2002 303(d) List

Prepared by the West Virginia Department of Environmental Protection

Complete with listing rationale

West Virginia 2002 Section 303(d) List
Listing Rationale Table of Contents

Section 1 - Overview

Section 303(d) of the federal Clean Water Act requires states to develop lists of impaired surface waters (or "water quality limited segments") for their respective jurisdictions. This document represents West Virginia's list of impaired waters for the 2002 Section 303(d) List. In addition to the list of impaired waters, this document provides background information on a number of watershed management and pollution control topics, and explains the data evaluated in the preparation of the list and the methodology used to identify impaired waterbodies. Information is provided that allows the tracking of previously listed waters that are not contained on the 2002 list. Additionally, there is a section devoted to the impairment status of West Virginia's major rivers that outlines significant changes to their status. This document is intended to fulfill the State's requirements for listing impaired waters under Section 303(d) of the federal Clean Water Act and the U.S. Environmental Protection Agency (EPA) Water Quality Planning and Management Regulations, 40 CFR 130.7.

West Virginia's last 303(d) list was developed in 1998. Historically, this document has been submitted to EPA for review and approval by April 1 of even-numbered years. However, due to extensive changes proposed in new regulations for 303(d) list compilation and total maximum daily load (TMDL) development, EPA changed the requirement for the 2000 Section 303(d) list. States were allowed to submit a 2000 Section 303(d) list; however, many states, including West Virginia, chose not to submit a list. Instead, West Virginia concentrated its resources on TMDL program development.

On November 19, 2001, EPA issued the 2002 Integrated Water Quality Monitoring and Assessment Report Guidance. This guidance recommends that states submit an integrated report that combines the substance of the 303(d) list and the 305(b) report of statewide water quality. Immediately after issuance of the guidance, EPA extended the due dates for both the 303(d) list and the 305(b) report to October 2002. The late publication of the guidance prohibited West Virginia's development of an integrated report. However, West Virginia used the time extension to improve the quality of both documents. Time and technical resources were devoted to revisiting historical listings to determine their validity and to the overall decision-making process and documentation.

In 1999, the West Virginia Department of Environmental Protection (WVDEP) formed the TMDL Stakeholder Committee. The committee was comprised of 22 members from diverse interests, including representatives from environmental and recreational groups, coal, oil and gas, and forestry industries, nonpoint sources, municipalities, and state and federal government. The group was charged with developing consensus-based recommendations to the WVDEP on 303(d) listing and TMDL development. To the maximum extent practical, the recommendations of the stakeholder group are addressed by this document.

Section 2 - 303(d) Listing Process

To begin the 2002 Section 303(d) list development process, the WVDEP requested and assembled all readily available water quality data for West Virginia waters. Significant efforts were taken to obtain data from external sources as detailed in Section 4 of this document. Data evaluation by the agency began in the summer of 2001. 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 initial impairment decisions and rationale were proposed in a provisional draft document and provided to EPA Region III for comment. In accordance with the TMDL stakeholder group's recommendations, the provisional draft document also was made available to their group.

Comments from the initial distribution were evaluated and subsequent revisions were included in the final draft document. The final draft was formally advertised for public comment on August 1, 2002. Notices of the availability of the document were placed in newspapers statewide, and included advertisement of a comment period ending September 3, 2002. The document also was promoted via e-mail and the Internet. WVDEP received comments from both the gerneral public and U.S. EPA's Region III Office. After careful review of all comments submitted regarding the final draft document, WVDEP prepared a Responsiveness Summary to address the issues raised by all commentors. The Responsiveness Summary includes both a summary of comments and WVDEP's responses to those comments. The Responsiveness Summary is included in Section 11 of this document.

Section 3 - West Virginia Water Quality Standards

The basis for 303(d) listing relates back to a state's water quality standards. In general terms, if water quality standards are violated, 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 the comparison of the instream values of various water quality parameters to the numeric or narrative criteria contained in the standards. In West Virginia, the 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.*

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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 46 CSR 1 and are summarized in Table 1. Each of the designated uses is protected by criteria that address specific conditions that must be met and maintained to ensure the use. For example, the water contact recreation 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 standards. Water quality criteria also can be written in a narrative form. For example, the water quality

Table 1 - West Virginia Water Use Categories

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.

When more than one use exists, they shall be protected by criteria for the use category requiring the most stringent protection.

quality standards contain a provision which 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 46 CSR 1. More information regarding the use of narrative criteria for the 2002 Section 303(d) list is contained in Section 5 under the discussions of decision criteria for biological impairment and fish consumption advisories. Both numeric and narrative criteria are designed to protect the designated uses of state waters and are used to assess their impairment status.

The version of 46 CSR 1 used in the development of the 2002 Section 303(d) list is the regulation with an effective date of July 1, 1999*. This version is used because EPA revised its regulations that specify when new and revised State and Tribal water quality standards become effective for Clean Water Act purposes (the Alaska Decision). Under EPA's regulation, any new or revised standards, if submitted to EPA after March 30, 2000, will not be used for Clean Water Act purposes until approved by EPA. These regulations

also provide that standards already in effect and submitted to EPA by March 30, 2000 may be used for Clean Water Act purposes, whether or not approved by EPA. As such, any water quality standard revisions that were promulgated by West Virginia after March 30, 2000 and which have not received EPA approval are not effective*.

** See Section 12 for updated information on the status of West Virginia's aluminum criteria.*

Section 4 - Data Used in List Development

The 2002 Section 303(d) list was developed using all readily available data. The WVDEP, Division of Water Resources (DWR) generated the majority of the available water quality data. In preparation for the 303(d) listing process, the agency 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 colleges and universities soliciting data for the list. Specific requests for data were made to the state and federal agencies known by the

Table 2 - Data providers for 2002 303(d) Listing

WV Dept. of Agriculture	Friends of Deckers Creek	STORET - Ohio EPA
American Electric Power	Glenville Utilities	STORET - Pennsylvania DEP
Aristech Chemical Co.	Green Tree Consulting	STORET - US Forest Service
Bayer Corporation	Huttonsville Correctional	STORET - Virginia Department of Environmental Quality
Cacapon Institute	Jane Lew Water Commission	
Callisto Coal	Logan Co. PSD	Town of Cedar Grove
Citizen - Don Gasper	Lower West Fork Association	Town of Davis
City of Beckley	Mannington Water Wks.	Town of Fayetteville
City of Belington	Marfork Coal Co.	Town of Follansbee
City of Huntington	Martinka Coal Co.	Town of Lumberport
City of Keyser	Mary Ruth Corp.	Town of Oceana
City of Masontown	EPA Moutain Top Mining and Valley Fill EIS	Town of Paw Paw
City of Morgantown		Town of Summersville
City of Moundsville	National Park Service	Town of Sutton
City of Mt. Hope	Naval Security Group	Town of Walton
City of Mullens	ORSANCO	Town of Wayne
City of Richwood	Patriot Mining Co.	US Geologic Survey
City of Weirton	Pen Coal	Weirton Steel
City of Wheeling	Potesta and Assoc.	WOPEC
Clarksburg Water Board	R & K Enterprises	WV American Water
Claywood Park P.S.D.	Rawl Sales & Processing	WV DEP
Empire Consulting	Special Metals Corp.	WV DNR
EPA - STORET	STORET - Corps of Engineers	WV Wesleyan College

WVDEP to be generators of water quality data. West Virginia DWR staff evaluated data from 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.

Listing and delisting decisions are made using the most accurate and recent data available to WVDEP. The use of data more than five years old is intentionally limited. For the development of the 2002 Section 303(d) list, WVDEP generally used water quality data generated between July 1996 and July 2001. Data from this period is available for all of the state's five hydrologic groups. Where water quality data generated in the most recent two-year period of a dataset indicates an impairment condition that is different from the condition indicated by the entire set, WVDEP based its listing decision on the most recent data.

Section 5 - Listing Rationale

Decision criteria for numeric water quality criteria

Many 303(d) listing decisions are based on a comparison of water quality data to numeric criteria. The frequency of exceedence of a criterion is the primary factor for a listing decision. In general, if an ample dataset exists and the stream violates criteria more than 10% of the time, it is considered to be impaired. If lesser amounts of data are available, the listing threshold increases due to uncertainty.

Table 3 describes criteria used to make 305(b) use support determinations and 303(d) impairment decisions relative to pollutants for which numeric water quality criteria are applicable.

The agency has established certain guidelines for the minimum number of samples required to list or delist a waterbody. Ideally, a minimum of 20 samples would be used to make all listing decisions and typically, agency data from ambient stations will give 20 samples over a five-year period. However, data often includes less than 20 samples per site. If fewer than 20 samples per station or representative area were collected and violations were observed, listing decisions were made on a case-by-case basis, in accordance with the general guidance provided by the decision matrix. Consideration was given to other forms of information such as benthological surveys, fish community studies, and visual observations, among others. All of this information was considered when making decisions where less than the optimal number of samples was available. A degree of professional judgment is unavoidable when less than optimal datasets exist.

Use support and impairment decisions were made by comparing the instream values of various water quality parameters to the numeric criteria contained in the West Virginia water quality standards. For the Ohio River, both Ohio River Valley Water Sanitation Commission (ORSANCO) and West Virginia water quality criteria were considered as required by 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 WVDEP 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.

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Table 3 - West Virginia Waterbody Assessment Matrix for Numeric Criteria

Number of Samples (last 5 years)	Frequency of Violation	305(b) Classification	303(d) Action
> 20	< 10%	Fully Supporting	No Listing
	11 - 25%	Partially Supporting	List
	> 25%	Non-Supporting	List
10 - 19	< 10%	Fully Supporting	No Listing
	11 - 50%	Threatened or Partially Supporting[1]	No Listing List
	> 50%	Non-Supporting	List
5 - 9	< 20%	Fully Supporting	No Listing
	21 - 75 %	Threatened or Partially Supporting[1]	No Listing List
	> 75%	Non-Supporting	List
< 5	< 20%	Fully Supporting or Not Assessed[2]	No Listing No Listing
	21 - 100%	Not Assessed (if no obvious impacts observed[3])	No Listing
		Non-Supporting (if obvious impacts observed)	List

[1] The waterbody may be classified as either threatened or partially supporting after consideration of additional factors, including but not limited to magnitude of violations, data trends, climatological data, and hydrologic conditions. For aquatic life use classifications, the results of available biological and habitat assessment data will be considered. Where available information is limited and uncertainty is high, assessments will tend toward a less-impaired classification.

[2] The waterbody may be classified as either fully supporting or not assessed after consideration of additional factors, including but not limited to number of samples collected, number of parameters evaluated, and the results of available biological / habitat data.

[3] Obvious impacts include acid mine drainage, raw sewage, or any other type of impairment that can be discerned by simple observation.

Decision criteria for atmospheric deposition (acid rain)

The historical data source for suspected acid rain impairments has been the Division of Natural Resources' (DNR) infertile streams database. DNR includes streams in the database if the instream, long-term average pH value is less than 6.0 standard units. For the 2002 Section 303(d) list, the WVDEP obtained all recent (July 1996 – June 2001) pH data for streams in the DNR database and evaluated it under the decision criteria for numeric water quality criteria described above. Waters were included on the 2002 Section 303(d) list if recent data indicated exceedence of the listing criteria or if the water was previously listed and no recent data was available. Previously listed waters were delisted if recent pH water quality data did not exceed listing criteria. Additionally, the impaired lengths of certain streams were adjusted to recognize ongoing limestone treatment operations.

Decision criteria related to fish consumption advisories

Fish consumption advisories are used to inform the public about potential health risks associated with eating fish from West Virginia's streams. The WVDEP, DNR, and the Bureau for Public Health (BPH) have collaborated on fish contamination issues since the 1980s. An executive order by the governor in 2000 mandated a formal collaborative process to issue fish consumption advisories. Fish consumption advisories are now developed and issued in accordance with an interagency agreement between the WVDEP, DNR and BPH. There are currently fish consumption advisories on ten state streams for a variety of fish species and contaminants. All West Virginia streams with fish consumption advisories are considered impaired and included on the 303(d) list for the causative pollutant.

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Risk-based principles are used to determine whether fish consumption advisories are necessary. Fish consumption 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.

The presence of contaminants in fish tissue in amounts that warrant a public health agency to recommend limiting the ingestion of fish is sufficient evidence of impairment pursuant to the narrative water quality criterion provided at 46 CSR 1 - 3.2.e. That criterion prohibits the presence of materials in concentrations that are harmful, hazardous or toxic to man, animal or aquatic life in state waters. Furthermore, the decision to list waters based on the existence of fish consumption advisories is strongly supported by EPA.

Decision criteria for biological impairment

The narrative water quality criterion of 46 CSR 1 - 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. In general, streams with WVSCI scores less than 60.6 points are considered to be biologically impaired and are included on the 303(d) list.

WV Stream Condition Index or WVSCI

The WVSCI consists of six benthic community metrics combined into a single multimetric index. The WVSCI was developed by Tetra Tech Inc. (2000) using DEP & 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. 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. This 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.

In the 1998 list, streams were listed as impaired if their "bioscore" was 50 or less. Streams received zero, one or two points for each of six metrics, and the resultant score was normalized to a scale of 0-100. The individual metrics were scored based on a comparison to a reference site or group of sites, but the final impairment threshold of 50 was based on best professional judgement. All benthic macroinvertebrate data was recalculated using the WVSCI. Streams that scored above the new threshold value of 60.6 were removed from the 2002 Section 303(d) list unless numeric water quality criteria were exceeded.

Benthic macroinvertebrates are collected with a 500 um mesh rectangular dip net. The kick sample is composited from 2.0 m^2 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 (ie, 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 cause of impairment on the 303(d) list and most are listed by default for their entire length. In most cases, it is doubtful that the entire length of the 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 cause(s) of the impairment and the contributing sources of pollution also will be identified in the TMDL development process.

Certain streams that have been evaluated and found to be biologically impaired were not immediately placed on the 303(d) list. Evaluations of the possible sources of impairment for these streams indicate that the actual source of impairment may be linked to a pollutant for which a TMDL has already been completed on the stream. An example scenario would be a low biological score on a stream that has undergone TMDL development 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 because the full implementation of the TMDL is expected to correct the problem. The placement of these streams on the 303(d) list would likely result in a duplication of efforts by the TMDL program. If implementation of the TMDL does not correct the problem and biological scores remain low, then the stream will be placed on a subsequent 303(d) list.

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For information about the development of the West Virginia Stream Condition Index, go to

http://www.wvdep.org/Docs/536WV-Index.pdf

Decision criteria for fecal coliform

The TMDL stakeholder committee recommended that the WVDEP include streams impaired by fecal coliform when it possesses data showing impairment. In previous 303(d) lists, the WVDEP did not list waterbodies for fecal coliform impairment caused by domestic sewage sources because treatment technology is available to abate the problem and various environmental rules provide an alternative to TMDL development for corrective action. The WVDEP has honored the committee recommendation and, as such, the 2002 Section 303(d) list contains several new fecal coliform impairments. Fecal coliform listing decisions were based on the previously described decision criteria for numeric water quality criteria.

Section 6 - Common Impairments of West Virginia Waters

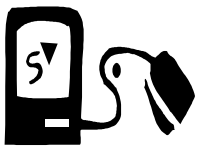
There are more than 9,500 streams in West Virginia, comprising a total length of over 32,000 miles. Six hundred and sixty-seven (667) impaired streams, covering approximately 4,374 stream miles, are identified on West Virginia's 2002 Section 303(d) list. The most common numeric water quality criteria impairments are those related to mine drainage, bacterial contamination and atmospheric acid deposition (acid rain). Numerous listings of aquatic life impairments, of unknown or uncertain cause, also are contained on the list. Those impairments are based on narrative water quality criteria and have been determined through biological assessments of state waters.

Mine drainage - Mine drainage continues to impact many West Virginia waters. Mine drainage streams are impaired by low pH and/or elevated concentrations of metals, including iron, aluminum, and manganese. Many of these streams also exhibit biological impairment. The 1998 303(d) list included 488 streams impacted by mine drainage. New data compiled by WVDEP has resulted in additional listings. TMDLs have been developed for mine drainage impaired streams in the Cheat River, Tygart Valley River, Paint Creek, Elk River, Buckhannon River, Monongahela River, Tug Fork River, West Fork River and Stony River watersheds where restoration through TMDL implementation is now the focus. The remaining mine drain age impairments from the 1998 list will be addressed by a TMDL prior to March 30, 2008. The 2002 list contains 128 streams impaired by mine drainage in need of TMDLs.

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 areas and agricultural lands. Fecal coliform TMDLs have been developed in the South Branch of the Potomac and Lost River watersheds and implementation has significantly improved water quality in certain parts of those watersheds.

Many more West Virginia waters beyond those identified on the list are suspected to be impaired by fecal coliform bacteria. The WVDEP's watershed assessment and TMDL development methodologies will subject suspect streams to intensified bacteria monitoring in the future and additional listings will be forth-coming. The 2002 list contains 29 waters listed as impaired relative to the fecal coliform water quality criteria.

Atmospheric Deposition - The aquatic life communities in the headwater sections of many West Virginia waters continue to be impacted by low pH water quality. The impairment is most prevalent in watersheds with soils of low buffering capacity and most often caused by acid precipitation. The DNR implements a program to treat impacted stream segments with the addition of limestone. In many instances, the treatment projects have restored a viable fishery.



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In the 1998 303(d) list, low pH impairments that could not be attributed to mining were assumed to be caused by acid rain, and the impacted streams were identified in a distinct section of the list entitled "Waterbodies Impaired by Acid Rain." The WVDEP recognizes that historical mining sources that have yet to be identified may be causing or contributing to some of those impairments. The WVDEP also recognizes that the low pH condition of some listed waters may be natural. The water quality data available for listing decisions is not sufficient to allow discrimination between streams with impairments caused by acid precipitation and those with natural low pH conditions. For these reasons, the low pH impairments that are not attributed to mining on the 2002 Section 303(d) list are not absolutely identified as acid rain impairments. In the listing, the associated cause of the impairment is indicated as "unknown". Through its pre-TMDL monitoring efforts, the WVDEP will generate new information to help determine if the low pH condition is from atmospheric deposition, mine drainage or natural sources. TMDL development will proceed only for impaired waters, and the causative sources of the impairments will be identified through the TMDL development process.

Biological Impairment- The 2002 Section 303(d) list is dominated by 486 listings of biologically impaired waters. This impairment is based on narrative water quality criteria and determined through biological assessment of a wadeable stream's benthic macroinvertebrate community. A discussion of narrative water quality criteria is provided in Section 3 and the assessment methodology and listing decision criteria is provided in Section 5.

While it is premature to judge the cause of biological impairment at the time of listing, it is likely that many TMDLs will identify precipitation-induced sedimentation and instream and riparian habitat destruction as significant sources. In those cases, restoration will likely depend upon nonpoint source pollution controls and nontraditional remedies such as riparian buffer zone establishment and the application of natural stream design concepts to improve instream habitat.

Section 7 - Major River Summaries

Several major rivers in West Virginia have been evaluated for impairments and improvements just as their tributaries have. Significant changes in their 303(d) listing status are outlined in this section.

Elk River

A section of the lower Elk River was previously listed for total aluminum, iron, lead and zinc. TMDLs for aluminum, iron and lead were established in 2001. Due to the revision of zinc water quality criteria from total to dissolved form, and to new water quality data for the Elk River that indicates attainment of the dissolved criteria, no TMDL was developed for zinc. The aluminum, iron and lead impairments of the lower Elk River are contained in the *Previously Listed Waters - TMDL Developed* supplement. The previous zinc impairment is identified in the *Previously Listed Waters – No TMDL Developed* supplement.

Guyandotte River

The 1998 303(d) list contained a listing for the lower Guyandotte River for total iron and total aluminum. The evaluation of recent iron and aluminum data supports continued listing for the lower Guyandotte River and indicates an impairment for both pollutants in the upper Guyandotte River, as well. Available data also indicates biological impairment of the upper Guyandotte River and significant violations of fecal coliform criteria in both the upper and lower reaches of the river. The entire length of the Guyandotte River has been added to the 2002 Section 303(d) list for iron, aluminum, and fecal coliform. A section of the Upper Guyandotte River also is listed for biological impairment. The entire river is proposed for TMDL development, for all impairments, in 2004.

Kanawha River

Most of the Lower Kanawha River was previously listed for an impairment related to the dioxin water quality criteria. A TMDL was completed in 2000 and the impairment is contained in the *Previously Listed Waters - TMDL Developed* supplement. The Upper Kanawha River was previously listed for a zinc related impairment. Due to the revision of zinc water quality criteria from total to dissolved form, and to new water quality data for the Kanawha River that indicates attainment of the dissolved criteria, the previous zinc impairment is identified in the *Previously Listed Waters – No TMDL Developed* supplement.

Monongahela River

The mainstem of the Monongahela River was previously listed for total aluminum. In September of 2002, TMDL development was completed on the Monongahela River. The completion of this TMDL for aluminum allows the previous listing for Aluminum to be moved to Supplement Tabel B "Previously Listed Waters - TMDL Developed." In addition, a review was conducted of the data submitted by Morgantown Utility Board as part of its combined sewer overflow study. The data indicates violations of fecal coliform criteria in the Monongahela River upstream of Morgantown CSOs. In consideration of this data, the Monongahela River is being listed for fecal coliform in 2002. The listed segment of the river begins at the confluence of the Tygart Valley and West Fork rivers and ends at the border between West Virginia and Pennsylvania.

Ohio River

The Ohio River was previously listed for several impairments. The entire length of the river in West Virginia was listed for PCBs, chlordane and aluminum. Sections of the river in the Upper Ohio North, Upper Ohio South and Middle Ohio North watersheds were listed for total copper. Sections of the river in the Upper Ohio North, Middle Ohio South and Lower Ohio watersheds were listed for iron. Sections of the river in the Middle Ohio South and Lower Ohio watersheds were listed for dioxin. Several significant changes have occurred to the assessments of the Ohio River.

Iron and aluminum- Using the "clean hands techniques", the Ohio River Valley Water Sanitation Commission (ORSANCO) conducted monitoring for a variety of metals, including iron and aluminum, at multiple locations in the river from July 1, 1999 through June 30, 2001. A review of the data obtained from analysis of samples collected using this technique reveals a significant reduction in the number of total metals violations. Additionally, the one value above water quality criteria was recorded during the extreme conditions of a flood. This data indicates delisting is warranted for iron and aluminum and the previous impairments are identified in the *Previously Listed Waters – No TMDL Developed* supplement.

Copper- Due to the revision of copper water quality criteria from total to dissolved form, and to new water quality data for the Ohio River that indicates attainment of the dissolved criteria, delisting is warranted and the previous impairments are identified in the *Previously Listed Waters – No TMDL Developed* supplement.

Ohio River Segments			
Watershed Name	**HUC Code**	**Mile Points**	**Description**
Lower Ohio River	5090101	MP 317 – 265.7	mouth of Big Sandy R to mouth of Kanawha R
Middle Ohio River South	5030202	MP 265.7 -172.2	mouth of Kanawha R to mouth of Muskingham R
Middle Ohio River North	5030201	MP 172.2 – 113.8	mouth of Muskingham R to mouth of Fish Creek
Upper Ohio River South	5030106	MP 113.8 – 71.4	mouth of Fish Creek to mouth of Cross Creek
Upper Ohio River North	5030101	MP 71.4 – 40	mouth of Cross Creek to PA line

Fecal Coliform- An evaluation of the fecal coliform data collected by ORSANCO at points located upstream, in town and downstream of the cities of Wheeling and Huntington indicate fecal coliform problems are present in portions of the Ohio River. The samples were taken during the time period that ORSANCO considers to be the recreational season, from May 1 through October 30. Although fewer violations were found upstream of these areas, the number of violations is more than the 10 percent used for listing criteria. Therefore, the Ohio River in the vicinity of both of these cities is being placed on the 2002 Section 303(d) list for fecal coliform.

Dioxin- A dioxin TMDL was completed for the impaired segments of the Ohio River identified on the 1998 list, Mid Ohio and Lower Ohio, and those impairments are contained in the *Previously Listed Waters - TMDL Developed* supplement. ORSANCO is continuing to sample in an attempt to isolate any possible sources of dioxin. West Virginia will continue to assess any data gathered as part of ORSANCO's efforts. New ORSANCO data has identified an additional dioxin impairment for segments of the river in the Upper Ohio North and Upper Ohio South watersheds. A new listing for that impairment is included on the 303(d) list.

Chlordane- The previously listed chlordane impairment is no longer considered valid. The state's Fish Consumption Advisory Committee has reviewed the latest fish tissue information and concluded that advisories for chlordane are not warranted. In light of the new information, the chlordane advisory has been removed and the impairment is identified in the *Previously Listed Waters – No TMDL Developed* supplement. The advisory committee supports continued fish tissue sampling on the Ohio River, which will be periodically reviewed.

PCBs and Mercury- The Ohio River was prviously listed for PCBs in 1998. In September of 2002 a TMDL was completed for this impairment allowing the PCB listing to be moved to Supplement Table B - *Previously Listed Waters - TMDL Developed*. However, recently collected fish tissue data has triggered an advisory for mercury the Ohio River. Due to the addition of mercury to the Ohio River fish advisory, an Ohio River mercury listing has been added to the 2002 Section 303(d) list for the entire length of the river in West Virginia. Further information about the Ohio River fish consumption advisories can be found at the West Virginia Bureau for Public Health's website at http://www.wvdhhr.org/fish/)

South Branch of the Potomac River

The South Branch of the Potomac River and selected tributaries were included on the 1998 303(d) list for violations of fecal coliform water quality criteria. TMDLs were completed for the South Branch of the Potomac, the South Fork of the South Branch, the North Fork of the South Branch, Lunice Creek, Mill Creek, and Anderson Run in February 1998. The impairments of the South Branch mainstem and certain tributary watersheds are contained in the *Previously Listed Waters- TMDL Developed* supplement.

In all of the TMDLs, the fecal coliform impairment was primarily attributed to agricultural nonpoint sources. A 50.6% load reduction was specified for agricultural nonpoint sources in the South Branch mainstem. Reduction targets for individual mainstem segments ranged from 0% to 71%. Agricultural load reductions for the impaired tributaries ranged from 36% - 42%. The tributary reductions were designed to address fecal coliform impairment in the immediate watershed, as well as the impairment in the South Branch mainstem.

In response to the TMDLs, the West Virginia Department of Agriculture, the Natural Resource Conservation Service, the West Virginia Conservation Agency, and the West Virginia Department of Environmental Protection gave high priority to the watersheds in their various landowner assistance and water quality improvement programs. Sizeable investments have been made for Best Management Practice (BMP) installation and operation. The West Virginia Department of Agriculture initiated a fecal coliform water quality monitoring program in July 1998. Over 4,000 samples have been collected and analyzed from strategic locations in the subject waters.

TMDL Implementation Success

The TMDLs for six streams in the South Branch of the Potomac watershed established in 1998 were among the first TMDLs to be approved in EPA Region 3. The streams were considered impaired due to excessive amounts of fecal coliform bacteria in stream samples. At the time of their development, these TMDLs were questioned and controversial. Despite this initial doubt, since 1998 many dedicated landowners, agencies and individuals have worked to limit the amount of bacteria entering the watershed's streams.

Based on recent bacteria sampling information, two streams, the North Fork of the South Branch of the Potomac River and the South Fork of the South Branch of the Potomac River no longer exceed the state's listing criteria for bacteria and are being heralded nationally as TMDL success stories. While many TMDLs remain to be completed in West Virgina and other states, it is encouraging to realize and enjoy the positive benefits of focused restoration efforts. These streams are among the first nationally to be considered restored largely as a result of the TMDL process.

Overall, TMDL implementation in the South Branch watershed has resulted in improvement to the instream fecal coliform concentrations over the conditions demonstrated at the time of TMDL development. Various statistical analyses of the new data indicate an improving condition. Throughout the watershed, median fecal coliform concentrations are generally lower, as is the rate of exceedence of the maximum daily, 400 count/100ml criteria.

Data indicates that the North Fork and South Fork fecal coliform violation rates are now below the state's listing criteria. These watersheds are truly TMDL implementation success stories made possible by a significant effort to improve animal waste handling practices. The installation and maintenance of conservation practices designed to keep animal waste from entering the streams has had a demonstrable positive effect on water quality.

Although some streams in the watershed are not yet attaining compliance with fecal coliform criteria, the documented improvements are extremely encouraging. Proper management of new sources, in conjunction with maintenance of remediation efforts at existing sources, is necessary to achieve or continue to achieve TMDL targets.

Section 8 - TMDL Development Schedule

Since 1997, EPA Region III has 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

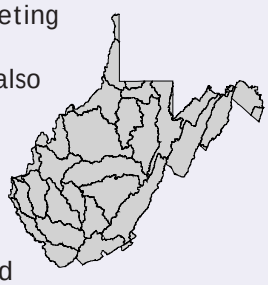
development requirements and compliance dates. While EPA was working on developing TMDLs, WVDEP concentrated on building its own TMDL program. With the help of the TMDL stakeholder committee, the agency secured funding from the state legislature and created the TMDL section within the Division of Water Resources.

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. The Division of Water Resources has initiated a new approach to TMDL development. DWR will take 48 months to develop a TMDL from start to finish. This approach will enable 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 process has already commenced for the TMDLs the WVDEP will be developing in 2004 and 2005.

Barring any outstanding circumstances, all TMDLs will be 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 (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.

West Virginia Watershed Management Framework

In 1996, the West Virginia Watershed Management Framework was created. The framework outlines West Virginia's comprehensive approach to managing the state's waters and its surrounding ecosystem. The framework process establishes a coordinated way for government agencies, businesses, environmental groups, watershed associations, citizens, academia, and others to participate in identifying and targeting streams that require restoration, protection, and enhancement. It also provides a mechanism to develop and implement management strategies.



There are the 32 watersheds split up into five groups: A, B, C, D, and E. The process consists of five phases, each phase lasting approximately one year. Each group of watersheds begins the process in a staggered approach and as one cycle is completed, another group begins the cycle again.

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, the TMDL is implemented through the NPDES permitting process and efforts toward limiting nonpoint source 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.

Find it on the Web!

Copies of most TMDLs can be found on the U.S. EPA's web page at **http://www.epa.gov/reg3wapd/tmdl/repts.htm**

The 303(d) list identifies the waters and impairments for which TMDLs will be developed over the next four years by specifying the year in the "Projected TMDL Year" column. The impaired waters to be addressed by EPA TMDL development in 2002 and 2003 are known. Similarly, the waters proposed by WVDEP for TMDL development in 2004 and 2005 also are known and identified on the list.

Per the WVDEP's selection methodology, mine drainage impairments in hydrologic groups C, D and E will be targeted for TMDL development in 2006, 2007 and 2008, respectively. As such, the appropriate, specific TMDL development years for those impairments are indicated on the list. For other impairments where the timing of TMDL development is less certain, multiple year entries are indicated that represent the opportunity for TMDL development per the Watershed Management Framework cycle.

Section 9 - List Format Description

The format of the 2002 Section 303(d) list is conceptually 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 listed alphabetically 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 general cause of the impairment (where known), the impaired length (or, by default, the entire length), the planned timing of TMDL development and whether or not the stream was on the 1998 list.

The cause of impairment is often unknown or uncertain at the time of listing and is so indicated on the list. The cause(s) of impairment and the contributing sources of pollution will be identified in the TMDL development process. Many waters are listed by default for their entire length. In most cases, it is doubtful that the entire length of 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 scheduling of TMDL development is discussed in detail in Section 8.

A West Virginia Watershed Management Framework map is provided to assist navigation within the list. A key also is provided to aid in the interpretation of presented information.

Section 10 - List Supplements

Three additional supplements are provided that allow tracking of previously listed waters that are not on the 2002 Section 303(d) list. Specifically, the three supplements are entitled: "Previously Listed Waters – No TMDL Developed", "Previously Listed Waters – TMDL Developed", and "TMDL Developed – Below Listing Criteria."

Supplemental Table A - Previously Listed Waters – No TMDL Developed- Previously listed waters that are not on the 2002 list are included in this supplement if a TMDL has not yet been developed, and these waters have been reevaluated and determined either to not be impaired, or not in need of a TMDL. 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, 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 set forth previously in this document.

Supplemental Table B - Previously Listed Waters - TMDL Developed- TMDLs have been developed for many impaired waters contained on the 1998 303(d) list. Under the existing 40 CFR 130 regulations, TMDL development allows for the removal from the 303(d) list. Further, EPA's Integrated Water Quality Monitoring and Assessment Report Guidance sets forth federal expectations regarding the future handling of such waters. The guidance recommends classification of such waters in a category that is clearly distinguished from the formal 303(d) list. To facilitate future transition to the "Integrated" process and format, WVDEP has developed this supplement.

Waters included in this supplement have had TMDLs developed, but water quality improvements are not yet complete and/or documented.

Supplemental Table C - TMDL Developed – Below Listing Criteria- The goal of every TMDL is to bring the stream back to the point where it meets its designated uses and the associated water quality criteria. Streams in this supplement have had TMDLs developed and recent water quality information indicates that listing criteria are no longer being exceeded.

Section 11. Responsiveness Summary

The West Virginia Department of Environmental Protection (WVDEP) is pleased to provide this response to comments received on the State's Draft 2002 Section 303 (d) list. The large volume of comments reflects the continued attention being given to both the 303 (d) listing process and Total Maximum Daily Load (TMDL) development in West Virginia. The WVDEP appreciates the efforts commentors have put forth to improve this process. As WVDEP pursues TMDL development, continued dialog between the agency and all watershed stakeholders will be necessary to efficiently and systematically address the State's water quality impairments.

The volume of comments received precludes the WVDEP from providing specific responses to individual commentors on each issue raised. As such, all comments have been compiled and responded to in this responsiveness summary. Comments and comment summaries in this document are bolded and italicized. Agency responses appear in plain text.

Special Note:

Certain impaired waters contained in the Draft 2002 Section 303(d) List have been removed from the final list because TMDLs have been recently issued. Affected waters are located in the Monongahela, West Fork, Tug Fork, Dunloup Creek, and Fourpole Creek watersheds and have had TMDLs issued by the U.S. EPA on September 30, 2002. The US EPA also issued the Ohio River PCB TMDL, which impacts all mainstem segments of the Ohio River. The waters and associated impairments are now contained in Supplement B – *Previously Listed Waters – TMDL Developed*.

