated with mine drainage (low pH, and high concentration of iron aluminum and/or manganese)
- 💧 Bacterial contamination evidenced by exceedance of numeric water quality criteria for fecal coliform
- 💧 Low pH associated with acid rain, and
- 💧 Biological impairment, as determined through application of the West Virginia Stream Condition Index

The above impairments are prevalent on the 2006 West Virginia Section 303(d) list. The list and the summary results of Tables 4 and 5 provide an overview of the impairment status of West Virginia waters. An alternative mechanism for assessing general status and the relative impacts of various causes and sources is provided by DEP's Probabilistic Monitoring Program. The program and assessment results are described in the Section 7 – Probabilistic Monitoring Program and Data Summary.



Orange water typically indicates the stream violates iron standards.
Photo by Rob Row in Mingo County

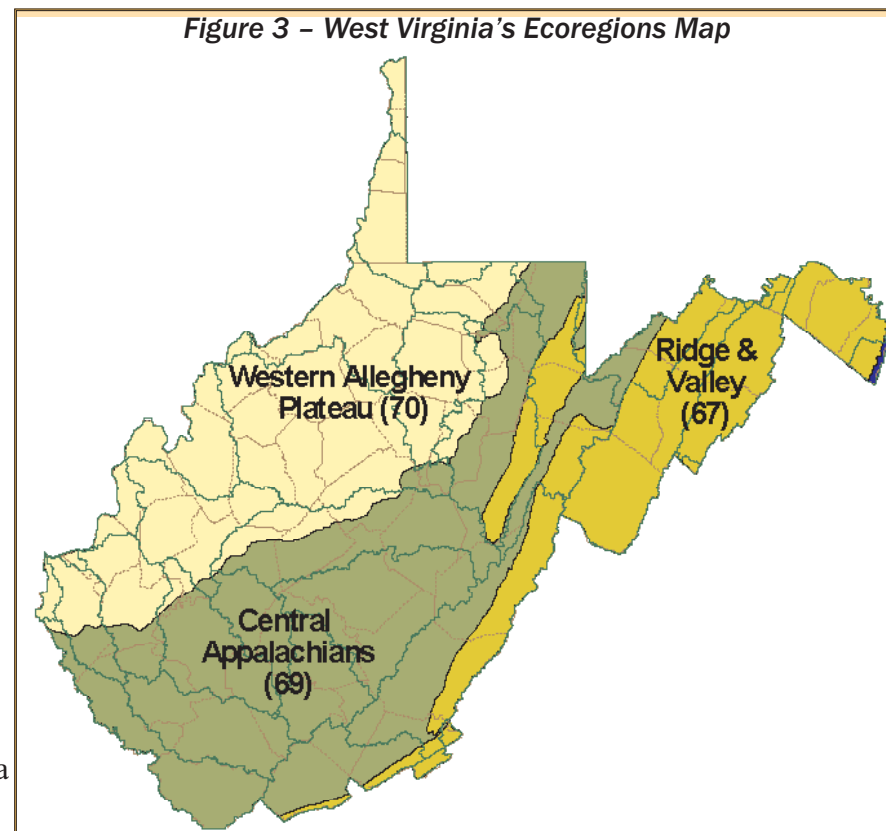
Section 7 – Probabilistic Monitoring Program and Data Summary

The goal of any probabilistic program is to provide statistically unbiased estimates of stream conditions throughout a particular region (i.e., watershed, ecoregion or state) without actually sampling every single stream mile in that region. This approach can be used to describe various aspects of stream conditions including: the proportion of stream miles with biological impairment, proportion of stream miles with specific water quality criteria violations, and characterize the relative importance of stressors such as sedimentation or acid precipitation. The current probabilistic design is stratified to ensure adequate coverage across all watersheds and allows the state to characterize overall water quality conditions at the watershed (USGS 8-digit HUC) level in addition to providing statewide estimates of condition.

In 2006, West Virginia will be completing its second five-year cycle using a sample design that provides data from 750 sites from wadeable streams statewide. The target population for this effort was small to medium sized (1-4th order) wadeable streams. Ninety-eight percent of West Virginia's stream miles are of this size class and ~ 70% of these are wadeable. This level of effort allows for good estimations of conditions across the state with a high degree of confidence. The sites are spread across 25 watersheds and watershed groupings (some small watersheds are combined with adjacent ones) and allow estimates of conditions at this scale, but with lesser confidence. Six sites are sampled in each of the 25 watersheds each year, resulting in 30 samples per watershed at the end of the five-year design.

While this design does allow for watershed level characterizations following the completion of the cycle, describing these estimates for the more broad classification of Level 3 Ecoregions reduces the uncertainties around the different estimates of condition. Results for the first three years (2002-2004) of the current effort have been summarized for this report and are described in terms of ecoregions.

With these improvements in DEP's probabilistic sample design, problems develop in trying to compare one data set with the other. The first five-year cycle included more of the larger order streams, which was a result of both the fact that the original target universe included up to fifth order streams and the fact that several watersheds were sampled in drought years that forced assessments into the larger streams because they were the only ones with flows adequate to sample. These differences in approach are most evident when looking at stream characteristics that would be expected to have an upstream/downstream gradient. For example, sedimentation problems often are not evident in headwater streams because the slope of these streams is such that sand and silt do not settle out until it reaches the slower, flatter sections. By sampling a higher percentage of headwater streams, it might be expected to see a lower percentage of stream miles with sediment impacts.

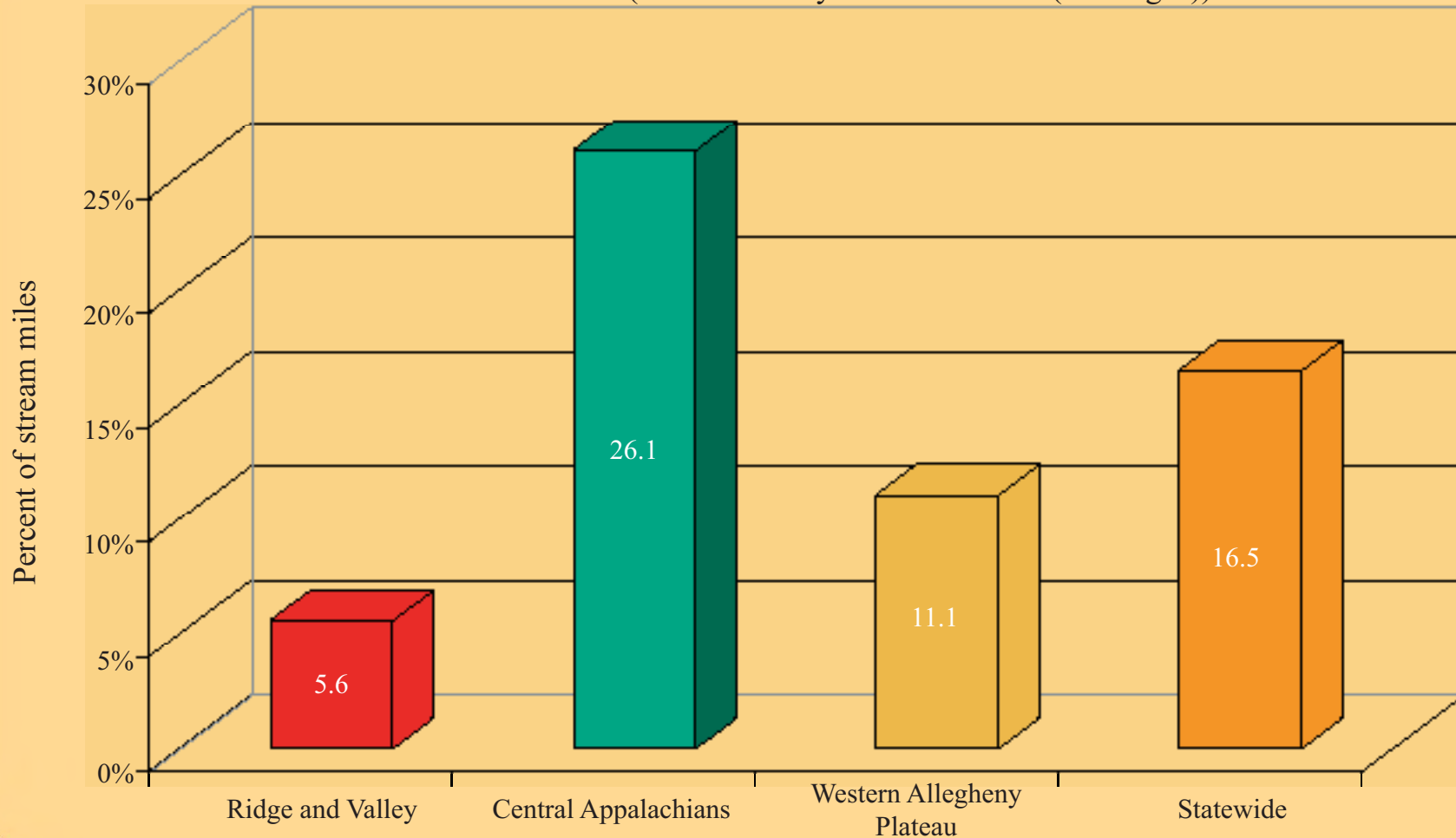


Mine Drainage

Streams impacted by mine drainage may be impaired by low pH and/or elevated concentrations of metals, including iron, aluminum, and manganese. Other dissolved ions such as sulfate may also be present in concentrations above ambient levels. A sulfate concentration greater than 50 mg/L was used to identify probabilistic sites influenced by mine drainage. Following this guideline, approximately 16.5% of the stream miles statewide are influenced by mine drainage (Figure 4). Observed on an ecoregional basis, mine drainage influences a greater proportion of stream miles in the coal rich Central Appalachians (Ecoregion 69) than in the Ridge and Valley (Ecoregion 67) or Western Allegheny Plateau (Ecoregion 70). About 26.1% of the stream miles in the Central Appalachians are influenced by mine drainage. In contrast, about 5.6% and 11.1% of stream miles are influenced by mine drainage in the Ridge and Valley and Western Allegheny Plateau, respectively.

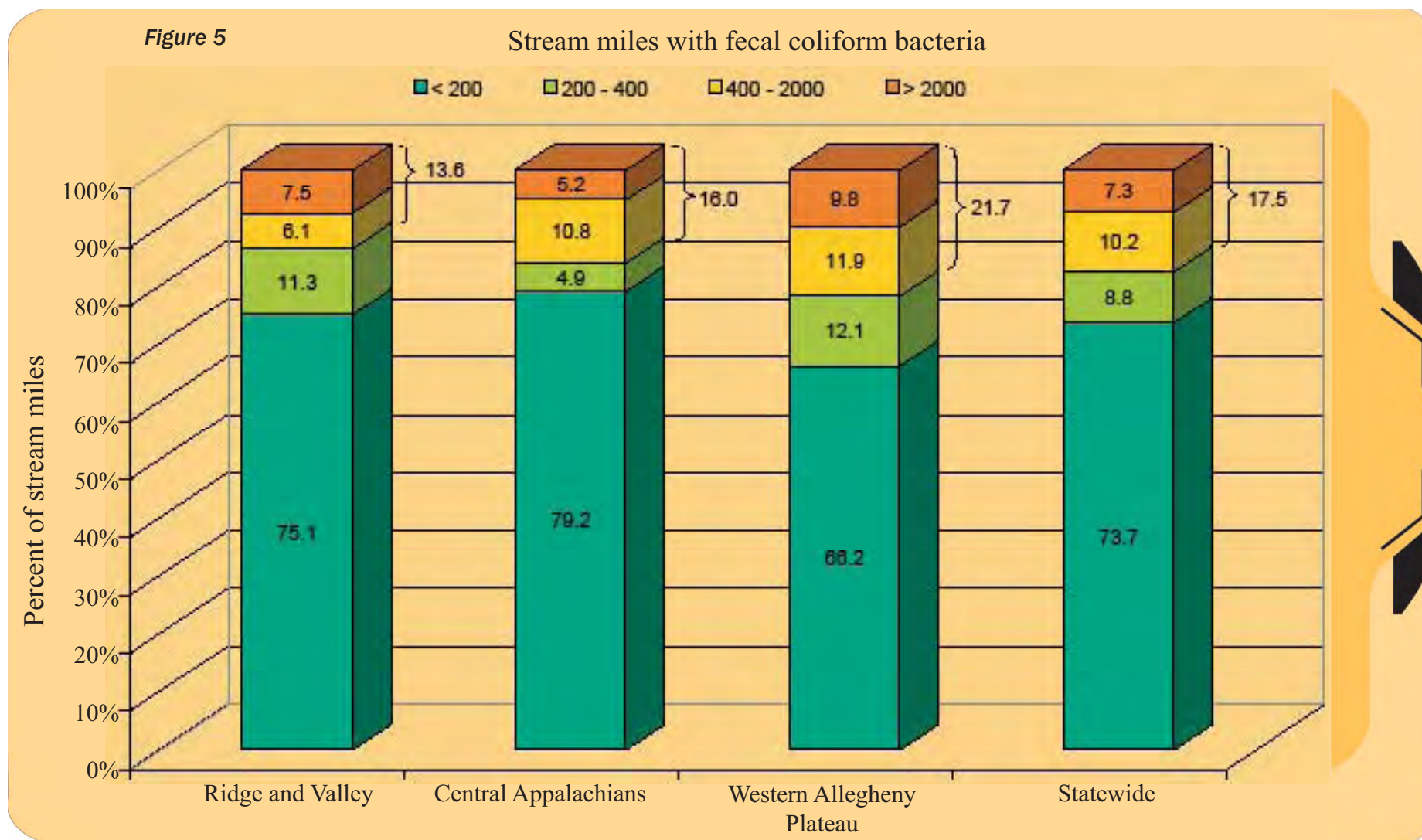
Figure 4

Percent of stream miles influenced by mine drainage
(as indicated by elevated sulfate (> 50mg/L))



Bacterial Contamination

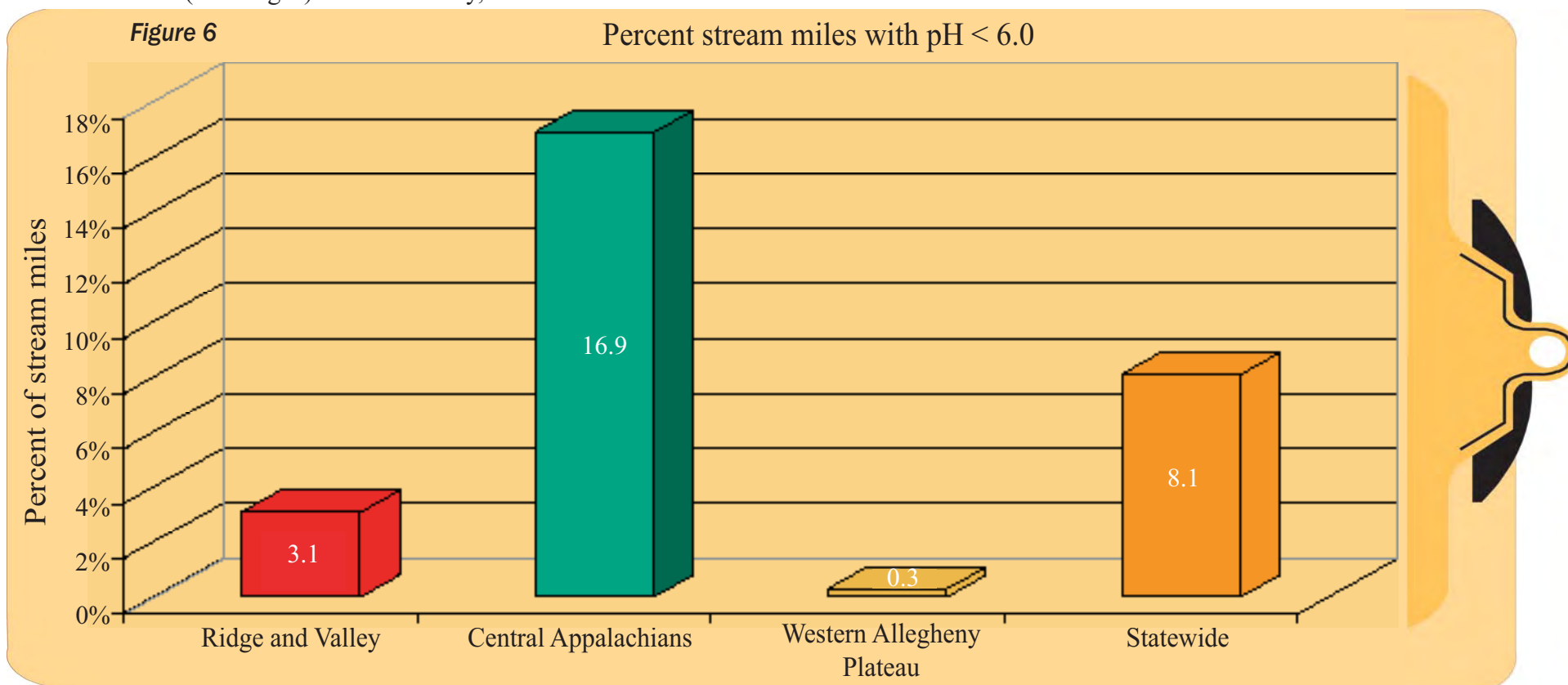
Many West Virginia waters contain elevated levels of fecal coliform bacteria. Contributors to the problem include leaking or overflowing sewage collection systems, illegal homeowner sewage discharges by straight pipes or failing septic systems, and runoff from urban or residential areas and agricultural lands. Based on probabilistic data, about 17.5% of stream miles in the state have fecal coliform bacteria levels that violate the criterion of greater than 400 colonies/100mL (Figure 5). In general, watersheds in the more developed regions of the state had a greater proportion of stream miles violating the criterion. The proportion of stream miles violating the criterion was highest in the Western Allegheny Plateau ecoregion (21.7% of stream miles) and progressively decreased in the Central Appalachians (16% of stream miles) and the Ridge and Valley ecoregions (13.6% of stream miles).



Acidity

The aquatic life communities in the headwater sections of many West Virginia waters continue to be impacted by acidic water. The impairment is most prevalent in watersheds with soils of low buffering capacity and most often caused by acid precipitation and less often (but more severely) by acid mine drainage. An evaluation of probabilistic data indicates that approximately 8.1% of the stream miles in the state have pH values below 6.0 (Figure 6). Most of the stream miles identified as impacted by acidic waters are in the Central Appalachians ecoregion, representing 16.9% of the stream miles within this area). Specifically, the Forested Hills and Mountains section of this ecoregion are largely susceptible to acid deposition impacts due to infertile soils and resistant sandstones of the Pottsville group. The Ridge and Valley ecoregion is less susceptible to the impacts of acid deposition with geologic materials such as limestone, shale, and sandstone providing more buffering capacity to neutralize acids. Nonetheless, probabilistic data indicates that approximately 3.1% of the stream miles in this ecoregion are impacted by acidic conditions. There are almost no stream miles with impacts attributed to acidic conditions in the Western Allegheny Plateau ecoregion. Again, this ecoregion has well buffered soils that limit the impacts of acid precipitation.

It is interesting to note that these descriptions, which are based solely on the percentage of stream miles with low pH (< 6), match up very closely with those calculated for the 2004 Integrated Report for Acid Deposition, which were determined by counting sites with low alkalinity (< 10 mg/l) and low sulfates (< 10 mg/L). Unfortunately, those calculations aren't available at this time for the newer data.

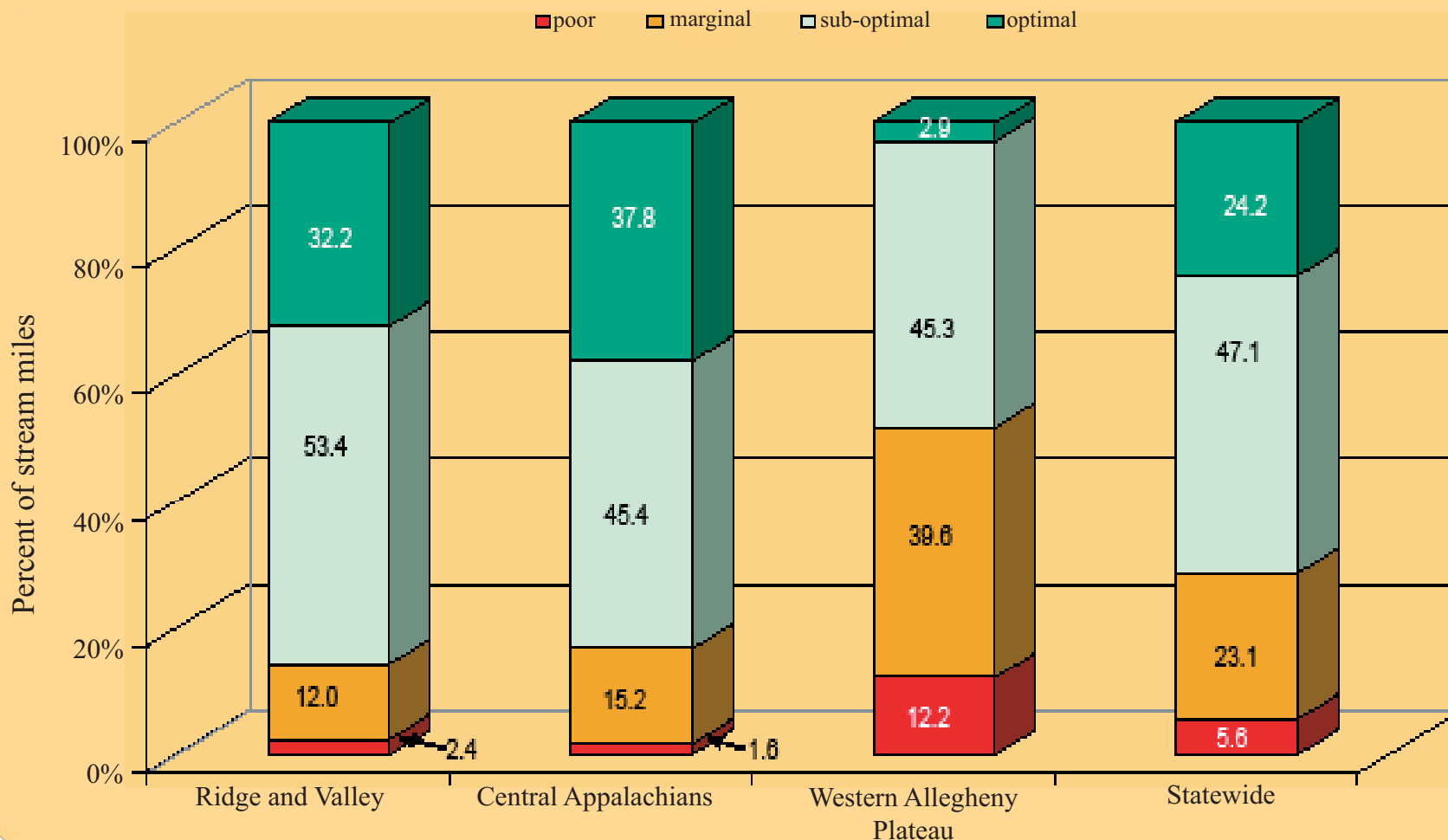


Habitat Quality

During the course of probabilistic sampling, DEP personnel collected data on many features of both riparian and instream habitat known to be important to the biological communities of streams. Habitat parameters in EPA's Rapid Bioassessment protocol were measured. These include measures of the amount of sediments and embeddedness in the stream channel as well as measures of the vegetation along the bank and riparian zone in the stream corridor. Specifically, 10 characteristics are scored (0-20) based on their quality and then combined to assess the overall physical habitat condition of the site. Overall quality is then categorized as optimal, suboptimal, marginal, or poor. Based on probabilistic data, about 24.2% of stream miles have optimal habitat quality (Total RBP score of 160 or greater), 47.1% of stream miles have suboptimal quality (130–159), 23.1% of stream miles have marginal quality (100–129), and 5.6% have poor stream habitat (< 100). This 2006 summary of the RBP habitat cannot be

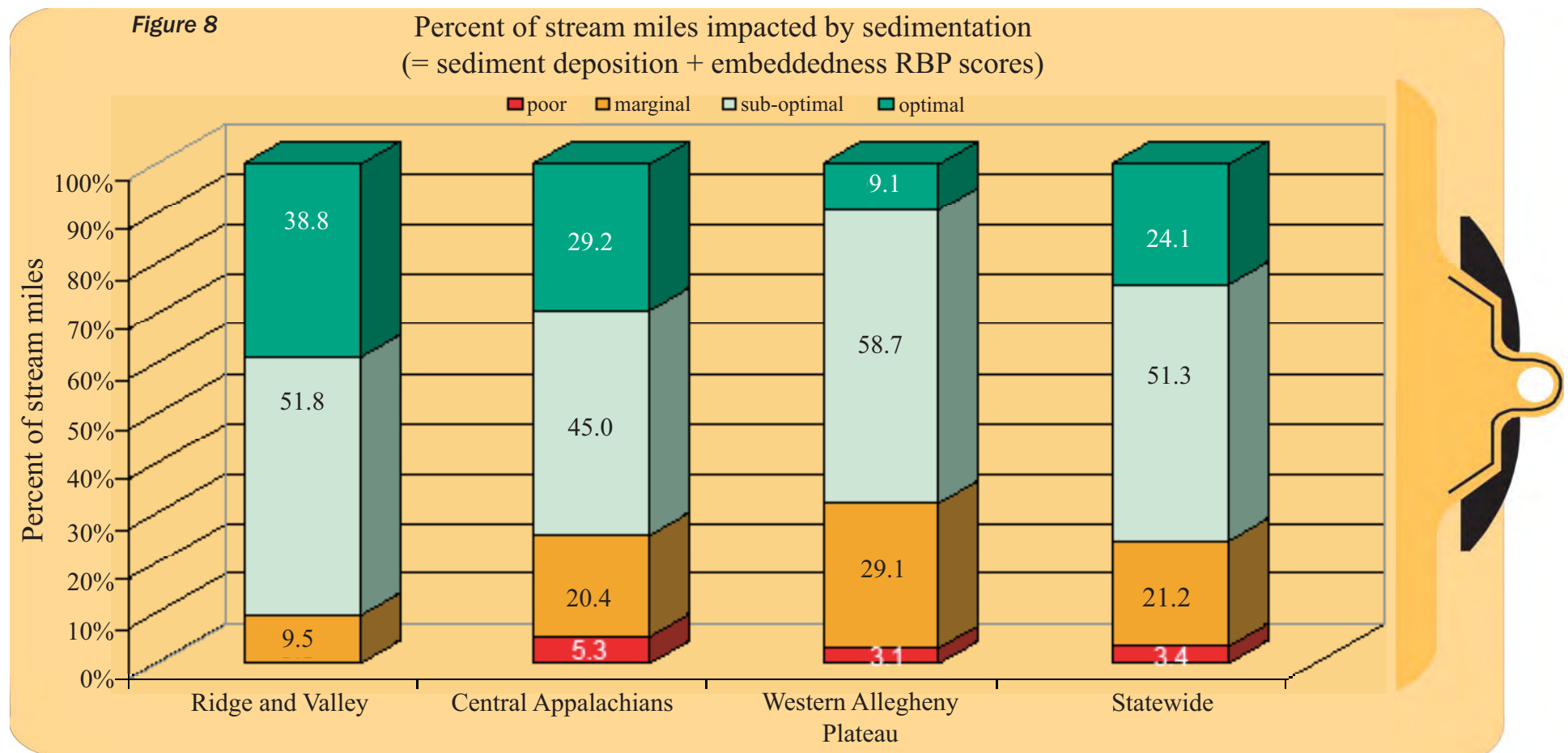
Figure 7

Percent of stream miles by habitat quality



directly compared to that in the 2004 Integrated Report, because of different thresholds. The category thresholds in the 2004 report were such that zero percent of the streams were described as having poor overall habitat. For this report, a site with an average score for each of the individual parameters of ‘marginal’ or less (10 or below) is considered ‘poor.’ In previous reports, in order to be considered poor, a site had to average less than marginal for each of the 10 parameters.

The Ridge and Valley and Central Appalachians ecoregions are similar with respect to overall habitat quality. More than 30% of stream miles in each of these ecoregions are of optimal quality and only about 15% are marginal or poor with respect to overall habitat quality. In comparison, habitat quality scores are lower in the Western Allegheny Plateau. The presence of more widespread development and factors such as higher rates of soil erosion in this ecoregion are potential causes for less than 3% of its stream miles being rated as optimal in overall habitat quality. Additionally, the proportion of stream miles (39.6%) with marginal habitat quality is substantially higher in this ecoregion. It is important to consider that the greatest proportion (more than 75%) of stream miles in the state are in the suboptimal or lower habitat categories. This indicates that most of the state’s stream miles have at least some degree of habitat degradation. (See Figure 7, page 30).



Although we may gain insight into overall habitat conditions by combining the individual measures, it is useful to examine specific habitat problems. Sedimentation of streams is one of the most important problems facing water resource protection agencies in West Virginia. Important sources of increased sedimentation include agricultural activities, mining, logging, oil/gas, roads, urban and suburban development, and removal of stream bank and riparian vegetation. The effects of sediment deposition on stream biota are well known and include interference with respiration and the smothering of physical habitat. In the course of evaluating probabilistic data, embeddedness and sediment deposition from EPA's RBP habitat evaluation were combined and used as an overall indicator of habitat quality as related to sedimentation. The categories used to rate overall habitat quality, were also used to rate sedimentation: optimal, suboptimal, marginal, or poor. Sedimentation results for the state as a whole indicate that 3.4% of stream miles are in poor condition, 21.2% stream miles are marginal, 51.3% of stream miles are suboptimal, and 24.1% of stream miles are in optimal condition (Figure 8). As with the overall habitat scores, the widespread impacts of sedimentation as a pollutant in West Virginia are apparent in that over 75% of the wadeable streams miles in the state score less than optimal.

Parallel to overall habitat quality, the Ridge and Valley and Central Appalachians ecoregions are similar with respect to sedimentation. In the Ridge and Valley ecoregion, about 34% of stream miles are in good condition and about 12.9% are in poor condition. Results for the Central Appalachians are similar with 36.1% of stream miles in good condition and 13.8% of stream miles in poor condition. It's interesting to note that in these ecoregions there are nearly as many stream miles in optimal condition as in marginal and poor condition combined. The Western Allegheny Plateau continued to show substantial problems with respect to habitat quality, especially in terms of sedimentation. In contrast to the Ridge and Valley and Central Appalachians, only about 9% of stream miles in this ecoregion are in optimal condition and approximately 32.1% of stream miles are in poor condition. If marginal and poor stream miles were combined for this ecoregion, nearly two-thirds (66.3%) of its stream miles would be categorized as having enough sediment to reduce habitat quality. The presence of more widespread development and higher rates of soil erosion in this ecoregion are potential causes of the observed increase in sedimentation and resultant decrease in habitat quality.

West Virginia Stream Condition Index or WVSCI

The WVSCI consists of six benthic community metrics combined into a single multimetric index. The WVSCI was developed using DEP and EPA data collected from riffle habitats in wadeable streams.

WVSCI Scoring Criteria

**> 68.0
Unimpaired**

**≥ 60.6 to 68
"Gray Zone"**

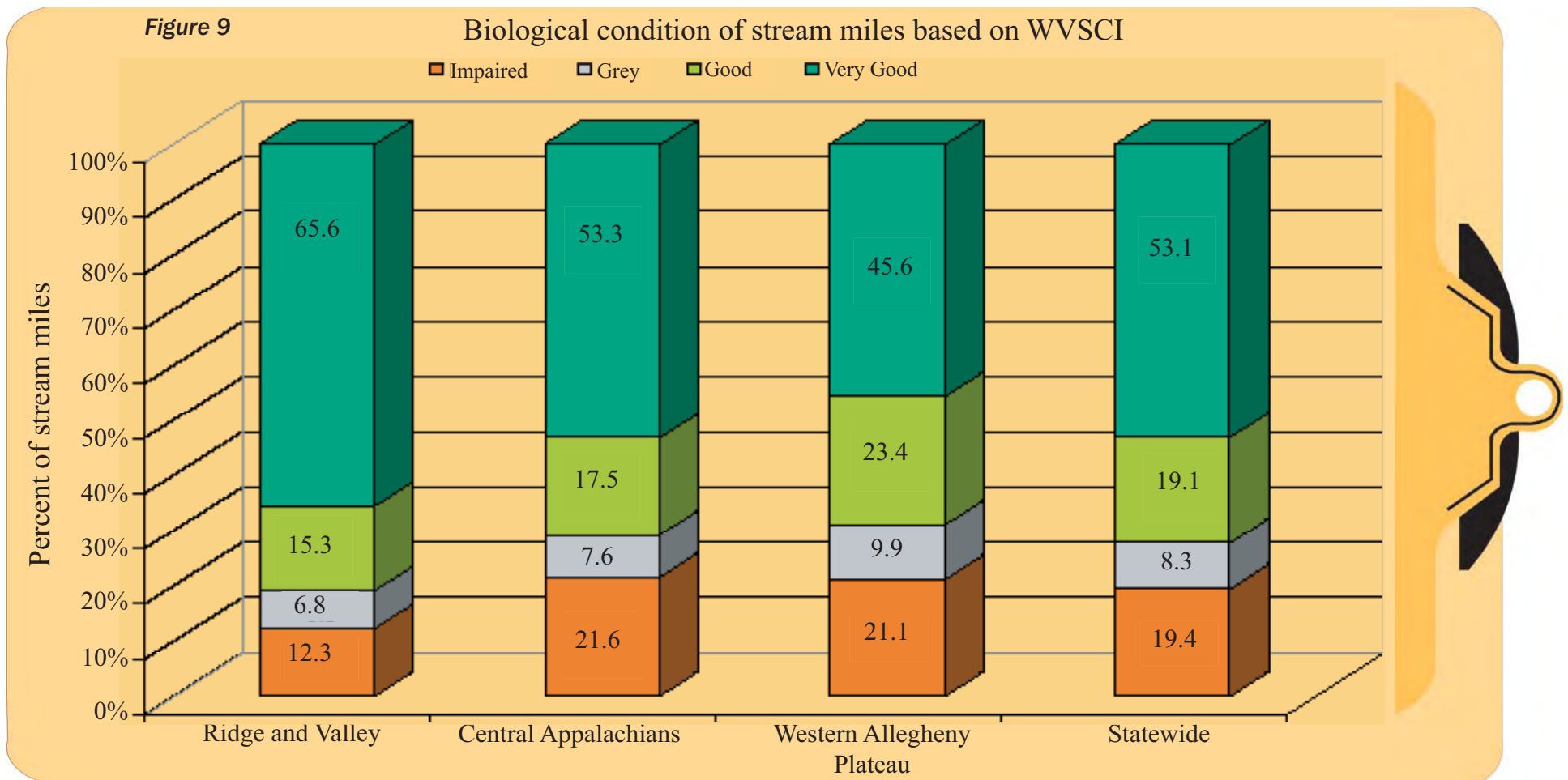
**< 60.6
Impaired**

In general terms, all metric values were converted to a standard 0 (worst) to 100 (best) point scale. The six standardized metric scores were then averaged for each benthic sample site to come up with a final index score ranging from 0.0 to 100.0. Using the distribution of scores from all sites that are considered reference sites, an impairment threshold of 68.0 was established. If a stream site received a WVSCI score greater than 68.0, it was considered to be unimpaired. Initially, a site that received a WVSCI score equal to or less than 68.0 was considered impaired. However, because the final WVSCI score can be affected by a number of factors (collector, micro-habitat variables, subsampling, etc.), agency personnel sampled sites in duplicate to determine the precision of the scoring.

Following an analysis of the duplicate data, agency personnel determined the precision estimate to be 7.4 WVSCI points for a single sample. The value (7.4) was then subtracted from the impaired threshold score of 68.0 and generated what is termed the "gray zone" that ranges from 60.6 to 68.0. If a site had a WVSCI score within the gray zone, a single kick sample was considered insufficient for classifying it as impaired. If a site received a WVSCI score less than 60.6, the agency was highly confident that the site was truly biologically impaired based on that benthic macroinvertebrate sample.

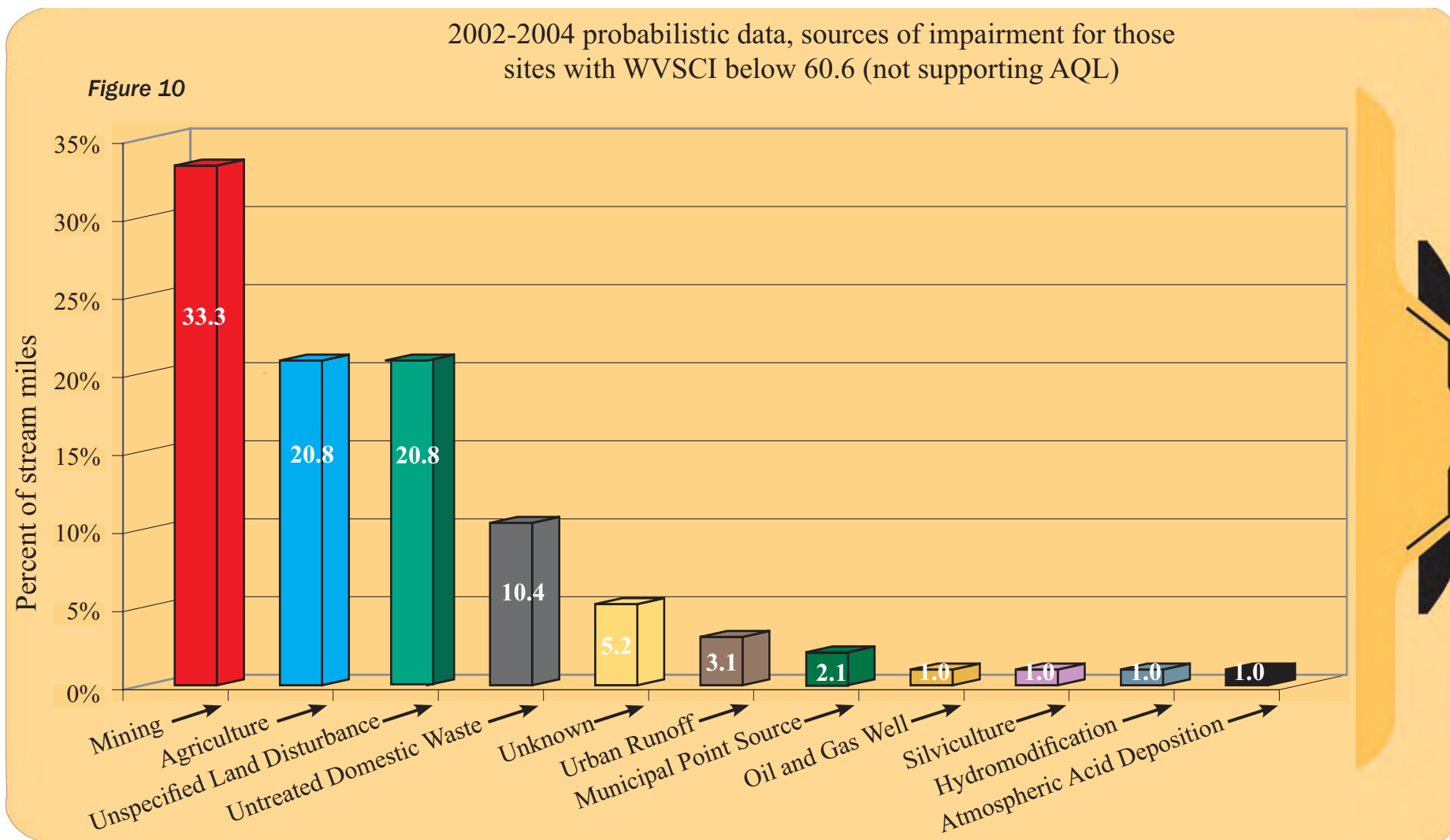
Biological Impairment

The biological communities living in West Virginia streams are exposed to many stressors, including toxic contaminants, sedimentation, nutrient enrichment, and acid precipitation. DEP uses benthic macroinvertebrates to assess the biological condition of streams in the state. These organisms can provide reliable information on water and habitat quality in streams. They are extremely diverse and exhibit a wide range of tolerances to pollutants. They serve as an excellent tool for measuring overall ecological health, especially when summarized into a single index of biological integrity. In West Virginia, the health of benthic macroinvertebrate communities are rated using a multimetric index developed for use in wadeable streams. The WVSCI is composed of six metrics (each measuring a different aspect of the community) that were selected to maximize discrimination between streams with known impairments and reference streams. Based on the WVSCI impairment threshold of 60.6 (0 –100 scale), about 19.4 % of wadeable stream miles in the state are impaired, while approximately 72.2 % of stream miles are not impaired (Figure 9 -Random). Both the Western Allegheny Plateau and the Central Appalachians ecoregions had slightly higher percentages of stream miles rated as impaired (21.1% and 21.6% respectively).



Sources of Bio-impairment

The results of the 2002-2004 probabilistic sampling revealed that 96 out of 451 sites received a WVSCI score of 60.6 or less. Benthic macroinvertebrate communities that score within this range are considered impaired, and DEP would describe them as not supporting their aquatic life use designation. Eleven categories of major sources of biological impairment were determined using water chemistry analyses, narrative descriptions by sampling personnel, benthic community characteristics, and several Geographic Information System data layers depicting landuse activities. Each of the 96 sites was assigned a primary source of impairment from one of the 11 categories. For sites with possibly more than one source of impairment, the most obvious source was listed. Of the 96 bio-impaired sites, mining affected more than 33 percent. The next highest source of impairment is agriculture.



Section 8 –Major Basin Summaries

Guyandotte River

The Guyandotte River is divided into upper and lower sections. The confluence of Island Creek and the Guyandotte River defines the boundary between the Upper and Lower Guyandotte watersheds. The impairments of the Upper Guyandotte River mainstem (fecal coliform, total iron and biological impairment) and the Lower Guyandotte River mainstem (fecal coliform, total iron) are addressed by TMDLs developed by EPA Region III in 2004. In that effort, EPA also developed TMDLs for numerous Guyandotte River tributaries predominantly impaired by mine drainage.

Kanawha River and Major Tributaries (New, Bluestone, Greenbrier, Gauley, Elk and Coal rivers)

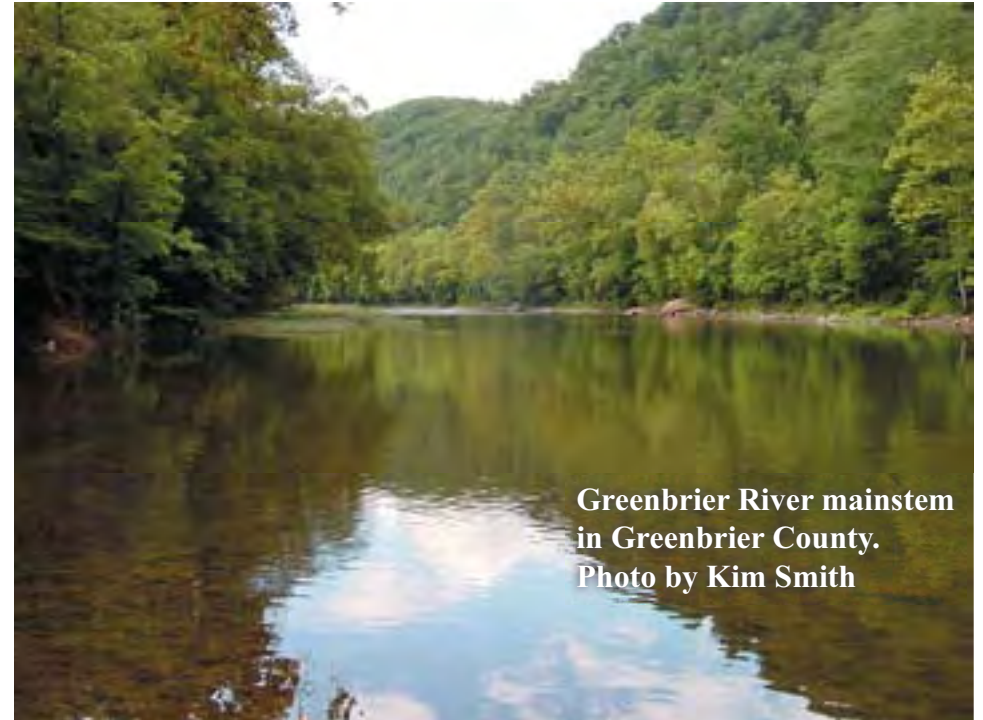
The Kanawha River, like the Guyandotte, is also divided into two sections. The break occurs near the mouth of the Elk River with the upper section extending upstream to the confluence of the New River and Gauley River. The Lower Kanawha River segment begins near the mouth of the Elk River and continues downstream to its confluence with the Ohio River at Point Pleasant.

The entire Kanawha River mainstem, Bluestone River and Bluestone Lake are listed as impaired because of consumption advisories related to elevated fish tissue concentrations of and Polychlorinated Biphenyls (PCBs).

Fecal coliform impairments have been identified in the Lower Kanawha River mainstem and in all of the major tributaries of the Kanawha River. Affected segments include the New River (mouth to Bluestone Dam), the Gauley River (mouth to river mile 37.2), the Elk River (mouth to Sutton Dam), and entire lengths of the Bluestone, Coal and Greenbrier rivers.

Previous EPA TMDL development efforts addressed dioxin impairments of the Lower Kanawha River and tributaries (September 2000) and metals impairments of the Elk River and tributaries (September 2001). Additionally, the Department of Environmental Protection finalized numerous TMDLs for impaired tributaries of the Upper Kanawha River in January 2005.

The DEP is developing fecal coliform TMDLs for the Coal, Greenbrier, New, and Bluestone rivers. The Coal River TMDL will be finalized in 2006 and the Greenbrier, New, and Bluestone rivers TMDLs will be finalized by December 2007. In addition to the TMDLs for the mainstem impairments, TMDLs will be developed for these rivers' tributary waters.



**Greenbrier River mainstem
in Greenbrier County.
Photo by Kim Smith**

Monongahela River and Major Tributaries (Cheat, Tygart Valley, and West Fork rivers)

Between March 2001 and September 2002, EPA developed TMDLs addressing the iron, aluminum, manganese and pH impairments of the Monongahela, Cheat, Tygart Valley and West Fork rivers and numerous tributary waters.

Recent aluminum and manganese water quality criteria revisions create uncertainty relative to the impairment status of affected waters and, as such the validity of many TMDLs. DEP has recently initiated pre-TMDL monitoring in the Cheat River and tributaries to re-evaluate impairment status pursuant to currently effective criteria and modify iron, aluminum, manganese and pH TMDLs, as appropriate. This effort will be finalized in 2009 and may include new TMDLs for geographically proximate impaired streams in the Cheat River Watershed. It is important to note that the pH water quality conditions of the Cheat River mainstem and Cheat Lake have shown drastic improvement in recent times. The West Virginia Division of Natural Resources' limestone drum station on the Blackwater River and its application of limestone fines to headwater streams impacted by acid rain have restored many miles of trout water and recent pH data at the head of Cheat Lake has documented a pH greater than 6.0 continuously for the past two years.

Fecal coliform impairments have been identified in the Monongahela River (entire length), the Tygart Valley River (river mile 65 to headwater), and the West Fork River (mouth to Stonewall Jackson Lake tailwater). The same segment of the West Fork River also is biologically impaired, has a dissolved zinc water quality criteria impairment, and a consumption advisory related to elevated fish tissue concentrations of Polychlorinated Biphenyls (PCBs). Stonewall Jackson Lake, Cheat Lake and Tygart Lake are all listed as impaired for mercury because of consumption advisories related to elevated fish tissue concentrations of mercury.

Little Kanawha River

A small headwater section of the river is impaired relative to pH from RM 162.1 upstream to the headwaters. Additionally, the entire river is now listed for fecal coliform impairment and PCBs.

EPA previously developed iron and aluminum TMDLs for the mainstem and several tributaries. The previously developed aluminum TMDL is obsolete due to recent criteria revisions. Currently, four additional tributaries are under DEP TMDL development for total iron, pH and biological impairment with finalization expected by December 2007.

Ohio River

EPA developed TMDLs for dioxin and PCBs impairments in the Ohio River in 2000 and 2002, respectively. Additional segments of the river are included as dioxin-impaired on the 2006 Section 303(d) List, upstream of the area of applicability of the original TMDL. DEP finalized numerous TMDLs for impaired tributaries in the Upper Ohio North Watershed in January 2005.

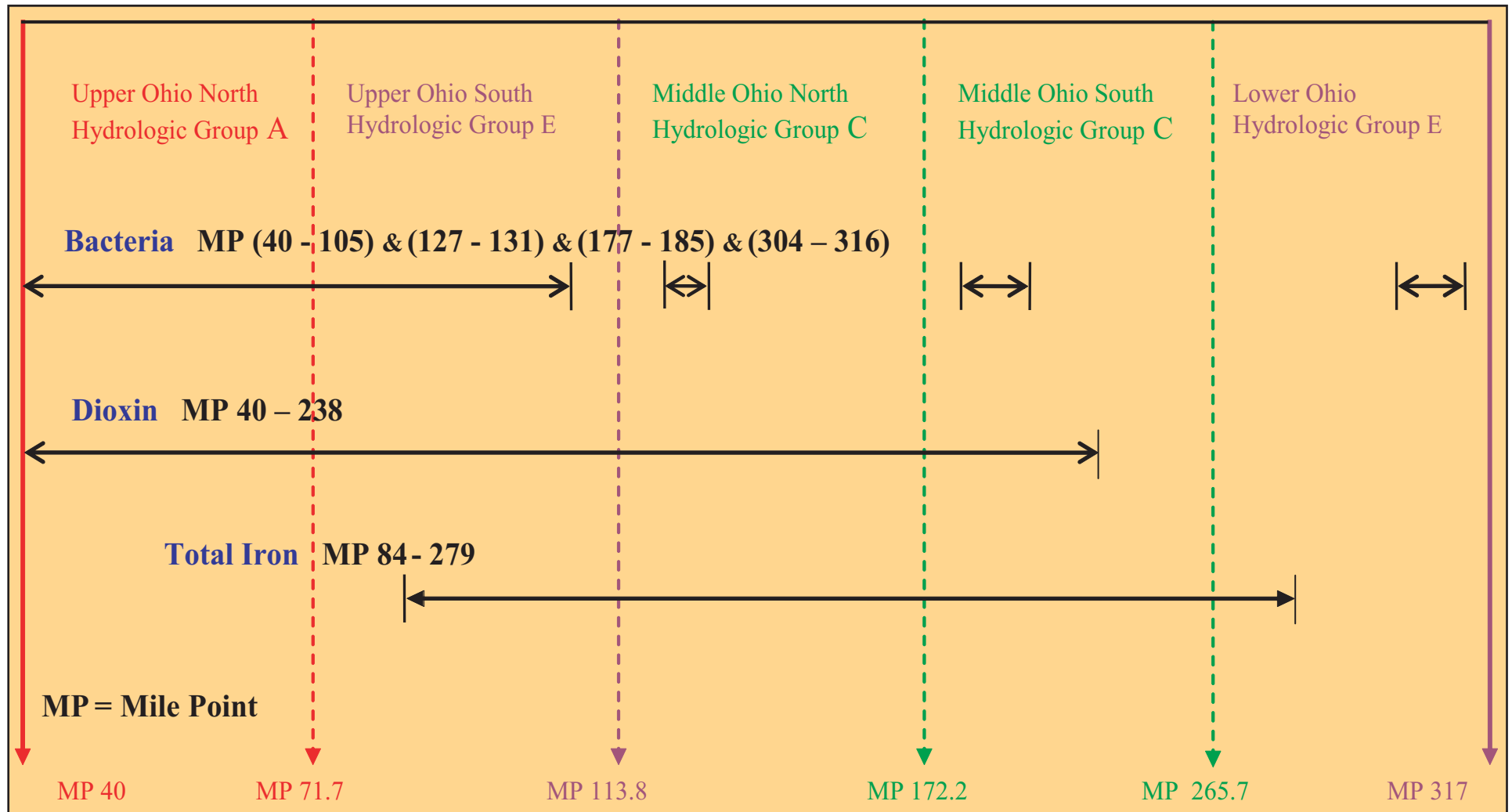
The Ohio River Valley Water Sanitation Commission (ORSANCO) does extensive water quality monitoring of the Ohio River. Every two years ORSANCO publishes its 305(b) report addressing water quality issues on the Ohio River. As in the past, DEP has reviewed ORSANCO's Draft 2006 305(b) report and incorporated the data and assessment results into the West Virginia 303(d) List. When both West Virginia and ORSANCO have an established criterion for a particular pollutant the most stringent standard is applied for assessment purposes, as provided in the ORSANCO Compact.

The bacteria impairment identified for various Ohio River segments reflects assessments based upon a combination of both ORSANCO's E. coli. water quality criteria and West Virginia's fecal coliform criteria.

In addition, certain segments of the river have been identified as iron-impaired based upon the applicable West Virginia warmwater aquatic life criterion of 1.5 mg/l.

The following graphic depicts the impaired segments of the Ohio River bordering West Virginia.

Figure 11 – Impairments of the West Virginia section of the Ohio River



Tug Fork River

In 2002, EPA developed iron and aluminum TMDLs for the Tug Fork River mainstem. Iron, aluminum, manganese and pH TMDLs were developed for its impaired tributaries. As described earlier, subsequent aluminum and manganese water quality criteria revisions create uncertainty relative to the impairment status of affected waters and, as such, the validity of many aluminum and manganese TMDLs.

The Tug Fork River is identified on the 2006 Section 303(d) List for biological impairment from RM 51.6 to its headwaters and is listed for fecal coliform impairment from the mouth to RM 35.7.

Chesapeake Bay and Gulf of Mexico

The Chesapeake Bay and Gulf of Mexico are impaired by nutrients and sediment from multiple upstream states and sources. These large and biologically diverse waterbodies are an important economic resource for their surrounding states and the nation as a whole. The need for their protection and restoration is a high priority for many parties. West Virginia's Potomac, Shenandoah and James rivers are headwaters to the Chesapeake Bay. The remaining watersheds in the state flow to the Gulf of Mexico. West Virginia's involvement in the restoration of these waterbodies will likely require nutrient and sediment reductions from both point and nonpoint sources. In some cases, these reductions may be necessary on streams that may not be locally impaired. Given this, equitable load reduction targets and implementation strategies are of primary importance to West Virginia.



Aerial photo of Chesapeake Bay.
Courtesy of NASA/GSFC

Section 9 – Interstate Water Coordination

Joint PCB Monitoring Effort with Virginia

The DEP has been working with the Virginia Department of Environmental Quality (Va. DEQ) to assess the issue of PCB impairment along the Virginia section of the Bluestone River. As part of a cooperative project, DEP and Va. DEQ placed a number of semi-permeable membrane devices throughout the Bluestone watershed in both Virginia and West Virginia. The purpose of the project is to determine the level of PCB contamination present in the mainstem Bluestone River and tributaries. Several devices were placed in streams that are known or suspected to be historical PCB sources. DEP and Va. DEQ are working with both the United States Geological Survey (USGS) and Region III of EPA on this project. EPA provided funding through its RARE grant program while USGS supplied the semi-permeable membrane devices and is doing the analysis of the devices. The product of this cooperative effort is expected to be a TMDL for the Bluestone River and tributaries with loadings and allocated reductions for sources in both Virginia and West Virginia.

Ohio River Valley Water Sanitation Commission — ORSANCO

As with previous reports, DEP's 2006 Integrated Report includes assessments based on data provided by ORSANCO. Throughout development of ORSANCO's 2006 Biennial Assessment Report, DEP has been involved with ORSANCO's efforts to standardize assessments among the "compact" states. DEP personnel continue to participate in several standing committees, along with representatives from other Compact states, charged with helping direct ORSANCO's water quality and biological monitoring efforts.

West Virginia and the Chesapeake Bay Program

In June 2002, Governor Bob Wise signed the Chesapeake Bay Program Water Quality Initiative Memorandum of Understanding. By signing this memo, West Virginia agrees to develop goals and objectives to reduce nutrient and sediment loads. Reductions of 33 percent for nitrogen, 35 percent for phosphorus, and 6 percent for sediment are needed between 2002 and 2010. These reductions are anticipated to come from a variety of sectors including point sources such as municipal wastewater treatment plants and industry, and nonpoint sources such as agriculture, forestry, urban, suburban, and mixed open land uses. The plan for meeting these reductions is in West Virginia's Potomac Tributary Strategy. Fourteen percent of West Virginia's waters drain into the Potomac River and on to the Chesapeake Bay.

Interstate Commission on Potomac River Basin

The Commission is a non-regulatory agency of basin states (Maryland, Pennsylvania, Virginia and West Virginia), Washington, D.C. and the federal government. The Commission promotes watershed-wide solutions to the pollution and water resources challenges facing the basin and its more than 5.3 million residents. Examples of current commission efforts include Chesapeake Bay Program involvement, stream biological assessments, support of selected stream gages, the Potomac Groundwater Assessment, Potomac Basin Drinking Water Source Protection Partnership coordination and Potomac Watershed Toxic Spill Model support. In addition, the Commission's public outreach program supports and helps coordinate an annual watershed-wide clean up effort and produces and distributes 150,000 copies of the newsletter *Potomac Basin Reporter*. The commissioners are appointed by their respective jurisdictions and provide policy guidance and oversight for a skilled staff of scientists and educators. Currently, the West Virginia representative is serving as the chairman of the Commission.

Ohio River Basin Commission

The Commission, in its current form, was founded in 1981. The purpose of the Commission shall be to: (1) provide a forum for Ohio River Basin states to study, discuss, and develop regional policies and positions on common interstate issues concerning water and related land resources; (2) coordinate to the extent possible water and related land resources planning in the Ohio River Basin; (3) provide representation of regional interest to the federal government; (4) investigate, study and review water related problems of the Basin and; (5) assist in water and related land resources training for Basin representatives. The Commission welcomes membership from all states draining to the Ohio River including Illinois, Indiana, Kentucky, Maryland, New York, North Carolina, Ohio, Pennsylvania, Tennessee, Virginia, and West Virginia.