The following entities provided written comments on the Draft West Virginia 2002 Section 303(d) List:

Arch Coal, Inc.
Callisto Coal Company, Inc
Coal River Mountain Watch
Consol Energy, Inc
Empire Consulting Services, L.L.C.
Jack Bradburn
Jackson and Kelly, PLLC
Pen Coal Corporation
Property Owners- Blue Meadows
Twelvepole Watershed Association
US EPA - Region III
Wayne County Commission
Western Pocahontas Properties
West Virginia Chamber of Commerce
West Virginia Farm Bureau
West Virginia Manufacturers Association
West Virginia Rivers Coalition

Comment No. 1 ***Several commentors contend the biological listing methodology is improper and additional review of the accuracy of the biological listing criteria as a predictor of water quality impairment is needed.***

Response: A description of the West Virginia Stream Condition Index (WVSCI) and the listing criteria for biological impairment are described in the rationale document. The WVDEP's position has not changed relative to its responsibility to list waters that for which available data indicates a significant adverse impact to the biological component of an aquatic ecosystem (46 CSR 3.2.i). The index uses metrics that are both validated and widely used nationally when assessing biologic health of aquatic systems. West Virginia was fortunate to have prominent national experts involved in the design and testing of the stream index. The rating of observed benthic macroinvertebrate communities using the WVSCI is an appropriate methodology for assessing this impairment. Further, its application to 303(d) listing is expected by the US EPA.

Comment No. 2 ***Several commentors requested the WVDEP should not list based solely on a fish consumption advisory.***

Response: The agency's position relative to listing waters with fish consumption advisories is described in the rationale document and reiterated below.

The presence of contaminants in fish tissue in amounts that warrant a public health agency to limit the ingestion of fish is sufficient evidence of impairment pursuant to the narrative water quality criterion provided at 46-1-3.2.e. That criterion prohibits the presence of materials in concentrations that are harmful, hazardous or toxic to man, animal or aquatic life in state waters. Further, the decision to list waters based on the existence of fish consumption advisories is strongly supported by the US EPA.

Comment No. 3 ***Several commentors requested additional explanation relative to the methodology used by WVDEP to make listing decisions based on narrative criteria and a specific discussion of the methodology was requested to be included in the rationale document.***

Response: The 2002 Section 303(d) list includes numerous listings based upon violation of narrative criteria. Most of the listings relate to narrative criterion 46 CSR 3.2.i and the biological impairments identified through benthic macroinvertebrate sampling and application of the West Virginia Stream Condition Index (WVSCI). Other listings relate to narrative criterion 46 CSR 3.2.e and the fish consumption advisories issued by the WV Bureau for Public Health. The decision criteria descriptions found in the listing rationale, supplemented by the additional information contained in this responsiveness summary, should provide adequate explanations of the WVDEP's listing considerations relative to narrative water quality criteria.

Comment No. 4 ***One commentor requested the number of samples and percent violations used to de-list the North Fork and South Fork of the South Branch of the Potomac to be shown and suggested de-listing decisions be based on the same decision matrix used for listing decisions.***

Response: The problems associated with the display of number of samples and percent violations are described in the response to the previous comment. The multiple assessment locations associated with the WV Department of Agriculture report exemplifies the problem. The decisions for the subject waters were based on the decision matrix used for listing decisions. The requested supporting information has been provided to the commentor.

Comment No. 5 ***Two commentors pointed out that the 2002 list doesn't show the number of data points or the percent violations for each listed segment, contrary to Recommendation 14 of the TMDL Stakeholder Committee.***

Response: The WVDEP attempted to honor the stakeholder recommendation and show the number of samples and the frequency of violation associated with each listing, but encountered difficulty displaying information clearly in the table format, particularly when data was available for more than one sampling location in a stream.

The WVDEP considered displaying each sampling station as a row in the table. That would have resulted in a doubling or more of the number of pages in the document and would have reduced the clarity of the listing decisions. The display of multiple columns, showing the number of samples, violation frequency, and location of various assessment points, also was considered. In addition to adversely impacting decision clarity, that option could not be accomplished while maintaining all column information for a listed water row on a single page. The WVDEP considered combining all station data and providing summary "number of samples" and "frequency of violation" columns for the listed waters. But the WVDEP evaluates individual sampling stations independently and attempts to define the extent of impairment based on the results of the various stations, and the "combination" option does not accurately reflect the decision making process.

For the reasons described above, the WVDEP decided that it could not practically display the information suggested by Recommendation 14. Any interested party is encouraged to contact the Division of Water Resources if stream specific frequency of violation information is desired.

Comment No. 6 ***One Commentor suggested WVDEP classify streams as threatened, as opposed to partially supporting, when a violation rate of 11-25% is observed.***

Response: The suggestion is in general conflict with US EPA listing guidelines and if followed, is believed to be unapprovable by the US EPA. See also WVDEP response to a similar yet opposing comment on this issue from US EPA (Comment No. 7).

Comment No. 7 ***One commentor stated that WVDEP should list all waterbodies with >10% violation of criteria unless the state can provide a justification that the waterbody does not meet the criteria for listing on the 303(d) list. The commentor (USEPA) requested WVDEP provide a justification for not listing a waterbody with "less than optimal data sets" and explain how this listing policy was implemented on a case-by-case basis.***

Response: WVDEP acknowledges the commentor's concerns for not listing waterbodies with >10% frequency of violation in less than optimal datasets. In discussions with USEPA staff, WVDEP more specifically understands that USEPA is making this statement as it relates to WVDEP's decision criteria matrix where 10-19 samples are available. The heart of USEPA's concern lies in the discretion that the matrix offers for datasets in the 10-19 samples per station or representative monitoring location range.

The matrix states for sample sets between 10 and 19 samples, with violations between 11-50%, it would be discretionary for WVDEP to list the stream and/or segment. US EPA further stated this was inconsistent with 1998 305(b) guidance which recommends, in datasets larger than 10 samples, violation's of >10% frequency should result in a listing.

WVDEP acknowledges US EPA's concern and offers the following response and resolution. Upon close review by assessment personnel it was determined that although the matrix technically allowed for not listing streams when greater than 10% violations occurred in datasets with 10-19 samples, that liberty was only used where <3 violations were noted. In all cases where more than 2 violations were recorded, the stream or segment was listed, thus abuse of the available discretion did not occur. In situations where 2 violations occurred, in sample sets consisting of 10-19 samples (10.5% - 20% frequency of violation), WVDEP did not automatically list the stream or segment. In these situations consideration was given to what neighboring monitoring station data indicated and the magnitude of the violation.

Although our discretion potential was not abused, an issue does remain with the discretion the matrix allows when 3 or more violations are present. WVDEP intends to work with US EPA Region 3 personnel to refine this category of the matrix as the State develops a listing methodology submission pursuant to proposed federal regulations in support of the Consolidated Listing and Methodology guidance. Further, for streams or stream segments that demonstrated 2 violations during the assessment period and did not make the 303(d) list, WVDEP will afford special monitoring site selection consideration during the hydrologic region's next scheduled sampling.

Comment No. 8 ***Three comments were received relating to WVDEP's actions on threatened waters. One questioned the WVDEP's use of the term threatened, citing its conflict with federal guidance, another suggested enhanced description in the rationale document, and the other contended WVDEP's failure to list threatened waters is in direct conflict with Recommendations 7 and 9 from the TMDL Stakeholder Committee.***

Response: The term "threatened", as used in the decision matrix of the rationale document, relates solely to 305(b) classifications, and has no direct relevance to 303(d) listing. The WVDEP classifies waters as threatened, for 305(b) purposes, where the available data show low frequency/low magnitude violations in a less than optimal datasets. Waters identified as threatened in the 305(b) process are not included on the 303(d) list because the WVDEP is not convinced they are impaired. This 305(b) usage is a substitute for classification of these waters as "not assessed" and provides the agency with a useful tool when determining future monitoring activities.

Recommendation 7 defined threatened waters as those that are likely to exceed water quality standards within the next two years and suggested that the determination be based on data showing a statistically declining trend or agency knowledge of pending changes (e.g. requests for new permits) that would adversely affect water quality. The WVDEP seldom, if ever, has data sufficient for determining declining trends in unimpaired waters, thus no listings of threatened waters appear on the 2002 draft Section 303(d) list. Similarly, the part of the definition that deals with agency knowledge of pending permit applications that would, if issued, cause impairment is inconsistent with agency responsibility. The differences associated with the usage of the term "threatened" were identified when the agency responded to Recommendations 7 and 9 in correspondence to the TMDL Stakeholder Committee members dated July 21, 1999. Finally, all responses to comments have been included in the listing rationale document.

Comment No. 9 ***Two commentors questioned WVDEP's use of a waterbody's long-term average pH to determine if the waterbody is impaired for atmospheric deposition. One commentor requested WVDEP clarify the minimum requirements for long term average pH, the other suggested that listing based on evidence of acid deposition is inappropriate.***

Response: The WVDEP did not use long-term average pH for listing decisions in the 2002 cycle. For this cycle, the WVDEP reviewed all instream pH data generated between July 1996 and July 2001 for suspected low pH impairments and made listing decisions based upon frequency of violation and the decision criteria matrix. Prior acid rain listings were retained on the 2002 list if no new information was available. If WVDEP's intensified monitoring in advance of TMDL development demonstrates compliance with the pH criteria, then TMDL development will not be pursued.

Comment No. 10 ***One commentor was concerned that certain streams WVDEP found to be biologically impaired were not immediately placed on the Section 303(d) list because the source of impairment may be linked to a pollutant for which a TMDL has already been completed. In these cases the stream was not listed because full implementation is expected to correct the impairment. WVDEP was encouraged to demonstrate the linkage between biological impairment and pollutants for which a TMDL has been established. If the linkage cannot be demonstrated, then the commentor requested the biologically impaired stream remain or be placed on the Section 303(d) list.***

Response: This issue was discussed in the Listing Rationale Document accompanying the draft 2002 Section 303(d) List. The reasoning behind this position is to avoid inefficiency in the State's TMDL development program. Where existing TMDLs require significant pollutant reductions to achieve compliance with aquatic life protection criteria, the development of additional TMDLs, that would require those same pollutant reductions, would not be a wise use of limited TMDL development resources.

Agency staff performed detailed technical evaluations of the water quality criteria and the pollutant reductions required by the chemical-specific TMDLs for the streams classified in this manner. These evaluations resulted in determinations that implementation of the existing TMDLs will resolve the biological impairment. Iron, aluminum and pH TMDLs address aquatic life protection water quality criteria and it is reasonable to assume that the significant metals reductions required by the TMDLs (and the associated increase in alkalinity and/or reduction of sediment loading) will have a positive effect on the aquatic ecosystems. Similarly, a nexus also exists between fecal coliform loading reductions required by bacteria TMDLs and a general improvement in biological condition. Installation and maintenance of many conservation practices necessary to reduce bacterial loadings in agricultural watersheds will also lower nutrient and sediment contributions and enhance riparian habitat, thereby positively impacting the biological condition.

Future monitoring plans to evaluate overall TMDL implementation effectiveness, in concert with the State's Watershed Management Framework, will include a biological assessment component to confirm the assumptions.

Comment No. 11 ***One commentor recommended inclusion of a discussion of coal mining and its relation to sedimentation and subsequent biological impairment.***

Response: The WVDEP does not believe that the Section 303(d) list would be improved through speculation of the biological impacts that are attributable to mining or other sources. The causative sources of biological impairment will be determined for specific streams, on a case-by-case basis, in the TMDL development process.

Comment No. 12 ***One commentor requested a copy of the WV Division of Natural Resources data on infertile streams and documentation that limestone treatment operations are successfully mitigating atmospheric deposition impairments.***

Response: WVDEP has forwarded the requested information used in the development of the 2002 Section 303(d) List to the commentor.

The WVDEP is proposing delisting without TMDL development for Laurel Run of Shavers Fork (MCS-5), Left Fork of Buckhannon River (MTB-32) and Right Fork of Buckhannon River (MTB-31). The instream pH data considered in the delistings of these waters has been provided to the commentor as mentioned previously.

In the Draft 2002 Section 303(d) list, WVDEP proposed delisting of Shavers Fork (MC-59) and the refinement of listed mileages of several other previously listed waters, for pH impairments, based upon knowledge of limestone treatment activities by WVDNR. Although WVDEP believes such activities are positively affecting the subject waters, the agency lacks sufficient instream pH data to delist. As such, the final list retains the pH impairments for these waters.

Comment No. 13 ***One commentor proposed that the cause of pH impairment should not be identified in the 303(d) list, but determined in the TMDL development process.***

Response: The WVDEP recognizes that conclusive information regarding the causative sources of impairment is often not available at the time of listing, and agrees that the identification of the causative sources is best accomplished in the TMDL development process. As such, the causes associated with new pH listings are specified as "unknown". Many of the mining related pH impairments are relistings from previous Section 303(d) lists. In the development of the previous lists, those impairments were attributed to mine drainage as the low pH was associated with other ions and indicators common to mine drainage. In waterbodies identified as being impaired by mine drainage, there could be limited occurrences of depressed pH that is not associated with mine drainage. The agency believes this would be an infrequent occurrence. If the intensified monitoring and detailed analyses associated with TMDL development identifies alternate sources of impairment, then TMDL allocations would be configured to require pollutant reduction from the causative sources.

Comment No. 14 ***One commentor requested the WVDEP make available a description of the data used, the decision process for qualifying data, a justification for not using any existing and readily available data and information, and a rationale for any discrepancies between data sets.***

Response: A detailed discussion regarding data solicitation, qualification and use is provided in Section 4 of the rationale document. In addition, a table is provided showing all external data providers.

Comment No. 15 ***One commentor requested WVDEP provide data supporting the removal of the Chlordane fish consumption advisory.***

Response: The West Virginia Bureau for Public Health has rescinded Ohio River fish consumption advisories related to chlordane. As described in the decision criteria for fish consumption advisories, a recommendation from the Bureau to limit the ingestion of fish is sufficient evidence of impairment pursuant to the narrative criteria at 46 CSR 1-3.2(e). Similarly, sufficient justification for delisting exists where the Bureau finds that the ingestion of fish no longer poses a significant health risk. Data supporting the Bureau's decision has been provided to the commentor.

Comment No. 16 ***One commentor suggested that WVDEP may be wrong to use the version of 46 CSR 1 that has an effective date of July 1, 1999, and contended that changes after that time have been submitted to and approved by EPA.***

Response: The version of 46 CSR 1 with an effective date of July 1, 1999 is the proper compilation of EPA-approved criteria upon which listing decisions for the West Virginia 2002 Section 303(d) List were based*. No subsequent, approved rule changes have affected specific numeric or narrative criteria.

** See Section 12 for updated information on the status of West Virginia's aluminum criteria.*

Comment No. 17 ***One commentor questioned the contradiction implied by 303(d) listing of a stream and also proposing the stream for Tier 2.5 antidegradation protection.***

Response: The referenced antidegradation classification is a preliminary list of streams proposed for Tier 2.5 protection and has not been finalized by the WVDEP nor submitted to the Legislature for approval. That notwithstanding, it is possible for a stream to exhibit the exceptional qualities necessary for its consideration under the Tier 2.5 level of protection, even though a specific water quality impairment exists. For example, a naturally reproducing trout water may be granted Tier 2.5 protection even though it is also impaired in relation to the criterion for fecal coliform bacteria. The Tier 2.5 level of protection requires maintenance of existing quality, or improvement, under a pollutant-by-pollutant approach. If the example scenario arises in the future, it would be completely proper for WVDEP to pursue improvement of the fecal coliform impairment through 303(d) listing and subsequent TMDL development, without altering the stream's Tier 2.5 classification.

Comment No. 18 ***One commentor requested reevaluation of data contained in the Mountaintop Mining/Valley Fill Environmental Impact Study.***

Response: As suggested by the commentor, WVDEP, in cooperation with US EPA, revisited the referenced study data to ensure that only qualified data was used for listing purposes.

Comment No. 19 ***For listing decisions where data is inconclusive, one commentor recommended that WVDEP err on the side of caution and list these waterbodies.***

Response: The WVDEP decided to make decisions based on the less than optimal datasets, and devised criteria in which the automatic listing thresholds, and the "frequency of violation" ranges to which agency discretion is applied, increase as available data becomes more limited. Where less than optimal datasets nonetheless provided a clear indication of the status of the water being considered, the matrix allowed the WVDEP to make the appropriate listing decision. For the datasets where the conclusion to be reached from available data was less than obvious, the matrix allowed the professional judgment of agency staff to be applied on a case-by-case basis.

While some may argue that this approach is detrimental to the restoration of impaired waters, the WVDEP believes the suggested approach may be detrimental to statewide restoration efforts. West Virginia is synchronizing the TMDL development and watershed management framework processes. The Section 303(d) list will be the primary source from which TMDL development candidates will be selected. The first step in the development process involves the performance of an intense pre-TMDL monitoring effort. If the WVDEP targets waters that the intensified pre-TMDL monitoring shows are not impaired, then the agency misses opportunities to do TMDLs on other impaired waters for a minimum of five years.

Comment No. 20 ***A commentor suggested that in addition to frequency of exceedance, some consideration should be given to the magnitude of exceedance. Some streams with low magnitude violations should be considered threatened rather than impaired.***

Response: As described earlier, the listing criteria for ample datasets are firm and listing decisions were based entirely on violation frequency. For the "frequency of violation" ranges for less than optimal datasets shown in the decision criteria matrix, the WVDEP does consider the magnitude of exceedances and other factors when it applies professional judgment. (See also response to Comments Nos. 7 and 18).

Comment No. 21 ***Two commentors requested consideration and explanation of an interim de-listing process.***

Response: The federal regulation currently in effect calls for a Section 303(d) list every two years. The TMDL Stakeholder Committee, in accordance with said rule, recommended that no interim delistings occur. The committee recognized the resource drain and confusion a dynamic Section 303(d) list could cause. Until such time that the listing cycle is officially altered, WVDEP does not intend to consider implementing an interim delisting process.

Comment No. 22 ***WVDEP has provided projected years for TMDL development on the Draft 2002 Section 303(d) list. The commentor suggested that WVDEP should provide a better discussion of priority ranking as per 40 CFR 130.7(b)(4).***

Response: 40 CFR 130.7(b)(4) requires priority ranking that takes into account severity of pollution. It also requires identification of uses of the impaired segment and the pollutants causing impairment. Lastly, it requires specific identification of segments for which TMDL development is targeted in the next two years.

The WVDEP believes the proposed list complies with the prioritization requirements of the regulations, and that the rationale document adequately describes the TMDL development targeting and prioritization process. The list exceeds the requirement to identify segments targeted for TMDL development in the next two years by specifically identifying all TMDLs scheduled for development in 2002, 2003, 2004 and 2005. For all listings, the affected water quality criteria (numeric or narrative) and associated designated uses are identified.

TMDL development plans beyond 2005 recognize both the consent decree requirements and the Watershed Management Framework process. The severity of pollution consideration is partially accomplished by targeting all mine drainage impairment listings for TMDL development by 2008, as required by the consent decree. The Watershed Management Framework will annually provide input to the WVDEP in their selection of streams for which TMDL are to be developed. The input from the framework is expected to supplement severity of pollution considerations with likelihood of implementation success considerations that are based upon current agency initiatives and public priority.

Comment No. 23 ***Commentors from one area contend that WV DEP did not provide adequate public notice and opportunity for comment on the Draft West Virginia 2002 Section 303(d) List.***

Response: The public notice period for the Draft 2002 Section 303(d) list opened on August 1, 2002 and ended on September 3, 2002. Public notices were placed in approximately 40 daily and weekly papers statewide. Throughout the public notice period copies of the draft were available via WVDEP's website or by contacting the WVDEP's office at 1201 Greenbrier Street. Individual electronic notification of the list's availability was provided to all persons with an email address contained in WVDEP's database of citizens & groups who have previously expressed an interest in being kept up to date with water quality issues. Unfortunately, near the close of the comment period WVDEP learned that notice of publication of the draft list did not appear in the Wayne County newspaper as planned. WVDEP apologizes for this error, WVDEP does however believe that adequate public notification was provided. In fact the notification mechanisms employed go far and above the minimum legal requirements.

Comment No. 24 ***Various commentors questioned the appropriateness of WVDEP's decision to list the entire length of the stream when the true impaired length is undetermined.***

Response: WVDEP's practice of defaulting to listing the entire stream when sampling from limited points along a stream's continuum is not available has been in place for many listing cycles. The agency clearly identifies where the listed mileages are defaults versus actual bracketed impairment sections. The agency's extensive pre-TMDL sampling and TMDL development will define the true impaired steam section.

Comment No. 25 ***One commentor stated it is inappropriate to compare biologic samples collected below an impoundment with those collected from a free-flowing riffle area in an unimpounded stream.***

Response: This comment was believed to be in specific reference to biologic samples collected below impoundments as part of the mountaintop mining/valley fill environmental impact study. USEPA personnel have indicated that in the mountain top study all such samples were taken a reasonable distance downstream of the impoundments and were collected from representative free-flowing riffle habitats. The distance from the impoundments allowed the collection of a representative biologic sample from habitat not directly impacted by the mining activity.

The commentor specifically mentioned that the abundance of chironomids and simulids cause the WVSCI to be unfairly lowered. The agency accepts there may be a potential increase in the number of collector filterers below an impoundment, but the presence of an impoundment does not explain why there are a reduced number of sensitive taxa collected at these sites.

No mayflies were identified in the biologic samples obtained from the specific streams referenced by the commentor. (Sugartree Branch, Beech Fork, Left Fork/Beech, and Rockhouse Ck) The absence of mayflies cannot be explained by the existence of an impoundment alone. Furthermore both the US EPA and WVDEP have documented the presence of mayflies and other pollution sensitive taxa at other sites below impoundments.

Comment No. 26 ***A comment was received contending the State's selenium criteria are overprotective.***

Response: The WVDEP has and will continue to apply the effective water quality criteria as established by the Environmental Quality Board, the West Virginia Legislature and with final approval from USEPA. The currently approved criteria are the standards that must be utilized in the 303(d) listing and TMDL development processes.

Comment No. 27 ***Several commentors questioned listing of stream segments now replaced by valley fills, sedimentation ponds, approved mitigation projects and US Army Corps of Engineers projects such as Beech Fork Lake and East Lynn Lake.***

Response: Specific streams with objections were re-analyzed to determine if impoundments or fills affected them. The listings for East Fork / Twelvepole, Beech Fork, Kiah Creek, Cove Creek, and Maynard Branch, were originally listed for their entire lengths. The listed lengths have been modified, so that sections impounded by Beech Fork Lake and East Lynn Lake are no longer included.

Comment No. 28 ***One commentor believes biologic data contained in EPA's Mountain Top/ Valley Fill Environmental Impact Study for summer and fall 1999 represented severe drought conditions and thus is not comparable to the WVSCI index.***

Response: US EPA personnel were careful to not collect data from any site that exhibited characteristics that could later be construed as non-comparable. The samples collected during this period were all collected from streams with adequate flow to allow organisms to properly wash into the nets and are considered comparable.

Comment No. 29 ***One commentor requested WVDEP provide discussion of major issues affecting biological impairment decisions.***

Response: Streams were listed for biological impairment if the macroinvertebrate sample was collected under conditions comparable to that for which the WVSCI was developed. Those conditions are: sample collected from flowing portion of stream (riffle/run), from a cobble / gravel substrate, and collected from April through October. There are several items on the field sheets associated with each of the benthic samples that can aid in determining whether a sample is comparable. The method of collection (net type and number of kicks making up the composite sample) is recorded. The average depth of riffles, runs, and pools are measured and recorded. The relative flow conditions are recorded (normal, above normal, below normal) as well as present / past 24 hour precipitation status. The composition of the substrate (percent bedrock, boulder, cobble, gravel, sand, and silt) of the area from which the sample was collected is also recorded. In addition to looking at this data from the field sheets, the size of the watershed was determined using a GIS program. All sites that had low scores were analyzed using both field and GIS information to ensure that a stream was not characterized as impaired if: it was believed to be ephemeral, if the sample was taken from non-comparable substrate (bedrock, hardpan, etc); if it was collected with non-comparable methods (MACs Mid-Atlantic Coastal Protocol or hand-picked); or if it was collected outside the established index period.

Comment No. 30 ***Comment was received requesting clarification on the conflicting reports appearing in local papers regarding the water quality of the South Branch of the Potomac. An inquiry also specifically asked if it is safe to swim or bathe in the River and if the fish can be eaten.***

Response: The WVDEP acknowledges that seemingly conflicting information has appeared in local media outlets. A fish kill occurred in the spring and summer of 2002 and the cause remains uncertain. The WV Division of Natural Resources has led the investigation into the possible causes of the fish kill and has informed the public on what is and is not known about the cause.

During the same time frame, WVDEP advertised for public comment the state's draft Section 303(d) List. The list contained WVDEP's characterization of the South Branch of the Potomac as being in need of bacteria load reductions through continued TMDL implementation. Bacteria load reductions have been called for in the South Branch of the Potomac since the TMDL was completed in 1997. Since that time, WVDEP has worked extensively with many agency partners to implement practices and controls designed to reduce or eliminate sources of bacteria loading. Recent water quality data in the watershed indicates an improving condition as detailed in the rationale document for the 303(d) list.

The agency understands how it is seemingly easy to relate the published South Branch of the Potomac bacteria impairment with the recent fish kill. One should bear in mind that the State's fecal coliform criteria are designed to be protective of human health as opposed to aquatic life. A direct linkage between human health based fecal coliform criteria exceedances and toxic effects to aquatic life is not known to exist. The cause of the fish kill remains unknown and is still being investigated by WVDNR and leading fishery researchers. Further, WVDEP and WVDNR are working closely together to research and select appropriate monitoring parameters and methodologies should the situation reoccur.

In regard to the question "Are the fish safe to eat?" the WV Bureau for Public Health has not issued any advisories recommending restricted consumption of fish from any parts of the South Branch of the Potomac River or its tributaries.

Relating to the question of "Is it unhealthy to swim or bathe in?" WVDEP responds that there is an inherent risk of illness when swimming in any undisinfected water. Guidance previously offered by the Local Health Departments for the South Branch of the Potomac River indicated that during low flow rate and clear water conditions, the River's bacteriological quality meets the WV Bureau for Public Health Bathing Beach Standards. During high flow rate conditions and immediately following rainfall run-off events when the river water turns muddy, bacteria counts do rise. Under those conditions, the guidance advised users not to swim in the River and to wash well after wading, fishing, or boating activities.

Comment No. 31 ***Commentors expressed concern regarding difficulty identifying listed unnamed tributaries and the lack of a description of the West Virginia stream coding system***

Response: The system used to identify streams on the Draft 2002 Section 303(d) List is based upon the West Virginia Department of Natural Resources Stream Coding System as referenced in the State's water quality standards. While the current system has many strengths, it is not well suited for locating specific unnamed tributaries. Efforts are underway to develop a new stream numbering system in the state. The process is referred to as the National Hydrography Dataset (NHD). The NHD is anticipated to include a numbering system for all intermittent and perennial streams as depicted on a 1:24,000 scale map. Further information of NHD is available at: http://nhd.usgs.gov . As was done throughout the comment period, WVDEP personnel will always continue to answer any questions from the public concerning stream locations and listings.

Comment No. 32 ***One commentor requested information to support the WVDEP's delisting of the unnamed tributary of Robinson Run (WVO-21-B-0.9) without TMDL development.***

Response: After a physical tour of the small watershed by WVDEP personnel, the agency proposed delisting because implementation of conservation practices at two farms is expected to result in compliance with water quality standards. The WVDEP has determined that, in this instance, restoration is best accomplished by direct pursuit of conservation practice installation, rather than TMDL development. Pursuant to 40 CFR 130.7(b)(iii), impaired waters so characterized need not be included on the Section 303(d) list. While evaluating its FY02 TMDL development workload in West Virginia, EPA Region III considered, but did not pursue, TMDL development for this stream because they concurred with the WVDEP's assessment.

A Section 319 FY01 Incremental Grant has been awarded in the Robinson Run watershed, with goals related to agricultural nonpoint source pollution abatement through best management practice installation. The WVDEP and partner agencies have targeted the problematic farms in the watershed of the unnamed tributary and are actively encouraging their participation. TMDL development would not be prudent at this time because the ongoing governmental activities are identical to those that would be needed for TMDL implementation**.

*** See Section 12 for updated information on the status of this stream.*

Comment No. 33 ***One commentor requested WVDEP provide a copy of A Stream Condition Index for West Virginia Wadeable Streams and Project Plan for the Watershed Assessment Program, Water Quality and Benthic Macroinvertabrate Monitoring, WV Bureau of Environment, DEP, DWR (Sept. 2001).***

Response: The subject reports are properly referenced in the rational document and available on the WVDEP website. An electronic copy of those documents has been provided to the commentor.

Comment No. 34 ***WVDEP received various constructive editorial comments and many requests for technical revisions to stream listings.***

Response: Editorial comments were considered and revisions to the list and rationale document were made as appropriate. All requests for specific stream listing revision were considered. The WVDEP, on its own volition, also performed additional QA/QC evaluations during the comment period and made refinements to the list. Comments received and agency determinations are documented in the following spreadsheet (Table 4 - Technical Revisions to Specific Stream Listings).

Table 4. Technical Revisions to Specific Stream Listings

Commenter	Stream name	AN Code	Issues	Changes	Decision comments
Arch Coal, Inc.	Ten Mile Fork Cabin Creek	WVK-61-L	CNA - Biological - question impaired reach length for CNA - Biological, Aluminum, Iron, Manganese, and pH	No change in listing	This stream was previously listed for metals. There is insufficient data to delist for these parameters. WAP and SRG sampled several locations along the stream where violations of various parameters occurred. WAP also took three samples for biological assessment; 2 at mouth and one at 2.5 miles above mouth. All WVSCI scores were below 60.6. There is no listing for pH.
Arch Coal, Inc.	Spruce Fork	WVKC-10-T	CNA - Biological - requested removal of CNA Biological listing	Change - decreased CNA - Biological impairment reach length	Change the impaired reach. Considered three good WVSCI scores to limit the impaired reach from 17.4 miles to HW
Arch Coal, Inc.	Rockhouse Creek	WVKC-10-T-13	CNA - Biological and Selenium - requested removal of biological and selenium listings	No change in listing	There were 3/6 hits for Selenium. There were 4/5 samples with low WVSCI scores. The last sample was taken in Apr00 and it's WVSCI score was 51.0. List for CNA - Biological impairment and Selenium.
Arch Coal, Inc.	Beech Creek	WVKC-10-T-15	CNA - Biological and Selenium - requested removal of biological and selenium listings	No change in listing	There were 6 Selenium samples taken and all resultant values were above the AQ limit of 5 ug/l. There were also 5 of 5 low WVSCI scores. Maintain listing for both Biological and Selenium impairments.
Arch Coal, Inc.	Left Fork Beech Creek	WVKC-10-T-15-A	CNA - Biological and Selenium - requested removal of biological and selenium listings	No change in listing	There were 6 Selenium samples taken and all resultant values were above both the AQ limit of 5 ug/l and the HH criteria of 10 ug/l. The lowest value was 15.3 ug/l. There were 3 comparable biological samples taken and all WVSCI scores were below 60.6. List for Biological and Selenium impairments for entire stream.
Arch Coal, Inc.	MUD RIVER	WVOG-2	Selenium	No change in listing	Selenium sample results were reevaluated. Sample location for Selenium was at 77.7 miles above mouth and there were 4/5 violations above the HH criteria and 5/5 violations for AQ criteria.
Arch Coal, Inc.	CABIN BRANCH	WVOG-65-B-7	CNA - Biological - requested removal of CNA-Biological listing	No change in listing	This stream is not listed. There is another Cabin Branch WVOG-16-C which is listed for WVSCI based on Watershed Assessment Program sampling event which resulted in a WVSCI score of 48.5, which is below listing criterion.
Arch Coal, Inc.	RIGHT FORK/PINE CK	WVOG-65-H-1	CNA - Biological - questioned entire length biological listing based on one sample	No change in listing	See Responsiveness Summary
Arch Coal, Inc.	COW CREEK	WVOG-65-J	CNA - Biological - requested removal of CNA-Biological listing	No change in listing	Data from Mountain Top Study was reevaluated to ensure that only valid sample points are being used. There were 4 of 5 sample events that fell within the comparable index period of April through October. (See "A Stream Condition Index for West Virginia Wadeable Streams.) Two locations were analyzed by the Mountain Top study - at 2.3 miles above mouth and at 5.5 miles above mouth. All scores at 5.5 miles were above 63; thus good, and all scores at 2.3 miles were below 55; thus bad. There was also a Watershed Assessment Program sample taken at mouth which was also well below listing criterion with a score of 36.3. No change is listing.
Arch Coal, Inc.	HALL FORK	WVOG-65-J-3-A	Selenium	No change in listing	Selenium sample results were reevaluated. Sample location for Selenium was at 0.6 miles above mouth and 1/5 hits were above HH criteria of 10, but all 5 samples were above AQ limit of 5; thus list for AQ not HH. No change is listing.

Table 4. Technical Revisions to Specific Stream Listings

Commenter	Stream name	AN Code	Issues	Changes	Decision comments
Arch Coal, Inc.	OLDHOUSE BR ROCKHOUSE CK	WVOG-77-A.5	Aluminum, Iron, Manganese, pH - questioned listing for entire length based on one sample	No change in listing	Because this was listed on the 1998 303d list for Aluminum, Iron, Manganese, and pH, data for these parameters was evaluated to see if sufficient data present to delist. The commenter is correct concerning the one sample not showing violations, but this is insufficient data to delist.
Arch Coal, Inc.	SUGARTREE BRANCH	WVOGM-47	CNA - Biological, Selenium - requested removal of biological and selenium listings	No change in listing	Data from Mountain Top Study was reevaluated to ensure that only good sample points are being used. There were 4 of 5 sample events that fell within the comparable index period of April through October. (See "A Stream Condition Index for West Virginia Wadeable Streams.) All sample results were below the 60.6 cutoff. Selenium sample results were also
Arch Coal, Inc.	STANLEY FK	WVOGM-48	Selenium	No change in listing	Selenium sample results were reevaluated and there were 5 valid samples. All five sample results were above the AQ limit of 5 ug/l and three were above the HH limit of 10 ug/l; thus listing for both AQ and HH. Only one location at the mouth was analyzed.
Callisto Coal Company	POND FK	WVKC-10-U	CNA - Biological	No change in listing	Additional data was submitted by Callisto Coal Company. Upon evaluation, all 14 sites appear to be in the section listed as impaired, no change needed. We had no data from the upper 11.4 miles of Pond Fork, TMDL sampling should further refine listing.
Callisto Coal Company	WEST FK POND FK	WVKC-10-U-7	CNA - Biological	No change in listing	Callisto data (rarefied to 200 org subsample) resulted in WVSCI scores of 25 & 26 up and downstream of Roach Branch. 3 WAP sites all scored as impaired. Keep as is. Callisto objection was to KC-35 which is the wrong code for this stream.
Consol Energy	Pigeon Creek	WVBST-24	Aluminum, Iron, Manganese, and pH - want delisting for fe, al, mn, and pH from 8.25 miles above mouth to headwaters	Change - Move to Supplement B - TMDL Developed	Additional CONSOL data was supplied during comment period. The data was collected after the designated evaluation period. The stream has been removed from the list because a TMDL has been completed and is now on the TMDL Developed list. The TMDL is expected to resolve the pH, Aluminum, Iron, Manganese, and biological impairments.
Consol Energy	Milstone Branch	WVBST-24-O	Aluminum, Iron, Manganese - want delisting for fe, al, and mn for length	Change - Move to Supplement B - TMDL Developed	Additional CONSOL data was supplied during comment period. The data was collected after the designated evaluation period. The stream has been removed from the list because a TMDL has been completed and is now on the TMDL Developed list. The TMDL is expected to resolve the Aluminum, Iron, and Manganese impairments.
Consol Energy	Robinson Run	WVMW-12	Aluminum, Iron, Manganese - request delisting for metals from 1.6 miles above mouth to headwaters	Change - Move to Supplement B - TMDL Developed	Additional CONSOL data was supplied during comment period. The data was collected after the designated evaluation period. The stream has been removed from the list because a West Fork TMDL has been completed and is now on the Supplement B - TMDL Developed. The TMDL is expected to resolve the Aluminum, Iron, and Manganese impairments.

Table 4. Technical Revisions to Specific Stream Listings

Commenter	Stream name	AN Code	Issues	Changes	Decision comments
Consol Energy	Bingamon Creek	WVMW-7	Aluminum, Iron - request delisting for fe and al for entire length **or** from mouth to 3.6 miles upstream of mouth	Change - Move Aluminum and Iron to Supplement B - TMDL Developed	Additional CONSOL data was supplied during comment period. The data was collected after the designated evaluation period. The stream has been removed from the list because a TMDL has been completed and is now on the TMDL Developed list. The TMDL is expected to resolve the Aluminum and Iron impairments.
Consol Energy	Cunningham Run	WVMW-7-D	Aluminum, Iron - request delisting for fe and al for entire length	Change - Move Aluminum and Iron to Supplement B - TMDL Developed and remove CNA - Biological listing	Additional CONSOL data was supplied during comment period. The data was collected after the designated evaluation period. The stream has been removed from the list because a TMDL has been completed and is now on the TMDL Developed list. Remove the CNA - Biological listing. The TMDL is expected to resolve the Aluminum, Iron, and CNA - Biological impairments.
Empire Consulting & Pen Coal	WEST FK TWELVEPOLE CK	WVO-2-P	CNA - Biological	Change - decreased CNA - Biological impairment reach length	Originally listed entire reach. WAP has 2 good WVSCI scores at miles 16.1 and 30.2 (should remove this 14.1 mile section) and another WVSCI score above 60.6 at mile 40.9. List for bio impairment from mouth upstream 16.1 miles and from 30.2 miles above mouth upstream to 40.9 miles above mouth.
Empire Consulting & Pen Coal	RIGHT FK/CUB BR	WVO-2-Q-31-A	CNA - Biological	Change - decreased the length of the stream from 1.1 mi to 0.8 mi.	No Pen Coal data. One WAP sample near mouth scored 41.7. Data from Empire Consulting has numerous inaccuracies. Their own data shows the downstream site on this stream as impaired and the upstream site scored (after recalculating) scored a 77.8. However, collection dates are not included, therefore comparability of sample cannot be determined. WQ: somewhat high conductivity, plenty large. Keep entire stream on list for CNA Biological impairment. Change in stream length from 1.1 to 0.8 miles.
EPA	TUG FK	WVBST	Aluminum and Iron - listed for 35.7 miles in 2002; 58.8 miles in 98. Al and Fe are listed from mouth to Kermit. Any data above Kermit?	Change - Move to Supplement B - TMDL Developed	In the 98 list, it appears that the mileage included the portion of the Big Sandy R. that flows along the WV Border. This stream was previously listed for both Al and Fe from mouth to Kermit. The stream has been removed from the list for both Aluminum and Iron because a TMDL has been completed and is now on the TMDL Developed list. The TMDL is expected to resolve the Aluminum and Iron impairments. The fecal and bio stay on the list.
EPA	SPROUSE CK	WVBST-38	CNA - Biological - There is a low WVSCI score but no listing for CNA - Biological impairment.	No change in listing	EPA is correct that there is a low WVSCI score at the mouth; however, the stream has been removed from the list because a TMDL has been completed. The TMDL is expected to resolve the biological impairment.
EPA	LAUREL BR/PAINT CK	WVK-65-N	Aluminum - This is not listed on 96 or 98 lists.	Change - Removed Aluminum impairment from Supplement B - TMDL Developed list	Paint Creek TMDL has reduction allocations for this stream for Aluminum. Implementation of TMDL is expected to resolve the Aluminum impairment. Since this was not previously listed, the stream was removed from the TMDL Developed list for Aluminum
EPA	HICKORY CAMP BR	WVK-65-P	CNA - Biological - Is this listed on TMDL dev. List?	No change in listing	This stream was previously listed for Biological impairment. The Paint Creek TMDL specifically addresses this impairment. No change; stays on Supplemental B - TMDL Developed.

Table 4. Technical Revisions to Specific Stream Listings

Commenter	Stream name	AN Code	Issues	Changes	Decision comments
EPA	WORKMAN CK/ CLEAR FK	WVKC-47-O	Manganese and Iron - Reevaluate Manganese and Iron data and decision	No change in listing.	For all metals, there were 10 sample locations along this 3.5 mile stream. All but 1 site had 15 samples. There were no more than 3 sites with 1 violation and no more than 2 sites had 2 violations. New water quality data does not support listing.
EPA	LEFT FK/NO FK	WVKGC-24-C	pH - pH listed for 1.0 miles in 2002; 1.48 miles in 98	Change - mileage error, should be 1.5 for total length	The length of this stream was increased to 1.5 miles.
EPA	DUNKARD CK	WVM-1	Fecal Coliform - Review listing decision for fecal coliform in Dunkard	No change in listing.	From 1998 to present there has only been 1 violation (459 count) out of 17 samples. This would not constitute listing.
EPA	LITTLE SANDY CK	WVMC-12-B	CNA - Biological - On provisional list for CNA Biological but not on public comment list	No change in listing.	Not listing stream because implementation of TMDL is expected to resolve this impairment.
EPA	SOUTH FK/GREEN RUN	WVMC-16-A	pH - was not listed on 98 list but appears on the Supplemental B - TMDL Developed list	Change - removed pH listing from the Supplemental B - TMDL Developed list	Removed pH listing from the Supplemental B - TMDL Developed list. pH was not previously listed and there is not sufficient data to list although there are some bad scores. The Cheat TMDL calls for reductions for metals for this stream. The completed Cheat TMDL is expected to resolve this issue.
EPA	SHAVERS FK	WVMC-59	pH	Change - move from Supplemental A - No TMDL Developed to a listing record for pH	See Responsiveness Summary
EPA	MCGEE RN	WVMCS-39	pH -impaired reach length difference and DNR treatment success	Change - increase pH impairment reach length to entire length	See Responsiveness Summary
EPA	CROUCH RN	WVMCS-41	pH -impaired reach length difference and DNR treatment success	Change - increase pH impairment reach length to entire length	See Responsiveness Summary
EPA	STONECOAL RN	WVMCS-45	pH -impaired reach length difference and DNR treatment success	Change - increase pH impairment reach length to entire length	See Responsiveness Summary
EPA	FISH HATCHERY RUN	WVMCS-48	pH -impaired reach length difference and DNR treatment success	Change - increase pH impairment reach length to entire length	See Responsiveness Summary
EPA	CASSITY FK	WVMTM-16	pH -impaired reach length difference and DNR treatment success	No change in listing.	The Tygart TMDL is expected to resolve the pH impairment of the first 3.0 miles that is attributed to mine drainage. Keep the upper stretch from 3.0 miles above mouth to headwaters listed for pH from unknown source.

Table 4. Technical Revisions to Specific Stream Listings

Commenter	Stream name	AN Code	Issues	Changes	Decision comments
EPA	UNT #1/ BOOTH CK AT RM 1.4	WVMW-2-0.1A	Aluminum, Iron, Manganese - listed on 2002 list with notation that they were listed in 98. UNT listing confusion	Change - remove CNA - Biological listing record and move the pH, Aluminum, Iron, Manganese listing record to Supplemental B - TMDL Developed list	Better identification of stream names and codes have been provided. This is the stream that was formerly on 98 as UNT#1/ BOOTHS CK and listed for pH and metals. Added mileage to the stream name to better distinguish. Move to Supplemental B - TMDL Develo
EPA	UNT #3/ BOOTHS CK AT RM 3.54	WVMW-2-0.5A	pH - was listed on 98 but not listed on 2002 list. UNT listing confusion.	Change - moved Aluminum, Iron, Manganese listing record to Supplemental B - TMDL Developed and add a record for pH under the Supplemental B - TMDL Developed	Better identification of stream names and codes have been provided. This is the stream that was formerly on 98 as UNT#2/ BOOTHS CK and listed for pH and metals. Added mileage to the stream name to better distinguish. Move to Supplemental B - TMDL Develo
EPA	UNT #5/ BOOTHS CREEK AT RM 4.84	WVMW-2-0.8A	Aluminum, Iron, Manganese, and pH - were listed on 98 but not listed on 2002 list UNT listing confusion	Change - move the pH, Aluminum, Iron, Manganese listing records to the Supplemental B - TMDL Developed list	This is a new UNT/ BOOTHS Ck listing. It was not formerly on 98 list. The former UNT#3/ BOOTHS CK has a code of WVMW-2-D.5. Move the pH, Aluminum, Iron, Manganese listing records to the Supplemental B - TMDL Developed list because of the completed West F
EPA	BROWNS CK	WVMW-23	CNA - Biological - There are low WVSCI scores at mouth (35.9) and at 4.1 miles (50.6). Recommend listing.	No change in listing.	EPA is correct. Data indicates two bad bios at mouth and at 4.1 miles; however, the completed West Fork TMDL is expected to resolve the CA - Biological impairment.
EPA	BROWNS CK	WVMW-23	Fecal Coliform - There is fecal coliform violations at mouth and at 4.1. Review listing decision.	No change in listing.	There is not sufficient evidence for listing. Although there were violations at both sample locations, there are not enough sample events to list.
EPA	UNT/ WEST FORK AT RM 14.6	WVMW-9.5	Aluminum, Iron, Manganese, and pH - were listed on 98 but not listed on 2002 list; was listed on 98 as U.T. #3 @ VIROPA as WVMW-8.7	Change - add records for pH, Aluminum, Iron, Manganese to the Supplemental B - TMDL Developed and remove CNA - Biological listing	The relist for ph and metals was inadvertently left off. The name and codes have changed from the 98 list. This stream was formerly known as UNT#3 at VIROPA - WVMW-8.7. The West Fork TMDL was completed and is expected to resolve the pH, Aluminum, Iron,
EPA	UNT/ ROBINSON RN**	WVO-21-B-0.9	Aluminum, Iron, Manganese - Delist justification	No change is listing	*** See Section 12 for updated information on the status of this stream.*

Table 4. Technical Revisions to Specific Stream Listings

Commenter	Stream name	AN Code	Issues	Changes	Decision comments
EPA	PATS BRANCH	WVOG-0.5	Copper, Fluoride - want to see permit details for this delist	No change in listing	Requested documentation provided.
EPA	ISLAND CK	WVOG-65	Iron - Reevaluate Iron data and decision	No change in listing	Following is our listing rationale for this stream. There were samples taken at 7.3, 9.8, 10.1, 11.6, 11.8, 13.2, 13.3, 13.5, 14.8, 14.9. At all locations except 13.x there were at least 0/24. At the 13.2, 13.3, 13.5 results were 0/24, 2/12, 1/12. No change in listing.
EPA	STONY RV	WVPNB-17	CNA - Biological - Low WVSCI score but no CNA - Biological impairment listing	No change in listing.	This stream has a TMDL for pH, metals, and unionized ammonia. The CNA - Biologic impairment should be covered by the TMDL.
EPA	SOUTH FK / LUNICE CREEK	WVPSB-26-D	CNA - Biological - This stream was listed for CNA Biological in 98 but is missing in 2002.	Change - move CNA - Biological impairment to Supplement A - No TMDL Developed	This stream is covered by the Lunice Creek TMDL of 1997. The CNA - Biological impairment is expected to be resolved by TMDL implementation.
Pen Coal	KIAH CK	WVO-2-Q-18	CNA - Biological	Change - decreased CNA - Biological impairment reach length	WAP's site scored 53.5, which is approx 1.1 miles upstream from East Lynn Lake impoundment. Pen Coal data (rarefied to 200 org subsample):26 samples from 5 sites. The most downstream site (004B) scored low in 1 of 4 samples (could consider as unimpaired, but it doesn't affect the length of stream listed because there are impaired sites up and down from this site). The next site upstream scored as impaired in 2 samples and gray in the other 2 (consider site as impaired). The next 2 upstream sites (004 & 003) are clearly impaired, and the upstream site (003A) could be considered OK. List from Lake upstream to 003A - 11.7 miles
Pen Coal	PARKER BR	WVO-2-Q-18-D	CNA - Biological	Change - decreased CNA - Biological impairment reach length	No Pen Coal data. One WAP sample near mouth scored 40.2. WQ: relatively high conductivity and sulfates. Change length to 1.4 miles - mouth upstream 1.4 miles to valley fill
Pen Coal	ROLLEM FORK	WVO-2-Q-18-E	CNA - Biological	Change - remove CNA - Biological listing record	Only sample in the Pen Coal sample set is at the mouth. The other samples were all on an unnamed tributary approx. 0.9 miles above mouth. The mouth sample WVSCI score was 65.1 in Apr01. WAP also sampled the mouth and got a WVSCI score of 45.1. This sample was taken Apr00. Since the most recent mouth WVSCI is above 60.6, do not list for Bio.
Pen Coal	COPLEY TRACE BR	WVO-2-Q-18-G	CNA - Biological	Change - decreased CNA - Biological impairment reach length	Using Pen Coal data (rarefied to 200 org subsample): They have 12 samples from 3 sites. The downstream site had 5 of 5 samples with scores below 60.6. They have a site ~ 0.9 miles upstream from mouth that scored as impaired in 2 of 5 samples. (consider OK) WAP had one site near the mouth which scored 42.36 List as impaired from mouth up to Pen Coal's site at 0.9 miles.

Table 4. Technical Revisions to Specific Stream Listings

Commenter	Stream name	AN Code	Issues	Changes	Decision comments
Pen Coal	MILAM CK	WVO-2-Q-20	CNA - Biological	Change - remove CNA Biological impairment listing	Using Pen Coal data (rarefied to 200 org subsample): in 10 samples (2 sites) one was impaired, 2 gray, the rest scored above 68. Single WAP sample scored 46.2. Remove entire stream from list for CNA - Biological impairment.
Pen Coal	HONEYTRACE FK	WVO-2-Q-20-C	CNA - Biological	Change - remove CNA Biological impairment listing	The low WVSCI score found at the mouth of this site was noncomparable because of size and collection method. Remove entire stream from list for CNA - Biological impairment.
Pen Coal	MAYNARD BR	WVO-2-Q-23	CNA - Biological - Sample location relative to impoundment	Change - decreased CNA - Biological impairment reach length	Pen Coal data: Single site near mouth scored 53.8. WAP: one site near mouth scored 34.3. WQ: relatively high conductivity and sulfates. Pen Coal map shows impoundment at upstream forks. List only portion below impoundment for biological impairment; mouth upstream to impoundment at 0.7 miles above mouth.
Pen Coal	HONEY BR/EA FK/TWELVEPOLE CK	WVO-2-Q-29	CNA - Biological - Sample location relative to impoundment	Change - decreased CNA - Biological impairment reach length	Using Pen Coal data (rarefied to 200 org subsample): 3 of 4 samples (at 2 sites) score as impaired, the other as gray. WAP data: duplicate samples both scored as impaired. There is an impoundment at approx. 0.24 miles. List for CNA - Biological impairment from mouth upstream to impoundment.
Pen Coal and Empire Consulting	EAST FK TWELVEPOLE CK	WVO-2-Q	CNA - Biological	Change - decreased CNA - Biological impairment reach length	Using Pen Coal data (rarefied to 200 org subsample): in 45 samples upstream of East Lynn Lake, only 12 samples scored above 68; 20 samples are below 60.6. Only one of eight sites had no samples scoring as impaired (BM-001B). Wap data: 3 of 4 samples score as impaired. Empire Consulting data has many errors and does not include dates of collection. Bottom line - stream is slightly impaired. List from Mile 25.0 upstream to HW for a total of 23.7 miles.
Twelvepole WSA	KROUT CK	WVO-2-0.1A	CNA - Biological - Sample location relative to impoundment	No change in listing	Objection based on impoundment issue, there is no impoundment, no change.
Twelvepole WSA	UNT/TWELVEPOLE CREEK	WVO-2-0.8A	General - Confusion regarding location of UNTs	No change in listing	This is true with a lot of the Unnamed tributaries. The mouth of this stream is at 38.3709 N, 82.5283 W. See also Responsiveness Summary
Twelvepole WSA	BUFFALO CK TWELVEPOLE CK	WVO-2-C	CNA - Biological - Sample location relative to impoundment	No change in listing	Objection based on impoundment issue, there is no impoundment, no change.
Twelvepole WSA	BEECH FK TWELVEPOLE CK	WVO-2-H	CNA - Biological - Sample location relative to impoundment	Change - decreased CNA - Biological impairment reach length	Change - decreased CNA - Biological impairment reach length
Twelvepole WSA	RUBENS BR	WVO-2-H-3	CNA - Biological - Sample location relative to impoundment	Change - decreased CNA - Biological impairment reach length	Objection assumed that the sampling site was downstream of an impoundment. The sample was collected just upstream of the impoundment. Change length of impairment to reach upstream of impoundment to HW. List for 1.3 miles from 0.7 miles above mouth to HW.

Table 4. Technical Revisions to Specific Stream Listings

Commenter	Stream name	AN Code	Issues	Changes	Decision comments
Twelvepole WSA	LONG BR/BEECH FK	WVO-2-H-7	CNA - Biological - Sample location relative to impoundment	No change in listing	WAP sample was taken upstream of Beech Fork Lake, mileage listed is that which is upstream of lake as well, no change.
Twelvepole WSA	BUTLER BR	WVO-2-H-8	CNA - Biological - Sample location relative to impoundment	No change in listing	Objection based on impoundment issue, there is no impoundment, no change.
Twelvepole WSA	LYNN CK TWELVEPOLE CK	WVO-2-I	CNA - Biological - Sample location relative to impoundment	No change in listing	Objection based on impoundment issue, there is no impoundment, no change.
Twelvepole WSA	SHOAL BR	WVO-2-M	CNA - Biological - Sample location relative to impoundment	No change in listing	Objection based on impoundment issue, there is no impoundment, no change.
Twelvepole WSA	LEFT FK/WILSON CK	WVO-2-N-1	CNA - Biological - Sample location relative to impoundment	No change in listing	Objection based on impoundment issue, there is no impoundment, no change.
Twelvepole WSA	TOMS CK TWELVEPOLE CK	WVO-2-O	CNA - Biological - Sample location relative to impoundment	No change in listing	Objection based on impoundment issue, there is no impoundment, no change.
Twelvepole WSA	WEST FK TWELVEPOLE CK	WVO-2-P	Do not want stream listed due to work being done.	No change in listing	We recognize the work that has been done, however without sufficient data supporting a no list situation, we must list. All additional data will be considered during the TMDL process.
Twelvepole WSA	BIG BR WE FK TWELVEPOLE CK	WVO-2-P-1	CNA - Biological - Sample location relative to impoundment	No change in listing	Objection based on impoundment issue, there is no impoundment, no change.
Twelvepole WSA	WELLS BR WE FK TWELVEPOLE CK	WVO-2-P-19	CNA - Biological - Sample location relative to impoundment	No change in listing	Objection based on impoundment issue, there is no impoundment, no change.
Twelvepole WSA	MOSES FK/WE FK TWELVEPOLE CK	WVO-2-P-21	CNA - Biological - Sample location relative to impoundment	No change in listing	Objection based on impoundment issue, there is no impoundment, no change.
Twelvepole WSA	RIGHT FK/MOSES CK	WVO-2-P-21-C	CNA - Biological - Sample location relative to impoundment	No change in listing	Objection based on impoundment issue, there is no impoundment, no change.
Twelvepole WSA	TRACE FK/WE FK	WVO-2-P-4	CNA - Biological - Sample location relative to impoundment	No change in listing	Objection based on impoundment issue, there is no impoundment, no change.
Twelvepole WSA	MOSES FK	WVO-2-P-43	CNA - Biological - Sample location relative to impoundment	No change in listing	Objection based on impoundment issue, there is no impoundment, no change.

Table 4. Technical Revisions to Specific Stream Listings

Commenter	Stream name	AN Code	Issues	Changes	Decision comments
Twelvepole WSA	COVE CK	WVO-2-Q-17	CNA - Biological - Sample location relative to impoundment	Change - decrease total length, still list for entire length	Objection based on location of impoundment and relationship to sample locations. Stream is above East Lynn Lake and is only 4.0 miles long. The additional 0.8 miles that was considered as the original length included part of the Lake. Sample location is 1.1 miles above mouth (or Lake).
Twelvepole WSA	LEFT FK/CAMP CK	WVO-2-Q-8-A	CNA - Biological	No change in listing	Stream was previously listed for Aluminum, Iron, Manganese & pH, REIC did study for Twelvepole Watershed Association. They collected a single WQ sample up and downstream of AMD discharge. The data suggests that the metals and pH problems are limited to the lower 0.3 miles, but with a single sample this is insufficient data to delist. No change in listing.
Twelvepole WSA	TIGER FK/LEFT FK/CAMP CK	WVO-2-Q-8-A-1	CNA - Biological - Sample location relative to impoundment	No change in listing	Objection based on impoundment issue, there is no impoundment, no change.
Twelvepole WSA	LYNN CK/EA FK TWELVEPOLE CK	WVO-2-Q-9	CNA - Biological - Sample location relative to impoundment	No change in listing	Objection based on impoundment issue, there is no impoundment, no change.
WVDEP - QA/QC Refinement	Hicks Hollow	WVK-61.5	CNA - Biological	Change - added listing record for CNA - Biological impairment	There was a low WVSCI score but no listing record. Added listing record for entire length (0.9 mi).
WVDEP - QA/QC Refinement	PEACHTREE CK	WVKC-46-G	Aluminum, Iron, Manganese	Change - Remove Aluminum record from Supplemental A and add an Aluminum impairment listing record	During QA/QC of some mining data found a mistake in the delisting of Aluminum. Iron and Manganese are still to be maintained on Supplemental A -No TMDL Developed list and change to a listing for Aluminum impairment.
WVDEP - QA/QC Refinement	TONEY FK	WVKC-47-L	Aluminum, Iron, Manganese	Change - move the Aluminum, Iron, and Manganese to Supplemental A - No TMDL Developed list	During QA/QC, some mining data was reviewed and additional data was found. It was determined that this stream was being listed for Aluminum, Iron, and Manganese in error and that there was sufficient data and cause to move this stream to Supplemental A - No TMDL Developed list.
WVDEP - QA/QC Refinement	RADER FK/TWENTYMILE CK	WVKG-5-R	Aluminum and Iron	Change - remove Aluminum and Iron impairments from list	During QA/QC of some mining data, it was determined that there was insufficient data to list for Aluminum or Iron. Change listing for Al and Fe to no list due to review of updated mtn top data
WVDEP - QA/QC Refinement	LAUREL CK/PINEY CK	WVKN-26-N	CNA - Biological	Change - added listing record for CNA - Biological impairment	During QA/QC, a low WVSCI Score was found, but no listing. Added record for CNA - Biological for entire length - 5.5 miles
WVDEP - QA/QC Refinement	Jones Cabin Run	WVLK-66-E-4	CNA - Biological	Change - added listing record for CNA - Biological impairment	During QA/QC, a low WVSCI Score was found, but no listing. Added listing record for CNA - Biological for entire length - 1.9 miles

Table 4. Technical Revisions to Specific Stream Listings

Commenter	Stream name	AN Code	Issues	Changes	Decision comments
WVDEP - QA/QC Refinement	Lynch Run	WVLK-85	CNA - Biological	Change - added listing record for CNA - Biological impairment	During QA/QC, a low WVSCI Score was found, but no listing. The Little Kanawha TMDL does not have reductions for this stream and is not expected to resolve this impairment. Added record for CNA - Biological for entire length - 2.4 miles
WVDEP - QA/QC Refinement	WHITEOAK RN	WVLKS-10-D	CNA - Biological	Change - added listing record for CNA - Biological impairment	During QA/QC, low WVSCI Scores were found, but no listing. The Little Kanawha TMDL is not expected to resolve this impairment. Added record for CNA - Biological for entire length - 1.9 miles
WVDEP - QA/QC Refinement	BENDER RN	WVLKS-10-P	CNA - Biological	Change - added listing record for CNA - Biological impairment	During QA/QC, low WVSCI Scores were found, but no listing. The Little Kanawha TMDL is not expected to resolve this impairment. Added record for CNA - Biological for entire length - 2.5 miles
WVDEP - QA/QC Refinement	Right Fork/Steer Creek	WVLKS-9	CNA - Biological	Change - added listing record for CNA - Biological impairment	During QA/QC, low WVSCI Scores were found, but no listing. The Little Kanawha TMDL does not have reductions for this stream and is not expected to resolve this impairment. Added record for CNA - Biological for entire length - 25.4 miles
WVDEP - QA/QC Refinement	WHITMEADOW RN	WVMCS-44	pH -impaired reach length difference and DNR treatment success	Change - increase pH impairment reach length to entire length	See Responsiveness Summary
WVDEP - QA/QC Refinement	FIRST FK	WVMCS-50	pH -impaired reach length difference and DNR treatment success	Change - increase pH impairment reach length to entire length	See Responsiveness Summary
WVDEP - QA/QC Refinement	GLADE RN/MILL CK	WVMT-64-C	Iron	Change - added listing record for iron impairment	During QA/QC of data, additional data for iron was found and reevaluated. It was determined that there were more violations of iron that was sufficient to require listing for iron impairment.
WVDEP - QA/QC Refinement	POND CK	WVO-43	CNA - Biological	Change - decreased CNA - Biological impairment reach length	During QA/QC of data, a WVSCI scores >60.6 at RM 5.8 was missed and added. This decreased the CNA - Biological impairment reach to mouth upstream to 5.8 miles.
WVDEP - QA/QC Refinement	Little Fishing Creek	WVO-69-C	CNA - Biological	Change - added listing record for CNA - Biological impairment	During QA/QC, a WVSCI Scores from two locations on the stream were found, but no listing. The sample taken at 0.4 miles above mouth was bad and the sample taken at 5.6 miles above mouth was good. Add listing record for CNA - Biological for impaired reach from mouth upstream 5.6 miles.
WVDEP - QA/QC Refinement	South Fork/Fishing Creek	WVO-69-N	CNA - Biological	Change - added listing record for CNA - Biological impairment	During QA/QC, a low WVSCI Score was found, but no listing. Added listing record for CNA - Biological for entire length - 20.4 miles
WVDEP - QA/QC Refinement	GUYAN CK	WVO-9	CNA - Biological	Change - decreased CNA - Biological impairment reach length	During QA/QC, some WVSCI scores >60.6 at RMs 5.3 & 12.5 were missed, thus added. This decreased the CNA - Biological impairment reach from entire length to from 5.3 miles above mouth upstream to 12.5 miles above mouth.
WVDEP - QA/QC Refinement	CLEAR FK	WVOG-100	CNA - Biological	Change - decreased CNA - Biological impairment reach length	During QA/QC of data, it was found that a good upstream WVSCI score was missed. Data was reevaluated and the impaired reach segment was decreased. List CNA - Biological impairment reach from mouth upstream 25.0 miles which shortened length by 4.0 miles.

Table 4. Technical Revisions to Specific Stream Listings

Commenter	Stream name	AN Code	Issues	Changes	Decision comments
WVDEP - QA/QC Refinement	ROCKCASTLE CK	WVOG-123	CNA - Biological	Change - decreased CNA - Biological impairment reach length	During QA/QC of data, it was found that a good upstream WVSCI score was missed. Data was reevaluated and the impaired reach segment was decreased. List CNA - Biological impairment reach from mouth upstream 4.0 miles which shortened length by 0.2 miles.
WVDEP - QA/QC Refinement	SMITH BR/PINNACLE CK	WVOG-124-D	CNA - Biological	Change - added listing record for CNA - Biological impairment	During QA/QC, a low WVSCI Score was found, but no listing. Added listing record for CNA - Biological for entire length - 2.1 miles
WVDEP - QA/QC Refinement	LONG BR	WVOG-129	CNA - Biological	Change - added listing record for CNA - Biological impairment	During QA/QC, a low WVSCI Score was found, but no listing. Added listing record for CNA - Biological for entire length - 2.1 miles
WVDEP - QA/QC Refinement	MUD RV	WVOG-2	CNA - Biological	Change - added listing record for CNA - Biological impairment	There were low WVSCI scores, but no listing record; list for CNA -Biological impairment for entire length. WAP sampling showed a WVSCI=44.0 at 3.6. Above this point there were three sample locations where WVSCIs were above criteria; however, the wapbase notes that two of these are noncomparable. The only comparable good WVSCI score was at mile point 77.2. Additional sampling within index period from Mtntop data shows violations at 77.7 (3 of 4, latest bad) and at 82.7 (3 of 4, latest bad). ; added listing record for entire length - 79.0 miles
WVDEP - QA/QC Refinement	LIMESTONE BR	WVOG-48	CNA - Biological	Change - remove CNA - Biological listing record	WVSCI score was 70.3; should not have been listed
WVDEP - QA/QC Refinement	COAL BR/ISLAND CK	WVOG-65-A	CNA - Biological	Change - added listing record for CNA - Biological impairment	During QA/QC, a low WVSCI Score was found, but no listing. Added listing record for CNA - Biological for entire length - 2.1 miles
WVDEP - QA/QC Refinement	ELLIS BR/MUD FK	WVOG-65-B-1-B	CNA - Biological	Change - added listing record for CNA - Biological impairment	During QA/QC, a low WVSCI Score was found, but no listing. Added listing record for CNA - Biological for entire length - 1.6 miles
WVDEP - QA/QC Refinement	UPPER DEMPSEY BR	WVOG-65-B-1-E	CNA - Biological	Change - added listing record for CNA - Biological impairment	During QA/QC, a low WVSCI Score was found, but no listing. Added listing record for CNA - Biological for entire length - 1.3 miles
WVDEP - QA/QC Refinement	BUFFALO CK	WVOG-75	CNA - Biological	Change - decreased CNA - Biological impairment reach length	During QA/QC of data, it was found that a good upstream WVSCI score was missed. Data was reevaluated and the impaired reach segment was decreased. List CNA - Biological impairment reach from mouth upstream 9.9 miles which shortened length by 8.9 miles.
WVDEP - QA/QC Refinement	HUFF CK	WVOG-76	CNA - Biological	Change - decreased CNA - Biological impairment reach length	During QA/QC of data, it was found that a good upstream WVSCI score was missed. Data was reevaluated and the impaired reach segment was decreased. List CNA - Biological impairment reach from mouth upstream 13.9 miles which shortened length by 7.3 miles.
WVDEP - QA/QC Refinement	OLDHOUSE BR ROCKHOUSE CK	WVOG-77-A.5	CNA - Biological	Change - added listing record for CNA - Biological impairment	During QA/QC, a low WVSCI Score was found, but no listing. Added listing record for CNA - Biological for entire length - 1.1 miles

Table 4. Technical Revisions to Specific Stream Listings

Commenter	Stream name	AN Code	Issues	Changes	Decision comments
WVDEP - QA/QC Refinement	BUFFALO CK LITTLE HUFF CK	WVOG-92-K	CNA - Biological	Change - decreased CNA - Biological impairment reach length	During QA/QC of data, it was found that a good downstream WVSCI score was missed. Data was reevaluated and the impaired reach segment was decreased. List CNA - Biological impairment reach from mouth upstream 1.8 miles, which shortened length 1.3 miles.
WVDEP - QA/QC Refinement	TRACE FK/MUD RV	WVOGM-20	CNA - Biological	Change - decreased CNA - Biological impairment reach length	During QA/QC of data, it was found that a good downstream WVSCI score was missed. Data was reevaluated and the impaired reach segment was decreased. List CNA - Biological impairment reach from 6.4 miles above mouth upstream to HW which shortened length by 6.4 miles.
WVDEP - QA/QC Refinement	SUGARTREE FK	WVOGM-25-I	CNA - Biological	Change - decreased CNA - Biological impairment reach length	During QA/QC of data, it was found that a good upstream WVSCI score was missed. Data was reevaluated and the impaired reach segment was decreased. List CNA - Biological impairment reach from mouth upstream to 3.0 miles above mouth, which shortened length by 2.9 miles.
WVDEP - QA/QC Refinement	STANLEY FK	WVOGM-48	CNA - Biological	Change - added listing record for CNA - Biological impairment	There were low WVSCI Scores, but no listing record. Four samples were taken within the index period. The last sample was in Apr00 and it was 22.6; thus list for bio; added CNA - Biological impairment listing record for entire length - 2.0 miles
WVDEP - QA/QC Refinement	BALLARD FK	WVOGM-49	CNA - Biological	Change - added listing record for CNA - Biological impairment	There were low WVSCI scores, but no listing record. Four samples were taken within the index period. The last sample was in Apr00 and it was 30.9; thus list for bio; added CNA - Biological impairment listing record for entire length - 2.3 miles
WVDEP - QA/QC Refinement and EPA	LAUREL FK /COAL FK	WVK-61-H-1	CNA - Biological	Change - move CNA - Biological listing to Supplement A.- No TMDL Developed list	During DEP QA/QC an incorrect listing occurred for CNA - Biological. This stream was listed previously for CNA - Biological. Because of the revised biological index and listing methodology, the WVSCI scores were recalculated and the WVSCI score was above 60.6, thus insufficient data to list move to Supplement A.
WVDEP - QA/QC Refinement and EPA	ELK CK	WVMW-21	Aluminum, Iron, Manganese	Change - decreased impaired reach for Aluminum, Iron, & Mn and move to Supplemental B - TMDL Developed	During QA/QC, it was found that there was incorrect mileage associated with the listing of metals. Changed Aluminum, Iron, Manganese impairments from 27.9 miles to entire length and moved to the Supplemental B - TMDL Developed list because of the completed West Fork TMDL.
WVDEP - QA/QC Refinement and EPA	JENKINS FK	WVK-73-D	pH - was listed on 98 but not listed on 2002 list	Change - added listing record for pH impairment	Add relist record for pH. This stream was listed for metals and pH impairments in 98 and there is not sufficient data to support delisting. The pH record was left off inadvertently.
WVDEP - QA/QC Refinement and EPA	Ohio River	WVO	Fecal Coliform	Minor revision to impaired reaches in Upper Ohio South & Lower Ohio segments	Change made to be consistant w/ ORSANCO assessment

Section 12 – EPA Approval and Resultant Refinements

EPA Region III provided comments to WVDEP pursuant to the Draft West Virginia 2002 Section 303(d) List released for public comment in August 2002. WVDEP reactions to those EPA comments are documented in the Responsiveness Summary contained in Section 11. The WVDEP submitted the West Virginia 2002 Section 303(d) List to EPA Region III for final approval on October 9, 2002. The parties coordinated resolution of issues that arose during EPA's review of the submission and the WVDEP made certain revisions to the submission. EPA Region III determined the list, as revised, meets the requirements of Section 303(d) of the Clean Water Act and approved it on June 20, 2003. A copy of the EPA approval letter and rationale follows. Furthermore, revisions that resulted from EPA's review of the October 9, 2002 submission are described below and in the Approval Rationale.