Overlooking the Ohio River
from Oil Ridge in Pleasants County.
Photo by Mike Whitman

Section 10 – Total Maximum Daily Load (TMDL) Development Process

Beginning in 1997, EPA Region III developed West Virginia TMDLs under the settlement of a 1995 lawsuit, Ohio Valley Environmental Coalition, Inc., West Virginia Highlands Conservancy, et. al. v. Browner, et. al. The lawsuit resulted in a consent decree between the plaintiffs and the EPA that specifies TMDL development requirements and compliance dates. While EPA was working on developing TMDLs, DEP concentrated on building its own TMDL program. With the help of the TMDL stakeholder committee, the agency secured funding from the state legislature and created the TMDL section within the Division of Water and Waste Management.

The TMDL section is committed to implementing a TMDL process that reflects the requirements of TMDL regulations, provides for the achievement of water quality standards, and ensures that ample stakeholder participation is achieved in the development and implementation of TMDLs. DEP's 48-month development process enables the agency to carry out an extensive data generation and gathering effort to produce scientifically defensible TMDLs, as well as allow ample time for modeling, report drafting and frequent public participation opportunities.

The DEP's TMDLs are developed according to the Watershed Management Framework cycle. The framework divides the state into 32 major watersheds and operates on a five year, five-step process. The watersheds are divided into five hydrologic groups (groups A - E). Each group of watersheds is assessed once every five years. A map depicting the 32 watersheds and the hydrologic groupings is provided as an attachment to this document. The TMDL process begins in the first year of the cycle with pre-TMDL sampling and public meetings in the affected watersheds. The data is compiled and TMDL development begins in year two of the cycle. In the third year, TMDL development continues and the TMDL is drafted. The TMDL is finalized in the fourth year. In the fifth year of the cycle, TMDL implementation is initiated through the NPDES permitting process and efforts toward limiting nonpoint source pollutant loading.

Throughout the TMDL development process, there are numerous opportunities for public participation and input. The West Virginia TMDL program also must accomplish TMDL development in accordance with the consent decree between EPA and the Ohio Valley Environmental Coalition, et. al., which requires all streams impaired by mine drainage to have TMDLs developed by 2008. Each year, the agency selects waters within the targeted hydrologic group where mine drainage TMDL development is mandated by the consent decree. Other geographically proximate impairments are added to those selections until the agency's annual resources for TMDL development are consumed. In this way, statewide TMDL development by regulatory deadlines is efficiently and systematically accomplished.

The DEP began developing TMDLs for selected waters in Hydrologic Group A in 2001. Additional development efforts were initiated for group B, group C, group D and group E in impaired waters in 2002, 2003, 2004 and 2005, respectively. The DEP received EPA approval of group A TMDLs in early 2005. Hydrologic Group B TMDLs were on schedule but are now delayed due to recent approval of the revision of dissolved aluminum water quality criteria. Work is underway to incorporate the necessary changes resulting from the criteria revision and, upon completion, these revised draft TMDLs will be advertised and offered for public comment. DEP expects finalization this summer. Development is progressing well for TMDLs scheduled for finalization in 2006, 2007 and 2008.

Projected TMDL Completion Year	
Hydrologic Group A	2009, 2014, 2019
Hydrologic Group B	2010, 2015, 2020
Hydrologic Group C	2006, 2011, 2016, 2021
Hydrologic Group D	2007, 2012, 2017
Hydrologic Group E	2008, 2013, 2018

The 303(d) List identifies and prioritizes the waters and impairments for which TMDLs will be developed over the next three years by specifying the year in the “Projected TMDL Year” column. The impaired waters intended for TMDL development in 2006, 2007, and 2008 are known and identified on the list. The remaining legacy mine drainage impairments that, per the consent decree, must have TMDLs developed by 2008 are also specified. For other waters and impairments, where the timing of TMDL development is less certain, the “Projected TMDL Year” is identified as the most future year when opportunity exists per the DEP’s plans to develop TMDLs in concert with the Watershed Management Framework.



DEP's Catherine Rosfjord sampling near
Cheat Lake in Monongalia County
Photo by Rob Row

Section 11 – Water Pollution Control Programs

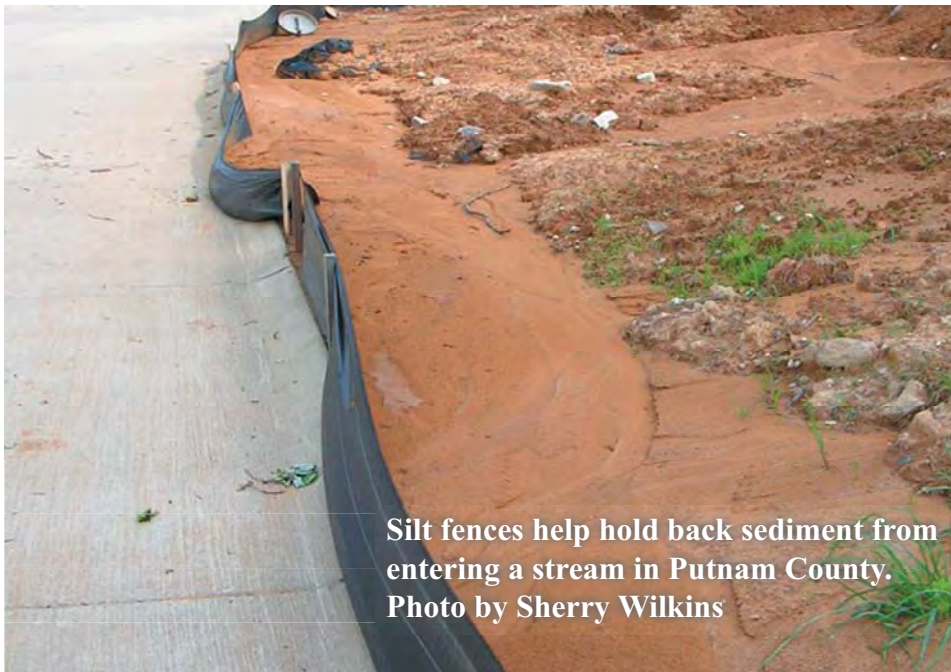
Division of Water and Waste Management

The Division of Water and Waste Management's mission is to preserve and enhance West Virginia's watersheds for the benefit and safety of all. DWWM strives to meet its mission through implementation of programs controlling surface and groundwater pollution caused by industrial and municipal discharges as well as oversight of construction, operation and closure of hazardous and solid waste and underground storage tank sites. In addition, the division works to protect, restore, and enhance the state's watersheds through comprehensive watershed assessments, groundwater monitoring, wetlands preservation, inspection and enforcement of hazardous and solid waste disposal and proper operation of underground storage tanks. The Integrated Report provides greater detail about Point Source, Nonpoint Source and Groundwater programs.

In January 2006, Environmental Enforcement became a branch of the Division of Water and Waste Management. Environmental Enforcement promotes compliance with the Solid Waste Management Act, Water Pollution Control Act, Groundwater Protection Act, Hazardous Waste Management Act, Underground Storage Tank Act, and Dam Safety Act by providing assistance, inspecting regulated sites, and enforcing conditions required by these acts.

Point Source Program or National Pollution Discharge Elimination System (NPDES)

The objectives of the point source control program are to control and reduce water pollution. These objectives are met by ensuring that discharges from facilities meet the applicable Clean Water Act effluent limitations and do not violate water quality standards. The DWWM's primary mechanism for implementing this program is the West Virginia NPDES permit. This program, at the state level, regulates activities and facilities involving the installation, construction, modification, and operation and maintenance of wastewater treatment systems as well as their discharges. Individual and general permits are used to implement the program. The permits include effluent limits and requirements for facility operation and maintenance, discharge monitoring and reporting. Permits for stormwater construction require the implementation of proper best management practices. Permits for home aeration units require the permittees to maintain an operation and maintenance agreement. Due to these requirements and emphasis on issuing major permits, the best available technology approach to point source control has resulted in substantial pollution reduction in all state waters, particularly in the area of conventional pollutants.



Silt fences help hold back sediment from entering a stream in Putnam County.
Photo by Sherry Wilkins

This approach also has provided states greater latitude in requiring additional reductions in effluent loadings of these pollutants. Best available technology limits are generally adequate to protect water quality

since the majority of major dischargers are located on large rivers, which have the capacity to assimilate wastewater. The best management practices approach for control of storm water discharges associated with construction activities has resulted in a reduction of pollution associated with these sources. On smaller streams, the combination of best available technology and water quality-based permit limits has generally provided the greatest degree of pollutant control, particularly in relation to toxic substances. In addition to enabling DWWM to correct problems, state rules also provide a pretreatment program in conjunction with the NPDES program with procedures for regulating proposed industrial wastewater connections to publicly owned treatment works. This allows DWWM to evaluate proposals and require the installation of pretreatment facilities where necessary, or otherwise approve with required conditions.

Each permitted facility also is required to monitor its discharges and submit regular reports. As a result of reviewing these reports, where noncompliance exists, administrative actions are generally initiated to obtain compliance. These may include warning letters, notices to comply, enforcement orders, or referrals for civil action. Other activities administered by the permitting section of the DWWM include developing wasteload allocations for new or expanding activities, regulating the land application of sewage sludge through the permit process, and regulating industrial solid waste landfills through issuance of permits.

Combined Sewer Overflows (CSO)

There are currently 55 permitted CSO communities in West Virginia that have over 700 outfalls. These communities are located throughout the state and discharge to the major rivers, including the Ohio, Kanawha, Monongahela, and Guyandotte, as well as their tributaries. The DEP is currently reviewing long-term control plans and water quality studies submitted by these communities.

Concerns include CSOs located along rivers used for recreational purposes. Many of West Virginia's larger rivers are used for water contact recreation. It is important to educate the public about CSOs when using these recreational areas. The major concern is the effect of CSOs on water quality. Preliminary results have indicated smaller streams are affected more than the larger rivers. Long term planning for many cities has tried to reduce the number of CSOs or discharges on these smaller streams. West Virginia so far has identified funding needs of over \$900 million to minimize CSO impacts statewide.

Nonpoint Source Control Program

Many of the streams being listed on the state's list of impaired waters are affected by nonpoint sources. The majority of the TMDLs being developed involve nonpoint source water quality impacts. To more effectively respond to TMDL implementation needs, the Nonpoint Source Management Plan was updated in 2000 to incorporate watershed management principles, including integration of TMDL and Watershed Management Framework scheduling. That integration has already proven beneficial in the state's eastern panhandle where TMDLs were completed in the mid-1990s for bacteria associated with agricultural animal wastes. Through the Nonpoint Source Program, partnerships with state and federal agriculture agencies, and the DEP's State Revolving Fund, more than \$18 million has been spent implementing best management practices to address agricultural water quality impacts in the Potomac River and its tributaries. These examples emphasize the need for the existing nonpoint source programs promoting voluntary installation of best management practices to be more focused on identified priority watersheds. Also, enforcement of water quality violations from nonpoint source activities should be used as necessary to encourage compliance. Continuation and expansion of the agency's use of the fund's loans for additional nonpoint source problems, such as failing septic system rehabilitation, also would be beneficial.

The Nonpoint Source Control Program works with other cooperating state agencies to assess nonpoint source impacts, then develops and implements projects designed to reduce pollutant loads from agricultural, silviculture, resource extraction, urban runoff and construction activities. Program initiatives are based upon education, technical assistance, financial incentives, demonstration projects, and enforcement, as necessary. The division's Nonpoint Source Program supports the overall administration and coordination of the nonpoint source activities through these participating state agencies: the Division of Mining and Reclamation, the Division of Land Restoration, the West Virginia Conservation Agency (WVCA), the Office of Oil and Gas, and the Division of Forestry. Each year, specific activities are funded under the Nonpoint Source Program. The following are descriptions of the current program's components.

Nonpoint Source Program Coordinator for Agriculture and Construction

The Nonpoint Source Program of the WVCA has broad responsibilities for coordination of the statewide nonpoint source water quality activities for agriculture and construction. This integrates the water quality components, geographic locations, cooperating agency activities and resources into the total program objectives.

State Revolving Fund for Agriculture

Loan funds are made available at low interest to landowners for installation of best management practices on farms through the DWWM's Revolving Loan Fund. The revolving fund program coordination office is located at the WVCA headquarters. It is responsible for development of the program, which includes implementing and evaluating the state's Revolving Loan Fund for the installation of agriculture best management practices through the local Soil Conservation Districts, WVCA, DEP, Natural Resources Conservation Service, and the Farm Service Agency.

State Nonpoint Source Silviculture Program

Managed through the Division of Forestry, the goal of this program is to maintain and strengthen the cooperative effort and involvement of state and federal agencies, environmental groups, forest industries, woodland owners, and the general public toward preventing and correcting water quality problems associated with the harvesting and processing of forest products. In addition, the program deals with the problems created by forest fires, repeat fires and enforces the use of best management practices under the West Virginia Logging Sediment Control Act.



Animal waste entering streams may contribute to a stream having fecal coliform exceedences.
Photo by Alvan Gale

Watershed Resource Center

The Nonpoint Source Resource Management Training Center is a cooperative partnership project conducted by the WVCA, the West Virginia Department of Education, DEP, and EPA. The main objective of this partnership is to combat nonpoint source pollution in West Virginia and reduce

nonpoint source impacts through public education. The nonpoint source Watershed Resource Center provides information and training on the control of nonpoint source impacts to all individuals and groups that disturb soil. Land users utilizing this facility include urban developers, loggers, farmers, watershed associations, homeowners, earth moving contractors, consulting engineers, resource extraction industry individuals, students, and teachers.

Groundwater Program

Under the Groundwater Protection Act, West Virginia Code Chapter 22, Article 12, Section 6.a.3, DEP is required to provide a biennial report to the Legislature on the status of the state's groundwater and groundwater management program, including detailed reports from each agency that have groundwater regulatory responsibility. The current biennial report to the Legislature covers the period from July 1, 2003, through June 30, 2005. This is the seventh report completed since the passage of the act in 1991. This section provides a brief overview of the report. Copies of the full report "Groundwater Programs and Activities: Biennial Report to the West Virginia 2006 Legislature" may be obtained by contacting the Groundwater Program at the Division of Water and Waste Management, 601 57th St., SE, Charleston, WV 25304. The report also may be reviewed at www.wvdep.org. http://www.wvdep.org/Docs/9776_GW_Biennial_Report_2006.pdf

The DWWM Groundwater Program is responsible for compiling and editing information submitted for the biennial report. The DEP, the West Virginia Department of Agriculture, and the West Virginia Department of Health and Human Resources all have groundwater regulatory responsibility and contributed to the report. These state boards and six standing committees currently share the responsibility of developing and implementing rules, policies, and procedures for the Ground Water Protection Act (1991). The Environmental Quality Board, the Groundwater Coordinating Committee, the Groundwater Protection Act Committee, the Groundwater Monitoring Well Drillers Advisory Board, the Well Head Protection Committee, and the Nonpoint Source Coordinating Committee are the standing committees.

The report provides a concise, yet thorough, overview of those programs that are charged with the responsibility of protecting and ensuring the continued viability of groundwater resources in West Virginia. It is also the intent of the report to express the challenges faced and the goals accomplished as we work together to protect and restore West Virginia's water resources. Many of the programs and offices in the reporting divisions express a need for an accessible central and statewide electronic data system. Currently, all groundwater and other data is collected by individual programs and offices. The DEP Information Technology Office has implemented the Environmental Resource Information System and is currently working on the implementation of the Environmental Quality Information System.

Another desire expressed is the need for a systematic approach to groundwater complaint investigation that would enhance involvement and coordination among agencies with groundwater protection responsibilities.

Programs and agencies also have identified the need for specific hydrogeologic information on the state's groundwater such as regional and local potentiometric surfaces (water levels), groundwater flow studies, and access to statewide dedicated groundwater monitoring data. The installation of a centralized database linked to GIS coverages accessible to the various agencies and the public will go a long way in resolving this problem.

Additional themes include greater outreach to the citizens of West Virginia on issues such as nonpoint source pollution, protecting individual ground and drinking water sources, and the installation of toll-free help lines to enhance statewide consistency and a unified approach to the implementation

of groundwater rules. Many of these problems are addressed by five-year cooperative studies performed jointly between the Division of Water and Waste Management and the United States Geological Survey (USGS).

The Ambient Groundwater Quality Monitoring Network was established by the DWWM in cooperation with the USGS in 1992 and is an on-going project. The network provides critical data needed for proper management of West Virginia's groundwater resources. The major objective of this USGS study is to assess the ambient groundwater quality of major systems (geologic units) within West Virginia and to characterize the individual systems. Characterization of the quality of water from the major systems helps to:

- 💧 Determine which water quality constituents are problems within the state
- 💧 Determine which systems have potential water quality problems
- 💧 Assess the severity of water quality problems in respective systems
- 💧 Prioritize these concerns

Only by documenting present ambient groundwater quality of the state's major systems can regulatory agencies assess whether water quality degradation has occurred in certain areas and whether potential degradation is a result of natural processes or those associated with human activity.

Spatial variability in water quality is determined for specific geologic units based on sampling of approximately 30 wells annually. The sampling continues over a period of approximately six years and provides a database of more than 200 wells from which comprehensive water samples are collected. Wells are selected in specific drainage basins in given years, rotating annually to new basins, thus providing sampling of groundwater in all watersheds of the state over the five year period. Then, the cycle of sampling begins again. All associated groundwater quality data for each well sampled and summaries of groundwater quality for each respective watershed are published in the USGS Water Resources Data for West Virginia annual report.

While many challenges remain, much has been done to provide protection and continued viability of West Virginia's groundwater resource. The DWWM, DOA, and DHHR continue to work closely to fulfill the mission of the DEP, "promoting a healthy environment."



DEP's Mike Puckett sampling
Clear Fork Creek in Boone County.
Photo by Doug Wood

Section 12 – Cost Benefits

The improvement in water quality due to the installation of new and upgraded municipal wastewater systems has been significant since 1972 when the Water Pollution Control Act Amendment was passed by Congress. Between 1972 and 2003, 409 wastewater systems received funding provided by DEP's Construction Assistance Program. From 1972 to 1990 the major funding provided was from the EPA Construction Grants Program totaling \$668 million in grant funds to 200 projects. From 1990 to 2005, the major funding provided was from the Clean Water State Revolving Fund low interest loan program, totaling approximately \$478 million in loan funds to 192 projects. During the specific reporting period of July 2003 to June 2005, 24 wastewater projects were funded by the State Revolving Fund program totaling approximately \$120 million in closed loan agreements.

The above funding provided to municipal systems has resulted in a number of them coming into

compliance with administrative orders and consent decrees. Some of the utilities have extended sewer service to areas where customers used malfunctioning septic tank systems or had direct discharges to streams. All of these projects have environmental benefits affecting the quality of surface and groundwater. They correct a number of health hazards, including raw or partially treated sewage being discharged to areas where children play.

Table 7 – State Agency Water Pollution Control Expenditures for Fiscal Year 2005

Department of Environmental Protection		
Office of Administration		9,380,360
Office of Information Technology		2,834,347
Division of Water & Waste Management		111,344,958
Division of Mining and Reclamation		19,760,015
Office of Oil & Gas		2,352,540
Office of Environmental Enforcement		3,626,425
Division of Land Restoration		54,761,374
Environmental Quality Board		102,449
Division of Natural Resources		
Fish Kill Reimbursement		13,683
Acid Impacted Streams		140,000
Stream Restoration		2,300
	Total	204,318,541
Note: Abandoned Mine Lands and Environmental Remediation are now combined.		
Office of Water Resources and Waste Management are now combined.		

To varying degrees, each project improves and affects the quality of surface waters and groundwater. These types of discharges deplete the oxygen level in the receiving stream and raise the bacteria levels well above standards in the water, leaving it aesthetically unpleasing. Tons of pollutants are removed daily at wastewater plants in the state and more stream miles are able to sustain a full array of aquatic life as a result of these improvements. Boaters, swimmers, and fishermen can be assured of a safer and healthier stream to enjoy. A few thousand families have centralized sewage collection and treatment for the first time. Many yards and ditch lines have been relieved of oozing seepage and raw sewage discharges. This not only results in environmental benefit, but also reduces public health risk.

In West Virginia, the majority of water pollution control activities (permitting) are administered through various state agencies. The DWWM oversees the establishment and refinement of water quality standards along with administration and enforcement of water pollution control (NPDES) permits not related to coal mining. In addition, the office administers Section 401 water quality certifications, with comments provided by the DNR's Wildlife Resources Section. The Division of Mining and Reclamation handles coal-related NPDES permits. The DWWM issues NPDES permits associated with solid waste facilities. The state Bureau for Public Health has input on municipal facilities and oversees all activities associated with home septic systems in cooperation with county sanitarians. The Environmental Quality Board acts as an appellate board on some water pollution control activities. The DWWM also contributes to two interstate commissions dealing with water pollution: ORSANCO and the Interstate Commission on the Potomac River Basin. Table 7 provides a breakdown of various state agency expenditures for water pollution control activities during fiscal year 2005.

In addition to the traditional municipal wastewater projects that have always been funded by the DEP, in fiscal year 1998 a new nonpoint source pollution control program was created under the fund called the West Virginia Agriculture Water Quality Loan Program. This program has provided more than \$3.9 million for the installation of agriculture best management practices across the state, with most of the funding going to Grant, Hampshire, Hardy, Pendleton and Mineral counties. These counties were the original five that participated in the 1998 pilot program before the program was implemented statewide. During the specific reporting period of July 2003 to June 2005, \$457,837 was provided for agriculture best management practices statewide.

Improvement in the water quality of state rivers and streams has had numerous benefits, particularly for the larger rivers such as the Ohio, Kanawha, and Monongahela. In these waterbodies, a recovery of the sport fishery has coincided with an increase in other water-based recreational activities such as boating, skiing, and swimming.

Section 13 – Public Participation and Responsiveness Summary

The draft Section 303(d) List was advertised for public comment from March 22, 2006, through May 5, 2006. Notices of the availability of the draft document were placed in newspapers statewide, including requests for public comment (see reply below). The draft document was promoted via e-mail and the Internet. At the conclusion of the public comment period, DEP considered all comments and made adjustments to the list where appropriate. DEP submitted its 2006 Section 303(d) List to EPA Region III for approval.

The DEP is pleased to provide the following responses to the comments received about the state's Draft 2006 Section 303(d) List. The DEP appreciates the efforts commenters have put forth to improve West Virginia's listing and TMDL development processes.

All comments have been compiled and responded to in this responsiveness summary. Comments and comment summaries are bold and italicized. Agency responses appear in plain text.

1. Comments were received expressing concern over the recent revisions to water quality criteria for dissolved aluminum and manganese.

The Draft West Virginia 2006 Section 303(d) List properly bases impairment decisions on currently applicable water quality criteria. The subject criteria have been approved by EPA and are therefore effective for Clean Water Act purposes. The protection of associated designated uses is inherent in EPA's approval. Detailed information regarding the criterion revisions and DEP implementation actions is provided in West Virginia Water Quality Standards section of the document.

2. Comments were received requesting the listing of the entire lengths of South Branch of the Potomac River, Lost River, and the Cacapon River pursuant to the narrative water quality criteria of 47CSR2 § 3.2.e and § 3.2.i. and the documentation of intersex in smallmouth bass.

DEP remains concerned with the findings of reproductive anomalies in the smallmouth bass of the subject waters. Over the past three years, in cooperation with several state and federal agencies, DEP has undertaken an extensive effort to assess the extent and cause, whether natural or anthropogenic, of intersex occurrence in South Branch smallmouth bass. The study includes fish community and water quality sampling of the South Branch and several other streams, three of which were selected as reference streams. Intersex has been documented in all of the studied streams, including the reference streams. Intersex has also been documented in Virginia's reference water, the Cowpasture River.

DEP agrees that impairment assessments based upon narrative criteria are valid, as evidenced by the numerous biological impairments displayed on 2002, 2004 and 2006 Section 303(d) Lists. Those listings are based upon the narrative criterion of 47CSR2 § 3.2.i, with impairments determined through the collection of benthic macroinvertebrates and comparison to the West Virginia Stream Condition Index.

The assessment of impairment pursuant to the referenced narrative criteria is possible in relation to intersex, but DEP lacks any index or methodology to gauge acceptable/unacceptable rates of intersex. The documentation of intersex in reference waters with low anthropogenic influence implies the existence of a non-problematic background condition. While extremely concerned with the apparent high rate of intersex in the subject waters, DEP

Section 303(d) Commentors	
Appalachian Center for the Economy and Environment	West Virginia Rivers Coalition
L. Dadisman	

also lacks documentation of the effects that the observed intersex is having on their smallmouth populations. As such, the agency cannot conclude the significant adverse impacts to biological integrity required for impairment under 47CSR2 § 3.2.i. Although the presence of antibiotics and other substances was suspected and confirmed through monitoring of discharges and receiving waters, the low concentrations that were measured cannot be linked to either fish kills or intersex. Identification of specific causative pollutants is not necessary for the listing of biological impairment pursuant to 47CSR2 § 3.2.i., but is important for listing pursuant to 47CSR2 § 3.2.e, where wastes must be present and contain materials in concentrations which are harmful, hazardous or toxic to man, animal or aquatic life.

The DEP's decision not to list the subject waters in no way affects its commitment to study the situation and address the cause(s) of any impairment that is identified in the future. All available resources will continue to be applied. The agencies involved are currently focusing on studies concerning:

- 💧 The relationship of intersex and fish kills
- 💧 The causative pollutants associated with the fish kills
- 💧 The reproductive ability of male bass with intersex, via assessment of sperm motility, and
- 💧 The presence, magnitude and effect of antibiotics, pesticides, endocrine disrupting compounds and other pollutants

Because this situation mandates flexibility, DEP and partner agencies may initiate other studies in the future as plausible hypotheses are presented. DEP's progress will be documented on its Web site, and in future integrated reports.



DEP's Rob Row sampling Pinch Creek
in Raleigh County.
Photo by Ashley Thomas

Section 14 – U.S. Environmental Protection Agency Approval

The DEP submitted an initial report to the EPA Region III office on August 18, 2006. This submission contained revisions based on EPA 's review of the draft 303(d) document noticed for public comment. In addition, EPA Region III provided e-mail comments on subsequent issues that arose during their review of the August 18 submittal. The DEP made necessary revisions and resubmitted the document to EPA Region III on December 22, 2006. The EPA determined the report, as revised, met the applicable requirements of Section 303(d) of the Clean Water Act. EPA approved West Virginia's 2006 Section 303(d) list on February 28, 2007.

A copy of the EPA approval letter and rationale follows, along with DEP's submission letters from August 18 and December 22, 2006. EPA's Approval Rationale documents the applicable statutory and regulatory requirements and explains how West Virginia's 2006 Integrated Water Quality Monitoring and Assessment Report complies with each requirement.

NOTE: The contents of the letters have not been altered in any way, but have been reformatted to fit this document. Actual signed copies of the letters are available upon request.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION III
1650 Arch Street
Philadelphia, Pennsylvania 19103-2029
2/28/07

Ms. Lisa McClung, Director
Division of Water and Waste Management
West Virginia Department of Environmental Protection
601 57th Street SE
Charleston, WV 25304-2345

Dear Ms. McClung:

Thank you for the West Virginia Department of Environmental Protection's (WVDEP) final submission on August 24, 2006, of its identification of waters under Section 303(d) of the Clean Water Act ("2006 Section 303(d) List").

The U.S. Environmental Protection Agency Region III (EPA) has reviewed the submission and supporting documentation and, pursuant to Section 303(d) of the Act, 33 U.S.C. §1313(d), hereby approves West Virginia's 2006 Section 303(d) List of water quality limited segments still requiring a Total Maximum Daily Load (TMDL). The enclosed narrative provides an explanation of the basis for EPA's approval.

Thank you again for this submission. If you or your staff has any questions, please feel free to contact Mr. Larry Merrill at (215) 814-5452 or Ms. Jennifer Sincock at (215) 814-5766 for assistance.

Sincerely,

Signed

Jon M. Capacasa, Director
Water Protection Division

Enclosure

cc: Patrick Campbell, WVDEP DWWM
David Montali, WVDEP DWWM

APPROVAL RATIONALE

Introduction

EPA has conducted a complete review of West Virginia's 2006 Section 303(d) List and supporting documentation and information. Based on this review, EPA has determined that West Virginia's list of water quality limited segments ("WQLSs") still requiring Total Maximum Daily Loads ("TMDLs") meets the requirements of Section 303(d) of the Clean Water Act ("CWA" or "the Act") and EPA's implementing regulations. Therefore, by this order, EPA hereby approves West Virginia's 2006 Section 303(d) list. The statutory and regulatory requirements, and EPA's review of West Virginia's compliance with each requirement, are described in detail below.

Statutory and Regulatory Background

Identification of WQLSs for Inclusion on Section 303(d) List

Section 303(d)(1) of the Act directs the states to identify those waters within their jurisdiction for which effluent limitations required by Section 301(b)(1)(A) and (B) are not stringent enough to implement any applicable water quality standard, and to establish a priority ranking for such waters, taking into account the severity of the pollution and the uses to be made of such waters. The Section 303(d) listing requirement applies to waters impaired by point and/or nonpoint sources, pursuant to EPA's long-standing interpretation of Section 303(d).

EPA regulations provide that states do not need to list waters where the following controls are adequate to implement applicable standards: (1) technology-based effluent limitations required by the Act; (2) more stringent effluent limitations required by state or local authority; and (3) other pollution control requirements required by state, local, or Federal authority. See 40 CFR 130.7(b)(1).

West Virginia developed an Integrated Report which identifies the assessment status of all of West Virginia's waters combining EPA's Section 303(d) and 305(b) requirements. The Integrated Report compartmentalized the waters of West Virginia into five distinct categories. All stream segments or assessment units fall into one of the following categories:

- Category 1 - Fully supporting all designated uses.
- Category 2 - Fully supporting some designated uses, but insufficient or no information exists to assess the other designated uses.
- Category 3 - Insufficient or no information exists to determine if any of the uses are being met.
- Category 4 - Waters that are impaired or threatened but do not need a (TMDL).
 - o Category 4a - waters that already have an approved TMDL but are still not meeting standards.
 - o Category 4b - waters that have other control mechanisms in place which are reasonably expected to return the water to meeting designated uses.
 - o Category 4c - waters that have been determined to be impaired by pollution or other natural factors.
- Category 5 - Waters that have been assessed as impaired and are expected to need a TMDL.

West Virginia's Section 303(d) list of impaired waters is in Category 5 of West Virginia's 2006 Integrated Report. West Virginia also provided

the 2006 Section 303(d) list in the same format as the 2004 Section 303(d) list consisting of the 303(d) list of impaired waters and six supplemental tables that track previously listed waters. The format of the 2006 Section 303(d) list follows the Watershed Management Framework with five hydrologic groups (A-E). Within each hydrologic group, watersheds are arranged alphabetically and impaired waterbodies are listed alphabetically within their appropriate watershed. The information that follows each impaired stream includes the stream code, the affected water quality criteria, the source of the impairment (where known), the impaired size (or, by default, the entire length), the reach description, the projected timing of TMDL development and whether or not the stream was on the 2004 list.

Six supplemental tables were provided to track previously listed waters that are not present on the 2006 Section 303(d) list. “Supplemental Table A - Previously Listed Waters - No TMDL Developed” is a list of previously listed waters which have been reevaluated and determined not to be impaired and, therefore, not in need of a TMDL. Causes for revision of the impairment status include recent water quality data demonstrating improved water quality condition, revision to the water quality criteria associated with the previous listing, or a modification of the listing methodology. Decisions regarding the need for TMDL development were made in accordance with the requirements of 40 CFR 130.7(b)(1) and the state’s listing criteria. In the Integrated Report, these waters have been moved from Category 5 to Category 1, 2, 3, or 4, as appropriate.

“Supplemental Table B - Waters with TMDLs Developed” is a list of previously listed impaired waters for which a TMDL has been developed and approved by EPA. Waters included in this supplement have had a TMDL developed, but water quality improvements are not yet complete and/or documented. Since the Section 303(d) list is a list of water quality limited segments still requiring TMDLs (see 40 C.F.R. 130.7(b)), EPA’s Integrated Water Quality Monitoring and Assessment Report Guidance recommends classification of such waters in a category separate from the 303(d) list. WVDEP developed this supplemental table to track previously listed impaired waters for which TMDLs have been developed. In the Integrated Report, these waters have been listed in Category 4a which includes waters that already have an approved TMDL but are not meeting standards. Supplemental Table B has a sublist called “Supplemental Table B1 – 2005 TMDLs” which is a list of previously listed waters for which a TMDL was developed in 2005, revised due to aluminum and manganese criteria changes, and approved by EPA on September 26, 2006.

“Supplemental Table C - Water Quality Improvements” is a list of previously listed impaired waters with improved water quality due to TMDL implementation or pre-TMDL stream restoration work that resulted in delisting. These waters are included in Category 1 (meeting all uses), provided that impairments for other uses or pollutants are not present.

“Supplemental Table D - Impaired Waters - No TMDL Development Needed” is a list of impaired waters for which either other control mechanisms are in place to control pollutants or the water is impaired by pollution (i.e., flow alterations caused by mining). These are the same waters contained in Category 4b and 4c, respectively.

“Supplemental Table E - Total Aluminum TMDLs Developed” is a list of previously listed impaired waters for which a total aluminum TMDL has been developed and established by EPA. Due to the criteria change from total aluminum to dissolved aluminum, West Virginia placed total aluminum TMDLs onto a separate table from Supplemental Table B. All waters contained on Supplemental Tables B and E are included on Category 4a of the Integrated Report.

“Supplemental Table F – New Listings for 2006” is a list of impaired waters that were not previously included on the 2004 Section 303(d) list.

Consideration of Existing and Readily Available Water Quality-Related Data

In developing Section 303(d) lists, states are required to assemble and evaluate all existing and readily available water quality-related data and information, including, at a minimum, consideration of existing and readily available data and information about the following categories of waters: (1) waters identified as partially meeting or not meeting designated uses, or as threatened, in the state's most recent Section 305(b) report; (2) waters for which dilution calculations or predictive modeling indicate nonattainment of applicable standards; (3) waters for which water quality problems have been reported by governmental agencies, members of the public, or academic institutions; and (4) waters identified as impaired or threatened in any Section 319 nonpoint assessment submitted to EPA. See 40 CFR 130.7(b)(5). In addition to these minimum categories, states are required to consider any other data and information that is existing and readily available. EPA's 1991 Guidance for Water Quality-Based Decisions describes categories of water quality-related data and information that may be existing and readily available. See Guidance for Water Quality-Based Decisions: The TMDL Process, EPA Office of Water, Appendix C (1991) (EPA's 1991 Guidance). While states are required to evaluate all existing and readily available water quality-related data and information, states may decide to rely or not rely on particular data or information in determining whether to list particular waters.

In addition to requiring states to assemble and evaluate all existing and readily available water quality-related data and information, EPA regulations at 40 CFR 130.7(b)(6) require states to include as part of their submissions to EPA, documentation to support decisions to rely or not rely on particular data and information and decisions to list or not list waters. Such documentation needs to include, at a minimum, the following information: (1) a description of the methodology used to develop the list; (2) a description of the data and information used to identify waters; and (3) any other reasonable information requested by the Region. West Virginia's 2006 Integrated Water Quality Monitoring and Assessment Report identified the state's assessment methodology and its use of data.

Priority Ranking

EPA regulations also codify and interpret the requirement in Section 303(d)(1)(A) of the Act that states establish a priority ranking for listed waters. The regulations at 40 CFR 130.7(b)(4) require states to prioritize waters on their Section 303(d) lists for TMDL development, and also to identify those WQLSs targeted for TMDL development in the next two years. In prioritizing and targeting waters, states must, at a minimum, take into account the severity of the pollution and the uses to be made of such waters. See Section 303(d)(1)(A). As long as these factors are taken into account, the Act provides that states establish priorities. States may consider other factors relevant to prioritizing waters for TMDL development, including immediate programmatic needs, vulnerability of particular waters as aquatic habitats, recreational, economic and aesthetic importance of particular waters, degree of public interest and support, and state or national policies and priorities. See 57 Fed. Reg. 33040, 33045 (July 24, 1992) and EPA's 1991 Guidance.

Analysis of West Virginia's Submission

Identification of Waters and Consideration of Existing and Readily Available Water Quality-Related Data and Information

EPA has reviewed West Virginia's submission, and has concluded that West Virginia developed its 2006 Section 303(d) list in compliance

with Section 303(d) of the Act and 40 CFR 130.7. EPA's review is based on its analysis of whether West Virginia reasonably considered existing and readily available water quality-related data and information and reasonably identified waters required to be listed.

A. Description of the methodology used to develop this list, Section 130.7(b)(6)(i)

West Virginia's 2006 Section 303(d) list was developed using all existing and readily available data. In West Virginia, the WVDEP's Division of Water and Waste Management (DWWM) is responsible for the collection and compilation of this information. In preparation for the 303(d) listing process, WVDEP sought water quality information from various state and Federal agencies, colleges and universities, and private individuals, businesses and organizations. News releases and public notices were published in state newspapers and letters were sent to state and Federal agencies known by WVDEP to be generators of water quality data.

West Virginia's 303(d) list is based largely on the data collection and assessment that underlies the 305(b) report of the state's water quality. WVDEP generated the majority of available surface water quality data through the Watershed Assessment Program (WAP) performed within the Watershed Management Framework cycle. Biological data sources included WV Stream Condition Index (WVSCI) scores collected during WVDEP's WAP. Additional data was obtained from state and Federal agencies, local environmental agencies, colleges, and universities, citizen monitoring groups, and private firms. A complete list of data providers is shown on Table 3 of the Integrated Report. West Virginia considered all data and information regarding 130.7(b)(5) categories, which is the minimum required by Federal regulations.

Data evaluation by the agency began in the fall of 2005. In-house personnel possessing varying areas of expertise compared instream data to applicable water quality criteria and determined the impairment status of state waters. The basis for 303(d) listing decisions relates to the West Virginia water quality standards. In general terms, if water quality standards are exceeded, a waterbody is considered impaired, placed on the 303(d) list, and scheduled for TMDL development. More specifically, a waterbody is considered impaired when it does not attain the designated use assigned to it by applicable water quality standards. Use attainment is determined by comparison of the instream values of various water quality parameters to the numeric or narrative criteria contained in the standards. The West Virginia water quality standards are codified at 46 CSR 1 - *Legislative Rule of the Environmental Quality Board - Requirements Governing Water Quality Standards*, and at 60 CSR 5 - *Legislative Rule of the Department of Environmental Protection - Antidegradation Implementation Procedures*. The 46 CSR 1 version used to develop the 2006 Section 303(d) list went into effect January 9, 2006. All water quality standards contained in this version have received the EPA's approval and are currently considered effective for CWA purposes.

In addition, West Virginia provided its rationale for not relying on particular existing and readily available water quality-related data and information as a basis for listing waters. West Virginia DWWM staff evaluated data from internal and external sources to ensure that collection and analytical methods, quality assurance/quality control and method detection levels were consistent with approved procedures. All qualified data from available sources were used in the decision making process. For the stream quality assessment, West Virginia generally used water quality data generated between July 2000 and June 2005. EPA finds West Virginia's screening protocol and criteria described in its 2006 Section 303(d) listing rationale narrative to be a reasonable rationale in determining the usage of outside data, as waters listed as "impaired" should be based on scientifically valid data.

West Virginia released the Draft 2006 Section 303(d) List for public comment on March 22, 2006 through May 5, 2006. Notices of the availability of the Draft 2006 Section 303(d) List were placed in newspapers statewide and promoted via e-mail and the internet. These notices included information on where to obtain the documents and where to send comments. On May 1, 2006, WVDEP provided EPA with its 303(d) Decision Database which records listing decisions for all waterbodies. After review of the 303(d) Decision Database, EPA provided comments to WVDEP on June 16, 2006, requesting (1) clarification of individual waterbody listings; (2) supporting documentation used to place waters onto Category 4b shown in “Supplemental Table D – Impaired Waters – No TMDL Development Needed”; (3) a list of stream name and/or stream code changes from the 2004 to 2006 lists; (4) copies of comment letters received during the public comment period; and (5) supporting data for Ohio River listings. West Virginia received written comments from three entities including EPA. WVDEP evaluated all comments received and prepared a responsiveness summary detailing WVDEP’s actions regarding these comments. EPA concludes that WVDEP properly considered and responded to relevant public comments.

EPA received WVDEP’s final 2006 Integrated Water Quality Monitoring and Assessment Report package combining the Section 303(d) list and Section 305(b) report on August 24, 2006. This package included: (1) a listing rationale narrative describing: (a) an overview of the process for development of the 2006 Integrated Report; (b) the assessment methodologies for the following kinds of data: numerical water quality criteria data including fecal coliform and pH, biological impairment, and fish consumption advisories; and (c) an explanation of the data evaluated in the preparation of the list; (2) a summary of comments and responses that could affect the listing of waters; (3) the 303(d) list with six supplemental tables tracking previously listed waters; (4) spreadsheets containing information on stream segments in each of the five assessment categories; (5) WVDEP’s 303(d) Decision Database which records final listing decisions; and (6) all comment letters received by WVDEP during the public comment period.

West Virginia received comments questioning listing decisions for particular waterbodies. Where commentors advocated for or against particular impairment listings, West Virginia responded to the comments by providing relevant waterbody-specific analyses used in the listing decision, and where appropriate, making changes to the Section 303(d) list.

In identifying water quality limited segments for inclusion on the Section 303(d) list, states must evaluate attainment with water quality standards established under Section 303(c) of the Act, including numeric criteria, narrative criteria, waterbody uses, and antidegradation requirements, based on consideration of all existing and readily available information, including but not limited to assessment information such as chemistry, toxicity, or ecological assessment. 40 C.F.R. 130.7(b)(3) and (b)(5). Assessment information is particularly important for determining whether a waterbody is achieving its designated use (such as supporting aquatic life) or narrative criteria.

With respect to the various types of assessment information, EPA recommends that the states apply a policy of independent application to determine whether a waterbody is achieving applicable water quality standards. This policy addresses three types of assessment information: chemistry, toxicity testing results, and ecological assessment. Each of these three methods can provide a valid assessment of non-attainment of a designated use and each independently can provide conclusive evidence of nonattainment without confirmation with a second method. EPA, Final Policy on Biological Assessments and Criteria (June 19, 1991); see also 48 Fed. Reg. 51,400, 51,402 (Nov. 8, 1983) (noting that biological monitoring is one method of testing compliance with narrative criteria); cf. 33 U.S.C. 1313(c)(2)(B) (nothing in Section 303 should be construed “to limit or delay the use of effluent limitations or other permit conditions based on or involving biological monitoring or assessment methods

....”). Biological assessments can provide compelling evidence of water quality impairment because they directly measure the aquatic community’s response to pollutants or stressors, and they can help provide an ecologically based assessment of the compliance status of a waterbody. Memorandum from Geoffrey H. Grubbs, Director, Assessment and Watershed Protection Division, EPA, to Water Management Division Directors, Regional TMDL Coordinators, Regions I-X re Guidance for 1994 Section 303(d) Lists (Nov. 26, 1993).

Following EPA’s review of WVDEP’s final 2006 Section 303(d) list, EPA identified some additional concerns for which clarification and/or additional listings were provided by WVDEP in subsequent correspondence. West Virginia provided additional information to address EPA’s comments and certain discrepancies identified by WVDEP. An electronic copy of West Virginia’s revised 2006 Integrated Report combining the Section 303(d) list and Section 305(b) report with associated databases were received by mail on December 22, 2006.

EPA has reviewed West Virginia’s description of the data and information it considered, its methodology for identifying waters, and additional information provided in response to comments raised by EPA. EPA concludes that the state properly assembled and evaluated all existing and readily available data and information, including data and information relating to the categories of waters specified in 40 CFR 130.7(b)(5).

B. Description of the data and information used to identify waters, including a description of the data and information used by West Virginia as required by Section 130.7(b)(5).

1. Section 130.7(b)(5)(i), Waters identified by West Virginia in its most recent Section 305(b) report as “partially meeting” or not meeting designated uses or as threatened.”

West Virginia’s 2006 Section 303(d) list was combined with the 305(b) report to form what is now referred to as the Integrated Report. Therefore, the 305(b) report is no longer a stand alone document and the data that would have gone into development of such a “stand alone” report was used in the production of the Integrated Report. In West Virginia, the biennial water quality assessment is conducted by the WVDEP DWWM. The Integrated Report incorporates the data and evaluations obtained from state and Federal agencies, local environmental agencies, colleges, and universities, citizen monitoring groups, and private firms. A complete list of data providers is shown on Table 3 of the Integrated Report. West Virginia relied heavily on ORSANCO’s 2006 305(b) report and use support information when making listing decisions for the Ohio River and the tributaries for which data was available. West Virginia’s Integrated Report compartmentalized the waters of West Virginia into five distinct categories which were described above. Waters are defined as being either supporting of all uses, supporting of all uses for which assessment occurred, lacking data for a determination, impaired but not requiring a TMDL, or impaired and requiring a TMDL.

Waters in Category 5, impaired and requiring a TMDL, are those placed on West Virginia’s 2006 Section 303(d) list. These waters are found as not attaining their designated uses based on monitoring data. The methodology used to determine non-attainment of designated uses is described in West Virginia’s 2006 Integrated Water Quality Monitoring and Assessment Report. West Virginia also provided the Section 303(d) list with five supplemental tables that track previously listed waters.

2. Section 130.7(b)(5)(ii), Waters for which dilution calculations or predictive models indicate nonattainment of applicable water quality standards.

West Virginia relied primarily on water quality monitoring data described above in identifying impaired segments. However, certain waters are included on the 2006 Section 303(d) list based upon modeling results associated with TMDL development. TMDL modeling of the baseline condition for all such waters indicates that pollutant reductions from existing sources are needed to ensure compliance with water quality criteria. In the majority of cases, water quality monitoring and predictive modeling reach consistent conclusions regarding the impairment status of waterbodies. In other cases, monitoring data may not be available, may not have been obtained at critical conditions or locations, or may not reflect the conditions that would exist if point sources were discharging at their permit limits. Where predictive modeling indicated that discharges in accordance with existing permit limits would cause violation of water quality criteria, the designated use of the water quality may be classified as “threatened,” thereby subjecting it to 303(d) listing and TMDL development pursuant to Section 130.7(b)(5).

3. Section 130.7(b)(5)(iii), Waters for which water quality problems have been reported by local, state, or Federal agencies; members of the public; or academic institutions.

West Virginia solicited data from entities outside of the WVDEP. Several waters were placed on West Virginia’s 2006 Section 303(d) list as a result of data collected by agencies other than WVDEP as identified in Table 2 of the Integrated Report.

- Federal agencies (i.e., U.S. Geological Survey, National Park Service, and EPA)
- State agencies (i.e., WV Department of Natural Resources, WV Department of Agriculture, and ORSANCO)
- Members of the public (i.e., Friends of Decker Creek, Friends of Cacapon River)
- Private companies (i.e., Koppers, Inc., Allegheny Energy Supply)
- Academic institutions (i.e., WV Wesleyan College)

West Virginia encouraged comment on its draft lists, and the submission of water quality data, each time the list was public noticed. West Virginia received additional data and information as comments to their Public Notice Draft 2006 Section 303(d) list. In their listing rationale, West Virginia summarized the comments and any changes that were made to the proposed list based on additional data and information.

4. Section 130.7(b)(5)(iv), Waters identified by West Virginia as impaired or threatened in a nonpoint assessment submitted to EPA under section 319 of the CWA or in any updates of the assessment.

West Virginia properly listed waters with nonpoint sources causing or expected to cause impairment, consistent with Section 303(d) and EPA guidance. Section 303(d) lists are to include all WQLSs still needing TMDLs, regardless of whether the source of impairment is a point and/or nonpoint source. EPA’s long-standing interpretation is that Section 303(d) applies to waters impacted by point and/or nonpoint sources. In *Pronsolino v. Marcus*, the District Court for the Northern District of California held that Section 303(d) of the CWA authorizes EPA to identify and establish TMDLs for waters impaired by nonpoint sources. *Pronsolino et al. V. Marcus et al.*, 91 F.Supp.2d 1337, 1347 (N.D.Ca. 2000), *aff’d*, 291 F.3d 1123 (9th Cir. 2002), *petition for cert. filed*, 71 U.S.L.W. 3531 (Feb. 6, 2003) (No. 02-1186). See also EPA’s 1991 Guidance and National Clarifying Guidance for 1998 Section 303(d) Lists, Aug. 27, 1997.

5. Other data and information used to identify waters (besides items 1-4 discussed above).

EPA has reviewed West Virginia's description of the data, information, and methodology used by West Virginia in the development of their 2006 Section 303(d) list. This includes supplemental data and information that was submitted in response to EPA's comments. It is not clear if WVDEP considered other data in addition to the categories of existing and readily available data and information listed in the EPA regulations and set out above. As mentioned previously, several Federal, state, and local agencies, citizen groups, private companies, and academic institutions provided data to WVDEP for preparation of West Virginia's 2004 Section 303(d) list. Table 3 of the Integrated Report lists 30 sources of data utilized during the listing process. After this review, EPA has concluded that West Virginia has properly assembled and evaluated all existing and readily available data and information, including data and information relating to the categories of waters specified in 40 CFR 130.7(b)(5).

C. A rationale for any decision to not use any existing and readily available data and information for any one of the categories of waters as described in Sections 130.7(b)(5) and 130.7(b)(6)(iii).

West Virginia provided its rationale for not relying on particular existing and readily available water quality-related data and information as a basis for listing waters. West Virginia DWWM staff evaluated data from internal and external sources to ensure that collection and analytical methods, quality assurance/quality control and method detection levels were consistent with approved procedures. All qualified data from available sources were used in the decision making process. EPA finds West Virginia's screening protocol and criteria described in its 2006 Integrated Report rationale narrative to be a reasonable rationale in determining the usage of outside data, as waters listed as "impaired" should be based on scientifically valid data.

D. Rationale for delisting of waterbodies from the previous 303(d) list.

West Virginia has indicated, through "Supplemental Table A", those waterbodies that were included in previous 303(d) lists but are now delisted from the 2006 Section 303(d) list. West Virginia has demonstrated, to EPA's satisfaction, its rationale for these delistings. According to the regulations at 40 CFR 130.7(b), a water may be delisted for the following reasons: more recent or accurate data; more sophisticated water quality modeling; flaws in the original analysis that led to the water being listed in the categories in section 130.7(b)(5); or changes in conditions (i.e., new control equipment, elimination of discharges).

WVDEP delisted waterbodies due to new water quality analyses demonstrating compliance with water quality standards, revisions to water quality criteria associated with the previous listing, or a modification of the listing methodology. One of the conditions outlined includes more recent or accurate data showing compliance with applicable water quality standards. For the 2006 Section 303(d) list, West Virginia submitted various sets of data demonstrating that certain waters either recovered to the point that the applicable water quality standards have been attained, or were listed in error and are currently not impaired. For other delistings, reassessments revealed that some waters were still impaired, but that the pollutants or impairment lengths had changed. These delisted water-pollutant combinations were reassessed using methodologies at least as stringent as the methodology that originally placed the water on the list.

For each segment proposed for removal from the 2006 Section 303(d) list, West Virginia provided EPA with sufficient documentation as justification. Such data included benthic macroinvertebrate data, chemical data, compliance data, and other forms of documentation. EPA reviewed

this data and approves the delisting determinations listed in “Supplemental Table A”. Decisions regarding the need for TMDL development were made in accordance with the requirements of 40 CFR 130.7(b)(1) and the state’s listing criteria.

WVDEP has also identified on “Supplemental Table B” those waterbodies where a TMDL has been completed. Consequently, these waterbodies are not included on the 303(d) list.

E. Any other reasonable information requested by the Regional Administrator described in Section 130.7(b)(6)(iv).

During the review of West Virginia’s 2006 Section 303(d) list, EPA Region III staff requested additional information from West Virginia.

- **Justification for differences between EPA recommendations and WVDEP’s final 2006 Section 303(d) list.** In comment letters dated June 16, 2006 and various electronic comments sent from September 2006 to October 2006, EPA requested clarification and amendments to West Virginia’s 2006 Section 303(d) list and WVDEP’s 303(d) decision database. West Virginia evaluated EPA’s comments and provided explanations and specific data for specific streams where the state determined the recent data showed the streams were meeting water quality standards. Where appropriate, the list was revised to resolve the discrepancy. WVDEP provided data and other documentation as necessary to support its listing decisions and database.

- **Justification for delisting segments.** West Virginia delisted a number of segments listed on the 2006 list which were provided on “Supplemental Table A - Previously Listed Waters - No TMDL Developed”. EPA reviewed the monitoring data to support delisting and requested that some segments remain on the list. West Virginia either placed the waters back on the 2006 Section 303(d) list, or provided a reasonable rationale for removing the waters. Where waters were delisted, the delisting was consistent with the CWA and implementing regulations.

- **Clarification of changes to previously listed waters.** EPA requested that West Virginia clarify changes in segment length and stream codes to previously listed waters. This information was provided to EPA to justify changes made from previous listing cycles.

EPA concludes that West Virginia has addressed all additional information EPA Region III requested of the state during the review of the 2006 Section 303(d) list.

F. Identification of the pollutants causing or expected to cause a violation of the applicable water quality standards described in Section 130.7(b)(4).

West Virginia identified the pollutants that were causing or expected to cause a violation of the applicable water quality standards for every listed segment where the identity of the pollutant was known. West Virginia included those pollutants for which a numeric water quality criterion was violated, such as fecal coliform. For violations of a narrative criterion, pollutants were rarely identified. Therefore, many waters were listed for violations of the narrative biological standard without identifying a cause since no cause was determined at the time of listing. West Virginia anticipates that the cause of biological impairments will be determined during TMDL development.

G. Priority Ranking and Targeting

Within the 2006 Section 303(d) list, West Virginia has provided TMDL development dates and a detailed discussion of both the priority ranking and schedule development in its 2006 Section 303(d) list rationale. This discussion includes a description of West Virginia's five-year Watershed Management Framework cycle for its five hydrologic groups (A-E). EPA reviewed West Virginia's priority ranking of listed waters for TMDL development, and concludes that West Virginia properly took into account the severity of pollution and the uses to be made of such waters. Scheduling, however, takes into account additional relevant factors, such as programmatic considerations (i.e., efficient allocation of resources, Watershed Management Framework cycles, and coordination with other programs or states) and technical considerations (i.e., data availability, problem complexity, availability of technical tools). Another factor West Virginia considered in prioritizing its listed waters is the schedule in the consent decree resolving *Ohio Valley Environmental Coalition, Inc., et al. v. Carol Browner, et al.*, No. 2:95-0529 (S.D.W.VA.) entered on July 9, 1997, which establishes dates for EPA to ensure TMDL development for all waters and pollutants listed on West Virginia's 1996 Section 303(d) list.

In addition, EPA reviewed West Virginia's identification of WQLSs targeted for TMDL development in the next three years, and concludes that the targeted waters are appropriate for TMDL development in this timeframe. High priority has been placed on these stream segments. For other impairments where the timing of TMDL development is less certain, multiple year entries were indicated that represent the opportunity for TMDL development per the Watershed Management Framework cycle.

Although West Virginia's projected TMDL development dates do not strictly follow EPA's pace guidance of completion with eight to thirteen years since initial listing, West Virginia's TMDL development plans appear consistent with the guidance in that West Virginia plans to develop TMDLs for approximately 100 impaired waters per year and attempts to simultaneously develop TMDLs for all known impairments. The 2006 Section 303(d) list identifies eleven lakes and 1,131 streams. Given West Virginia's TMDL development rate of approximately 100 waters per year, it is likely that West Virginia will comply with EPA's pace guidance.

H. Coordination with the U.S. Fish and Wildlife Service

During West Virginia's public comment period, EPA sent a copy of West Virginia's Draft 2006 Section 303(d) list in electronic correspondence on October 30, 2006, to the West Virginia Field Office of the U.S. Fish and Wildlife Service (FWS). EPA requested comments from FWS regarding the draft list. No comments from FWS were received.

August 18, 2006

Larry Merrill
Office of Watersheds
US EPA Region 3 (3WP30)
1650 Arch Street
Philadelphia, PA 19103-2029

Dear Mr. Merrill:

Pursuant to requirements contained in the federal Clean Water Act, 40CFR130 and in current federal guidelines, I am hereby transmitting to your office West Virginia's 2006 Integrated Water Quality Monitoring and Assessment Report. The report represents a lengthy review of all existing and readily available water quality information on West Virginia's waters, contains information on our assessment methodologies and includes the West Virginia 2006 Section 303(d) List. The Section 303(d) List component is being officially submitted for your approval.

In support of the submission, the following information is provided on the included CD:

- An electronic copy of the document
- Spreadsheets containing information on stream segments in each of the five assessment categories
- West Virginia's 303(d) decision database with supporting electronic data files
- A spreadsheet identifying and rationalizing the changes, including stream code updates, made to the Section 303(d) List and supplements in the time since the documents were released for public comment.

The Integrated Report contains a Responsiveness Summary addressing public comments received in response to the Draft Section 303(d) List. Hard copies of public comments received are also enclosed.

Consideration was given to the comments provided by EPA Region III. DEP reactions to the more substantive issues are provided below:

Classification of the ammonia impairments of Stony River (WVPNB-17) and Fourmile Creek (WVPNB-17-C) under Category 4B

The subject impairments result from the use of anhydrous ammonia for the treatment of acidity and metals in mining related discharges subject to a WV/NPDES Permit. Controls will be applied through permitting and/or enforcement actions and both waters are anticipated to be compliant with ammonia water quality criteria prior to the development of the 2008 Section 303(d) list.

Classification of the biological and temperature impairments of Stony River (WVPNB-17) under Category 4B

The public notice draft inadvertently omitted Category 4B temperature and biological impairments for the segment of Stony River between Mount Storm Lake and Fourmile Creek. The discharge from Mount Storm Lake is believed responsible for elevated stream temperatures and associated changes in the biological communities in the segment of Stony River below the lake. Currently, Virginia Electric and Power Company (a unit of Dominion Resources, Inc.) operates the Mt. Storm Power Station using Mt. Storm Lake, as a source of cooling water for the coal-fired power generation facility. The current NPDES permit expires in November 2006 and upon reissuance, will require operational modifications as necessary to reduce or eliminate thermal impacts to this segment of Stony River.

Identification of Previously Developed Total Aluminum TMDLs

Supplement E has been added to display streams for which obsolete total aluminum TMDLs have been developed.