EPA's Approval Rationale documents the applicable statutory and regulatory requirements and explains how the West Virginia 2002 Section 303(d) List complies with each requirement.

Unnamed Tributary of Robinson Run

In its Draft Section 303(d) List, the WVDEP proposed delisting of the Unnamed Tributary of Robinson Run (WVO-21-B-0.9). The initial proposal was based upon the nonpoint source restoration activities that have been initiated in the watershed. EPA concluded that the stream continues to meet the criteria of 40 CFR 130.7(b)(1), and must remain on the list. As such, the WVDEP returned the water to the list. This issue is addressed on Page 13 of EPA's Approval Rationale.

New aluminum water quality criteria

On April 17, 2003, EPA approved revisions to the water quality criteria for aluminum. The previously applicable 750 ppb acute aquatic life protection criterion for *total recoverable* aluminum was replaced with a 750 ppb *dissolved* criterion and a new 87 ppb chronic aquatic life protection dissolved aluminum criterion was added. Prior to April 17, 2003, the revisions were pending EPA approval and could not be implemented pursuant to the Alaska Rule (See Section 3) The Draft West Virginia 2002 Section 303(d) List was properly prepared and submitted pursuant to the water quality criteria that were effective at the time of list development. The timing of the criteria revision approval precluded comprehensive reassessment of waters listed pursuant to the previously applicable criteria. As such, the majority of aluminum listings contained in the Draft 2002 list remain. The WVDEP intends to reassess those listings in the upcoming 2004 303(d) process. Six aluminum listings were removed from the 303(d) List in response to the criteria change. The affected waters were not were not identified as impaired on the West Virginia 1998 Section 303(d) List. The WVDEP reviewed available water quality information for the subject streams, found no impairments pursuant to the aquatic life protection criteria for dissolved aluminum, and determined listing to be inappropriate. This issue is addressed on Page 7 of EPA's Approval Rationale.

Biological impairments with Fecal Coliform TMDLs developed

The WVDEP initially decided not to list three biologically-impaired waters in the South Branch Potomac watershed. The WVDEP believed that implementation of existing fecal coliform TMDLs would drive BMP installation and positively impact the biological condition of the waters. EPA did not support the rationale

and mandated listing of the biological impairments. The subject waters are Anderson Run (WVPSB-18), South Fork Lunice Creek (WVPSB 26-D) and Hawes Run (WVPSB-21-X). This issue is addressed on Pages 12 and 13 of EPA's Approval Rationale.

Final note

In the past, the designation of unnamed tributaries has been a source of confusion for the public. This explanation is being offered to clarify how these streams are named in the 2002 303(d) list. The abbreviation used for unnamed tributaries is UNT. Often in the past, an unnamed tributary of Dry Fork would be written as: UNT/Dry Fork. In the 2002 303(d) list additional characters have been added to the stream code to further describe the stream's location. Numbers have been added to indicate the distance upstream in miles, otherwise known as river miles, that the unnamed tributary is from the mouth of the named stream. In other words, the river miles indicate the length from the mouth of the named stream to its confluence with the unnamed stream. For example, UNT/ Dry Fork RM 2.5 is the location of the mouth of the unnamed tributary of Dry Fork, which is located 2.5 miles upstream from the mouth of Dry Fork.

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

JUN 20 2003

RECEIVED

JUN 23 2003

WV DEPARTMENT OF
ENVIRONMENTAL PROTECTION

Ms. Allyn G. Turner, Director
Division of Water and Waste Management
West Virginia Department of Environmental Protection
1201 Greenbrier Street
Charleston, WV 25311

Dear Ms. Turner:

Thank you for the West Virginia Department of Environmental Protection's (WVDEP) submission on October 9, 2002, of its identification of waters under Section 303(d) of the Clean Water Act ("2002 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 2002 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.

In a separate letter dated September 30, 2002, EPA approved WVDEP's identification on West Virginia's 2002 Section 303(d) List of the upper and lower Guyandotte River as high priority water quality limited segments still requiring a TMDL. That approval is incorporated herein by reference.

Thank you again for this submission. If you or your staff have any questions, please feel free to contact Mr. Thomas Henry (215) 814-5752 or Ms. Jennifer Sincock (215) 814-5766 for assistance.

Sincerely,

Jon M. Capacasa, Director
Water Protection Division

Enclosure

cc: Patrick Campbell, Assistant Director,
Division of Water Resources

APPROVAL RATIONALE

Introduction

EPA has conducted a complete review of West Virginia's 2002 Section 303(d) list and supporting documentation and information and, 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 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 each State to identify those waters within its 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's 2002 Section 303(d) list consists of the 303(d) list of impaired waters and three supplemental tables that track previously listed waters. The format of the 2002 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 affected designated use, the cause of the impairment (where known), the impaired length (or, by default, the entire length), the planned timing of TMDL development and whether or not the stream was on the 1998 list.

Three supplemental tables were provided to track previously listed waters that are not present on the 2002 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.

"Supplemental Table B - Previously Listed Waters - TMDL Developed" is a list of previously listed impaired waters for which a TMDL has been developed and established 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.

"Supplemental Table C - TMDL Developed - Below Listing Criteria" is a list of impaired waters that have had TMDLs developed and recent water quality information indicates that the applicable water quality standards are no longer being exceeded. The waters listed on this supplemental table have been restored through TMDL implementation to meet their designated uses and associated water quality criteria.

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.

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 2002 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 2002 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. The DWWM was formerly know as the Division of Water Resources (DWR). 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 2 of the listing rationale narrative. 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 summer of 2001. 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 relate 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*.

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. EPA finds West Virginia's screening protocol and criteria described in its 2002 303(d) listing rationale narrative and clarified in its response to comments to be a reasonable rationale in determining the usage of outside data, as waters listed as "impaired" should be based on scientifically valid data.

In June 2002, West Virginia provided a provisional draft document with the initial impairment decisions and rationale narrative to EPA and the TMDL stakeholder group for comment. The TMDL stakeholder group, formed by WVDEP in 1999, is comprised of 22 members from diverse interests, including representatives from environmental and recreational groups, coal, oil and gas, and forestry industries, nonpoint sources, municipalities, and state and Federal government. The group was charged with developing consensus-based recommendations to WVDEP on 303(d) listing and TMDL development. To the maximum extent practical, the recommendations of the stakeholder group were addressed. EPA also provided comments in a letter dated July 17, 2002 which were addressed by West Virginia.

Preliminary comments from the initial distribution of the provisional draft document were evaluated and subsequent revisions were included in the Draft 2002 303(d) List which was released for public comment on August 1, 2002 through September 3, 2002. Notices of the availability of the Draft 2002 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. EPA provided comments to WVDEP on September 9, 2002 requesting clarification of (1) listing decision criteria for the following data: numeric, atmospheric deposition, fish consumption advisory, and biological; (2) data descriptions; (3) priority ranking; (4) individual waterbody listings; and (5) additional documentation and data to support delisted segments and/or pollutants. West Virginia received written comments from 17 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.

WVDEP provided an advance submission on September 25, 2002, of its identification of waters in the upper and lower Guyandotte River hydrologic regions on West Virginia's 2002 list of water quality impaired segments pursuant to Section 303(d) of the CWA. In a separate letter dated September 30, 2002, EPA approved WVDEP's identification on West Virginia's 2002 Section 303(d) list of the mainstems of the upper and lower Guyandotte River as high priority water quality limited segments still requiring a total maximum daily load (TMDL). That approval is incorporated herein by reference.

EPA received WVDEP's final 2002 Section 303(d) list package on October 9, 2002. This package included: (1) a listing rationale narrative describing: (a) an overview of the process for development of the 2002 303(d) list with background information on watershed management and pollution control; (b) the listing methodologies for the following kinds of data: numerical water quality; atmospheric deposition, fish consumption advisories, biological impairment, and fecal coliform; 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 three supplemental tables tracking previously listed waters; (4) WVDEP's "Decision Tracking" database which records final listing decisions; (5) WVDEP's "Alldata" spreadsheet containing water quality data for many waters; (6) biologic and water quality information from EPA's Mountaintop Mining/Valley Fill Environmental Impact Study (EIS); (7) Ohio River Valley Water Sanitation Commission (ORSANCO) clean metals data; (8) West Virginia Division of Natural Resources (DNR) pH water quality information; (9) Ohio River chlordane fish tissue information (10) documentation for delisting decisions including NPDES permit applications, etc.; (11) the WVDEP 2001 *Quality Assurance Project Plan for the Watershed Assessment Program: Water Quality and Benthic Macroinvertebrate Monitoring*; (12) the EPA 2000 *A Stream Condition Index for West Virginia Wadeable Streams*; and (13) 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.

EPA recognizes that WVDEP received comments questioning its reliance on biological assessments and the West Virginia Stream Condition Index to identify waters for inclusion on 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 a narrative criteria.

With respect to the various types of assessment information, EPA recommends 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 2002 Section 303(d) list, EPA identified some additional concerns for which clarification and/or additional listings were provided by WVDEP in subsequent correspondence. In particular, EPA requested a description of the listing decision methodology utilized for biological impairments on waters for which a TMDL had already been developed. In a letter dated March 14, 2003, West Virginia provided additional information that clarified their rationale with respect to biological impairment listing decisions for streams where a TMDL had been developed for mine drainage pollutants including aluminum, iron, and pH, to achieve the aquatic life designated use criteria. EPA found West Virginia's biological listing methodology to be a reasonable rationale because implementation of TMDLs developed for aquatic life criteria are expected to improve stream water quality and address the biological impairment. West Virginia provided additional information to address

EPA's comments and certain discrepancies identified by WVDEP. An electronic copy of West Virginia's revised 2002 Section 303(d) list and database were received by electronic mail on March 31, 2003.

On April 17, 2003, EPA approved revisions to certain water quality standards in West Virginia including an aquatic life protection criteria change from total recoverable aluminum to dissolved aluminum. At the time of data solicitation and at the time the 2002 Section 303(d) list was prepared and submitted, the version of 46 CSR 1 with an effective date of July 1, 1999 contained the applicable water quality standards. As a result of EPA's April 17, 2003 approval of revisions to the aluminum criteria, West Virginia, in a letter dated June 5, 2003, withdrew the following waters from the 2002 Section 303(d) list:

Stream Name	Code	Criteria	Use	Length	Reach	TMDL Year	98 List?
MIDDLE ISLAND CK	WVO-58	Aluminum	AQ	96.0	Entire Length	2006/2011/2016	No
TWELVEPOLE CK	WVO-2	Aluminum	AQ	33.0	Entire Length	2008/2013/2018	No
RT FORK/BUFFALO CK	WVOG-61-A	Aluminum	AQ	1.5	Entire Length	2003 -	No
LITTLE CUB CK	WVOG-108	Aluminum	AQ	3.6	Entire Length	2003	No
HORSEMILL BR	WVK-64-A	Aluminum	AQ	2.1	Entire Length	2009/2014	No
BRIERY CK	WVKG-19-U-2-A	Aluminum	AQ	1.5	Entire Length	2006/2011/2016	No

These subject waters were not identified as impaired on the West Virginia 1998 Section 303(d) list. They were included on the draft 2002 list based upon the previously applicable aquatic life protection criteria for total recoverable aluminum. In response to the criteria change, West Virginia reviewed available water quality information for the subject streams, and found no impairments pursuant to the aquatic life protection criteria for dissolved aluminum. Consistent with Section 303(d), which requires listing of waters for which technology-based limits are not sufficiently stringent to achieve "any water quality standard applicable to such waters," and with public comment urging that waters be listed based on the most current water quality standards and criteria approved by EPA, West Virginia determined that it is not appropriate to identify these waters on the 2002 Section 303(d) list. EPA expects that West Virginia will monitor these streams to determine dissolved aluminum impairment, if any, during the next monitoring period for the Hydrologic Group in which they are located. West Virginia amended their 2002 Section 303(d) list and database to address EPA's comments.

Future Section 303(d) lists should use the standards approved on April 17, 2003. As data applicable to the newly approved standards is gathered, West Virginia may use that data to

determine that TMDLs are or are not necessary and to determine whether particular waters should be de-listed or added to the next Section 303(d) list.

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 303(d) list is based largely on the data collection and assessment that underlies the 305(b) report of the State's water quality. In West Virginia, WVDEP's DWWM is responsible for the collection and compilation of this information. WVDEP compiles West Virginia's Inventory of the Water Quality, the 305(b) Report, every two years pursuant to Section 305(b) of the Clean Water Act (CWA). A WVDEP data request letter was widely advertised for the solicitation of data for the 2002 list. The decision process for the 2002 list incorporated data from 68 sources on Table 2 in the listing rationale, including the 2000 305(b) Report (and data sources implied by this extensive assessment) and information compiled for the draft 2002 305(b) Report (and data sources implied by this extensive assessment). WVDEP identified those waterbodies that currently do not meet the narrative or numeric water quality criteria established in the state's water quality standards. The 305(b) report indicates a water quality impairment whenever there is technically a loss of designated use, regardless of the duration of the loss or knowledge of its cause. Many of the waters with biological impairments placed on the 2002 list fall into this category; they were identified in the 305(b) report through the WVSCI data.

Further, West Virginia relied heavily on ORSANCO's 2002 305(b) report and use support information when making listing decisions on the Ohio River and the tributaries for which data was available including the Kanawha River. This information was supplemented by West Virginia's fish consumption advisories.

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 data described above in identifying impaired segments. The State also reviewed some NPDES permit files to help identify sources of impairment. The State was not aware of any information, outside of the NPDES permits, with dilution calculations or predictive models which could be incorporated into the 2002 Section 303(d) list.

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. The decision process for the 2002 list incorporated data from 68 sources identified in Table 2 of the listing rationale, including:

- local agencies (e.g., City of Morgantown, City of Mullens, Clarksburg Water Board, Town of Wayne);
- state agencies (e.g., WV DNR, WVDEP, Ohio Environmental Protection Agency, Pennsylvania Department of Environmental Protection, Virginia Department of Environmental Quality, ORSANCO, WV Department of Agriculture);
- Federal agencies (e.g., US Geological Survey, US Forest Service, EPA - Storet);
- members of the public (e.g., Friends of Decker Creek, Lower West Fork Association);
- private companies (Weirton Steel, Calisto Coal, Patriot Mining Co.); and,
- academic institutions (e.g., WV Wesleyan College, Cacapon Institute).

West Virginia encouraged comment on its draft lists, and the submission of water quality data, each time the list is public noticed. West Virginia received additional data and information as comments to their public noticed draft 2002 Section 303(d) list. In their listing rationale narrative, 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).

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 2002 Section 303(d) list. Table 2 of the submission lists 68 sources of data utilized during the listing process.

EPA has reviewed West Virginia's description of the data, information it considered, and its methodology for identifying waters. This includes data and information submitted in response to specific comments raised by EPA following WVDEP's final report submission. 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).

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 2002 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.

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 2002 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 (e.g., 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 2002 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 1998 303(d) list, West Virginia provided EPA with sufficient documentation as justification. Such data included benthic macroinvertebrate data, fish tissue 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. Rationale for West Virginia's decision not to list waters pursuant to 40 CFR 130.7(b)(1) because they are expected to meet water quality standards.

The State's decision not to list Pats Branch (WVOG-0.5) for copper and fluoride on its 2002 Section 303(d) list is consistent with EPA's regulations at 40 CFR 130.7(b)(1). Under 40 CFR 130.7(b)(1), States are not required to list WQLSs where effluent limitations required by the CWA, more stringent effluent limitations required by State or local authority, or other pollution control requirements required by State, local or Federal authority, are stringent enough to implement applicable water quality standards. The regulation does not specify the time frame in which these various requirements must implement applicable water quality standards to support a State's decision not to list particular waters.

Monitoring should be scheduled for these waters to verify that the water quality standard is attained as expected in a reasonable time frame. Where standards will not be attained through implementation of the requirements listed in 40 CFR 130.7(b)(1) in a reasonable time, it is appropriate for the water to be placed on the Section 303(d) list to ensure that implementation of the required controls and progress towards compliance with applicable standards is tracked. If it is determined that the water is, in fact, meeting applicable standards when the next Section 303(d) list is developed, it would be appropriate for the State to remove the water from the list at that time.

Specifically, West Virginia has chosen not to list Pats Branch (WVOG-0.5) for copper and fluoride because a NPDES permit (WV0114618) addressing these pollutants was issued to

Inco Alloys International Incorporated. The permit expires April 15, 2004 when it will need to be reissued. WVDEP has committed to monitoring the facility's compliance with this NPDES permit. West Virginia has demonstrated through compliance orders and agreements, effluent limitations required by West Virginia will result in the attainment of water quality standards within a reasonable time, likely before the next listing cycle.

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

During the review of West Virginia's 2002 Section 303(d) list, EPA Region III staff requested additional information from West Virginia.

- **Justification for differences between EPA recommendations and WVDEP's final 2002 Section 303(d) list.** In comment letters dated July 17, 2002 and September 9, 2002 and various electronic comments sent from October 2002 to June 2003, EPA requested clarification and amendments to West Virginia's 2002 Section 303(d) list and WVDEP's "Decision Tracking" 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 1998 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 2002 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.

- **Decision to not list certain waters impacted by biological impairment where a TMDL had previously been developed for pollutants other than biological impairment including mine drainage pollutants (aluminum, iron, and pH) and fecal coliform bacteria.** In a letter dated March 14, 2003, West Virginia provided a description of the listing decision methodology utilized for biological impairments on waters for which a TMDL had been developed for mine drainage pollutants (aluminum, iron, and pH) that affect the aquatic life designated use criteria. EPA found West Virginia's biological listing methodology to be a reasonable rationale because implementation of TMDLs developed for aquatic life criteria are expected to improve stream water quality and positively impact the aquatic community. However, West Virginia also used this listing methodology for waters impacted by biological impairment where a TMDL had previously been developed for fecal coliform bacteria, a human health designated use

criteria. EPA requested that West Virginia list these biologically impacted waters with a fecal coliform bacteria TMDL because it is uncertain if implementation of fecal coliform reductions would have a direct link to aquatic life criteria or cause positive impacts to the aquatic community. Therefore, West Virginia placed these waters back onto the 2002 Section 303(d) list. West Virginia amended their 2002 Section 303(d) list and database to address EPA's comments.

- **Decision to list Unnamed Tributary/Robinson Run for aluminum, iron, and manganese.** In a letter dated June 5, 2003, West Virginia proposed the return of Unnamed Tributary/Robinson Run (WVO-21-B-0.9) to the 2002 Section 303(d) list. This water was identified as impaired on the 1998 Section 303(d) list. When this water was considered for the 2002 Section 303(d) list, West Virginia initially proposed delisting without TMDL development, based upon the nonpoint source restoration activities that have been initiated in the watershed. After conferring, EPA concluded that Unnamed Tributary/Robinson Run continues to meet the criteria of 40 CFR 130.7(b)(1), and must remain on the list. Therefore, West Virginia placed this water back onto the 2002 Section 303(d) list and amended their database to address EPA's comments. West Virginia anticipates that the nonpoint source restoration activities initiated in the watershed will result in improved water quality sufficient to allow Unnamed Tributary/Robinson Run to be removed from the list during the next listing cycle.

EPA concludes that West Virginia has addressed all additional information EPA Region III requested of the State during the review of the 2002 Section 303(d) list.

G. Priority Ranking and Targeting

Within the 2002 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 2002 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 (e.g., efficient allocation of resources, Watershed Management Framework cycles, coordination with other programs or states) and technical considerations (e.g., 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 303(d) list.

In addition, EPA reviewed West Virginia's identification of WQLSs targeted for TMDL development in the next four 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.

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

In electronic correspondence on October 10, 2002, EPA requested comments on West Virginia's 2002 Section 303(d) list from the West Virginia Field Office of the U.S. Fish and Wildlife Service (FWS). In a letter dated October 28, 2002, the FWS stated that EPA's approval of West Virginia's 303(d) list is not likely to adversely affect the Federally listed species under the Services' respective jurisdictions.

Department of Environmental Protection

W e s t V i r g i n i a

Promoting a Healthy Environment

WV 2002 Section 303(d) List Key

(Final approved - June 2003)

List Format

Impaired streams have been listed first by their hydrologic grouping, according to the West Virginia Watershed Management Framework (see map). Streams are then arranged alphabetically under their major watershed name as shown in the example below.

ID #	Stream Name	Stream Code	Criteria Affected	Use Affected	Cause	Impaired Length (mi)	Reach Description	Projected TMDL Year	1998 list?
HYDROLOGIC GROUP A									
Cheat Watershed - HUC# 05020004 - *streams 26 miles 94*									
1	BUCK RN	WVMCS-52	pH	All	Unknown	1.0	(Entire length)	2009/ 2014	Yes
2	COLES RN/CHEAT RV	WVMC-2.5	CNA-Biological	AQ	Unknown	2.0	(Entire length)	2009/ 2014	Yes

Each stream has been designated an identification number for easy reference. Following the stream name is the alphanumeric stream code. The affected criterion associated with the impaired stream is listed next. If this criterion is in parentheses, it is considered a legacy listing for mine drainage.

Following the criteria is the designated use affected by the impairment, and then the cause of the impairment. The impaired length of stream is next, listed in miles. The reach description follows, and describes the length of impairment in as much detail as possible. If the reach description is in parentheses, the exact length of impairment is unknown and will be determined during the TMDL development process. The projected TMDL development year is listed next. TMDLs proposed to be developed in 2002, 2003, 2004 and 2005 are identified specifically. TMDLs projected to be developed after 2005 have multiple years specified that represent the opportunity for development based on the Watershed Management Framework cycle. The last column of the list provides information as to whether or not the stream appeared on the 1998 list or is a new listing.

In the past, the designation of unnamed tributaries has been a source of confusion for the public. This explanation is being offered to clarify how these streams are named in the 2002 303(d) list. The abbreviation used for unnamed tributaries is UNT. Often in the past, an unnamed tributary of Dry Fork would be written as: UNT/Dry Fork. In the 2002 303(d) list additional characters have been added to the stream code to further describe the stream's location. Numbers have been added to indicate the distance upstream in miles, otherwise known as river miles, that the unnamed tributary is from the mouth of the named stream. In other words, the river miles indicate the length from the mouth of the named stream to its confluence with the unnamed stream. For example, UNT/ Dry Fork RM 2.5 is the location of the mouth of the unnamed tributary of Dry Fork, which is located 2.5 miles upstream from the mouth of Dry Fork.

Abbreviations and Acronyms

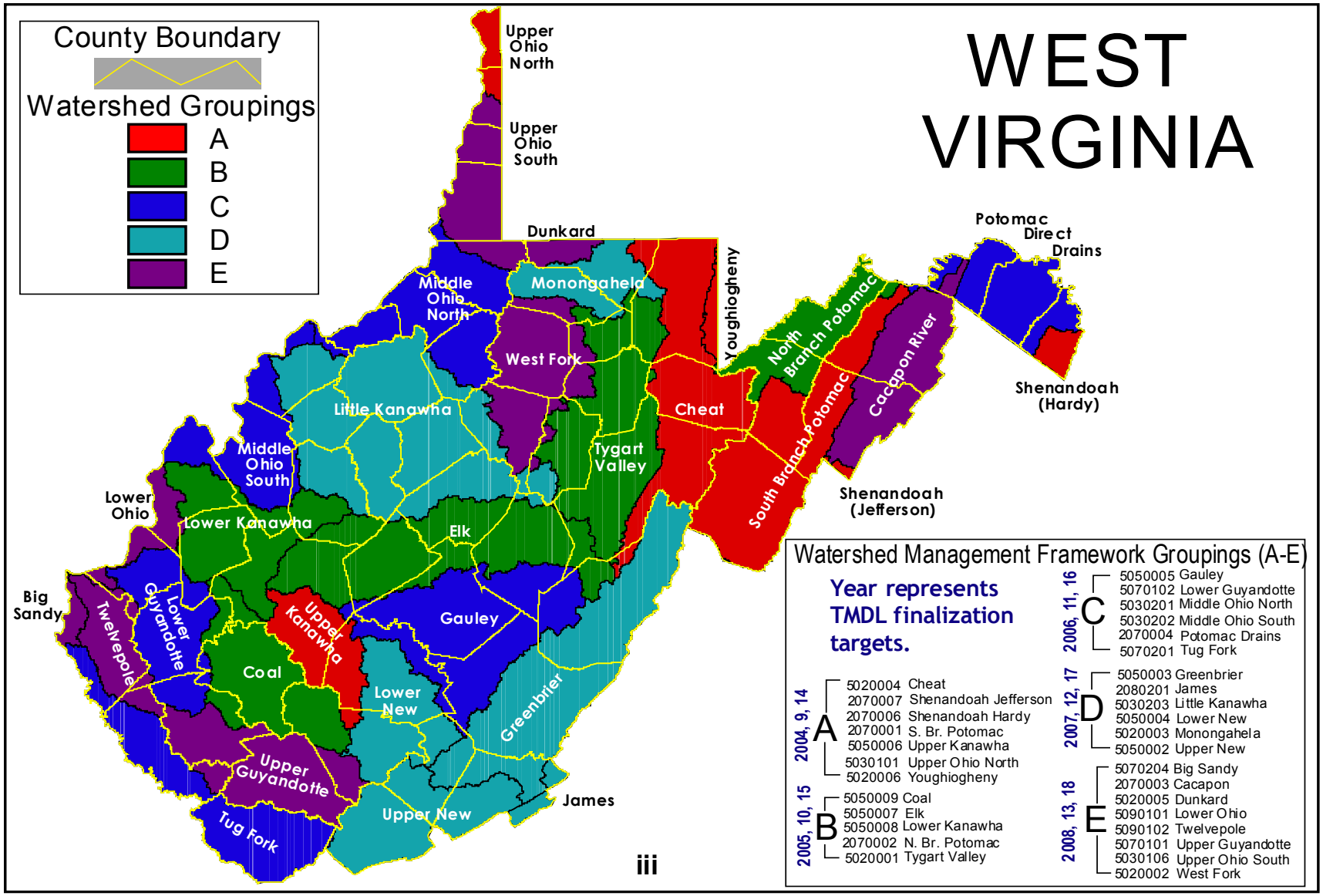
AQ- aquatic life
CNA- Conditions Not Allowable in State Waters
COE- Army Corps of Engineers
DO- dissolved oxygen
HH- human health
HUC- hydrologic unit code
HW- headwaters
MI- mile
MP- mile point
PCB- polychlorinated biphenyl
RM- river mile
TMDL- total maximum daily load
UNT- unnamed tributary

WV 2002 SECTION 303(d) LIST
WATERSHED DIRECTORY

(Final approved - June 2003)

Watershed Group	Watershed	Excel Sheet (Tab) Names			
			SUPPLEMENTAL TABLES		
		2002 Section 303(d) List	A Previously Listed- No TMDL	B TMDL Developed	C TMDL Developed- Criteria Met
		page#	*page#*	*page#*	*page#*
A	Cheat	1	A-1	B-1	n/a
A	Shenandoah (Jefferson)	2	n/a	B-5	n/a
A	Shenandoah (Hardy)	n/a	n/a	n/a	n/a
A	South Branch Potomac	2	A-1	B-5	C-1
A	Upper Kanawha	3	A-2	B-5	n/a
A	Upper Ohio North	6	A-2	B-6	n/a
A	Youghiogheny	7	A-2	n/a	n/a
B	Coal	8	A-3	n/a	n/a
B	Elk	9	A-3	B-7	n/a
B	Lower Kanawha	10	n/a	B-7	n/a
B	North Branch Potomac	11	A-3	B-8	n/a
B	Tygart Valley	12	A-3	B-8	n/a
C	Gauley	14	A-4	n/a	n/a
C	Lower Guyandotte	16	A-4	n/a	n/a
C	Middle Ohio North	18	A-4	B-12	n/a
C	Middle Ohio South	19	A-4	B-12	n/a
C	Potomac Direct Drains	19	n/a	n/a	n/a
C	Tug Fork	20	A-4	B-12	n/a
D	Greenbrier	21	n/a	n/a	n/a
D	James	n/a	n/a	n/a	n/a
D	Little Kanawha	21	n/a	B-15	n/a
D	Lower New	22	A-5	B-15	n/a
D	Monongahela	23	A-5	B-16	n/a
D	Upper New	23	n/a	n/a	n/a
E	Big Sandy	25	n/a	n/a	n/a
E	Cacapon	25	n/a	B-19	n/a
E	Dunkard	25	A-6	n/a	n/a
E	Lower Ohio	26	A-6	B-19	n/a
E	Twelvepole	27	A-6	n/a	n/a
E	Upper Guyandotte	29	A-6	n/a	n/a
E	Upper Ohio South	34	A-6	B-19	n/a
E	West Fork	36	A-6	B-19	n/a

NOTE: For electronic users, these page numbers may be different depending upon printer type and printer settings.


County Boundary
Watershed Groupings
A
B
C
D
E
WEST VIRGINIA
Upper Ohio North
Upper Ohio South
Dunkard
Middle Ohio North
Monongahela
Youghiogheny
West Fork
Potomac Direct Drains
North Branch Potomac
Cacapon River
Shenandoah (Hardy)
Little Kanawha
Cheat
Tygart Valley
Middle Ohio South
South Branch Potomac
Shenandoah (Jefferson)
Lower Ohio
Lower Kanawha
Elk
Big Sandy
Twelvepole
Lower Guyandotte
Upper Kanawha
Gauley
Coal
Lower New
Greenbrier
Upper Guyandotte
Tug Fork
Upper New
James
iii
Watershed Management Framework Groupings (A-E)
Year represents TMDL finalization targets.
2004, 9, 14
A
5020004 Cheat
2070007 Shenandoah Jefferson
2070006 Shenandoah Hardy
2070001 S. Br. Potomac
5050006 Upper Kanawha
5030101 Upper Ohio North
5020006 Youghiogheny
2005, 10, 15
B
5050009 Coal
5050007 Elk
5050008 Lower Kanawha
2070002 N. Br. Potomac
5020001 Tygart Valley
2006, 11, 16
C
5050005 Gauley
5070102 Lower Guyandotte
5030201 Middle Ohio North
5030202 Middle Ohio South
2070004 Potomac Drains
5070201 Tug Fork
2007, 12, 17
D
5050003 Greenbrier
2080201 James
5030203 Little Kanawha
5050004 Lower New
5020003 Monongahela
5050002 Upper New
2008, 13, 18
E
5070204 Big Sandy
2070003 Cacapon
5020005 Dunkard
5090101 Lower Ohio
5090102 Twelvepole
5070101 Upper Guyandotte
5030106 Upper Ohio South
5020002 West Fork

2002 SECTION 303(d) LIST

WEST VIRGINIA

HYDROLOGIC GROUP A

Cheat Watershed - HUC# 05020004 - *streams 26 miles 118*

ID#	Stream Name	Stream Code	Criteria Affected	Use Affected	Cause	Impaired Length	Reach Description	Projected TMDL Year	1998 list?
1	Buck Run	WVMCS-52	pH	All	Unknown	1.0	(Entire length)	2009/2014	Yes
2	Coles Run	WVMC-2.5	CNA-Biological	AQ	Unknown	2.0	(Entire length)	2009/2014	Yes
3	Crab Orchard Creek	WVMC-17-0.7A	CNA-Biological	AQ	Unknown	3.5	(Entire length)	2009/2014	Yes
4	Crouch Run	WVMCS-41	pH	All	Unknown	2.8	(Entire length)	2009/2014	Yes
5	First Fork	WVMCS-50	pH	All	Unknown	5.4	(Entire length)	2009/2014	Yes
6	Fish Hatchery Run	WVMCS-48	pH	All	Unknown	2.8	(Entire length)	2009/2014	Yes
7	Freeland Run	WVMC-60-D-12	CNA-Biological	AQ	Unknown	1.8	(Entire length)	2009/2014	Yes
8	Gandy Run	WVMC-60-O-3	pH	All	Unknown	2.3	(Entire length)	2009/2014	Yes
9	Kelly Run	WVMC-2.7	CNA-Biological	AQ	Unknown	1.8	(Entire length)	2009/2014	Yes
10	Laurel Run	WVMC-60-E	pH	All	Unknown	3.6	(Entire length)	2009/2014	Yes
11	McGee Run	WVMCS-39	pH	All	Unknown	2.0	(Entire length)	2009/2014	Yes
12	Patterson Run	WVMC-12-A-2	CNA-Biological	AQ	Unknown	3.6	(Entire length)	2009/2014	Yes
13	Red Creek	WVMC-60-O	CNA-Biological	AQ	Unknown	18.8	from 1.0 miles above mouth upstream to HW	2009/2014	Yes
			pH	All	Unknown	18.8	from 1.0 miles above mouth upstream to HW	2009/2014	Yes
14	Sand Run	WVMC-60-D-3-E	CNA-Biological	AQ	Unknown	2.2	(Entire length)	2009/2014	No
15	Scott Run	WVMC-7	CNA-Biological	AQ	Unknown	3.8	(Entire length)	2009/2014	Yes
16	Shavers Fork	WVMCS	pH	All	Unknown	35.0	from Bemis upstream to Cheat Bridge	2009/2014	Yes
17	Smoky Hollow	WVMCS-0.5	CNA-Biological	AQ	Unknown	1.8	(Entire length)	2009/2014	Yes
18	South Fork/Red Creek	WVMC-60-O-4	pH	All	Unknown	6.0	(Entire length)	2009/2014	Yes
19	Stonecoal Run	WVMCS-45	pH	All	Unknown	2.6	(Entire length)	2009/2014	Yes
20	Tory Camp Run	WVMC-60-R	CNA-Biological	AQ	Unknown	2.6	(Entire length)	2009/2014	No
21	UNT#1/Beaver Creek RM 1.25	WVMC-12-B-1-B	CNA-Biological	AQ	Unknown	0.8	(Entire length)	2009/2014	No
22	UNT/Webster Run RM 1.24	WVMC-12-B-0.5-A	CNA-Biological	AQ	Unknown	1.6	(Entire length)	2009/2014	Yes
23	Whites Run	WVMC-4	CNA-Biological	AQ	Unknown	2.5	(Entire length)	2009/2014	Yes
24	Whitmeadow Run	WVMCS-44	pH	All	Unknown	2.5	(Entire length)	2009/2014	Yes

2002 SECTION 303(d) LIST

WEST VIRGINIA

ID#	Stream Name	Stream Code	Criteria Affected	Use Affected	Cause	Impaired Length	Reach Description	Projected TMDL Year	1998 list?
25	Yellow Creek	WVMC-60-D-7	CNA-Biological	AQ	Unknown	3.0	(Entire length)	2009/2014	No
26	Yokum Run	WVMCS-40	pH	All	Unknown	2.6	(Entire length)	2009/2014	Yes
	SHENANDOAH (JEFFERSON) WATERSHED - HUC# 02070007 - *streams 4 miles 27*								
27	Bullskin Run	WVS-6	CNA-Biological	AQ	Unknown	8.5	(Entire length)	2009/2014	Yes
28	Cattail Run	WVS-2	CNA-Biological	AQ	Unknown	3.7	(Entire length)	2009/2014	No
29	Evitts Run	WVS-4	CNA-Biological	AQ	Unknown	10.3	(Entire length)	2009/2014	No
30	North Fork	WVS-6-A	CNA-Biological	AQ	Unknown	4.6	(Entire length)	2009/2014	Yes
	SOUTH BRANCH POTOMAC WATERSHED - HUC# 02070001 - *streams 21 miles 92*								
31	UNT/South Branch Potomac RM 22.0	WVPSB-1.9	CNA-Biological	AQ	Unknown	3.6	(Entire length)	2009/2014	No
32	Abernathy Run	WVPSB-1.8	CNA-Biological	AQ	Unknown	3.9	(Entire length)	2009/2014	No
33	Anderson Run	WVPSB-18	CNA-Biological	AQ	Unknown	4.9	(Entire length)	2009/2014	No
34	Buffalo Creek	WVPSB-5	CNA-Biological	AQ	Unknown	3.6	(Entire length)	2009/2014	Yes
35	Dumpling Run	WVPSB-9-B	CNA-Biological	AQ	Unknown	2.6	(Entire length)	2009/2014	Yes
36	Dumpling Spring Run	WVPSB-21-F	CNA-Biological	AQ	Unknown	2.5	(Entire length)	2009/2014	Yes
37	East Dry Run	WVPSB-53	CNA-Biological	AQ	Unknown	4.0	(Entire length)	2009/2014	Yes
38	Hawes Run	WVPSB-21-X	CNA-Biological	AQ	Unknown	3.1	mouth upstream 3.1 miles	2009/2014	No
39	Jordan Run	WVPSB-28-A	CNA-Biological	AQ	Unknown	5.9	(Entire length)	2009/2014	No
40	Judy Run	WVPSB-28-U	CNA-Biological	AQ	Unknown	2.0	(Entire length)	2009/2014	Yes
41	Mayhew Run	WVPSB-9-B-2	CNA-Biological	AQ	Unknown	1.1	(Entire length)	2009/2014	Yes
42	McDowell Run	WVPSB-11	CNA-Biological	AQ	Unknown	2.7	(Entire length)	2009/2014	Yes
43	Mill Creek	WVPSB-28-M	CNA-Biological	AQ	Unknown	3.4	(Entire length)	2009/2014	Yes
44	Miller Run	WVPSB-21-AA	CNA-Biological	AQ	Unknown	6.5	(Entire length)	2009/2014	Yes
45	Mudlick Run	WVPSB-18-A	CNA-Biological	AQ	Unknown	8.4	(Entire length)	2009/2014	Yes
46	Powers Hollow	WVPSB-28-0.5A	CNA-Biological	AQ	Unknown	2.7	(Entire length)	2009/2014	Yes
47	Root Run	WVPSB-28-P	CNA-Biological	AQ	Unknown	3.0	(Entire length)	2009/2014	Yes
48	Smith Creek	WVPSB-46	CNA-Biological	AQ	Unknown	12.3	(Entire length)	2009/2014	Yes

2002 SECTION 303(d) LIST

WEST VIRGINIA

ID#	Stream Name	Stream Code	Criteria Affected	Use Affected	Cause	Impaired Length	Reach Description	Projected TMDL Year	1998 list?
49	South Fork	WVPSB-26-D	CNA-Biological	AQ	Unknown	10.3	(Entire length)	2009/2014	Yes
50	Stony Run	WVPSB-21-R	CNA-Biological	AQ	Unknown	2.7	(Entire length)	2009/2014	Yes
51	UNT/South Fork South Branch Potomac RM 42.3 (Hively Gap)	WVPSB-21-T	CNA-Biological	AQ	Unknown	2.6	(Entire length)	2009/2014	Yes
	UPPER KANAWHA WATERSHED - HUC# 05050006 - *streams 61 miles 203*								
52	Abbott Creek	WVK-61-O-1	(Aluminum, Iron, Manganese)	(AQ, HH)	Mine Drainage	2.3	(Entire length)	2004	Yes
			pH	All	Mine Drainage	2.3	(Entire length)	2004	Yes
53	Armstrong Creek	WVK-73	(Aluminum, Iron, Manganese)	(AQ, HH)	Mine Drainage	8.4	(Entire length)	2004	Yes
54	Bear Hollow	WVK-61-I	(Aluminum, Iron, Manganese)	(AQ, HH)	Mine Drainage	1.6	(Entire length)	2004	Yes
			CNA-Biological	AQ	Unknown	1.6	(Entire length)	2004	No
			pH	All	Mine Drainage	1.6	(Entire length)	2004	Yes
55	Beards Fork	WVK-76-D	(Aluminum, Iron, Manganese)	(AQ, HH)	Mine Drainage	4.3	(Entire length)	2004	Yes
56	Big Bottom Hollow	WVK-49-H	CNA-Biological	AQ	Unknown	2.5	(Entire length)	2004	No
57	Boomer Branch	WVK-74	(Aluminum, Iron, Manganese)	(AQ, HH)	Mine Drainage	2.5	(Entire length)	2004	Yes
			CNA-Biological	AQ	Unknown	2.5	(Entire length)	2004	Yes
			pH	All	Mine Drainage	2.5	(Entire length)	2004	Yes
58	Bullpush Fork	WVK-72-B	CNA-Biological	AQ	Unknown	2.4	(Entire length)	2004	Yes
59	Cabin Creek	WVK-61	(Aluminum, Iron, Manganese)	(AQ, HH)	Mine Drainage	21.1	(Entire length)	2004	Yes
			CNA-Biological	AQ	Unknown	21.1	(Entire length)	2004	No
			pH	All	Mine Drainage	21.1	(Entire length)	2004	Yes
60	Camp Branch	WVK-76-J	(Aluminum, Iron, Manganese)	(AQ, HH)	Mine Drainage	2.0	(Entire length)	2004	Yes
61	Campbells Creek	WVK-49	CNA-Biological	AQ	Unknown	18.5	(Entire length)	2004	No
62	Cane Fork	WVK-61-J	(Aluminum, Iron, Manganese)	(AQ, HH)	Mine Drainage	2.7	(Entire length)	2004	Yes
			pH	All	Mine Drainage	2.7	(Entire length)	2004	Yes
63	Carroll Branch	WVK-59	(Aluminum, Iron, Manganese)	(AQ, HH)	Mine Drainage	2.8	(Entire length)	2004	Yes
			pH	All	Mine Drainage	2.8	(Entire length)	2004	Yes
64	Coal Fork	WVK-49-D	CNA-Biological	AQ	Unknown	3.0	(Entire length)	2004	Yes
65	Counterfeit Branch	WVK-57-D	(Aluminum, Iron, Manganese)	(AQ, HH)	Mine Drainage	0.8	(Entire length)	2004	Yes

ID#	Stream Name	Stream Code	Criteria Affected	Use Affected	Cause	Impaired Length	Reach Description	Projected TMDL Year	1998 list?
66	Dempsey Branch	WVK-76-C-1	CNA-Biological	AQ	Unknown	2.7	(Entire length)	2004	No
67	Dry Branch/Campbells Creek	WVK-49-A	CNA-Biological	AQ	Unknown	1.3	(Entire length)	2004	No
68	Dry Branch/Witcher Creek	WVK-57-A	CNA-Biological	AQ	Unknown	1.7	(Entire length)	2004	Yes
69	Dry Branch/Cabin Creek	WVK-61-B	CNA-Biological	AQ	Unknown	2.9	(Entire length)	2004	No
70	Fields Creek	WVK-58	(Aluminum, Iron, Manganese)	(AQ, HH)	Mine Drainage	5.6	(Entire length)	2004	Yes
			CNA-Biological	AQ	Unknown	5.6	(Entire length)	2004	No
71	Fifteenmile Fork	WVK-61-O	(Aluminum, Iron, Manganese)	(AQ, HH)	Mine Drainage	3.6	(Entire length)	2004	Yes
			pH	All	Mine Drainage	3.6	(Entire length)	2004	Yes
72	Fishhook Fork	WVK-72-A-1	(Aluminum, Iron, Manganese)	(AQ, HH)	Mine Drainage	1.5	(Entire length)	2004	Yes
73	Fourmile Fork	WVK-53-C	CNA-Biological	AQ	Unknown	1.7	(Entire length)	2004	No
74	Greens Branch	WVK-61-G	(Aluminum, Iron, Manganese)	(AQ, HH)	Mine Drainage	2.0	(Entire length)	2004	Yes
			pH	All	Mine Drainage	2.0	(Entire length)	2004	Yes
75	Hicks Hollow	WVK-61.5	(Aluminum, Iron, Manganese)	(AQ, HH)	Mine Drainage	0.9	(Entire length)	2004	Yes
			CNA-Biological	AQ	Unknown	0.9	(Entire length)	2004	No
			pH	All	Mine Drainage	0.9	(Entire length)	2004	Yes
76	Horsemill Branch	WVK-64-A	CNA-Biological	AQ	Unknown	2.1	(Entire length)	2009/2014	Yes
			Manganese	HH	Unknown	2.1	(Entire length)	2009/2014	No
			pH	All	Unknown	2.1	(Entire length)	2009/2014	No
77	Hughes Creek	WVK-66	CNA-Biological	AQ	Unknown	7.0	(Entire length)	2009/2014	Yes
78	Hurricane Fork	WVK-64-J	CNA-Biological	AQ	Unknown	4.3	(Entire length)	2009/2014	Yes
79	Ingram Branch	WVK-76-K	(Aluminum, Iron, Manganese)	(AQ, HH)	Mine Drainage	1.2	(Entire length)	2004	Yes
80	Jarrett Branch	WVK-75	(Aluminum, Iron, Manganese)	(AQ, HH)	Mine Drainage	1.6	(Entire length)	2004	Yes
			CNA-Biological	AQ	Unknown	1.6	(Entire length)	2004	No
81	Jenkins Fork	WVK-73-D	(Aluminum, Iron, Manganese)	(AQ, HH)	Mine Drainage	2.1	(Entire length)	2004	Yes
			pH	All	Unknown	2.1	(Entire length)	2004	Yes
82	Laurel Branch	WVK-73-E-1	(Aluminum, Iron, Manganese)	(AQ, HH)	Mine Drainage	1.2	(Entire length)	2004	Yes
83	Laurel Fork	WVK-61-H-1	pH	All	Mine Drainage	3.5	(Entire length)	2004	Yes
84	Left Fork/Armstrong Creek	WVK-73-G	(Aluminum, Iron, Manganese)	(AQ, HH)	Mine Drainage	2.9	(Entire length)	2004	Yes
85	Left Fork/Lens Creek	WVK-53-A	(Aluminum, Iron, Manganese)	(AQ, HH)	Mine Drainage	2.1	(Entire length)	2004	Yes
86	Lens Creek	WVK-53	CNA-Biological	AQ	Unknown	6.4	(Entire length)	2004	Yes

2002 SECTION 303(d) LIST

WEST VIRGINIA

ID#	Stream Name	Stream Code	Criteria Affected	Use Affected	Cause	Impaired Length	Reach Description	Projected TMDL Year	1998 list?
87	Little Creek	WVK-60-A	CNA-Biological	AQ	Unknown	1.9	(Entire length)	2004	No
88	Long Branch	WVK-61-O-2	(Aluminum, Iron, Manganese)	(AQ, HH)	Mine Drainage	2.8	(Entire length)	2004	Yes
			pH	All	Mine Drainage	2.8	(Entire length)	2004	Yes
89	Lower Creek	WVK-67	CNA-Biological	AQ	Unknown	1.7	(Entire length)	2009/2014	Yes
90	Maple Fork	WVK-65-HH-1-A	CNA-Biological	AQ	Unknown	2.9	(Entire length)	2009/2014	No
91	Mile Branch	WVK-63	(Aluminum, Iron, Manganese)	(AQ, HH)	Mine Drainage	1.3	(Entire length)	2004	Yes
92	Mill Branch	WVK-58-A	(Aluminum, Iron, Manganese)	(AQ, HH)	Mine Drainage	1.2	(Entire length)	2004	Yes
93	Mission Hollow	WVK-46-A	CNA-Biological	AQ	Unknown	2.3	(Entire length)	2009/2014	Yes
94	Molly Kincaid Branch	WVK-76-G	(Aluminum, Iron, Manganese)	(AQ, HH)	Mine Drainage	1.3	(Entire length)	2004	Yes
95	Morris Creek	WVK-70	(Aluminum, Iron, Manganese)	(AQ, HH)	Mine Drainage	4.8	(Entire length)	2004	Yes
			CNA-Biological	AQ	Unknown	4.8	(Entire length)	2004	Yes
96	New West Hollow	WVK-58-B.8-1	(Aluminum, Iron, Manganese)	(AQ, HH)	Mine Drainage	1.1	(Entire length)	2004	Yes
97	Pointlick Fork	WVK-49-F	CNA-Biological	AQ	Unknown	3.7	(Entire length)	2004	Yes
98	Powellton Fork	WVK-73-E	(Aluminum, Iron, Manganese)	(AQ, HH)	Mine Drainage	4.4	(Entire length)	2004	Yes
99	Rattlesnake Hollow	WVK-49-I	CNA-Biological	AQ	Unknown	2.0	(Entire length)	2004	Yes
100	Right Fork/Armstrong Creek	WVK-73-F	(Aluminum, Iron, Manganese)	(AQ, HH)	Mine Drainage	2.5	(Entire length)	2004	Yes
101	Right Fork/Beards Fork	WVK-76-D-1	(Aluminum, Iron, Manganese)	(AQ, HH)	Mine Drainage	2.3	(Entire length)	2004	Yes
102	Ring Hollow	WVK-53-B	CNA-Biological	AQ	Unknown	1.6	(Entire length)	2004	No
103	Robinson Branch	WVK-76-E	(Aluminum, Iron, Manganese)	(AQ, HH)	Mine Drainage	1.6	(Entire length)	2004	Yes
104	Slaughter Creek	WVK-60	(Aluminum, Iron, Manganese)	(AQ, HH)	Mine Drainage	6.0	(Entire length)	2004	Yes
			CNA-Biological	AQ	Unknown	6.0	(Entire length)	2004	No
105	Smithers Creek	WVK-72	(Aluminum, Iron, Manganese)	(AQ, HH)	Mine Drainage	7.0	(Entire length)	2004	Yes
			CNA-Biological	AQ	Unknown	7.0	(Entire length)	2004	Yes
106	Staten Run	WVK-71	(Aluminum, Iron, Manganese)	(AQ, HH)	Mine Drainage	1.2	(Entire length)	2004	Yes
107	Sycamore Branch	WVK-65-L	CNA-Biological	AQ	Unknown	3.2	(Entire length)	2009/2014	Yes
108	Tenmile Fork	WVK-61-L	(Aluminum, Iron, Manganese)	(AQ, HH)	Mine Drainage	6.0	(Entire length)	2004	Yes
			CNA-Biological	AQ	Unknown	6.0	(Entire length)	2004	No
109	Watson Branch	WVK-62	(Aluminum, Iron, Manganese)	(AQ, HH)	Mine Drainage	1.2	(Entire length)	2004	Yes
			pH	All	Mine Drainage	1.2	(Entire length)	2004	Yes
110	West Hollow	WVK-68.5	(Aluminum, Iron, Manganese)	(AQ, HH)	Mine Drainage	0.9	(Entire length)	2004	Yes

2002 SECTION 303(d) LIST

WEST VIRGINIA

ID#	Stream Name	Stream Code	Criteria Affected	Use Affected	Cause	Impaired Length	Reach Description	Projected TMDL Year	1998 list?
111	Wet Branch	WVK-61-C	CNA-Biological	AQ	Unknown	3.3	(Entire length)	2004	Yes
112	Wolfpen Hollow	WVK-58-B.1	(Aluminum, Iron, Manganese)	(AQ, HH)	Mine Drainage	1.0	(Entire length)	2004	Yes
			pH	All	Mine Drainage	1.0	(Entire length)	2004	Yes
UPPER OHIO NORTH WATERSHED - HUC# 05030101 - *streams 21 miles 96*									
113	Alexanders Run (Number Two Hollow)	WVO-97-B	(Aluminum, Iron, Manganese)	(AQ, HH)	Mine Drainage	3.3	(Entire length)	2004	Yes
			CNA-Biological	AQ	Unknown	3.3	(Entire length)	2004	No
			pH	All	Mine Drainage	3.3	(Entire length)	2004	Yes
114	Alleghany Steel Run	WVO-95.5	CNA-Biological	AQ	Unknown	1.9	(Entire length)	2004	Yes
115	Bosley Run	WVO-95-A	CNA-Biological	AQ	Unknown	3.2	(Entire length)	2004	Yes
116	Brown Hollow	WVO-97-D	CNA-Biological	AQ	Unknown	1.4	(Entire length)	2004	Yes
117	Cross Creek	WVO-95	CNA-Biological	AQ	Unknown	7.2	(Entire length)	2004	Yes
118	Deep Gut Run	WVO-101	(Aluminum, Iron, Manganese)	(AQ, HH)	Mine Drainage	4.3	(Entire length)	2004	Yes
			CNA-Biological	AQ	Unknown	4.3	(Entire length)	2004	No
119	Harmon Creek	WVO-97	CNA-Biological	AQ	Unknown	7.6	(Entire length)	2004	No
120	Holbert Run	WVO-99	CNA-Biological	AQ	Unknown	2.8	(Entire length)	2009/2014	No
121	Laurel Hollow	WVO-105	CNA-Biological	AQ	Unknown	2.1	(Entire length)	2009/2014	No
122	Mahan Run	WVO-96	CNA-Biological	AQ	Unknown	2.8	(Entire length)	2004	Yes
123	Marks Run	WVO-108	CNA-Biological	AQ	Unknown	1.7	(Entire length)	2009/2014	Yes
124	Marrow Run	WVO-98-A.5	CNA-Biological	AQ	Unknown	1.2	(Entire length)	2004	Yes
125	Mechling Run	WVO-97-C	(Aluminum, Iron, Manganese)	(AQ, HH)	Mine Drainage	1.7	(Entire length)	2004	Yes
126	Mercer Run	WVO-102-C-1	CNA-Biological	AQ	Unknown	2.3	(Entire length)	2004	Yes
127	Middle Run	WVO-107	CNA-Biological	AQ	Unknown	2.0	(Entire length)	2009/2014	Yes
128	North Fork/Tomlinson Run	WVO-102-C	CNA-Biological	AQ	Unknown	6.0	(Entire length)	2004	Yes
129	North Potrock Run	WVO-95-C	CNA-Biological	AQ	Unknown	2.9	(Entire length)	2004	Yes
130	Ohio River (Upper North Section)	WVO-un	Dioxin	HH	Unknown	31.4	mp 71.4 to mp 40 (entire section)	2012	No
			Mercury	HH	Unknown	31.4	mp 71.4 to mp 40 (entire section)	2012	No
131	Potrock Run	WVO-95-D	CNA-Biological	AQ	Unknown	1.7	(Entire length)	2004	Yes

2002 SECTION 303(d) LIST

WEST VIRGINIA

ID#	Stream Name	Stream Code	Criteria Affected	Use Affected	Cause	Impaired Length	Reach Description	Projected TMDL Year	1998 list?
132	Sappingtons Run	WVO-97-A	(Aluminum, Iron, Manganese)	(AQ, HH)	Mine Drainage	2.9	(Entire length)	2004	Yes
			CNA-Biological	AQ	Unknown	2.9	(Entire length)	2004	No
			pH	All	Mine Drainage	2.9	(Entire length)	2004	Yes
133	South Fork/Tomlinson Run	WVO-102-B	CNA-Biological	AQ	Unknown	5.1	(Entire length)	2004	Yes
	YOUGHIOGHENY WATERSHED - HUC# 05020006 - *streams 5 miles 25*								
134	Laurel Run	WVMY-2-0.2A	(Aluminum, Iron, Manganese)	(AQ, HH)	Mine Drainage	4.8	(Entire length)	2008	Yes
			pH	All	Mine Drainage	4.8	(Entire length)	2008	Yes
135	Little Laurel Run	WVMY-2-0.2A-1	CNA-Biological	AQ	Unknown	2.8	(Entire length)	2009/2014	Yes
136	Maple Run	WVMY-5	CNA-Biological	AQ	Unknown	8.2	(Entire length)	2009/2014	No
137	Snowy Creek	WVMY-2	CNA-Biological	AQ	Unknown	6.2	(Entire length)	2009/2014	Yes
138	Wardwell Run	WVMY-2-A-1	CNA-Biological	AQ	Unknown	3.2	(Entire length)	2009/2014	Yes

ID#	Stream Name	Stream Code	Criteria Affected	Use Affected	Cause	Impaired Length	Reach Description	Projected TMDL Year	1998 list?
			HYDROLOGIC GROUP B						
			COAL WATERSHED - HUC# 05050009 - *streams 33 miles 303*						
139	Adkins Fork	WVKC-10-T-21	CNA-Biological	AQ	Unknown	2.4	(Entire length)	2005	No
140	Beech Creek	WVKC-10-T-15	CNA-Biological	AQ	Unknown	5.3	(Entire length)	2005	No
			Selenium	AQ	Unknown	5.3	(Entire length)	2005	No
141	Big Coal River or Coal River	WVK-34	Fecal coliform	HH	Unknown	60.5	(Entire length)	2005	No
142	Big Horse Creek	WVKC-10-I	CNA-Biological	AQ	Unknown	10.1	(Entire length)	2005	No
143	Brush Creek	WVKC-21	CNA-Biological	AQ	Unknown	3.8	(Entire length)	2005	No
144	Buffalo Fork	WVKC-47-L-1	Selenium	AQ, HH	Unknown	2.5	(Entire length)	2005	No
145	Clear Fork	WVKC-47	Fecal coliform	HH	Unknown	23.0	(Entire length)	2005	No
146	Crooked Creek	WVKC-9	CNA-Biological	AQ	Unknown	3.3	(Entire length)	2005	No
147	Dow Fork	WVKC-47-G-1	(Aluminum, Iron, Manganese)	(AQ, HH)	Mine Drainage	1.3	(Entire length)	2005	Yes
148	Drews Creek	WVKC-46-G-1	Aluminum	AQ	Mine Drainage	4.5	(Entire length)	2005	Yes
149	Jehu Branch	WVKC-46-Q-3	(Aluminum, Iron, Manganese)	(AQ, HH)	Mine Drainage	1.7	(Entire length)	2005	Yes
150	Joes Creek	WVKC-29	CNA-Biological	AQ	Unknown	7.2	(Entire length)	2005	No
151	Lacey Branch	WVKC-10-U-21	CNA-Biological	AQ	Unknown	2.4	(Entire length)	2005	No
152	Left Fork/Beech Creek	WVKC-10-T-15-A	CNA-Biological	AQ	Unknown	2.4	(Entire length)	2005	No
			Selenium	AQ, HH	Unknown	2.4	(Entire length)	2005	No
153	Little Coal River	WVKC-10	Fecal coliform	HH	Unknown	32.0	(Entire length)	2005	No
154	Little Horse Creek	WVKC-10-J	CNA-Biological	AQ	Unknown	3.5	(Entire length)	2005	No
155	Long Branch	WVKC-47-G	(Aluminum, Iron, Manganese)	(AQ, HH)	Mine Drainage	2.5	(Entire length)	2005	Yes
156	Marsh Fork	WVKC-46	CNA-Biological	AQ	Unknown	15.0	from 20.2 miles above mouth to HW	2005	No
157	Martin Fork	WVKC-46-G-2	Aluminum	AQ	Mine Drainage	1.8	from 1.2 miles above mouth upstream to HW	2005	Yes
			Iron	AQ, HH	Mine Drainage	1.8	from 1.2 miles above mouth upstream to HW	2005	Yes
158	Millers Camp Branch	WVKC-46-Q	CNA-Biological	AQ	Unknown	6.8	(Entire length)	2005	No
159	Missouri Fork	WVKC-10-T-9-B	CNA-Biological	AQ	Unknown	3.3	(Entire length)	2005	No

2002 SECTION 303(d) LIST

WEST VIRGINIA

ID#	Stream Name	Stream Code	Criteria Affected	Use Affected	Cause	Impaired Length	Reach Description	Projected TMDL Year	1998 list?
160	Peachtree Creek	WVKC-46-G	Aluminum	AQ	Mine Drainage	3.8	(Entire length)	2005	Yes
161	Pond Fork	WVKC-10-U	CNA-Biological	AQ	Unknown	37.0	from 9 miles above mouth upstream to HW	2005	No
162	Raines Fork	WVKC-47-E-4	CNA-Biological	AQ	Unknown	1.1	(Entire length)	2005	No
163	Rock Creek	WVKC-10-N	CNA-Biological	AQ	Unknown	5.1	(Entire length)	2005	No
164	Rockhouse Creek	WVKC-10-T-13	CNA-Biological	AQ	Unknown	3.0	(Entire length)	2005	No
			Selenium	AQ	Unknown	3.0	(Entire length)	2005	No
165	Spruce Fork	WVKC-10-T	CNA-Biological	AQ	Unknown	13.6	from 17.4 miles above mouth upstream to HW	2005	No
166	Spruce Laurel Fork	WVKC-10-T-11	CNA-Biological	AQ	Unknown	15.3	mouth upstream 15.3 miles	2005	No
167	Stonecoal Branch	WVKC-47-F	CNA-Biological	AQ	Unknown	1.0	(Entire length)	2005	No
168	Surveyor Creek	WVKC-46-P	CNA-Biological	AQ	Unknown	3.2	(Entire length)	2005	No
169	Toney Fork	WVKC-47-L	CNA-Biological	AQ	Unknown	2.4	(Entire length)	2005	No
170	West Fork/Pond Fork	WVKC-10-U-7	CNA-Biological	AQ	Unknown	16.9	(Entire length)	2005	No
171	White Oak Creek	WVKC-35	CNA-Biological	AQ	Unknown	5.5	(Entire length)	2005	No
	ELK WATERSHED - HUC# 05050007 - *streams 16 miles 37*								
172	Bear Run	WVKE-84.5	CNA-Biological	AQ	Unknown	1.5	(Entire length)	2010/2015	No
173	Camp Creek	WVKE-34	CNA-Biological	AQ	Unknown	3.1	(Entire length)	2010/2015	No
174	Coonskin Branch	WVKE-4	CNA-Biological	AQ	Unknown	1.1	(Entire length)	2010/2015	No
175	Fall Run	WVKE-98-C-14	pH	All	Unknown	5.7	(Entire length)	2010/2015	Yes
176	Grassy Fork	WVKE-41-C-1	CNA-Biological	AQ	Unknown	2.7	(Entire length)	2010/2015	No
177	Green Bottom	WVKE-2-E	CNA-Biological	AQ	Unknown	0.9	(Entire length)	2010/2015	No
178	Jacks Run	WVKE-76-W	CNA-Biological	AQ	Unknown	1.3	(Entire length)	2010/2015	No
179	Kaufman Branch	WVKE-7-E	CNA-Biological	AQ	Unknown	1.0	(Entire length)	2010/2015	No
180	Laurel Fork	WVKE-37-B	CNA-Biological	AQ	Unknown	2.5	(Entire length)	2010/2015	No
181	Mudlick Branch	WVKE-14-M-2	CNA-Biological	AQ	Unknown	1.6	(Entire length)	2010/2015	No
182	Newhouse Branch	WVKE-3	CNA-Biological	AQ	Unknown	2.0	(Entire length)	2010/2015	No
183	Old Woman Run	WVKE-88	CNA-Biological	AQ	Unknown	2.3	(Entire length)	2010/2015	No
184	Summers Fork	WVKE-37-D	CNA-Biological	AQ	Unknown	2.6	(Entire length)	2010/2015	No

ID#	Stream Name	Stream Code	Criteria Affected	Use Affected	Cause	Impaired Length	Reach Description	Projected TMDL Year	1998 list?
185	UNT/Granny Creek RM 3.93	WVKE-87-C	CNA-Biological	AQ	Unknown	1.4	(Entire length)	2010/2015	No
186	Upper Mill Creek	WVKE-78	CNA-Biological	AQ	Unknown	4.8	(Entire length)	2010/2015	No
187	Whiteoak Fork	WVKE-14-G-2	CNA-Biological	AQ	Unknown	3.0	(Entire length)	2010/2015	No
	LOWER KANAWHA WATERSHED - HUC# 05050008 - *streams 35 miles 144*								
188	Anderson Lick Run	WVKP-28-E	CNA-Biological	AQ	Unknown	1.3	(Entire length)	2010/2015	No
189	Armour Creek	WVK-30	CNA-Biological	AQ	Unknown	3.7	(Entire length)	2010/2015	No
190	Broadtree Run	WVKP-16-B	CNA-Biological	AQ	Unknown	1.7	(Entire length)	2010/2015	No
191	Camp Creek	WVKP-26	CNA-Biological	AQ	Unknown	2.2	(Entire length)	2010/2015	No
192	Coal Hollow	WVK-39-J	CNA-Biological	AQ	Unknown	1.6	(Entire length)	2010/2015	No
193	Cow Creek	WVK-22-B-2	CNA-Biological	AQ	Unknown	4.4	(Entire length)	2010/2015	No
194	Craig Branch	WVK-41-D.5-2	CNA-Biological	AQ	Unknown	0.6	(Entire length)	2005	No
195	Edens Fork	WVK-41-E-1	CNA-Biological	AQ	Unknown	2.4	(Entire length)	2005	No
196	Gallatin Branch	WVK-33	CNA-Biological	AQ	Unknown	1.6	(Entire length)	2010/2015	No
197	Harmond Creek	WVKP-4	CNA-Biological	AQ	Unknown	2.8	(Entire length)	2010/2015	No
198	Heizer Creek	WVKP-1	(Aluminum, Iron, Manganese)	(AQ, HH)	Mine Drainage	9.2	(Entire length)	2005	Yes
			pH	All	Mine Drainage	9.2	(Entire length)	2005	Yes
199	Holmes Branch	WVK-41-E-2	CNA-Biological	AQ	Unknown	1.7	mouth upstream 1.7 miles	2005	No
200	Hurricane Creek	WVK-22	CNA-Biological	AQ	Unknown	34.7	(Entire length)	2010/2015	No
201	Jakes Run	WVK-16-B	CNA-Biological	AQ	Unknown	1.9	(Entire length)	2010/2015	No
202	Joplin Branch	WVK-42	CNA-Biological	AQ	Unknown	2.9	(Entire length)	2010/2015	No
203	Long Branch	WVK-22-B-3	CNA-Biological	AQ	Unknown	2.8	(Entire length)	2010/2015	No
204	Manila Creek	WVKP-1-A	(Aluminum, Iron, Manganese)	(AQ, HH)	Mine Drainage	7.4	(Entire length)	2005	Yes
			pH	All	Mine Drainage	7.4	(Entire length)	2005	Yes
205	Pond Branch	WVK-11	CNA-Biological	AQ	Unknown	3.0	(Entire length)	2010/2015	No
206	Poplar Fork/Thirteenmile Creek	WVK-12-F	CNA-Biological	AQ	Unknown	5.0	from mouth upstream 5.0 miles	2010/2015	No
207	Poplar Fork/Hurricane Creek	WVK-22-B	CNA-Biological	AQ	Unknown	11.8	(Entire length)	2010/2015	No