Ohio River Mainstem Data

The Ohio River impairment decisions are based primarily on data obtained from the Ohio River Sanitation Commission (ORSANCO). ORSANCO maintains an extensive water quality sampling program for the Ohio River and works in conjunction with other states to standardize its pollutant sampling list. DEP assessments were based upon data included in ORSANCO's 2006 305(b) report.

Impairment Naming Convention for Aluminum Listings

As requested, DEP changed the name of aluminum listings in the List, Supplements and Decision Database from "aluminum" to "aluminum (d)" to clarify that identified impairments are based upon dissolved aluminum water quality criteria.

Table of Data Providers

As requested, the "Data Providers" table has been updated to reflect entities who submitted data for the 2004 Integrated Report, if their data was considered in the preparation of 2006 report.

Additional Changes made by DEP

In addition to the changes specifically noted above, DEP identified several errors in the draft Section 303(d) List, which were corrected to accurately reflect the current status of WV waters. Documentation of DEP-initiated changes is included in the spreadsheet denoting changes made to the Public Notice draft document.

The document represents the best efforts of our staff and I am confident that you will find the report to be both informative and compliant with applicable guidance. The report as submitted to your office is available on our website, although we do not intend to print and distribute the

document until we obtain your approval of the Section 303(d) portion. As such, I look forward to your timely review and stand ready to explain our actions in any detail necessary for your approval. If you or your staff have any questions or would like to discuss any issue in greater detail please contact Dave Montali or me at (304) 926-0499 (exts.1063, 1046).

Sincerely,

signed
Patrick V. Campbell
Assistant Director

Attachments

cc: Lisa McClung, Director, DEP-DWWM
Jennifer Sincock, US EPA
Mark Barath, US EPA
James Laine, DEP-DWWM

December 22, 2006

Larry Merrill
Office of Watersheds
US EPA Region 3 (3WP30)
1650 Arch Street
Philadelphia, PA 19103-2029

Dear Mr. Merrill:

Following our telephone conversation of December 14, 2006 and a review of comments provided by your staff, the WVDEP made various revisions in anticipation of EPA approval of the Section 303(d) components of the 2006 Water Quality Monitoring and Assessment Report. WVDEP also modified portions of the report in response to questions and comments provided relative to the Section 305(b) components. For any unresolved 305(b) issues, WV DEP would anticipate continued dialogue between our agencies. Resultant modifications to our report/process will be included in the 2008 report.

Specific to the 2006 Integrated Report, the WVDEP made the following final revisions:

1. Ohio River mainstem (WVO) - resolved issues with bacterial listings, categories and use supports for the Middle Ohio North and Middle Ohio South segments.
2. Toppers Creek (WVKP-13) - removed dissolved aluminum listing from Supplement A and added segment from Legg Fork to Headwaters to Supplement B1 to be consistent with the Toppers Creek TMDL.
3. Little White Oak Branch (WVKC-10-T-22.5) - removed pH impairment from Supplement B1 and included it on Supplement A after confirming pH no longer warrants listing consistent with the Coal River Watershed TMDL.
4. Added Cacapon Institute to the list of data submitters (Table 3).
5. Corrected the errors in the "Biological Impairment" narrative on Page 33 to be consistent with Figure 9.
6. Corrected the finalization year for the Cheat TMDL to 2009 on page 36.
7. Revised Page 50 to provide a list of entities providing comment on the Draft 2006 Section 303(d) List.

8. Corrected the list reference date in last sentence of the last paragraph (2002 changed to 2004) of the List Key description page.
9. Tables 5 & 6 and the Section 6 narrative have been updated to reflect all revisions.
10. Added narratives describing Supplemental Tables A – F.

Enclosed with this correspondence is a CD containing the revised West Virginia 2006 Integrated Water Quality Monitoring and Assessment Report and an updated version of the 2006 decision database. In addition, the CD contains additional electronic files with revised versions of stream impairment/use attainment determinations and categorical listings. A spreadsheet with an updated version of the 2006 Section 303(d) list and supplemental tables is also included. The spreadsheet contains a tab identifying changes made since the release of the draft document. Further, we anticipate delivering all information necessary to populate EPA's ADB by January 5th, 2007.

WVDEP remains willing to cooperate in any manner necessary to support EPA's approval of the Section 303(d) List. If you or your staff have any questions or would like to discuss any issue in greater detail, please contact Dave Montali or me at (304) 926-0499.

Sincerely,

signed
Patrick V. Campbell
Assistant Director

Attachments

cc: Lisa McClung, Director, DEP-DWWM
Jennifer Sincock, US EPA
Mark Barath, US EPA

2006 West Virginia List and Supplements A – F Complete with List Key



Elk River merging with
Kanawha River in Kanawha County:
Photo by Steve Young

The format of the 2006 Integrated Report is organized around the Watershed Management Framework. The five hydrologic groups (A-E) of the framework provide the skeleton. Within each hydrologic group, watersheds are arranged alphabetically and impaired waters are sorted by stream code in their appropriate watershed. The information that follows each impaired stream includes the stream code, the affected water quality criteria, the affected designated use, the source of the impairment (where known), the impaired length (or, by default, the entire length), the planned or last possible timing of TMDL development and whether or not the stream was on the 2004 list. The source of impairment is often unknown or uncertain at the time of listing and is so indicated on the list. Many waters are listed, by default, for their entire length because the exact location of impairment is unknown. The contributing sources of pollution and resultant impaired segments of the waterbody will be determined by the TMDL.

Supplemental Descriptions

Six supplemental tables are provided that allow tracking of previously listed waters that are no longer on the 303(d) list. Specifically, the supplemental tables are entitled: “Previously Listed Waters – No TMDL Developed”; “Waters with TMDL Developed”; “Water Quality Improvements”; “2005 TMDLs”; “Impaired Waters - No TMDL Needed”; and “New Listings.” Each of the supplemental tables are described in more detail below:

Supplemental Table A - Previously Listed Waters – No TMDL Developed

Previously listed waters from the 2004 list that are not on the 2006 list are included in this supplemental table if a TMDL has not been developed, and these waters have been re-evaluated and determined not to be impaired. Causes for revision of the impairment status include recent water quality data demonstrating an improved water quality condition, revision to the water quality criteria associated with the previous listing, documentation that the water was previously listed in error or a modification of the listing methodology.

Supplemental Table B – Waters with TMDLs Developed

TMDLs have been developed for many previously listed waters. Under 40CFR130 regulations, TMDL development allows the removal of an impaired water from the 303(d) list. In the suggested format of the Integrated Report, such waters are to be classified in Category 4A and clearly distinguished from Category 5 and the 303(d) list. Waters included in Category 4A have TMDLs developed, but water quality improvements are not yet complete and/or documented. The waters and impairments identified in Supplemental Table B will match those of Category 4A of the Integrated Report.

Supplemental Table B-1 – 2005 TMDLs

TMDLs for selected impaired waters in the Coal River, North Branch of Potomac River and Lower Kanawha River watersheds were scheduled to be finalized prior to December 31, 2005. Development has been delayed as a result of the recently approved revision of the dissolved aluminum water quality criteria. Remodeling to address the revised criteria is underway and the TMDLs are anticipated to be finalized in the near future. For the purpose of this draft, it is assumed that EPA will finalize these TMDLs prior to their approval of the 2006 Section 303(d) list. Barring unforeseen complications, the waters/impairments shown in Table B-1 will also be included in Category 4A of the Integrated Report.

Supplemental Table C - Water Quality Improvements

The goal of TMDLs and stream restoration projects is to bring the stream back to the point where it meets its designated uses and the associated water quality criteria. Supplemental Table C identifies waterbodies with improved water quality due to TMDL implementation or pre-TMDL stream restoration work that results in delisting.

Supplemental Table D

Supplemental Table D is provided to allow tracking of waters removed from the 303(d) list that do not require TMDL development. These streams are being placed in either Category 4a or 4b of the 2006 Integrated Report. Category 4a identifies streams for which other pollution control requirements are reasonably expected to result in the attainment of the water quality standards in the near future. Pats Branch is currently identified on Supplemental Table D because the impairment is related to a permitted discharge and is being addressed by a WV/NPDES permit. Category 4b of the 2006 Integrated Report included streams whose flow has been altered by mining operations, rather than by a pollutant. Since neither of these conditions is caused by a pollutant, they are not appropriate for 303(d) listing. However, DEP has chosen to provide this information to address any questions about the status of these waterbodies.

Supplemental Table E

Supplemental Table E provides a list of waters for which the previously applicable criteria of total aluminum were used as a basis for TMDLs development. In April 2003, a significant change occurred in regards to West Virginia's water quality criteria for aluminum. EPA approval was received for a change in the aluminum aquatic life protection criteria from total recoverable to dissolved aluminum. WV DEP is providing Table E for two main reasons. First, the total aluminum TMDLs were developed to meet consent decree requirements and removal of the total aluminum TMDLs from the 2006 Integrated Report might lead some to believe that the aluminum requirements in the consent decree have not been met. Second, the change in water quality criteria from the total recoverable form to the dissolved form does not automatically nullify the existing TMDLs. Although, the change in the water quality criteria may have an effect on the relationship between the allocations in the existing TMDLs and permit limits, the TMDLs still may provide viable and relevant information, such as the identification of sources of aluminum discharge in the watershed, information on speciation or other characteristics of aluminum as it moves downstream. For these reasons, WV DEP has included Supplemental Table E in the 2006 Integrated Report.

Supplemental Table F

DEP is providing Supplemental Table E which contains waterbodies being included on the 303(d) list for the first time or additional pollutants being added to waterbodies listed prior to 2006. The table is included as an easy way for the public to identify new additions to the list.

WV 2006 Section 303(d) List Key

List Format

Impaired waters are first organized by their hydrologic group pursuant to the West Virginia Watershed Management Framework (i.e. Hydrologic Group A waters are shown first, followed by Hydrologic Group B, etc.). Within each hydrologic group, major watersheds are displayed alphabetically (e.g. within Hydrologic Group B, the Coal watershed is displayed first, followed by the Elk, followed by the Lower Kanawha, and so on.) Within each major watershed, impaired waters are arranged by their stream code.

The following table displays the format of the West Virginia 2006 Section 303(d) List and contains excerpts designed to display various intricacies.

Stream Name	Stream Code	Criteria Affected	Source	Impaired Length (mi)	Reach Description	Projected TMDL Year	2004 List?
Hydrologic Group B							
Coal Watershed – HUC # 05050009							
Big Coal River	WVKC	Fecal Coliform	Unknown	60.5	Entire Length	2005	Yes
Little Coal River	WVKC-10	Fecal Coliform	Unknown	32.0	Entire Length	2005	Yes
Spruce Fork	WVKC-10-T	Fecal Coliform	Unknown	18.1	Mouth - RM 18.1	2005	Yes
		Iron	Unknown	31.0	Entire Length	2005	No
Hewitt Creek	WVKC-10-T-9	Fecal Coliform	Unknown	6.0	Entire Length	2005	Yes
		Iron	Unknown	6.0	Entire Length	2005	Yes
Craddock Fork	WVKC-10-T-9-C	Fecal Coliform	Unknown	2.5	Entire Length	2005	No
		Iron	Unknown	2.5	Entire Length	2005	No
Sycamore Branch	WVKC-10-T-9-C-2	Fecal Coliform	Unknown	0.8	Mouth - RM 0.8	2005	Yes

West Virginia's streams are coded under an alphanumeric system. Major rivers have been assigned an alphabetical code that symbolizes their name. For example, the code for the Coal River is "WVKC" which symbolizes West Virginia-Kanawha-Coal. Adding a numerical suffix to the major river code codifies tributaries to the mainstems of the major rivers. Suffixes are applied in ascending order from mouth to headwaters. Tributaries of tributaries are codified by alternately adding numerical and alphabetical suffixes, always in ascending order from mouth to headwaters. In the example table, the Little Coal River (WVKC-10) is the tenth tributary of the Coal River (WVKC) and Spruce Fork (WVKC-10-T) is the twentieth tributary of the Little Coal River. Hewitt Creek (WVKC-10-T-9) is the ninth tributary of Spruce Fork. Craddock Fork (WVKC-10-T-9-C) is the third tributary of Hewitt Creek, and Sycamore Branch (WVKC-10-T-9-C-2) is the second tributary of Craddock Fork.

The "Criteria Affected" column identifies the numeric or narrative water quality criterion that is not attained in the impaired water. On the list, a separate line is provided for each affected criterion (reference above listings for Spruce Fork or Hewitt Creek). The "Source" column identifies the general source(s) of the impairment. In most instances, the actual source of impairment is not known at the time of listing. For all waters and impairments, the impaired length is provided, as well as the impaired reach description, in as much detail as possible. If the exact length of impairment is unknown, the entire length of the stream is indicated by default. Sources of impairment and impaired reach descriptions will be confirmed in the TMDL development process.

The "Projected TMDL Year" column indicates the latest year in which the DEP plans to develop a TMDL for the impairment. The last column of the list provides information as to whether or not the stream appeared on the West Virginia 2004 Section 303(d) List or is a new listing.

Projected TMDL Completion Year	
Hydrologic Group A	2009, 2014, 2019
Hydrologic Group B	2010, 2015, 2020
Hydrologic Group C	2006, 2011, 2016, 2021
Hydrologic Group D	2007, 2012, 2017
Hydrologic Group E	2008, 2013, 2018

Designated Uses

The affected designated uses associated with each listing are not displayed in the tabular format. Instead, the following table and discussion provides information regarding the affected designated use(s) for all criteria exceedances that resulted in the listing of impaired waters.

Criterion	Affected Designated Use			
	Aquatic Life	Contact Recreation	Public Water Supply	All Other uses
Aluminum, dissolved	X			
Chromium, hexavalent	X			
CNA-Biological	X			
Dioxin (2,3,7,8 - TCDD)		X	X	X
Fecal Coliform / Bacteria		X	X	
Iron	X		X	
Lead, dissolved	X			
Manganese			X	
Mercury		X	X	
pH	X	X	X	X
Selenium	X		X	
Zinc	X			

Both the aquatic life and public water supply uses are affected in most waters listed as impaired relative to **iron** because the numeric criterion for aquatic life in warmwater fisheries (1.5 mg/l) is identical to the criterion for the public water supply use. The aquatic life criterion for iron in troutwaters (0.5 mg/l) is more stringent than the criterion for the public water supply use. The public water supply use is not necessarily affected in troutwaters that are listed pursuant to the aquatic life iron criterion. The contact recreation and public water supply uses are affected in all waters listed as impaired relative to **fecal coliform** because the criteria applicable to both uses are identical. Similarly, all designated uses of waters listed as impaired relative to **pH** are affected because the pH criterion (6.0 – 9.0 standard units) is applicable to all designated uses. Although the West Virginia Water Quality Standards contain **lead** and **hexavalent chromium** criteria for the public water supply use, all identified impairments on the 2006 list were associated with the more stringent aquatic life use criteria for those parameters. The **dioxin** impairment of the Ohio River identified on the 2006 list is based upon exceedance of criteria for all designated uses except aquatic life. The aquatic life use is affected in all waters identified as impaired relative to **selenium**. Additionally, the following waters exceed the selenium criterion for the public water supply use: Beaver Pond Branch (WVKC-10-U-9), Left Fork of White Oak Creek (WVKC-35-E), Seng Creek (WVKC-42), Left Fork of Beech Creek (WVKC-10-T-15-A), and Hughes Fork (WVKG-5-B-4).

Abbreviations and Acronyms

AQ	Aquatic Life	HW	Headwaters	mp	Mile Point	Trout	Streams identified as Trout waters
CNA	Conditions not allowable	HUC	Hydrologic Unit Code	RM	River Mile	UNT	Unnamed Tributary
(d)	Dissolved	mi	Miles	TMDL	Total Maximum Daily Load		

2006 West Virginia 303 (d) List



Maple Run in
Preston County:
Photo by Rob Row

2006 Section 303(d) List

Stream Name	Stream Code	Criteria Affected	Source	Impaired Size (stream-mi) (lake-acres)	Reach Description	Projected TMDL Year (No Later Than)	2004 list?
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HYDROLOGIC GROUP A

Cheat Watershed - HUC# 05020004 - 36 streams 281 miles 1 lake 1730 acres

Cheat Lake	WVMC-(L1)	Mercury	Unknown	1730.0	Entire length	2014	Yes
		PCBs	Unknown	1730.0	Entire length	2019	No
Coles Run	WVMC-2.5	CNA-Biological	Unknown	2.0	Entire length	2014	Yes
Kelly Run	WVMC-2.7	CNA-Biological	Unknown	1.8	Entire length	2014	Yes
Whites Run	WVMC-4	CNA-Biological	Unknown	2.5	Entire length	2014	Yes
Scott Run	WVMC-7	CNA-Biological	Unknown	3.8	Entire length	2014	Yes
Big Sandy Creek	WVMC-12	Aluminum (d) (trout)	Unknown	19.0	Entire length	2014	Yes
Patterson Run	WVMC-12-A-2	CNA-Biological	Unknown	3.6	Entire length	2014	Yes
UNT/Webster Run RM 1.3	WVMC-12-B-0.5-A	CNA-Biological	Unknown	1.6	Entire length	2014	Yes
Muddy Creek	WVMC-17	Aluminum (d) (trout)	Unknown	3.4	Mouth to RM 3.4	2014	Yes
Crab Orchard Creek	WVMC-17-0.7A	CNA-Biological	Unknown	3.5	Entire length	2014	Yes
Dry Fork	WVMC-60	Mercury	Unknown	44.8	Entire length	2014	Yes
Lindy Run	WVMC-60-D-2.5	pH	Unknown	2.0	Entire length	2019	No
North Fork/Blackwater River	WVMC-60-D-3	Aluminum (d)	Unknown	8.0	Entire length	2014	Yes
Sand Run	WVMC-60-D-3-E	CNA-Biological	Unknown	2.2	Entire length	2014	Yes
UNT/Beaver Creek RM 11.0	WVMC-60-D-5-H	CNA-Biological	Unknown	2.1	Entire length	2014	Yes
Yellow Creek	WVMC-60-D-7	CNA-Biological	Unknown	3.0	Entire length	2014	Yes
Freeland Run	WVMC-60-D-12	CNA-Biological	Unknown	1.8	Entire length	2014	Yes
Otter Creek	WVMC-60-F	pH	Unknown	12.8	Entire length	2019	No
Coal Run	WVMC-60-F-1	pH	Unknown	2.0	Entire length	2019	No
Yellow Creek	WVMC-60-F-7	pH	Unknown	2.6	Entire length	2019	No
South Fork	WVMC-60-G-2	pH	Unknown	1.6	Entire length	2019	No
Laurel Run/Dry Fork	WVMC-60-E	pH	Unknown	3.6	Entire length	2019	No

2006 Section 303(d) List

Stream Name	Stream Code	Criteria Affected	Source	Impaired Size (stream-mi) (lake-acres)	Reach Description	Projected TMDL Year (No Later Than)	2004 list?
Red Creek	WVMC-60-O	CNA-Biological	Unknown	19.8	Entire length	2014	Yes
		pH	Unknown	19.8	Entire length	2014	Yes
Gandy Run	WVMC-60-O-3	pH	Unknown	2.3	Entire length	2014	Yes
South Fork/Red Creek	WVMC-60-O-4	pH	Unknown	6.0	Entire length	2014	Yes
Stonecoal Run	WVMC-60-O-6	pH	Unknown	2.2	Entire length	2019	No
Tory Camp Run	WVMC-60-R	CNA-Biological	Unknown	2.6	Entire length	2014	Yes
SHAVERS FORK SUBWATERSHED							
Shavers Fork	WVMCS	Mercury	Unknown	96.9	Entire length	2014	Yes
		pH	Unknown	28.0	RM 40.6 (Bemis) to RM 68.6 (Cheat Bridge)	2014	Yes
		PCBs	Unknown	96.9	Entire length	2019	No
Smoky Hollow	WVMCS-0.5	CNA-Biological	Unknown	1.8	Entire length	2014	Yes
McGee Run	WVMCS-39	pH	Unknown	2.0	Entire length	2014	Yes
Yokum Run	WVMCS-40	pH	Unknown	2.6	Entire length	2014	Yes
Crouch Run	WVMCS-41	pH	Unknown	2.8	Entire length	2014	Yes
Whitmeadow Run	WVMCS-44	pH	Unknown	2.5	Entire length	2014	Yes
Stonecoal Run	WVMCS-45	pH	Unknown	2.6	Entire length	2014	Yes
Fish Hatchery Run	WVMCS-48	pH	Unknown	2.8	Entire length	2014	Yes
First Fork	WVMCS-50	pH	Unknown	5.4	Entire length	2014	Yes
Buck Run	WVMCS-52	pH	Unknown	1.0	Entire length	2014	Yes

SHENANDOAH (JEFFERSON) WATERSHED - HUC# 02070007 - 5 streams 47 miles

Shenandoah River	WVS	Mercury	Unknown	19.5	Entire length	2014	Yes
Cattail Run	WVS-2	CNA-Biological	Unknown	3.7	Entire length	2014	Yes
Evitts Run	WVS-4	CNA-Biological	Unknown	10.3	Entire length	2014	Yes
Bullskin Run	WVS-6	CNA-Biological	Unknown	8.5	Entire length	2014	Yes
North Fork	WVS-6-A	CNA-Biological	Unknown	4.6	Entire length	2014	Yes

2006 Section 303(d) List

Stream Name	Stream Code	Criteria Affected	Source	Impaired Size (stream-mi) (lake-acres)	Reach Description	Projected TMDL Year (No Later Than)	2004 list?
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SOUTH BRANCH POTOMAC WATERSHED - HUC# 02070001 - 26 streams 325 miles

South Branch Potomac River	WVPSB	Fecal Coliform	Unknown	40.7	RM 14.2 (Springfield) to RM 54.9 (Old Fields)	2014	Yes
		PCBs	Unknown	154.1	Entire length	2019	No
Abernathy Run	WVPSB-1.8	CNA-Biological	Unknown	3.9	Entire length	2014	Yes
UNT/South Branch Potomac River RM 21.86	WVPSB-1.9	CNA-Biological	Unknown	3.6	Entire length	2014	Yes
Buffalo Creek	WVPSB-5	CNA-Biological	Unknown	3.6	Entire length	2014	Yes
Dumpling Run	WVPSB-9-B	CNA-Biological	Unknown	2.6	Entire length	2014	Yes
Mayhew Run	WVPSB-9-B-2	CNA-Biological	Unknown	1.1	Entire length	2014	Yes
McDowell Run	WVPSB-11	CNA-Biological	Unknown	2.7	Entire length	2014	Yes
Anderson Run	WVPSB-18	CNA-Biological	Unknown	4.9	Entire length	2014	Yes
Mudlick Run	WVPSB-18-A	CNA-Biological	Unknown	2.2	Mouth to RM 2.2	2014	Yes
South Fork/South Branch Potomac River	WVPSB-21	CNA-Biological	Unknown	18.1	RM 26.4 to RM 44.5	2019	No
		Mercury	Unknown	74.0	Entire length	2014	Yes
Dumpling Run	WVPSB-21-F	CNA-Biological	Unknown	2.5	Entire length	2014	Yes
Stony Run	WVPSB-21-R	CNA-Biological	Unknown	2.7	Entire length	2014	Yes
UNT/South Branch Potomac River RM 42.3 (Hively Gap)	WVPSB-21-T	CNA-Biological	Unknown	2.6	Entire length	2014	Yes
Hawes Run	WVPSB-21-X	CNA-Biological	Unknown	4.2	Mouth to RM 4.2	2014	Yes
Miller Run	WVPSB-21-AA	CNA-Biological	Unknown	6.5	Entire length	2014	Yes
UNT/South Branch RM 61.4	WVPSB-21.5	CNA-Biological	Unknown	3.2	Mouth to RM 3.2	2019	No
UNT/UNT RM 2.5/Hutton Run RM 0.7	WVPSB-22-A-4	CNA-Biological	Unknown	1.6	Entire length	2019	No
Robinson Run	WVPSB-26-A	CNA-Biological	Unknown	5.4	Entire length	2019	No
South Fork/Lunice Creek	WVPSB-26-D	CNA-Biological	Unknown	10.3	Entire length	2014	Yes

2006 Section 303(d) List

Stream Name	Stream Code	Criteria Affected	Source	Impaired Size (stream-mi) (lake-acres)	Reach Description	Projected TMDL Year (No Later Than)	2004 list?
Powers Hollow	WVPSB-28-0.5A	CNA-Biological	Unknown	2.7	Entire length	2014	Yes
Jordan Run	WVPSB-28-A	CNA-Biological	Unknown	5.9	Entire length	2014	Yes
Mill Creek	WVPSB-28-M	CNA-Biological	Unknown	3.4	Entire length	2014	Yes
Root Run	WVPSB-28-P	CNA-Biological	Unknown	3.0	Entire length	2014	Yes
Judy Run	WVPSB-28-U	CNA-Biological	Unknown	2.1	Entire length	2014	Yes
Smith Creek	WVPSB-46	CNA-Biological	Unknown	12.3	Entire length	2014	Yes
East Dry Run	WVPSB-53	CNA-Biological	Unknown	4.0	Entire length	2014	Yes

UPPER KANAWHA WATERSHED - HUC# 05050006 - 20 streams 109 miles

Kanawha River (Upper)	WVK-up	Mercury	Unknown	9.8	RM 57.9 (confluence with Elk River) to RM 67.7 (Marmet Lock)	2014	Yes
		PCBs	Unknown	48.0	RM 57.9 (confluence with Elk River) to HW	2019	No
Mission Hollow	WVK-46-A	CNA-Biological	Unknown	2.3	Entire length	2014	Yes
Pointlick Fork	WVK-49-F	CNA-Biological	Unknown	3.7	Entire length	2014	Yes
Rattlesnake Hollow	WVK-49-I	CNA-Biological	Unknown	2.0	Entire length	2014	Yes
Big Ninemile Fork	WVK-49-N	CNA-Biological	Unknown	1.8	Entire length	2014	Yes
Georges Creek	WVK-50	CNA-Biological	Unknown	2.8	Entire length	2014	Yes
Wet Branch	WVK-61-C	CNA-Biological	Unknown	3.3	Entire length	2014	Yes
Coal Fork	WVK-61-H	CNA-Biological	Unknown	5.8	Entire length	2014	Yes
UNT/Tenmile Fork RM 1.2	WVK-61-L-0.5	CNA-Biological	Unknown	1.4	Entire length	2014	Yes
Horsemill Branch	WVK-64-A	CNA-Biological	Unknown	2.1	Entire length	2014	Yes
		Manganese	Unknown	2.1	Entire length	2014	Yes
		pH	Unknown	2.1	Entire length	2014	Yes
Hurricane Fork	WVK-64-J	CNA-Biological	Unknown	4.3	Entire length	2014	Yes
Left Fork/Kelleys Creek	WVK-64-K	CNA-Biological	Unknown	3.1	Entire length	2019	No

WEST VIRGINIA

2006 Section 303(d) List

WEST VIRGINIA

Stream Name	Stream Code	Criteria Affected	Source	Impaired Size (stream-mi) (lake-acres)	Reach Description	Projected TMDL Year (No Later Than)	2004 list?
Sycamore Branch	WVK-65-L	CNA-Biological	Unknown	3.2	Entire length	2014	Yes
Bishop Fork	WVK-65-X	CNA-Biological	Unknown	1.7	Entire length	2014	Yes
Maple Fork	WVK-65-HH-1-A	CNA-Biological	Unknown	2.9	Entire length	2014	Yes
Hughes Creek	WVK-66	CNA-Biological	Unknown	7.0	Entire length	2014	Yes
Lower Creek	WVK-67	CNA-Biological	Unknown	1.7	Entire length	2014	Yes
Smithers Creek	WVK-72	CNA-Biological	Unknown	7.0	Entire length	2014	Yes
Bullpush Fork	WVK-72-B	CNA-Biological	Unknown	2.4	Entire length	2014	Yes
Dempsey Branch	WVK-76-C-1	CNA-Biological	Unknown	2.7	Entire length	2014	Yes

UPPER OHIO NORTH WATERSHED - HUC# 05030101 - 6 streams 43 miles

Ohio River (Upper North)	WVO-un	Dioxin	Unknown	31.4	Ohio River from MP 71.4 (mouth of Cross Creek) to MP 40 (PA line)	2012	Yes
		Bacteria	Unknown	31.4	Ohio River from MP 71.4 (mouth of Cross Creek) to MP 40 (PA line)	2012	Yes
Mahan Run	WVO-96	CNA-Biological	Unknown	2.8	Entire length	2014	Yes
Holbert Run	WVO-99	CNA-Biological	Unknown	2.8	Entire length	2014	Yes
Laurel Hollow	WVO-105	CNA-Biological	Unknown	2.1	Entire length	2014	Yes
Middle Run	WVO-107	CNA-Biological	Unknown	2.0	Entire length	2014	Yes
Marks Run	WVO-108	CNA-Biological	Unknown	1.7	Entire length	2014	Yes

WEST VIRGINIA

2006 Section 303(d) List

WEST VIRGINIA

Stream Name	Stream Code	Criteria Affected	Source	Impaired Size (stream-mi) (lake-acres)	Reach Description	Projected TMDL Year (No Later Than)	2004 list?
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YOUGHIOGHENY WATERSHED - HUC# 05020006 - 5 streams 29 miles

Youghiogheny River	WVMY	CNA-Biological	Unknown	6.2	Entire length	2018	Yes
Snowy Creek	WVMY-2	Aluminum (d) (trout)	Unknown	6.2	Entire length	2008	Yes
		CNA-Biological	Unknown	6.2	Entire length	2008	Yes
		Iron (trout)	Unknown	6.2	Entire length	2008	Yes
Laurel Run	WVMY-2-0.2A	Iron	Mine Drainage	4.8	Entire length	2008	Yes
		pH	Mine Drainage	4.8	Entire length	2008	Yes
Wardwell Run	WVMY-2-A-1	CNA-Biological	Unknown	3.2	Entire length	2008	Yes
Maple Run	WVMY-5	CNA-Biological	Unknown	8.2	Entire length	2008	Yes

Stream Name	Stream Code	Criteria Affected	Source	Impaired Size (stream-mi) (lake-acres)	Reach Description	Projected TMDL Year (No Later Than)	2004 list?
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HYDROLOGIC GROUP B

COAL WATERSHED - HUC# 05050009 - 10 streams 28 miles
(2005 TMDL streams are not included - See Supplemental Table B-1)

Ely Fork	WVKC-10-E-2	CNA-Biological	Unknown	3.6	Entire length	2020	No
Rockhouse Creek	WVKC-10-T-13	CNA-Biological	Unknown	3.0	Entire length	2015	Yes
Left Fork/Beech Creek	WVKC-10-T-15-A	CNA-Biological	Unknown	2.4	Entire length	2015	Yes
James Branch	WVKC-10-U-16	CNA-Biological	Unknown	4.2	Entire length	2015	Yes
Seng Creek	WVKC-42	CNA-Biological	Unknown	5.9	Entire length	2015	Yes
Ellis Creek	WVKC-46-B	CNA-Biological	Unknown	1.2	Mouth to RM 1.2	2015	Yes
Spanker Branch	WVKC-46-M	CNA-Biological	Unknown	2.0	Entire length	2020	No
Raines Fork	WVKC-47-E-4	CNA-Biological	Unknown	1.1	Entire length	2015	Yes
Toney Fork	WVKC-47-L	CNA-Biological	Unknown	2.4	Entire length	2015	Yes
Buffalo Fork	WVKC-47-L-1	CNA-Biological	Unknown	2.5	Entire length	2015	Yes

ELK WATERSHED - HUC# 05050007 - 25 streams 224 miles 1 Lake 1500 acres

Elk River	WVKE	Chromium, hexavalent	Unknown	102.0	RM 4.4 to RM 106.4 (Sutton Lake)	2015	Yes
		Fecal Coliform	Unknown	27.2	Mouth to RM 27.2	2015	Yes
Sutton Lake	WVKE-(L1)	Mercury	Unknown	1500.0	Entire length	2015	Yes
Green Bottom (Belcher Hollow)	WVKE-2-E	CNA-Biological	Unknown	0.9	Entire length	2015	Yes
Newhouse Branch	WVKE-3	CNA-Biological	Unknown	2.0	Entire length	2015	Yes
Coonskin Branch	WVKE-4	CNA-Biological	Unknown	1.1	Entire length	2015	Yes
Kaufman Branch	WVKE-7-E	CNA-Biological	Unknown	1.0	Entire length	2015	Yes
Whiteoak Fork	WVKE-14-G-2	CNA-Biological	Unknown	3.0	Entire length	2015	Yes

2006 Section 303(d) List

Stream Name	Stream Code	Criteria Affected	Source	Impaired Size (stream-mi) (lake-acres)	Reach Description	Projected TMDL Year (No Later Than)	2004 list?
Mudlick Branch	WVKE-14-M-2	CNA-Biological	Unknown	1.6	Entire length	2015	Yes
Big Sandy Creek	WVKE-23	CNA-Biological	Unknown	12.5	Mouth to RM 12.5	2015	Yes
		Fecal Coliform	Unknown	24.4	Entire length	2015	Yes
Camp Creek	WVKE-34	CNA-Biological	Unknown	3.1	Entire length	2015	Yes
Laurel Fork	WVKE-37-B	CNA-Biological	Unknown	2.5	Entire length	2015	Yes
Reed Fork	WVKE-37-C-1	CNA-Biological	Unknown	1.9	Entire length	2015	Yes
Summers Fork	WVKE-37-D	CNA-Biological	Unknown	2.6	Entire length	2015	Yes
Grassy Fork	WVKE-41-C-1	CNA-Biological	Unknown	2.7	Entire length	2015	Yes
Leatherwood Creek	WVKE-46	Aluminum (d) (trout)	Unknown	11.3	Entire length	2015	Yes
		CNA-Biological	Unknown	11.3	Entire length	2015	Yes
Buffalo Creek	WVKE-50	CNA-Biological	Unknown	21.7	RM 2.1 to HW	2015	Yes
Lilly Fork	WVKE-50-B	CNA-Biological	Unknown	13.1	Entire length	2015	Yes
Big Branch	WVKE-50-B-3	CNA-Biological	Unknown	2.3	Entire length	2020	No
Jacks Run	WVKE-76-W	CNA-Biological	Unknown	1.3	Entire length	2015	Yes
Upper Mill Creek	WVKE-78	CNA-Biological	Unknown	4.8	Entire length	2015	Yes
Bear Run	WVKE-84.5	CNA-Biological	Unknown	1.5	Entire length	2015	Yes
UNT/Granny Creek	WVKE-87-C	CNA-Biological	Unknown	1.4	Entire length	2015	Yes
Old Woman Run	WVKE-88	CNA-Biological	Unknown	2.4	Entire length	2015	Yes
Fall Run	WVKE-98-B-3	pH	Unknown	2.4	Entire length	2015	Yes
Desert Fork	WVKE-98-B-16	pH	Unknown	7.4	Entire length	2015	Yes
Fall Run	WVKE-98-C-14	pH	Unknown	1.4	Entire length	2015	Yes

2006 Section 303(d) List

Stream Name	Stream Code	Criteria Affected	Source	Impaired Size (stream-mi) (lake-acres)	Reach Description	Projected TMDL Year (No Later Than)	2004 list?
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LOWER KANAWHA WATERSHED - HUC# 05050008 - 33 streams 175 miles
(2005 TMDL streams are not included - See Supplemental Table B-1)

Kanawha River (Lower)	WVK-lo	Fecal Coliform	Unknown	56.4	RM 1.5 to RM 57.9 (confluence with Elk River)	2015	Yes
		Mercury	Unknown	25.7	RM 32.2 (Winfield Lock) to RM 57.9 (confluence with Elk River)	2015	Yes
		PCBs	Unknown	57.9	Mouth (confluence with Ohio) to RM 57.9 (confluence with Elk River)	2020	No
Pond Branch	WVK-11	CNA-Biological	Unknown	3.1	Entire length	2015	Yes
Poplar Fork	WVK-12-F	CNA-Biological	Unknown	5.0	Mouth to RM 5.0	2015	Yes
Jakes Run	WVK-16-B	CNA-Biological	Unknown	1.9	Entire length	2015	Yes
Saltlick Creek	WVK-16-J-3	CNA-Biological	Unknown	2.9	Entire length	2015	Yes
Buckelew Hollow	WVK-16-R	CNA-Biological	Unknown	1.7	Entire length	2020	No
UNT/UNT RM 0.4/Little Buffalo Creek RM 1.0	WVK-20-A-1	CNA-Biological	Unknown	1.2	Entire length	2020	No
Hurricane Creek	WVK-22	CNA-Biological	Unknown	21.2	Mouth to RM 21.2	2015	Yes
Cow Creek	WVK-22-B-2	CNA-Biological	Unknown	4.4	Entire length	2015	Yes
Long Branch	WVK-22-B-3	CNA-Biological	Unknown	2.8	Entire length	2015	Yes
UNT/Crooked Creek	WVK-22-B-5-B	CNA-Biological	Unknown	1.3	Entire length	2015	Yes
Sleepy Creek	WVK-22-C	CNA-Biological	Unknown	3.9	Entire length	2015	Yes
Rider Creek	WVK-22-J	CNA-Biological	Unknown	1.7	Entire length	2015	Yes
Armour Creek	WVK-30	CNA-Biological	Unknown	3.7	Entire length	2015	Yes
UNT/Scary Creek RM 0.13	WVK-32-0.1A	CNA-Biological	Unknown	0.8	Entire length	2015	Yes
Rockstep Run	WVK-32-A	CNA-Biological	Unknown	2.3	Entire length	2015	Yes

2006 Section 303(d) List

Stream Name	Stream Code	Criteria Affected	Source	Impaired Size (stream-mi) (lake-acres)	Reach Description	Projected TMDL Year (No Later Than)	2004 list?
UNT/UNT RM 0.4/Scary Creek RM 2.1	WVK-32-B-1	CNA-Biological	Unknown	1.5	Entire length	2020	No
Gallatin Branch	WVK-33	CNA-Biological	Unknown	1.6	Entire length	2015	Yes
Ward Hollow	WVK-39-A	CNA-Biological	Unknown	1.7	Entire length	2015	Yes
Rays Branch	WVK-39-F	CNA-Biological	Unknown	2.7	Entire length	2015	Yes
Coal Hollow	WVK-39-J	CNA-Biological	Unknown	1.6	Entire length	2015	Yes
Joplin Branch	WVK-42	CNA-Biological	Unknown	2.9	Entire length	2015	Yes
POCATALICO RIVER SUBWATERSHED							
Pocatalico River	WVKP	CNA-Biological	Unknown	16.0	RM 45.0 to HW	2015	Yes
Harmond Creek	WVKP-4	CNA-Biological	Unknown	2.8	Entire length	2015	Yes
Rocky Fork	WVKP-5	CNA-Biological	Unknown	6.9	Entire length	2015	Yes
Spring Branch	WVKP-9-A	CNA-Biological	Unknown	1.4	Entire length	2015	Yes
Grapevine Creek	WVKP-16	CNA-Biological	Unknown	6.5	Entire length	2020	No
Broadtree Run	WVKP-16-B	CNA-Biological	Unknown	1.7	Entire length	2015	Yes
UNT/Dog Fork RM 2.0	WVKP-17-F-3	CNA-Biological	Unknown	1.0	Entire length	2020	No
Raccoon Creek	WVKP-20	CNA-Biological	Unknown	3.0	Entire length	2015	Yes
Leatherwood Creek	WVKP-22	CNA-Biological	Unknown	4.2	Entire length	2015	Yes
Camp Creek	WVKP-26	CNA-Biological	Unknown	2.2	Entire length	2015	Yes
Anderson Lick Run	WVKP-28-E	CNA-Biological	Unknown	1.3	Entire length	2015	Yes

2006 Section 303(d) List

Stream Name	Stream Code	Criteria Affected	Source	Impaired Size (stream-mi) (lake-acres)	Reach Description	Projected TMDL Year (No Later Than)	2004 list?
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NORTH BRANCH POTOMAC WATERSHED - HUC# 02070002 - 5 streams 36 miles 1 Lake 1200 acres
(2005 TMDL streams are not included - See Supplemental Table B-1)

Patterson Creek	WVPNB-4	CNA-Biological	Unknown	25.2	RM 32.2 to HW	2015	Yes
Pargut Run	WVPNB-4-J-1	CNA-Biological	Unknown	3.4	Entire length	2015	Yes
UNT/Patterson Creek RM 16.0	WVPNB-4-J.5	CNA-Biological	Unknown	1.0	Entire length	2020	No
Mill Creek	WVPNB-4-S	CNA-Biological	Unknown	5.6	Mouth to RM 5.6	2015	Yes
UNT/UNT RM 0.5/New Creek RM 4.3	WVPNB-7-C.4-1	CNA-Biological	Unknown	0.7	Entire length	2015	Yes

TYGART VALLEY WATERSHED - HUC# 05020001 - 40 streams 303 miles 1 Lake 1750 acres

Tygart Valley River	WVMT	Fecal Coliform	Unknown	78.7	RM 65.1 to HW	2015	Yes
		Mercury	Unknown	49.8	RM 33.2 (Tygart Lake) to RM 83.0 (Elkins)	2015	Yes
Tygart Lake	WVMT-(L1)	Mercury	Unknown	1750.0	Entire length	2015	Yes
		PCBs	Unknown	1750.0	Entire length	2020	No
Wickwire Run	WVMT-8	CNA-Biological	Unknown	8.0	Entire length	2015	Yes
Three Fork Creek	WVMT-12	Aluminum (d)	Unknown	19.0	Entire length	2015	Yes
Raccoon Creek	WVMT-12-C	Aluminum (d)	Unknown	8.8	Entire length	2015	Yes
Little Sandy Creek	WVMT-18-E	Aluminum (d)	Unknown	10.6	Entire length	2015	Yes
		CNA-Biological	Unknown	10.6	Entire length	2015	Yes
Sugar Creek	WVMT-24-C	CNA-Biological	Unknown	12.0	Entire length	2015	Yes
Long Run	WVMT-24-C-4	CNA-Biological	Unknown	1.6	Entire length	2015	Yes
Hackers Creek	WVMT-26	CNA-Biological	Unknown	4.6	Entire length	2015	Yes
Foxgrape Run	WVMT-26-B	CNA-Biological	Unknown	3.4	Entire length	2015	Yes
Little Laurel Run	WVMT-40-A	pH	Unknown	3.8	Entire length	2015	Yes

2006 Section 303(d) List

Stream Name	Stream Code	Criteria Affected	Source	Impaired Size (stream-mi) (lake-acres)	Reach Description	Projected TMDL Year (No Later Than)	2004 list?
Roaring Creek	WVMT-42	Aluminum (d)	Unknown	15.0	Entire length	2015	Yes
UNT/Roaring Creek	WVMT-42-F	pH	Unknown	1.2	Entire length	2015	Yes
Craven Run	WVMT-43-A	CNA-Biological	Unknown	5.6	Entire length	2015	Yes
Davis Lick	WVMT-43-H	CNA-Biological	Unknown	3.8	Entire length	2015	Yes
Laurel Run	WVMT-43-O	CNA-Biological	Unknown	2.5	Entire length	2015	Yes
Glade Run	WVMT-64-C	Iron (trout)	Unknown	1.8	Entire length	2015	Yes
		pH	Unknown	1.8	Entire length	2015	Yes
Meatbox Run	WVMT-64-E	pH	Unknown	1.3	Entire length	2015	Yes
Potatohole Fork	WVMT-64-F	pH	Unknown	2.0	Entire length	2015	Yes
Riffle Creek	WVMT-66	CNA-Biological	Unknown	1.5	Mouth to RM 1.5	2015	Yes
BUCKHANNON RIVER SUBWATERSHED							
Childers Run	WVMTB-9	CNA-Biological	Unknown	2.3	Entire length	2015	Yes
Little Sand Run	WVMTB-13	Fecal Coliform	Unknown	3.4	Entire length	2020	No
Left Fork/Little Sand Run	WVMTB-13-A	Fecal Coliform	Unknown	2.5	Entire length	2020	No
Ratcliff Run	WVMTB-14	Fecal Coliform	Unknown	2.9	Entire length	2020	No
Cutright Run	WVMTB-17	pH	Unknown	4.2	Entire length	2015	Yes
Sawmill Run	WVMTB-20	CNA-Biological	Unknown	1.6	Entire length	2015	Yes
Right Fork/Tenmile Creek	WVMTB-25-A	pH	Unknown	4.0	Entire length	2015	Yes
Marsh Fork	WVMTB-31-J	pH	Unknown	5.5	Entire length	2015	Yes
Smooth Rocklick Run	WVMTB-32-A	pH	Unknown	2.0	Entire length	2015	Yes
Bearcamp Run	WVMTB-32-D	pH	Unknown	5.5	Entire length	2015	Yes
Beech Run	WVMTB-32-H	pH	Unknown	5.2	Entire length	2015	Yes

WEST VIRGINIA

2006 Section 303(d) List

WEST VIRGINIA

Stream Name	Stream Code	Criteria Affected	Source	Impaired Size (stream-mi) (lake-acres)	Reach Description	Projected TMDL Year (No Later Than)	2004 list?
MIDDLE FORK RIVER SUBWATERSHED							
Laurel Run	WVMTM-2	pH	Unknown	2.0	Entire length	2015	Yes
Hooppole Run	WVMTM-3	CNA-Biological	Unknown	1.6	Entire length	2015	Yes
Service Run	WVMTM-5	pH	Unknown	1.0	Entire length	2015	Yes
Short Run	WVMTM-7	pH	Unknown	1.7	Entire length	2015	Yes
Right Fork/Middle Fork River	WVMTM-11	Iron (trout)	Unknown	15.3	Entire length	2015	Yes
Cassity Fork	WVMTM-16	pH	Unknown	3.5	RM 3.0 to HW	2015	Yes
Three Forks Run	WVMTM-17	CNA-Biological	Unknown	2.6	Entire length	2015	Yes
Birch Fork	WVMTM-26	pH	Unknown	6.6	Entire length	2015	Yes
Rocky Run	WVMTM-26-B	CNA-Biological	Unknown	5.8	Entire length	2015	Yes
Kittle Creek	WVMTM-28	pH	Unknown	6.2	Entire length	2015	Yes

2006 Section 303(d) List

Stream Name	Stream Code	Criteria Affected	Source	Impaired Size (stream-mi) (lake-acres)	Reach Description	Projected TMDL Year (No Later Than)	2004 list?
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HYDROLOGIC GROUP C

GAULEY WATERSHED - HUC# 05050005 - 104 streams 541 miles 1 Lake 2700 acres

Gauley River	WVKG	Fecal Coliform	Unknown	37.2	Mouth to RM 37.2 (Summersville Dam)	2021	No
Summersville Lake	WVKG-(L1)	Mercury	Unknown	2700.0	Entire length	2016	Yes
		PCBs	Unknown	2700.0	Entire length	2021	No
Scrabble Creek	WVKG-1	CNA-Biological	Unknown	3.1	Entire length	2006	Yes
		Fecal Coliform	Unknown	3.1	Entire length	2006	No
Left Fork/Scrabble Creek	WVKG-1-A	CNA-Biological	Unknown	2.2	Entire length	2006	No
Twentymile Creek	WVKG-5	CNA-Biological	Unknown	20.3	RM 7.4 to RM 27.7	2006	No
		Fecal Coliform	Unknown	7.4	Mouth to RM 7.4	2006	No
		Iron	Unknown	15.6	Mouth to RM 15.6	2006	No
		pH	Unknown	4.8	RM 24.6 to HW	2006	No
Bells Creek	WVKG-5-B	CNA-Biological	Unknown	8.2	Entire length	2006	No
		Fecal Coliform	Unknown	8.2	Entire length	2006	No
Open Fork	WVKG-5-B-1	Aluminum (d)	Unknown	2.9	Mouth to RM 2.9	2006	No
		CNA-Biological	Unknown	5.7	Entire length	2006	Yes
		Fecal Coliform	Unknown	5.7	Entire length	2006	No
		pH	Unknown	2.9	Mouth to RM 2.9	2006	No
Williams Hollow	WVKG-5-B-1-B	pH	Unknown	2.2	Entire length	2006	No
Sangamore Fork	WVKG-5-B-1-C	Aluminum (d)	Unknown	2.5	Entire length	2006	No
		CNA-Biological	Unknown	2.5	Entire length	2006	No
		pH	Unknown	2.5	Entire length	2006	No
Smith Branch	WVKG-5-B-2	Fecal Coliform	Unknown	0.2	Mouth to RM 0.2	2006	No
Hughes Fork	WVKG-5-B-4	Selenium	Unknown	3.0	Entire length	2006	Yes

2006 Section 303(d) List

Stream Name	Stream Code	Criteria Affected	Source	Impaired Size (stream-mi) (lake-acres)	Reach Description	Projected TMDL Year (No Later Than)	2004 list?
Rockcamp Fork	WVKG-5-B-5	Fecal Coliform	Unknown	4.2	Entire length	2006	No
Campbell Fork	WVKG-5-B-7	CNA-Biological	Unknown	2.1	Entire length	2006	Yes
		Fecal Coliform	Unknown	2.1	Entire length	2006	No
Rockcamp Fork	WVKG-5-F	Aluminum (d)	Unknown	2.3	Mouth to RM 2.3	2006	No
		CNA-Biological	Unknown	2.3	Mouth to RM 2.3	2006	Yes
		pH	Unknown	2.3	Mouth to RM 2.3	2006	No
Spring Branch	WVKG-5-F-1	Aluminum (d)	Unknown	1.2	Entire length	2006	No
		CNA-Biological	Unknown	1.2	Entire length	2006	Yes
		Iron	Unknown	1.2	Entire length	2006	No
		pH	Unknown	1.2	Entire length	2006	No
Boardtree Branch	WVKG-5-M	CNA-Biological	Unknown	2.1	Entire length	2006	No
Sugarcamp Branch	WVKG-5-N	CNA-Biological	Unknown	3.1	Entire length	2006	No
Stillhouse Branch	WVKG-5-O	CNA-Biological	Unknown	1.9	Entire length	2006	No
Robinson Fork	WVKG-5-P	CNA-Biological	Unknown	3.6	Entire length	2006	Yes
UNT/Robinson Fork RM 1.22 (Wildcat Hollow)	WVKG-5-P-4	Iron	Unknown	1.6	Entire length	2006	No
		pH	Unknown	1.6	Entire length	2006	No
Rich Creek	WVKG-6	Fecal Coliform	Unknown	1.7	Mouth to RM 1.7	2006	No
		Iron (trout)	Unknown	3.5	Mouth to RM 3.5	2006	No
Lick Branch	WVKG-6-A	Fecal Coliform	Unknown	1.3	Entire length	2006	No
Kelly Fork	WVKG-6-D	Fecal Coliform	Unknown	2.5	Entire length	2006	No
Peters Creek	WVKG-13	Fecal Coliform	Unknown	17.7	Entire length	2006	Yes
		Iron (trout)	Mine Drainage	17.7	Entire length	2006	Yes
Otter Creek	WVKG-13-B	Fecal Coliform	Unknown	2.6	Entire length	2006	No
Line Creek	WVKG-13-C	Fecal Coliform	Unknown	3.0	Entire length	2006	No
UNT/Line Creek RM 1.3	WVKG-13-C-3	pH	Unknown	1.8	Entire length	2006	No
Laurel Creek	WVKG-13-E	Fecal Coliform	Unknown	3.7	Entire length	2006	No

2006 Section 303(d) List

Stream Name	Stream Code	Criteria Affected	Source	Impaired Size (stream-mi) (lake-acres)	Reach Description	Projected TMDL Year (No Later Than)	2004 list?
Jerry Fork	WVKG-13-F	Iron	Mine Drainage	2.4	Entire length	2006	Yes
Jones Branch	WVKG-13-G	Fecal Coliform	Unknown	2.3	Entire length	2006	No
		Iron	Unknown	2.3	Entire length	2006	No
Keenan Branch	WVKG-13-H	Fecal Coliform	Unknown	1.6	Entire length	2006	No
Whitewater Branch	WVKG-13-J	Fecal Coliform	Unknown	3.0	Entire length	2006	No
Buck Garden Creek	WVKG-13-K	Fecal Coliform	Unknown	5.1	Entire length	2006	No
		Iron	Mine Drainage	5.1	Entire length	2006	Yes
Hutchison Branch	WVKG-13-K-1	Fecal Coliform	Unknown	2.7	Entire length	2006	No
McClung Branch	WVKG-13-M	Fecal Coliform	Unknown	2.5	Entire length	2006	No
Pine Run	WVKG-13-N	Iron	Unknown	0.7	Mouth to RM 0.65	2006	No
Bryant Branch	WVKG-13-O	Iron	Unknown	1.6	Entire length	2006	No
Meadow River	WVKG-19	Fecal Coliform	Unknown	68.8	Entire length	2016	Yes
Sewell Creek	WVKG-19-Q	Fecal Coliform	Unknown	14.1	Entire length	2006	No
		Iron	Mine Drainage	6.7	Mouth to RM 6.7	2006	Yes
Little Sewell Creek	WVKG-19-Q-1	Fecal Coliform	Unknown	6.1	Entire length	2006	No
		Iron	Unknown	0.3	Mouth to RM 0.3	2006	No
Briery Creek	WVKG-19-U-2-A	pH	Unknown	1.5	Entire length	2006	Yes
Little Clear Creek	WVKG-19-V	Iron (trout)	Mine Drainage	16.3	Entire length	2006	Yes
		pH	Unknown	15.5	RM 0.8 to HW	2006	No
UNT/Little Clear Creek RM 7.5	WVKG-19-V-3.8	Iron	Unknown	1.0	Entire length	2006	No
Laurel Creek	WVKG-19-V-5	pH	Unknown	3.7	Entire length	2006	No
Wallace Branch	WVKG-19-V-6	pH	Unknown	1.6	Entire length	2006	No
Kuhn Branch	WVKG-19-V-7	Iron (trout)	Unknown	1.9	Entire length	2006	No
Hominy Creek	WVKG-24	Iron (trout)	Mine drainage	1.8	RM 17.3 to RM 19.1	2016	Yes
Brushy Meadow Creek	WVKG-24-E-2	Fecal Coliform	Unknown	1.3	Mouth to RM 1.3	2006	No
		Iron (trout)	Mine Drainage	6.0	Entire length	2006	Yes

2006 Section 303(d) List

Stream Name	Stream Code	Criteria Affected	Source	Impaired Size (stream-mi) (lake-acres)	Reach Description	Projected TMDL Year (No Later Than)	2004 list?
UNT/Brushy Meadow Creek RM 1.3	WVKG-24-E-2-B	Fecal Coliform	Unknown	2.7	Entire length	2006	No
Colt Branch	WVKG-24-I	Iron	Mine Drainage	1.2	RM 1.0 to HW	2006	Yes
Jones Run	WVKG-26-B-2	CNA-Biological	Unknown	1.6	Entire length	2006	Yes
		Fecal Coliform	Unknown	1.6	Entire length	2006	No
Duffy Branch	WVKG-26-C	Iron	Unknown	1.5	Entire length	2006	No
Phillips Run	WVKG-26-D	Iron	Unknown	3.6	Entire length	2006	No
Trout Run	WVKG-26-F	pH	Unknown	3.7	Entire length	2006	No
Enoch Branch	WVKG-26-H	Iron	Unknown	3.0	Entire length	2006	No
		pH	Unknown	3.0	Entire length	2006	No
McMillion Creek	WVKG-26-I	Iron	Mine Drainage	6.0	RM 1.0 to HW	2006	Yes
Brushy Fork	WVKG-26-K	Iron (trout)	Unknown	5.5	Entire length	2006	No
Lower Spruce Run	WVKG-26-K-1	Iron	Mine Drainage	1.6	Entire length	2006	Yes
		pH	Unknown	1.6	Entire length	2006	No
Spruce Run	WVKG-26-K-1-A	Aluminum (d)	Unknown	1.5	Entire length	2006	No
		Iron	Mine Drainage	1.5	Entire length	2006	Yes
		pH	Unknown	1.5	Entire length	2006	No
Falls Run	WVKG-26-O-2	pH	Unknown	1.4	Entire length	2006	No
Laurel Fork	WVKG-26-P	Iron	Unknown	2.0	Entire length	2006	No
Big Beaver Creek	WVKG-30	Fecal Coliform	Unknown	16.4	Entire length	2006	No
Wyatt Run	WVKG-30-D	Fecal Coliform	Unknown	1.7	Entire length	2006	No
Little Beaver Creek	WVKG-30-E	Fecal Coliform	Unknown	6.0	Entire length	2006	No
UNT/Little Beaver Creek RM 4.0	WVKG-30-E-4	Fecal Coliform	Unknown	1.1	Entire length	2006	No
		Iron	Unknown	1.1	Entire length	2006	No
Left Fork/Big Beaver Creek	WVKG-30-H	Fecal Coliform	Unknown	1.0	Mouth to RM 1.0	2006	No
Paddy Run	WVKG-30-K	Iron	Unknown	1.2	Entire length	2006	No

2006 Section 303(d) List

Stream Name	Stream Code	Criteria Affected	Source	Impaired Size (stream-mi) (lake-acres)	Reach Description	Projected TMDL Year (No Later Than)	2004 list?
Bearpen Fork	WVKG-30-L	CNA-Biological	Unknown	2.5	Entire length	2006	Yes
		Iron	Mine Drainage	1.1	Mouth to RM 1.1	2006	Yes
		pH	Unknown	1.1	Mouth to RM 1.1	2006	No
Upper Laurel Run	WVKG-30-P	pH	Unknown	1.4	Entire length	2006	No
Little Laurel Creek	WVKG-31	pH	Unknown	2.4	RM 1.18 to HW	2006	No
UNT/Little Laurel Creek RM 1.1	WVKG-31-B	pH	Unknown	2.0	Entire length	2006	No
UNT/Little Laurel Creek RM 1.9	WVKG-31-C	pH	Unknown	1.5	Entire length	2006	No
Panther Creek	WVKG-32	Aluminum (d) (trout)	Unknown	1.7	Mouth to RM 1.7	2006	No
Cherry River	WVKG-34	Iron (trout)	Unknown	10.5	Entire length	2021	No
North Fork/Cherry River	WVKG-34-H	Aluminum (d) (trout)	Unknown	21.6	Entire length	2021	No
Desert Branch	WVKG-34-H-2	pH	Unknown	1.9	Entire length	2021	No
Windy Run	WVKG-34-H-8	pH	Unknown	2.0	Entire length	2006	Yes
Armstrong Run	WVKG-34-H-9	pH	Unknown	1.3	Entire length	2006	Yes
Rabbit Run	WVKG-34-H-11	pH	Unknown	1.4	Entire length	2021	No
Carpenter Run	WVKG-34-H-11.5	pH	Unknown	1.3	Entire length	2006	Yes
Bear Run	WVKG-34-H-14	pH	Unknown	2.2	Entire length	2021	No
Darnell Run	WVKG-34-H-17	pH	Unknown	1.0	Entire length	2021	No
Big Ditch Run	WVKG-46	CNA-Biological	Unknown	3.1	Entire length	2021	No
Turkey Creek	WVKG-60	pH	Unknown	5.1	Entire length	2006	Yes
Right Fork/Turkey Creek	WVKG-60-A	pH	Unknown	2.4	Entire length	2006	Yes
Big Run	WVKG-70	pH	Unknown	4.4	Entire length	2006	Yes