ID#	Stream Name	Stream Code	Criteria Affected	Use Affected	Cause	Impaired Length	Reach Description	Projected TMDL Year	1998 list?
208	Raccoon Creek	WVKP-20	CNA-Biological	AQ	Unknown	3.0	(Entire length)	2010/2015	No
209	Rays Branch	WVK-39-F	CNA-Biological	AQ	Unknown	2.7	(Entire length)	2010/2015	No
210	Rich Fork	WVK-41-D.5	(Aluminum, Iron, Manganese)	(AQ, HH)	Mine Drainage	1.5	(Entire length)	2005	Yes
			CNA-Biological	AQ	Unknown	1.5	(Entire length)	2005	No
			pH	All	Mine Drainage	1.5	(Entire length)	2005	Yes
211	Rider Creek	WVK-22-J	CNA-Biological	AQ	Unknown	1.7	(Entire length)	2010/2015	No
212	Rockstep Run	WVK-32-A	CNA-Biological	AQ	Unknown	2.3	(Entire length)	2010/2015	No
213	Rocky Fork	WVKP-5	CNA-Biological	AQ	Unknown	6.9	(Entire length)	2010/2015	No
214	Saltlick Creek	WVK-16-J-3	CNA-Biological	AQ	Unknown	2.8	(Entire length)	2010/2015	No
215	Spring Branch	WVKP-9-A	CNA-Biological	AQ	Unknown	1.4	(Entire length)	2010/2015	No
216	Tupper Creek	WVKP-13	(Aluminum, Iron, Manganese)	(AQ, HH)	Mine Drainage	6.8	(Entire length)	2005	Yes
			CNA-Biological	AQ	Unknown	6.8	(Entire length)	2005	No
			pH	All	Mine Drainage	6.8	(Entire length)	2005	Yes
217	Twomile Creek	WVK-41	CNA-Biological	AQ	Unknown	4.7	(Entire length)	2005	No
218	UNT/Crooked Creek RM 0.7	WVK-22-B-5-B	CNA-Biological	AQ	Unknown	1.3	(Entire length)	2010/2015	No
219	UNT/Left Fork RM 0.5/Twomile Creek	WVK-41-D-1	CNA-Biological	AQ	Unknown	1.9	(Entire length)	2005	No
220	Vintrioux Hollow	WVK-32-0.1A	CNA-Biological	AQ	Unknown	0.8	(Entire length)	2010/2015	No
221	Ward Hollow	WVK-39-A	CNA-Biological	AQ	Unknown	1.7	(Entire length)	2010/2015	No
222	Woodward Branch	WVK-41-A	CNA-Biological	AQ	Unknown	1.4	(Entire length)	2005	No
NORTH BRANCH POTOMAC WATERSHED - HUC# 02070002 - ***streams 15 miles 53***									
223	Abram Creek	WVPNB-16	(Aluminum, Iron, Manganese)	(AQ, HH)	Mine Drainage	18.5	(Entire length)	2005	Yes
			CNA-Biological	AQ	Unknown	18.5	(Entire length)	2005	No
			pH	All	Mine Drainage	18.5	(Entire length)	2005	Yes
224	Deakin Run	WVPNB-22	(Aluminum, Iron, Manganese)	(AQ, HH)	Mine Drainage	1.1	(Entire length)	2005	Yes
			CNA-Biological	AQ	Unknown	1.1	(Entire length)	2005	No
			pH	All	Mine Drainage	1.1	(Entire length)	2005	Yes
225	Elk Run	WVPNB-21	CNA-Biological	AQ	Unknown	2.9	(Entire length)	2005	No
			Iron	AQ, HH	Mine Drainage	2.9	(Entire length)	2005	Yes

ID#	Stream Name	Stream Code	Criteria Affected	Use Affected	Cause	Impaired Length	Reach Description	Projected TMDL Year	1998 list?
226	Emory Run	WVPNB-16-A	(Aluminum, Iron, Manganese)	(AQ, HH)	Mine Drainage	2.3	(Entire length)	2005	Yes
			CNA-Biological	AQ	Unknown	2.3	(Entire length)	2005	No
			pH	All	Mine Drainage	2.3	(Entire length)	2005	Yes
227	Glade Run	WVPNB-16-B.5	(Aluminum, Iron, Manganese)	(AQ, HH)	Mine Drainage	3.0	(Entire length)	2005	Yes
			pH	All	Mine Drainage	3.0	(Entire length)	2005	Yes
228	Laurel Run	WVPNB-16-C	CNA-Biological	AQ	Unknown	1.5	(Entire length)	2005	No
229	Little Buffalo Creek	WVPNB-19-A	CNA-Biological	AQ	Unknown	1.1	(Entire length)	2005	No
230	Little Creek	WVPNB-16-D	(Aluminum, Iron, Manganese)	(AQ, HH)	Mine Drainage	0.7	(Entire length)	2005	Yes
			pH	All	Mine Drainage	0.7	(Entire length)	2005	Yes
231	Mill Creek	WVPNB-4-S	CNA-Biological	AQ	Unknown	5.6	mouth upstream 5.6 miles	2010/2015	No
232	Montgomery Run	WVPNB-11	(Aluminum, Iron, Manganese)	(AQ, HH)	Mine Drainage	2.8	(Entire length)	2005	Yes
			pH	All	Mine Drainage	2.8	(Entire length)	2005	Yes
233	Pargut Run	WVPNB-4-J-1	CNA-Biological	AQ	Unknown	3.4	(Entire length)	2010/2015	No
234	Piney Swamp Run	WVPNB-12	(Aluminum, Iron, Manganese)	(AQ, HH)	Mine Drainage	5.5	(Entire length)	2005	Yes
			pH	All	Mine Drainage	5.5	(Entire length)	2005	Yes
235	Slaughterhouse Run	WVPNB-10	(Aluminum, Iron, Manganese)	(AQ, HH)	Mine Drainage	2.2	(Entire length)	2005	Yes
			pH	All	Mine Drainage	2.2	(Entire length)	2005	Yes
236	UNT/Abrams Creek RM 2.0	WVPNB-16-0.5A	CNA-Biological	AQ	Unknown	1.5	(Entire length)	2005	No
237	UNT/UNT RM 0.5/New Creek RM 4.2	WVPNB-7-C.4-1	CNA-Biological	AQ	Unknown	0.7	(Entire length)	2010/2015	No
	TYGART VALLEY WATERSHED - HUC# 05020001 - ***streams 26 miles 95***								
238	Bearcamp Run	WVMTB-32-D	pH	All	Unknown	5.5	(Entire length)	2010/2015	Yes
239	Beech Run	WVMTB-32-H	pH	All	Unknown	5.2	(Entire length)	2010/2015	Yes
240	Birch Fork	WVMTM-26	pH	All	Unknown	6.6	(Entire length)	2010/2015	Yes
241	Cassity Fork	WVMTM-16	pH	All	Unknown	3.4	from 3.0 miles above mouth upstream to HW	2010/2015	Yes
242	Childers Run	WVMTB-9	CNA-Biological	AQ	Unknown	2.3	(Entire length)	2010/2015	No
243	Craven Run	WVMT-43-A	CNA-Biological	AQ	Unknown	5.6	(Entire length)	2010/2015	No
244	Cutright Run	WVMTB-17	pH	All	Unknown	4.2	(Entire length)	2010/2015	No

2002 SECTION 303(d) LIST

WEST VIRGINIA

ID#	Stream Name	Stream Code	Criteria Affected	Use Affected	Cause	Impaired Length	Reach Description	Projected TMDL Year	1998 list?
245	Davis Lick	WVMT-43-H	CNA-Biological	AQ	Unknown	3.8	(Entire length)	2010/2015	No
246	Glade Run	WVMT-64-C	Iron	AQ, HH	Unknown	1.8	(Entire length)	2010/2015	No
			pH	All	Unknown	1.8	(Entire length)	2010/2015	Yes
247	Hooppole Run	WVMTM-3	CNA-Biological	AQ	Unknown	1.6	(Entire length)	2010/2015	No
248	Kittle Creek	WVMTM-28	pH	All	Unknown	6.2	(Entire length)	2010/2015	Yes
249	Laurel Run/Leading Creek	WVMT-43-O	CNA-Biological	AQ	Unknown	2.5	(Entire length)	2010/2015	No
250	Laurel Run/Middle Fork River	WVMTM-2	pH	All	Unknown	2.0	(Entire length)	2010/2015	Yes
251	Little Laurel Run	WVMT-40-A	pH	All	Unknown	3.8	(Entire length)	2010/2015	Yes
252	Marsh Fork	WVMTB-31-J	pH	All	Unknown	5.5	(Entire length)	2010/2015	Yes
253	Meatbox Run	WVMT-64-E	pH	All	Unknown	1.3	(Entire length)	2010/2015	Yes
254	Potatohole Fork	WVMT-64-F	pH	All	Unknown	2.0	(Entire length)	2010/2015	Yes
255	Riffle Creek	WVMT-66	CNA-Biological	AQ	Unknown	5.8	(Entire length)	2010/2015	No
256	Right Fork/Tenmile Creek	WVMTB-25-A	pH	All	Unknown	4.0	(Entire length)	2010/2015	Yes
257	Rocky Run	WVMTM-26-B	CNA-Biological	AQ	Unknown	5.8	(Entire length)	2010/2015	No
258	Service Run	WVMTM-5	pH	All	Unknown	0.9	(Entire length)	2010/2015	Yes
259	Short Run	WVMTM-7	pH	All	Unknown	1.7	(Entire length)	2010/2015	Yes
260	Smooth Rocklick Run	WVMTB-32-A	pH	All	Unknown	2.0	(Entire length)	2010/2015	Yes
261	Three Forks Run	WVMTM-17	CNA-Biological	AQ	Unknown	2.6	(Entire length)	2010/2015	No
262	UNT/Roaring Creek RM 4.1	WVMT-42-F	pH	All	Unknown	1.2	(Entire length)	2010/2015	Yes
263	Wickwire Run	WVMT-8	CNA-Biological	AQ	Unknown	8.0	(Entire length)	2010/2015	No

ID#	Stream Name	Stream Code	Criteria Affected	Use Affected	Cause	Impaired Length	Reach Description	Projected TMDL Year	1998 list?
HYDROLOGIC GROUP C									
GAULEY WATERSHED - HUC# 05050005 - *streams 52 miles 252*									
264	Aldrich Branch	WVKGC-9	pH	All	Unknown	2.5	(Entire length)	2006/2011/2016	Yes
265	Armstrong Run	WVKG-34-H-9	pH	All	Unknown	1.3	(Entire length)	2006/2011/2016	Yes
266	Barrenshe Run	WVKGC-4	pH	All	Unknown	3.0	(Entire length)	2006/2011/2016	Yes
267	Bearpen Fork	WVKG-30-L	(Aluminum, Iron, Manganese)	(AQ, HH)	Mine Drainage	2.5	(Entire length)	2006	Yes
			CNA-Biological	AQ	Unknown	2.5	(Entire length)	2006/2011/2016	No
268	Big Beaver Creek	WVKG-30	(Aluminum, Iron, Manganese)	(AQ, HH)	Mine Drainage	16.4	(Entire length)	2006	Yes
269	Big Run	WVKG-70	pH	All	Unknown	4.4	(Entire length)	2006/2011/2016	Yes
270	Birchlog Run	WVKGC-21	pH	All	Unknown	2.3	(Entire length)	2006/2011/2016	Yes
271	Briery Creek	WVKG-19-U-2-A	Manganese	HH	Unknown	1.5	(Entire length)	2006/2011/2016	No
			pH	All	Unknown	1.5	(Entire length)	2006/2011/2016	No
272	Brushy Meadow Creek	WVKG-24-E-2	(Aluminum, Iron, Manganese)	(AQ, HH)	Mine Drainage	5.9	(Entire length)	2006	Yes
273	Buck Garden Creek	WVKG-13-K	(Aluminum, Iron, Manganese)	(AQ, HH)	Mine Drainage	5.1	(Entire length)	2006	Yes
274	Campbell Fork	WVKG-5-B-7	CNA-Biological	AQ	Unknown	2.0	(Entire length)	2006/2011/2016	No
275	Carpenter Run	WVKG-34-H-11.5	pH	All	Unknown	1.3	(Entire length)	2006/2011/2016	Yes
276	Clear Fork	WVKG-26-O	(Aluminum, Iron, Manganese)	(AQ, HH)	Mine Drainage	4.0	(Entire length)	2006	Yes
277	Cold Run	WVKGC-18	pH	All	Unknown	1.5	(Entire length)	2006/2011/2016	Yes
278	Colt Branch	WVKG-24-I	(Aluminum, Iron, Manganese)	(AQ, HH)	Mine Drainage	2.2	(Entire length)	2006	Yes
279	Craig Run	WVKGW-1	pH	All	Unknown	3.0	(Entire length)	2006/2011/2016	Yes
280	Cutlip Branch	WVKG-19-V-4	pH	All	Unknown	1.3	(Entire length)	2006/2011/2016	No
281	Dogway Fork	WVKGC-19	pH	All	Unknown	8.9	(Entire length)	2006/2011/2016	Yes
282	Fockler Branch	WVKG-26-E	(Aluminum, Iron, Manganese)	(AQ, HH)	Mine Drainage	2.7	(Entire length)	2006	Yes
283	Gould Hollow	WVKG-19-Q-5	CNA-Biological	AQ	Unknown	1.8	(Entire length)	2006/2011/2016	No
284	Hughes Fork	WVKG-5-B-4	Selenium	AQ	Unknown	3.0	(Entire length)	2006/2011/2016	No
			Selenium	HH	Unknown	1.8	from 1.2 miles above mouth to HW	2006/2011/2016	No
285	Jerry Fork	WVKG-13-F	(Aluminum, Iron, Manganese)	(AQ, HH)	Mine Drainage	2.3	(Entire length)	2006	Yes
286	Jones Run	WVKG-26-B-2	CNA-Biological	AQ	Unknown	1.6	(Entire length)	2006/2011/2016	No

2002 SECTION 303(d) LIST

WEST VIRGINIA

ID#	Stream Name	Stream Code	Criteria Affected	Use Affected	Cause	Impaired Length	Reach Description	Projected TMDL Year	1998 list?
287	Left Fork/North Fork/Cranberry River	WVKGC-24-C	pH	All	Unknown	1.5	(Entire length)	2006/2011/2016	Yes
288	Lick Branch/Rich Creek	WVKG-6-A	CNA-Biological	AQ	Unknown	1.3	(Entire length)	2006/2011/2016	No
289	Lick Branch/Cranberry River	WVKGC-14	pH	All	Unknown	2.1	(Entire length)	2006/2011/2016	Yes
290	Little Beaver Creek	WVKG-30-E	(Aluminum, Iron, Manganese)	(AQ, HH)	Mine Drainage	6.0	(Entire length)	2006	Yes
			CNA-Biological	AQ	Unknown	6.0	(Entire length)	2006/2011/2016	No
291	Little Clear Creek	WVKG-19-V	(Aluminum, Iron, Manganese)	(AQ, HH)	Mine Drainage	16.3	(Entire length)	2006	Yes
292	Little Laurel Creek	WVKG-31	CNA-Biological	AQ	Unknown	3.5	(Entire length)	2006/2011/2016	No
293	Little Rough Run	WVKGC-17.3	pH	All	Unknown	1.2	(Entire length)	2006/2011/2016	Yes
294	Lower Laurel Run	WVKG-30-N	CNA-Biological	AQ	Unknown	1.4	(Entire length)	2006/2011/2016	No
295	Lower Spruce Run	WVKG-26-K-1	(Aluminum, Iron, Manganese)	(AQ, HH)	Mine Drainage	1.6	(Entire length)	2006	Yes
296	McMillion Creek	WVKG-26-I	(Aluminum, Iron, Manganese)	(AQ, HH)	Mine Drainage	7.0	(Entire length)	2006	Yes
297	Middle Fork/Williams River	WVKGW-10	pH	All	Unknown	12.9	(Entire length)	2006/2011/2016	Yes
298	Muddlety Creek	WVKG-26	(Aluminum, Iron, Manganese)	(AQ, HH)	Mine Drainage	27.0	(Entire length)	2006	Yes
299	North Fork/Cranberry River	WVKGC-24	pH	All	Unknown	4.0	from mouth upstream 4.0 miles	2006/2011/2016	Yes
300	Open Fork	WVKG-5-B-1	CNA-Biological	AQ	Unknown	5.7	(Entire length)	2006/2011/2016	No
301	Panther Creek	WVKG-32	(Aluminum, Iron, Manganese)	(AQ, HH)	Mine Drainage	8.6	(Entire length)	2006	Yes
302	Persinger Creek	WVKG-27	(Aluminum, Iron, Manganese)	(AQ, HH)	Mine Drainage	4.9	(Entire length)	2006	Yes
303	Peters Creek	WVKG-13	(Aluminum, Iron, Manganese)	(AQ, HH)	Mine Drainage	17.6	(Entire length)	2006	Yes
			Fecal coliform	HH	Unknown	17.6	(Entire length)	2006/2011/2016	No
304	Right Fork/Turkey Creek	WVKG-60-A	pH	All	Unknown	2.3	(Entire length)	2006/2011/2016	Yes
305	Robinson Fork	WVKG-5-P	CNA-Biological	AQ	Unknown	3.6	(Entire length)	2006/2011/2016	No
306	Rockcamp Fork	WVKG-5-F	CNA-Biological	AQ	Unknown	4.3	(Entire length)	2006/2011/2016	No
307	Scrabble Creek	WVKG-1	(Aluminum, Iron, Manganese)	(AQ, HH)	Mine Drainage	3.1	(Entire length)	2006	Yes
			CNA-Biological	AQ	Unknown	3.1	(Entire length)	2006/2011/2016	No
308	Sewell Creek	WVKG-19-Q	(Aluminum, Iron, Manganese)	(AQ, HH)	Mine Drainage	14.1	(Entire length)	2006	Yes
309	Spring Branch	WVKG-5-F-1	CNA-Biological	AQ	Unknown	1.2	(Entire length)	2006/2011/2016	No
310	Spruce Run	WVKG-26-K-1-A	(Aluminum, Iron, Manganese)	(AQ, HH)	Mine Drainage	1.5	(Entire length)	2006	Yes
311	Sugar Creek	WVKGW-21	pH	All	Unknown	3.8	(Entire length)	2006/2011/2016	Yes

ID#	Stream Name	Stream Code	Criteria Affected	Use Affected	Cause	Impaired Length	Reach Description	Projected TMDL Year	1998 list?
312	Tea Creek	WVKGW-20	pH	All	Unknown	5.7	(Entire length)	2006/2011/2016	Yes
313	Tumbling Rock Run	WVKGC-22	pH	All	Unknown	2.4	(Entire length)	2006/2011/2016	Yes
314	Turkey Creek	WVKG-60	pH	All	Unknown	5.1	(Entire length)	2006/2011/2016	Yes
315	Windy Run	WVKG-34-H-8	pH	All	Unknown	2.0	(Entire length)	2006/2011/2016	Yes
	LOWER GUYANDOTTE WATERSHED - HUC# 05070102 - ***streams 35 miles 242***								
316	Aarons Creek	WVOG-35	CNA-Biological	AQ	Unknown	3.0	(Entire length)	2006/2011/2016	No
317	Ballard Fork	WVOGM-49	CNA-Biological	AQ	Unknown	2.3	(Entire length)	2006/2011/2016	No
318	Buffalo Creek	WVOG-61	(Aluminum, Iron, Manganese)	(AQ, HH)	Mine Drainage	3.1	(Entire length)	2004	Yes
			pH	All	Mine Drainage	3.1	(Entire length)	2004	Yes
319	Coon Creek	WVOGM-20-A	CNA-Biological	AQ	Unknown	3.3	(Entire length)	2006/2011/2016	No
320	Davis Creek	WVOG-3	CNA-Biological	AQ	Unknown	2.8	(Entire length)	2006/2011/2016	No
321	Dry Run	WVOG-41	CNA-Biological	AQ	Unknown	1.3	(Entire length)	2006/2011/2016	No
322	Ed Stone Branch	WVOG-49-A	(Aluminum, Iron, Manganese)	(AQ, HH)	Mine Drainage	2.3	(Entire length)	2004	Yes
			CNA-Biological	AQ	Unknown	2.3	(Entire length)	2004	No
			pH	All	Mine Drainage	2.3	(Entire length)	2004	Yes
323	Fowler Branch	WVOG-51.5	CNA-Biological	AQ	Unknown	1.1	(Entire length)	2006/2011/2016	No
324	Godby Branch	WVOG-53	(Aluminum, Iron, Manganese)	(AQ, HH)	Mine Drainage	1.5	(Entire length)	2004	Yes
			CNA-Biological	AQ	Unknown	1.5	(Entire length)	2004	No
			pH	All	Mine Drainage	1.5	(Entire length)	2004	Yes
325	Indian Fork	WVOGM-12	CNA-Biological	AQ	Unknown	6.5	(Entire length)	2006/2011/2016	No
326	Laurel Fork	WVOG-42-C	CNA-Biological	AQ	Unknown	1.7	(Entire length)	2006/2011/2016	No
327	Lick Branch	WVOG-34-A	CNA-Biological	AQ	Unknown	2.3	(Entire length)	2006/2011/2016	No
328	Limestone Branch	WVOG-48	(Aluminum, Iron, Manganese)	(AQ, HH)	Mine Drainage	1.8	(Entire length)	2004	Yes
			pH	All	Mine Drainage	1.8	(Entire length)	2004	Yes
329	Little Cabell Creek	WVOGM-3	CNA-Biological	AQ	Unknown	3.3	(Entire length)	2006/2011/2016	No

2002 SECTION 303(d) LIST

WEST VIRGINIA

ID#	Stream Name	Stream Code	Criteria Affected	Use Affected	Cause	Impaired Length	Reach Description	Projected TMDL Year	1998 list?
330	Lower Guyandotte River	WVOG-lo	Aluminum	AQ	Unknown	73.0	(Entire length)	2004	Yes
			Fecal coliform	HH	Unknown	73.0	(Entire length)	2004	No
			Iron	AQ, HH	Unknown	73.0	(Entire length)	2004	Yes
331	Meadow Branch	WVOGM-25-A	CNA-Biological	AQ	Unknown	1.8	(Entire length)	2006/2011/2016	No
332	Merritt Creek	WVOG-10	CNA-Biological	AQ	Unknown	3.3	(Entire length)	2006/2011/2016	No
333	Mill Creek	WVOG-59	CNA-Biological	AQ	Unknown	2.3	(Entire length)	2006/2011/2016	No
334	Mud River	WVOGM	CNA-Biological	AQ	Unknown	79.0	(Entire length)	2004	No
			Selenium	AQ, HH	Unknown	79.0	(Entire length)	2004	No
335	North Branch/Ed Stone Branch	WVOG-49-A-1	(Aluminum, Iron, Manganese)	(AQ, HH)	Mine Drainage	0.8	(Entire length)	2004	Yes
			pH	All	Mine Drainage	0.8	(Entire length)	2004	Yes
336	Perrys Branch	WVOG-49-E-1	CNA-Biological	AQ	Unknown	0.9	(Entire length)	2006/2011/2016	No
337	Right Fork/Merritt Creek	WVOG-10-A	CNA-Biological	AQ	Unknown	2.1	(Entire length)	2006/2011/2016	No
			Iron	AQ, HH	Unknown	1.5	(Entire length)	2004	No
338	Right Fork/Buffalo Creek	WVOG-61-A	pH	All	Unknown	1.5	(Entire length)	2004	No
339	Right Fork/Mill Creek	WVOGM-8-C	CNA-Biological	AQ	Unknown	2.8	(Entire length)	2006/2011/2016	No
340	Short Bend Fork	WVOG-42-A	CNA-Biological	AQ	Unknown	1.1	(Entire length)	2006/2011/2016	No
341	Smith Creek	WVOG-11	CNA-Biological	AQ	Unknown	3.7	(Entire length)	2006/2011/2016	No
342	South Fork	WVOG-51-G.5	CNA-Biological	AQ	Unknown	1.8	(Entire length)	2006/2011/2016	No
343	Stanley Fork	WVOGM-48	CNA-Biological	AQ	Unknown	2.0	(Entire length)	2004	No
			Selenium	AQ, HH	Unknown	2.0	(Entire length)	2004	No
344	Straight Fork	WVOGM-22-A	CNA-Biological	AQ	Unknown	1.9	(Entire length)	2006/2011/2016	No
345	Sugartree Branch	WVOGM-47	CNA-Biological	AQ	Unknown	1.6	(Entire length)	2004	No
			Selenium	AQ, HH	Unknown	1.6	(Entire length)	2004	No
346	Sugartree Fork	WVOGM-25-I	CNA-Biological	AQ	Unknown	3.0	from mouth upstream 3.0 miles	2006/2011/2016	No

ID#	Stream Name	Stream Code	Criteria Affected	Use Affected	Cause	Impaired Length	Reach Description	Projected TMDL Year	1998 list?
347	Trace Fork	WVOGM-20	CNA-Biological	AQ	Unknown	17.9	from 6.4 miles above mouth upstream to HW	2006/2011/2016	No
348	UNT/Big Creek RM 3.3	WVOG-49-C.1	CNA-Biological	AQ	Unknown	0.8	(Entire length)	2006/2011/2016	No
349	Valley Fork	WVOGM-25-H-1	CNA-Biological	AQ	Unknown	2.9	(Entire length)	2006/2011/2016	No
350	Vickers Branch	WVOG-49-C	CNA-Biological	AQ	Unknown	1.2	(Entire length)	2006/2011/2016	No
	MIDDLE OHIO NORTH WATERSHED - HUC# 05030201 - *streams 12 miles 247*								
351	Big Run	WVOMI-29-A	CNA-Biological	AQ	Unknown	4.9	(Entire length)	2006/2011/2016	No
352	Elk Fork	WVOMI-23-B	CNA-Biological	AQ	Unknown	14.8	(Entire length)	2006/2011/2016	No
353	Indian Creek	WVOMI-29	CNA-Biological	AQ	Unknown	3.8	mouth upstream 3.8 miles	2006/2011/2016	No
354	Little Fishing Creek	WVO-69-C	CNA-Biological	AQ	Unknown	5.6	from mouth upstream 5.6 miles	2006/2011/2016	No
355	McElroy Creek	WVOMI-30	CNA-Biological	AQ	Unknown	22.1	(Entire length)	2006/2011/2016	No
356	Meathouse Fork	WVOMI-46	CNA-Biological	AQ	Unknown	15.4	mouth upstream 15.4 miles	2006/2011/2016	No
357	Middle Island Creek	WVOMI	Fecal coliform	HH	Unknown	96.0	(Entire length)	2006/2011/2016	No
			Iron	AQ, HH	Unknown	96.0	(Entire length)	2006/2011/2016	No
358	Mudlick Run	WVOMI-23-B-3	CNA-Biological	AQ	Unknown	2.1	(Entire length)	2006/2011/2016	No
359	Ohio River (Middle North Section)	WVO-mn	Fecal coliform	HH	Unknown	12.6	mp 126.4 to mp 113.8	2012	No
			Mercury	HH	Unknown	58.4	mp 172.2 to mp 113.8 (entire section)	2012	No
360	Peach Fork	WVOMI-23-G	CNA-Biological	AQ	Unknown	0.4	from mouth upstream 0.4 miles	2006/2011/2016	No
361	South Fork/Fishing Creek	WVO-69-N	CNA-Biological	AQ	Unknown	20.4	(Entire length)	2006/2011/2016	No
362	Wilhelm Run	WVOMI-40-E	CNA-Biological	AQ	Unknown	3.5	(Entire length)	2006/2011/2016	No

2002 SECTION 303(d) LIST

WEST VIRGINIA

ID#	Stream Name	Stream Code	Criteria Affected	Use Affected	Cause	Impaired Length	Reach Description	Projected TMDL Year	1998 list?
	MIDDLE OHIO SOUTH WATERSHED - HUC# 05030202 - *streams 12 miles 198*								
363	Big Run	WVO-50	CNA-Biological	AQ	Unknown	10.1	(Entire length)	2006/2011/2016	No
364	Grasslick Creek	WVO-32-L-7	CNA-Biological	AQ	Unknown	10.3	from 3.0 miles above mouth upstream to HW	2006/2011/2016	No
365	Little Mill Creek	WVO-31	CNA-Biological	AQ	Unknown	10.0	(Entire length)	2006/2011/2016	No
366	Nesselroad Run	WVO-36-J-5	CNA-Biological	AQ	Unknown	7.6	(Entire length)	2006/2011/2016	No
367	North Fork	WVO-44-B	CNA-Biological	AQ	Unknown	20.0	(Entire length)	2006/2011/2016	No
368	Ohio River (Middle South Section)	WVO-ms	Mercury	HH	Unknown	93.5	mp 265.7 to mp 172.2 (entire section)	2012	No
369	Pond Creek	WVO-43	CNA-Biological	AQ	Unknown	5.8	from mouth upstream 5.8 miles	2006/2011/2016	No
370	Sandy Creek	WVO-36	CNA-Biological	AQ	Unknown	22.0	(Entire length)	2006/2011/2016	No
371	Sliding Hill Creek	WVO-24	CNA-Biological	AQ	Unknown	4.8	(Entire length)	2006/2011/2016	No
372	South Fork/Lee Creek	WVO-44-A	CNA-Biological	AQ	Unknown	11.2	(Entire length)	2006/2011/2016	No
373	Spring Creek	WVO-33	CNA-Biological	AQ	Unknown	2.5	(Entire length)	2006/2011/2016	No
374	UNT/Robinson Run RM 2.4	WVO-21-B-0.9	Aluminum	AQ	Unknown	0.2	(Entire length)	2006/2011/2016	Yes
			Iron	AQ, HH	Unknown	0.2	(Entire length)	2006/2011/2016	Yes
			Manganese	HH	Unknown	0.2	(Entire length)	2006/2011/2016	Yes
	POTOMAC DIRECT DRAINS WATERSHED - HUC# 02070004 - *streams 15 miles 100*								
375	Dry Run	WVP-4-C-1	CNA-Biological	AQ	Unknown	4.6	(Entire length)	2006/2011/2016	No
376	Eagle Run	WVP-4-B	CNA-Biological	AQ	Unknown	1.2	(Entire length)	2006/2011/2016	No
377	Elk Branch	WVP-1-A	CNA-Biological	AQ	Unknown	4.5	(Entire length)	2006/2011/2016	No
378	Evans Run	WVP-4-D	CNA-Biological	AQ	Unknown	5.8	(Entire length)	2006/2011/2016	No
379	Goose Creek	WVP-4-J-1	CNA-Biological	AQ	Unknown	3.0	(Entire length)	2006/2011/2016	No
380	Harlan Run	WVP-5	CNA-Biological	AQ	Unknown	7.2	(Entire length)	2006/2011/2016	No
381	Hopewell Run	WVP-4-I	CNA-Biological	AQ	Unknown	3.5	(Entire length)	2006/2011/2016	No
382	Middle Creek/Opequon Creek	WVP-4-J	CNA-Biological	AQ	Unknown	7.3	(Entire length)	2006/2011/2016	No
383	Mill Creek	WVP-4-M	CNA-Biological	AQ	Unknown	11.4	(Entire length)	2006/2011/2016	No

ID#	Stream Name	Stream Code	Criteria Affected	Use Affected	Cause	Impaired Length	Reach Description	Projected TMDL Year	1998 list?
384	Opequon Creek	WVP-4	CNA-Biological	AQ	Unknown	30.7	(Entire length)	2006/2011/2016	No
			Fecal coliform	HH	Unknown	30.7	(Entire length)	2006/2011/2016	No
385	Silver Spring Run	WVP-4-P	CNA-Biological	AQ	Unknown	3.2	(Entire length)	2006/2011/2016	No
386	Sylvan Run	WVP-4-M-1	CNA-Biological	AQ	Unknown	4.5	(Entire length)	2006/2011/2016	No
387	Torytown Run	WVP-4-M-2	CNA-Biological	AQ	Unknown	2.4	(Entire length)	2006/2011/2016	No
388	Tuscarora Creek	WVP-4-C	CNA-Biological	AQ	Unknown	9.2	(Entire length)	2006/2011/2016	No
389	UNT/Potomac River (0.55 mi downstream of Town Run)	WVP-2.2	CNA-Biological	AQ	Unknown	1.5	(Entire length)	2006/2011/2016	No
	TUG FORK WATERSHED - HUC# 05070201 - ***streams 9 miles 174***								
390	Badway Branch	WVBST-78-G	CNA-Biological	AQ	Unknown	1.3	(Entire length)	2006/2011/2016	No
391	Grapevine Branch	WVBST-70-F	CNA-Biological	AQ	Unknown	1.8	(Entire length)	2006/2011/2016	No
392	Greenbrier Fork	WVBST-60-A	CNA-Biological	AQ	Unknown	3.5	(Entire length)	2006/2011/2016	No
393	Mountain Fork	WVBST-70-W-1-A	CNA-Biological	AQ	Unknown	3.6	(Entire length)	2006/2011/2016	No
394	Rock Narrows Branch	WVBST-103	CNA-Biological	AQ	Unknown	1.7	(Entire length)	2006/2011/2016	No
395	Silver Creek	WVBST-16	CNA-Biological	AQ	Unknown	2.5	(Entire length)	2006/2011/2016	No
396	Sulphur Creek	WVBST-41	CNA-Biological	AQ	Unknown	1.7	(Entire length)	2006/2011/2016	No
397	Tug Fork River	WVBST	CNA-Biological	AQ	Unknown	107.6	from river mile 47.4 upstream to HW	2006/2011/2016	No
			Fecal coliform	HH	Unknown	155.0	(Entire length)	2006/2011/2016	No
398	Upper Shannon Branch	WVBST-95	CNA-Biological	AQ	Unknown	2.5	(Entire length)	2006/2011/2016	No

ID#	Stream Name	Stream Code	Criteria Affected	Use Affected	Cause	Impaired Length	Reach Description	Projected TMDL Year	1998 list?
HYDROLOGIC GROUP D									
GREENBRIER WATERSHED - HUC# 05050003 - *streams 7 miles 79*									
399	Buffalo Run	WVKNG-68-F	CNA-Biological	AQ	Unknown	4.3	(Entire length)	2007/2012/2017	No
400	Meadow Creek	WVKNG-28-Q	CNA-Biological	AQ	Unknown	16.0	(Entire length)	2007/2012/2017	No
401	Muddy Creek	WVKNG-22	CNA-Biological	AQ	Unknown	20.9	(Entire length)	2007/2012/2017	No
402	Possum Hollow	WVKNG-53-E	CNA-Biological	AQ	Unknown	2.8	(Entire length)	2007/2012/2017	No
403	Second Creek	WVKNG-23	Fecal coliform	HH	Unknown	23.7	(Entire length)	2007/2012/2017	No
404	Shock Run	WVKNG-66-D	CNA-Biological	AQ	Unknown	3.8	(Entire length)	2007/2012/2017	No
405	Stoney Creek	WVKNG-55	CNA-Biological	AQ	Unknown	7.0	(Entire length)	2007/2012/2017	No
LITTLE KANAWHA WATERSHED - HUC# 05030203 - *streams 15 miles 282*									
406	Bender Run	WVLKS-10-P	CNA-Biological	AQ	Unknown	2.5	(Entire length)	2007/2012/2017	No
407	Duck Creek	WVLK-82	(Aluminum, Iron, Manganese)	(AQ, HH)	Mine Drainage	3.7	(Entire length)	2007	Yes
			CNA-Biological	AQ	Unknown	3.7	(Entire length)	2007/2012/2017	No
408	Duskcamp Run	WVLK-88	(Aluminum, Iron, Manganese)	(AQ, HH)	Mine Drainage	3.5	(Entire length)	2007	Yes
			CNA-Biological	AQ	Unknown	3.5	(Entire length)	2007/2012/2017	No
409	Getout Run	WVLK-131	pH	All	Unknown	2.5	(Entire length)	2007/2012/2017	Yes
410	Hughes River	WVLKH	Fecal coliform	HH	Unknown	13.8	(Entire length)	2007/2012/2017	No
411	Indian Creek	WVLKH-9-J	CNA-Biological	AQ	Unknown	7.5	mouth upstream 7.5 miles	2007/2012/2017	No
412	Jones Cabin Run	WVLK-66-E-4	CNA-Biological	AQ	Unknown	1.9	(Entire length)	2007/2012/2017	No
413	Left Fork/Right Fork/Little Kanawha River	WVLK-115-H	pH	All	Unknown	7.1	(Entire length)	2007/2012/2017	Yes
414	Left Fork/Steer Creek	WVLKS-10	CNA-Biological	AQ	Unknown	24.5	(Entire length)	2007/2012/2017	No
415	Little Kanawha River	WVO-47	Fecal coliform	HH	Unknown	169.0	(Entire length)	2007/2012/2017	No
			pH	All	Unknown	6.9	from HW downstream 6.9 miles	2007/2012/2017	Yes
416	Lynch Run	WVLK-85	(Aluminum, Iron, Manganese)	(AQ, HH)	Mine Drainage	2.4	(Entire length)	2007	Yes
			CNA-Biological	AQ	Unknown	2.4	(Entire length)	2007	No

ID#	Stream Name	Stream Code	Criteria Affected	Use Affected	Cause	Impaired Length	Reach Description	Projected TMDL Year	1998 list?
417	Right Fork/Little Kanawha River	WVLK-115	pH	All	Unknown	14.1	(Entire length)	2007/2012/2017	Yes
418	Right Fork/Steer Creek	WVLKS-9	CNA-Biological	AQ	Unknown	25.4	(Entire length)	2007/2012/2017	No
419	UNT/ Little Kanawha River RM 171.2 (Ellis Run)	WVLK-130.5	pH	All	Unknown	2.6	(Entire length)	2007/2012/2017	Yes
420	Whiteoak Run	WVLKS-10-D	CNA-Biological	AQ	Unknown	1.9	(Entire length)	2007/2012/2017	No
	LOWER NEW WATERSHED - HUC# 05050004 - *streams 24 miles 167*								
421	Arbuckle Creek	WVKN-21	CNA-Biological	AQ	Unknown	6.2	(Entire length)	2007/2012/2017	No
			Fecal coliform	HH	Unknown	6.2	(Entire length)	2007/2012/2017	No
422	Batoff Creek	WVKN-26-A	(Aluminum, Iron, Manganese)	(AQ, HH)	Mine Drainage	3.6	(Entire length)	2007	Yes
			pH	All	Mine Drainage	3.6	(Entire length)	2007	Yes
423	Bowyer Creek	WVKN-26-M	(Aluminum, Iron, Manganese)	(AQ, HH)	Mine Drainage	4.4	(Entire length)	2007	Yes
424	Brooks Branch	WVKN-42	CNA-Biological	AQ	Unknown	4.4	(Entire length)	2007/2012/2017	No
425	Coal Run	WVKN-16	Fecal coliform	HH	Unknown	2.6	(Entire length)	2007/2012/2017	No
426	Farleys Creek	WVKN-34	CNA-Biological	AQ	Unknown	5.0	(Entire length)	2007/2012/2017	No
427	Floyd Creek	WVKN-17-B	(Aluminum, Iron, Manganese)	(AQ, HH)	Mine Drainage	3.0	(Entire length)	2007	Yes
			CNA-Biological	AQ	Unknown	3.0	(Entire length)	2007/2012/2017	No
428	Glade Creek	WVKN-29	CNA-Biological	AQ	Unknown	9.2	from 8.4 miles above mouth to HW	2007/2012/2017	No
429	Keeney Creek	WVKN-15	Fecal coliform	HH	Unknown	4.8	(Entire length)	2007/2012/2017	No
430	Laurel Creek/Glade Creek	WVKN-17-A-2	CNA-Biological	AQ	Unknown	5.8	(Entire length)	2007/2012/2017	No
431	Laurel Creek/Piney Creek	WVKN-26-N	(Aluminum, Iron, Manganese)	(AQ, HH)	Mine Drainage	5.5	(Entire length)	2007	Yes
			CNA-Biological	AQ	Unknown	5.5	(Entire length)	2007	No
432	Lick Creek	WVKN-35	Fecal coliform	HH	Unknown	13.9	(Entire length)	2007/2012/2017	No
433	Little Beaver Creek	WVKN-26-F-2	CNA-Biological	AQ	Unknown	9.9	(Entire length)	2007/2012/2017	No
434	Little Whitestick Creek	WVKN-26-E-1	Fecal coliform	HH	Unknown	4.0	(Entire length)	2007/2012/2017	No
435	Madam Creek	WVKN-44	Fecal coliform	HH	Unknown	6.2	(Entire length)	2007/2012/2017	No

ID#	Stream Name	Stream Code	Criteria Affected	Use Affected	Cause	Impaired Length	Reach Description	Projected TMDL Year	1998 list?
436	Marr Branch	WVKN-9	CNA-Biological	AQ	Unknown	2.8	(Entire length)	2007/2012/2017	No
			Fecal coliform	HH	Unknown	2.8	(Entire length)	2007/2012/2017	No
437	Meadow Creek	WVKN-32	Fecal coliform	HH	Unknown	11.8	(Entire length)	2007/2012/2017	No
438	Mill Creek	WVKN-22-K	CNA-Biological	AQ	Unknown	5.0	(Entire length)	2007/2012/2017	No
439	Osborne Creek	WVKN-7-B	CNA-Biological	AQ	Unknown	4.8	(Entire length)	2007/2012/2017	No
440	Piney Creek	WVKN-26	Fecal coliform	HH	Unknown	33.5	(Entire length)	2007/2012/2017	No
441	Red Spring Branch	WVKN-35-D	CNA-Biological	AQ	Unknown	3.8	(Entire length)	2007/2012/2017	No
442	UNT/Glade Creek RM 2.0	WVKN-17-A-0.5	pH	All	Unknown	0.7	(Entire length)	2007/2012/2017	Yes
443	Whitestick Creek	WVKN-26-G	CNA-Biological	AQ	Unknown	5.9	(Entire length)	2007/2012/2017	No
444	Wolf Creek	WVKN-10	CNA-Biological	AQ	Unknown	10.0	(Entire length)	2007/2012/2017	No
	MONONGAHELA WATERSHED - HUC# 05020003 - *streams 9 miles 60*								
445	Cobun Creek	WVM-9	pH	All	Unknown	2.4	from 7.9 miles above mouth upstream to HW	2007/2012/2017	Yes
446	Dents Run	WVM-23-P	CNA-Biological	AQ	Unknown	5.1	(Entire length)	2007/2012/2017	No
447	Grassy Run	WVM-19-E	CNA-Biological	AQ	Unknown	2.5	(Entire length)	2007/2012/2017	No
448	Monongahela River	WVM	Fecal coliform	HH	Unknown	37.5	(Entire length)	2007/2012/2017	No
449	Pyles Fork	WVM-23-O	CNA-Biological	AQ	Unknown	11.0	(Entire length)	2007/2012/2017	No
450	UNT/Camp Run RM 0.8	WVM-2.1-A	CNA-Biological	AQ	Unknown	1.5	(Entire length)	2007/2012/2017	No
	UPPER NEW WATERSHED - HUC# 05050002 - *streams 10 miles 132*								
451	Bluestone River	WVKNB	Fecal coliform	HH	Unknown	56.3	from 10.8 miles above mouth upstream to HW	2007/2012/2017	No
452	Brush Creek	WVKNB-12	CNA-Biological	AQ	Unknown	16.2	from 4.1 miles above mouth upstream to HW	2007/2012/2017	No
453	Crane Creek	WVKNB-30	CNA-Biological	AQ	Unknown	6.8	(Entire length)	2007/2012/2017	No
454	Dry Creek	WVKN-61-E	CNA-Biological	AQ	Unknown	6.0	(Entire length)	2007/2012/2017	No
455	Hans Creek	WVKN-51-D	CNA-Biological	AQ	Unknown	15.8	(Entire length)	2007/2012/2017	No

2002 SECTION 303(d) LIST

WEST VIRGINIA

ID#	Stream Name	Stream Code	Criteria Affected	Use Affected	Cause	Impaired Length	Reach Description	Projected TMDL Year	1998 list?
456	Pipestem Creek	WVKNB-1	CNA-Biological	AQ	Unknown	2.4	from 7.2 miles above mouth upstream to HW	2007/2012/2017	No
457	Rich Creek	WVKNB-18	(Aluminum, Iron, Manganese)	(AQ, HH)	Mine Drainage	10.9	(Entire length)	2007	Yes
458	Righthand Fork	WVKNB-28-B	CNA-Biological	AQ	Unknown	7.8	(Entire length)	2007/2012/2017	No
459	Simmons Creek	WVKNB-33	CNA-Biological	AQ	Unknown	3.0	(Entire length)	2007/2012/2017	No
460	South Fork/Brush Creek	WVKNB-12-J	CNA-Biological	AQ	Unknown	7.0	(Entire length)	2007/2012/2017	No

ID#	Stream Name	Stream Code	Criteria Affected	Use Affected	Cause	Impaired Length	Reach Description	Projected TMDL Year	1998 list?
HYDROLOGIC GROUP E									
BIG SANDY WATERSHED - HUC# 05070204 - *streams 6 miles 15*									
461	Elijah Creek	WVBS-7	CNA-Biological	AQ	Unknown	2.2	(Entire length)	2008/2013/2018	No
462	Gilkerson Branch	WVBS-7-B	CNA-Biological	AQ	Unknown	1.2	(Entire length)	2008/2013/2018	No
463	Miller Creek	WVBS-1	CNA-Biological	AQ	Unknown	1.7	(Entire length)	2008/2013/2018	No
464	Redhead Branch	WVBS-13	CNA-Biological	AQ	Unknown	0.7	(Entire length)	2008/2013/2018	No
465	Sugar Branch	WVBS-8-0.7A	CNA-Biological	AQ	Unknown	0.8	(Entire length)	2008/2013/2018	No
466	Whites Creek	WVBS-5	CNA-Biological	AQ	Unknown	8.8	(Entire length)	2008/2013/2018	No
CACAPON WATERSHED - HUC# 02070003 - *streams 3 miles 13*									
467	Little Cacapon River	WVP-19	CNA-Biological	AQ	Unknown	7.3	from 5.7 miles above mouth upstream to 13.0 miles above mouth	2008/2013/2018	No
468	UNT/Bear Wallow Creek RM 1.0	WVPC-7-F-1-B	CNA-Biological	AQ	Unknown	3.4	(Entire length)	2008/2013/2018	No
469	Upper Cove Run	WVPC-24-K	CNA-Biological	AQ	Unknown	1.9	mouth upstream 1.9 miles	2008/2013/2018	No
DUNKARD WATERSHED - HUC# 05020005 - *streams 14 miles 63*									
470	Blacks Run	WVM-1-B.3	CNA-Biological	AQ	Unknown	0.4	(Entire length)	2008/2013/2018	No
471	Building Run	WVM-1-E-5	CNA-Biological	AQ	Unknown	1.3	(Entire length)	2008/2013/2018	No
472	Days Run	WVM-1-C	CNA-Biological	AQ	Unknown	8.4	(Entire length)	2008/2013/2018	No
473	Dolls Run	WVM-1-A	CNA-Biological	AQ	Unknown	3.5	mouth upstream 3.5 miles	2008/2013/2018	No

2002 SECTION 303(d) LIST

WEST VIRGINIA

ID#	Stream Name	Stream Code	Criteria Affected	Use Affected	Cause	Impaired Length	Reach Description	Projected TMDL Year	1998 list?
474	Dunkard Creek	WVM-1	Aluminum	AQ	Mine Drainage	8.6	Pentress downstream to border (approx. 8.6 miles upstream of border)	2008	Yes
			CNA-Biological	AQ	Unknown	16.0	(Entire length)	2008/2013/2018	No
			Iron	AQ, HH	Mine Drainage	8.6	Pentress downstream to border (approx. 8.6 miles upstream of border)	2008	Yes
475	Honey Run	WVM-1-E-2-A	CNA-Biological	AQ	Unknown	1.8	(Entire length)	2008/2013/2018	No
476	Jakes Run	WVM-1-B.1	CNA-Biological	AQ	Unknown	9.2	(Entire length)	2008/2013/2018	No
477	Miracle Run	WVM-1-E	CNA-Biological	AQ	Unknown	7.6	(Entire length)	2008/2013/2018	No
478	Range Run	WVM-1-F-5	CNA-Biological	AQ	Unknown	3.5	(Entire length)	2008/2013/2018	No
479	Ripleys Run	WVM-1-B	CNA-Biological	AQ	Unknown	0.5	(Entire length)	2008/2013/2018	No
480	UNT/Days Run RM 5.8	WVM-1-C-4	CNA-Biological	AQ	Unknown	1.2	(Entire length)	2008/2013/2018	No
481	UNT/Days Run RM 7.3	WVM-1-C-7	CNA-Biological	AQ	Unknown	1.5	(Entire length)	2008/2013/2018	No
482	West Virginia Fork	WVM-1-F	CNA-Biological	AQ	Unknown	6.2	(Entire length)	2008/2013/2018	No
483	Wise Run	WVM-1-F-3	CNA-Biological	AQ	Unknown	2.2	(Entire length)	2008/2013/2018	No
	LOWER OHIO WATERSHED - HUC# 05090101 - *streams 11 miles 107*								
484	Crab Creek	WVO-13	CNA-Biological	AQ	Unknown	8.3	(Entire length)	2008/2013/2018	No
485	Guyan Creek	WVO-9	CNA-Biological	AQ	Unknown	7.2	from 5.3 miles above mouth upstream to 12.5 miles above mouth	2008/2013/2018	No
486	McCowan Branch	WVO-9-B	CNA-Biological	AQ	Unknown	2.5	(Entire length)	2008/2013/2018	No
487	Middle Fork	WVO-13-D	CNA-Biological	AQ	Unknown	4.3	(Entire length)	2008/2013/2018	No
488	Mud Run	WVO-10-D	CNA-Biological	AQ	Unknown	2.8	(Entire length)	2008/2013/2018	No
489	Ninemile Creek	WVO-7	CNA-Biological	AQ	Unknown	3.2	mouth upstream 3.2 miles	2008/2013/2018	No
490	Ohio River (Lower Section)	WVO-lo	Fecal coliform	HH	Unknown	12.0	mp 317.1 to mp 305.1	2012	No
			Mercury	HH	Unknown	51.4	mp 317.1 to mp 265.7 (entire section)	2012	No
491	Sevenmile Creek	WVO-6	CNA-Biological	AQ	Unknown	5.9	(Entire length)	2008/2013/2018	No

ID#	Stream Name	Stream Code	Criteria Affected	Use Affected	Cause	Impaired Length	Reach Description	Projected TMDL Year	1998 list?
492	Sixteenmile Creek	WVO-11	CNA-Biological	AQ	Unknown	13.2	mouth upstream to 13.2 miles	2008/2013/2018	No
493	Spurlock Creek	WVO-9-A	CNA-Biological	AQ	Unknown	5.5	(Entire length)	2008/2013/2018	No
494	Stonecoal Run	WVO-11-A	CNA-Biological	AQ	Unknown	2.5	(Entire length)	2008/2013/2018	No
	TWELVEPOLE WATERSHED - HUC# 05090102 - ***streams 34 miles 176***								
495	Beech Fork	WVO-2-H	CNA-Biological	AQ	Unknown	10.2	from mouth upstream to dam and from lake backwaters upstream to headwaters	2008/2013/2018	No
496	Big Branch	WVO-2-P-1	CNA-Biological	AQ	Unknown	2.2	(Entire length)	2008/2013/2018	No
497	Buffalo Creek	WVO-2-C	CNA-Biological	AQ	Unknown	4.5	from mouth upstream 4.5 miles	2008/2013/2018	No
498	Butler Branch	WVO-2-H-8	CNA-Biological	AQ	Unknown	1.8	(Entire length)	2008/2013/2018	No
499	Camp Creek/Twelvepole Creek	WVO-2-G	CNA-Biological	AQ	Unknown	3.4	(Entire length)	2008/2013/2018	No
			(Aluminum, Iron, Manganese)	(AQ, HH)	Mine Drainage	0.9	(Entire length)	2008	Yes
500	Camp Creek/East Fork Twelvepole Creek	WVO-2-Q-8	pH	All	Mine Drainage	0.9	(Entire length)	2008	Yes
501	Copley Trace Branch	WVO-2-Q-18-G	CNA-Biological	AQ	Unknown	0.9	from mouth upstream 0.9 miles	2008/2013/2018	No
502	Cove Creek	WVO-2-Q-17	CNA-Biological	AQ	Unknown	4.0	(Entire length)	2008/2013/2018	No
503	East Fork Twelvepole Creek	WVO-2-Q	CNA-Biological	AQ	Unknown	23.7	from 25.0 miles above mouth upstream to headwaters	2008/2013/2018	No
504	Honey Branch	WVO-2-Q-29	CNA-Biological	AQ	Unknown	0.2	from mouth upstream to impoundment at 0.2 miles	2008/2013/2018	No
505	Kiah Creek	WVO-2-Q-18	CNA-Biological	AQ	Unknown	11.7	from mouth upstream 11.7 miles	2008/2013/2018	No
506	Krout Creek	WVO-2-0.1A	CNA-Biological	AQ	Unknown	2.4	(Entire length)	2008/2013/2018	No
507	Left Fork/Wilson Creek	WVO-2-N-1	CNA-Biological	AQ	Unknown	2.2	(Entire length)	2008/2013/2018	No
			(Aluminum, Iron, Manganese)	(AQ, HH)	Mine Drainage	4.4	(Entire length)	2008	Yes
508	Left Fork/Camp Creek	WVO-2-Q-8-A	pH	All	Mine Drainage	4.4	(Entire length)	2008	Yes

ID#	Stream Name	Stream Code	Criteria Affected	Use Affected	Cause	Impaired Length	Reach Description	Projected TMDL Year	1998 list?
509	Long Branch	WVO-2-H-7	CNA-Biological	AQ	Unknown	3.6	(Entire length)	2008/2013/2018	No
510	Lynn Creek/Twelvepole Creek	WVO-2-I	CNA-Biological	AQ	Unknown	3.0	(Entire length)	2008/2013/2018	No
511	Lynn Creek/East Fork Twelvepole Creek	WVO-2-Q-9	CNA-Biological	AQ	Unknown	1.9	(Entire length)	2008/2013/2018	No
512	Maynard Branch	WVO-2-Q-23	CNA-Biological	AQ	Unknown	0.7	from mouth upstream to impoundment at 0.7 miles above mouth	2008/2013/2018	No
513	Moses Fork (near Cabwaylingo State Forest)	WVO-2-P-21	CNA-Biological	AQ	Unknown	6.7	(Entire length)	2008/2013/2018	No
514	Moses Fork (about 1.4 miles upstream of Dingess)	WVO-2-P-43	CNA-Biological	AQ	Unknown	2.5	(Entire length)	2008/2013/2018	No
515	Parker Branch	WVO-2-Q-18-D	CNA-Biological	AQ	Unknown	1.4	from mouth upstream 1.4 miles to valley fill	2008/2013/2018	No
516	Right Fork/Camp Creek	WVO-2-G-1	CNA-Biological	AQ	Unknown	2.6	(Entire length)	2008/2013/2018	No
517	Right Fork/Moses Fork	WVO-2-P-21-C	CNA-Biological	AQ	Unknown	1.7	(Entire length)	2008/2013/2018	No
518	Right Fork/Cub Branch	WVO-2-Q-31-A	CNA-Biological	AQ	Unknown	0.8	(Entire length)	2008/2013/2018	No
519	Right Fork/Camp Creek	WVO-2-Q-8-B	CNA-Biological	AQ	Unknown	3.6	(Entire length)	2008/2013/2018	No
520	Rubens Branch	WVO-2-H-3	CNA-Biological	AQ	Unknown	1.3	from 0.7 miles above mouth upstream to HW	2008/2013/2018	No
521	Shoal Branch	WVO-2-M	CNA-Biological	AQ	Unknown	1.1	(Entire length)	2008/2013/2018	No
522	Tiger Fork	WVO-2-Q-8-A-1	CNA-Biological	AQ	Unknown	1.7	(Entire length)	2008/2013/2018	No
523	Toms Creek	WVO-2-O	CNA-Biological	AQ	Unknown	2.6	(Entire length)	2008/2013/2018	No
524	Trace Fork	WVO-2-P-4	CNA-Biological	AQ	Unknown	4.5	(Entire length)	2008/2013/2018	No

ID#	Stream Name	Stream Code	Criteria Affected	Use Affected	Cause	Impaired Length	Reach Description	Projected TMDL Year	1998 list?
525	Twelvepole Creek	WVO-2	CNA-Biological	AQ	Unknown	28.8	mouth upstream 28.8 miles	2008/2013/2018	No
			Fecal coliform	HH	Unknown	33.0	(Entire length)	2008/2013/2018	No
			Iron	AQ, HH	Unknown	33.0	(Entire length)	2008/2013/2018	No
526	UNT/Twelvepole Creek RM 5.56	WVO-2-0.8A	CNA-Biological	AQ	Unknown	2.0	(Entire length)	2008/2013/2018	No
527	Wells Branch	WVO-2-P-19	CNA-Biological	AQ	Unknown	1.7	(Entire length)	2008/2013/2018	No
528	West Fork/Twelvepole Creek	WVO-2-P	CNA-Biological	AQ	Unknown	26.8	from mouth upstream 16.1 miles and from 30.2 miles above mouth upstream to 40.9 miles above mouth	2008/2013/2018	No

UPPER GUYANDOTTE WATERSHED - HUC# 05070101 - *streams 88 miles 527*

529	Barkers Creek	WVOG-131	(Aluminum, Iron, Manganese)	(AQ, HH)	Mine Drainage	8.0	(Entire length)	2004	Yes
			CNA-Biological	AQ	Unknown	8.0	(Entire length)	2004	No
530	Big Branch	WVOG-136	CNA-Biological	AQ	Unknown	2.0	(Entire length)	2008/2013/2018	No
531	Brier Creek	WVOG-110-A	(Aluminum, Iron, Manganese)	(AQ, HH)	Mine Drainage	4.8	(Entire length)	2004	Yes
532	Browning Fork	WVOG-89-B-1	CNA-Biological	AQ	Unknown	4.4	(Entire length)	2008/2013/2018	No
533	Buffalo Creek/Upper Guyandotte River	WVOG-75	CNA-Biological	AQ	Unknown	9.9	from mouth upstream 9.9 miles	2008/2013/2018	No
534	Buffalo Creek/Little Huff Creek	WVOG-92-K	(Aluminum, Iron, Manganese)	(AQ, HH)	Mine Drainage	3.1	(Entire length)	2004	Yes
			CNA-Biological	AQ	Unknown	1.8	from mouth upstream 1.8 miles	2004	No
			pH	All	Mine Drainage	3.1	(Entire length)	2004	Yes
535	Cabin Branch	WVOGC-16-C	CNA-Biological	AQ	Unknown	1.9	(Entire length)	2008/2013/2018	No
536	Cabin Creek	WVOG-127	(Aluminum, Iron, Manganese)	(AQ, HH)	Mine Drainage	3.6	(Entire length)	2004	Yes
537	Camp Branch	WVOG-71.5	CNA-Biological	AQ	Unknown	1.9	(Entire length)	2008/2013/2018	No
538	Chestnut Flats Branch	WVOGC-16-B-1	CNA-Biological	AQ	Unknown	1.0	(Entire length)	2008/2013/2018	No

ID#	Stream Name	Stream Code	Criteria Affected	Use Affected	Cause	Impaired Length	Reach Description	Projected TMDL Year	1998 list?
539	Clear Fork	WVOGC	CNA-Biological	AQ	Unknown	25.0	from mouth upstream 25.0 miles	2004	No
			Iron	HH	Unknown	29.0	(Entire length)	2004	No
540	Coal Branch	WVOG-65-A	(Aluminum, Iron, Manganese)	(AQ, HH)	Mine Drainage	2.1	(Entire length)	2004	Yes
			CNA-Biological	AQ	Unknown	2.1	(Entire length)	2004	No
			pH	All	Mine Drainage	2.1	(Entire length)	2004	Yes
541	Copperas Mine Fork	WVOG-65-B	(Aluminum, Iron, Manganese)	(AQ, HH)	Mine Drainage	9.3	(Entire length)	2004	Yes
			CNA-Biological	AQ	Unknown	9.3	(Entire length)	2004	No
			pH	All	Mine Drainage	9.3	(Entire length)	2004	Yes
542	Cow Creek	WVOG-65-J	CNA-Biological	AQ	Unknown	5.5	mouth upstream 5.5 miles	2008/2013/2018	No
543	Crane Fork	WVOGC-26	(Aluminum, Iron, Manganese)	(AQ, HH)	Mine Drainage	4.3	(Entire length)	2004	Yes
			CNA-Biological	AQ	Unknown	4.3	(Entire length)	2004	No
544	Devils Fork	WVOG-137	(Aluminum, Iron, Manganese)	(AQ, HH)	Mine Drainage	4.9	(Entire length)	2004	Yes
			CNA-Biological	AQ	Unknown	4.9	(Entire length)	2004	No
545	Elk Trace Branch	WVOG-96-C	(Aluminum, Iron, Manganese)	(AQ, HH)	Mine Drainage	2.0	(Entire length)	2004	Yes
546	Ellis Branch	WVOG-65-B-1-B	(Aluminum, Iron, Manganese)	(AQ, HH)	Mine Drainage	1.6	(Entire length)	2004	Yes
			CNA-Biological	AQ	Unknown	1.6	(Entire length)	2004	No
			pH	All	Mine Drainage	1.6	(Entire length)	2004	Yes
547	Franks Fork	WVOGC-16-U	CNA-Biological	AQ	Unknown	1.8	(Entire length)	2008/2013/2018	No
548	Gooney Otter Creek	WVOG-131-F	(Aluminum, Iron, Manganese)	(AQ, HH)	Mine Drainage	6.8	(Entire length)	2004	Yes
549	Hall Fork	WVOG-65-J-3-A	Selenium	AQ	Unknown	1.0	(Entire length)	2004	No
550	Hickory Branch	WVOG-131-B	(Aluminum, Iron, Manganese)	(AQ, HH)	Mine Drainage	2.1	(Entire length)	2004	Yes
551	Huff Creek	WVOG-76	(Aluminum, Iron, Manganese)	(AQ, HH)	Mine Drainage	21.2	(Entire length)	2004	Yes
			CNA-Biological	AQ	Unknown	13.9	from mouth upstream 13.9 miles	2004	No
552	Indian Creek	WVOG-110	(Aluminum, Iron, Manganese)	(AQ, HH)	Mine Drainage	18.9	(Entire length)	2004	Yes
553	Island Creek	WVOG-65	CNA-Biological	AQ	Unknown	18.1	(Entire length)	2008/2013/2018	No
554	Jims Branch	WVOG-131-F-1	(Aluminum, Iron, Manganese)	(AQ, HH)	Mine Drainage	1.4	(Entire length)	2004	Yes
555	Joe Branch	WVOG-128	(Aluminum, Iron, Manganese)	(AQ, HH)	Mine Drainage	1.6	(Entire length)	2004	Yes
			CNA-Biological	AQ	Unknown	1.6	(Entire length)	2004	No

ID#	Stream Name	Stream Code	Criteria Affected	Use Affected	Cause	Impaired Length	Reach Description	Projected TMDL Year	1998 list?
556	Kezee Fork	WVOG-92-K-1	(Aluminum, Iron, Manganese)	(AQ, HH)	Mine Drainage	0.8	(Entire length)	2004	Yes
557	Laurel Branch	WVOG-124-H	(Aluminum, Iron, Manganese)	(AQ, HH)	Mine Drainage	2.1	(Entire length)	2004	Yes
558	Laurel Fork	WVOGC-16	(Aluminum, Iron, Manganese)	(AQ, HH)	Mine Drainage	23.5	(Entire length)	2004	Yes
			CNA-Biological	AQ	Unknown	10.9	mouth upstream 10.9 miles	2004	No
559	Left Fork/Allen Creek	WVOG-135-A	(Aluminum, Iron, Manganese)	(AQ, HH)	Mine Drainage	2.6	(Entire length)	2004	Yes
			CNA-Biological	AQ	Unknown	2.6	(Entire length)	2004	No
560	Lefthand Fork	WVOG-77-D	CNA-Biological	AQ	Unknown	2.4	(Entire length)	2008/2013/2018	No
561	Little Cub Creek/Upper Guyandotte River	WVOG-108	Iron	AQ, HH	Unknown	3.6	(Entire length)	2004	No
562	Little Cub Creek	WVOG-92-B	CNA-Biological	AQ	Unknown	2.8	(Entire length)	2008/2013/2018	No
563	Little Huff Creek/Little Huff Creek	WVOG-92	CNA-Biological	AQ	Unknown	14.8	from 0.2 miles above mouth upstream to HW	2008/2013/2018	No
564	Long Branch (Between New Richmond and Itmann)	WVOG-129	(Aluminum, Iron, Manganese)	(AQ, HH)	Mine Drainage	2.1	(Entire length)	2004	Yes
			CNA-Biological	AQ	Unknown	2.1	(Entire length)	2004	No
565	Long Branch (Below Wolfpen Fork)	WVOG-97	CNA-Biological	AQ	Unknown	2.7	(Entire length)	2008/2013/2018	No
566	Lower Dempsey Branch	WVOG-65-B-1-A	(Aluminum, Iron, Manganese)	(AQ, HH)	Mine Drainage	2.1	(Entire length)	2004	Yes
			CNA-Biological	AQ	Unknown	2.1	(Entire length)	2004	No
			pH	All	Mine Drainage	2.1	(Entire length)	2004	Yes
567	Lower Road Branch	WVOGC-12	(Aluminum, Iron, Manganese)	(AQ, HH)	Mine Drainage	2.5	(Entire length)	2004	Yes
568	Marsh Fork/Brier Creek	WVOG-110-A-2	(Aluminum, Iron, Manganese)	(AQ, HH)	Mine Drainage	2.0	(Entire length)	2004	Yes
569	Marsh Fork/Cabin Creek	WVOG-127-D	CNA-Biological	AQ	Unknown	3.5	(Entire length)	2008/2013/2018	No
570	McDonald Fork	WVOG-96-H	(Aluminum, Iron, Manganese)	(AQ, HH)	Mine Drainage	1.3	(Entire length)	2004	Yes
571	Measle Fork	WVOG-134-D	(Aluminum, Iron, Manganese)	(AQ, HH)	Mine Drainage	3.3	(Entire length)	2004	Yes
			pH	All	Mine Drainage	3.3	(Entire length)	2004	Yes
572	Middle Fork	WVOG-75-L	CNA-Biological	AQ	Unknown	2.2	(Entire length)	2008/2013/2018	No
573	Milam Branch	WVOGC-16-M	(Aluminum, Iron, Manganese)	(AQ, HH)	Mine Drainage	4.9	(Entire length)	2004	Yes
			CNA-Biological	AQ	Unknown	4.9	(Entire length)	2004	No
574	Mill Branch	WVOG-131-C	CNA-Biological	AQ	Unknown	2.6	(Entire length)	2008/2013/2018	No
575	Mill Creek	WVOG-65-C	CNA-Biological	AQ	Unknown	1.6	(Entire length)	2008/2013/2018	No

2002 SECTION 303(d) LIST

WEST VIRGINIA

ID#	Stream Name	Stream Code	Criteria Affected	Use Affected	Cause	Impaired Length	Reach Description	Projected TMDL Year	1998 list?
576	Mud Fork	WVOG-65-B-1	(Aluminum, Iron, Manganese)	(AQ, HH)	Mine Drainage	7.5	(Entire length)	2004	Yes
			CNA-Biological	AQ	Unknown	7.5	(Entire length)	2004	No
			pH	All	Mine Drainage	7.5	(Entire length)	2004	Yes
577	Mudlick Fork	WVOG-92-K-2	(Aluminum, Iron, Manganese)	(AQ, HH)	Mine Drainage	0.7	(Entire length)	2004	Yes
578	Mullens Branch	WVOG-138-E	CNA-Biological	AQ	Unknown	1.4	(Entire length)	2008/2013/2018	No
579	Muzzle Creek	WVOG-92-I	(Aluminum, Iron, Manganese)	(AQ, HH)	Mine Drainage	3.3	(Entire length)	2004	Yes
			CNA-Biological	AQ	Unknown	3.3	(Entire length)	2004	No
580	Noseman Branch	WVOG-131-F-2	(Aluminum, Iron, Manganese)	(AQ, HH)	Mine Drainage	2.3	(Entire length)	2004	Yes
581	Oldhouse Branch	WVOG-77-A.5	(Aluminum, Iron, Manganese)	(AQ, HH)	Mine Drainage	1.1	(Entire length)	2004	Yes
			CNA-Biological	AQ	Unknown	1.1	(Entire length)	2004	No
			pH	All	Mine Drainage	1.1	(Entire length)	2004	Yes
582	Pad Fork	WVOG-92-Q	(Aluminum, Iron, Manganese)	(AQ, HH)	Mine Drainage	4.1	(Entire length)	2004	Yes
583	Paynter Branch	WVOG-76-M	CNA-Biological	AQ	Unknown	2.5	(Entire length)	2008/2013/2018	No
584	Pinnacle Creek	WVOG-124	(Aluminum, Iron, Manganese)	(AQ, HH)	Mine Drainage	26.6	(Entire length)	2004	Yes
585	Proctor Hollow	WVOG-75-C.5	(Aluminum, Iron, Manganese)	(AQ, HH)	Mine Drainage	1.6	(Entire length)	2004	Yes
			CNA-Biological	AQ	Unknown	1.6	(Entire length)	2004	Yes
			pH	All	Mine Drainage	1.6	(Entire length)	2004	Yes
586	Reedy Branch	WVOG-99	(Aluminum, Iron, Manganese)	(AQ, HH)	Mine Drainage	2.8	(Entire length)	2004	Yes
587	Right Fork/Pine Creek	WVOG-65-H-1	CNA-Biological	AQ	Unknown	2.9	(Entire length)	2008/2013/2018	No
588	Right Fork/Buffalo Creek	WVOG-75-A	CNA-Biological	AQ	Unknown	8.1	(Entire length)	2008/2013/2018	No
589	Right Fork/Sandlick Creek	WVOG-78-A	CNA-Biological	AQ	Unknown	1.3	(Entire length)	2008/2013/2018	No
590	Righthand Fork/Rum Creek	WVOG-70-A	CNA-Biological	AQ	Unknown	3.9	(Entire length)	2008/2013/2018	No
591	Righthand Fork/Pad Fork	WVOG-92-Q-1	(Aluminum, Iron, Manganese)	(AQ, HH)	Mine Drainage	2.1	(Entire length)	2004	Yes
592	Road Branch	WVOG-96-B	(Aluminum, Iron, Manganese)	(AQ, HH)	Mine Drainage	1.6	(Entire length)	2004	Yes
593	Robinette Branch	WVOG-75-D	CNA-Biological	AQ	Unknown	1.5	(Entire length)	2008/2013/2018	No
594	Rockcastle Creek	WVOG-123	CNA-Biological	AQ	Unknown	4.0	from mouth upstream to 4.0 miles above mouth	2008/2013/2018	No
595	Rockhouse Branch	WVOG-65-B-1-F	CNA-Biological	AQ	Unknown	2.3	(Entire length)	2008/2013/2018	No
596	Slab Fork	WVOG-134	(Aluminum, Iron, Manganese)	(AQ, HH)	Mine Drainage	15.1	(Entire length)	2004	Yes
			CNA-Biological	AQ	Unknown	7.8	mouth upstream 7.8 miles	2004	No