2006 Section 303(d) List

Stream Name	Stream Code	Criteria Affected	Source	Impaired Size (stream-mi) (lake-acres)	Reach Description	Projected TMDL Year (No Later Than)	2004 list?
CRANBERRY RIVER SUBWATERSHED							
Cranberry River	WVKGC	Aluminum (d) (trout)	Unknown	27.6	Entire length	2016	Yes
Barrenshe Run	WVKGC-4	pH	Unknown	3.0	Entire length	2006	Yes
Aldrich Branch	WVKGC-9	pH	Unknown	2.5	Entire length	2006	Yes
Lick Branch	WVKGC-14	pH	Unknown	2.1	Entire length	2006	Yes
Little Rough Run	WVKGC-17.3	pH	Unknown	1.2	Entire length	2006	Yes
Cold Run	WVKGC-18	pH	Unknown	1.5	Entire length	2006	Yes
Dogway Fork	WVKGC-19	pH	Unknown	1.8	RM 6.8 to HW	2006	Yes
Birchlog Run	WVKGC-21	pH	Unknown	2.3	Entire length	2006	Yes
Tumbling Rock Run	WVKGC-22	pH	Unknown	2.4	Entire length	2006	Yes
North Fork/Cranberry River	WVKGC-24	pH	Unknown	6.6	Entire length	2006	Yes
Left Fork/North Fork/Cranberry River	WVKGC-24-C	pH	Unknown	1.0	Entire length	2006	Yes
WILLIAMS RIVER SUBWATERSHED							
Williams River	WVKGW	Aluminum (d) (trout)	Unknown	30.2	RM 2.6 to HW	2016	Yes
Craig Run	WVKGW-1	pH	Unknown	0.4	Mouth to RM 0.4	2006	Yes
Middle Fork/Williams River	WVKGW-10	Aluminum (d) (trout)	Unknown	12.9	Entire length	2006	No
		pH	Unknown	12.9	Entire length	2006	Yes
Beechy Run	WVKGW-10-C	pH	Unknown	3.9	Entire length	2021	No
Kens Creek	WVKGW-18	pH	Unknown	2.3	Entire length	2006	No
Tea Creek	WVKGW-20	pH	Unknown	5.7	Entire length	2006	Yes
Sugar Creek	WVKGW-21	Aluminum (d) (trout)	Unknown	3.8	Entire length	2006	Yes
		pH	Unknown	1.3	RM 2.5 to HW	2006	Yes
UNT/Sugar Creek RM 2.5	WVKGW-21-B	pH	Unknown	0.8	Entire length	2006	No

2006 Section 303(d) List

Stream Name	Stream Code	Criteria Affected	Source	Impaired Size (stream-mi) (lake-acres)	Reach Description	Projected TMDL Year (No Later Than)	2004 list?
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LOWER GUYANDOTTE WATERSHED - HUC# 05070102 - 45 streams 259 miles

Davis Creek	WVOG-3	CNA-Biological	Unknown	2.8	Entire length	2016	Yes
Merritt Creek	WVOG-10	CNA-Biological	Unknown	3.3	Entire length	2016	Yes
Smith Creek	WVOG-11	CNA-Biological	Unknown	3.7	Entire length	2016	Yes
Madison Creek	WVOG-17	CNA-Biological	Unknown	4.0	Entire length	2016	Yes
Fourmile Creek	WVOG-27	CNA-Biological	Unknown	8.0	Entire length	2021	No
Ninemile Creek	WVOG-31	CNA-Biological	Unknown	7.1	Entire length	2021	No
Tenmile Creek	WVOG-32	CNA-Biological	Unknown	7.5	Entire length	2021	No
Lick Branch	WVOG-34-A	CNA-Biological	Unknown	2.3	Entire length	2016	Yes
Aarons Creek	WVOG-35	CNA-Biological	Unknown	3.0	Entire length	2016	Yes
Laurel Creek	WVOG-38-D	CNA-Biological	Unknown	2.8	Mouth to RM 2.8	2021	No
Dry Run	WVOG-41	CNA-Biological	Unknown	1.3	Entire length	2016	Yes
Short Bend Fork	WVOG-42-A	CNA-Biological	Unknown	1.2	Entire length	2016	Yes
Laurel Fork	WVOG-42-C	CNA-Biological	Unknown	1.7	Entire length	2016	Yes
West Fork	WVOG-44-A	CNA-Biological	Unknown	2.4	Entire length	2021	No
Smokehouse Fork	WVOG-44-E	CNA-Biological	Unknown	8.7	Entire length	2021	No
Bulwark Branch	WVOG-44-K	CNA-Biological	Unknown	1.6	Entire length	2016	Yes
Vickers Branch	WVOG-49-C	CNA-Biological	Unknown	1.2	Entire length	2016	Yes
UNT/Big Creek	WVOG-49-C.1	CNA-Biological	Unknown	0.3	Entire length	2016	Yes
Trace Fork	WVOG-49-D	CNA-Biological	Unknown	5.9	Entire length	2021	No
Hurricane Branch	WVOG-49-D-1	CNA-Biological	Unknown	1.9	Entire length	2021	No
Garrett Fork	WVOG-49-E	CNA-Biological	Unknown	4.0	Entire length	2021	No
Perrys Branch	WVOG-49-E-1	CNA-Biological	Unknown	1.0	Entire length	2016	Yes
South Fork/Crawley Creek	WVOG-51-G.5	CNA-Biological	Unknown	1.8	Entire length	2016	Yes
Fowler Branch	WVOG-51.5	CNA-Biological	Unknown	1.1	Entire length	2016	Yes
Mill Creek	WVOG-59	CNA-Biological	Unknown	2.4	Entire length	2016	Yes

2006 Section 303(d) List

Stream Name	Stream Code	Criteria Affected	Source	Impaired Size (stream-mi) (lake-acres)	Reach Description	Projected TMDL Year (No Later Than)	2004 list?
MUD RIVER SUBWATERSHED							
Mud River	WVOGM	CNA-Biological	Unknown	79.0	Entire length	2016	Yes
Little Cabell Creek	WVOGM-3	CNA-Biological	Unknown	3.3	Entire length	2016	Yes
Big Cabell Creek	WVOGM-4	CNA-Biological	Unknown	7.4	Entire length	2021	No
Fudges Creek	WVOGM-6	CNA-Biological	Unknown	6.7	Entire length	2021	No
Mill Creek	WVOGM-8	CNA-Biological	Unknown	4.2	Entire length	2021	No
Right Fork/Mill Creek	WVOGM-8-C	CNA-Biological	Unknown	2.8	Entire length	2016	Yes
Johns Branch	WVOGM-11	CNA-Biological	Unknown	2.5	Entire length	2021	No
Indian Fork	WVOGM-12	CNA-Biological	Unknown	6.5	Entire length	2016	Yes
Charley Creek	WVOGM-14	CNA-Biological	Unknown	8.7	Entire length	2021	No
Trace Fork	WVOGM-20	CNA-Biological	Unknown	17.9	RM 6.4 to HW	2016	Yes
Coon Creek	WVOGM-20-A	CNA-Biological	Unknown	3.3	Entire length	2016	Yes
Straight Fork	WVOGM-22-A	CNA-Biological	Unknown	1.9	Entire length	2016	Yes
Meadow Branch	WVOGM-25-A	CNA-Biological	Unknown	1.8	Entire length	2016	Yes
Straight Fork	WVOGM-25-H	CNA-Biological	Unknown	7.4	Entire length	2021	No
Valley Fork	WVOGM-25-H-1	CNA-Biological	Unknown	2.9	Entire length	2016	Yes
Sugartree Fork	WVOGM-25-I	CNA-Biological	Unknown	3.0	Mouth to RM 3.0	2016	Yes
Big Creek	WVOGM-35	CNA-Biological	Unknown	1.8	Mouth to RM 1.8	2021	No
Left Fork/Mud River	WVOGM-39	CNA-Biological	Unknown	12.2	Entire length	2016	Yes
Stinson Branch	WVOGM-39-E	CNA-Biological	Unknown	2.6	Entire length	2021	No
Ballard Fork	WVOGM-49	CNA-Biological	Unknown	2.3	Entire length	2016	Yes

2006 Section 303(d) List

Stream Name	Stream Code	Criteria Affected	Source	Impaired Size (stream-mi) (lake-acres)	Reach Description	Projected TMDL Year (No Later Than)	2004 list?
MIDDLE OHIO NORTH WATERSHED - HUC# 05030201 - 16 streams 261 miles							
Ohio River (Middle North)	WVO-mn	Bacteria	Unknown	4.0	Ohio R from MP 131 to MP 127	2012	No
		Dioxin	Unknown	58.4	Ohio R from mp 172.2 (mouth of Muskingham R) to mp 113.8 (mouth of Fish Creek)	2012	No
		Iron	Unknown	58.4	Ohio R from mp 172.2 (mouth of Muskingham R) to mp 113.8 (mouth of Fish Creek)	2021	No
French Creek	WVO-57	CNA-Biological	Unknown	7.6	Entire length	2016	No
Little Fishing Creek	WVO-69-C	CNA-Biological	Unknown	5.6	From mouth to RM 5.6	2016	Yes
South Fork/Fishing Creek	WVO-69-N	CNA-Biological	Unknown	20.4	Entire length	2016	Yes
Price Run	WVO-69-N-9	CNA-Biological	Unknown	4.4	Entire length	2021	No
MIDDLE ISLAND CREEK SUBWATERSHED							
Middle Island Creek	WVOMI	CNA-Biological	Unknown	56.3	RM 22.4 to HW	2016	Yes
		Fecal Coliform	Unknown	78.7	Entire length	2016	Yes
		Iron	Unknown	78.7	Entire length	2016	Yes
		Mercury	Unknown	78.7	Entire length	2016	Yes
		PCBs	Unknown	78.7	Entire length	2021	No
Sancho Creek	WVOMI-21	CNA-Biological	Unknown	9.6	Entire length	2021	No
Elk Fork	WVOMI-23-B	CNA-Biological	Unknown	14.8	Entire length	2016	Yes
Mudlick Run	WVOMI-23-B-3	CNA-Biological	Unknown	2.1	Entire length	2016	Yes
Peach Fork	WVOMI-23-G	CNA-Biological	Unknown	0.4	Mouth to RM 0.4	2016	Yes
Indian Creek	WVOMI-29	CNA-Biological	Unknown	3.8	Mouth to RM 3.8	2016	Yes

2006 Section 303(d) List

Stream Name	Stream Code	Criteria Affected	Source	Impaired Size (stream-mi) (lake-acres)	Reach Description	Projected TMDL Year (No Later Than)	2004 list?
Big Run	WVOMI-29-A	CNA-Biological	Unknown	4.9	Entire length	2016	Yes
McElroy Creek	WVOMI-30	CNA-Biological	Unknown	22.1	Entire length	2016	Yes
Wilhelm Run	WVOMI-40-E	CNA-Biological	Unknown	3.5	Entire length	2016	Yes
Meathouse Fork	WVOMI-46	CNA-Biological	Unknown	19.7	Entire length	2016	Yes
Buckeye Run	WVOMI-47-C	CNA-Biological	Unknown	5.4	Entire length	2016	Yes

MIDDLE OHIO SOUTH WATERSHED - HUC# 05030202 - 19 streams 229 miles 1 Lake 278 acres

Ohio River (Middle South)	WVO-ms	Bacteria	Unknown	8.0	Ohio R from MP 185.0 to MP 177.0	2012	Yes
		Dioxin	Unknown	65.8	Ohio R from MP 238.0 to MP 172.2 (mouth of Muskingham R)	2012	Yes
		Iron	Unknown	93.5	Ohio R from MP 265.7 to MP 172.2 (mouth of Muskingham R)	2021	No
Oldtown Creek	WVO-21	CNA-Biological	Unknown	10.7	RM 8.7 to HW	2021	No
UNT/Robinson Run	WVO-21-B-0.9	CNA-Biological	Unknown	0.2	Entire length	2016	Yes
		Iron	Unknown	0.2	Entire length	2016	Yes
Trace Fork	WVO-21-C	CNA-Biological	Unknown	3.6	Mouth to RM 3.6	2021	No
Tenmile Creek	WVO-23	CNA-Biological	Unknown	8.9	Entire length	2021	No
Sliding Hill Creek	WVO-24	CNA-Biological	Unknown	4.8	Entire length	2016	Yes
UNT/Sliding Hill Creek RM 1.2	WVO-24-A	CNA-Biological	Unknown	4.8	Entire length	2021	No
Little Mill Creek	WVO-31	CNA-Biological	Unknown	10.0	Entire length	2016	Yes
Parchment Creek	WVO-32-H	CNA-Biological	Unknown	2.4	Mouth to RM 2.4	2021	No
Grasslick Creek	WVO-32-L-7	CNA-Biological	Unknown	10.3	RM 3.0 to HW	2016	Yes
Elk Fork Lake	WVO-32-M-(L1)	Mercury	Unknown	278.0	Entire length	2016	Yes
		PCBs	Unknown	278.0	Entire length	2021	No

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Stream Name	Stream Code	Criteria Affected	Source	Impaired Size (stream-mi) (lake-acres)	Reach Description	Projected TMDL Year (No Later Than)	2004 list?
Spring Creek	WVO-33	CNA-Biological	Unknown	2.5	Entire length	2016	Yes
Sandy Creek	WVO-36	CNA-Biological	Unknown	22.0	Entire length	2016	Yes
Nesselroad Run	WVO-36-J-5	CNA-Biological	Unknown	7.6	Entire length	2016	Yes
Pond Creek	WVO-43	CNA-Biological	Unknown	5.8	Mouth to RM 5.8	2016	Yes
South Fork/Lee Creek	WVO-44-A	CNA-Biological	Unknown	11.2	Entire length	2016	Yes
North Fork/Lee Creek	WVO-44-B	CNA-Biological	Unknown	20.0	Entire length	2016	Yes
UNT/Sandy Creek RM 4.5	WVO-46-J	CNA-Biological	Unknown	1.7	Entire length	2021	No
Briscoe Run	WVO-49	CNA-Biological	Unknown	2.8	Entire length	2021	No
Big Run	WVO-50	CNA-Biological	Unknown	10.1	Entire length	2016	Yes

POTOMAC DIRECT DRAINS WATERSHED - HUC# 02070004 - 29 streams 183 miles

Elks Run	WVP-1	CNA-Biological	Unknown	6.3	Entire length	2006	No
		Fecal Coliform	Unknown	6.3	Entire length	2006	No
Elk Branch	WVP-1-A	CNA-Biological	Unknown	4.5	Entire length	2006	Yes
		Fecal Coliform	Unknown	4.5	Entire length	2006	No
Rattlesnake Run	WVP-2	CNA-Biological	Unknown	4.4	Entire length	2021	No
UNT/Potomac River RM 12.8 (Teague's Run)	WVP-2.2	CNA-Biological	Unknown	1.5	Entire length	2006	Yes
		Fecal Coliform	Unknown	1.5	Entire length	2006	No
Rockymarsh Run	WVP-3	CNA-Biological	Unknown	4.7	Entire length	2021	No
Opequon Creek	WVP-4	Aluminum (d) (trout)	Unknown	30.7	Entire length	2016	Yes
		CNA-Biological	Unknown	30.7	Entire length	2006	Yes
		Fecal Coliform	Unknown	30.7	Entire length	2006	Yes
Hoke Run	WVP-4-A	CNA-Biological	Unknown	3.3	Entire length	2006	No
		Fecal Coliform	Unknown	3.3	Entire length	2006	No

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Stream Name	Stream Code	Criteria Affected	Source	Impaired Size (stream-mi) (lake-acres)	Reach Description	Projected TMDL Year (No Later Than)	2004 list?
Eagle Run	WVP-4-B	CNA-Biological	Unknown	1.2	Entire length	2006	Yes
		Fecal Coliform	Unknown	1.2	Entire length	2006	No
Tuscarora Creek	WVP-4-C	CNA-Biological	Unknown	7.0	Mouth to RM 7.0	2006	Yes
		Fecal Coliform	Unknown	11.6	Entire length	2006	No
Dry Run	WVP-4-C-1	CNA-Biological	Unknown	4.6	Entire length	2006	Yes
		Fecal Coliform	Unknown	4.6	Entire length	2006	No
Evans Run	WVP-4-D	CNA-Biological	Unknown	5.8	Entire length	2006	Yes
Shaw Run	WVP-4-F	CNA-Biological	Unknown	2.2	Entire length	2006	No
		Fecal Coliform	Unknown	2.2	Entire length	2006	No
Buzzard Run	WVP-4-H	Fecal Coliform	Unknown	2.6	Entire length	2006	No
Hopewell Run	WVP-4-I	CNA-Biological	Unknown	3.5	Entire length	2006	Yes
		Fecal Coliform	Unknown	3.5	Entire length	2006	No
UNT/Hopewell Run RM 1.7	WVP-4-I-2	CNA-Biological	Unknown	2.6	Entire length	2006	No
		Fecal Coliform	Unknown	2.6	Entire length	2006	No
Middle Creek	WVP-4-J	CNA-Biological	Unknown	11.7	Entire length	2006	Yes
		Fecal Coliform	Unknown	11.7	Entire length	2006	No
Goose Creek	WVP-4-J-1	Fecal Coliform	Unknown	3.0	Entire length	2006	No
Three Run	WVP-4-L	Fecal Coliform	Unknown	2.2	Entire length	2006	No
Mill Creek	WVP-4-M	CNA-Biological	Unknown	11.4	Entire length	2006	Yes
		Fecal Coliform	Unknown	11.4	Entire length	2006	No
Sylvan Run	WVP-4-M-1	CNA-Biological	Unknown	4.5	Entire length	2006	Yes
Torytown Run	WVP-4-M-2	CNA-Biological	Unknown	2.4	Entire length	2006	Yes
		Fecal Coliform	Unknown	2.4	Entire length	2006	No
Turkey Run	WVP-4-N	CNA-Biological	Unknown	5.1	Entire length	2006	No
		Fecal Coliform	Unknown	5.1	Entire length	2006	No

2006 Section 303(d) List

Stream Name	Stream Code	Criteria Affected	Source	Impaired Size (stream-mi) (lake-acres)	Reach Description	Projected TMDL Year (No Later Than)	2004 list?
Silver Spring Run	WVP-4-P	CNA-Biological	Unknown	3.2	Entire length	2006	Yes
		Fecal Coliform	Unknown	3.2	Entire length	2006	No
Jordan Run	WVP-4.5	Fecal Coliform	Unknown	1.9	Entire length	2006	No
Harlan Run	WVP-5	CNA-Biological	Unknown	7.2	Entire length	2006	Yes
		Fecal Coliform	Unknown	7.2	Entire length	2006	No
Tullis Branch	WVP-5-A	CNA-Biological	Unknown	4.2	Entire length	2006	No
		Fecal Coliform	Unknown	4.2	Entire length	2006	No
Sleepy Creek	WVP-9	Fecal Coliform	Unknown	29.7	Mouth to RM 18.0 & RM 26.7 to HW	2006	No
Middle Fork/Sleepy Creek	WVP-9-E	CNA-Biological	Unknown	4.7	RM 7.0 to HW	2021	No
Indian Run	WVP-9-G	Fecal Coliform	Unknown	2.0	Entire length	2006	No

TUG FORK WATERSHED - HUC# 05070201 - 18 streams 201 miles

Tug Fork River	WVBST	CNA-Biological	Unknown	103.4	RM 51.6 to HW	2016	Yes
		Fecal Coliform	Unknown	35.7	Mouth to RM 35.7	2021	No
Lost Creek	WVBST-7	CNA-Biological	Unknown	4.5	Entire length	2021	No
Silver Creek	WVBST-16	CNA-Biological	Unknown	2.5	Entire length	2016	Yes
Sulphur Creek	WVBST-41	CNA-Biological	Unknown	1.7	Entire length	2016	Yes
Bull Creek	WVBST-57	Fecal Coliform	Unknown	4.9	Entire length	2021	No
Left Fork/Bull Creek	WVBST-57-B	Fecal Coliform	Unknown	2.0	Entire length	2021	No
Greenbrier Fork	WVBST-60-A	CNA-Biological	Unknown	3.5	Entire length	2016	Yes
Horse Creek	WVBST-63	CNA-Biological	Unknown	4.6	Entire length	2021	No
Grapevine Branch	WVBST-70-F	CNA-Biological	Unknown	1.8	Entire length	2016	Yes
Wolfpen Branch	WVBST-70-M-3	CNA-Biological	Unknown	1.6	Entire length	2016	Yes
Jacobs Fork	WVBST-70-W	Fecal Coliform	Unknown	10.6	Entire length	2021	No
Mountain Fork	WVBST-70-W-1-A	CNA-Biological	Unknown	3.6	Entire length	2016	Yes

WEST VIRGINIA

2006 Section 303(d) List

WEST VIRGINIA

Stream Name	Stream Code	Criteria Affected	Source	Impaired Size (stream-mi) (lake-acres)	Reach Description	Projected TMDL Year (No Later Than)	2004 list?
Badway Branch	WVBST-78-G	CNA-Biological	Unknown	1.3	Entire length	2016	Yes
Upper Shannon Branch	WVBST-95	CNA-Biological	Unknown	2.4	Entire length	2016	Yes
North Fork/Elkhorn Creek	WVBST-99-L	Fecal Coliform	Unknown	8.0	Entire length	2021	No
Windmill Gap Branch	WVBST-99-L-4	Fecal Coliform	Unknown	2.8	Entire length	2021	No
Rock Narrows Branch	WVBST-103	CNA-Biological	Unknown	1.7	Entire length	2016	Yes
Little Creek	WVBST-120	Fecal Coliform	Unknown	4.2	Entire length	2021	No

2006 Section 303(d) List

Stream Name	Stream Code	Criteria Affected	Source	Impaired Size (stream-mi) (lake-acres)	Reach Description	Projected TMDL Year (No Later Than)	2004 list?
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HYDROLOGIC GROUP D

GREENBRIER WATERSHED - HUC# 05050003 - 38 streams 439 miles

Greenbrier River	WVKNG	Fecal Coliform	Unknown	159.8	Entire length	2007	No
Big Creek	WVKNG-3	Fecal Coliform	Unknown	6.0	Entire length	2007	No
Hungard Creek	WVKNG-13	Fecal Coliform	Unknown	9.2	Entire length	2007	No
Kelly Creek	WVKNG-15	Fecal Coliform	Unknown	5.0	Entire length	2007	No
Flint Hollow	WVKNG-15-A	Fecal Coliform	Unknown	2.2	Entire length	2007	No
Wolf Creek	WVKNG-18	Fecal Coliform	Unknown	10.1	Entire length	2007	No
Laurel Creek	WVKNG-18-A	Fecal Coliform	Unknown	7.0	Entire length	2007	No
Broad Run	WVKNG-18-B	Fecal Coliform	Unknown	4.6	Entire length	2007	No
Muddy Creek	WVKNG-22	Fecal Coliform	Unknown	20.9	Entire length	2007	No
Mill Creek	WVKNG-22-A	Fecal Coliform	Unknown	8.2	Entire length	2007	No
Kitchen Creek	WVKNG-22-C	Fecal Coliform	Unknown	10.0	Entire length	2007	No
UNT/Muddy Creek RM 19.8	WVKNG-22-E	Fecal Coliform	Unknown	0.1	Entire length	2007	No
Sinking Creek	WVKNG-22-E-1-(S)	Fecal Coliform	Unknown	1.0	Entire length	2007	No
Hughart Creek	WVKNG-22-E-1-A-(S)	Fecal Coliform	Unknown	1.0	Entire length	2007	No
Milligan Creek	WVKNG-22.7-A-1-(S)	Fecal Coliform	Unknown	7.0	Entire length	2007	No
Second Creek	WVKNG-23	Fecal Coliform	Unknown	21.5	RM 6.5 to HW	2007	Yes
Back Creek	WVKNG-23-H	Fecal Coliform	Unknown	3.5	Entire length	2007	No
Kitchen Creek	WVKNG-23-G	Fecal Coliform	Unknown	5.6	Entire length	2007	No
Monroe Draft	WVKNG-25-A	Fecal Coliform	Unknown	2.7	Mouth to RM 2.7	2007	No
Little Creek	WVKNG-28-D	Fecal Coliform	Unknown	9.4	Entire length	2007	No
Whites Draft	WVKNG-28-F	Fecal Coliform	Unknown	2.0	Mouth to RM 2.0	2007	No
UNT/Whites Draft RM 2.0	WVKNG-28-F-2	Fecal Coliform	Unknown	3.5	Entire length	2007	No
Meadow Creek	WVKNG-28-Q	Fecal Coliform	Unknown	2.6	Mouth to RM 2.6	2007	No

2006 Section 303(d) List

Stream Name	Stream Code	Criteria Affected	Source	Impaired Size (stream-mi) (lake-acres)	Reach Description	Projected TMDL Year (No Later Than)	2004 list?
Spring Creek	WVKNG-30	Fecal Coliform	Unknown	23.6	Entire length	2007	No
Beaver Creek	WVKNG-47	Fecal Coliform	Unknown	8.6	Entire length	2007	No
Swago Creek	WVKNG-49	Fecal Coliform	Unknown	3.8	Entire length	2007	No
Knapp Creek	WVKNG-53	Fecal Coliform	Unknown	26.3	Mouth to RM 26.3	2007	No
Browns Creek	WVKNG-53-D	Fecal Coliform	Unknown	5.8	Entire length	2007	No
Douthat Creek	WVKNG-53-H	Fecal Coliform	Unknown	9.1	Entire length	2007	No
Stony Creek	WVKNG-55	Fecal Coliform	Unknown	3.0	Mouth to RM 3.0	2007	No
Indian Draft	WVKNG-55-A	Fecal Coliform	Unknown	4.4	Entire length	2007	No
Thorny Creek	WVKNG-59	Fecal Coliform	Unknown	9.9	RM 0.1 to HW	2007	No
UNT/Thorny Creek RM 9.3	WVKNG-59-E	Fecal Coliform	Unknown	1.1	Entire length	2007	No
Clover Creek	WVKNG-61	Fecal Coliform	Unknown	9.0	Entire length	2007	No
Shock Run	WVKNG-66-D	Fecal Coliform	Unknown	2.6	Mouth to RM 2.6	2007	No
Galford Run	WVKNG-66-E	Fecal Coliform	Unknown	5.2	Mouth to RM 5.2	2007	No
Deer Creek	WVKNG-68	Fecal Coliform	Unknown	17.3	RM 0.1 to HW	2007	No
Buffalo Run	WVKNG-68-F	Fecal Coliform	Unknown	3.0	Mouth to RM 3.0	2007	No
Allegheny Run	WVKNG-75	Fecal Coliform	Unknown	2.6	Entire length	2007	No

JAMES WATERSHED - HUC# 02080201 - 3 streams 4 miles

South Fork/Potts Creek	WVJ-1-E	Fecal Coliform	Unknown	1.3	Mouth to RM 1.3	2007	No
Ray Fork	WVJ-1-E-1	CNA-Biological	Unknown	1.8	Entire length	2007	No
		Fecal Coliform	Unknown	1.0	Mouth to RM 1.0	2007	No
UNT/Sweet Springs Creek RM 5.4	WVJ-2-H	Fecal Coliform	Unknown	1.1	Entire length	2007	No

2006 Section 303(d) List

Stream Name	Stream Code	Criteria Affected	Source	Impaired Size (stream-mi) (lake-acres)	Reach Description	Projected TMDL Year (No Later Than)	2004 list?
LITTLE KANAWHA WATERSHED - HUC# 05030203 - 25 streams 370 miles 1 Lake 968 acres							
Little Kanawha River	WVLK	Fecal Coliform	Unknown	132.6	Mouth to RM 132.6 (Burnsville Dam)	2017	No
		pH	Unknown	6.9	RM 162.1 to HW	2017	Yes
		PCBs	Unknown	169.0	Entire length	2017	No
Burnsville Lake	WVLK-(L1)	Mercury	Unknown	968.0	Entire length	2017	Yes
Leading Creek	WVLK-40	CNA-Biological	Unknown	5.6	Mouth to RM 5.6	2017	Yes
Tanner Creek	WVLK-66	CNA-Biological	Unknown	15.3	Entire length	2017	Yes
Jones Cabin Run	WVLK-66-E-4	CNA-Biological	Unknown	1.9	Entire length	2017	Yes
Duck Creek	WVLK-82	CNA-Biological	Unknown	2.3	Mouth to RM 2.3	2007	Yes
		Iron	Unknown	2.2	RM 1.5 to HW	2007	Yes
Lynch Run	WVLK-85	CNA-Biological	Unknown	0.9	Mouth to RM 0.9	2007	Yes
		Fecal Coliform	Unknown	0.9	Mouth to RM 0.9	2007	No
		Manganese	Unknown	0.3	RM 0.2 to RM 0.5	2007	Yes
UNT/Lynch Run RM 0.9	WVLK-85-C	Iron	Unknown	0.9	Entire length	2007	No
Duskcamp Run	WVLK-88	Fecal Coliform	Unknown	3.5	Entire length	2007	No
		Iron	Mine Drainage	3.5	Entire length	2007	Yes
Right Fork/Duskcamp Run	WVLK-88-A	CNA-Biological	Unknown	2.6	Entire length	2007	No
Copen Run	WVLK-90	Fecal Coliform	Unknown	5.2	Entire length	2007	No
Right Fork/Little Kanawha River	WVLK-115	pH	Unknown	13.7	RM 0.4 to HW	2017	Yes
Left Fork/Right Fork/Little Kanawha River	WVLK-115-H	pH	Unknown	7.1	Entire length	2017	Yes
UNT/Little Kanawha River RM 171.2 (Ellis Run)	WVLK-130.5	pH	Unknown	2.6	Entire length	2017	Yes
Getout Run	WVLK-131	pH	Unknown	2.5	Entire length	2017	Yes

2006 Section 303(d) List

Stream Name	Stream Code	Criteria Affected	Source	Impaired Size (stream-mi) (lake-acres)	Reach Description	Projected TMDL Year (No Later Than)	2004 list?
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HUGHES RIVER SUBWATERSHED

Hughes River	WVLKH	Mercury	Unknown	13.8	Entire length	2017	Yes
		PCBs	Unknown	13.8	Entire length	2017	No
Goose Creek	WVLKH-4	CNA-Biological	Unknown	10.0	Mouth to RM 10.0	2017	Yes
South Fork/Hughes River	WVLKH-9	CNA-Biological	Unknown	31.0	RM 1.0 to RM 32.0	2017	Yes
Indian Creek	WVLKH-9-J	CNA-Biological	Unknown	7.5	Mouth to RM 7.5	2017	Yes
Middle Fork/South Fork/Hughes River	WVLKH-9-AA	CNA-Biological	Unknown	11.0	Entire length	2017	Yes

STEER CREEK SUBWATERSHED

Rush Run	WVLKS-4	CNA-Biological	Unknown	3.0	Entire length	2017	Yes
Right Fork/Steer Creek	WVLKS-9	CNA-Biological	Unknown	25.4	Entire length	2017	Yes
Left Fork/Steer Creek	WVLKS-10	CNA-Biological	Unknown	24.5	Entire length	2017	Yes
Whiteoak Run	WVLKS-10-D	CNA-Biological	Unknown	1.9	Entire length	2017	Yes
Steer Run	WVLKS-10-E	CNA-Biological	Unknown	5.1	Entire length	2017	Yes
Bender Run	WVLKS-10-P	CNA-Biological	Unknown	2.5	Entire length	2017	Yes

LOWER NEW WATERSHED - HUC# 05050004 - 33 streams 265 miles

New River (Lower)	WVKN-lo	Fecal Coliform	Unknown	68.4	Entire length (to Bluestone Dam)	2007	No
Laurel Creek	WVKN-5	Fecal Coliform	Unknown	9.8	Entire length	2007	No
Mill Creek	WVKN-7	Fecal Coliform	Unknown	3.9	Mouth to RM 3.9	2007	No
UNT/Mill Creek RM 1.7	WVKN-7-0.5A	Fecal Coliform	Unknown	1.0	Entire length	2007	No
Osborne Creek	WVKN-7-B	CNA-Biological	Unknown	2.6	Mouth to RM 2.6	2007	Yes
		Fecal Coliform	Unknown	4.8	Entire length	2007	No
UNT/Osborne Creek RM 0.7	WVKN-7-B-0.3	Fecal Coliform	Unknown	1.4	Entire length	2007	No
Marr Branch	WVKN-9	CNA-Biological	Unknown	2.8	Entire length	2007	Yes
		Fecal Coliform	Unknown	0.7	RM 0.2 to RM 0.9	2007	Yes

2006 Section 303(d) List

Stream Name	Stream Code	Criteria Affected	Source	Impaired Size (stream-mi) (lake-acres)	Reach Description	Projected TMDL Year (No Later Than)	2004 list?
UNT/Marr Branch RM 0.9	WVKN-9-A	CNA-Biological	Unknown	1.0	Entire length	2007	No
		Fecal Coliform	Unknown	1.0	Entire length	2007	No
Wolf Creek	WVKN-10	CNA-Biological	Unknown	10.0	Entire length	2007	Yes
		Fecal Coliform	Unknown	7.5	Mouth to RM 2.6 & RM 5.1 to HW	2007	Yes
House Branch	WVKN-10-A	Fecal Coliform	Unknown	3.6	Entire length	2007	No
Crooked Run	WVKN-10-B	Fecal Coliform	Unknown	2.2	Entire length	2007	No
Short Creek	WVKN-10-C	Fecal Coliform	Unknown	1.8	Entire length	2007	No
UNT/Wolf Creek RM 8.7	WVKN-10-M	Aluminum (d)	Unknown	0.9	Entire length	2007	No
		Iron	Unknown	0.9	Entire length	2007	No
		pH	Unknown	0.9	Entire length	2007	No
Keeney Creek	WVKN-15	Fecal Coliform	Unknown	5.2	Mouth to RM 5.2	2007	Yes
Coal Run	WVKN-16	Fecal Coliform	Unknown	2.6	Entire length	2007	Yes
Floyd Creek	WVKN-17-B	Aluminum (d)	Unknown	3.0	Entire length	2007	No
		CNA-Biological	Unknown	3.0	Entire length	2007	Yes
		Iron	Mine Drainage	3.0	Entire length	2007	Yes
		pH	Unknown	3.0	Entire length	2007	No
Arbuckle Creek	WVKN-21	CNA-Biological	Unknown	6.2	Entire length	2007	Yes
		Fecal Coliform	Unknown	6.2	Entire length	2007	Yes
Rocklick Creek	WVKN-21-A	Fecal Coliform	Unknown	1.8	Entire length	2007	No
Mill Creek	WVKN-22-K	CNA-Biological	Unknown	5.0	Entire length	2007	Yes
		Iron	Unknown	4.9	RM 0.1 to HW	2007	No
		pH	Unknown	4.9	RM 0.1 to HW	2007	No
Piney Creek	WVKN-26	Fecal Coliform	Unknown	20.6	Mouth to RM 20.6	2007	Yes
		Iron (trout)	Unknown	33.5	Entire length	2007	No
Batoff Creek	WVKN-26-A	Iron	Unknown	2.9	RM 0.7 to HW	2007	Yes
		pH	Unknown	2.9	RM 0.7 to HW	2007	Yes

2006 Section 303(d) List

Stream Name	Stream Code	Criteria Affected	Source	Impaired Size (stream-mi) (lake-acres)	Reach Description	Projected TMDL Year (No Later Than)	2004 list?
Cranberry Creek	WVKN-26-E	CNA-Biological	Unknown	6.0	Entire length	2007	Yes
		Fecal Coliform	Unknown	6.0	Entire length	2007	No
		Iron	Unknown	6.0	Entire length	2007	No
Little Whitestick Creek	WVKN-26-E-1	Fecal Coliform	Unknown	4.0	Entire length	2007	Yes
Beaver Creek	WVKN-26-F	CNA-Biological	Unknown	9.1	Mouth to RM 9.1	2007	No
		Fecal Coliform	Unknown	11.6	Entire length	2007	No
		Iron (trout)	Unknown	11.6	Entire length	2007	No
Little Beaver Creek	WVKN-26-F-2	CNA-Biological	Unknown	9.9	Entire length	2007	Yes
		Fecal Coliform	Unknown	9.9	Entire length	2007	No
Whitestick Creek	WVKN-26-G	CNA-Biological	Unknown	5.9	Entire length	2007	Yes
		Fecal Coliform	Unknown	5.9	Entire length	2007	No
Soak Creek	WVKN-26-K	Fecal Coliform	Unknown	5.5	Entire length	2007	No
Bowyer Creek	WVKN-26-M	Fecal Coliform	Unknown	4.4	Entire length	2007	No
		Iron	Mine Drainage	4.4	Entire length	2007	Yes
Laurel Creek	WVKN-26-N	Fecal Coliform	Unknown	5.1	Mouth to RM 5.1	2007	No
		Iron	Mine Drainage	5.1	Mouth to RM 5.1	2007	Yes
Glade Creek	WVKN-29	CNA-Biological	Unknown	15.5	RM 8.4 to HW	2007	Yes
		Fecal Coliform	Unknown	20.2	RM 0.2 to RM 12.3 & RM 14.4 to RM 22.5	2007	No
Meadow Creek	WVKN-32	Fecal Coliform	Unknown	8.8	Mouth to RM 8.8	2007	Yes
Brooks Branch	WVKN-42	Fecal Coliform	Unknown	1.7	Mouth to RM 1.7	2007	No
Madam Creek	WVKN-44	Fecal Coliform	Unknown	6.2	Entire length	2007	Yes

2006 Section 303(d) List

Stream Name	Stream Code	Criteria Affected	Source	Impaired Size (stream-mi) (lake-acres)	Reach Description	Projected TMDL Year (No Later Than)	2004 list?
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MONONGAHELA WATERSHED - HUC# 05020003 - 14 streams 130 miles

Monongahela River	WVM	Fecal Coliform	Unknown	37.5	Entire length	2017	Yes
		PCBs	Unknown	37.5	Entire length	2017	No
UNT/Camp Run RM 0.8	WVM-2.1-A	CNA-Biological	Unknown	1.5	Entire length	2017	Yes
UNT/Kanes Creek RM 2.6	WVM-8-I-1	Iron	Unknown	0.8	Entire length	2017	Yes
		pH	Unknown	0.8	Entire length	2017	Yes
UNT/Deckers Creek RM 18.6	WVM-8-J	Lead	Unknown	1.5	Entire length	2017	Yes
Cobun Creek	WVM-9	pH	Unknown	2.4	RM 7.9 to HW	2017	Yes
Booths Creek	WVM-10	Aluminum (d) (trout)	Unknown	9.6	Entire length	2017	Yes
Indian Creek	WVM-17	CNA-Biological	Unknown	9.4	Entire length	2017	Yes
		Iron	Unknown	9.4	Entire length	2017	Yes
Grassy Run	WVM-19-E	CNA-Biological	Unknown	2.5	Entire length	2017	Yes
Paw Paw Creek	WVM-22	CNA-Biological	Unknown	12.7	RM 1.7 to HW	2017	Yes
Buffalo Creek	WVM-23	CNA-Biological	Unknown	30.2	Entire length	2017	Yes
Mahan Run	WVM-23-L	CNA-Biological	Unknown	3.6	Entire length	2017	No
Pyles Fork	WVM-23-O	CNA-Biological	Unknown	11.0	Entire length	2017	Yes
Dents Run	WVM-23-P	CNA-Biological	Unknown	5.1	Entire length	2017	Yes
Whetstone Run	WVM-23-Q	CNA-Biological	Unknown	2.6	Entire length	2017	No

UPPER NEW WATERSHED - HUC# 05050002 - 55 streams 386 miles 2 Lake 2110 acres

Beech Run	WVKN-45	Fecal Coliform	Unknown	1.4	Mouth to RM 1.4	2007	No
Bluestone Lake	WVKN-(L1)	PCBs	Unknown	2040.0	Entire length	2017	No
Indian Creek	WVKN-51	CNA-Biological	Unknown	3.4	RM 30.6 to HW	2007	No
		Fecal Coliform	Unknown	7.3	RM 8.5 to HW	2007	No
Bradshaw Creek	WVKN-51-A	Fecal Coliform	Unknown	4.8	Entire length	2007	No
Stinking Lick Creek	WVKN-51-B	Fecal Coliform	Unknown	6.2	Entire length	2007	No

2006 Section 303(d) List

Stream Name	Stream Code	Criteria Affected	Source	Impaired Size (stream-mi) (lake-acres)	Reach Description	Projected TMDL Year (No Later Than)	2004 list?
Hans Creek	WVKN-51-D	Fecal Coliform	Unknown	15.8	Entire length	2007	No
Indian Draft	WVKN-51-G	Fecal Coliform	Unknown	4.0	Entire length	2007	No
UNT/Indian Draft RM 1.5	WVKN-51-G-1	Fecal Coliform	Unknown	1.4	Entire length	2007	No
Laurel Creek	WVKN-51-H-(S)	Fecal Coliform	Unknown	10.2	Entire length	2007	No
Cooks Run	WVKN-51-I	Fecal Coliform	Unknown	3.0	Entire length	2007	No
Rock Camp Creek	WVKN-51-K	Fecal Coliform	Unknown	6.2	Entire length	2007	No
Turkey Creek	WVKN-51-O	Fecal Coliform	Unknown	10.0	Entire length	2007	No
Gin Hollow	WVKN-51-R	Fecal Coliform	Unknown	1.4	Entire length	2007	No
Burnside Branch	WVKN-51-S-1-(S)	Fecal Coliform	Unknown	6.2	Entire length	2007	No
Adair Run	WVKN-59	Fecal Coliform	Unknown	3.7	Mouth to RM 3.7	2007	No
East River	WVKN-60	Fecal Coliform	Unknown	22.9	Entire length	2007	No
Fivemile Creek	WVKN-60-C	Fecal Coliform	Unknown	6.0	Entire length	2007	No
Possum Hollow	WVKN-60-C-2	Fecal Coliform	Unknown	8.4	Entire length	2007	No
Hales Branch	WVKN-60-C-3	Fecal Coliform	Unknown	1.0	Entire length	2007	No
Payne Branch	WVKN-60-C-4	Fecal Coliform	Unknown	3.0	Entire length	2007	No
Rich Creek	WVKN-61	Fecal Coliform	Unknown	10.6	Mouth to RM 10.6	2007	No
Brush Creek	WVKN-61-A	Fecal Coliform	Unknown	5.0	Mouth to RM 5.0	2007	No
Scott Branch	WVKN-61-B	Fecal Coliform	Unknown	2.6	Entire length	2007	No
Crooked Creek	WVKN-61-C	Fecal Coliform	Unknown	4.2	Entire length	2007	No
Mud Run	WVKN-61-D	Fecal Coliform	Unknown	2.8	Entire length	2007	No
Dry Creek	WVKN-61-E	CNA-Biological	Unknown	2.9	Mouth to RM 2.9	2007	Yes
		Fecal Coliform	Unknown	6.0	Entire length	2007	No
Painter Run	WVKN-61-E-1	Fecal Coliform	Unknown	2.6	Entire length	2007	No

2006 Section 303(d) List

Stream Name	Stream Code	Criteria Affected	Source	Impaired Size (stream-mi) (lake-acres)	Reach Description	Projected TMDL Year (No Later Than)	2004 list?
BLUESTONE RIVER SUBWATERSHED							
Bluestone River	WVKNB	CNA-Biological	Unknown	67.1	Entire length	2007	No
		Fecal Coliform	Unknown	67.1	Entire length	2007	Yes
		PCBs	Unknown	67.1	Entire length	2017	No
Pipestem Creek	WVKNB-1	Fecal Coliform	Unknown	9.6	Entire length	2007	No
Suck Creek	WVKNB-3-A	Fecal Coliform	Unknown	5.6	Entire length	2007	No
UNT/Jumping Branch RM 2.0	WVKNB-3-C-1-D	Fecal Coliform	Unknown	1.2	Entire length	2007	No
UNT/Jumping Branch RM 2.5	WVKNB-3-C-1-E	Fecal Coliform	Unknown	1.0	Entire length	2007	No
Mountain Creek	WVKNB-5	Fecal Coliform	Unknown	2.6	Mouth to RM 2.6	2007	Yes
North Fork/Mountain Creek	WVKNB-5-B	Fecal Coliform	Unknown	5.7	Entire length	2007	No
Brush Creek	WVKNB-12	CNA-Biological	Unknown	19.2	RM 1.1 to HW	2007	Yes
		Fecal Coliform	Unknown	20.3	Entire length	2007	No
Laurel Creek	WVKNB-12-B	Fecal Coliform	Unknown	8.8	Entire length	2007	No
Gladly Fork	WVKNB-12-H	Fecal Coliform	Unknown	3.0	Entire length	2007	No
South Fork/Brush Creek	WVKNB-12-J	Fecal Coliform	Unknown	7.0	Entire length	2007	No
Middle Fork/South Fork/Brush Creek	WVKNB-12-J-2	Fecal Coliform	Unknown	3.1	Entire length	2007	No
Kee Reservoir	WVKNB-12-J-2-(L1)	PCBs	Unknown	70.0	Entire length	2017	No
Camp Creek	WVKNB-13	Fecal Coliform	Unknown	14.5	Entire length	2007	No
Wolf Creek	WVKNB-15	Fecal Coliform	Unknown	7.9	Entire length	2007	No
Rich Creek	WVKNB-18	Fecal Coliform	Unknown	10.9	Entire length	2007	No
		Iron	Unknown	9.9	RM 1.0 to HW	2007	No
Blacklick Creek	WVKNB-22	Fecal Coliform	Unknown	7.8	Entire length	2007	No
Rocky Branch	WVKNB-22-A	Fecal Coliform	Unknown	2.8	Entire length	2007	No
Barn Branch	WVKNB-22-C	Fecal Coliform	Unknown	2.2	Entire length	2007	No
Widemouth Creek	WVKNB-28	Fecal Coliform	Unknown	6.6	Entire length	2007	No

WEST VIRGINIA

2006 Section 303(d) List

WEST VIRGINIA

Stream Name	Stream Code	Criteria Affected	Source	Impaired Size (stream-mi) (lake-acres)	Reach Description	Projected TMDL Year (No Later Than)	2004 list?
Righthand Fork/Widemouth Creek	WVKNB-28-B	CNA-Biological	Unknown	7.8	Entire length	2007	Yes
		Fecal Coliform	Unknown	7.8	Entire length	2007	No
Lefthand Fork/Widemouth Creek	WVKNB-28-C	Fecal Coliform	Unknown	5.6	Entire length	2007	No
Crane Creek	WVKNB-30	CNA-Biological	Unknown	6.8	Entire length	2007	Yes
		Fecal Coliform	Unknown	6.8	Entire length	2007	No
		Iron (trout)	Unknown	6.8	Entire length	2007	No
Belcher Branch	WVKNB-30-C	Iron	Unknown	2.2	Entire length	2007	No
UNT/Crane Creek RM 4.5	WVKNB-30-D.5	Fecal Coliform	Unknown	1.3	Entire length	2007	No
Simmons Creek	WVKNB-33	CNA-Biological	Unknown	3.0	Entire length	2007	Yes
		Fecal Coliform	Unknown	3.0	Entire length	2007	No
		Iron	Unknown	3.0	Entire length	2007	No
Laurel Fork	WVKNB-34.5	CNA-Biological	Unknown	1.2	Entire length	2007	No
		Fecal Coliform	Unknown	1.2	Entire length	2007	No
Butt Hollow	WVKNB-35	Fecal Coliform	Unknown	2.1	Entire length	2007	No
Brush Fork	WVKNB-36	CNA-Biological	Unknown	6.8	Entire length	2007	No
		Fecal Coliform	Unknown	6.8	Entire length	2007	No
Neil Hollow	WVKNB-37	Fecal Coliform	Unknown	4.8	Entire length	2007	No

2006 Section 303(d) List

Stream Name	Stream Code	Criteria Affected	Source	Impaired Size (stream-mi) (lake-acres)	Reach Description	Projected TMDL Year (No Later Than)	2004 list?
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HYDROLOGIC GROUP E

BIG SANDY WATERSHED - HUC# 05070204 - 12 streams 62 miles

Big Sandy River	WVBS	Iron	Unknown	26.6	Entire length	2018	No
Miller Creek	WVBS-1	CNA-Biological	Unknown	1.7	Entire length	2018	Yes
Cedar Run	WVBS-4	CNA-Biological	Unknown	1.1	RM 0.4 to HW (RM 1.5)	2018	Yes
Whites Creek	WVBS-5	CNA-Biological	Unknown	8.8	Entire length	2018	Yes
Balangee Branch	WVBS-5-A.9	CNA-Biological	Unknown	1.6	Entire length	2018	Yes
Gragston Creek	WVBS-6	CNA-Biological	Unknown	6.5	Entire length	2018	No
Elijah Creek	WVBS-7	CNA-Biological	Unknown	2.2	Entire length	2018	Yes
Gilkerson Branch	WVBS-7-B	CNA-Biological	Unknown	1.2	Entire length	2018	Yes
Hurricane Creek	WVBS-8	CNA-Biological	Unknown	7.9	Entire length	2018	No
Sugar Branch	WVBS-8-0.7A	CNA-Biological	Unknown	0.8	Entire length	2018	Yes
Tabor Creek	WVBS-10	CNA-Biological	Unknown	2.6	RM 1.0 to HW	2018	Yes
Redhead Branch	WVBS-13	CNA-Biological	Unknown	0.7	Entire length	2018	Yes

CACAPON WATERSHED - HUC# 02070003 - 4 streams 34 miles

Hiett Run	WVPC-7-D	CNA-Biological	Unknown	5.7	Entire length	2018	Yes
UNT/Bear Wallow Creek	WVPC-7-F-1-B	CNA-Biological	Unknown	3.4	Entire length	2018	Yes
Upper Cove Run	WVPC-24-K	CNA-Biological	Unknown	1.9	Mouth to RM 1.9	2018	Yes
Little Cacapon River	WVP-19	CNA-Biological	Unknown	23.3	RM 5.7 to HW	2018	Yes

2006 Section 303(d) List

Stream Name	Stream Code	Criteria Affected	Source	Impaired Size (stream-mi) (lake-acres)	Reach Description	Projected TMDL Year (No Later Than)	2004 list?
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DUNKARD WATERSHED - HUC# 05020005 - 14 streams 65 miles

Dunkard Creek	WVM-1	CNA-Biological	Unknown	17.9	RM 18.7 (PA/WV border) to RM 36.6 (Forks of WV and PA)	2008	Yes
		Iron	Mine Drainage	8.6	RM 18.7 (PA/WV border) to RM 27.3	2008	Yes
Dolls Run	WVM-1-A	CNA-Biological	Unknown	3.5	Mouth to RM 3.5	2008	Yes
Smoky Drain	WVM-1-A-2	CNA-Biological	Unknown	1.7	Entire length	2008	Yes
Ripleys Run	WVM-1-B	CNA-Biological	Unknown	0.5	Entire length	2008	Yes
Jakes Run	WVM-1-B.1	CNA-Biological	Unknown	9.2	Entire length	2008	Yes
Blacks Run	WVM-1-B.3	CNA-Biological	Unknown	0.4	Entire length	2008	Yes
Days Run	WVM-1-C	CNA-Biological	Unknown	8.4	Entire length	2008	Yes
UNT/Days Run RM 5.8	WVM-1-C-4	CNA-Biological	Unknown	1.2	Entire length	2008	Yes
Miracle Run	WVM-1-E	CNA-Biological	Unknown	7.6	Entire length	2008	Yes
Honey Run	WVM-1-E-2-A	CNA-Biological	Unknown	1.8	Entire length	2008	Yes
Building Run	WVM-1-E-5	CNA-Biological	Unknown	1.3	Entire length	2008	Yes
West Virginia Fork/Dunkard Creek	WVM-1-F	CNA-Biological	Unknown	5.8	Mouth to RM 5.8	2008	Yes
Wise Run	WVM-1-F-3	CNA-Biological	Unknown	2.2	Entire length	2008	Yes
Range Run	WVM-1-F-5	CNA-Biological	Unknown	3.5	Entire length	2008	Yes

LOWER OHIO WATERSHED - HUC# 05090101 - 14 streams 97 miles

Ohio River (Lower)	WVO-lo	Bacteria	Unknown	12.0	Ohio R from MP 316.0 to MP 304.0	2012	Yes
		Iron	Unknown	13.3	Ohio R from MP 279.0 to MP 265.7	2018	No
Fourpole Creek	WVO-3	CNA-Biological	Unknown	11.7	Entire length	2018	Yes
Sevenmile Creek	WVO-6	CNA-Biological	Unknown	5.9	Entire length	2018	Yes

2006 Section 303(d) List

Stream Name	Stream Code	Criteria Affected	Source	Impaired Size (stream-mi) (lake-acres)	Reach Description	Projected TMDL Year (No Later Than)	2004 list?
Ninemile Creek	WVO-7	CNA-Biological	Unknown	3.2	Mouth to RM 3.2	2018	Yes
Guyan Creek	WVO-9	CNA-Biological	Unknown	7.2	RM 5.3 to RM 12.5	2018	Yes
Spurlock Creek	WVO-9-A	CNA-Biological	Unknown	5.5	Entire length	2018	Yes
McCowan Branch	WVO-9-B	CNA-Biological	Unknown	2.5	Entire length	2018	Yes
Rocky Fork	WVO-10-A	CNA-Biological	Unknown	2.7	Entire length	2018	No
Mud Run	WVO-10-D	CNA-Biological	Unknown	1.5	Mouth to RM 1.5	2018	Yes
Sixteenmile Creek	WVO-11	CNA-Biological	Unknown	13.2	Mouth to RM 13.2	2018	Yes
Stonecoal Run	WVO-11-A	CNA-Biological	Unknown	2.5	Entire length	2018	Yes
Crab Creek	WVO-13	CNA-Biological	Unknown	6.7	Mouth to RM 6.7	2018	Yes
Mud Run	WVO-13-A	CNA-Biological	Unknown	4.4	Entire length	2018	Yes
Middle Fork	WVO-13-D	CNA-Biological	Unknown	4.3	Entire length	2018	Yes

TWELVEPOLE WATERSHED - HUC# 05090102 - 37 streams 202 miles 1 Lake 720 acres

Twelvepole Creek	WVO-2	CNA-Biological	Unknown	28.8	Mouth to RM 28.8	2018	Yes
		Fecal Coliform	Unknown	33.0	Entire length	2018	No
		Iron	Unknown	33.0	Entire length	2018	Yes
Krout Creek	WVO-2-0.1A	CNA-Biological	Unknown	2.4	Entire length	2018	Yes
UNT/Twelvepole Creek RM 5.5	WVO-2-0.8A	CNA-Biological	Unknown	2.0	Entire length	2018	Yes
Buffalo Creek	WVO-2-C	CNA-Biological	Unknown	4.5	Mouth to RM 4.5	2018	Yes
Camp Creek	WVO-2-G	CNA-Biological	Unknown	3.4	Entire length	2018	Yes
Right Fork/Camp Creek	WVO-2-G-1	CNA-Biological	Unknown	2.6	Entire length	2018	Yes
Beech Fork	WVO-2-H	CNA-Biological	Unknown	20.2	Mouth to RM 3.7 (dam) & Lake backwaters to HW	2018	Yes
Beech Fork Lake	WVO-2-H-(L1)	Mercury	Unknown	720.0	Entire length	2018	Yes
Rubens Branch	WVO-2-H-3	CNA-Biological	Unknown	1.3	RM 0.7 to HW	2018	Yes
Long Branch	WVO-2-H-7	CNA-Biological	Unknown	3.6	Entire length	2018	Yes

2006 Section 303(d) List

Stream Name	Stream Code	Criteria Affected	Source	Impaired Size (stream-mi) (lake-acres)	Reach Description	Projected TMDL Year (No Later Than)	2004 list?
Butler Branch	WVO-2-H-8	CNA-Biological	Unknown	1.8	Entire length	2018	Yes
Shoal Branch	WVO-2-M	CNA-Biological	Unknown	1.1	Entire length	2018	Yes
Left Fork/Wilson Creek	WVO-2-N-1	CNA-Biological	Unknown	2.2	Entire length	2018	Yes
Toms Creek	WVO-2-O	CNA-Biological	Unknown	2.6	Entire length	2018	Yes
West Fork/Twelvepole Creek	WVO-2-P	CNA-Biological	Unknown	26.8	Mouth to RM 16.1 & RM 30.2 to RM 40.9	2018	Yes
Big Branch	WVO-2-P-1	CNA-Biological	Unknown	2.2	Entire length	2018	Yes
Trace Fork	WVO-2-P-4	CNA-Biological	Unknown	4.5	Entire length	2018	Yes
Billy Branch	WVO-2-P-12	CNA-Biological	Unknown	2.8	Entire length	2018	Yes
Wells Branch	WVO-2-P-19	CNA-Biological	Unknown	1.7	Entire length	2018	Yes
Moses Fork	WVO-2-P-21	CNA-Biological	Unknown	3.7	Mouth to RM 3.7	2018	Yes
Right Fork/Moses Fork	WVO-2-P-21-C	CNA-Biological	Unknown	1.7	Entire length	2018	Yes
Breeden Creek	WVO-2-P-36	CNA-Biological	Unknown	3.2	Entire length	2018	No
Moses Fork	WVO-2-P-43	CNA-Biological	Unknown	2.5	Entire length	2018	Yes
East Fork/Twelvepole Creek	WVO-2-Q	CNA-Biological	Unknown	33.9	RM 4.4 to RM 10.5 (East Lynn Lake) & RM 22.9 (East Lynn Lake) to HW	2018	Yes
Camp Creek	WVO-2-Q-8	Iron	Mine Drainage	1.0	Entire length	2008	Yes
		pH	Mine Drainage	1.0	Entire length	2008	Yes
Left Fork/Camp Creek	WVO-2-Q-8-A	Iron	Mine Drainage	4.4	Entire length	2008	Yes
		pH	Mine Drainage	4.4	Entire length	2008	Yes
Tiger Fork	WVO-2-Q-8-A-1	CNA-Biological	Unknown	1.7	Entire length	2008	Yes
Right Fork/Camp Creek	WVO-2-Q-8-B	CNA-Biological	Unknown	3.6	Entire length	2008	Yes
Lynn Creek	WVO-2-Q-9	CNA-Biological	Unknown	1.9	Entire length	2018	Yes
Rich Creek	WVO-2-Q-14	Iron	Unknown	3.5	Entire length	2018	No
Cove Creek	WVO-2-Q-17	CNA-Biological	Unknown	4.8	Entire length	2018	Yes
Kiah Creek	WVO-2-Q-18	CNA-Biological	Unknown	11.7	Mouth to RM 11.7	2018	Yes

2006 Section 303(d) List

Stream Name	Stream Code	Criteria Affected	Source	Impaired Size (stream-mi) (lake-acres)	Reach Description	Projected TMDL Year (No Later Than)	2004 list?
Parker Branch	WVO-2-Q-18-D	CNA-Biological	Unknown	1.4	Mouth to RM 1.4 (impoundment)	2018	Yes
Rollem Fork	WVO-2-Q-18-E	CNA-Biological	Unknown	1.9	Entire length	2018	Yes
Copley Trace Branch	WVO-2-Q-18-G	CNA-Biological	Unknown	0.9	Mouth to RM 0.9	2018	Yes
Maynard Branch	WVO-2-Q-23	CNA-Biological	Unknown	0.4	Mouth to RM 0.4 (impoundment)	2018	Yes
Honey Branch	WVO-2-Q-29	CNA-Biological	Unknown	0.2	Mouth to RM 0.2 (impoundment)	2018	Yes
Right Fork/Cub Branch	WVO-2-Q-31-A	CNA-Biological	Unknown	1.1	Entire length	2018	Yes

UPPER GUYANDOTTE WATERSHED - HUC# 05070101 - 39 streams 145 miles 1 Lake 630 acres

Island Creek	WVOG-65	CNA-Biological	Unknown	18.1	Entire length	2018	Yes
R D Bailey Lake	WVOG-(L1)	PCBs	Unknown	630.0	Entire length	2018	No
Rockhouse Branch	WVOG-65-B-1-F	CNA-Biological	Unknown	2.3	Entire length	2018	Yes
Whitman Creek	WVOG-65-B-2	CNA-Biological	Unknown	6.8	Entire length	2018	Yes
Curry Branch	WVOG-65-B-5	CNA-Biological	Unknown	0.9	Entire length	2018	Yes
Mill Creek	WVOG-65-C	CNA-Biological	Unknown	1.6	Entire length	2018	Yes
Right Fork/Pine Creek	WVOG-65-H-1	CNA-Biological	Unknown	2.9	Entire length	2018	Yes
Cow Creek	WVOG-65-J	CNA-Biological	Unknown	6.5	Entire length	2018	Yes
Lower Dempsey Branch	WVOG-65-L.5	CNA-Biological	Unknown	1.1	Entire length	2018	Yes
Righthand Fork	WVOG-70-A	CNA-Biological	Unknown	4.0	Entire length	2018	Yes
Camp Branch	WVOG-71.5	CNA-Biological	Unknown	1.9	Entire length	2018	Yes
Buffalo Creek	WVOG-75	CNA-Biological	Unknown	9.9	Mouth to RM 9.9	2018	Yes
Right Fork/Buffalo Creek	WVOG-75-A	CNA-Biological	Unknown	8.1	Entire length	2018	Yes
Robinette Branch	WVOG-75-D	CNA-Biological	Unknown	1.5	Entire length	2018	Yes
Middle Fork/Buffalo Creek	WVOG-75-L	CNA-Biological	Unknown	2.2	Entire length	2018	Yes
Paynter Branch	WVOG-76-M	CNA-Biological	Unknown	2.5	Entire length	2018	Yes

2006 Section 303(d) List

Stream Name	Stream Code	Criteria Affected	Source	Impaired Size (stream-mi) (lake-acres)	Reach Description	Projected TMDL Year (No Later Than)	2004 list?
Lefthand Fork/Rockhouse Creek	WVOG-77-D	CNA-Biological	Unknown	2.4	Entire length	2018	Yes
Right Fork/Sandlick Creek	WVOG-78-A	CNA-Biological	Unknown	1.3	Entire length	2018	Yes
Spice Creek	WVOG-82	CNA-Biological	Unknown	1.8	Entire length	2018	Yes
Stafford Branch	WVOG-88	CNA-Biological	Unknown	1.4	Entire length	2018	Yes
Browning Fork	WVOG-89-B-1	CNA-Biological	Unknown	4.4	Entire length	2018	Yes
Little Huff Creek	WVOG-92	CNA-Biological	Unknown	15.3	Entire length	2018	Yes
Little Cub Creek	WVOG-92-B	CNA-Biological	Unknown	2.8	Entire length	2018	Yes
Suke Creek	WVOG-92-M	CNA-Biological	Unknown	2.4	Entire length	2018	Yes
Long Branch	WVOG-97	CNA-Biological	Unknown	2.7	Entire length	2018	Yes
Rockcastle Creek	WVOG-123	CNA-Biological	Unknown	4.0	Mouth to RM 4.0	2018	Yes
Little Pinnacle Creek	WVOG-124-P	CNA-Biological	Unknown	3.4	Entire length	2018	No
Sugar Run	WVOG-125	CNA-Biological	Unknown	2.1	Entire length	2018	Yes
Marsh Fork	WVOG-127-D	CNA-Biological	Unknown	3.5	Entire length	2018	Yes
Mill Branch	WVOG-131-C	CNA-Biological	Unknown	2.6	Entire length	2018	Yes
Marsh Fork	WVOG-134-C	CNA-Biological	Unknown	3.9	Entire length	2018	Yes
Big Branch	WVOG-136	CNA-Biological	Unknown	2.0	Entire length	2018	Yes
Wiley Spring Branch	WVOG-137-C	CNA-Biological	Unknown	3.5	RM 0.7 to HW	2018	No
Mullens Branch	WVOG-138-E	CNA-Biological	Unknown	1.4	Entire length	2018	Yes
Tommy Creek	WVOG-139-A	CNA-Biological	Unknown	4.8	Entire length	2018	Yes
CLEAR FORK SUBWATERSHED							
Chestnut Flats Branch	WVOGC-16-B-1	CNA-Biological	Unknown	1.0	Entire length	2018	Yes
Cabin Branch	WVOGC-16-C	CNA-Biological	Unknown	2.0	Entire length	2018	Yes
Tom Bailey Branch	WVOGC-16-J-1	CNA-Biological	Unknown	2.0	Entire length	2018	Yes
White Oak Branch	WVOGC-16-N	CNA-Biological	Unknown	1.9	Entire length	2018	No
Franks Fork	WVOGC-16-U	CNA-Biological	Unknown	1.8	Entire length	2018	Yes

2006 Section 303(d) List

Stream Name	Stream Code	Criteria Affected	Source	Impaired Size (stream-mi) (lake-acres)	Reach Description	Projected TMDL Year (No Later Than)	2004 list?
UPPER OHIO SOUTH WATERSHED - HUC# 05030106 - 38 streams 193 miles							
Ohio River (Upper South)	WVO-us	Bacteria	Unknown	43.6	Ohio R from MP 105.0 to MP 71.4 (mouth of Cross Creek)	2012	Yes
		Dioxin	Unknown	52.4	Ohio R from MP 113.8 to MP 71.4 (mouth of Cross Creek)	2012	Yes
		Iron	Unknown	39.8	Ohio R from MP 113.8 to MP 84.0	2018	No
Conner Run	WVO-77-A	CNA-Biological	Unknown	3.2	Entire length	2018	Yes
Whetstone Creek	WVO-77-E	CNA-Biological	Unknown	9.0	Entire length	2018	Yes
Lynn Camp Run	WVO-77-H	CNA-Biological	Unknown	4.0	Mouth to RM 4.0	2018	Yes
Bark Camp Run	WVO-77-H-0.8	CNA-Biological	Unknown	1.6	Entire length	2018	Yes
Maggoty Run	WVO-77-K	CNA-Biological	Unknown	5.2	Entire length	2018	Yes
Long Drain	WVO-77-O-8	CNA-Biological	Unknown	8.8	Entire length	2018	Yes
Grave Creek	WVO-83	CNA-Biological	Unknown	19.5	RM 2.5 to HW	2008	Yes
Middle Grave Creek	WVO-83-A	CNA-Biological	Unknown	12.2	Entire length	2008	Yes
		Fecal Coliform	Unknown	12.2	Entire length	2008	Yes
Wells Run	WVO-83-A-1.5	Iron	Mine Drainage	1.1	Entire length	2008	Yes
		pH	Mine Drainage	1.1	Entire length	2008	Yes
French Run	WVO-83-B.8	CNA-Biological	Unknown	2.9	Entire length	2008	Yes
North Fork/Grave Creek	WVO-83-E	CNA-Biological	Unknown	5.0	Entire length	2008	Yes
Molleys Hollow	WVO-84-A	CNA-Biological	Unknown	1.0	Entire length	2008	Yes
Jim Run	WVO-85	CNA-Biological	Unknown	1.6	Mouth to RM 1.6	2008	Yes
Boggs Run	WVO-86	CNA-Biological	Unknown	4.2	Entire length	2008	Yes
Browns Run	WVO-86-A	CNA-Biological	Unknown	1.7	Entire length	2008	Yes
Caldwell Run	WVO-87	CNA-Biological	Unknown	2.7	Entire length	2008	Yes
Long Run	WVO-88-B	Iron	Mine Drainage	4.3	Entire length	2008	Yes

2006 Section 303(d) List

Stream Name	Stream Code	Criteria Affected	Source	Impaired Size (stream-mi) (lake-acres)	Reach Description	Projected TMDL Year (No Later Than)	2004 list?
		pH	Mine Drainage	4.3	Entire length	2008	Yes
Waddles Run	WVO-88-B-1	CNA-Biological	Unknown	2.8	Entire length	2008	Yes
		Iron	Mine Drainage	2.8	Entire length	2008	Yes
		pH	Mine Drainage	2.8	Entire length	2008	Yes
Pogue Run	WVO-88-B-2	CNA-Biological	Unknown	3.2	Entire length	2008	Yes
		Iron	Mine Drainage	3.2	Entire length	2008	Yes
		pH	Mine Drainage	3.2	Entire length	2008	Yes
Peters Run	WVO-88-D-1	CNA-Biological	Unknown	4.0	RM 0.9 to HW	2008	Yes
Laidley Run	WVO-88-D-2-D	CNA-Biological	Unknown	1.6	Entire length	2008	Yes
Todd Run	WVO-88-D-2-F	CNA-Biological	Unknown	2.2	Entire length	2008	Yes
Point Run	WVO-88-D-5	CNA-Biological	Unknown	2.1	Entire length	2008	Yes
Roneys Point Run	WVO-88-D-6	CNA-Biological	Unknown	2.2	Entire length	2008	Yes
Britt Run	WVO-88-E.9	CNA-Biological	Unknown	1.4	Mouth to RM 1.4	2008	Yes
		Iron	Mine Drainage	2.4	Entire length	2008	Yes
		pH	Mine Drainage	2.4	Entire length	2008	Yes
Wherry Run	WVO-88-H-2	CNA-Biological	Unknown	1.9	Entire length	2008	Yes
Hollidays Hollow	WVO-88-H.5	Iron	Mine Drainage	1.7	Entire length	2008	Yes
		pH	Mine Drainage	1.7	Entire length	2008	Yes
Burch Run	WVO-88-I	CNA-Biological	Unknown	0.7	Mouth to RM 0.7	2008	Yes
UNT/Wheeling Creek RM 26.5	WVO-88-M.3	CNA-Biological	Unknown	1.5	Entire length	2008	No
Glenns Run	WVO-89	CNA-Biological	Unknown	2.4	Entire length	2008	Yes
		Iron	Mine Drainage	2.4	Entire length	2008	Yes
		pH	Mine Drainage	2.4	Entire length	2008	Yes
Graeb Hollow	WVO-89-A	CNA-Biological	Unknown	1.3	Entire length	2008	Yes

2006 Section 303(d) List

Stream Name	Stream Code	Criteria Affected	Source	Impaired Size (stream-mi) (lake-acres)	Reach Description	Projected TMDL Year (No Later Than)	2004 list?
Short Creek	WVO-90	CNA-Biological	Unknown	10.3	Entire length	2008	Yes
		Iron	Mine Drainage	10.3	Entire length	2008	Yes
		pH	Mine Drainage	10.3	Entire length	2008	Yes
North Fork/Short Creek	WVO-90-D	CNA-Biological	Unknown	4.4	Entire length	2008	Yes
UNT/North Fork RM 1.3/Short Creek	WVO-90-D-0.8	CNA-Biological	Unknown	1.3	Entire length	2008	Yes
Huff Run	WVO-90-D-1	CNA-Biological	Unknown	2.0	Entire length	2008	Yes
UNT/Ohio River RM 79.4 (Harrison Run)	WVO-91	CNA-Biological	Unknown	1.0	Entire length	2008	Yes
Castleman Run	WVO-92-L	CNA-Biological	Unknown	3.5	RM 1.7 to HW	2008	Yes

WEST FORK WATERSHED - HUC# 05020002 - 24 streams 158 miles 1 Lake 2650 acres

West Fork River	WVMW	CNA-Biological	Unknown	74.4	Mouth to RM 74.4 (Stonewall Jackson Dam)	2018	Yes
		Fecal Coliform	Unknown	74.4	Mouth to RM 74.4 (Stonewall Jackson Dam)	2018	Yes
		PCBs	Unknown	74.4	Mouth to RM 74.4 (Stonewall Jackson Dam)	2018	No
		Zinc (dis)	Unknown	74.4	Mouth to RM 74.4 (Stonewall Jackson Dam)	2018	Yes
Stonewall Jackson Lake	WVMW-(L1)	Mercury	Unknown	2650.0	Entire length	2018	Yes
Bingamon Creek	WVMW-7	CNA-Biological	Unknown	14.6	Entire length	2018	Yes
Long Run	WVMW-7-B	CNA-Biological	Unknown	2.0	Entire length	2018	Yes
Cunningham Run	WVMW-7-D	CNA-Biological	Unknown	2.4	Entire length	2018	Yes
Glade Fork	WVMW-7-F	CNA-Biological	Unknown	5.0	Entire length	2018	Yes

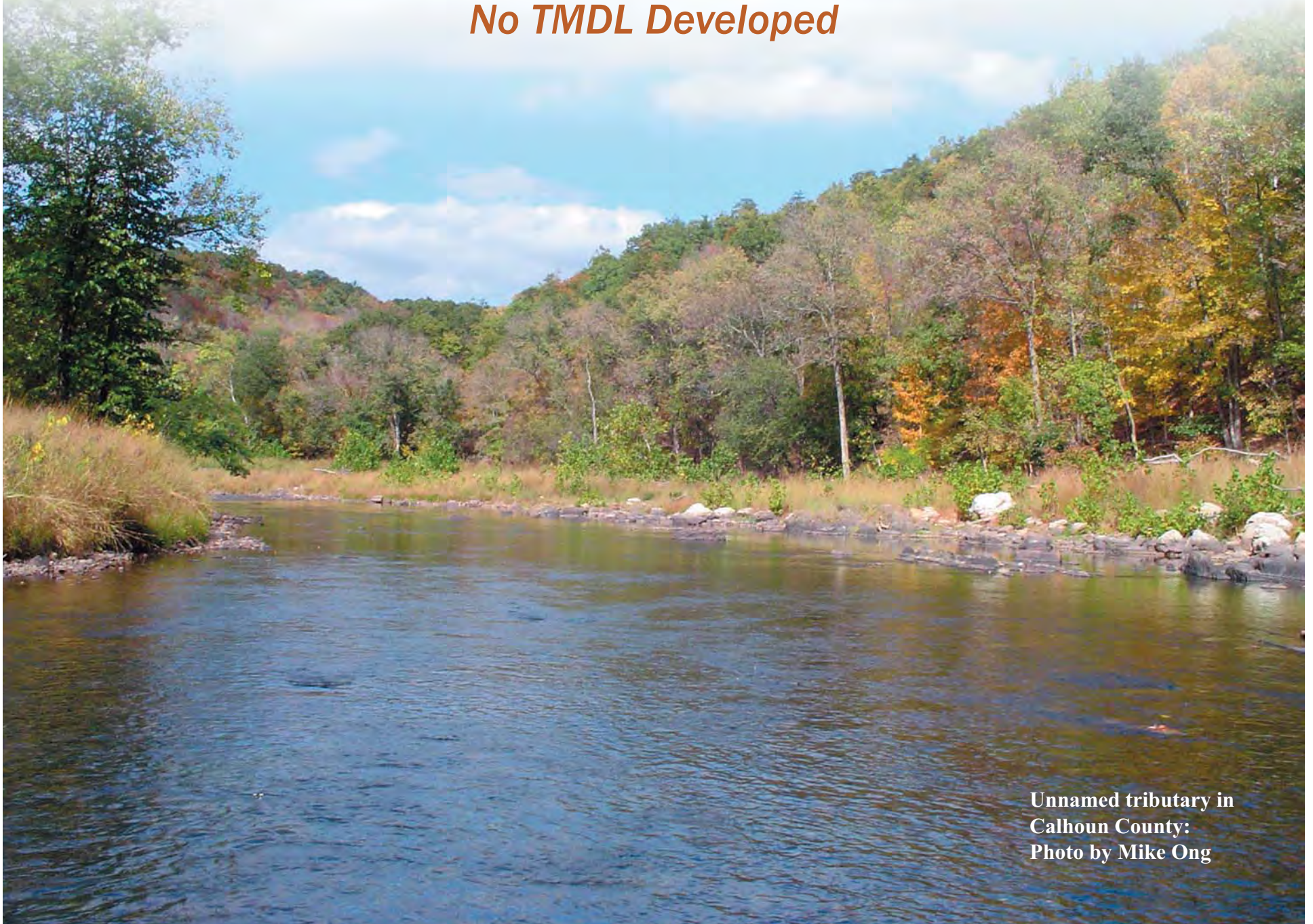
WEST VIRGINIA

2006 Section 303(d) List

WEST VIRGINIA

Stream Name	Stream Code	Criteria Affected	Source	Impaired Size (stream-mi) (lake-acres)	Reach Description	Projected TMDL Year (No Later Than)	2004 list?
Coal Lick Run	WVMW-7-F-1	CNA-Biological	Unknown	2.2	Entire length	2018	Yes
Browns Run	WVMW-10	CNA-Biological	Unknown	1.0	Entire length	2018	Yes
Robinson Run	WVMW-12	CNA-Biological	Unknown	5.4	Entire length	2018	Yes
Big Elk Creek	WVMW-13-B-6	CNA-Biological	Unknown	3.0	Entire length	2018	No
Middle Run	WVMW-13-B-7	CNA-Biological	Unknown	3.8	Entire length	2018	Yes
Mudlick Run	WVMW-13-B-9	CNA-Biological	Unknown	2.4	Entire length	2018	Yes
Salem Fork	WVMW-13-I	CNA-Biological	Unknown	9.2	Entire length	2018	Yes
Cherrycamp Run	WVMW-13-I-2	CNA-Biological	Unknown	3.2	Entire length	2018	Yes
Patterson Fork	WVMW-13-I-3	CNA-Biological	Unknown	2.4	Entire length	2018	Yes
Halls Run	WVMW-13-J	CNA-Biological	Unknown	4.6	Entire length	2018	Yes
Davisson Run	WVMW-15-D	CNA-Biological	Unknown	3.0	Entire length	2018	Yes
Ann Run	WVMW-15-E	CNA-Biological	Unknown	3.6	Entire length	2018	Yes
Johnson Fork	WVMW-20-C	CNA-Biological	Unknown	1.5	Entire length	2018	Yes
Turkey Run	WVMW-21-E	CNA-Biological	Unknown	1.7	Entire length	2018	Yes
Bonds Run	WVMW-26-A	CNA-Biological	Unknown	1.4	Entire length	2018	Yes
Isaacs Creek	WVMW-29	CNA-Biological	Unknown	6.2	Entire length	2018	Yes
Right Fork/Stonecoal Creek	WVMW-38-G	CNA-Biological	Unknown	1.2	Mouth to RM 1.2 (below impoundment)	2018	Yes
Pringle Fork	WVMW-38-G-3	CNA-Biological	Unknown	0.9	Mouth to RM 0.9	2018	Yes
Hughes Fork	WVMW-46-G	CNA-Biological	Unknown	2.6	Entire length	2018	Yes

***Supplemental Table A – Previously Listed Waters –
No TMDL Developed***



**Unnamed tributary in
Calhoun County:
Photo by Mike Ong**

Supplemental Table A - Previously Listed Waters - No TMDL Developed - 2006

Stream Name	Stream Code	Criteria	Reason for Delisting
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HYDROLOGIC GROUP A

CHEAT WATERSHED - HUC# 05020004

Cheat River	WVMC	Aluminum (d)	Water quality criteria revised and data does not support listing per 0.750 mg/l
Beaver Creek	WVMC-60-D-5	Aluminum (d)	Water quality criteria revised and data does not support listing per 0.750 mg/l

SHENANDOAH (JEFFERSON) WATERSHED - HUC# 02070007

Shenandoah River	WVS	Aluminum (d)	Water quality criteria revised and data does not support listing per 0.750 mg/l
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SOUTH BRANCH POTOMAC WATERSHED - HUC# 02070001

South Branch Potomac River (Mouth to RM 79.0)	WVPSB	Aluminum (d)	Water quality criteria revised and data does not support listing per 0.750 mg/l
South Branch Potomac River (RM 79.0 to HW)	WVPSB	Aluminum (d) (trout)	New water quality data does not support listing per 0.087 mg/l

UPPER KANAWHA WATERSHED - HUC# 05050006

Kanawha River (Upper)	WVK-up	Aluminum (d)	Water quality criteria revised and data does not support listing per 0.750 mg/l
Simmons Creek	WVK-54	CNA-Biological	Biological data used for (previous) listing has been deemed non-comparable
Kellys Creek	WVK-64	Aluminum (d)	Water quality criteria revised and data does not support listing per 0.750 mg/l
Paint Creek	WVK-65	Aluminum (d)	Water quality criteria revised and data does not support listing per 0.750 mg/l
Plum Orchard Creek	WVK-65-Z	CNA-Biological	Biological data used for (previous) listing has been deemed non-comparable

UPPER OHIO NORTH WATERSHED - HUC# 05030101

Cross Creek	WVO-95	Aluminum (d)	Water quality criteria revised and data does not support listing per 0.750 mg/l
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YOUGHIOGHENY WATERSHED - HUC# 05020006

Laurel Run	WVMY-2-0.2A	Manganese	Water quality criteria revised - no longer applicable
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Supplemental Table A - Previously Listed Waters - No TMDL Developed - 2006

Stream Name	Stream Code	Criteria	Reason for Delisting
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HYDROLOGIC GROUP B

COAL WATERSHED - HUC# 05050009

Little Hewitt Creek	WVKC-10-H	Aluminum (d)	New water quality data does not support listing per 0.087 mg/l
Rich Hollow	WVKC-10-I-8	Manganese	Water quality criteria revised - no longer applicable
Little Horse Creek	WVKC-10-J	Manganese	Water quality criteria revised - no longer applicable
UNT/Breckenridge Creek RM 2.7	WVKC-46-L-1	pH	Data used for (previous) listing has been deemed inappropriate
Spruce Fork	WVKC-10-T	Aluminum (d)	New water quality data does not support listing per 0.087 mg/l
Hewett Creek	WVKC-10-T-9	Aluminum (d)	Water quality criteria revised and data does not support listing per 0.750 mg/l
Spruce Laurel Fork	WVKC-10-T-11	Aluminum (d)	New water quality data does not support listing per 0.087 mg/l
Little White Oak Branch	WVKC-10-T-22.5	pH	Stream no longer exists
Pond Fork	WVKC-10-U	Aluminum (d)	New water quality data does not support listing per 0.087 mg/l
Robinson Creek	WVKC-10-U-3	Aluminum (d)	New water quality data does not support listing per 0.087 mg/l
West Fork/Pond Fork	WVKC-10-U-7	Aluminum (d)	New water quality data does not support listing per 0.087 mg/l
Browns Branch	WVKC-10-U-7-D	Manganese	Water quality criteria revised - no longer applicable
Laurel Creek	WVKC-31	Aluminum (d)	New water quality data does not support listing per 0.087 mg/l
		Manganese	Water quality criteria revised - no longer applicable
Horse Branch	WVKC-32	Manganese	Water quality criteria revised - no longer applicable
White Oak Creek	WVKC-35	Aluminum (d)	New water quality data does not support listing per 0.087 mg/l
Left Fork/White Oak Creek	WVKC-35-E	Aluminum (d)	New water quality data does not support listing per 0.087 mg/l
UNT/Big Coal River RM 52.7	WVKC-35.8	Manganese	Water quality criteria revised - no longer applicable
Little Elk Creek	WVKC-39	Aluminum (d)	New water quality data does not support listing per 0.087 mg/l
Little Marsh Fork	WVKC-46-A	Aluminum (d)	New water quality data does not support listing per 0.087 mg/l
Brushy Fork	WVKC-46-A-4	Aluminum (d)	New water quality data does not support listing per 0.087 mg/l
Martin Fork	WVKC-46-G-2	Manganese	Water quality criteria revised - no longer applicable
Millers Fork	WVKC-46-G-3	Manganese	Water quality criteria revised - no longer applicable
Bee Branch	WVKC-46-J-2	Manganese	Water quality criteria revised - no longer applicable

Supplemental Table A - Previously Listed Waters - No TMDL Developed - 2006

Stream Name	Stream Code	Criteria	Reason for Delisting
Millers Camp Branch	WVKC-46-Q	Aluminum (d) Manganese	New water quality data does not support listing per 0.087 mg/l Water quality criteria revised - no longer applicable
Laurel Branch	WVKC-46-Q-4	Manganese	Water quality criteria revised - no longer applicable
Jehu Branch	WVKC-46-Q-5	Manganese	Water quality criteria revised - no longer applicable
Stonecoal Branch	WVKC-47-F	Manganese	Water quality criteria revised - no longer applicable
Long Branch	WVKC-47-G	Aluminum (d)	New water quality data does not support listing per 0.087 mg/l
Dow Fork	WVKC-47-G-1	Manganese	Water quality criteria revised - no longer applicable

ELK WATERSHED - HUC# 05050007

Elk River	WVKE	Aluminum (d)	Water quality criteria revised and data does not support listing per 0.750 mg/l
Blue Creek	WVKE-14	Aluminum (d)	Water quality criteria revised and data does not support listing per 0.750 mg/l
Big Sandy Creek	WVKE-23	Aluminum (d)	Water quality criteria revised and data does not support listing per 0.750 mg/l
Leatherwood Creek	WVKE-46	Manganese	Water quality criteria revised - no longer applicable
Buffalo Creek	WVKE-50	Aluminum (d)	Water quality criteria revised and data does not support listing per 0.750 mg/l
Lilly Fork	WVKE-50-B	Aluminum (d)	WV Dept Natural Resources (DNR) advised that this is not a trout water
Birch River	WVKE-76	Aluminum (d)	Water quality criteria revised and data does not support listing per 0.750 mg/l
Sugar Creek	WVKE-111-K	pH	New water quality data does not support listing

LOWER KANAWHA WATERSHED - HUC# 05050008

Twomile Creek	WVK-41	Aluminum (d)	Water quality criteria revised and data does not support listing per 0.750 mg/l
POCATALICO RIVER SUBWATERSHED			
Rich Fork	WVK-41-D.5	Manganese	Water quality criteria revised - no longer applicable
Heizer Creek	WVKP-1	Manganese	Water quality criteria revised - no longer applicable
Manila Creek	WVKP-1-A	Manganese	Water quality criteria revised - no longer applicable
Sulphur Hollow	WVKP-1-A-0.4	Manganese	Water quality criteria revised - no longer applicable
UNT/Manila Creek RM 2.3	WVKP-1-A-0.48	Manganese	Water quality criteria revised - no longer applicable
Alcocks Hollow	WVKP-1-A-0.6	Manganese	Water quality criteria revised - no longer applicable
UNT/Manila Creek RM 3.2	WVKP-1-A-0.8	Manganese	Water quality criteria revised - no longer applicable

Supplemental Table A - Previously Listed Waters - No TMDL Developed - 2006

Stream Name	Stream Code	Criteria	Reason for Delisting
Coal Hollow	WVKP-1-A.3	Manganese	Water quality criteria revised - no longer applicable
UNT/Heizer Creek RM 2.3	WVKP-1-A.6	Manganese	Water quality criteria revised - no longer applicable
Tupper Creek	WVKP-13	Manganese	Water quality criteria revised - no longer applicable
Union Fork	WVKP-13-C.5	Manganese	Water quality criteria revised - no longer applicable
UNT/Union Fork RM 0.2	WVKP-13-C.5-1	Manganese	Water quality criteria revised - no longer applicable

NORTH BRANCH POTOMAC WATERSHED - HUC# 02070002

Slaughterhouse Run	WVPNB-10	Manganese	Water quality criteria revised - no longer applicable
UNT/Montgomery Run RM 1.4	WVPNB-11-A	Manganese	Water quality criteria revised - no longer applicable
Piney Swamp Run	WVPNB-12	Manganese	Water quality criteria revised - no longer applicable
UNT/Piney Swamp Run RM 0.7	WVPNB-12-B	Manganese	Water quality criteria revised - no longer applicable
UNT/Piney Swamp Run RM 1.8	WVPNB-12-E	Manganese	Water quality criteria revised - no longer applicable
UNT/Piney Swamp Run RM 2.2	WVPNB-12-F	Manganese	Water quality criteria revised - no longer applicable
Abram Creek	WVPNB-16	Manganese	Water quality criteria revised - no longer applicable
Emory Creek	WVPNB-16-A	Manganese	Water quality criteria revised - no longer applicable
UNT/Emory Creek RM 0.8	WVPNB-16-A-1	Manganese	Water quality criteria revised - no longer applicable
Glade Run	WVPNB-16-B.5	Manganese	Water quality criteria revised - no longer applicable
UNT/Glade Run RM 0.3	WVPNB-16-B.5-1	Manganese	Water quality criteria revised - no longer applicable
Laurel Run	WVPNB-16-C	Manganese	Water quality criteria revised - no longer applicable
UNT/Abrams Creek RM 13.6	WVPNB-16-C.4	Manganese	Water quality criteria revised - no longer applicable
UNT/Abrams Creek RM 15.9	WVPNB-16-C.8	Manganese	Water quality criteria revised - no longer applicable
Little Creek	WVPNB-16-D	Manganese	Water quality criteria revised - no longer applicable
Stony River	WVPNB-17	Aluminum (d)	Water quality criteria revised and data does not support listing per 0.750 mg/l

Supplemental Table A - Previously Listed Waters - No TMDL Developed - 2006

Stream Name	Stream Code	Criteria	Reason for Delisting
TYGART VALLEY WATERSHED - HUC# 05020001			
Tygart Valley River (Mouth to Huttonsville)	WVMT	Aluminum (d)	Water quality criteria revised and data does not support listing per 0.750 mg/l
Tygart Valley River (Huttonsville to HW)	WVMT	Aluminum (d) (trout)	New water quality data does not support listing per 0.087 mg/l
Buckhannon River (Mouth to Beans Mill)	WVMTB	Aluminum (d)	Water quality criteria revised and data does not support listing per 0.750 mg/l
Buckhannon River (Beans Mill to rt/lf forks)	WVMTB	Aluminum (d) (trout)	New water quality data does not support listing per 0.087 mg/l
Middle Fork River (Mouth to Cassity Fk)	WVMTM	Aluminum (d)	Water quality criteria revised and data does not support listing per 0.750 mg/l
Middle Fork River (Cassity Fk to HW)	WVMTM	Aluminum (d) (trout)	New water quality data does not support listing per 0.087 mg/l

Supplemental Table A - Previously Listed Waters - No TMDL Developed - 2006

Stream Name	Stream Code	Criteria	Reason for Delisting
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HYDROLOGIC GROUP C

GAULEY WATERSHED - HUC# 05050005

Gauley River	WVKG	Aluminum (d)	Water quality criteria revised and data does not support listing per 0.750 mg/l
Scrabble Creek	WVKG-1	Iron	New water quality data does not support listing
		Manganese	Water quality criteria revised - no longer applicable
Twentymile Creek	WVKG-5	Aluminum (d)	Water quality criteria revised and data does not support listing per 0.750 mg/l
Lick Branch	WVKG-6-A	CNA-Biological	New biological data does not support listing
Peters Creek	WVKG-13	Manganese	Water quality criteria revised - no longer applicable
Jerry Fork	WVKG-13-F	Manganese	Water quality criteria revised - no longer applicable
Buck Garden Creek	WVKG-13-K	Manganese	Water quality criteria revised - no longer applicable
Sewell Creek	WVKG-19-Q	Manganese	Water quality criteria revised - no longer applicable
Gould Hollow	WVKG-19-Q-5	CNA-Biological	New biological data does not support listing
Briery Creek	WVKG-19-U-2-A	Manganese	Water quality criteria revised - no longer applicable
Little Clear Creek	WVKG-19-V	Manganese	Water quality criteria revised - no longer applicable
Cutlip Branch	WVKG-19-V-4	pH	New water quality data does not support listing
Brushy Meadow Creek	WVKG-24-E-2	Manganese	Water quality criteria revised - no longer applicable
Colt Branch	WVKG-24-I	Manganese	Water quality criteria revised - no longer applicable
Muddlety Creek	WVKG-26	Iron	New water quality data does not support listing
		Manganese	Criterion applicable - New water quality data does not support listing
Fockler Branch	WVKG-26-E	Iron	New water quality data does not support listing
		Manganese	Criterion applicable - New water quality data does not support listing
McMillion Creek	WVKG-26-I	Manganese	Water quality criteria revised - no longer applicable
Lower Spruce Run	WVKG-26-K-1	Manganese	Water quality criteria revised - no longer applicable
Spruce Run	WVKG-26-K-1-A	Manganese	Water quality criteria revised - no longer applicable
Clear Fork	WVKG-26-O	Iron	New water quality data does not support listing
		Manganese	Water quality criteria revised - no longer applicable

Supplemental Table A - Previously Listed Waters - No TMDL Developed - 2006

Stream Name	Stream Code	Criteria	Reason for Delisting
Persinger Creek	WVKG-27	Iron Manganese	New water quality data does not support listing Water quality criteria revised - no longer applicable
Big Beaver Creek	WVKG-30	Iron Manganese	New water quality data does not support listing Water quality criteria revised - no longer applicable
Little Beaver Creek	WVKG-30-E	CNA-Biological Iron Manganese	Data used for (previous) listing has been deemed inappropriate New water quality data does not support listing Water quality criteria revised - no longer applicable
Bearpen Fork	WVKG-30-L	Manganese	Water quality criteria revised - no longer applicable
Lower Laurel Run	WVKG-30-N	CNA-Biological	New biological data does not support listing
Little Laurel Creek	WVKG-31	CNA-Biological	New biological data does not support listing
WILLIAMS RIVER SUBWATERSHED			
Williams River	WVKGW	pH	Listed in error

MIDDLE OHIO NORTH WATERSHED - HUC# 05030201

Ohio River (Middle North)	WVO-mn	Phenols	New water quality data does not support listing
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MIDDLE OHIO SOUTH WATERSHED - HUC# 05030202

Ohio River (Middle South)	WVO-ms	CNA-Biological	ORSANCO revision of assessment methodology
UNT/Robinson Run	WVO-21-B-0.9	Manganese	Water quality criteria revised - no longer applicable

POTOMAC DIRECT DRAINS WATERSHED - HUC# 02070004

Goose Creek	WVP-4-J-1	CNA-Biological	New biological data does not support listing
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TUG FORK WATERSHED - HUC# 05070201

Pigeon Creek	WVBST-24	Aluminum (d)	Water quality criteria revised and data does not support listing per 0.750 mg/l
Rockhouse Fork	WVBST-24-Q	Aluminum (d)	Water quality criteria revised and data does not support listing per 0.750 mg/l
Mate Creek	WVBST-40	Aluminum (d)	Water quality criteria revised and data does not support listing per 0.750 mg/l

Supplemental Table A - Previously Listed Waters - No TMDL Developed - 2006

Stream Name	Stream Code	Criteria	Reason for Delisting
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HYDROLOGIC GROUP D

GREENBRIER WATERSHED - HUC# 05050003

Greenbrier River (Mouth to RM 151)	WVKNG	Aluminum (d)	Water quality criteria revised and data does not support listing per 0.750 mg/l
Greenbrier River (RM 151 to HW)	WVKNG	Aluminum (d) (trout)	New water quality data does not support listing per 0.087 mg/l
Muddy Creek	WVKNG-22	CNA-Biological	New biological data does not support listing
Kitchen Creek	WVKNG-23-G	CNA-Biological	New biological data does not support listing
Meadow Creek	WVKNG-28-Q	CNA-Biological	New biological data does not support listing
Possum Hollow	WVKNG-53-E	CNA-Biological	New biological data does not support listing
Stony Creek	WVKNG-55	CNA-Biological	New biological data does not support listing
Shock Run	WVKNG-66-D	CNA-Biological	New biological data does not support listing
Buffalo Run	WVKNG-68-F	CNA-Biological	New biological data does not support listing

LITTLE KANAWHA WATERSHED - HUC# 05030203

Duck Creek	WVLK-82	Manganese	Criterion applicable - New water quality data does not support listing
Lynch Run	WVLK-85	Iron	New water quality data does not support listing
Sand Fork	WVLK-86	Aluminum (d)	Water quality criteria revised and data does not support listing per 0.750 mg/l
Duskcamp Run	WVLK-88	CNA-Biological	New biological data does not support listing
		Manganese	Water quality criteria revised - no longer applicable
Saltlick Creek	WVLK-95	Aluminum (d)	Water quality criteria revised and data does not support listing per 0.750 mg/l

LOWER NEW WATERSHED - HUC# 05050004

New River (Lower)	WVKN-lo	Aluminum (d)	Water quality criteria revised and data does not support listing per 0.750 mg/l
UNT/Glade Creek RM 2.0	WVKN-17-A-0.5	pH	New water quality data does not support listing
Laurel Creek/Glade Creek	WVKN-17-A-2	CNA-Biological	New biological data does not support listing
Floyd Creek	WVKN-17-B	Manganese	Water quality criteria revised - no longer applicable
Slater Creek	WVKN-24	Fecal Coliform	New water quality data does not support listing
Batoff Creek	WVKN-26-A	Manganese	Water quality criteria revised - no longer applicable

Supplemental Table A - Previously Listed Waters - No TMDL Developed - 2006

Stream Name	Stream Code	Criteria	Reason for Delisting
Bowyer Creek	WVKN-26-M	Manganese	Water quality criteria revised - no longer applicable
Laurel Creek	WVKN-26-N	CNA-Biological Manganese	New biological data does not support listing Water quality criteria revised - no longer applicable
Farleys Creek	WVKN-34	CNA-Biological	New biological data does not support listing
Lick Creek	WVKN-35	Fecal Coliform	New wastewater treatment system in place and data since does not support listing
Red Spring Branch	WVKN-35-D	CNA-Biological	New biological data does not support listing
Brooks Branch	WVKN-42	CNA-Biological	New biological data does not support listing

MONONGAHELA WATERSHED - HUC# 05020003

Scotts Run	WVM-6	Aluminum (d)	Water quality criteria revised and data does not support listing per 0.750 mg/l
Dents Run	WVM-7	Aluminum (d)	Water quality criteria revised and data does not support listing per 0.750 mg/l
Deckers Creek	WVM-8	Aluminum (d)	Water quality criteria revised and data does not support listing per 0.750 mg/l
Indian Creek	WVM-17	Aluminum (d)	Water quality criteria revised and data does not support listing per 0.750 mg/l
Paw Paw Creek	WVM-22	Aluminum (d)	Water quality criteria revised and data does not support listing per 0.750 mg/l
Buffalo Creek	WVM-23	Aluminum (d)	Water quality criteria revised and data does not support listing per 0.750 mg/l

UPPER NEW WATERSHED - HUC# 05050002

Hans Creek	WVKN-51-D	CNA-Biological	New biological data does not support listing
Adair Run	WVKN-59	CNA-Biological	New biological data does not support listing
BLUESTONE RIVER SUBWATERSHED			
Pipestem Creek	WVKNB-1	CNA-Biological	New biological data does not support listing
Little Bluestone River	WVKNB-3	Fecal Coliform	New water quality data does not support listing
South Fork/Brush Creek	WVKNB-12-J	CNA-Biological	Biological data used for (previous) listing has been deemed non-comparable

Supplemental Table A - Previously Listed Waters - No TMDL Developed - 2006

Stream Name	Stream Code	Criteria	Reason for Delisting
HYDROLOGIC GROUP E			
BIG SANDY WATERSHED - HUC# 05070204			
Whites Creek	WVBS-5	Aluminum (d)	Water quality criteria revised and data does not support listing per 0.750 mg/l
CACAPON WATERSHED - HUC# 02070003			
Cacapon River	WVPC	Aluminum (d)	Water quality criteria revised and data does not support listing per 0.750 mg/l
DUNKARD WATERSHED - HUC# 05020005			
UNT/Days Run RM 7.3	WVM-1-C-7	CNA-Biological	Data used for (previous) listing has been deemed inappropriate
TWELVEPOLE WATERSHED - HUC# 05090102			
West Fork/Twelvpole Creek	WVO-2-P	Aluminum (d)	Water quality criteria revised and data does not support listing per 0.750 mg/l
Camp Creek	WVO-2-Q-8	Manganese	Water quality criteria revised - no longer applicable
Left Fork/Camp Creek	WVO-2-Q-8-A	Manganese	Water quality criteria revised - no longer applicable
UPPER GUYANDOTTE WATERSHED - HUC# 05070101			
Rum Creek	WVOG-70	Aluminum (d)	Water quality criteria revised and data does not support listing per 0.750 mg/l

Supplemental Table A - Previously Listed Waters - No TMDL Developed - 2006

Stream Name	Stream Code	Criteria	Reason for Delisting
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UPPER OHIO SOUTH WATERSHED - HUC# 05030106

Wells Run	WVO-83-A-1.5	Manganese	Water quality criteria revised - no longer applicable
Long Run	WVO-88-B	Manganese	Water quality criteria revised - no longer applicable
Waddles Run	WVO-88-B-1	Manganese	Water quality criteria revised - no longer applicable
Pogue Run	WVO-88-B-2	Manganese	Water quality criteria revised - no longer applicable
Little Wheeling Creek	WVO-88-D	Aluminum (d)	Water quality criteria revised and data does not support listing per 0.750 mg/l
Britt Run	WVO-88-E.9	Manganese	Water quality criteria revised - no longer applicable
Hollidays Run	WVO-88-H.5	Manganese	Water quality criteria revised - no longer applicable
Short Creek	WVO-90	Aluminum (d)	Water quality criteria revised and data does not support listing per 0.750 mg/l

WEST FORK WATERSHED - HUC# 05020002

Booths Creek	WVMW-2	Aluminum (d)	Water quality criteria revised and data does not support listing per 0.750 mg/l
Bingamon Creek	WVMW-7	Aluminum (d)	Water quality criteria revised and data does not support listing per 0.750 mg/l
Tenmile Creek	WVMW-13	Aluminum (d)	Water quality criteria revised and data does not support listing per 0.750 mg/l
Little Tenmile Creek	WVMW-13-B	Aluminum (d)	Water quality criteria revised and data does not support listing per 0.750 mg/l
Beards Run	WVMW-15-G	Aluminum (d)	Water quality criteria revised and data does not support listing per 0.750 mg/l
Brushy Fork	WVMW-21-G	Aluminum (d)	Water quality criteria revised and data does not support listing per 0.750 mg/l
Gnatty Creek	WVMW-21-M	Aluminum (d)	Water quality criteria revised and data does not support listing per 0.750 mg/l
Lost Creek	WVMW-26	Aluminum (d)	Water quality criteria revised and data does not support listing per 0.750 mg/l
Hackers Creek	WVMW-31	Aluminum (d)	Water quality criteria revised and data does not support listing per 0.750 mg/l
Kincheloe Creek	WVMW-32	Aluminum (d)	Water quality criteria revised and data does not support listing per 0.750 mg/l
Freemans Creek	WVMW-36	Aluminum (d)	Water quality criteria revised and data does not support listing per 0.750 mg/l
Skin Creek	WVMW-46	CNA-Biological	Biological data used for (previous) listing has been deemed non-comparable

Supplemental Table B – Waters with TMDL Developed



Acid Mine Drainage in a stream
in Logan County:
Photo by Jason Morgan

Supplemental Table B - Waters with TMDLs Developed

Stream Name	Stream Code	Criteria	TMDL Date
HYDROLOGIC GROUP A			
CHEAT WATERSHED - HUC# 05020004			
Cheat River	WVMC	Iron	2001
		pH	2001
		Zinc	2001
UNT/Cheat River RM 4.0	WVMC-0.5	Iron	2001
		Manganese	2001
		pH	2001
UNT/Cheat River RM 7.7	WVMC-2.3	Iron	2001
		Manganese	2001
		pH	2001
UNT/Cheat River RM 8.5	WVMC-2.4	Iron	2001
		Manganese	2001
		pH	2001
Crammeys Run	WVMC-3	Iron	2001
		Manganese	2001
Bull Run	WVMC-11	Iron	2001
		Manganese	2001
		pH	2001
UNT/Bull Run RM 1.6	WVMC-11-0.1A	pH	2001
Middle Run	WVMC-11-A	Iron	2001
		Manganese	2001
		pH	2001
Mountain Run	WVMC-11-B	Iron	2001
		Manganese	2001
		pH	2001
Lick Run	WVMC-11-B-1	Iron	2001
		Manganese	2001
		pH	2001

Supplemental Table B - Waters with TMDLs Developed

Stream Name	Stream Code	Criteria	TMDL Date
UNT/Bull Run RM 2.1	WVMC-11-C	Iron	2001
		Manganese	2001
		pH	2001
Right Fork Bull Run	WVMC-11-E	Iron	2001
		Manganese	2001
		pH	2001
Big Sandy Creek	WVMC-12	Iron	2001
		Manganese	2001
		pH	2001
UNT/Big Sandy Creek RM 2.9	WVMC-12-0.2A	Iron	2001
		Manganese	2001
		pH	2001
Sovern Run	WVMC-12-0.5A	Iron	2001
		Manganese	2001
		pH	2001
Little Sandy Creek	WVMC-12-B	Iron	2001
		Manganese	2001
		pH	2001
Webster Run	WVMC-12-B-0.5	Iron	2001
		Manganese	2001
		pH	2001
Beaver Creek	WVMC-12-B-1	Iron	2001
		Manganese	2001
		pH	2001
Glade Run	WVMC-12-B-1-A	Iron	2001
		Manganese	2001
		pH	2001
UNT/Beaver Creek RM 1.68	WVMC-12-B-1-C	Iron	2001
		Manganese	2001
		pH	2001
Hog Run	WVMC-12-B-3	Iron	2001
		Manganese	2001
		pH	2001

Supplemental Table B - Waters with TMDLs Developed

Stream Name	Stream Code	Criteria	TMDL Date
Cherry Run	WVMC-12-B-5	Iron	2001
		Manganese	2001
		pH	2001
Hazel Run	WVMC-12-C	Iron	2001
		Manganese	2001
		pH	2001
Conner Run	WVMC-13.5	Iron	2001
		Manganese	2001
		pH	2001
Greens Run	WVMC-16	Iron	2001
		Manganese	2001
		pH	2001
South Fork/Greens Run	WVMC-16-A	Iron	2001
		Manganese	2001
UNT/South Fork RM 0.6	WVMC-16-A-1	Iron	2001
		Manganese	2001
		pH	2001
Muddy Creek	WVMC-17	Iron	2001
		Manganese	2001
		pH	2001
Martin Creek	WVMC-17-A	Iron	2001
		Manganese	2001
		pH	2001
Fickey Run	WVMC-17-A-0.5	Iron	2001
		Manganese	2001
		pH	2001
Glade Run	WVMC-17-A-1	Iron	2001
		Manganese	2001
		pH	2001
UNT/Glade Run RM 1.06	WVMC-17-A-1-A	Iron	2001
		Manganese	2001
		pH	2001

Supplemental Table B - Waters with TMDLs Developed

Stream Name	Stream Code	Criteria	TMDL Date
UNT/Glade Run RM 1.36	WVMC-17-A-1-B	Iron	2001
		Manganese	2001
		pH	2001
Roaring Creek	WVMC-18	Iron	2001
		Manganese	2001
		pH	2001
Morgan Run	WVMC-23	Iron	2001
		Manganese	2001
		pH	2001
UNT/Morgan Run RM 1.1	WVMC-23-0.2A	Manganese	2001
		pH	2001
Church Creek	WVMC-23-A	Iron	2001
		Manganese	2001
		pH	2001
UNT/Church Creek RM 1.2	WVMC-23-A-1	Iron	2001
		Manganese	2001
		pH	2001
Heather Run	WVMC-24	Iron	2001
		Manganese	2001
		pH	2001
UNT/Heather Run RM 1.5	WVMC-24-A	Iron	2001
		Manganese	2001
		pH	2001
Lick Run	WVMC-25	Iron	2001
		Manganese	2001
		pH	2001
Joes Run	WVMC-26	Iron	2001
		Manganese	2001
Pringle Run	WVMC-27	Iron	2001
		Manganese	2001
		pH	2001
Left Fork/Pringle Run	WVMC-27-A	Iron	2001
		Manganese	2001
		pH	2001

Supplemental Table B - Waters with TMDLs Developed

Stream Name	Stream Code	Criteria	TMDL Date
Right Fork/Pringle Run	WVMC-27-B	Iron	2001
		Manganese	2001
		pH	2001
Blackwater River	WVMC-60-D	Iron	2001
		Oxygen, Dissolved	1998
Tub Run	WVMC-60-D-2	Iron	2001
		Manganese	2001
		pH	2001
Finley Run	WVMC-60-D-2.7	Iron	2001
		Manganese	2001
		pH	2001
North Fork/Blackwater River	WVMC-60-D-3	Iron	2001
		Manganese	2001
		pH	2001
Long Run	WVMC-60-D-3-A	Iron	2001
		Manganese	2001
		pH	2001
Middle Run	WVMC-60-D-3-B	Iron	2001
		Manganese	2001
		pH	2001
Snyder Run	WVMC-60-D-3-C	Iron	2001
		Manganese	2001
		pH	2001
Beaver Creek	WVMC-60-D-5	Iron	2001
		Manganese	2001
		pH	2001
Hawkins Run	WVMC-60-D-5-C	Iron	2001
		Manganese	2001
		pH	2001

SHENANDOAH (JEFFERSON) WATERSHED - HUC# 02070007

Shenandoah River	WVS	PCBs	2001
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Supplemental Table B - Waters with TMDLs Developed

Stream Name	Stream Code	Criteria	TMDL Date
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SOUTH BRANCH POTOMAC WATERSHED - HUC# 02070001

South Branch Potomac River	WVPSB	Fecal Coliform	1998
Anderson Run	WVPSB-18	Fecal Coliform	1998
Mill Creek	WVPSB-25	Fecal Coliform	1998
Lunice Creek	WVPSB-26	Fecal Coliform	1998

UPPER KANAWHA WATERSHED - HUC# 05050006

Campbells Creek	WVK-49	CNA-Biological	2004
		Fecal Coliform	2004
Dry Branch	WVK-49-A	Aluminum (d)	2004
		CNA-Biological	2004
		Fecal Coliform	2004
Spring Fork	WVK-49-B	Aluminum (d)	2004
		Fecal Coliform	2004
UNT/Left Fork RM 0.2/Spring Fork	WVK-49-B-2-A	Iron	2004
Coal Fork	WVK-49-D	Fecal Coliform	2004
Pointlick Fork	WVK-49-F	Fecal Coliform	2004
Wash Branch	WVK-49-F.5	Fecal Coliform	2004
Cline Branch	WVK-49-G	Fecal Coliform	2004
Big Bottom Hollow	WVK-49-H	CNA-Biological	2004
		Fecal Coliform	2004
		Iron	2004
Rattlesnake Hollow	WVK-49-I	Manganese	2004
UNT/Campbells Creek RM 7.5 (Sprucepine Hollow)	WVK-49-J	Fecal Coliform	2004
Lens Creek	WVK-53	CNA-Biological	2004
		Fecal Coliform	2004
		Iron	2004
Left Fork/Lens Creek	WVK-53-A	Fecal Coliform	2004
		Iron	2004

Supplemental Table B - Waters with TMDLs Developed

Stream Name	Stream Code	Criteria	TMDL Date
UNT/Left Fork RM 1.8/Lens Creek	WVK-53-A-0.4	Aluminum (d)	2004
		Iron	2004
		Manganese	2004
		pH	2004
Ring Hollow	WVK-53-B	Fecal Coliform	2004
Fourmile Fork	WVK-53-C	CNA-Biological	2004
		Fecal Coliform	2004
Witcher Creek	WVK-57	Aluminum (d)	2004
		CNA-Biological	2004
		Fecal Coliform	2004
		Iron	2004
		Manganese	2004
		pH	2004
Dry Branch	WVK-57-A	Aluminum (d)	2004
		CNA-Biological	2004
		Fecal Coliform	2004
		Iron	2004
Left Fork/Witcher Creek	WVK-57-C	Fecal Coliform	2004
Counterfeit Branch	WVK-57-D	Iron	2004
UNT/Witcher Creek RM 5.2	WVK-57-D.5	Aluminum (d)	2004
		pH	2004
Fields Creek	WVK-58	Aluminum (d)	2004
		CNA-Biological	2004
		Fecal Coliform	2004
Scott Branch	WVK-58-B	Fecal Coliform	2004
Wolfpen Hollow	WVK-58-B.1	Aluminum (d)	2004
		CNA-Biological	2004
		Fecal Coliform	2004
		Iron	2004
		Manganese	2004
		pH	2004
Coopers Hollow	WVK-58-B.3	Fecal Coliform	2004
Mill Branch	WVK-58-B.8	Aluminum (d)	2004

Supplemental Table B - Waters with TMDLs Developed

Stream Name	Stream Code	Criteria	TMDL Date
New West Hollow	WVK-58-B.8-1	Aluminum (d)	2004
		Iron	2004
		Manganese	2004
South Hollow	WVK-58-C	CNA-Biological	2004
Carroll Branch	WVK-59	Aluminum (d)	2004
		CNA-Biological	2004
		Iron	2004
		Manganese	2004
		pH	2004
Slaughter Creek	WVK-60	Aluminum (d)	2004
		Manganese	2004
Little Creek	WVK-60-A	Aluminum (d)	2004
		CNA-Biological	2004
		Manganese	2004
		pH	2004
UNT/Little Creek RM 0.4	WVK-60-A-1	Aluminum (d)	2004
		Manganese	2004
		pH	2004
Bradley Fork	WVK-60-B	Aluminum (d)	2004
		Manganese	2004
		pH	2004
UNT/Slaughter Creek RM 3.1	WVK-60-B.1	Aluminum (d)	2004
		Manganese	2004
		pH	2004
Cabin Creek	WVK-61	Aluminum (d)	2004
		CNA-Biological	2004
		Fecal Coliform	2004
		Iron	2004
		Manganese	2004
		pH	2004
Dry Branch	WVK-61-B	Fecal Coliform	2004
		Iron	2004

Supplemental Table B - Waters with TMDLs Developed

Stream Name	Stream Code	Criteria	TMDL Date
UNT/Dry Branch RM 0.7	WVK-61-B-1	Aluminum (d) CNA-Biological pH	2004 2004 2004
Paint Branch	WVK-61-E	Iron	2004
Longbottom Creek	WVK-61-F	Fecal Coliform	2004
Left Fork/Longbottom Creek	WVK-61-F-1	CNA-Biological	2004
Greens Branch	WVK-61-G	Fecal Coliform pH	2004 2004
Coal Fork	WVK-61-H	Aluminum (d)	2004
Laurel Fork/Coal Fork	WVK-61-H-1	Aluminum (d) CNA-Biological Iron Manganese	2004 2004 2004 2004
Left Fork/Laurel Fork	WVK-61-H-1-A	CNA-Biological	2004
UNT/Coal Fork RM 4.6	WVK-61-H-3	Aluminum (d) Iron Manganese	2004 2004 2004
Bear Hollow	WVK-61-I	Aluminum (d) CNA-Biological Fecal Coliform pH	2004 2004 2004 2004
UNT/Bear Hollow RM 0.3	WVK-61-I-1	Aluminum (d) CNA-Biological Fecal Coliform Manganese pH	2004 2004 2004 2004 2004
Cane Fork	WVK-61-J	Aluminum (d) CNA-Biological Iron Manganese pH	2004 2004 2004 2004 2004
Toms Fork	WVK-61-K	Aluminum (d)	2004

Supplemental Table B - Waters with TMDLs Developed

Stream Name	Stream Code	Criteria	TMDL Date
Tenmile Fork	WVK-61-L	Aluminum (d) CNA-Biological Iron	2004 2004 2004
UNT/Tenmile Fork RM 1.2	WVK-61-L-0.5	Aluminum (d)	2004
UNT/Tenmile Fork RM 4.2	WVK-61-L-5	Iron	2004
Fifteenmile Fork	WVK-61-O	Aluminum (d) Iron Manganese pH	2004 2004 2004 2004
Abbott Creek	WVK-61-O-1	Aluminum (d) Iron Manganese pH	2004 2004 2004 2004
Hicks Hollow	WVK-61.5	Aluminum (d) CNA-Biological Iron Manganese pH	2004 2004 2004 2004 2004
Watson Branch	WVK-62	Aluminum (d) Manganese pH	2004 2004 2004
Mile Branch	WVK-63	Aluminum (d) CNA-Biological Fecal Coliform Iron	2004 2004 2004 2004
Paint Creek	WVK-65	pH	2001
Jones Branch	WVK-65-C	Iron Manganese	2001 2001
Packs Branch	WVK-65-DD	Iron Manganese	2001 2001
Big Fork	WVK-65-DD-2	Iron Manganese	2001 2001

Supplemental Table B - Waters with TMDLs Developed

Stream Name	Stream Code	Criteria	TMDL Date
Tenmile Fork	WVK-65-M	Iron	2001
		Manganese	2001
		pH	2001
Long Branch	WVK-65-M-1	Iron	2001
		Manganese	2001
		pH	2001
Hickory Camp Branch	WVK-65-P	CNA-Biological	2001
		Iron	2001
		Manganese	2001
		pH	2001
Cedar Creek	WVK-65-Q	pH	2001
UNT/Paint Creek RM 17.2	WVK-65-Q.3	Iron	2001
		Manganese	2001
		pH	2001
UNT/Paint Creek RM 17.6	WVK-65-Q.5	Iron	2001
		Manganese	2001
		pH	2001
Fifteenmile Creek	WVK-65-R	Iron	2001
		Manganese	2001
Spring Branch	WVK-65-S	pH	2001
Skitter Creek	WVK-65-T	Iron	2001
		Manganese	2001
Lykins Creek	WVK-65-W	Iron	2001
		Manganese	2001
		pH	2001
Long Branch	WVK-65-Y-2	Iron	2001
		Manganese	2001
Morris Creek	WVK-70	CNA-Biological	2004
		Iron	2004
		Manganese	2004
		pH	2004
Schuyler Fork	WVK-70-A	Aluminum (d)	2004
		Manganese	2004
		pH	2004

Supplemental Table B - Waters with TMDLs Developed

Stream Name	Stream Code	Criteria	TMDL Date
Staten Run	WVK-71	CNA-Biological Iron	2004 2004
Smithers Creek	WVK-72	Aluminum (d)	2004
Blake Branch	WVK-72-A	Aluminum (d) Fecal Coliform	2004 2004
Fishhook Fork	WVK-72-A-1	Aluminum (d) Manganese	2004 2004
Bullpush Fork	WVK-72-B	Aluminum (d)	2004
Burnett Hollow	WVK-72-B-2	Aluminum (d)	2004
Armstrong Creek	WVK-73	Aluminum (d) CNA-Biological pH	2004 2004 2004
Tucker Hollow	WVK-73-A	Aluminum (d) pH	2004 2004
Jenkins Fork	WVK-73-D	Aluminum (d) CNA-Biological Manganese pH	2004 2004 2004 2004
Craig Hollow	WVK-73-D-1	Aluminum (d) Manganese pH	2004 2004 2004
Powellton Fork	WVK-73-E	Aluminum (d) Iron	2004 2004
Laurel Branch/Powellton Fork	WVK-73-E-1	Iron Manganese	2004 2004
Woodrum Branch	WVK-73-E-2	Iron	2004
Right Fork/Armstrong Creek	WVK-73-F	Aluminum (d) Manganese pH	2004 2004 2004
Boomer Branch	WVK-74	Aluminum (d) CNA-Biological	2004 2004

Supplemental Table B - Waters with TMDLs Developed

Stream Name	Stream Code	Criteria	TMDL Date
Jarrett Branch	WVK-75	Aluminum (d)	2004
		CNA-Biological	2004
		Iron	2004
		Manganese	2004
		pH	2004
UNT/Jarrett Branch RM 1.1	WVK-75-A	Aluminum (d)	2004
		Manganese	2004
		pH	2004
Loop Creek	WVK-76	Fecal Coliform	2004
Mulberry Fork	WVK-76-C	Fecal Coliform	2004
Beards Fork	WVK-76-D	Aluminum (d)	2004
Ingram Branch	WVK-76-K	Aluminum (d)	2004
		CNA-Biological	2004
		pH	2004

UPPER OHIO NORTH WATERSHED - HUC# 05030101

Ohio River (Upper North)	WVO-un	PCBs	2002
Cross Creek	WVO-95	CNA-Biological	2004
		Fecal Coliform	2004
UNT/Cross Creek RM 1.7	WVO-95-0.5A	Fecal Coliform	2004
Bosley Run	WVO-95-A	CNA-Biological	2004
		Fecal Coliform	2004
North Potrock Run	WVO-95-C	Fecal Coliform	2004
Potrock Run	WVO-95-D	CNA-Biological	2004
		Fecal Coliform	2004
Alleghany Steel Run	WVO-95.5	CNA-Biological	2004
		Fecal Coliform	2004
UNT/Alleghany Steel Run RM 0.9	WVO-95.5-A	CNA-Biological	2004
		Fecal Coliform	2004
Harmon Creek	WVO-97	CNA-Biological	2004
		Fecal Coliform	2004
UNT/Harmon Creek RM 2.9	WVO-97-0.7A	Fecal Coliform	2004
UNT/Harmon Creek RM 3.2	WVO-97-0.9A	Fecal Coliform	2004

Supplemental Table B - Waters with TMDLs Developed

Stream Name	Stream Code	Criteria	TMDL Date
Sappingtons Run	WVO-97-A	CNA-Biological Fecal Coliform	2004 2004
Alexanders Run	WVO-97-B	CNA-Biological Fecal Coliform Iron Manganese	2004 2004 2004 2004
Mechling Run	WVO-97-C	Fecal Coliform	2004
Brown Hollow	WVO-97-D	CNA-Biological Fecal Coliform	2004 2004
Kings Creek	WVO-98	Fecal Coliform	2004
Turkeyfoot Run	WVO-98-0.5A	Fecal Coliform	2004
Rush Run	WVO-98-0.7A	CNA-Biological Fecal Coliform	2004 2004
North Fork/Kings Creek	WVO-98-A	Fecal Coliform	2004
Marrow Run	WVO-98-A.5	CNA-Biological Fecal Coliform	2004 2004
UNT/Kings Creek RM 6.8	WVO-98-C	Fecal Coliform	2004
Deep Gut Run	WVO-101	Aluminum (d) CNA-Biological Iron Manganese pH	2004 2004 2004 2004 2004
UNT/Deep Gut Run RM 1.8	WVO-101-E	Manganese	2004
South Fork/Tomlinson Run	WVO-102-B	CNA-Biological Fecal Coliform	2004 2004
North Fork/Tomlinson Run	WVO-102-C	CNA-Biological Fecal Coliform	2004 2004
Mercer Run	WVO-102-C-1	CNA-Biological Fecal Coliform	2004 2004
UNT/North Fork RM 4.4/Tomlinson Run (Stewarts Run)	WVO-102-C-6	Fecal Coliform	2004
Tomlinson Run Lake	WVO-102-(L1)	Sedimentation/Siltation	1998

Supplemental Table B - Waters with TMDLs Developed

Stream Name	Stream Code	Criteria	TMDL Date
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HYDROLOGIC GROUP B

ELK WATERSHED - HUC# 05050007

Elk River	WVKE	Iron	2001
		Lead	2001
Morris Creek	WVKE-26	Iron	2001
		Manganese	2001
		pH	2001
Left Fork/Morris Creek	WVKE-26-A	Iron	2001
		Manganese	2001
		pH	2001
Buffalo Creek	WVKE-50	Iron	2001
		Manganese	2001
Pheasant Run	WVKE-50-T	Iron	2001
		Manganese	2001
		pH	2001

LOWER KANAWHA WATERSHED - HUC# 05050008

Kanawha River (Lower)	WVK-lo	Dioxin	2000
Hurricane W S Rs	WVK-22-(L1)	Iron	1998
		Sedimentation/Siltation	1998
		Trophic State Index	1998
Armour Creek	WVK-30	Dioxin	2000
Ridenour Lake	WVK-30-A-(L1)	Iron	1999
		Sedimentation/Siltation	1999
		Trophic State Index	1999
POCATALICO RIVER SUBWATERSHED			
Pocatalico River	WVKP	Dioxin	2000
Flat Fork	WVKP-33	PCBs	2001

Supplemental Table B - Waters with TMDLs Developed

Stream Name	Stream Code	Criteria	TMDL Date
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NORTH BRANCH POTOMAC WATERSHED - HUC# 02070002

Stony River	WVPNB-17	Iron	2001
		Manganese	2001
		pH	2001
Laurel Run	WVPNB-17-B.5	pH	2001
Fourmile Run	WVPNB-17-C	Iron	2001
		Manganese	2001
		pH	2001
Laurel Run	WVPNB-17-D	Iron	2001
		Manganese	2001
		pH	2001
Helmick Run	WVPNB-17-E	Iron	2001
		Manganese	2001
		pH	2001

TYGART VALLEY WATERSHED - HUC# 05020001

Tygart Valley River	WVMT	Iron	2001
		Manganese	2001
		pH	2001
Goose Creek	WVMT-4	Iron	2001
		Manganese	2001
		pH	2001
Lost Run	WVMT-5	Iron	2001
		Manganese	2001
		pH	2001
Berkely Run	WVMT-11	Iron	2001
		Manganese	2001
		pH	2001
Shelby Run	WVMT-11-A	Iron	2001
		Manganese	2001
		pH	2001

Supplemental Table B - Waters with TMDLs Developed

Stream Name	Stream Code	Criteria	TMDL Date
Long Run	WVMT-11-B	Iron	2001
		Manganese	2001
		pH	2001
Berry Run	WVMT-11-B-1	Iron	2001
		Manganese	2001
		pH	2001
Three Fork Creek	WVMT-12	Iron	2001
		Manganese	2001
		pH	2001
Raccoon Creek	WVMT-12-C	Iron	2001
		Manganese	2001
		pH	2001
Little Raccoon Run	WVMT-12-C-2	Iron	2001
		Manganese	2001
Brains Creek	WVMT-12-G-2	Iron	2001
		Manganese	2001
		pH	2001
Birds Creek	WVMT-12-H	Iron	2001
		Manganese	2001
		pH	2001
Squires Creek	WVMT-12-H-1	Iron	2001
		Manganese	2001
		pH	2001
Sandy Creek	WVMT-18	Iron	2001
		Manganese	2001
		pH	2001
Glade Run	WVMT-18-C	Iron	2001
		Manganese	2001
		pH	2001
Little Sandy Creek	WVMT-18-E	Iron	2001
		Manganese	2001
		pH	2001

Supplemental Table B - Waters with TMDLs Developed

Stream Name	Stream Code	Criteria	TMDL Date
Maple Run	WVMT-18-E-1	Iron	2001
		Manganese	2001
		pH	2001
Left Fork/Little Sandy Creek	WVMT-18-E-3	Iron	2001
		Manganese	2001
		pH	2001
Left Fork/Sandy Creek	WVMT-18-G	Iron	2001
		Manganese	2001
Frost Run	WVMT-24-A	Iron	2001
		Manganese	2001
		pH	2001
Ford Run	WVMT-27	Iron	2001
		Manganese	2001
		pH	2001
Anglins Run	WVMT-29	Iron	2001
		Manganese	2001
		pH	2001
Island Run	WVMT-36	Iron	2001
		Manganese	2001
		pH	2001
Beaver Creek	WVMT-37	Iron	2001
		Manganese	2001
		pH	2001
Laurel Run	WVMT-39	Iron	2001
		Manganese	2001
		pH	2001
UNT/Tygart Valley River RM 75.2 (Harding)	WVMT-40.5	Iron	2001
		Manganese	2001
		pH	2001

Supplemental Table B - Waters with TMDLs Developed

Stream Name	Stream Code	Criteria	TMDL Date
Grassy Run	WVMT-41	Iron	2001
		Manganese	2001
		pH	2001
Roaring Creek	WVMT-42	Iron	2001
		Manganese	2001
		pH	2001
BUCKHANNON RIVER SUBWATERSHED			
Buckhannon River	WVMTB	Iron	1998
Pecks Run	WVMTB-5	Iron	2001
		Manganese	2001
		pH	2001
UNT/Pecks Run RM 3.62	WVMTB-5-0.8A	Iron	2001
		Manganese	2001
		pH	2001
Little Pecks Run	WVMTB-5-B	Iron	2001
		Manganese	2001
Mud Run	WVMTB-5-C	Iron	2001
		Manganese	2001
Turkey Run	WVMTB-10	Iron	2001
		Manganese	2001
		pH	2001
Sugar Run	WVMTB-10-A	Iron	2001
		Manganese	2001
Fink Run	WVMTB-11	Iron	2001
		Manganese	2001
		pH	2001
Mud Lick Run	WVMTB-11-B	Iron	2001
		Manganese	2001
Bridge Run	WVMTB-11-B.7	Iron	2001
		Manganese	2001
		pH	2001
Bull Run	WVMTB-18-B	Iron	2001
Blacklick Run	WVMTB-18-B-2	Iron	2001
Mudlick Run	WVMTB-18-B-3	Iron	2001

Supplemental Table B - Waters with TMDLs Developed

Stream Name	Stream Code	Criteria	TMDL Date
Tenmile Creek	WVMTB-25	Iron	1998
Panther Fork	WVMTB-27	pH	2001
Swamp Run	WVMTB-29	Iron	2001
		Manganese	2001
		pH	2001
Herods Run	WVMTB-30	pH	2001
Left Fork/Buckhannon River	WVMTB-32	Iron	1998
MIDDLE FORK RIVER SUBWATERSHED			
Middle Fork River	WVMTM	pH	2001
Devil Run	WVMTM-4	Iron	2001
		Manganese	2001
		pH	2001
Hell Run	WVMTM-6	Iron	2001
		Manganese	2001
		pH	2001
Whiteoak Run	WVMTM-8	Iron	2001
		Manganese	2001
		pH	2001
Cassity Fork	WVMTM-16	Iron	2001
		Manganese	2001
		pH	2001
Panther Run	WVMTM-16-A	Iron	2001
		Manganese	2001
		pH	2001

Supplemental Table B - Waters with TMDLs Developed

Stream Name	Stream Code	Criteria	TMDL Date
HYDROLOGIC GROUP C			
LOWER GUYANDOTTE WATERSHED - HUC# 05070102			
Guyandotte River (Lower)	WVOG-lo	Fecal Coliform	2004
		Iron	2004
Right Fork/Merritt Creek	WVOG-10-A	CNA-Biological	2004
		Iron	2004
Limestone Branch	WVOG-48	Iron	2004
		Manganese	2004
		pH	2004
Big Creek	WVOG-49	Aluminum (d)	2004
Ed Stone Branch	WVOG-49-A	CNA-Biological	2004
		Iron	2004
		Manganese	2004
		pH	2004
North Branch	WVOG-49-A-1	Iron	2004
		Manganese	2004
		pH	2004
Crawley Creek	WVOG-51	Aluminum (d)	2004
Godby Branch	WVOG-53	CNA-Biological	2004
		Iron	2004
		Manganese	2004
		pH	2004
Buffalo Creek	WVOG-61	Aluminum (d)	2004
		Iron	2004
		Manganese	2004
		pH	2004
Right Fork/Buffalo Creek	WVOG-61-A	Iron	2004
		pH	2004

Supplemental Table B - Waters with TMDLs Developed

Stream Name	Stream Code	Criteria	TMDL Date
MUD RIVER SUBWATERSHED			
Mud River	WVOGM	Selenium	2004
Sugartree Branch	WVOGM-47	CNA-Biological Selenium	2004 2004
Stanley Fork	WVOGM-48	CNA-Biological Selenium	2004 2004
MIDDLE OHIO NORTH WATERSHED - HUC# 05030201			
Ohio River (Middle North)	WVO-mn	PCBs	2002
MIDDLE OHIO SOUTH WATERSHED - HUC# 05030202			
Ohio River (Middle South)	WVO-ms	Dioxin PCBs	2000 2002
Turkey Run Lake	WVO-37-(L1)	Iron Sedimentation/Siltation Trophic State Index	1999 1999 1999
TUG FORK WATERSHED - HUC# 05070201			
Tug Fork River	WVBST	Iron	2002
PowderMill Branch	WVBST-3	Iron Manganese	2002 2002
Pigeon Creek	WVBST-24	Iron Manganese pH	2002 2002 2002
Millstone Branch	WVBST-24-O	Iron Manganese	2002 2002
Sugartree Creek	WVBST-32	Iron Manganese	2002 2002
Williamson Creek	WVBST-33	Iron Manganese	2002 2002
Sprouse Creek	WVBST-38	Iron	2002

Supplemental Table B - Waters with TMDLs Developed

Stream Name	Stream Code	Criteria	TMDL Date
Rutherford Branch	WVBST-40-B	Iron	2002
		Manganese	2002
		pH	2002
Mitchell Branch	WVBST-40-C	Iron	2002
		Manganese	2002
Chafin Branch	WVBST-40-D	Iron	2002
		Manganese	2002
Thacker Creek	WVBST-42	Iron	2002
		Manganese	2002
		pH	2002
Scissorsville Branch	WVBST-42-A	Iron	2002
		Manganese	2002
		pH	2002
Mauchlinville Branch	WVBST-42-B	Iron	2002
		Manganese	2002
		pH	2002
Grapevine Creek	WVBST-43	Iron	2002
		Manganese	2002
Lick Fork	WVBST-43-A	Iron	2002
		Manganese	2002
Panther Creek	WVBST-60	Iron	2002
		Manganese	2002
Cub Branch	WVBST-60-D	Iron	2002
		Manganese	2002
Grapevine Branch	WVBST-70-F	Iron	2002
		Manganese	2002
Beartown Branch	WVBST-70-I	Iron	2002
		Manganese	2002
Atwell Branch	WVBST-70-O	Iron	2002
		Manganese	2002
Clear Fork	WVBST-76	Iron	2002
		Manganese	2002
Shabbyroom Branch	WVBST-78-B	Iron	2002
		Manganese	2002

Supplemental Table B - Waters with TMDLs Developed

Stream Name	Stream Code	Criteria	TMDL Date
HoneyCamp Branch	WVBST-78-D	Iron	2002
		Manganese	2002
Coontree Branch	WVBST-78-E	Iron	2002
		Manganese	2002
Stonecoal Branch	WVBST-78-F	Iron	2002
		Manganese	2002
Badway Branch	WVBST-78-G	Iron	2002
		Manganese	2002
Newson Branch	WVBST-78-H	Iron	2002
		Manganese	2002
Moorecamp Branch	WVBST-78-I	Iron	2002
		Manganese	2002
Left Fork/Davy Branch	WVBST-85-A	Iron	2002
		Manganese	2002
Shannon Branch	WVBST-94	Iron	2002
		Manganese	2002
Upper Shannon Branch	WVBST-95	Iron	2002
		Manganese	2002
Puncheoncamp Branch	WVBST-98-A	Iron	2002
		Manganese	2002
Little Indian Creek	WVBST-100	Iron	2002
		Manganese	2002
Jed Branch	WVBST-102	Iron	2002
		Manganese	2002
Rock Narrows Branch	WVBST-103	Iron	2002
		Manganese	2002
Harris Branch	WVBST-104	Iron	2002
		Manganese	2002
Mitchell Branch	WVBST-105	Iron	2002
		Manganese	2002
Sugarcamp Branch	WVBST-106	Iron	2002
		Manganese	2002
Grapevine Branch	WVBST-107	Iron	2002
		Manganese	2002

Supplemental Table B - Waters with TMDLs Developed

Stream Name	Stream Code	Criteria	TMDL Date
Sandlick Creek	WVBST-109	Iron	2002
		Manganese	2002
Right Fork/Sandlick Creek	WVBST-109-A	Iron	2002
		Manganese	2002
Left Fork/Sandlick Creek	WVBST-109-B	Iron	2002
		Manganese	2002
Adkin Branch	WVBST-110	Iron	2002
		Manganese	2002
Belcher Branch	WVBST-111	Iron	2002
		Manganese	2002
Turnhole Branch	WVBST-112	Iron	2002
		Manganese	2002
Harmon Branch	WVBST-113	Iron	2002
		Manganese	2002
South Fork/Tug Fork River	WVBST-115	Iron	2002
		Manganese	2002
Tea Branch	WVBST-115-A	Iron	2002
		Manganese	2002
McClure Branch	WVBST-115-B	Iron	2002
		Manganese	2002
Jump Branch	WVBST-115-D	Iron	2002
		Manganese	2002
Spice Creek	WVBST-115-E	Iron	2002
		Manganese	2002
Laurel Branch	WVBST-115-F	Iron	2002
		Manganese	2002
Road Fork	WVBST-115-G	Iron	2002
		Manganese	2002
Belcher Branch	WVBST-116	Iron	2002
		Manganese	2002
Loop Branch	WVBST-117	Iron	2002
		Manganese	2002
Mill Branch	WVBST-118	Iron	2002
		Manganese	2002

Supplemental Table B - Waters with TMDLs Developed

Stream Name	Stream Code	Criteria	TMDL Date
Dry Branch	WVBST-119	Iron	2002
		Manganese	2002
Little Creek	WVBST-120	Iron	2002
		Manganese	2002
Indian Grave Branch	WVBST-120-A	Iron	2002
		Manganese	2002
Puncheoncamp Branch	WVBST-120-B	Iron	2002
		Manganese	2002
Millseat Branch	WVBST-121	Iron	2002
		Manganese	2002
Ballard Harmon Branch	WVBST-122	Iron	2002
		Manganese	2002
Sams Branch	WVBST-123	Iron	2002
		Manganese	2002

Supplemental Table B - Waters with TMDLs Developed

Stream Name	Stream Code	Criteria	TMDL Date
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HYDROLOGIC GROUP D

LITTLE KANAWHA WATERSHED - HUC# 05030203

Little Kanawha River	WVLK	Iron	2000
Mountwood Park Lake	WVLK-10-(L1)	Sedimentation/Siltation	1998
Reedy Creek	WVLK-25	Iron	2000
Spring Creek	WVLK-31	Iron	2000
Sand Fork	WVLK-86	Iron	2000
Saltlick Creek	WVLK-95	Iron	2000
Saltlick Pond 9	WVLK-95-(L1)	Sedimentation/Siltation	2000

LOWER NEW WATERSHED - HUC# 05050004

Dunloup Creek	WVKN-22	Fecal Coliform	2002
		Iron	2002
Meadow Fork	WVKN-22-B	Iron	2002
		Manganese	2002
		pH	2002

MONONGAHELA WATERSHED - HUC# 05020003

Camp Run	WVM-2.1	Iron	2002
		Manganese	2002
		pH	2002
UNT/Monongahela River RM 92.0	WVM-2.6	Iron	2002
		Manganese	2002
		pH	2002
Laurel Run	WVM-2.7	Iron	2002
		Manganese	2002
		pH	2002
Robinson Run	WVM-4	Iron	2002
		Manganese	2002
		pH	2002

Supplemental Table B - Waters with TMDLs Developed

Stream Name	Stream Code	Criteria	TMDL Date
West Run	WVM-3	Iron	2002
		Manganese	2002
		pH	2002
Crafts Run	WVM-4-A	Iron	2002
		Manganese	2002
		pH	2002
UNT/Robinson Run RM 1.09	WVM-4-B	Iron	2002
		Manganese	2002
		pH	2002
Scotts Run	WVM-6	Iron	2002
		Manganese	2002
Dents Run	WVM-7	Iron	2002
		Manganese	2002
UNT/Dents Run RM 3.57	WVM-7-C	Iron	2002
		Manganese	2002
		pH	2002
Deckers Creek	WVM-8	Iron	2002
		Manganese	2002
		pH	2002
Hartman Run	WVM-8-0.5A	Iron	2002
		Manganese	2002
		pH	2002
Deep Hollow	WVM-8-A.7	Iron	2002
		Manganese	2002
		pH	2002
Gladly Run	WVM-8-D	Iron	2002
		Manganese	2002
		pH	2002
Slabcamp Run	WVM-8-F	Iron	2002
		Manganese	2002
		pH	2002
Dillan Creek	WVM-8-G	Iron	2002
		Manganese	2002

Supplemental Table B - Waters with TMDLs Developed

Stream Name	Stream Code	Criteria	TMDL Date
Laurel Run	WVM-8-H	Iron	2002
		Manganese	2002
		pH	2002
Kanes Creek	WVM-8-I	Iron	2002
		Manganese	2002
		pH	2002
Cobun Creek	WVM-9	pH	2002
Booths Creek	WVM-10	Iron	2002
		Manganese	2002
		pH	2002
Owl Creek	WVM-10-D	Iron	2002
		Manganese	2002
		pH	2002
Mays Run	WVM-10-E	Iron	2002
		Manganese	2002
		pH	2002
UNT/Booths Creek RM 6.24	WVM-10-F	Iron	2002
		Manganese	2002
		pH	2002
Brand Run	WVM-11	Iron	2002
		Manganese	2002
		pH	2002
Flaggy Meadow Run	WVM-14	Iron	2002
Birchfield Run	WVM-15	Iron	2002
		Manganese	2002
		pH	2002
Parker Run	WVM-20	Iron	2002
		Manganese	2002
		pH	2002
UNT/Monongahela River RM 121.8	WVM-20.2	Iron	2002
		Manganese	2002
		pH	2002
Pharaoh Run	WVM-21	Iron	2002

Supplemental Table B - Waters with TMDLs Developed

Stream Name	Stream Code	Criteria	TMDL Date
Robinson Run	WVM-22-C	Iron	2002
		Manganese	2002
		pH	2002
Sugar Run	WVM-22-K	Iron	2002
		Manganese	2002
		pH	2002
Mod Run	WVM-23-K	Iron	2002
		Manganese	2002
Fleming Fork	WVM-23-N-1	Iron	2002
		Manganese	2002
Whetstone Run	WVM-23-Q	Iron	2002
		Manganese	2002
		pH	2002
Joes Run	WVM-23-R	Iron	2002
		Manganese	2002
		pH	2002
UNT/Monongahela River	WVM-23.5	Iron	2001
		Manganese	2001
UNT/Monongahela River RM 128.55	WVM-25.9	Iron	2002
		Manganese	2002
		pH	2002

Supplemental Table B - Waters with TMDLs Developed

Stream Name	Stream Code	Criteria	TMDL Date
HYDROLOGIC GROUP E			
CACAPON WATERSHED - HUC# 02070003			
Lost River	WVPC-24	Fecal Coliform	1998
LOWER OHIO WATERSHED - HUC# 05090101			
Ohio River (Lower)	WVO-lo	Dioxin	2000
		PCBs	2002
UPPER GUYANDOTTE WATERSHED - HUC# 05070101			
Guyandotte River (Upper)	WVOG-up	Aluminum (d)	2004
		CNA-Biological	2004
		Fecal Coliform	2004
		Iron	2004
Island Creek	WVOG-65	Aluminum (d)	2004
Coal Branch	WVOG-65-A	CNA-Biological	2004
		Iron	2004
		Manganese	2004
		pH	2004
Copperas Mine Fork	WVOG-65-B	Aluminum (d)	2004
		CNA-Biological	2004
		Iron	2004
		Manganese	2004
		pH	2004
Mud Fork	WVOG-65-B-1	CNA-Biological	2004
		Iron	2004
		Manganese	2004
		pH	2004

Supplemental Table B - Waters with TMDLs Developed

Stream Name	Stream Code	Criteria	TMDL Date
Lower Dempsey Branch	WVOG-65-B-1-A	CNA-Biological	2004
		Iron	2004
		Manganese	2004
		pH	2004
Ellis Branch	WVOG-65-B-1-B	CNA-Biological	2004
		Iron	2004
		Manganese	2004
		pH	2004
Upper Dempsey Branch	WVOG-65-B-1-E	CNA-Biological	2004
		Iron	2004
		Manganese	2004
		pH	2004
Trace Fork	WVOG-65-B-4	CNA-Biological	2004
		Iron	2004
		Manganese	2004
		pH	2004
Buffalo Creek	WVOG-75	Aluminum (d)	2004
Proctor Hollow	WVOG-75-C.5	CNA-Biological	2004
		Iron	2004
		Manganese	2004
		pH	2004
Huff Creek	WVOG-76	CNA-Biological	2004
		Iron	2004
		Manganese	2004
Toney Fork	WVOG-76-L	CNA-Biological	2004
		Iron	2004
		Manganese	2004
Oldhouse Branch	WVOG-77-A.5	CNA-Biological	2004
		Iron	2004
		Manganese	2004
		pH	2004
Gilbert Creek	WVOG-89	Aluminum (d)	2004

Supplemental Table B - Waters with TMDLs Developed

Stream Name	Stream Code	Criteria	TMDL Date
Muzzle Creek	WVOG-92-I	CNA-Biological Iron Manganese	2004 2004 2004
Buffalo Creek	WVOG-92-K	CNA-Biological Iron Manganese pH	2004 2004 2004 2004
Kezee Fork	WVOG-92-K-1	Iron Manganese	2004 2004
Mudlick Fork	WVOG-92-K-2	Iron Manganese	2004 2004
Pad Fork	WVOG-92-Q	Iron Manganese	2004 2004
Righthand Fork	WVOG-92-Q-1	Iron Manganese	2004 2004
Big Cub Creek	WVOG-96	Aluminum (d)	2004
Sturgeon Branch	WVOG-96-A	Iron Manganese	2004 2004
Road Branch	WVOG-96-B	Iron Manganese	2004 2004
Elk Trace Branch	WVOG-96-C	Iron Manganese	2004 2004
Toler Hollow	WVOG-96-F	CNA-Biological Iron Manganese	2004 2004 2004
McDonald Fork	WVOG-96-H	Iron Manganese	2004 2004
Reedy Branch	WVOG-99	Iron Manganese	2004 2004
Little Cub Creek	WVOG-108	Iron	2004
Indian Creek	WVOG-110	Iron Manganese	2004 2004
Brier Creek	WVOG-110-A	Iron Manganese	2004 2004

Supplemental Table B - Waters with TMDLs Developed

Stream Name	Stream Code	Criteria	TMDL Date
Marsh Fork	WVOG-110-A-2	Iron	2004
		Manganese	2004
Pinnacle Creek	WVOG-124	CNA-Biological	2004
		Iron	2004
		Manganese	2004
Smith Branch	WVOG-124-D	CNA-Biological	2004
		Iron	2004
		Manganese	2004
Laurel Branch	WVOG-124-H	Iron	2004
		Manganese	2004
Spider Creek	WVOG-124-I	Iron	2004
		Manganese	2004
Cabin Creek	WVOG-127	Iron	2004
		Manganese	2004
Joe Branch	WVOG-128	CNA-Biological	2004
		Iron	2004
		Manganese	2004
Long Branch	WVOG-129	CNA-Biological	2004
		Iron	2004
		Manganese	2004
Still Run	WVOG-130	Iron	2004
		Manganese	2004
Barkers Creek	WVOG-131	CNA-Biological	2004
		Iron	2004
		Manganese	2004
Hickory Branch	WVOG-131-B	Iron	2004
		Manganese	2004
Gooney Otter Creek	WVOG-131-F	Iron	2004
		Manganese	2004
Jims Branch	WVOG-131-F-1	Iron	2004
		Manganese	2004
Noseman Branch	WVOG-131-F-2	Iron	2004
		Manganese	2004

Supplemental Table B - Waters with TMDLs Developed

Stream Name	Stream Code	Criteria	TMDL Date
Slab Fork	WVOG-134	Aluminum (d) (trout)	2004
		CNA-Biological	2004
		Iron	2004
		Manganese	2004
Measle Fork	WVOG-134-D	Iron	2004
		Manganese	2004
		pH	2004
Left Fork/Allen Creek	WVOG-135-A	CNA-Biological	2004
		Iron	2004
		Manganese	2004
Devils Fork	WVOG-137	CNA-Biological	2004
		Iron	2004
		Manganese	2004
Winding Gulf	WVOG-138	Aluminum (d)	2004
		CNA-Biological	2004
		Iron	2004
		Manganese	2004
Stonecoal Creek	WVOG-139	CNA-Biological	2004
		Iron	2004
		Manganese	2004
CLEAR FORK SUBWATERSHED			
Clear Fork	WVOGC	Aluminum (d)	2004
		CNA-Biological	2004
		Iron	2004
Lower Road Branch	WVOGC-12	Iron	2004
		Manganese	2004
Laurel Fork	WVOGC-16	CNA-Biological	2004
		Iron	2004
		Manganese	2004
Milam Branch	WVOGC-16-M	CNA-Biological	2004
		Iron	2004
		Manganese	2004

Supplemental Table B - Waters with TMDLs Developed

Stream Name	Stream Code	Criteria	TMDL Date
Trough Fork	WVOGC-16-P	CNA-Biological Iron Manganese	2004 2004 2004
Toney Fork	WVOGC-19	CNA-Biological Iron Manganese	2004 2004 2004
Crane Fork	WVOGC-26	CNA-Biological Iron Manganese	2004 2004 2004

UPPER OHIO SOUTH WATERSHED - HUC# 05030106

Ohio River (Upper South)	WVO-us	PCBs	2002
Burches Run Lake	WVO-83-C-(L1)	Sedimentation/Siltation Trophic State Index	1998 1998
Bear Rock Lake	WVO-88-D-2-F-(L1)	Oxygen, Dissolved Sedimentation/Siltation Trophic State Index	1999 1999 1999
Castleman Run Lake	WVO-92-L-(L1)	Sedimentation/Siltation Trophic State Index	1999 1999

WEST FORK WATERSHED - HUC# 05020002

West Fork River	WVMW	Iron	2002
Booths Creek	WVMW-2	Iron Manganese	2002 2002
UNT/Booths Creek RM 1.4	WVMW-2-0.1A	Iron Manganese pH	2002 2002 2002
UNT/Booths Creek RM 3.5	WVMW-2-0.5A	Iron Manganese pH	2002 2002 2002
Hog Lick Run	WVMW-2-A	Iron Manganese	2002 2002

Supplemental Table B - Waters with TMDLs Developed

Stream Name	Stream Code	Criteria	TMDL Date
Sweep Run	WVMW-2-C	Iron	2002
		Manganese	2002
Horners Run	WVMW-2-D	Iron	2002
		Manganese	2002
		pH	2002
UNT/Booths Creek RM 8.3	WVMW-2-D.5	Iron	2002
		Manganese	2002
Purdys Run	WVMW-2-D-1	Iron	2002
		Manganese	2002
		pH	2002
Coons Run	WVMW-3	Iron	2002
		Manganese	2002
		pH	2002
Bingamon Creek	WVMW-7	Iron	2002
UNT/West Fork River RM 11.44	WVMW-7.1	Iron	2002
		Manganese	2002
		pH	2002
Elklick Run	WVMW-7-C	Iron	2002
		Manganese	2002
Cunningham Run	WVMW-7-D	Iron	2002
Laurel Run	WVMW-8	Iron	2002
		Manganese	2002
UNT/West Fork RM 13.1 (at Viropa)	WVMW-8.5	Iron	2002
		Manganese	2002
		pH	2002
Mudlick Run	WVMW-9	Iron	2002
		Manganese	2002
		pH	2002
UNT/West Fork RM 13.9	WVMW-9.5	Iron	2002
		Manganese	2002
		pH	2002
Browns Run	WVMW-10	Iron	2002
		Manganese	2002

Supplemental Table B - Waters with TMDLs Developed

Stream Name	Stream Code	Criteria	TMDL Date
Shinns Run	WVMW-11	Iron	2002
		Manganese	2002
		pH	2002
Robinson Run	WVMW-12	Iron	2002
		Manganese	2002
Pigotts Run	WVMW-12-A	Iron	2002
		Manganese	2002
UNT/Robinson Run RM 1.08	WVMW-12-B	Iron	2002
		Manganese	2002
Tenmile Creek	WVMW-13	Iron	2002
		Manganese	2002
Jack Run	WVMW-13-0.5A	Iron	2002
		Manganese	2002
Jones Creek	WVMW-13-A	Iron	2002
		Manganese	2002
Little Tenmile Creek	WVMW-13-B	Iron	2002
		Manganese	2002
Peters Run	WVMW-13-B-1	Iron	2002
		Manganese	2002
UNT/Little Tenmile Creek RM 2.0	WVMW-13-B-1.5	Iron	2002
		Manganese	2002
Bennett Run	WVMW-13-B-2	Iron	2002
		Manganese	2002
		pH	2002
Laurel Run	WVMW-13-B-4	Iron	2002
		Manganese	2002
Big Elk Creek	WVMW-13-B-6	Iron	2002
		Manganese	2002
Mudlick Run	WVMW-13-B-9	Iron	2002
		Manganese	2002
		pH	2002
Isaacs Creek	WVMW-13-C	Iron	2002
		Manganese	2002

Supplemental Table B - Waters with TMDLs Developed

Stream Name	Stream Code	Criteria	TMDL Date
Little Isaacs Creek	WVMW-13-C-1	Iron	2002
		Manganese	2002
Gregory Run	WVMW-13-D	Iron	2002
		Manganese	2002
Katys Lick Creek	WVMW-13-E	Iron	2002
		Manganese	2002
UNT/Tenmile Creek RM 10.82	WVMW-13-E.7	Iron	2002
		Manganese	2002
Rockcamp Run	WVMW-13-F	Iron	2002
		Manganese	2002
Little Rockcamp Run	WVMW-13-F-1	Iron	2002
		Manganese	2002
Cherrycamp Run	WVMW-13-I-2	Iron	2002
		Manganese	2002
Patterson Fork	WVMW-13-I-3	Iron	2002
		Manganese	2002
Coburn Fork	WVMW-13-N	Iron	2002
		Manganese	2002
		pH	2002
Shaw Run	WVMW-13-N-1	Iron	2002
		Manganese	2002
		pH	2002
UNT/West Fork River RM 20.42	WVMW-14.2	Iron	2002
		Manganese	2002
		pH	2002
Simpson Creek	WVMW-15	Iron	2002
		Manganese	2002
UNT/Simpson Creek RM 1.23	WVMW-15-0.5A	Iron	2002
		Manganese	2002
		pH	2002
Jack Run	WVMW-15-A	Iron	2002
		Manganese	2002
		pH	2002

Supplemental Table B - Waters with TMDLs Developed

Stream Name	Stream Code	Criteria	TMDL Date
Smith Run	WVMW-15-B	Iron	2002
		Manganese	2002
		pH	2002
Jerry Run	WVMW-15-H	Iron	2002
		Manganese	2002
		pH	2002
Berry Run	WVMW-15-I	Iron	2002
		Manganese	2002
		pH	2002
Right Fork/Simpson Creek	WVMW-15-J	Iron	2002
		Manganese	2002
		pH	2002
UNT/Simpson Creek RM 21.92	WVMW-15-J.5	Iron	2002
		Manganese	2002
		pH	2002
UNT/Right Fork RM 1.97/Simpson Creek	WVMW-15-J-0.3	Iron	2002
		Manganese	2002
		pH	2002
Buck Run	WVMW-15-J-1	Iron	2002
		Manganese	2002
		pH	2002
Sand Lick Run	WVMW-15-J-2	Iron	2002
		Manganese	2002
		pH	2002
Gabe Fork	WVMW-15-J-3	Iron	2002
		Manganese	2002
		pH	2002
Bartlett Run	WVMW-15-K	Iron	2002
		Manganese	2002
		pH	2002
UNT/Simpson Creek RM 23.1	WVMW-15-K.7	Iron	2002
		Manganese	2002
		pH	2002

Supplemental Table B - Waters with TMDLs Developed

Stream Name	Stream Code	Criteria	TMDL Date
West Branch	WVMW-15-L	Iron	2002
		Manganese	2002
		pH	2002
UNT/West Branch RM 0.6	WVMW-15-L-0.5	Iron	2002
		Manganese	2002
		pH	2002
Stillhouse Run	WVMW-15-L-1	Iron	2002
		Manganese	2002
		pH	2002
Right Branch	WVMW-15-L-2	Iron	2002
		Manganese	2002
		pH	2002
Camp Run	WVMW-15-M	Iron	2002
		Manganese	2002
		pH	2002
UNT/Simpson Creek RM 26.94	WVMW-15-N	Iron	2002
		Manganese	2002
		pH	2002
Lambert Run	WVMW-16	Iron	2002
		Manganese	2002
		pH	2002
Jack Run	WVMW-17	Iron	2002
		Manganese	2002
Fall Run	WVMW-18	Iron	2002
		Manganese	2002
		pH	2002
Crooked Run	WVMW-19	Iron	2002
		Manganese	2002
		pH	2002
Simpson Fork	WVMW-20-B	Iron	2002
		Manganese	2002
Elk Creek	WVMW-21	Iron	2002
		Manganese	2002

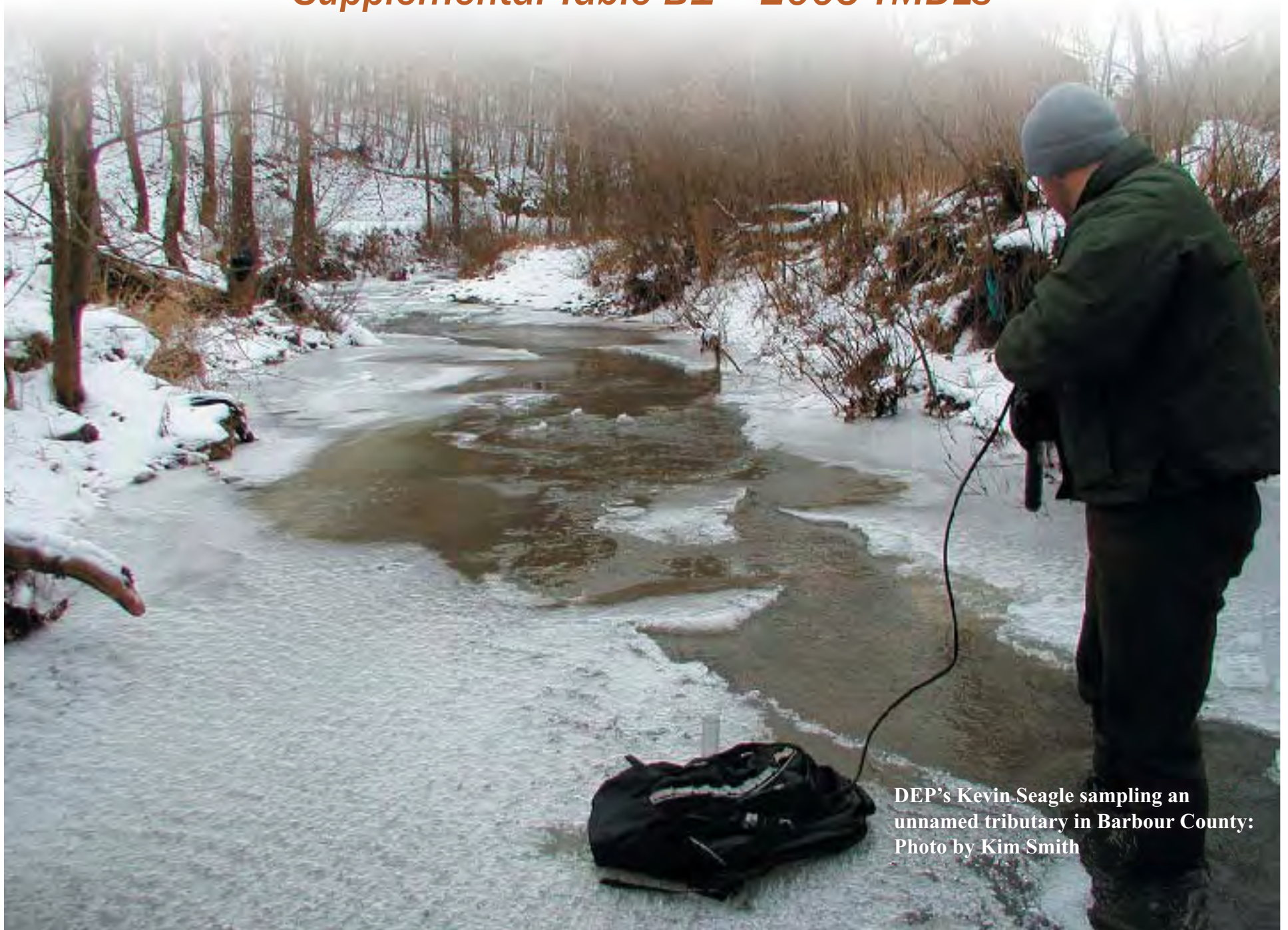
Supplemental Table B - Waters with TMDLs Developed

Stream Name	Stream Code	Criteria	TMDL Date
Murphy Run	WVMW-21-A	Iron	2002
		Manganese	2002
		pH	2002
Nutter Run	WVMW-21-D	Iron	2002
		Manganese	2002
Turkey Run	WVMW-21-E	Iron	2002
		Manganese	2002
Hooppole Run	WVMW-21-F	Iron	2002
		Manganese	2002
Brushy Fork	WVMW-21-G	Iron	2002
		Manganese	2002
Coplin Run	WVMW-21-G-1	Iron	2002
		Manganese	2002
Gnatty Creek	WVMW-21-M	Iron	2002
		Manganese	2002
Right Branch	WVMW-21-M-5	Iron	2002
		Manganese	2002
Charity Fork	WVMW-21-M-5-A	Iron	2002
		Manganese	2002
Birds Run	WVMW-21-O	Iron	2002
		Manganese	2002
Arnold Run	WVMW-21-P	Iron	2002
		Manganese	2002
Isaacs Run	WVMW-21-Q	Iron	2002
		Manganese	2002
Stewart Run	WVMW-21-S	Iron	2002
		Manganese	2002
Washburncamp Run	WVMW-22-A	Iron	2002
		Manganese	2002
Browns Creek	WVMW-23	Iron	2002
		Manganese	2002
Coburns Creek	WVMW-24	Iron	2002
		Manganese	2002

Supplemental Table B - Waters with TMDLs Developed

Stream Name	Stream Code	Criteria	TMDL Date
Sycamore Creek	WVMW-25	Iron	2002
		Manganese	2002
Lost Creek	WVMW-26	Iron	2002
		Manganese	2002
UNT/Lost Creek RM 3.32	WVMW-26-0.5A	Iron	2002
		Manganese	2002
Bonds Run	WVMW-26-A	Iron	2002
		Manganese	2002
Buffalo Creek	WVMW-27	Iron	2002
		Manganese	2002
Hackers Creek	WVMW-31	Iron	2002
		Manganese	2002
		pH	2002
Mare Run	WVMW-36-C.5	Iron	2002
		Manganese	2002
Grass Run	WVMW-38-E	Iron	2002
		Manganese	2002
Stone Lick	WVMW-44	Iron	2002
		Manganese	2002
Fitz Run	WVMW-50-C	Iron	2002
		Manganese	2002
		pH	2002
Ward Run	WVMW-50-D	Iron	2002
		Manganese	2002

Supplemental Table B1 – 2005 TMDLs



DEP's Kevin Seagle sampling an unnamed tributary in Barbour County:
Photo by Kim Smith

Supplemental Table B1 - 2005 TMDLs

Stream Name	Stream Code	Criteria Affected	Source	Impaired Size (stream-mi) (lake-acres)	Reach Description	Projected TMDL Year (No Later Than)	2004 list?
HYDROLOGIC GROUP B							
COAL WATERSHED - HUC# 05050009							
Big Coal River or Coal River	WVKC	Fecal Coliform	Unknown	60.5	Entire length	2005	Yes
Browns Creek	WVKC-2	CNA-Biological	Unknown	6.1	Entire length	2005	Yes
		Fecal Coliform	Unknown	6.1	Entire length	2005	Yes
Smith Creek	WVKC-4	CNA-Biological	Unknown	5.2	Entire length	2005	Yes
		Fecal Coliform	Unknown	5.2	Entire length	2005	Yes
Little Smith Creek	WVKC-4-C	CNA-Biological	Unknown	3.0	Entire length	2005	Yes
		Fecal Coliform	Unknown	3.0	Entire length	2005	Yes
Falls Creek	WVKC-5	Fecal Coliform	Unknown	3.6	Entire length	2005	Yes
Fuquay Creek	WVKC-8	Fecal Coliform	Unknown	5.4	Entire length	2005	Yes
Crooked Creek	WVKC-9	CNA-Biological	Unknown	3.3	Entire length	2005	Yes
		Fecal Coliform	Unknown	3.3	Entire length	2005	Yes
Little Coal River	WVKC-10	Fecal Coliform	Unknown	32.0	Entire length	2005	Yes
Cobb Creek	WVKC-10-E	Fecal Coliform	Unknown	3.8	Entire length	2005	Yes
Dicks Creek	WVKC-10-F	Iron	Unknown	1.9	Entire length	2005	Yes
Little Hewitt Creek	WVKC-10-H	Iron	Unknown	2.1	Entire length	2005	No
		pH	Unknown	2.1	Entire length	2005	Yes
Big Horse Creek	WVKC-10-I	CNA-Biological	Unknown	7.7	Mouth to RM 7.7	2005	Yes
		Fecal Coliform	Unknown	10.1	Entire length	2005	Yes
		Iron	Unknown	10.1	Entire length	2005	No
Laurel Fork	WVKC-10-I-2	Fecal Coliform	Unknown	4.3	Entire length	2005	Yes
		Iron	Unknown	4.3	Entire length	2005	Yes
Peters Cave Fork	WVKC-10-I-3	Fecal Coliform	Unknown	3.0	Entire length	2005	Yes
		Iron	Unknown	3.0	Entire length	2005	No

Supplemental Table B1 - 2005 TMDLs

Stream Name	Stream Code	Criteria Affected	Source	Impaired Size (stream-mi) (lake-acres)	Reach Description	Projected TMDL Year (No Later Than)	2004 list?
Dodson Fork	WVKC-10-I-6	CNA-Biological	Unknown	4.0	Entire length	2005	Yes
		Fecal Coliform	Unknown	4.0	Entire length	2005	Yes
		Iron	Unknown	4.0	Entire length	2005	No
Rich Hollow	WVKC-10-I-8	Iron	Unknown	1.1	Entire length	2005	No
Little Horse Creek	WVKC-10-J	CNA-Biological	Unknown	3.5	Entire length	2005	Yes
		Fecal Coliform	Unknown	2.5	Mouth to RM 2.5	2005	Yes
		Iron	Unknown	3.5	Entire length	2005	No
UNT/Little Horse Creek RM 2.4	WVKC-10-J-8	Fecal Coliform	Unknown	0.4	Entire length	2005	Yes
Camp Creek	WVKC-10-L	Fecal Coliform	Unknown	5.4	Entire length	2005	Yes
Rock Creek	WVKC-10-N	CNA-Biological	Unknown	3.8	Mouth to RM 3.8	2005	Yes
		Fecal Coliform	Unknown	5.1	Entire length	2005	Yes
Hubbard Fork	WVKC-10-N-2	CNA-Biological	Unknown	1.8	Entire length	2005	Yes
		Fecal Coliform	Unknown	1.8	Entire length	2005	Yes
Right Fork/Rock Creek	WVKC-10-N-3	CNA-Biological	Unknown	2.4	Entire length	2005	Yes
		Fecal Coliform	Unknown	2.4	Entire length	2005	Yes
Left Fork/Rock Creek	WVKC-10-N-4	CNA-Biological	Unknown	3.8	Entire length	2005	Yes
		Fecal Coliform	Unknown	3.8	Entire length	2005	Yes
Lick Creek	WVKC-10-O	CNA-Biological	Unknown	5.1	Entire length	2005	Yes
		Fecal Coliform	Unknown	5.1	Entire length	2005	Yes
Turtle Creek	WVKC-10-P	CNA-Biological	Unknown	7.0	Entire length	2005	Yes
		Fecal Coliform	Unknown	7.0	Entire length	2005	Yes
Spruce Fork	WVKC-10-T	Fecal Coliform	Unknown	18.1	Mouth to RM 18.1	2005	Yes
		Iron	Unknown	31.0	Entire length	2005	No
Sparrow Creek	WVKC-10-T-1	Fecal Coliform	Unknown	2.4	Entire length	2005	Yes
Laurel Branch	WVKC-10-T-2	Fecal Coliform	Unknown	1.1	Entire length	2005	Yes
Low Gap Creek	WVKC-10-T-3	Fecal Coliform	Unknown	1.9	Entire length	2005	Yes

Supplemental Table B1 - 2005 TMDLs

Stream Name	Stream Code	Criteria Affected	Source	Impaired Size (stream-mi) (lake-acres)	Reach Description	Projected TMDL Year (No Later Than)	2004 list?
Hunters Branch	WVKC-10-T-5	Aluminum (d)	Unknown	2.0	Entire length	2005	Yes
		Iron	Unknown	2.0	Entire length	2005	No
		pH	Unknown	2.0	Entire length	2005	Yes
Sixmile Creek	WVKC-10-T-7	Fecal Coliform	Unknown	4.6	Entire length	2005	Yes
Bias Branch	WVKC-10-T-8	CNA-Biological	Unknown	2.7	Entire length	2005	Yes
		Fecal Coliform	Unknown	2.7	Entire length	2005	Yes
		Iron	Unknown	2.7	Entire length	2005	No
Hewett Creek	WVKC-10-T-9	Fecal Coliform	Unknown	6.0	Entire length	2005	Yes
		Iron	Unknown	6.0	Entire length	2005	Yes
Meadow Fork	WVKC-10-T-9-A	Fecal Coliform	Unknown	3.4	Entire length	2005	Yes
Missouri Fork	WVKC-10-T-9-B	CNA-Biological	Unknown	1.4	RM 1.9 to HW	2005	Yes
		Fecal Coliform	Unknown	3.3	Entire length	2005	Yes
Isom Branch	WVKC-10-T-9-B.5	Fecal Coliform	Unknown	0.8	Mouth to RM 0.8	2005	Yes
Craddock Fork	WVKC-10-T-9-C	Fecal Coliform	Unknown	2.5	Entire length	2005	Yes
		Iron	Unknown	2.5	Entire length	2005	No
Sycamore Branch	WVKC-10-T-9-C-2	Fecal Coliform	Unknown	0.8	Mouth to RM 0.8	2005	Yes
Baldwin Fork	WVKC-10-T-9-D	CNA-Biological	Unknown	2.0	Entire length	2005	Yes
		Fecal Coliform	Unknown	2.0	Entire length	2005	Yes
		Iron	Unknown	2.0	Entire length	2005	No
Stollings Branch	WVKC-10-T-10	Fecal Coliform	Unknown	0.4	Mouth to RM 0.4	2005	Yes
Spruce Laurel Fork	WVKC-10-T-11	CNA-Biological	Unknown	6.1	Mouth to RM 6.1	2005	Yes
		Iron	Unknown	2.6	RM 3.5 to RM 6.1	2005	Yes
Sycamore Fork	WVKC-10-T-11-F	Iron	Unknown	3.6	Entire length	2005	No
Dennison Fork	WVKC-10-T-11-K	Iron	Unknown	2.1	Entire length	2005	No
Rockhouse Creek	WVKC-10-T-13	Fecal Coliform	Unknown	0.8	Mouth to RM 0.8	2005	Yes
		Iron	Unknown	3.0	Entire length	2005	No

Supplemental Table B1 - 2005 TMDLs

Stream Name	Stream Code	Criteria Affected	Source	Impaired Size (stream-mi) (lake-acres)	Reach Description	Projected TMDL Year (No Later Than)	2004 list?
Beech Creek	WVKC-10-T-15	Iron	Unknown	5.3	Entire length	2005	No
		Selenium	Unknown	1.7	Mouth to RM 1.7	2005	Yes
Left Fork/Beech Creek	WVKC-10-T-15-A	Iron	Unknown	2.4	Entire length	2005	No
		Selenium	Unknown	2.4	Entire length	2005	Yes
Seng Camp Creek	WVKC-10-T-16	Iron	Unknown	3.5	Entire length	2005	No
Trace Branch	WVKC-10-T-19	Iron	Unknown	1.0	Entire length	2005	No
		Selenium	Unknown	1.0	Entire length	2005	Yes
White Oak Branch	WVKC-10-T-22	Iron	Unknown	2.2	Entire length	2005	No
Little White Oak Branch	WVKC-10-T-22.5	pH	Unknown	1.3	Entire length	2005	Yes
Brushy Fork	WVKC-10-T-24	Iron	Unknown	3.8	Entire length	2005	Yes
Laurel Fork	WVKC-10-T-25	Iron	Unknown	4.2	Entire length	2005	No
Pond Fork	WVKC-10-U	CNA-Biological	Unknown	10.0	RM 26.6 to HW	2005	Yes
		Fecal Coliform	Unknown	20.3	RM 6.3 to RM 26.6	2005	Yes
		Iron	Unknown	36.6	Entire length	2005	No
Robinson Creek	WVKC-10-U-3	Iron	Unknown	5.3	Entire length	2005	No
Jacks Branch	WVKC-10-U-4	Iron	Unknown	1.8	Entire length	2005	No
Bull Creek	WVKC-10-U-5	Iron	Unknown	3.5	Entire length	2005	No
West Fork/Pond Fork	WVKC-10-U-7	CNA-Biological	Unknown	9.7	Mouth to RM 9.7	2005	Yes
		Iron	Unknown	16.9	Entire length	2005	No
Whites Branch	WVKC-10-U-7-B	Fecal Coliform	Unknown	3.8	Entire length	2005	Yes
		Iron	Unknown	3.8	Entire length	2005	No
James Creek	WVKC-10-U-7-I	Iron	Unknown	2.1	Entire length	2005	No
		Selenium	Unknown	0.2	Mouth to RM 0.16	2005	Yes
Casey Creek	WVKC-10-U-8	CNA-Biological	Unknown	5.3	Entire length	2005	Yes
		Iron	Unknown	5.3	Entire length	2005	No
Casey Creek	WVKC-10-U-8	Selenium	Unknown	5.3	Entire length	2005	Yes

Supplemental Table B1 - 2005 TMDLs

Stream Name	Stream Code	Criteria Affected	Source	Impaired Size (stream-mi) (lake-acres)	Reach Description	Projected TMDL Year (No Later Than)	2004 list?
Beaver Pond Branch	WVKC-10-U-9	Iron	Unknown	2.0	Entire length	2005	No
		Selenium	Unknown	2.0	Entire length	2005	Yes
Lacey Branch	WVKC-10-U-21	Iron	Unknown	1.4	Mouth to RM 1.4	2005	Yes
Alum Creek	WVKC-9.5	Fecal Coliform	Unknown	3.9	Entire length	2005	Yes
UNT/Alum Creek RM 1.5	WVKC-9.5-A	Fecal Coliform	Unknown	1.0	Entire length	2005	Yes
Little Alum Creek	WVKC-9.5-B	Fecal Coliform	Unknown	2.0	Entire length	2005	Yes
Brier Creek	WVKC-13	Fecal Coliform	Unknown	8.4	Entire length	2005	Yes
Fork Creek	WVKC-14	Iron	Unknown	4.5	Entire length	2005	No
Bull Creek	WVKC-16	Iron	Unknown	2.7	Entire length	2005	No
Lick Creek	WVKC-19	CNA-Biological	Unknown	4.0	Entire length	2005	Yes
		Fecal Coliform	Unknown	4.0	Entire length	2005	Yes
Brush Creek	WVKC-21	CNA-Biological	Unknown	3.8	Entire length	2005	Yes
		Fecal Coliform	Unknown	3.8	Entire length	2005	Yes
		Iron	Unknown	3.8	Entire length	2005	No
Honeycamp Fork	WVKC-21-A	Iron	Unknown	2.4	Entire length	2005	No
Ridgeview Hollow	WVKC-21-C	CNA-Biological	Unknown	1.0	Entire length	2005	Yes
		Fecal Coliform	Unknown	1.0	Entire length	2005	Yes
		Iron	Unknown	1.0	Entire length	2005	No
Drawdy Creek	WVKC-24	Fecal Coliform	Unknown	5.9	Entire length	2005	Yes
		Iron	Unknown	5.9	Entire length	2005	No
Short Creek	WVKC-26	Fecal Coliform	Unknown	2.7	Entire length	2005	Yes
Toneys Branch	WVKC-27	Fecal Coliform	Unknown	2.9	Entire length	2005	Yes
		Iron	Unknown	2.9	Entire length	2005	No
Joes Creek	WVKC-29	Fecal Coliform	Unknown	4.5	Mouth to RM 4.5	2005	Yes
		Iron	Unknown	7.2	Entire length	2005	No
Left Fork/Joes Creek	WVKC-29-A	Fecal Coliform	Unknown	1.3	Entire length	2005	Yes

Supplemental Table B1 - 2005 TMDLs

Stream Name	Stream Code	Criteria Affected	Source	Impaired Size (stream-mi) (lake-acres)	Reach Description	Projected TMDL Year (No Later Than)	2004 list?
Laurel Creek	WVKC-31	Fecal Coliform	Unknown	2.3	Mouth to RM 2.3	2005	Yes
		Iron	Unknown	8.6	Entire length	2005	No
Sandlick Creek	WVKC-31-A	CNA-Biological	Unknown	4.6	Entire length	2005	Yes
		Fecal Coliform	Unknown	4.6	Entire length	2005	Yes
		Iron	Unknown	4.6	Entire length	2005	No
Hopkins Fork	WVKC-31-B	Fecal Coliform	Unknown	6.3	Mouth to RM 6.3	2005	Yes
		Iron (trout)	Unknown	11.3	Entire length	2005	No
Big Jarrells Creek	WVKC-31-B-2	Fecal Coliform	Unknown	6.1	Entire length	2005	Yes
		Iron	Unknown	6.1	Entire length	2005	No
Logan Fork	WVKC-31-B-3	Iron	Unknown	5.2	Entire length	2005	No
Cold Fork	WVKC-31-C	Aluminum (d)	Unknown	2.0	Entire length	2005	No
		Iron	Unknown	2.0	Entire length	2005	No
		pH	Unknown	2.0	Entire length	2005	Yes
Little Laurel Creek	WVKC-31-G	Iron	Unknown	3.3	Entire length	2005	No
Mudlick Fork	WVKC-31-H	Iron	Unknown	1.8	Entire length	2005	No
Horse Branch	WVKC-32	Aluminum (d)	Unknown	2.1	Entire length	2005	Yes
		Iron	Unknown	2.1	Entire length	2005	No
		pH	Unknown	2.1	Entire length	2005	Yes
Haggle Branch	WVKC-33	Aluminum (d)	Unknown	1.6	Entire length	2005	Yes
		Iron	Unknown	1.6	Entire length	2005	No
		pH	Unknown	1.6	Entire length	2005	Yes
Jakes Branch	WVKC-34	Iron	Unknown	1.6	Entire length	2005	No
White Oak Creek	WVKC-35	Iron	Unknown	5.5	Entire length	2005	No
		Selenium	Unknown	5.5	Entire length	2005	Yes
Threemile Branch	WVKC-35-D	Aluminum (d)	Unknown	2.1	Entire length	2005	No
		Iron	Unknown	2.1	Entire length	2005	No

Supplemental Table B1 - 2005 TMDLs

Stream Name	Stream Code	Criteria Affected	Source	Impaired Size (stream-mi) (lake-acres)	Reach Description	Projected TMDL Year (No Later Than)	2004 list?
		pH	Unknown	2.1	Entire length	2005	Yes
Left Fork/White Oak Creek	WVKC-35-E	Iron	Unknown	2.3	Entire length	2005	No
		Selenium	Unknown	2.3	Entire length	2005	Yes
UNT/Big Coal River RM 52.7	WVKC-35.8	Aluminum (d)	Unknown	1.4	Entire length	2005	Yes
		Iron	Unknown	1.4	Entire length	2005	No
		pH	Unknown	1.4	Entire length	2005	Yes
Little Elk Creek	WVKC-39	Iron	Unknown	2.7	Entire length	2005	No
Seng Creek	WVKC-42	Fecal Coliform	Unknown	5.9	Entire length	2005	Yes
		Iron	Unknown	5.9	Entire length	2005	No
		Selenium	Unknown	5.9	Entire length	2005	Yes
Elk Run	WVKC-43	Iron	Unknown	4.4	Entire length	2005	Yes
Marsh Fork	WVKC-46	Fecal Coliform	Unknown	32.0	Mouth to RM 32.0	2005	Yes
		Iron	Unknown	9.2	Mouth to RM 9.2	2005	Yes
		Iron (trout)	Unknown	24.9	RM 9.2 to RM 34.1	2005	Yes
Little Marsh Fork	WVKC-46-A	Iron	Unknown	6.2	Entire length	2005	No
		Manganese	Unknown	3.8	Mouth to RM 3.8	2005	No
Brushy Fork	WVKC-46-A-4	Iron	Unknown	1.9	Entire length	2005	No
		Manganese	Unknown	0.1	Mouth to RM 0.1	2005	Yes
Ellis Creek	WVKC-46-B	Iron	Unknown	2.7	Entire length	2005	No
Hazy Creek	WVKC-46-C	Iron	Unknown	7.0	Entire length	2005	No
Stink Run	WVKC-46-E	Fecal Coliform	Unknown	0.1	Mouth to RM 0.1	2005	Yes
		Iron	Unknown	1.2	Entire length	2005	No
Horse Creek	WVKC-46-F	Iron	Unknown	5.1	Entire length	2005	No
Peachtree Creek	WVKC-46-G	Iron	Unknown	5.6	Entire length	2005	No
Drews Creek	WVKC-46-G-1	Iron	Unknown	2.9	RM 1.6 to HW	2005	Yes
Martin Fork	WVKC-46-G-2	Aluminum (d)	Unknown	3.0	Entire length	2005	Yes

Supplemental Table B1 - 2005 TMDLs

Stream Name	Stream Code	Criteria Affected	Source	Impaired Size (stream-mi) (lake-acres)	Reach Description	Projected TMDL Year (No Later Than)	2004 list?
		Iron	Unknown	3.0	Entire length	2005	No
		pH	Unknown	3.0	Entire length	2005	Yes
Millers Fork	WVKC-46-G-3	Iron	Unknown	1.2	Entire length	2005	Yes
Dry Creek	WVKC-46-H	Fecal Coliform	Unknown	2.3	Mouth to RM 2.3	2005	Yes
Rock Creek	WVKC-46-I	Fecal Coliform	Unknown	5.2	Entire length	2005	Yes
		Iron	Unknown	5.2	Entire length	2005	No
Righthand Fork	WVKC-46-I-1	Fecal Coliform	Unknown	2.9	Entire length	2005	Yes
Flat Branch	WVKC-46-I.7	Fecal Coliform	Unknown	1.4	Entire length	2005	Yes
Sandlick Creek	WVKC-46-J	CNA-Biological	Unknown	9.4	RM 0.7 to HW	2005	Yes
		Fecal Coliform	Unknown	6.5	Mouth to RM 6.5	2005	Yes
		Iron	Unknown	10.1	Entire length	2005	Yes
Bee Branch	WVKC-46-J-2	Aluminum (d)	Unknown	1.3	Entire length	2005	Yes
		pH	Unknown	1.3	Entire length	2005	Yes
Right Fork/Sandlick Creek	WVKC-46-J-3	CNA-Biological	Unknown	3.3	Entire length	2005	Yes
		Fecal Coliform	Unknown	2.4	Mouth to RM 2.4	2005	Yes
Wingrove Branch	WVKC-46-J-4	Fecal Coliform	Unknown	2.4	Entire length	2005	Yes
		Iron	Unknown	2.4	Entire length	2005	No
Harper Branch	WVKC-46-J-7	Iron	Unknown	1.0	Entire length	2005	Yes
Cove Creek	WVKC-46-K	Fecal Coliform	Unknown	1.2	Mouth to RM 1.2	2005	Yes
		Iron	Unknown	2.1	Entire length	2005	No
UNT/Cove Creek RM 1.2	WVKC-46-K-2	Fecal Coliform	Unknown	1.1	Entire length	2005	Yes
Breckenridge Creek	WVKC-46-L	Fecal Coliform	Unknown	4.8	Entire length	2005	Yes
UNT/Breckenridge Creek RM 2.7	WVKC-46-L-1	Fecal Coliform	Unknown	1.7	Entire length	2005	Yes
Spanker Branch	WVKC-46-M	Fecal Coliform	Unknown	2.0	Entire length	2005	Yes
Maple Meadow Creek	WVKC-46-N	CNA-Biological	Unknown	4.5	Entire length	2005	Yes
		Fecal Coliform	Unknown	3.0	Mouth to RM 3.0	2005	Yes

Supplemental Table B1 - 2005 TMDLs

Stream Name	Stream Code	Criteria Affected	Source	Impaired Size (stream-mi) (lake-acres)	Reach Description	Projected TMDL Year (No Later Than)	2004 list?
		Iron	Unknown	3.0	Mouth to RM 3.0	2005	Yes

Supplemental Table B1 - 2005 TMDLs

Stream Name	Stream Code	Criteria Affected	Source	Impaired Size (stream-mi) (lake-acres)	Reach Description	Projected TMDL Year (No Later Than)	2004 list?
Rockhouse Fork	WVKC-46-N-1	Fecal Coliform	Unknown	3.1	Entire length	2005	Yes
		Iron	Unknown	3.1	Entire length	2005	Yes
Claypool Hollow	WVKC-46-N.9	Fecal Coliform	Unknown	1.4	Entire length	2005	Yes
Dingess Branch	WVKC-46-O	Fecal Coliform	Unknown	3.9	Entire length	2005	Yes
		Iron	Unknown	3.9	Entire length	2005	Yes
Surveyor Creek	WVKC-46-P	CNA-Biological	Unknown	3.2	Entire length	2005	Yes
		Fecal Coliform	Unknown	3.2	Entire length	2005	Yes
		Iron	Unknown	3.2	Entire length	2005	No
Millers Camp Branch	WVKC-46-Q	CNA-Biological	Unknown	4.3	RM 2.5 to HW	2005	Yes
		Fecal Coliform	Unknown	2.5	Mouth to RM 2.5	2005	Yes
		Iron	Unknown	6.8	Entire length	2005	No
Clay Branch	WVKC-46-Q-0.1	Fecal Coliform	Unknown	0.9	Mouth to RM 0.9	2005	Yes
Stephens Branch	WVKC-46-Q-1	Iron	Unknown	4.0	Entire length	2005	No
Shockley Branch	WVKC-46-Q-3	Iron	Unknown	2.4	Entire length	2005	No
Laurel Branch	WVKC-46-Q-4	Iron	Unknown	2.3	Entire length	2005	Yes
Jehu Branch	WVKC-46-Q-5	Iron	Mine Drainage	1.7	Entire length	2005	Yes
Clear Fork	WVKC-47	Aluminum (d) (trout)	Unknown	9.2	RM 2.4 to RM 11.6	2005	Yes
		CNA-Biological	Unknown	12.1	RM 4.1 to RM 16.2	2005	Yes
		Fecal Coliform	Unknown	18.2	Mouth to RM 18.2	2005	Yes
		Iron	Mine Drainage	2.4	Mouth to RM 2.4	2005	Yes
		Iron (trout)	Mine Drainage	19.2	RM 2.4 to HW	2005	Yes
Sycamore Creek	WVKC-47-E	Fecal Coliform	Unknown	5.7	Entire length	2005	Yes
		Iron	Unknown	5.7	Entire length	2005	No
Stonecoal Branch	WVKC-47-F	Aluminum (d)	Unknown	1.0	Entire length	2005	Yes
		CNA-Biological	Unknown	1.0	Entire length	2005	Yes
		Iron	Unknown	1.0	Entire length	2005	Yes

Supplemental Table B1 - 2005 TMDLs

Stream Name	Stream Code	Criteria Affected	Source	Impaired Size (stream-mi) (lake-acres)	Reach Description	Projected TMDL Year (No Later Than)	2004 list?
		pH	Unknown	1.0	Entire length	2005	Yes
Long Branch	WVKC-47-G	Iron	Unknown	2.6	Entire length	2005	No
Dow Fork	WVKC-47-G-1	Aluminum (d)	Unknown	1.3	Entire length	2005	Yes
		Iron	Unknown	1.3	Entire length	2005	No
		pH	Unknown	1.3	Entire length	2005	Yes
Fulton Creek	WVKC-47-I	Iron	Unknown	3.2	Entire length	2005	Yes
White Oak Creek	WVKC-47-K	CNA-Biological	Unknown	4.0	Entire length	2005	Yes
		Fecal Coliform	Unknown	4.0	Entire length	2005	Yes
		Iron	Unknown	4.0	Entire length	2005	No
Left Fork/White Oak Creek	WVKC-47-K-1	Iron	Unknown	1.9	Entire length	2005	Yes
Toney Fork	WVKC-47-L	Fecal Coliform	Unknown	0.8	Mouth to RM 0.8	2005	Yes
		Iron	Mine Drainage	2.4	Entire length	2005	Yes
Buffalo Fork	WVKC-47-L-1	Iron	Unknown	2.5	Entire length	2005	No
McDowell Branch	WVKC-47-N	Fecal Coliform	Unknown	1.6	Entire length	2005	Yes
		Iron	Unknown	1.6	Entire length	2005	Yes
Lick Run	WVKC-47-P.5	CNA-Biological	Unknown	1.8	Entire length	2005	Yes
		Fecal Coliform	Unknown	1.8	Entire length	2005	Yes
		Iron	Unknown	1.8	Entire length	2005	Yes

Supplemental Table B1 - 2005 TMDLs

Stream Name	Stream Code	Criteria Affected	Source	Impaired Size (stream-mi) (lake-acres)	Reach Description	Projected TMDL Year (No Later Than)	2004 list?
LOWER KANAWHA WATERSHED - HUC# 05050008							
Twomile Creek	WVK-41	CNA-Biological	Unknown	4.7	Entire length	2005	Yes
		Fecal Coliform	Unknown	4.7	Entire length	2005	Yes
		Iron	Unknown	0.8	Mouth to RM 0.8	2005	Yes
Woodward Branch	WVK-41-A	Fecal Coliform	Unknown	1.4	Entire length	2005	Yes
Pfiever Branch	WVK-41-A-1	Fecal Coliform	Unknown	1.3	Entire length	2005	Yes
UNT/Woodward Branch RM 0.9	WVK-41-A-2	Fecal Coliform	Unknown	0.9	Entire length	2005	Yes
Chandler Branch	WVK-41-B	Fecal Coliform	Unknown	0.8	Entire length	2005	Yes
Sugar Creek	WVK-41-C	Fecal Coliform	Unknown	1.9	Entire length	2005	Yes
Left Fork/Twomile Creek	WVK-41-D	Fecal Coliform	Unknown	4.0	Entire length	2005	Yes
UNT/Left Fork RM 0.5/Twomile Creek	WVK-41-D-1	CNA-Biological	Unknown	1.9	Entire length	2005	Yes
		Fecal Coliform	Unknown	1.9	Entire length	2005	Yes
Rich Fork	WVK-41-D.5	Aluminum (d)	Unknown	1.5	Entire length	2005	Yes
		CNA-Biological	Unknown	1.5	Entire length	2005	Yes
		Fecal Coliform	Unknown	1.5	Entire length	2005	Yes
		pH	Mine Drainage	1.5	Entire length	2005	Yes
Craig Branch	WVK-41-D.5-2	CNA-Biological	Unknown	0.6	Entire length	2005	Yes
Right Fork/Twomile Creek	WVK-41-E	Fecal Coliform	Unknown	4.6	Entire length	2005	Yes
Edens Fork	WVK-41-E-1	CNA-Biological	Unknown	2.4	Entire length	2005	Yes
		Fecal Coliform	Unknown	2.4	Entire length	2005	Yes
Sheldon Rock Branch	WVK-41-E-1-A	Fecal Coliform	Unknown	1.8	Entire length	2005	Yes
Holmes Branch	WVK-41-E-2	CNA-Biological	Unknown	1.7	Mouth to RM 1.7	2005	Yes
		Fecal Coliform	Unknown	1.9	Entire length	2005	Yes
Trace Fork	WVK-41-E-2.5	Fecal Coliform	Unknown	1.4	Entire length	2005	Yes

Supplemental Table B1 - 2005 TMDLs

Stream Name	Stream Code	Criteria Affected	Source	Impaired Size (stream-mi) (lake-acres)	Reach Description	Projected TMDL Year (No Later Than)	2004 list?
POCATALICO RIVER SUBWATERSHED							
Heizer Creek	WVKP-1	Iron	Mine Drainage	3.6	Mouth to RM 3.6	2005	Yes
Manila Creek	WVKP-1-A	Aluminum (d)	Unknown	3.4	Mouth to RM 3.4	2005	Yes
		CNA-Biological	Unknown	7.4	Entire length	2005	Yes
		Iron	Mine Drainage	3.4	Mouth to RM 3.4	2005	Yes
		pH	Mine Drainage	3.4	Mouth to RM 3.4	2005	Yes
Sulphur Hollow	WVKP-1-A-0.4	Aluminum (d)	Unknown	0.6	Entire length	2005	Yes
		Iron	Unknown	0.6	Entire length	2005	Yes
		pH	Unknown	0.6	Entire length	2005	Yes
UNT/Manila Creek RM 2.3	WVKP-1-A-0.48	Aluminum (d)	Unknown	0.2	Entire length	2005	Yes
		Iron	Unknown	0.2	Entire length	2005	Yes
		pH	Unknown	0.2	Entire length	2005	Yes
Washington Hollow	WVKP-1-A-0.5	Iron	Unknown	0.7	Entire length	2005	Yes
Alcocks Hollow	WVKP-1-A-0.6	Aluminum (d)	Unknown	0.6	Entire length	2005	Yes
		Iron	Unknown	0.6	Entire length	2005	Yes
		pH	Unknown	0.6	Entire length	2005	Yes
UNT/Manila Creek RM 3.2	WVKP-1-A-0.8	Iron	Unknown	1.2	Entire length	2005	Yes
Coal Hollow	WVKP-1-A.3	Aluminum (d)	Unknown	1.2	Entire length	2005	Yes
		pH	Unknown	1.2	Entire length	2005	Yes
UNT/Heizer Creek RM 2.3	WVKP-1-A.6	Aluminum (d)	Unknown	0.3	Entire length	2005	Yes
		Iron	Unknown	0.3	Entire length	2005	Yes
		pH	Unknown	0.3	Entire length	2005	Yes
Tupper Creek	WVKP-13	Aluminum (d)	Unknown	4.1	Entire length	2005	Yes
		CNA-Biological	Unknown	6.8	Entire length	2005	Yes
		Fecal Coliform	Unknown	6.8	Entire length	2005	Yes
		Iron	Mine Drainage	5.8	Mouth to RM 5.8	2005	Yes

Supplemental Table B1 - 2005 TMDLs

Stream Name	Stream Code	Criteria Affected	Source	Impaired Size (stream-mi) (lake-acres)	Reach Description	Projected TMDL Year (No Later Than)	2004 list?
		pH	Mine Drainage	3.1	RM 2.7 to RM 5.8	2005	Yes

Supplemental Table B1 - 2005 TMDLs

Stream Name	Stream Code	Criteria Affected	Source	Impaired Size (stream-mi) (lake-acres)	Reach Description	Projected TMDL Year (No Later Than)	2004 list?
Legg Fork	WVKP-13-A	Fecal Coliform	Unknown	4.9	Entire length	2005	Yes
Sigman Fork	WVKP-13-A-1	Fecal Coliform	Unknown	3.3	Entire length	2005	Yes
Union Fork	WVKP-13-C.5	Aluminum (d)	Unknown	1.7	Entire length	2005	Yes
		Fecal Coliform	Unknown	1.7	Entire length	2005	Yes
		Iron	Unknown	1.7	Entire length	2005	Yes
		pH	Unknown	1.7	Entire length	2005	Yes
UNT/Union Fork RM 0.2	WVKP-13-C.5-1	Aluminum (d)	Unknown	1.0	Entire length	2005	Yes
		Fecal Coliform	Unknown	1.0	Entire length	2005	Yes
		Iron	Unknown	1.0	Entire length	2005	Yes
		pH	Unknown	1.0	Entire length	2005	Yes

NORTH BRANCH POTOMAC WATERSHED - HUC# 02070002

Slaughterhouse Run	WVPNB-10	CNA-Biological	Unknown	2.2	Entire length	2005	Yes
Montgomery Run	WVPNB-11	Aluminum (d)	Unknown	2.8	Entire length	2005	Yes
		CNA-Biological	Unknown	2.8	Entire length	2005	Yes
		Iron	Mine Drainage	1.4	Mouth to RM 1.4	2005	Yes
		pH	Mine Drainage	2.8	Entire length	2005	Yes
UNT/Montgomery Run RM 1.4	WVPNB-11-A	Aluminum (d)	Unknown	0.4	Entire length	2005	Yes
		pH	Unknown	0.4	Entire length	2005	Yes
Piney Swamp Run	WVPNB-12	Aluminum (d)	Unknown	3.2	Mouth to RM 3.2	2005	Yes
		CNA-Biological	Unknown	3.2	Mouth to RM 3.2	2005	Yes
		Iron	Mine Drainage	3.2	Mouth to RM 3.2	2005	Yes
		pH	Mine Drainage	5.5	Entire length	2005	Yes
UNT/Piney Swamp Run RM 0.7	WVPNB-12-B	Aluminum (d)	Unknown	0.4	Entire length	2005	Yes
		pH	Unknown	0.4	Entire length	2005	Yes

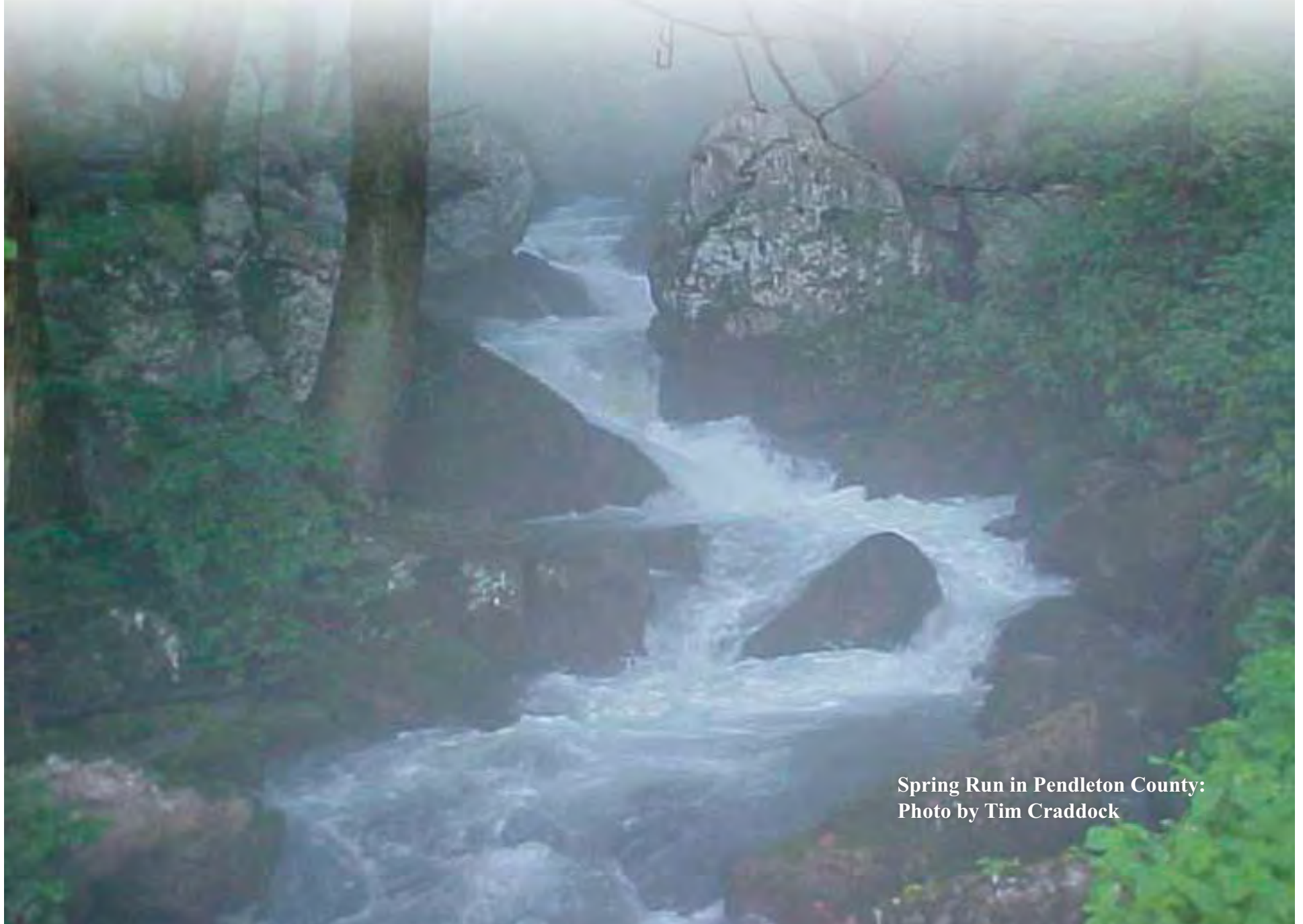
Supplemental Table B1 - 2005 TMDLs

Stream Name	Stream Code	Criteria Affected	Source	Impaired Size (stream-mi) (lake-acres)	Reach Description	Projected TMDL Year (No Later Than)	2004 list?
UNT/Piney Swamp Run RM 1.8	WVPNB-12-E	Aluminum (d)	Unknown	0.2	Entire length	2005	Yes
		Iron	Unknown	0.2	Entire length	2005	Yes
		pH	Unknown	0.2	Entire length	2005	Yes
UNT/Piney Swamp Run RM 2.2	WVPNB-12-F	Aluminum (d)	Unknown	0.7	Entire length	2005	Yes
		Iron	Unknown	0.7	Entire length	2005	Yes
		pH	Unknown	0.7	Entire length	2005	Yes
Abram Creek	WVPNB-16	Aluminum (d)	Unknown	18.5	Entire length	2005	Yes
		CNA-Biological	Unknown	18.5	Entire length	2005	Yes
		Iron	Mine Drainage	9.5	RM 9.0 to HW	2005	Yes
		pH	Mine Drainage	18.5	Entire length	2005	Yes
UNT/Abrams Creek RM 1.9	WVPNB-16-0.5A	CNA-Biological	Unknown	1.5	Entire length	2005	Yes
Emory Creek	WVPNB-16-A	Aluminum (d)	Unknown	2.3	Entire length	2005	Yes
		CNA-Biological	Unknown	2.3	Entire length	2005	Yes
		Iron	Mine Drainage	2.3	Entire length	2005	Yes
		pH	Mine Drainage	2.3	Entire length	2005	Yes
UNT/Emory Creek RM 0.8	WVPNB-16-A-1	Aluminum (d)	Unknown	1.0	Entire length	2005	Yes
		pH	Unknown	1.0	Entire length	2005	Yes
Glade Run	WVPNB-16-B.5	Aluminum (d)	Unknown	0.4	Mouth to RM 0.4	2005	Yes
		Iron	Mine Drainage	0.4	Mouth to RM 0.4	2005	Yes
		pH	Mine Drainage	0.4	Mouth to RM 0.4	2005	Yes
UNT/Glade Run RM 0.3	WVPNB-16-B.5-1	Aluminum (d)	Unknown	1.1	Entire length	2005	Yes
		Iron	Unknown	1.1	Entire length	2005	Yes
		pH	Unknown	1.1	Entire length	2005	Yes
Laurel Run	WVPNB-16-C	Aluminum (d)	Unknown	3.0	Entire length	2005	Yes
		pH	Unknown	3.0	Entire length	2005	Yes

Supplemental Table B1 - 2005 TMDLs

Stream Name	Stream Code	Criteria Affected	Source	Impaired Size (stream-mi) (lake-acres)	Reach Description	Projected TMDL Year (No Later Than)	2004 list?
UNT/Abrams Creek RM 13.6	WVPNB-16-C.4	Aluminum (d)	Unknown	0.9	Entire length	2005	Yes
		pH	Unknown	0.9	Entire length	2005	Yes
UNT/Abrams Creek RM 15.9	WVPNB-16-C.8	Aluminum (d)	Unknown	1.1	Entire length	2005	Yes
		Iron	Unknown	1.1	Entire length	2005	Yes
		pH	Unknown	1.1	Entire length	2005	Yes
Little Creek	WVPNB-16-D	Aluminum (d)	Unknown	0.7	Entire length	2005	Yes
		Iron	Mine Drainage	0.7	Entire length	2005	Yes
		pH	Mine Drainage	0.7	Entire length	2005	Yes
Little Buffalo Creek	WVPNB-19-A	Aluminum (d) (trout)	Unknown	0.6	Mouth to RM 0.6	2005	Yes
		Iron (trout)	Unknown	0.6	Mouth to RM 0.6	2005	Yes
		pH	Unknown	0.6	Mouth to RM 0.6	2005	Yes
Elk Run	WVPNB-22-A	Iron	Unknown	2.7	Entire length	2005	Yes

Supplemental Table C – Water Quality Improvements

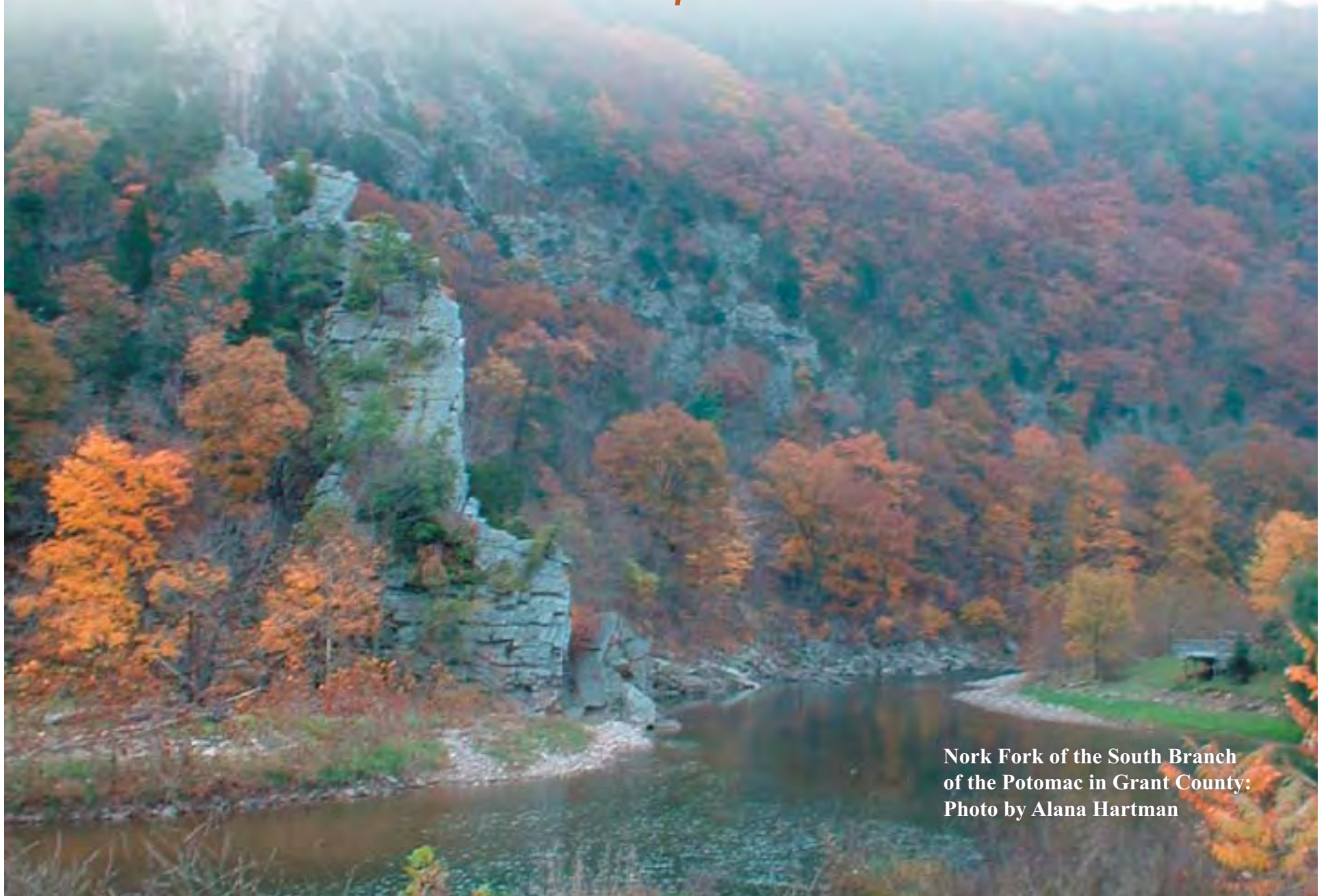


Spring Run in Pendleton County:
Photo by Tim Craddock

Supplemental Table C - Water Quality Improvements

Stream Name	Stream Code	Criteria	Improved reach description	Date added
HYDROLOGIC GROUP A				
SOUTH BRANCH POTOMAC WATERSHED - HUC# 02070001				
South Fork/South Branch Potomac River	WVPSB-21	Fecal coliform	Entire length	2002
North Fork/South Branch Potomac River	WVPSB-28	Fecal coliform	Entire length	2002
HYDROLOGIC GROUP C				
GAULEY WATERSHED - HUC# 05070102				
CRANBERRY RIVER SUBWATERSHED				
Dogway Fork	WVKGC-19	pH	Mouth to RM 6.8	2006
WILLIAMS RIVER SUBWATERSHED				
Sugar Creek	WVKGW-21	pH	Mouth to RM 2.5	2006

***Supplemental Table D – Impaired Waters –
No TMDL Development Needed***



**Nork Fork of the South Branch
of the Potomac in Grant County:
Photo by Alana Hartman**

Supplemental Table D - Impaired Waters - No TMDL Development Needed

Stream Name	Stream Code	Criteria Affected	Source	Impaired Size (miles)	Reach Description
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CATEGORY 4b - Impaired or threatened for one or more designated uses but does not require the development of a TMDL: Other pollution control requirements are reasonably expected to result in the attainment of the water quality standard in the near future.

HYDROLOGIC GROUP C

LOWER GUYANDOTTE WATERSHED - HUC# 05070102

Pats Branch	WVOG-0.5	Fluoride	Industrial Point Source Discharge	0.2	Mouth to RM 0.2
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HYDROLOGIC GROUP B

NORTH BRANCH POTOMAC WATERSHED - HUC# 02070002

Stony River	WVPNB-17	Ammonia	Industrial Point Source Discharge	4.7	RM 7.7 (Mill Run) to RM 12.4 (Fourmile Run)
		CNA-Biological	Industrial Point Source Discharge	2.3	RM 12.4 (Fourmile Run) to RM 14.7 (Mount Storm Lake)
		Temperature, water	Industrial Point Source Discharge	2.3	RM 12.4 (Fourmile Run) to RM 14.7 (Mount Storm Lake)
Fourmile Run	WVPNB-17-C	Ammonia	Industrial Point Source Discharge	0.7	Mouth to RM 0.7

Supplemental Table D - Impaired Waters - No TMDL Development Needed

Stream Name	Stream Code	Criteria Affected	Source	Impaired Size (miles)	Reach Description
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CATEGORY 4c - Impaired or threatened for one or more designated uses but does not require the development of a TMDL: Impairment is not caused by a pollutant.

HYDROLOGIC GROUP B

COAL WATERSHED - HUC# 05050009

Spruce Laurel Fork	WVKC-10-T-11	Low Flow Alterations	Coal Mining	7.6	From RM 6.1 to RM 13.7
Sycamore Fork	WVKC-10-T-11-F	Low Flow Alterations	Coal Mining	2.4	From mouth to RM 2.4
UNT/Sycamore Fork RM 1.4	WVKC-10-T-11-F-2	Low Flow Alterations	Coal Mining	0.4	Entire length
UNT/Sycamore Fork RM 1.7	WVKC-10-T-11-F-3	Low Flow Alterations	Coal Mining	0.4	Entire length
UNT/Sycamore Fork RM 2.0	WVKC-10-T-11-F-4	Low Flow Alterations	Coal Mining	0.3	From mouth to RM 0.3
UNT/Sycamore Fork RM 2.3	WVKC-10-T-11-F-5	Low Flow Alterations	Coal Mining	0.1	Entire length
Skin Poplar Branch	WVKC-10-T-11-G	Low Flow Alterations	Coal Mining	2.5	From mouth to RM 2.5
Jigly Branch	WVKC-10-T-11-G-1	Low Flow Alterations	Coal Mining	1.5	Entire length
UNT/Jigly Branch RM 0.8	WVKC-10-T-11-G-1-B	Low Flow Alterations	Coal Mining	0.5	Entire length
UNT/Skin Poplar Branch RM 2.5	WVKC-10-T-11-G-4	Low Flow Alterations	Coal Mining	0.3	From mouth to RM 0.3
Lower Lick Branch	WVKC-10-T-11-I	Low Flow Alterations	Coal Mining	0.7	From mouth to RM 0.7
UNT/James Branch RM 0.5	WVKC-10-U-16-A	Low Flow Alterations	Coal Mining	0.9	From RM 0.5 to RM 1.4
UNT/UNT RM 0.5/James Branch RM 0.5	WVKC-10-U-16-A-1	Low Flow Alterations	Coal Mining	0.6	Entire length
UNT/UNT RM 1.1/James Branch RM 0.5	WVKC-10-U-16-A-2	Low Flow Alterations	Coal Mining	0.6	Entire length
West Fork/Pond Fork	WVKC-10-U-7	Low Flow Alterations	Coal Mining	6.5	From RM 9.7 to RM 16.2
Bandy Branch	WVKC-10-U-7-E	Low Flow Alterations	Coal Mining	2.6	From mouth to RM 2.6
Mudlick Branch	WVKC-10-U-7-E-1	Low Flow Alterations	Coal Mining	1.7	From mouth to RM 1.7
UNT/Mudlick Branch RM 1.0	WVKC-10-U-7-E-1-A	Low Flow Alterations	Coal Mining	0.4	Entire length
Still Hollow	WVKC-10-U-7-E-2	Low Flow Alterations	Coal Mining	0.6	Entire length
James Creek	WVKC-10-U-7-I	Low Flow Alterations	Coal Mining	0.7	From RM 0.16 to RM 0.84
Ducky Ferrel Hollow	WVKC-10-U-7-I.5	Low Flow Alterations	Coal Mining	1.2	Entire length
UNT/James Creek RM 0.23	WVKC-10-U-7-I-1	Low Flow Alterations	Coal Mining	0.8	From mouth to RM 0.8

Supplemental Table D - Impaired Waters - No TMDL Development Needed

Stream Name	Stream Code	Criteria Affected	Source	Impaired Size (miles)	Reach Description
Matts Creek	WVKC-10-U-7-J	Low Flow Alterations	Coal Mining	2.0	From mouth to RM 2.0
UNT/ Matts Creek RM 0.2	WVKC-10-U-7-J-1	Low Flow Alterations	Coal Mining	0.2	Entire length
UNT/ Matts Creek RM 0.9	WVKC-10-U-7-J-2	Low Flow Alterations	Coal Mining	0.6	From mouth to RM 0.6
UNT/UNT RM 0.2/ Matts Creek RM 0.9	WVKC-10-U-7-J-2-A	Low Flow Alterations	Coal Mining	0.3	Entire length
UNT/ Matts Creek RM 1.4	WVKC-10-U-7-J-3	Low Flow Alterations	Coal Mining	0.4	Entire length
UNT/West Fork RM 10.6	WVKC-10-U-7-K	Low Flow Alterations	Coal Mining	0.6	Entire length
UNT/West Fork RM 11.6	WVKC-10-U-7-L	Low Flow Alterations	Coal Mining	0.5	Entire length
UNT/West Fork RM 11.8	WVKC-10-U-7-M	Low Flow Alterations	Coal Mining	0.5	Entire length
UNT/West Fork RM 11.9	WVKC-10-U-7-N	Low Flow Alterations	Coal Mining	0.5	Entire length
UNT/West Fork RM 12.1	WVKC-10-U-7-O	Low Flow Alterations	Coal Mining	0.4	From mouth to RM 0.4
UNT/West Fork RM 13.0	WVKC-10-U-7-P	Low Flow Alterations	Coal Mining	0.8	Entire length
UNT/West Fork RM 14.3	WVKC-10-U-7-Q	Low Flow Alterations	Coal Mining	1.1	Entire length
UNT/West Fork RM 14.5	WVKC-10-U-7-R	Low Flow Alterations	Coal Mining	1.0	Entire length
UNT/West Fork RM 15.5	WVKC-10-U-7-S	Low Flow Alterations	Coal Mining	0.9	From mouth to RM 0.9
UNT/UNT RM 0.3/West Fork RM 15.5	WVKC-10-U-7-S-1	Low Flow Alterations	Coal Mining	0.3	From mouth to RM 0.3
UNT/West Fork RM 15.7	WVKC-10-U-7-T	Low Flow Alterations	Coal Mining	0.5	Entire length
UNT/West Fork RM 16.0	WVKC-10-U-7-U	Low Flow Alterations	Coal Mining	0.4	Entire length

Supplemental Table E – Total Aluminum TMDLs Developed



Aluminum runoff in
Kanawha County:
Photo by Mike Whitman

Stream Name	Stream Code	Criteria	TMDL Date
HYDROLOGIC GROUP A			
CHEAT WATERSHED - HUC# 05020004			
Cheat River	WVMC	Aluminum (tot)	2001
UNT/Cheat River RM 4.0	WVMC-0.5	Aluminum (tot)	2001
UNT/Cheat River RM 7.7	WVMC-2.3	Aluminum (tot)	2001
UNT/Cheat River RM 8.5	WVMC-2.4	Aluminum (tot)	2001
Crammeys Run	WVMC-3	Aluminum (tot)	2001
Bull Run	WVMC-11	Aluminum (tot)	2001
UNT/Bull Run RM 1.6	WVMC-11-0.1A	Aluminum (tot)	2001
Middle Run	WVMC-11-A	Aluminum (tot)	2001
Mountain Run	WVMC-11-B	Aluminum (tot)	2001
Lick Run	WVMC-11-B-1	Aluminum (tot)	2001
Right Fork/Bull Run	WVMC-11-E	Aluminum (tot)	2001
Big Sandy Creek	WVMC-12	Aluminum (tot)	2001
UNT/Big Sandy Creek RM 2.9	WVMC-12-0.2A	Aluminum (tot)	2001
Sovern Run	WVMC-12-0.5A	Aluminum (tot)	2001
Little Sandy Creek	WVMC-12-B	Aluminum (tot)	2001
Webster Run	WVMC-12-B-0.5	Aluminum (tot)	2001
Beaver Creek	WVMC-12-B-1	Aluminum (tot)	2001
Glade Run	WVMC-12-B-1-A	Aluminum (tot)	2001
UNT/Beaver Creek RM 1.68	WVMC-12-B-1-C	Aluminum (tot)	2001
Hog Run	WVMC-12-B-3	Aluminum (tot)	2001
Cherry Run	WVMC-12-B-5	Aluminum (tot)	2001
Hazel Run	WVMC-12-C	Aluminum (tot)	2001
Conner Run	WVMC-13.5	Aluminum (tot)	2001
Greens Run	WVMC-16	Aluminum (tot)	2001
South Fork/Greens Run	WVMC-16-A	Aluminum (tot)	2001
UNT/South Fork RM 0.6/Greens Run	WVMC-16-A-1	Aluminum (tot)	2001
Muddy Creek	WVMC-17	Aluminum (tot)	2001
Martin Creek	WVMC-17-A	Aluminum (tot)	2001
Fickey Run	WVMC-17-A-0.5	Aluminum (tot)	2001
Glade Run	WVMC-17-A-1	Aluminum (tot)	2001
UNT/Glade Run RM 1.06	WVMC-17-A-1-A	Aluminum (tot)	2001
UNT/Glade Run RM 1.36	WVMC-17-A-1-B	Aluminum (tot)	2001
Roaring Creek	WVMC-18	Aluminum (tot)	2001
Morgan Run	WVMC-23	Aluminum (tot)	2001

Supplemental E - Total Aluminum TMDLs - 2006

Stream Name	Stream Code	Criteria	TMDL Date
UNT/Morgan Run RM 1.1	WVMC-23-0.2A	Aluminum (tot)	2001
Church Creek	WVMC-23-A	Aluminum (tot)	2001
UNT/Church Creek RM 1.2	WVMC-23-A-1	Aluminum (tot)	2001
Heather Run	WVMC-24	Aluminum (tot)	2001
UNT/Heather Run RM 1.5	WVMC-24-A	Aluminum (tot)	2001
Lick Run	WVMC-25	Aluminum (tot)	2001
Joes Run	WVMC-26	Aluminum (tot)	2001
Pringle Run	WVMC-27	Aluminum (tot)	2001
Left Fork/Pringle Run	WVMC-27-A	Aluminum (tot)	2001
Right Fork/Pringle Run	WVMC-27-B	Aluminum (tot)	2001
Blackwater River	WVMC-60-D	Aluminum (tot)	2001
Tub Run	WVMC-60-D-2	Aluminum (tot)	2001
Finley Run	WVMC-60-D-2.7	Aluminum (tot)	2001
North Fork/Blackwater River	WVMC-60-D-3	Aluminum (tot)	2001
Long Run	WVMC-60-D-3-A	Aluminum (tot)	2001
Middle Run	WVMC-60-D-3-B	Aluminum (tot)	2001
Snyder Run	WVMC-60-D-3-C	Aluminum (tot)	2001
Beaver Creek	WVMC-60-D-5	Aluminum (tot)	2001
Hawkins Run	WVMC-60-D-5-C	Aluminum (tot)	2001

UPPER KANAWHA WATERSHED - HUC# 05050006

Paint Creek	WVK-65	Aluminum (tot)	2001
Jones Branch	WVK-65-C	Aluminum (tot)	2001
Tenmile Fork	WVK-65-M	Aluminum (tot)	2001
Long Branch	WVK-65-M-1	Aluminum (tot)	2001
Hickory Camp Branch	WVK-65-P	Aluminum (tot)	2001
UNT/Paint Creek RM 17.2	WVK-65-Q.3	Aluminum (tot)	2001
UNT/Paint Creek RM 17.6	WVK-65-Q.5	Aluminum (tot)	2001
Fifteenmile Creek	WVK-65-R	Aluminum (tot)	2001
Skitter Creek	WVK-65-T	Aluminum (tot)	2001
Lykins Creek	WVK-65-W	Aluminum (tot)	2001
Long Branch	WVK-65-Y-2	Aluminum (tot)	2001
Packs Branch	WVK-65-DD	Aluminum (tot)	2001
Big Fork	WVK-65-DD-2	Aluminum (tot)	2001

Stream Name	Stream Code	Criteria	TMDL Date
HYDROLOGIC GROUP B			
ELK WATERSHED - HUC# 05050007			
Elk River	WVKE	Aluminum (tot)	2001
Morris Creek	WVKE-26	Aluminum (tot)	2001
Left Fork/Morris Creek	WVKE-26-A	Aluminum (tot)	2001
Buffalo Creek	WVKE-50	Aluminum (tot)	2001
Pheasant Run	WVKE-50-T	Aluminum (tot)	2001
LOWER KANAWHA WATERSHED - HUC# 05050008			
Ridenour Lake	WVK-30-A-(L1)	Aluminum (tot)	1999
NORTH BRANCH POTOMAC WATERSHED - HUC# 02070002			
Stony River	WVPNB-17	Aluminum (tot)	2001
Fourmile Run	WVPNB-17-C	Aluminum (tot)	2001
Laurel Run	WVPNB-17-D	Aluminum (tot)	2001
Helmick Run	WVPNB-17-E	Aluminum (tot)	2001
TYGART VALLEY WATERSHED - HUC# 05020001			
Tygart Valley River	WVMT	Aluminum (tot)	2001
Goose Creek	WVMT-4	Aluminum (tot)	2001
Lost Run	WVMT-5	Aluminum (tot)	2001
Berkely Run	WVMT-11	Aluminum (tot)	2001
Shelby Run	WVMT-11-A	Aluminum (tot)	2001
Long Run	WVMT-11-B	Aluminum (tot)	2001
Berry Run	WVMT-11-B-1	Aluminum (tot)	2001
Three Fork Creek	WVMT-12	Aluminum (tot)	2001
Raccoon Creek	WVMT-12-C	Aluminum (tot)	2001
Little Raccoon Run	WVMT-12-C-2	Aluminum (tot)	2001
Brains Creek	WVMT-12-G-2	Aluminum (tot)	2001

Supplemental E - Total Aluminum TMDLs - 2006

Stream Name	Stream Code	Criteria	TMDL Date
Birds Creek	WVMT-12-H	Aluminum (tot)	2001
Squires Creek	WVMT-12-H-1	Aluminum (tot)	2001
Sandy Creek	WVMT-18	Aluminum (tot)	2001
Glade Run	WVMT-18-C	Aluminum (tot)	2001
Little Sandy Creek	WVMT-18-E	Aluminum (tot)	2001
Maple Run	WVMT-18-E-1	Aluminum (tot)	2001
Left Fork/Little Sandy Creek	WVMT-18-E-3	Aluminum (tot)	2001
Left Fork/Sandy Creek	WVMT-18-G	Aluminum (tot)	2001
Frost Run	WVMT-24-A	Aluminum (tot)	2001
Foxgrape Run	WVMT-26-B	Aluminum (tot)	2001
Little Hackers Creek	WVMT-26-C	Aluminum (tot)	2001
Ford Run	WVMT-27	Aluminum (tot)	2001
Anglins Run	WVMT-29	Aluminum (tot)	2001
Pecks Run	WVMTB-5	Aluminum (tot)	2001
UNT/Pecks Run RM 3.62	WVMTB-5-0.8A	Aluminum (tot)	2001
Mud Run	WVMTB-5-C	Aluminum (tot)	2001
Turkey Run	WVMTB-10	Aluminum (tot)	2001
Sugar Run	WVMTB-10-A	Aluminum (tot)	2001
Fink Run	WVMTB-11	Aluminum (tot)	2001
Bridge Run	WVMTB-11-B.7	Aluminum (tot)	2001
Tenmile Creek	WVMTB-25	Aluminum (tot)	1998
Swamp Run	WVMTB-29	Aluminum (tot)	2001
Middle Fork River	WVMTM	Aluminum (tot)	2001
Devil Run	WVMTM-4	Aluminum (tot)	2001
Hell Run	WVMTM-6	Aluminum (tot)	2001
Whiteoak Run	WVMTM-8	Aluminum (tot)	2001
Cassity Fork	WVMTM-16	Aluminum (tot)	2001
Panther Run	WVMTM-16-A	Aluminum (tot)	2001
Island Run	WVMT-36	Aluminum (tot)	2001
Beaver Creek	WVMT-37	Aluminum (tot)	2001
Laurel Run	WVMT-39	Aluminum (tot)	2001
UNT/Tygart Valley River RM 75.2 (Harding)	WVMT-40.5	Aluminum (tot)	2001
Grassy Run	WVMT-41	Aluminum (tot)	2001
Roaring Creek	WVMT-42	Aluminum (tot)	2001

Stream Name	Stream Code	Criteria	TMDL Date
HYDROLOGIC GROUP C			
MIDDLE OHIO SOUTH WATERSHED - HUC# 05030202			
Turkey Run Lake	WVO-37-(L1)	Aluminum (tot)	1999
TUG FORK WATERSHED - HUC# 05070201			
Tug Fork River	WVBST	Aluminum (tot)	2002
PowderMill Branch	WVBST-3	Aluminum (tot)	2002
Pigeon Creek	WVBST-24	Aluminum (tot)	2002
Millstone Branch	WVBST-24-O	Aluminum (tot)	2002
Sugartree Creek	WVBST-32	Aluminum (tot)	2002
Williamson Creek	WVBST-33	Aluminum (tot)	2002
Sprouse Creek	WVBST-38	Aluminum (tot)	2002
Mate Creek	WVBST-40	Aluminum (tot)	2002
Rutherford Branch	WVBST-40-B	Aluminum (tot)	2002
Mitchell Branch	WVBST-40-C	Aluminum (tot)	2002
Chafin Branch	WVBST-40-D	Aluminum (tot)	2002
Thacker Creek	WVBST-42	Aluminum (tot)	2002
Scissorsville Branch	WVBST-42-A	Aluminum (tot)	2002
Mauchlinville Branch	WVBST-42-B	Aluminum (tot)	2002
Grapevine Creek	WVBST-43	Aluminum (tot)	2002
Lick Fork	WVBST-43-A	Aluminum (tot)	2002
Panther Creek	WVBST-60	Aluminum (tot)	2002
Cub Branch	WVBST-60-D	Aluminum (tot)	2002
Grapevine Branch	WVBST-70-F	Aluminum (tot)	2002
Beartown Branch	WVBST-70-I	Aluminum (tot)	2002
Atwell Branch	WVBST-70-O	Aluminum (tot)	2002
Clear Fork	WVBST-76	Aluminum (tot)	2002
Shabbyroom Branch	WVBST-78-B	Aluminum (tot)	2002
HoneyCamp Branch	WVBST-78-D	Aluminum (tot)	2002
Coontree Branch	WVBST-78-E	Aluminum (tot)	2002
Stonecoal Branch	WVBST-78-F	Aluminum (tot)	2002
Badway Branch	WVBST-78-G	Aluminum (tot)	2002
Newson Branch	WVBST-78-H	Aluminum (tot)	2002

Supplemental E - Total Aluminum TMDLs - 2006

Stream Name	Stream Code	Criteria	TMDL Date
Moorecamp Branch	WVBST-78-I	Aluminum (tot)	2002
Left Fork/Davy Branch	WVBST-85-A	Aluminum (tot)	2002
Shannon Branch	WVBST-94	Aluminum (tot)	2002
Upper Shannon Branch	WVBST-95	Aluminum (tot)	2002
Puncheoncamp Branch	WVBST-98-A	Aluminum (tot)	2002
Little Indian Creek	WVBST-100	Aluminum (tot)	2002
Jed Branch	WVBST-102	Aluminum (tot)	2002
Rock Narrows Branch	WVBST-103	Aluminum (tot)	2002
Harris Branch	WVBST-104	Aluminum (tot)	2002
Mitchell Branch	WVBST-105	Aluminum (tot)	2002
Sugarcamp Branch	WVBST-106	Aluminum (tot)	2002
Grapevine Branch	WVBST-107	Aluminum (tot)	2002
Sandlick Creek	WVBST-109	Aluminum (tot)	2002
Right Fork/Sandlick Creek	WVBST-109-A	Aluminum (tot)	2002
Left Fork/Sandlick Creek	WVBST-109-B	Aluminum (tot)	2002
Adkin Branch	WVBST-110	Aluminum (tot)	2002
Belcher Branch	WVBST-111	Aluminum (tot)	2002
Turnhole Branch	WVBST-112	Aluminum (tot)	2002
Harmon Branch	WVBST-113	Aluminum (tot)	2002
South Fork/Tug Fork River	WVBST-115	Aluminum (tot)	2002
Tea Branch	WVBST-115-A	Aluminum (tot)	2002
McClure Branch	WVBST-115-B	Aluminum (tot)	2002
Jump Branch	WVBST-115-D	Aluminum (tot)	2002
Spice Creek	WVBST-115-E	Aluminum (tot)	2002
Laurel Branch	WVBST-115-F	Aluminum (tot)	2002
Road Fork	WVBST-115-G	Aluminum (tot)	2002
Belcher Branch	WVBST-116	Aluminum (tot)	2002
Loop Branch	WVBST-117	Aluminum (tot)	2002
Mill Branch	WVBST-118	Aluminum (tot)	2002
Dry Branch	WVBST-119	Aluminum (tot)	2002
Little Creek	WVBST-120	Aluminum (tot)	2002
Indian Grave Branch	WVBST-120-A	Aluminum (tot)	2002
Puncheoncamp Branch	WVBST-120-B	Aluminum (tot)	2002
Millseat Branch	WVBST-121	Aluminum (tot)	2002
Ballard Harmon Branch	WVBST-122	Aluminum (tot)	2002
Sams Branch	WVBST-123	Aluminum (tot)	2002

Stream Name	Stream Code	Criteria	TMDL Date
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HYDROLOGIC GROUP D

LITTLE KANAWHA WATERSHED - HUC# 05030203

Little Kanawha River	WVLK	Aluminum (tot)	2000
Reedy Creek	WVLK-25	Aluminum (tot)	2000
Spring Creek	WVLK-31	Aluminum (tot)	2000
Sand Fork	WVLK-86	Aluminum (tot)	2000
Oil Creek	WVLK-94	Aluminum (tot)	2000
Saltlick Creek	WVLK-95	Aluminum (tot)	2000

LOWER NEW WATERSHED - HUC# 05050004

Dunloup Creek	WVKN-22	Aluminum (tot)	2002
Meadow Fork	WVKN-22-B	Aluminum (tot)	2002

MONONGAHELA WATERSHED - HUC# 05020003

Monongahela River	WVM	Aluminum (tot)	2002
Camp Run	WVM-2.1	Aluminum (tot)	2002
UNT/Monongahela River RM 92.0	WVM-2.6	Aluminum (tot)	2002
Laurel Run	WVM-2.7	Aluminum (tot)	2002
West Run	WVM-3	Aluminum (tot)	2002
Robinson Run	WVM-4	Aluminum (tot)	2004
Crafts Run	WVM-4-A	Aluminum (tot)	2002
UNT/Robinson Run RM 1.09	WVM-4-B	Aluminum (tot)	2002
Scotts Run	WVM-6	Aluminum (tot)	2002
Dents Run	WVM-7	Aluminum (tot)	2002
UNT/Dents Run RM 3.57	WVM-7-C	Aluminum (tot)	2002
Deckers Creek	WVM-8	Aluminum (tot)	2002
Hartman Run	WVM-8-0.5A	Aluminum (tot)	2002
Deep Hollow	WVM-8-A.7	Aluminum (tot)	2002
Glady Run	WVM-8-D	Aluminum (tot)	2002
Slabcamp Run	WVM-8-F	Aluminum (tot)	2002
Dillan Creek	WVM-8-G	Aluminum (tot)	2002
Laurel Run	WVM-8-H	Aluminum (tot)	2002

Supplemental E - Total Aluminum TMDLs - 2006

Stream Name	Stream Code	Criteria	TMDL Date
Kanes Creek	WVM-8-I	Aluminum (tot)	2002
Booths Creek	WVM-10	Aluminum (tot)	2002
Owl Creek	WVM-10-D	Aluminum (tot)	2002
Mays Run	WVM-10-E	Aluminum (tot)	2002
UNT/Booths Creek RM 6.24	WVM-10-F	Aluminum (tot)	2002
Brand Run	WVM-11	Aluminum (tot)	2002
Flaggy Meadow Run	WVM-14	Aluminum (tot)	2002
Birchfield Run	WVM-15	Aluminum (tot)	2002
Indian Creek	WVM-17	Aluminum (tot)	2002
Parker Run	WVM-20	Aluminum (tot)	2002
UNT/Monongahela River RM 121.8	WVM-20.2	Aluminum (tot)	2002
Robinson Run	WVM-22-C	Aluminum (tot)	2002
Sugar Run	WVM-22-K	Aluminum (tot)	2002
Buffalo Creek	WVM-23	Aluminum (tot)	2002
Mod Run	WVM-23-K	Aluminum (tot)	2002
Fleming Fork	WVM-23-N-1	Aluminum (tot)	2002
Whetstone Run	WVM-23-Q	Aluminum (tot)	2002
Joes Run	WVM-23-R	Aluminum (tot)	2002
UNT/Monongahela River RM 128.55	WVM-25.9	Aluminum (tot)	2002

Supplemental E - Total Aluminum TMDLs - 2006

Stream Name	Stream Code	Criteria	TMDL Date
HYDROLOGIC GROUP E			
LOWER OHIO WATERSHED - HUC# 05090101			
Fourpole Creek	WVO-3	Aluminum (tot)	2002
WEST FORK WATERSHED - HUC# 05020002			
West Fork River	WVMW	Aluminum (tot)	2002
Booths Creek	WVMW-2	Aluminum (tot)	2002
UNT/Booths Creek RM 1.4	WVMW-2-0.1A	Aluminum (tot)	2002
UNT/Booths Creek RM 3.5	WVMW-2-0.5A	Aluminum (tot)	2002
Hog Lick Run	WVMW-2-A	Aluminum (tot)	2002
Sweep Run	WVMW-2-C	Aluminum (tot)	2002
Horners Run	WVMW-2-D	Aluminum (tot)	2002
Purdys Run	WVMW-2-D-1	Aluminum (tot)	2002
UNT/Booths Creek RM 8.3	WVMW-2-D.5	Aluminum (tot)	2002
Coons Run	WVMW-3	Aluminum (tot)	2002
Bingamon Creek	WVMW-7	Aluminum (tot)	2002
Elklick Run	WVMW-7-C	Aluminum (tot)	2002
Cunningham Run	WVMW-7-D	Aluminum (tot)	2002
UNT/West Fork River RM 11.44	WVMW-7.1	Aluminum (tot)	2002
Laurel Run	WVMW-8	Aluminum (tot)	2002
UNT/West Fork RM 13.1 (at Viropa)	WVMW-8.5	Aluminum (tot)	2002
Mudlick Run	WVMW-9	Aluminum (tot)	2002
UNT/West Fork RM 13.9	WVMW-9.5	Aluminum (tot)	2002
Browns Run	WVMW-10	Aluminum (tot)	2002
Shinns Run	WVMW-11	Aluminum (tot)	2002
Robinson Run	WVMW-12	Aluminum (tot)	2002
Pigotts Run	WVMW-12-A	Aluminum (tot)	2002
UNT/Robinson Run RM 1.08	WVMW-12-B	Aluminum (tot)	2002
Tenmile Creek	WVMW-13	Aluminum (tot)	2002
Jack Run	WVMW-13-0.5A	Aluminum (tot)	2002
Jones Creek	WVMW-13-A	Aluminum (tot)	2002
Little Tenmile Creek	WVMW-13-B	Aluminum (tot)	2002
Peters Run	WVMW-13-B-1	Aluminum (tot)	2002

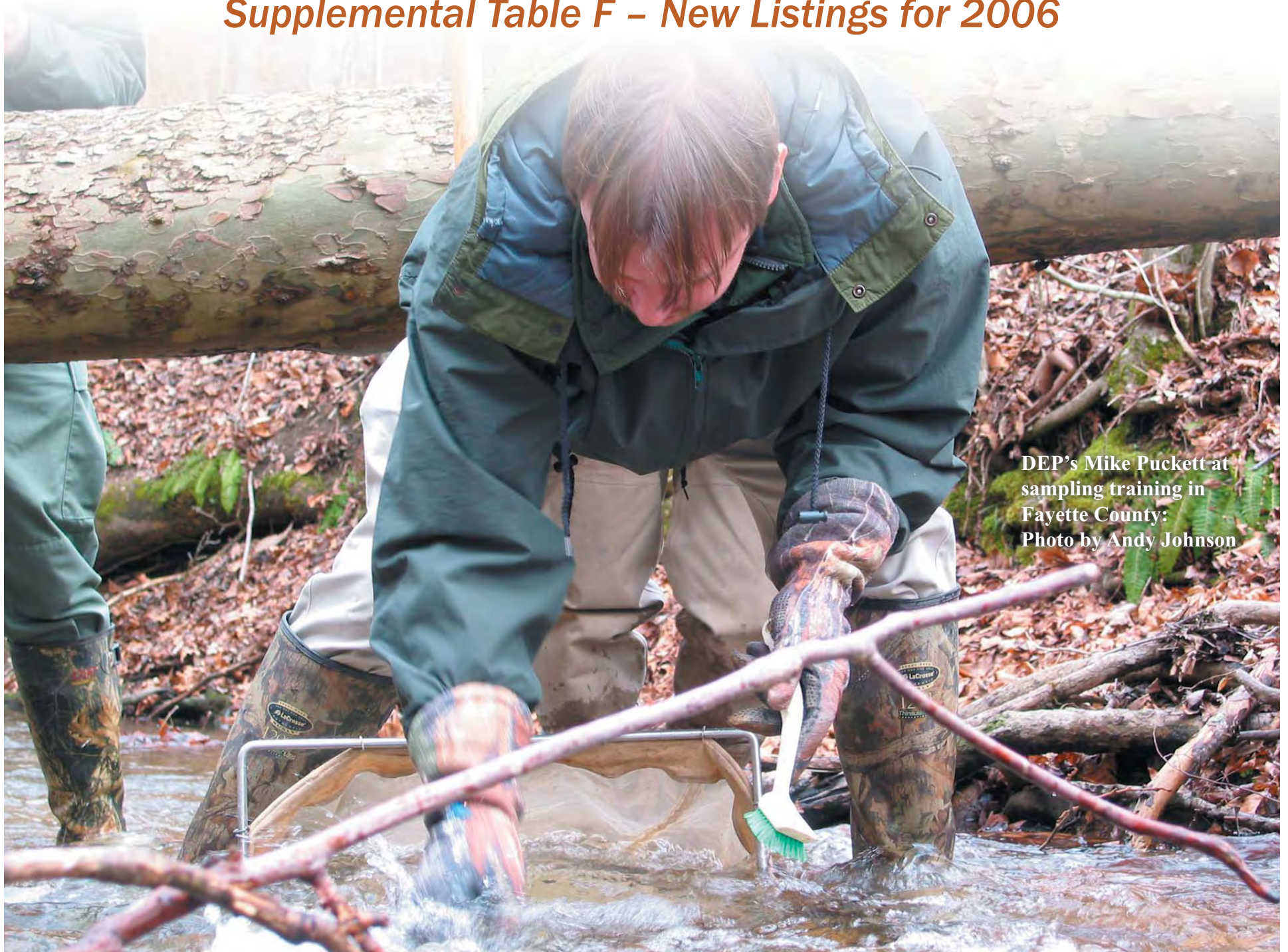
Supplemental E - Total Aluminum TMDLs - 2006

Stream Name	Stream Code	Criteria	TMDL Date
UNT/Little Tenmile Creek RM 2.0	WVMW-13-B-1.5	Aluminum (tot)	2002
Bennett Run	WVMW-13-B-2	Aluminum (tot)	2002
Laurel Run	WVMW-13-B-4	Aluminum (tot)	2002
Big Elk Creek	WVMW-13-B-6	Aluminum (tot)	2002
Mudlick Run	WVMW-13-B-9	Aluminum (tot)	2002
Isaacs Creek	WVMW-13-C	Aluminum (tot)	2002
Little Isaacs Creek	WVMW-13-C-1	Aluminum (tot)	2002
Gregory Run	WVMW-13-D	Aluminum (tot)	2002
Katys Lick Creek	WVMW-13-E	Aluminum (tot)	2002
UNT/Tenmile Creek RM 10.82	WVMW-13-E.7	Aluminum (tot)	2002
Rockcamp Run	WVMW-13-F	Aluminum (tot)	2002
Little Rockcamp Run	WVMW-13-F-1	Aluminum (tot)	2002
Cherrycamp Run	WVMW-13-I-2	Aluminum (tot)	2002
Patterson Fork	WVMW-13-I-3	Aluminum (tot)	2002
Coburn Fork	WVMW-13-N	Aluminum (tot)	2002
Shaw Run	WVMW-13-N-1	Aluminum (tot)	2002
UNT/West Fork River RM 20.42	WVMW-14.2	Aluminum (tot)	2002
Simpson Creek	WVMW-15	Aluminum (tot)	2002
UNT/Simpson Creek RM 1.23	WVMW-15-0.5A	Aluminum (tot)	2002
Jack Run	WVMW-15-A	Aluminum (tot)	2002
Smith Run	WVMW-15-B	Aluminum (tot)	2002
Jerry Run	WVMW-15-H	Aluminum (tot)	2002
Berry Run	WVMW-15-I	Aluminum (tot)	2002
Right Fork/Simpson Creek	WVMW-15-J	Aluminum (tot)	2002
UNT/Right Fork RM 1.97/Simpson Creek	WVMW-15-J-0.3	Aluminum (tot)	2002
Buck Run	WVMW-15-J-1	Aluminum (tot)	2002
Sand Lick Run	WVMW-15-J-2	Aluminum (tot)	2002
Gabe Fork	WVMW-15-J-3	Aluminum (tot)	2002
UNT/Simpson Creek RM 21.92	WVMW-15-J.5	Aluminum (tot)	2002
Bartlett Run	WVMW-15-K	Aluminum (tot)	2002
UNT/Simpson Creek RM 23.1	WVMW-15-K.7	Aluminum (tot)	2002
West Branch/Simpson Creek	WVMW-15-L	Aluminum (tot)	2002
UNT/West Branch RM 0.6/Simpson Creek	WVMW-15-L-0.5	Aluminum (tot)	2002
Stillhouse Run	WVMW-15-L-1	Aluminum (tot)	2002
UNT/West Branch RM 1.6/Simpson Creek	WVMW-15-L-2	Aluminum (tot)	2002
Camp Run	WVMW-15-M	Aluminum (tot)	2002

Supplemental E - Total Aluminum TMDLs - 2006

Stream Name	Stream Code	Criteria	TMDL Date
UNT/Simpson Creek RM 26.94	WVMW-15-N	Aluminum (tot)	2002
Lambert Run	WVMW-16	Aluminum (tot)	2002
Jack Run	WVMW-17	Aluminum (tot)	2002
Fall Run	WVMW-18	Aluminum (tot)	2002
Crooked Run	WVMW-19	Aluminum (tot)	2002
Simpson Fork	WVMW-20-B	Aluminum (tot)	2002
Elk Creek	WVMW-21	Aluminum (tot)	2002
Murphy Run	WVMW-21-A	Aluminum (tot)	2002
Nutter Run	WVMW-21-D	Aluminum (tot)	2002
Turkey Run	WVMW-21-E	Aluminum (tot)	2002
Hooppole Run	WVMW-21-F	Aluminum (tot)	2002
Brushy Fork	WVMW-21-G	Aluminum (tot)	2002
Coplin Run	WVMW-21-G-1	Aluminum (tot)	2002
Gnatty Creek	WVMW-21-M	Aluminum (tot)	2002
Right Branch/Gnatty Creek	WVMW-21-M-5	Aluminum (tot)	2002
Charity Fork	WVMW-21-M-5-A	Aluminum (tot)	2002
Birds Run	WVMW-21-O	Aluminum (tot)	2002
Arnold Run	WVMW-21-P	Aluminum (tot)	2002
Isaacs Run	WVMW-21-Q	Aluminum (tot)	2002
Stewart Run	WVMW-21-S	Aluminum (tot)	2002
Washburncamp Run	WVMW-22-A	Aluminum (tot)	2002
Browns Creek	WVMW-23	Aluminum (tot)	2002
Coburns Creek	WVMW-24	Aluminum (tot)	2002
Sycamore Creek	WVMW-25	Aluminum (tot)	2002
Lost Creek	WVMW-26	Aluminum (tot)	2002
UNT/Lost Creek RM 3.32	WVMW-26-0.5A	Aluminum (tot)	2002
Bonds Run	WVMW-26-A	Aluminum (tot)	2002
Buffalo Creek	WVMW-27	Aluminum (tot)	2002
Hackers Creek	WVMW-31	Aluminum (tot)	2002
Mare Run	WVMW-36-C.5	Aluminum (tot)	2002
Grass Run	WVMW-38-E	Aluminum (tot)	2002
Stone Lick	WVMW-44	Aluminum (tot)	2002
Fitz Run	WVMW-50-C	Aluminum (tot)	2002
Ward Run	WVMW-50-D	Aluminum (tot)	2002

Supplemental Table F – New Listings for 2006



DEP's Mike Puckett at
sampling training in
Fayette County:
Photo by Andy Johnson

2006 Section 303(d) - List - New Listings

Stream Name	Stream Code	Criteria Affected	Source	Impaired Size (stream-mi) (lake-acres)	Reach Description	Projected TMDL Year (No Later Than)
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HYDROLOGIC GROUP A

Cheat Watershed - HUC# 05020004

Cheat Lake	WVMC-(L1)	PCBs	Unknown	1730.0	Entire length	2019
Shavers Fork	WVMCS	PCBs	Unknown	96.9	Entire length	2019
Lindy Run	WVMC-60-D-2.5	pH	Unknown	2.0	Entire length	2019
Otter Creek	WVMC-60-F	pH	Unknown	12.8	Entire length	2019
Coal Run	WVMC-60-F-1	pH	Unknown	2.0	Entire length	2019
Yellow Creek	WVMC-60-F-7	pH	Unknown	2.6	Entire length	2019
South Fork	WVMC-60-G-2	pH	Unknown	1.6	Entire length	2019
Stonecoal Run	WVMC-60-O-6	pH	Unknown	2.2	Entire length	2019

SOUTH BRANCH POTOMAC WATERSHED - HUC# 02070001

South Branch Potomac River	WVPSB	PCBs	Unknown	154.1	Entire length	2019
South Fork/South Branch Potomac River	WVPSB-21	CNA-Biological	Unknown	18.1	RM 26.4 to RM 44.5	2019
UNT/South Branch RM 61.4	WVPSB-21.5	CNA-Biological	Unknown	3.2	Mouth to RM 3.2	2019
UNT/UNT RM 2.5/Hutton Run RM 0.7	WVPSB-22-A-4	CNA-Biological	Unknown	1.6	Entire length	2019
Robinson Run	WVPSB-26-A	CNA-Biological	Unknown	5.4	Entire length	2019

UPPER KANAWHA WATERSHED - HUC# 05050006

Kanawha River (Upper)	WVK-up	PCBs	Unknown	48.0	RM 57.9 (confluence with Elk River) to HW	2019
Left Fork/Kelleys Creek	WVK-64-K	CNA-Biological	Unknown	3.1	Entire length	2019

2006 Section 303(d) - List - New Listings

Stream Name	Stream Code	Criteria Affected	Source	Impaired Size (stream-mi) (lake-acres)	Reach Description	Projected TMDL Year (No Later Than)
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HYDROLOGIC GROUP B

COAL WATERSHED - HUC# 05050009

Ely Fork	WVKC-10-E-2	CNA-Biological	Unknown	3.6	Entire length	2020
Spanker Branch	WVKC-46-M	CNA-Biological	Unknown	2.0	Entire length	2020

ELK WATERSHED - HUC# 05050007

Big Branch	WVKE-50-B-3	CNA-Biological	Unknown	2.3	Entire length	2020
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LOWER KANAWHA WATERSHED - HUC# 05050008

Kanawha River (Lower)	WVK-lo	PCBs	Unknown	57.9	Mouth (confluence with Ohio) to RM 57.9 (confluence with Elk River)	2020
Bucklelew Hollow	WVK-16-R	CNA-Biological	Unknown	1.7	Entire length	2020
UNT/UNT RM 0.4/Little Buffalo Creek RM 1.0	WVK-20-A-1	CNA-Biological	Unknown	1.2	Entire length	2020
UNT/UNT RM 0.4/Scary Creek RM 2.1	WVK-32-B-1	CNA-Biological	Unknown	1.5	Entire length	2020
POCATALICO RIVER SUBWATERSHED						
Grapevine Creek	WVKP-16	CNA-Biological	Unknown	6.5	Entire length	2020
UNT/Dog Fork RM 2.0	WVKP-17-F-3	CNA-Biological	Unknown	1.0	Entire length	2020

WEST VIRGINIA

WEST VIRGINIA

2006 Section 303(d) - List - New Listings

Stream Name	Stream Code	Criteria Affected	Source	Impaired Size (stream-mi) (lake-acres)	Reach Description	Projected TMDL Year (No Later Than)
NORTH BRANCH POTOMAC WATERSHED - HUC# 02070002						
UNT/Patterson Creek RM 16.0	WVPNB-4-J.5	CNA-Biological	Unknown	1.0	Entire length	2020
TYGART VALLEY WATERSHED - HUC# 05020001						
Tygart Lake	WVMT-(L1)	PCBs	Unknown	1750.0	Entire length	2020
BUCKHANNON RIVER SUBWATERSHED						
Little Sand Run	WVMTB-13	Fecal Coliform	Unknown	3.4	Entire length	2020
Left Fork/Little Sand Run	WVMTB-13-A	Fecal Coliform	Unknown	2.5	Entire length	2020
Ratcliff Run	WVMTB-14	Fecal Coliform	Unknown	2.9	Entire length	2020

2006 Section 303(d) - List - New Listings

Stream Name	Stream Code	Criteria Affected	Source	Impaired Size (stream-mi) (lake-acres)	Reach Description	Projected TMDL Year (No Later Than)
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HYDROLOGIC GROUP C

GAULEY WATERSHED - HUC# 05050005

Gauley River	WVKG	Fecal Coliform	Unknown	37.2	Mouth to RM 37.2 (Summersville Dam)	2021
Summersville Lake	WVKG-(L1)	PCBs	Unknown	2700.0	Entire length	2021
Scrabble Creek	WVKG-1	Fecal Coliform	Unknown	3.1	Entire length	2006
Left Fork/Scrabble Creek	WVKG-1-A	CNA-Biological	Unknown	2.2	Entire length	2006
Twentymile Creek	WVKG-5	CNA-Biological	Unknown	20.3	RM 7.4 to RM 27.7	2006
		Fecal Coliform	Unknown	7.4	Mouth to RM 7.4	2006
		Iron	Unknown	15.6	Mouth to RM 15.6	2006
		pH	Unknown	4.8	RM 24.6 to HW	2006
Bells Creek	WVKG-5-B	CNA-Biological	Unknown	8.2	Entire length	2006
		Fecal Coliform	Unknown	8.2	Entire length	2006
Open Fork	WVKG-5-B-1	Aluminum (d)	Unknown	2.9	Mouth to RM 2.9	2006
		Fecal Coliform	Unknown	5.7	Entire length	2006
		pH	Unknown	2.9	Mouth to RM 2.9	2006
Williams Hollow	WVKG-5-B-1-B	pH	Unknown	2.2	Entire length	2006
Sangamore Fork	WVKG-5-B-1-C	Aluminum (d)	Unknown	2.5	Entire length	2006
		CNA-Biological	Unknown	2.5	Entire length	2006
		pH	Unknown	2.5	Entire length	2006
Smith Branch	WVKG-5-B-2	Fecal Coliform	Unknown	0.2	Mouth to RM 0.2	2006
Rockcamp Fork	WVKG-5-B-5	Fecal Coliform	Unknown	4.2	Entire length	2006
Campbell Fork	WVKG-5-B-7	Fecal Coliform	Unknown	2.1	Entire length	2006

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Stream Name	Stream Code	Criteria Affected	Source	Impaired Size (stream-mi) (lake-acres)	Reach Description	Projected TMDL Year (No Later Than)
Rockcamp Fork	WVKG-5-F	Aluminum (d)	Unknown	2.3	Mouth to RM 2.3	2006
		pH	Unknown	2.3	Mouth to RM 2.3	2006
Spring Branch	WVKG-5-F-1	Aluminum (d)	Unknown	1.2	Entire length	2006
		Iron	Unknown	1.2	Entire length	2006
		pH	Unknown	1.2	Entire length	2006
Boardtree Branch	WVKG-5-M	CNA-Biological	Unknown	2.1	Entire length	2006
Sugarcamp Branch	WVKG-5-N	CNA-Biological	Unknown	3.1	Entire length	2006
Stillhouse Branch	WVKG-5-O	CNA-Biological	Unknown	1.9	Entire length	2006
UNT/Robinson Fork RM 1.22 (Wildcat Hollow)	WVKG-5-P-4	Iron	Unknown	1.6	Entire length	2006
		pH	Unknown	1.6	Entire length	2006
Rich Creek	WVKG-6	Fecal Coliform	Unknown	1.7	Mouth to RM 1.7	2006
		Iron	Unknown	3.5	Mouth to RM 3.5	2006
Lick Branch	WVKG-6-A	Fecal Coliform	Unknown	1.3	Entire length	2006
Kelly Fork	WVKG-6-D	Fecal Coliform	Unknown	2.5	Entire length	2006
Otter Creek	WVKG-13-B	Fecal Coliform	Unknown	2.6	Entire length	2006
Line Creek	WVKG-13-C	Fecal Coliform	Unknown	3.0	Entire length	2006
UNT/Line Creek RM 1.3	WVKG-13-C-3	pH	Unknown	1.8	Entire length	2006
Laurel Creek	WVKG-13-E	Fecal Coliform	Unknown	3.7	Entire length	2006
Jones Branch	WVKG-13-G	Fecal Coliform	Unknown	2.3	Entire length	2006
		Iron	Unknown	2.3	Entire length	2006
Keenan Branch	WVKG-13-H	Fecal Coliform	Unknown	1.6	Entire length	2006
Whitewater Branch	WVKG-13-J	Fecal Coliform	Unknown	3.0	Entire length	2006
Buck Garden Creek	WVKG-13-K	Fecal Coliform	Unknown	5.1	Entire length	2006
Hutchison Branch	WVKG-13-K-1	Fecal Coliform	Unknown	2.7	Entire length	2006

2006 Section 303(d) - List - New Listings

Stream Name	Stream Code	Criteria Affected	Source	Impaired Size (stream-mi) (lake-acres)	Reach Description	Projected TMDL Year (No Later Than)
McClung Branch	WVKG-13-M	Fecal Coliform	Unknown	2.5	Entire length	2006
Pine Run	WVKG-13-N	Iron	Unknown	0.7	Mouth to RM 0.65	2006
Bryant Branch	WVKG-13-O	Iron	Unknown	1.6	Entire length	2006
Sewell Creek	WVKG-19-Q	Fecal Coliform	Unknown	14.1	Entire length	2006
Little Sewell Creek	WVKG-19-Q-1	Fecal Coliform	Unknown	6.1	Entire length	2006
		Iron	Unknown	0.3	Mouth to RM 0.3	2006
Little Clear Creek	WVKG-19-V	pH	Unknown	15.5	RM 0.8 to HW	2006
UNT/Little Clear Creek RM 7.5	WVKG-19-V-3.8	Iron	Unknown	1.0	Entire length	2006
Laurel Creek	WVKG-19-V-5	pH	Unknown	3.7	Entire length	2006
Wallace Branch	WVKG-19-V-6	pH	Unknown	1.6	Entire length	2006
Kuhn Branch	WVKG-19-V-7	Iron	Unknown	1.9	Entire length	2006
Brushy Meadow Creek	WVKG-24-E-2	Fecal Coliform	Unknown	1.3	Mouth to RM 1.3	2006
UNT/Brushy Meadow Creek RM 1.3	WVKG-24-E-2-B	Fecal Coliform	Unknown	2.7	Entire length	2006
Jones Run	WVKG-26-B-2	Fecal Coliform	Unknown	1.6	Entire length	2006
Duffy Branch	WVKG-26-C	Iron	Unknown	1.5	Entire length	2006
Phillips Run	WVKG-26-D	Iron	Unknown	3.6	Entire length	2006
Trout Run	WVKG-26-F	pH	Unknown	3.7	Entire length	2006
Enoch Branch	WVKG-26-H	Iron	Unknown	3.0	Entire length	2006
		pH	Unknown	3.0	Entire length	2006
Brushy Fork	WVKG-26-K	Iron	Unknown	5.5	Entire length	2006
Lower Spruce Run	WVKG-26-K-1	pH	Unknown	1.6	Entire length	2006
Spruce Run	WVKG-26-K-1-A	Aluminum (d)	Unknown	1.5	Entire length	2006
		pH	Unknown	1.5	Entire length	2006
Falls Run	WVKG-26-O-2	pH	Unknown	1.4	Entire length	2006

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Stream Name	Stream Code	Criteria Affected	Source	Impaired Size (stream-mi) (lake-acres)	Reach Description	Projected TMDL Year (No Later Than)
Laurel Fork	WVKG-26-P	Iron	Unknown	2.0	Entire length	2006
Big Beaver Creek	WVKG-30	Fecal Coliform	Unknown	16.4	Entire length	2006
Wyatt Run	WVKG-30-D	Fecal Coliform	Unknown	1.7	Entire length	2006
Little Beaver Creek	WVKG-30-E	Fecal Coliform	Unknown	6.0	Entire length	2006
UNT/Little Beaver Creek RM 4.0	WVKG-30-E-4	Fecal Coliform	Unknown	1.1	Entire length	2006
		Iron	Unknown	1.1	Entire length	2006
Left Fork/Big Beaver Creek	WVKG-30-H	Fecal Coliform	Unknown	1.0	Mouth to RM 1.0	2006
Paddy Run	WVKG-30-K	Iron	Unknown	1.2	Entire length	2006
Bearpen Fork	WVKG-30-L	pH	Unknown	1.1	Mouth to RM 1.1	2006
Upper Laurel Run	WVKG-30-P	pH	Unknown	1.4	Entire length	2006
Little Laurel Creek	WVKG-31	pH	Unknown	2.4	RM 1.18 to HW	2006
UNT/Little Laurel Creek RM 1.1	WVKG-31-B	pH	Unknown	2.0	Entire length	2006
UNT/Little Laurel Creek RM 1.9	WVKG-31-C	pH	Unknown	1.5	Entire length	2006
Panther Creek	WVKG-32	Aluminum (d) (trout)	Unknown	1.7	Mouth to RM 1.7	2006
Cherry River	WVKG-34	Iron	Unknown	10.5	Entire length	2021
North Fork/Cherry River	WVKG-34-H	Aluminum (d) (trout)	Unknown	21.6	Entire length	2021
Desert Branch	WVKG-34-H-2	pH	Unknown	1.9	Entire length	2021
Rabbit Run	WVKG-34-H-11	pH	Unknown	1.4	Entire length	2021
Bear Run	WVKG-34-H-14	pH	Unknown	2.2	Entire length	2021
Darnell Run	WVKG-34-H-17	pH	Unknown	1.0	Entire length	2021
Big Ditch Run	WVKG-46	CNA-Biological	Unknown	3.1	Entire length	2021

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Stream Name	Stream Code	Criteria Affected	Source	Impaired Size (stream-mi) (lake-acres)	Reach Description	Projected TMDL Year (No Later Than)
WILLIAMS RIVER SUBWATERSHED						
Middle Fork/Williams River	WVKGW-10	Aluminum (d) (trout)	Unknown	12.9	Entire length	2021
Beechy Run	WVKGW-10-C	pH	Unknown	3.9	Entire length	2021
Kens Creek	WVKGW-18	pH	Unknown	2.3	Entire length	2006
UNT/Sugar Creek RM 2.5	WVKGW-21-B	pH	Unknown	0.8	Entire length	2006
LOWER GUYANDOTTE WATERSHED - HUC# 05070102						
Fourmile Creek	WVOG-27	CNA-Biological	Unknown	8.0	Entire length	2021
Ninemile Creek	WVOG-31	CNA-Biological	Unknown	7.1	Entire length	2021
Tenmile Creek	WVOG-32	CNA-Biological	Unknown	7.5	Entire length	2021
Laurel Creek	WVOG-38-D	CNA-Biological	Unknown	2.8	Mouth to RM 2.8	2021
West Fork	WVOG-44-A	CNA-Biological	Unknown	2.4	Entire length	2021
Smokehouse Fork	WVOG-44-E	CNA-Biological	Unknown	8.7	Entire length	2021
Trace Fork	WVOG-49-D	CNA-Biological	Unknown	5.9	Entire length	2021
Hurricane Branch	WVOG-49-D-1	CNA-Biological	Unknown	1.9	Entire length	2021
Garrett Fork	WVOG-49-E	CNA-Biological	Unknown	4.0	Entire length	2021
MUD RIVER SUBWATERSHED						
Big Cabell Creek	WVOGM-4	CNA-Biological	Unknown	7.4	Entire length	2021
Fudges Creek	WVOGM-6	CNA-Biological	Unknown	6.7	Entire length	2021
Mill Creek	WVOGM-8	CNA-Biological	Unknown	4.2	Entire length	2021
Johns Branch	WVOGM-11	CNA-Biological	Unknown	2.5	Entire length	2021
Charley Creek	WVOGM-14	CNA-Biological	Unknown	8.7	Entire length	2021
Straight Fork	WVOGM-25-H	CNA-Biological	Unknown	7.4	Entire length	2021
Big Creek	WVOGM-35	CNA-Biological	Unknown	1.8	Mouth to RM 1.8	2021
Stinson Branch	WVOGM-39-E	CNA-Biological	Unknown	2.6	Entire length	2021

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Stream Name	Stream Code	Criteria Affected	Source	Impaired Size (stream-mi) (lake-acres)	Reach Description	Projected TMDL Year (No Later Than)
MIDDLE OHIO NORTH WATERSHED - HUC# 05030201						
Ohio River (Middle North)	WVO-mn	Iron	Unknown	58.4	Ohio R from MP 172.2 (mouth of Muskingham R) to MP 113.8 (mouth of Fish Creek)	2017
Price Run	WVO-69-N-9	CNA-Biological	Unknown	4.4	Entire length	2021
MIDDLE ISLAND CREEK SUBWATERSHED						
Middle Island Creek	WVOMI	PCBs	Unknown	78.7	Entire length	2021
Sancho Creek	WVOMI-21	CNA-Biological	Unknown	9.6	Entire length	2021
MIDDLE OHIO SOUTH WATERSHED - HUC# 05030202						
Ohio River (Middle South)	WVO-ms	Iron	Unknown	93.5	Ohio R from MP 265.7 to MP 172.2 (mouth of Muskingham R)	2021
Oldtown Creek	WVO-21	CNA-Biological	Unknown	10.7	RM 8.7 to HW	2021
Trace Fork	WVO-21-C	CNA-Biological	Unknown	3.6	Mouth to RM 3.6	2021
Tenmile Creek	WVO-23	CNA-Biological	Unknown	8.9	Entire length	2021
UNT/Sliding Hill Creek RM 1.2	WVO-24-A	CNA-Biological	Unknown	4.8	Entire length	2021
Parchment Creek	WVO-32-H	CNA-Biological	Unknown	2.4	Mouth to RM 2.4	2021
Elk Fork Lake	WVO-32-M-(L1)	PCBs	Unknown	278.0	Entire length	2021
UNT/Sandy Creek RM 4.5	WVO-46-J	CNA-Biological	Unknown	1.7	Entire length	2021
Briscoe Run	WVO-49	CNA-Biological	Unknown	2.8	Entire length	2021

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Stream Name	Stream Code	Criteria Affected	Source	Impaired Size (stream-mi) (lake-acres)	Reach Description	Projected TMDL Year (No Later Than)
POTOMAC DIRECT DRAINS WATERSHED - HUC# 02070004						
Elks Run	WVP-1	CNA-Biological	Unknown	6.3	Entire length	2006
		Fecal Coliform	Unknown	6.3	Entire length	2006
Elk Branch	WVP-1-A	Fecal Coliform	Unknown	4.5	Entire length	2006
Rattlesnake Run	WVP-2	CNA-Biological	Unknown	4.4	Entire length	2021
UNT/Potomac River RM 12.8 (Teague's Run)	WVP-2.2	Fecal Coliform	Unknown	1.5	Entire length	2006
Rockymarsh Run	WVP-3	CNA-Biological	Unknown	4.7	Entire length	2021
Hoke Run	WVP-4-A	CNA-Biological	Unknown	3.3	Entire length	2006
		Fecal Coliform	Unknown	3.3	Entire length	2006
Eagle Run	WVP-4-B	Fecal Coliform	Unknown	1.2	Entire length	2006
Tuscarora Creek	WVP-4-C	Fecal Coliform	Unknown	11.6	Entire length	2006
Dry Run	WVP-4-C-1	Fecal Coliform	Unknown	4.6	Entire length	2006
Shaw Run	WVP-4-F	CNA-Biological	Unknown	2.2	Entire length	2006
		Fecal Coliform	Unknown	2.2	Entire length	2006
Buzzard Run	WVP-4-H	Fecal Coliform	Unknown	2.6	Entire length	2006
Hopewell Run	WVP-4-I	Fecal Coliform	Unknown	3.5	Entire length	2006
UNT/Hopewell Run RM 1.7	WVP-4-I-2	CNA-Biological	Unknown	2.6	Entire length	2006
		Fecal Coliform	Unknown	2.6	Entire length	2006
Middle Creek	WVP-4-J	Fecal Coliform	Unknown	11.7	Entire length	2006
Goose Creek	WVP-4-J-1	Fecal Coliform	Unknown	3.0	Entire length	2006
Three Run	WVP-4-L	Fecal Coliform	Unknown	2.2	Entire length	2006
Mill Creek	WVP-4-M	Fecal Coliform	Unknown	11.4	Entire length	2006
Torytown Run	WVP-4-M-2	Fecal Coliform	Unknown	2.4	Entire length	2006

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Stream Name	Stream Code	Criteria Affected	Source	Impaired Size (stream-mi) (lake-acres)	Reach Description	Projected TMDL Year (No Later Than)
Turkey Run	WVP-4-N	CNA-Biological	Unknown	5.1	Entire length	2006
		Fecal Coliform	Unknown	5.1	Entire length	2006
Silver Spring Run	WVP-4-P	Fecal Coliform	Unknown	3.2	Entire length	2006
Jordan Run	WVP-4.5	Fecal Coliform	Unknown	1.9	Entire length	2006
Harlan Run	WVP-5	Fecal Coliform	Unknown	7.2	Entire length	2006
Tullis Branch	WVP-5-A	CNA-Biological	Unknown	4.2	Entire length	2006
		Fecal Coliform	Unknown	4.2	Entire length	2006
Sleepy Creek	WVP-9	Fecal Coliform	Unknown	29.7	Mouth to RM 18.0 & RM 26.7 to HW	2006
Middle Fork/Sleepy Creek	WVP-9-E	CNA-Biological	Unknown	4.7	RM 7.0 to HW	2021
Indian Run	WVP-9-G	Fecal Coliform	Unknown	2.0	Entire length	2006

TUG FORK WATERSHED - HUC# 05070201

Tug Fork River	WVBST	Fecal Coliform	Unknown	35.7	Mouth to RM 35.7	2021
Lost Creek	WVBST-7	CNA-Biological	Unknown	4.5	Entire length	2021
Bull Creek	WVBST-57	Fecal Coliform	Unknown	4.9	Entire length	2021
Left Fork/Bull Creek	WVBST-57-B	Fecal Coliform	Unknown	2.0	Entire length	2021
Horse Creek	WVBST-63	CNA-Biological	Unknown	4.6	Entire length	2021
Jacobs Fork	WVBST-70-W	Fecal Coliform	Unknown	10.6	Entire length	2021
North Fork/Elkhorn Creek	WVBST-99-L	Fecal Coliform	Unknown	8.0	Entire length	2021
Windmill Gap Branch	WVBST-99-L-4	Fecal Coliform	Unknown	2.8	Entire length	2021
Little Creek	WVBST-120	Fecal Coliform	Unknown	4.2	Entire length	2021

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Stream Name	Stream Code	Criteria Affected	Source	Impaired Size (stream-mi) (lake-acres)	Reach Description	Projected TMDL Year (No Later Than)
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HYDROLOGIC GROUP D

GREENBRIER WATERSHED - HUC# 05050003

Greenbrier River	WVKNG	Fecal Coliform	Unknown	159.8	Entire length	2007
Big Creek	WVKNG-3	Fecal Coliform	Unknown	6.0	Entire length	2007
Hungard Creek	WVKNG-13	Fecal Coliform	Unknown	9.2	Entire length	2007
Kelly Creek	WVKNG-15	Fecal Coliform	Unknown	5.0	Entire length	2007
Flint Hollow	WVKNG-15-A	Fecal Coliform	Unknown	2.2	Entire length	2007
Wolf Creek	WVKNG-18	Fecal Coliform	Unknown	10.1	Entire length	2007
Laurel Creek	WVKNG-18-A	Fecal Coliform	Unknown	7.0	Entire length	2007
Broad Run	WVKNG-18-B	Fecal Coliform	Unknown	4.6	Entire length	2007
Muddy Creek	WVKNG-22	Fecal Coliform	Unknown	20.9	Entire length	2007
Mill Creek	WVKNG-22-A	Fecal Coliform	Unknown	8.2	Entire length	2007
Kitchen Creek	WVKNG-22-C	Fecal Coliform	Unknown	10.0	Entire length	2007
UNT/Muddy Creek RM 19.8	WVKNG-22-E	Fecal Coliform	Unknown	0.1	Entire length	2007
Sinking Creek	WVKNG-22-E-1-(S)	Fecal Coliform	Unknown	1.0	Entire length	2007
Hughart Creek	WVKNG-22-E-1-A-(S)	Fecal Coliform	Unknown	1.0	Entire length	2007
Milligan Creek	WVKNG-22.7-A-1-(S)	Fecal Coliform	Unknown	7.0	Entire length	2007
Back Creek	WVKNG-23-H	Fecal Coliform	Unknown	3.5	Entire length	2007
Kitchen Creek	WVKNG-23-G	Fecal Coliform	Unknown	5.6	Entire length	2007
Monroe Draft	WVKNG-25-A	Fecal Coliform	Unknown	2.7	Mouth to RM 2.7	2007
Little Creek	WVKNG-28-D	Fecal Coliform	Unknown	9.4	Entire length	2007
Whites Draft	WVKNG-28-F	Fecal Coliform	Unknown	2.0	Mouth to RM 2.0	2007
UNT/Whites Draft RM 2.0	WVKNG-28-F-2	Fecal Coliform	Unknown	3.5	Entire length	2007
Meadow Creek	WVKNG-28-Q	Fecal Coliform	Unknown	2.6	Mouth to RM 2.6	2007

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Stream Name	Stream Code	Criteria Affected	Source	Impaired Size (stream-mi) (lake-acres)	Reach Description	Projected TMDL Year (No Later Than)
Spring Creek	WVKNG-30	Fecal Coliform	Unknown	23.6	Entire length	2007
Beaver Creek	WVKNG-47	Fecal Coliform	Unknown	8.6	Entire length	2007
Swago Creek	WVKNG-49	Fecal Coliform	Unknown	3.8	Entire length	2007
Knapp Creek	WVKNG-53	Fecal Coliform	Unknown	26.3	Mouth to RM 26.3	2007
Browns Creek	WVKNG-53-D	Fecal Coliform	Unknown	5.8	Entire length	2007
Douthat Creek	WVKNG-53-H	Fecal Coliform	Unknown	9.1	Entire length	2007
Stony Creek	WVKNG-55	Fecal Coliform	Unknown	3.0	Mouth to RM 3.0	2007
Indian Draft	WVKNG-55-A	Fecal Coliform	Unknown	4.4	Entire length	2007
Thorny Creek	WVKNG-59	Fecal Coliform	Unknown	9.9	RM 0.1 to HW	2007
UNT/Thorny Creek RM 9.3	WVKNG-59-E	Fecal Coliform	Unknown	1.1	Entire length	2007
Clover Creek	WVKNG-61	Fecal Coliform	Unknown	9.0	Entire length	2007
Shock Run	WVKNG-66-D	Fecal Coliform	Unknown	2.6	Mouth to RM 2.6	2007
Galford Run	WVKNG-66-E	Fecal Coliform	Unknown	5.2	Mouth to RM 5.2	2007
Deer Creek	WVKNG-68	Fecal Coliform	Unknown	17.3	RM 0.1 to HW	2007
Buffalo Run	WVKNG-68-F	Fecal Coliform	Unknown	3.0	Mouth to RM 3.0	2007
Allegheny Run	WVKNG-75	Fecal Coliform	Unknown	2.6	Entire length	2007

JAMES WATERSHED - HUC# 02080201 - 24 streams 238 miles 1 Lake 968 acres

South Fork/Potts Creek	WVJ-1-E	Fecal Coliform	Unknown	1.3	Mouth to RM 1.3	2007
Ray Fork	WVJ-1-E-1	CNA-Biological	Unknown	1.8	Entire length	2007
		Fecal Coliform	Unknown	1.0	Mouth to RM 1.0	2007
UNT/Sweet Springs Creek RM	WVJ-2-H	Fecal Coliform	Unknown	1.1	Entire length	2007

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Stream Name	Stream Code	Criteria Affected	Source	Impaired Size (stream-mi) (lake-acres)	Reach Description	Projected TMDL Year (No Later Than)
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LITTLE KANAWHA WATERSHED - HUC# 05030203

Little Kanawha River	WVLK	Fecal Coliform	Unknown	132.6	Mouth to RM 132.6 (Burnsville Dam)	2017
		PCBs	Unknown	169.0	Entire length	2017
Lynch Run	WVLK-85	Fecal Coliform	Unknown	0.9	Mouth to RM 0.9	2007
UNT/Lynch Run RM 0.9	WVLK-85-C	Iron	Unknown	0.9	Entire length	2007
Duskcamp Run	WVLK-88	Fecal Coliform	Unknown	3.5	Entire length	2007
Right Fork/Duskcamp Run	WVLK-88-A	CNA-Biological	Unknown	2.6	Entire length	2007
Copen Run	WVLK-90	Fecal Coliform	Unknown	5.2	Entire length	2007
HUGHES RIVER SUBWATERSHED						
Hughes River	WVLKH	PCBs	Unknown	13.8	Entire length	2017

LOWER NEW WATERSHED - HUC# 05050004

Laurel Creek	WVKN-5	Fecal Coliform	Unknown	9.8	Entire length	2007
Mill Creek	WVKN-7	Fecal Coliform	Unknown	3.9	Mouth to RM 3.9	2007
UNT/Mill Creek RM 1.7	WVKN-7-0.5A	Fecal Coliform	Unknown	1.0	Entire length	2007
Osborne Creek	WVKN-7-B	Fecal Coliform	Unknown	4.8	Entire length	2007
UNT/Osborne Creek RM 0.7	WVKN-7-B-0.3	Fecal Coliform	Unknown	1.4	Entire length	2007
UNT/Marr Branch RM 0.9	WVKN-9-A	CNA-Biological	Unknown	1.0	Entire length	2007
		Fecal Coliform	Unknown	1.0	Entire length	2007
House Branch	WVKN-10-A	Fecal Coliform	Unknown	3.6	Entire length	2007
Crooked Run	WVKN-10-B	Fecal Coliform	Unknown	2.2	Entire length	2007
Short Creek	WVKN-10-C	Fecal Coliform	Unknown	1.8	Entire length	2007

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Stream Name	Stream Code	Criteria Affected	Source	Impaired Size (stream-mi) (lake-acres)	Reach Description	Projected TMDL Year (No Later Than)
UNT/Wolf Creek RM 8.7	WVKN-10-M	Aluminum (d)	Unknown	0.9	Entire length	2007
		Iron	Unknown	0.9	Entire length	2007
		pH	Unknown	0.9	Entire length	2007
Floyd Creek	WVKN-17-B	Aluminum (d)	Unknown	3.0	Entire length	2007
		pH	Unknown	3.0	Entire length	2007
Rocklick Creek	WVKN-21-A	Fecal Coliform	Unknown	1.8	Entire length	2007
Mill Creek	WVKN-22-K	Iron	Unknown	4.9	RM 0.1 to HW	2007
		pH	Unknown	4.9	RM 0.1 to HW	2007
Piney Creek	WVKN-26	Iron	Unknown	33.5	Entire length	2007
Cranberry Creek	WVKN-26-E	Fecal Coliform	Unknown	6.0	Entire length	2007
		Iron	Unknown	6.0	Entire length	2007
Beaver Creek	WVKN-26-F	CNA-Biological	Unknown	9.1	Mouth to RM 9.1	2007
		Fecal Coliform	Unknown	11.6	Entire length	2007
		Iron	Unknown	11.6	Entire length	2007
Little Beaver Creek	WVKN-26-F-2	Fecal Coliform	Unknown	9.9	Entire length	2007
Whitestick Creek	WVKN-26-G	Fecal Coliform	Unknown	5.9	Entire length	2007
Soak Creek	WVKN-26-K	Fecal Coliform	Unknown	5.5	Entire length	2007
Bowyer Creek	WVKN-26-M	Fecal Coliform	Unknown	4.4	Entire length	2007
Laurel Creek	WVKN-26-N	Fecal Coliform	Unknown	5.1	Mouth to RM 5.1	2007
Glade Creek	WVKN-29	Fecal Coliform	Unknown	20.2	RM 0.2 to RM 12.3 & RM 14.4 to RM 22.5	2007
Brooks Branch	WVKN-42	Fecal Coliform	Unknown	1.7	Mouth to RM 1.7	2007

2006 Section 303(d) - List - New Listings

Stream Name	Stream Code	Criteria Affected	Source	Impaired Size (stream-mi) (lake-acres)	Reach Description	Projected TMDL Year (No Later Than)
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MONONGAHELA WATERSHED - HUC# 05020003

Monongahela River	WVM	PCBs	Unknown	37.5	Entire length	2017
Mahan Run	WVM-23-L	CNA-Biological	Unknown	3.6	Entire length	2017
Whetstone Run	WVM-23-Q	CNA-Biological	Unknown	2.6	Entire length	2017

UPPER NEW WATERSHED - HUC# 05050002

Beech Run	WVKN-45	Fecal Coliform	Unknown	1.4	Mouth to RM 1.4	2007
Bluestone Lake	WVKN-(L1)	PCBs	Unknown	2040.0	Entire length	2017
Indian Creek	WVKN-51	CNA-Biological	Unknown	3.4	RM 30.6 to HW	2007
		Fecal Coliform	Unknown	7.3	RM 8.5 to HW	2007
Bradshaw Creek	WVKN-51-A	Fecal Coliform	Unknown	4.8	Entire length	2007
Stinking Lick Creek	WVKN-51-B	Fecal Coliform	Unknown	6.2	Entire length	2007
Hans Creek	WVKN-51-D	Fecal Coliform	Unknown	15.8	Entire length	2007
Indian Draft	WVKN-51-G	Fecal Coliform	Unknown	4.0	Entire length	2007
UNT/Indian Draft RM 1.5	WVKN-51-G-1	Fecal Coliform	Unknown	1.4	Entire length	2007
Laurel Creek	WVKN-51-H-(S)	Fecal Coliform	Unknown	10.2	Entire length	2007
Cooks Run	WVKN-51-I	Fecal Coliform	Unknown	3.0	Entire length	2007
Rock Camp Creek	WVKN-51-K	Fecal Coliform	Unknown	6.2	Entire length	2007
Turkey Creek	WVKN-51-O	Fecal Coliform	Unknown	10.0	Entire length	2007
Gin Hollow	WVKN-51-R	Fecal Coliform	Unknown	1.4	Entire length	2007
Burnside Branch	WVKN-51-S-1-(S)	Fecal Coliform	Unknown	6.2	Entire length	2007
Adair Run	WVKN-59	Fecal Coliform	Unknown	3.7	Mouth to RM 3.7	2007
East River	WVKN-60	Fecal Coliform	Unknown	22.9	Entire length	2007
Fivemile Creek	WVKN-60-C	Fecal Coliform	Unknown	6.0	Entire length	2007

2006 Section 303(d) - List - New Listings

Stream Name	Stream Code	Criteria Affected	Source	Impaired Size (stream-mi) (lake-acres)	Reach Description	Projected TMDL Year (No Later Than)
Possum Hollow	WVKN-60-C-2	Fecal Coliform	Unknown	8.4	Entire length	2007
Hales Branch	WVKN-60-C-3	Fecal Coliform	Unknown	1.0	Entire length	2007
Payne Branch	WVKN-60-C-4	Fecal Coliform	Unknown	3.0	Entire length	2007
Rich Creek	WVKN-61	Fecal Coliform	Unknown	10.6	Mouth to RM 10.6	2007
Brush Creek	WVKN-61-A	Fecal Coliform	Unknown	5.0	Mouth to RM 5.0	2007
Scott Branch	WVKN-61-B	Fecal Coliform	Unknown	2.6	Entire length	2007
Crooked Creek	WVKN-61-C	Fecal Coliform	Unknown	4.2	Entire length	2007
Mud Run	WVKN-61-D	Fecal Coliform	Unknown	2.8	Entire length	2007
Dry Creek	WVKN-61-E	Fecal Coliform	Unknown	6.0	Entire length	2007
Painter Run	WVKN-61-E-1	Fecal Coliform	Unknown	2.6	Entire length	2007
BLUESTONE RIVER SUBWATERSHED						
Bluestone River	WVKNB	CNA-Biological	Unknown	67.1	Entire length	2007
		PCBs	Unknown	67.1	Entire length	2017
Pipestem Creek	WVKNB-1	Fecal Coliform	Unknown	9.6	Entire length	2007
Suck Creek	WVKNB-3-A	Fecal Coliform	Unknown	5.6	Entire length	2007
UNT/Jumping Branch RM 2.0	WVKNB-3-C-1-D	Fecal Coliform	Unknown	1.2	Entire length	2007
UNT/Jumping Branch RM 2.5	WVKNB-3-C-1-E	Fecal Coliform	Unknown	1.0	Entire length	2007
North Fork/Mountain Creek	WVKNB-5-B	Fecal Coliform	Unknown	5.7	Entire length	2007
Brush Creek	WVKNB-12	Fecal Coliform	Unknown	20.3	Entire length	2007
Laurel Creek	WVKNB-12-B	Fecal Coliform	Unknown	8.8	Entire length	2007
Glady Fork	WVKNB-12-H	Fecal Coliform	Unknown	3.0	Entire length	2007
South Fork/Brush Creek	WVKNB-12-J	Fecal Coliform	Unknown	7.0	Entire length	2007
Middle Fork/South Fork/Brush Creek	WVKNB-12-J-2	Fecal Coliform	Unknown	3.1	Entire length	2007

2006 Section 303(d) - List - New Listings

Stream Name	Stream Code	Criteria Affected	Source	Impaired Size (stream-mi) (lake-acres)	Reach Description	Projected TMDL Year (No Later Than)
Kee Reservoir	WVKNB-12-J-2-(L1)	PCBs	Unknown	70.0	Entire length	2017
Camp Creek	WVKNB-13	Fecal Coliform	Unknown	14.5	Entire length	2007
Wolf Creek	WVKNB-15	Fecal Coliform	Unknown	7.9	Entire length	2007
Rich Creek	WVKNB-18	Fecal Coliform	Unknown	10.9	Entire length	2007
		Iron	Unknown	9.9	RM 1.0 to HW	2007
Blacklick Creek	WVKNB-22	Fecal Coliform	Unknown	7.8	Entire length	2007
Rocky Branch	WVKNB-22-A	Fecal Coliform	Unknown	2.8	Entire length	2007
Barn Branch	WVKNB-22-C	Fecal Coliform	Unknown	2.2	Entire length	2007
Widemouth Creek	WVKNB-28	Fecal Coliform	Unknown	6.6	Entire length	2007
Righthand Fork/Widemouth Creek	WVKNB-28-B	Fecal Coliform	Unknown	7.8	Entire length	2007
Lefthand Fork/Widemouth Creek	WVKNB-28-C	Fecal Coliform	Unknown	5.6	Entire length	2007
Crane Creek	WVKNB-30	Fecal Coliform	Unknown	6.8	Entire length	2007
		Iron	Unknown	6.8	Entire length	2007
Belcher Branch	WVKNB-30-C	Iron	Unknown	2.2	Entire length	2007
UNT/Crane Creek RM 4.5	WVKNB-30-D.5	Fecal Coliform	Unknown	1.3	Entire length	2007

WEST VIRGINIA

WEST VIRGINIA

2006 Section 303(d) - List - New Listings

Stream Name	Stream Code	Criteria Affected	Source	Impaired Size (stream-mi) (lake-acres)	Reach Description	Projected TMDL Year (No Later Than)
Simmons Creek	WVKNB-33	Fecal Coliform	Unknown	3.0	Entire length	2007
		Iron	Unknown	3.0	Entire length	2007
Laurel Fork	WVKNB-34.5	CNA-Biological	Unknown	1.2	Entire length	2007
		Fecal Coliform	Unknown	1.2	Entire length	2007
Butt Hollow	WVKNB-35	Fecal Coliform	Unknown	2.1	Entire length	2007
Brush Fork	WVKNB-36	CNA-Biological	Unknown	6.8	Entire length	2007
		Fecal Coliform	Unknown	6.8	Entire length	2007
Neil Hollow	WVKNB-37	Fecal Coliform	Unknown	4.8	Entire length	2007

2006 Section 303(d) - List - New Listings

Stream Name	Stream Code	Criteria Affected	Source	Impaired Size (stream-mi) (lake-acres)	Reach Description	Projected TMDL Year (No Later Than)
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HYDROLOGIC GROUP E

BIG SANDY WATERSHED - HUC# 05070204

Big Sandy River	WVBS	Iron	Unknown	26.6	Entire length	2018
Gragston Creek	WVBS-6	CNA-Biological	Unknown	6.5	Entire length	2018
Hurricane Creek	WVBS-8	CNA-Biological	Unknown	7.9	Entire length	2018

LOWER OHIO WATERSHED - HUC# 05090101

Ohio River (Lower)	WVO-lo	Iron	Unknown	13.3	Ohio R from MP 279.0 to MP 265.7	2017
Rocky Fork	WVO-10-A	CNA-Biological	Unknown	2.7	Entire length	2018

TWELVEPOLE WATERSHED - HUC# 05090102

Twelvepole Creek	WVO-2	Fecal Coliform	Unknown	33.0	Entire length	2018
Breeden Creek	WVO-2-P-36	CNA-Biological	Unknown	3.2	Entire length	2018
East Fork/Twelvepole Creek	WVO-2-Q	CNA-Biological	Unknown	33.9	RM 4.4 to RM 10.5 (East Lynn Lake) & RM 22.9 (East Lynn Lake) to HW	2018
Rich Creek	WVO-2-Q-14	Iron	Unknown	3.5	Entire length	2008

2006 Section 303(d) - List - New Listings

Stream Name	Stream Code	Criteria Affected	Source	Impaired Size (stream-mi) (lake-acres)	Reach Description	Projected TMDL Year (No Later Than)
UPPER GUYANDOTTE WATERSHED - HUC# 05070101						
R D Bailey Lake	WVOG-(L1)	PCBs	Unknown	630.0	Entire length	2018
Little Pinnacle Creek	WVOG-124-P	CNA-Biological	Unknown	3.4	Entire length	2018
Wiley Spring Branch	WVOG-137-C	CNA-Biological	Unknown	3.5	RM 0.7 to HW	2018
CLEAR FORK SUBWATERSHED						
White Oak Branch	WVOGC-16-N	CNA-Biological	Unknown	1.9	Entire length	2018
UPPER OHIO SOUTH WATERSHED - HUC# 05030106						
Ohio River (Upper South)	WVO-us	Iron	Unknown	39.8	Ohio R from MP 113.8 to MP 84.0	2017
UNT/Wheeling Creek RM 26.5	WVO-88-M.3	CNA-Biological	Unknown	1.5	Entire length	2008
WEST FORK WATERSHED - HUC# 05020002						
West Fork River	WVMW	PCBs	Unknown	74.4	Mouth to RM 74.4 (Stonewall Jackson Dam)	2018
Big Elk Creek	WVMW-13-B-6	CNA-Biological	Unknown	3.0	Entire length	2018