2002 SECTION 303(d) LIST

WEST VIRGINIA

ID#	Stream Name	Stream Code	Criteria Affected	Use Affected	Cause	Impaired Length	Reach Description	Projected TMDL Year	1998 list?
597	Smith Branch	WVOG-124-D	(Aluminum, Iron, Manganese)	(AQ, HH)	Mine Drainage	2.1	(Entire length)	2004	Yes
			CNA-Biological	AQ	Unknown	2.1	(Entire length)	2004	No
598	Spice Creek	WVOG-82	CNA-Biological	AQ	Unknown	1.8	(Entire length)	2008/2013/2018	No
599	Spider Creek	WVOG-124-I	(Aluminum, Iron, Manganese)	(AQ, HH)	Mine Drainage	3.5	(Entire length)	2004	Yes
600	Stafford Branch	WVOG-88	CNA-Biological	AQ	Unknown	1.4	(Entire length)	2008/2013/2018	No
601	Still Run	WVOG-130	(Aluminum, Iron, Manganese)	(AQ, HH)	Mine Drainage	5.3	(Entire length)	2004	Yes
602	Stonecoal Creek	WVOG-139	(Aluminum, Iron, Manganese)	(AQ, HH)	Mine Drainage	10.2	(Entire length)	2004	Yes
			CNA-Biological	AQ	Unknown	10.2	(Entire length)	2004	No
603	Sturgeon Branch	WVOG-96-A	(Aluminum, Iron, Manganese)	(AQ, HH)	Mine Drainage	1.6	(Entire length)	2004	Yes
604	Sugar Run	WVOG-125	CNA-Biological	AQ	Unknown	2.1	(Entire length)	2008/2013/2018	No
605	Suke Creek	WVOG-92-M	CNA-Biological	AQ	Unknown	2.4	(Entire length)	2008/2013/2018	No
606	Toler Hollow	WVOG-96-F	(Aluminum, Iron, Manganese)	(AQ, HH)	Mine Drainage	1.1	(Entire length)	2004	Yes
			CNA-Biological	AQ	Unknown	1.1	(Entire length)	2004	No
607	Tom Bailey Branch	WVOGC-16-J-1	CNA-Biological	AQ	Unknown	1.9	(Entire length)	2008/2013/2018	No
608	Tommy Creek	WVOG-139-A	CNA-Biological	AQ	Unknown	4.8	(Entire length)	2008/2013/2018	No
609	Toney Fork/Huff Creek	WVOG-76-L	(Aluminum, Iron, Manganese)	(AQ, HH)	Mine Drainage	4.2	(Entire length)	2004	Yes
			CNA-Biological	AQ	Unknown	4.2	(Entire length)	2004	No
610	Toney Fork/Clear Fork	WVOGC-19	(Aluminum, Iron, Manganese)	(AQ, HH)	Mine Drainage	6.6	(Entire length)	2004	Yes
			CNA-Biological	AQ	Unknown	6.6	(Entire length)	2004	No
611	Trace Fork	WVOG-65-B-4	(Aluminum, Iron, Manganese)	(AQ, HH)	Mine Drainage	3.8	(Entire length)	2004	Yes
			CNA-Biological	AQ	Unknown	3.8	(Entire length)	2004	No
			pH	All	Mine Drainage	3.8	(Entire length)	2004	Yes
612	Trough Fork	WVOGC-16-P	(Aluminum, Iron, Manganese)	(AQ, HH)	Mine Drainage	3.6	(Entire length)	2004	Yes
			CNA-Biological	AQ	Unknown	3.6	(Entire length)	2004	No
613	Upper Dempsey Branch	WVOG-65-B-1-E	(Aluminum, Iron, Manganese)	(AQ, HH)	Mine Drainage	1.3	(Entire length)	2004	Yes
			CNA-Biological	AQ	Unknown	1.3	(Entire length)	2004	No
			pH	All	Mine Drainage	1.3	(Entire length)	2004	Yes

ID#	Stream Name	Stream Code	Criteria Affected	Use Affected	Cause	Impaired Length	Reach Description	Projected TMDL Year	1998 list?
614	Upper Guyandotte River	WVOG-up	Aluminum	AQ	Unknown	95.0	(Entire length)	2004	No
			CNA-Biological	AQ	Unknown	50.0	from R. D. Bailey Lake upstream to Forks of Guyandotte	2004	No
			Fecal coliform	HH	Unknown	95.0	(Entire length)	2004	No
			Iron	AQ, HH	Unknown	95.0	(Entire length)	2004	No
615	Whitman Creek	WVOG-65-B-2	CNA-Biological	AQ	Unknown	6.8	(Entire length)	2008/2013/2018	No
616	Winding Gulf	WVOG-138	(Aluminum, Iron, Manganese)	(AQ, HH)	Mine Drainage	15.5	(Entire length)	2004	Yes
			CNA-Biological	AQ	Unknown	9.1	from 0.7 miles above mouth upstream to 9.8 miles above mouth	2004	No
UPPER OHIO SOUTH WATERSHED - HUC# 05030106 - *streams 31 miles 170*									
617	Boggs Run	WVO-86	CNA-Biological	AQ	Unknown	4.2	(Entire length)	2008/2013/2018	No
618	Britt Run	WVO-88-E.9	(Aluminum, Iron, Manganese)	(AQ, HH)	Mine Drainage	2.4	(Entire length)	2008	Yes
			CNA-Biological	AQ	Unknown	1.4	mouth upstream 1.4 miles	2008/2013/2018	No
			pH	All	Mine Drainage	2.4	(Entire length)	2008	Yes
619	Burch Run	WVO-88-I	CNA-Biological	AQ	Unknown	0.7	mouth upstream 0.7 miles	2008/2013/2018	No
620	Caldwell Run	WVO-87	CNA-Biological	AQ	Unknown	2.7	(Entire length)	2008/2013/2018	No
621	Castleman Run	WVO-92-L	CNA-Biological	AQ	Unknown	3.5	from 1.7 miles above mouth upstream to HW	2008/2013/2018	No
622	Conner Run	WVO-77-A	CNA-Biological	AQ	Unknown	3.2	(Entire length)	2008/2013/2018	No
623	French Run	WVO-83-B.8	CNA-Biological	AQ	Unknown	2.6	(Entire length)	2008/2013/2018	No
624	Glenns Run	WVO-89	Aluminum	AQ	Mine Drainage	2.4	(Entire length)	2008	Yes
			CNA-Biological	AQ	Unknown	2.4	(Entire length)	2008/2013/2018	No
			Iron	AQ, HH	Mine Drainage	2.4	(Entire length)	2008	Yes
			pH	All	Mine Drainage	2.4	(Entire length)	2008	Yes
625	Grave Creek	WVO-83	CNA-Biological	AQ	Unknown	19.5	from 2.5 miles above mouth upstream to HW	2008/2013/2018	No
626	Harrison Run	WVO-91	CNA-Biological	AQ	Unknown	1.0	(Entire length)	2008/2013/2018	No

2002 SECTION 303(d) LIST

WEST VIRGINIA

ID#	Stream Name	Stream Code	Criteria Affected	Use Affected	Cause	Impaired Length	Reach Description	Projected TMDL Year	1998 list?
627	Hollidays Hollow	WVO-88-H.5	(Aluminum, Iron, Manganese)	(AQ, HH)	Mine Drainage	1.7	(Entire length)	2008	Yes
			pH	All	Mine Drainage	1.7	(Entire length)	2008	Yes
628	Huff Run	WVO-90-D-1	CNA-Biological	AQ	Unknown	2.0	(Entire length)	2008/2013/2018	No
629	Jim Run	WVO-85	CNA-Biological	AQ	Unknown	1.6	mouth upstream 1.6 miles	2008/2013/2018	No
630	Laidley Run	WVO-88-D-2-D	CNA-Biological	AQ	Unknown	1.5	(Entire length)	2008/2013/2018	No
631	Long Drain	WVO-77-O-8	CNA-Biological	AQ	Unknown	8.8	(Entire length)	2008/2013/2018	No
632	Long Run	WVO-88-B	(Aluminum, Iron, Manganese)	(AQ, HH)	Mine Drainage	4.3	(Entire length)	2008	Yes
			pH	All	Mine Drainage	4.3	(Entire length)	2008	Yes
633	Lynn Camp Run	WVO-77-H	CNA-Biological	AQ	Unknown	4.0	mouth upstream 4.0 miles	2008/2013/2018	No
634	Maggoty Run	WVO-77-K	CNA-Biological	AQ	Unknown	5.2	(Entire length)	2008/2013/2018	No
635	Middle Grave Creek	WVO-83-A	Fecal coliform	HH	Unknown	12.2	(Entire length)	2008/2013/2018	No
636	North Fork/Grave Creek	WVO-83-E	CNA-Biological	AQ	Unknown	5.0	(Entire length)	2008/2013/2018	No
637	North Fork/Short Creek	WVO-90-D	CNA-Biological	AQ	Unknown	4.3	(Entire length)	2008/2013/2018	No
638	Ohio River (Upper South Section)	WVO-us	Dioxin	HH	Unknown	12.8	mp 84.2 to mp 71.4	2012	No
			Fecal coliform	HH	Unknown	27.0	mp 113.8 to mp 86.8	2012	No
			Mercury	HH	Unknown	42.4	mp 113.8 to 71.4 (entire section)	2012	No
639	Peters Run	WVO-88-D-1	CNA-Biological	AQ	Unknown	4.9	(Entire length)	2008/2013/2018	No
640	Pogue Run	WVO-88-B-2	(Aluminum, Iron, Manganese)	(AQ, HH)	Mine Drainage	0.9	(Entire length)	2008	Yes
			CNA-Biological	AQ	Unknown	0.9	(Entire length)	2008/2013/2018	No
			pH	All	Mine Drainage	0.9	(Entire length)	2008	Yes
641	Point Run	WVO-88-D-5	CNA-Biological	AQ	Unknown	2.1	(Entire length)	2008/2013/2018	No
642	Short Creek	WVO-90	CNA-Biological	AQ	Unknown	10.3	(Entire length)	2008/2013/2018	No
			Iron	AQ, HH	Mine Drainage	10.3	(Entire length)	2008	Yes
			pH	All	Mine Drainage	10.3	(Entire length)	2008	Yes

ID#	Stream Name	Stream Code	Criteria Affected	Use Affected	Cause	Impaired Length	Reach Description	Projected TMDL Year	1998 list?
643	UNT/North Fork RM 1.33/Short Creek	WVO-90-D-0.8	CNA-Biological	AQ	Unknown	1.3	(Entire length)	2008/2013/2018	No
644	Waddles Run	WVO-88-B-1	(Aluminum, Iron, Manganese)	(AQ, HH)	Mine Drainage	2.8	(Entire length)	2008	Yes
			CNA-Biological	AQ	Unknown	2.8	(Entire length)	2008/2013/2018	No
			pH	All	Mine Drainage	2.8	(Entire length)	2008	Yes
645	Wells Run	WVO-83-A-1.5	(Aluminum, Iron, Manganese)	(AQ, HH)	Mine Drainage	1.1	(Entire length)	2008	Yes
			pH	All	Mine Drainage	1.1	(Entire length)	2008	Yes
646	Wherry Run	WVO-88-H-2	CNA-Biological	AQ	Unknown	1.9	(Entire length)	2008/2013/2018	No
647	Whetstone Creek	WVO-77-E	CNA-Biological	AQ	Unknown	9.0	(Entire length)	2008/2013/2018	No
	WEST FORK WATERSHED - HUC# 05020002 - ***streams 20 miles 177***								
648	Ann Run	WVMW-15-E	CNA-Biological	AQ	Unknown	3.6	(Entire length)	2008/2013/2018	No
649	Bonds Run	WVMW-26-A	CNA-Biological	AQ	Unknown	1.4	(Entire length)	2008/2013/2018	No
650	Browns Run	WVMW-10	CNA-Biological	AQ	Unknown	1.0	(Entire length)	2008/2013/2018	No
651	Cherrycamp Run	WVMW-13-I-2	CNA-Biological	AQ	Unknown	3.2	(Entire length)	2008/2013/2018	No
652	Davisson Run	WVMW-15-D	CNA-Biological	AQ	Unknown	3.0	(Entire length)	2008/2013/2018	No
653	Glade Fork	WVMW-7-F	CNA-Biological	AQ	Unknown	5.0	(Entire length)	2008/2013/2018	No
654	Halls Run	WVMW-13-J	CNA-Biological	AQ	Unknown	4.6	(Entire length)	2008/2013/2018	No
655	Hughes Fork	WVMW-46-G	CNA-Biological	AQ	Unknown	2.6	(Entire length)	2008/2013/2018	No
656	Isaacs Creek	WVMW-29	CNA-Biological	AQ	Unknown	6.2	(Entire length)	2008/2013/2018	No
657	Johnson Fork	WVMW-20-C	CNA-Biological	AQ	Unknown	1.5	(Entire length)	2008/2013/2018	No
658	Limestone Run	WVMW-20-A	CNA-Biological	AQ	Unknown	1.6	(Entire length)	2008/2013/2018	No
659	Middle Run	WVMW-13-B-7	CNA-Biological	AQ	Unknown	3.8	(Entire length)	2008/2013/2018	No
660	Mudlick Run	WVMW-13-B-9	CNA-Biological	AQ	Unknown	2.4	(Entire length)	2008/2013/2018	No
661	Patterson Fork	WVMW-13-I-3	CNA-Biological	AQ	Unknown	2.4	(Entire length)	2008/2013/2018	No
662	Pringle Fork	WVMW-38-G-3	CNA-Biological	AQ	Unknown	0.9	mouth upstream 0.9 miles	2008/2013/2018	No

2002 SECTION 303(d) LIST

WEST VIRGINIA

ID#	Stream Name	Stream Code	Criteria Affected	Use Affected	Cause	Impaired Length	Reach Description	Projected TMDL Year	1998 list?
663	Right Fork/Stonecoal Creek	WVMW-38-G	CNA-Biological	AQ	Unknown	8.4	(Entire length)	2008/2013/2018	No
664	Salem Fork	WVMW-13-I	CNA-Biological	AQ	Unknown	9.2	(Entire length)	2008/2013/2018	No
665	Skin Creek	WVMW-46	CNA-Biological	AQ	Unknown	11.7	mouth upstream 11.7 miles	2008/2013/2018	No
666	Turkey Run	WVMW-21-E	CNA-Biological	AQ	Unknown	1.7	(Entire length)	2008/2013/2018	No
667	West Fork River	WVMW	CNA-Biological	AQ	Unknown	103.0	(Entire length)	2008/2013/2018	No
			Fecal coliform	HH	Unknown	103.0	(Entire length)	2008/2013/2018	No

SUPPLEMENTAL

SECTION

A

Previously Listed Waters - No TMDL Developed

Supplemental Table A - Previously Listed Waters - No TMDL Developed - 2002

ID#	Stream Name	Stream Code	Criteria	Use Affected	Reason for Delisting
HYDROLOGIC GROUP A					
CHEAT WATERSHED - HUC# 05020004					
1001	Buckhorn Run	WVMC-31	CNA-Biological	AQ	Biological monitoring not comparable to index
1002	Clay Lick Run	WVMC-49	CNA-Biological	AQ	New biological data does not support listing
1003	Elk Run	WVMC-12-B-4	CNA-Biological	AQ	Revised biological index and listing methodology
1004	Glade Run	WVMC-12-E	CNA-Biological	AQ	Revised biological index and listing methodology
1005	Jacobs Run	WVMC-43-B	CNA-Biological	AQ	Revised biological index and listing methodology
1006	Jump Rock Run	WVMC-17-B	CNA-Biological	AQ	Revised biological index and listing methodology
1007	Laurel Run	WVMCS-5	pH	All	New water quality data does not support listing
1008	Left Fork Bull Run	WVMC-11-D	CNA-Biological	AQ	Revised biological index and listing methodology
1009	Red Run	WVMCS-46	CNA-Biological	AQ	Revised biological index and listing methodology
1010	Shays Run	WVMC-60-D-4.5	CNA-Biological	AQ	Revised biological index and listing methodology
1011	UNT/Roaring Creek RM 0.31	WVMC-18-0.1A	CNA-Biological	AQ	Revised biological index and listing methodology
1012	UNT/Buffalo Run RM 1.86	WVMC-22-B	CNA-Biological	AQ	Biological monitoring not comparable to index
1013	UNT/Muddy Creek RM 1.5	WVMC-17-0.6A	CNA-Biological	AQ	Revised biological index and listing methodology
1014	UNT/Cherry Run RM 2.0	WVMC-12-B-5-C	CNA-Biological	AQ	Revised biological index and listing methodology
1015	Wolf Run	WVMC-57	CNA-Biological	AQ	Revised biological index and listing methodology
1016	Yoakum Run	WVMC-60-D-11	CNA-Biological	AQ	Revised biological index and listing methodology
SOUTH BRANCH POTOMAC WATERSHED - HUC# 02070001					
1017	Blackthorn Creek	WVPSB-47-B	CNA-Biological	AQ	Revised biological index and listing methodology
1018	Bouses Run	WVPSB-28-Z	CNA-Biological	AQ	Revised biological index and listing methodology
1019	Briggs Run	WVPSB-32	CNA-Biological	AQ	Revised biological index and listing methodology
1020	Brushy Run	WVPSB-28-K-1	CNA-Biological	AQ	Revised biological index and listing methodology
1021	Buffalo Run	WVPSB-14	CNA-Biological	AQ	Revised biological index and listing methodology
1022	Clifford Hollow	WVPSB-17-A	CNA-Biological	AQ	Revised biological index and listing methodology
1023	Devil Hole Run	WVPSB-16	CNA-Biological	AQ	Revised biological index and listing methodology
1024	Johns Run	WVPSB-2	CNA-Biological	AQ	Revised biological index and listing methodology
1025	Mill Run	WVPSB-34	CNA-Biological	AQ	New biological data does not support listing
1026	Mitchell Run	WVPSB-23-A-1	CNA-Biological	AQ	New biological data does not support listing
1027	Nelson Run	WVPSB-28-V	CNA-Biological	AQ	Revised biological index and listing methodology

Supplemental Table A - Previously Listed Waters - No TMDL Developed - 2002

ID#	Stream Name	Stream Code	Criteria	Use Affected	Reason for Delisting
1028	Reeds Creek	WVPSB-33	CNA-Biological	AQ	Revised biological index and listing methodology
1029	UNT/Mudlick Run RM 1.65	WVPSB-18-A-0.5	CNA-Biological	AQ	New biological data does not support listing
1030	UNT/South Branch Potomac (0.3 miles upstrea	WVPSB-30.5	CNA-Biological	AQ	Revised biological index and listing methodology
1031	UNT/South Branch Potomac River RM 0.1	WVPSB-0.5	CNA-Biological	AQ	Revised biological index and listing methodology
1032	Wagner Run	WVPSB-21-O	CNA-Biological	AQ	Revised biological index and listing methodology
	UPPER KANAWHA WATERSHED - HUC# 05050006				
1033	Kanawha River (Upper Section Only)	WVK-up	Zinc	AQ	Water quality criteria revised and new data does not support listi
1034	Laurel Fork	WVK-61-H-1	CNA-Biological	AQ	Revised biological index and listing methodology
1035	South Sand Branch	WVK-65-HH-2	CNA-Biological	AQ	Revised biological index and listing methodology
	UPPER OHIO NORTH WATERSHED - HUC# 05030101				
1036	Ebenezer Run	WVO-95-B	CNA-Biological	AQ	Revised biological index and listing methodology
1037	Ohio River (Upper North Section)	WVO-un	Aluminum	AQ	New water quality data does not support listing
			Chlordane	HH	New fish tissue data does not support consumption advisory.
			Copper	AQ	Water quality criteria revised and new data does not support listi
			Iron	AQ, HH	New water quality data does not support listing
1038	Scott Run	WVO-95-E	CNA-Biological	AQ	New biological data does not support listing
1039	Turkeyfoot Run	WVO-98-0.5A	CNA-Biological	AQ	Revised biological index and listing methodology
	YOUGHIOGHENY WATERSHED - HUC# 05020006				
1040	Buffalo Run	WVMY-9	CNA-Biological	AQ	Revised biological index and listing methodology
1041	Tanklin Run	WVMY-1-E	CNA-Biological	AQ	Revised biological index and listing methodology

Supplemental Table A - Previously Listed Waters - No TMDL Developed - 2002

ID#	Stream Name	Stream Code	Criteria	Use Affected	Reason for Delisting
HYDROLOGIC GROUP B					
COAL WATERSHED - HUC# 05050009					
1042	Clear Fork	WVKC-47	(Aluminum, Iron, Manganese)	(AQ, HH)	New water quality data does not support listing
1043	Drews Creek	WVKC-46-G-1	Iron	AQ, HH	New water quality data does not support listing
			Manganese	HH	New water quality data does not support listing
1044	Martin Fork	WVKC-46-G-2	Manganese	HH	New water quality data does not support listing
1045	Peachtree Creek	WVKC-46-G	Iron	AQ, HH	New water quality data does not support listing
			Manganese	HH	New water quality data does not support listing
1046	Shumate Creek	WVKC-46-D	(Aluminum, Iron, Manganese)	(AQ, HH)	New water quality data does not support listing
1047	Toney Fork	WVKC-47-L	(Aluminum, Iron, Manganese)	(AQ, HH)	New water quality data does not support listing
1048	Workman Creek	WVKC-47-O	(Aluminum, Iron, Manganese)	(AQ, HH)	New water quality data does not support listing
ELK WATERSHED - HUC# 05050007					
1049	Elk River	WVK-43	Zinc	AQ	Water quality criteria revised and new data does not support listi
NORTH BRANCH POTOMAC WATERSHED - HUC# 02070002					
1050	Stony River	WVPNB-17	Unionized Ammonia	AQ	New water quality data does not support listing
TYGART VALLEY WATERSHED - HUC# 05020001					
1051	Left Fork/Buckhannon River	WVMTB-32	pH	All	New water quality data does not support listing
1052	Right Fork/Buckhannon River	WVMTB-31	pH	All	New water quality data does not support listing

Supplemental Table A - Previously Listed Waters - No TMDL Developed - 2002

ID#	Stream Name	Stream Code	Criteria	Use Affected	Reason for Delisting
HYDROLOGIC GROUP C					
GAULEY WATERSHED - HUC# 05050005					
1053	Gauley River	WVK-82	Lead	AQ	Water quality criteria revised and new data does not support listi
			Zinc	AQ	Water quality criteria revised and new data does not support listi
LOWER GUYANDOTTE WATERSHED - HUC# 05070102					
1054	Pats Branch	WVOG-0.5	Copper	AQ	Does not require TMDL per 40CFR130.7(b)(1)
			Fluoride	HH	Does not require TMDL per 40CFR130.7(b)(1)
MIDDLE OHIO NORTH WATERSHED - HUC# 05030201					
1055	OHIO RV (middle north section)	WVO-mn	Aluminum	AQ	New water quality data does not support listing
			Chlordane	HH	New fish tissue data does not support consumption advisory.
			Copper	AQ	Water quality criteria revised and new data does not support listi
MIDDLE OHIO SOUTH WATERSHED - HUC# 05030202					
1056	Ohio River (Middle North Section)	WVO-ms	Aluminum	AQ	New water quality data does not support listing
			Chlordane	HH	New fish tissue data does not support consumption advisory.
			Iron	AQ, HH	New water quality data does not support listing
TUG FORK WATERSHED - HUC# 05070201					
1057	Mate Creek	WVBST-40	Iron	AQ, HH	New water quality data does not support listing
			Manganese	HH	New water quality data does not support listing
1058	Sprouse Creek	WVBST-38	Manganese	HH	New water quality data does not support listing
1059	Tug Fork River	WVBST	Zinc	AQ	Water quality criteria revised and new data does not support listi

Supplemental Table A - Previously Listed Waters - No TMDL Developed - 2002

ID#	Stream Name	Stream Code	Criteria	Use Affected	Reason for Delisting
HYDROLOGIC GROUP D					
LOWER NEW WATERSHED - HUC# 05050004					
1060	Arbuckle Creek	WVKN-21	(Aluminum, Iron, Manganese)	(AQ, HH)	New water quality data does not support listing
			pH	All	New water quality data does not support listing
MONONGAHELA WATERSHED - HUC# 05020003					
1061	Flaggy Meadow Run	WVM-14	Manganese	HH	New water quality data does not support listing
			pH	All	New water quality data does not support listing
1062	Pharaoh Run	WVM-21	Manganese	HH	New water quality data does not support listing
			pH	All	New water quality data does not support listing
			Aluminum	AQ	New water quality data does not support listing

Supplemental Table A - Previously Listed Waters - No TMDL Developed - 2002

ID#	Stream Name	Stream Code	Criteria	Use Affected	Reason for Delisting
HYDROLOGIC GROUP E					
DUNKARD WATERSHED - HUC# 05020005					
1063	Dunkard Creek	WVM-1	Manganese	HH	New water quality data does not support listing
LOWER OHIO WATERSHED - HUC# 05090101					
1064	Ohio River (Lower Section)	WVO-lo	Aluminum	AQ	New water quality data does not support listing
			Chlordane	HH	New fish tissue data does not support consumption advisory.
			Iron	AQ, HH	New water quality data does not support listing
TWELVEPOLE WATERSHED - HUC# 05090102					
1065	Twelvepole Creek	WVO-2	Zinc	AQ	Water quality criteria revised and new data does not support listi
UPPER GUYANDOTTE WATERSHED - HUC# 05070101					
1066	Big Cub Creek	WVOG-96	(Aluminum, Iron, Manganese)	(AQ, HH)	New water quality data does not support listing
1067	Island Creek	WVOG-65	(Aluminum, Iron, Manganese)	(AQ, HH)	New water quality data does not support listing
UPPER OHIO SOUTH WATERSHED - HUC# 05030106					
1068	Ohio River (Upper South Section)	WVO-us	Aluminum	AQ	New water quality data does not support listing
			Chlordane	HH	New fish tissue data does not support consumption advisory.
			Copper	AQ	Water quality criteria revised and new data does not support listi
WEST FORK WATERSHED - HUC# 05020002					
1069	Browns Creek	WVMW-23	pH	All	New water quality data does not support listing
1070	Simpson Creek	WVMW-15	pH	All	New water quality data does not support listing
1071	UNT #2/SIMPSON CK	WVMW-15?	(Aluminum, Iron, Manganese)	(AQ, HH)	Water quality criteria not applicable - no stream present
	UNT #2/SIMPSON CK		pH	All	Water quality criteria not applicable - no stream present
1072	West Fork River	WVM-26	Zinc	AQ	Water quality criteria revised and new data does not support listi

SUPPLEMENTAL

SECTION

B

Previously Listed Waters - TMDL Developed

Supplemental Table B - Previously Listed Waters - TMDL Developed - 2002

ID#	Stream Name	Stream Code	Criteria	TMDL Date
HYDROLOGIC GROUP A				
CHEAT WATERSHED - HUC# 05020004				
2001	Beaver Creek/Little Sandy Creek	WVMC-12-B-1	(Aluminum, Iron, Manganese)	3/2001
			pH	3/2001
2002	Beaver Creek/Blackwater River	WVMC-60-D-5	(Aluminum, Iron, Manganese)	3/2001
			pH	3/2001
2003	Big Sandy Creek	WVMC-12	(Aluminum, Iron, Manganese)	3/2001
			pH	3/2001
2004	Blackwater River	WVMC-60-D	Aluminum	3/2001
			Iron	3/2001
			Low D.O.	1/1998
2005	Bull Run	WVMC-11	(Aluminum, Iron, Manganese)	3/2001
			pH	3/2001
2006	Cheat River	WVMC	Aluminum	3/2001
			Iron	3/2001
			pH	3/2001
			Zinc	3/2001
2007	Cherry Run	WVMC-12-B-5	(Aluminum, Iron, Manganese)	3/2001
			pH	3/2001
2008	Church Creek	WVMC-23-A	(Aluminum, Iron, Manganese)	3/2001
			pH	3/2001
2009	Conner Run	WVMC-13.5	(Aluminum, Iron, Manganese)	3/2001
			pH	3/2001
2010	Crammeys Run	WVMC-3	(Aluminum, Iron, Manganese)	3/2001
2011	Fickey Run	WVMC-17-A-0.5	(Aluminum, Iron, Manganese)	3/2001
			pH	3/2001
2012	Finley Run	WVMC-60-D-2.7	(Aluminum, Iron, Manganese)	3/2001
			pH	3/2001

Supplemental Table B - Previously Listed Waters - TMDL Developed - 2002

ID#	Stream Name	Stream Code	Criteria	TMDL Date
2013	Glade Run/Beaver Creek	WVMC-12-B-1-A	(Aluminum, Iron, Manganese)	3/2001
			pH	3/2001
2014	Glade Run/Martin Creek	WVMC-17-A-1	(Aluminum, Iron, Manganese)	3/2001
			pH	3/2001
2015	Greens Run	WVMC-16	(Aluminum, Iron, Manganese)	3/2001
			pH	3/2001
2016	Hawkins Run	WVMC-60-D-5-C	(Aluminum, Iron, Manganese)	3/2001
			pH	3/2001
2017	Hazel Run	WVMC-12-C	(Aluminum, Iron, Manganese)	3/2001
			pH	3/2001
2018	Heather Run	WVMC-24	(Aluminum, Iron, Manganese)	3/2001
			pH	3/2001
2019	Hog Run	WVMC-12-B-3	(Aluminum, Iron, Manganese)	3/2001
			pH	3/2001
2020	Joes Run	WVMC-26	(Aluminum, Iron, Manganese)	3/2001
2021	Left Fork/Pringle Run	WVMC-27-A	Aluminum	3/2001
			Iron	3/2001
			Manganese	3/2001
			pH	3/2001
2022	Lick Run/Mountain Run	WVMC-11-B-1	(Aluminum, Iron, Manganese)	3/2001
			Aluminum	3/2001
			pH	3/2001
2023	Lick Run/Cheat River	WVMC-25	(Aluminum, Iron, Manganese)	3/2001
			pH	3/2001

Supplemental Table B - Previously Listed Waters - TMDL Developed - 2002

ID#	Stream Name	Stream Code	Criteria	TMDL Date
2024	Little Sandy Creek	WVMC-12-B	(Aluminum, Iron, Manganese)	3/2001
			pH	3/2001
2025	Long Run	WVMC-60-D-3-A	Aluminum	3/2001
			Iron	3/2001
			Manganese	3/2001
			pH	3/2001
2026	Martin Creek	WVMC-17-A	(Aluminum, Iron, Manganese)	3/2001
			pH	3/2001
2027	Middle Run/Bull Run	WVMC-11-A	(Aluminum, Iron, Manganese)	3/2001
			pH	3/2001
2028	Middle Run/North Fork/Blackwater River	WVMC-60-D-3-B	(Aluminum, Iron, Manganese)	3/2001
			pH	3/2001
2029	Morgan Run	WVMC-23	(Aluminum, Iron, Manganese)	3/2001
			pH	3/2001
2030	Mountain Run	WVMC-11-B	(Aluminum, Iron, Manganese)	3/2001
			pH	3/2001
2031	Muddy Creek	WVMC-17	(Aluminum, Iron, Manganese)	3/2001
			pH	3/2001
2032	North Fork/Blackwater River	WVMC-60-D-3	(Aluminum, Iron, Manganese)	3/2001
			pH	3/2001
2033	Pringle Run	WVMC-27	(Aluminum, Iron, Manganese)	3/2001
			pH	3/2001
2034	Right Fork/Pringle Run	WVMC-27-B	Aluminum	3/2001
			Iron	3/2001
			Manganese	3/2001
			pH	3/2001
2035	Right Fork Bull Run	WVMC-11-E	Aluminum	3/2001
			Iron	3/2001
			Manganese	3/2001
			pH	3/2001
2036	Roaring Creek	WVMC-18	(Aluminum, Iron, Manganese)	3/2001
			pH	3/2001

Supplemental Table B - Previously Listed Waters - TMDL Developed - 2002

ID#	Stream Name	Stream Code	Criteria	TMDL Date
2037	Snyder Run	WVMC-60-D-3-C	(Aluminum, Iron, Manganese)	3/2001
			pH	3/2001
2038	South Fork/Greens Run	WVMC-16-A	(Aluminum, Iron, Manganese)	3/2001
2039	Sovern Run	WVMC-12-0.5A	(Aluminum, Iron, Manganese)	3/2001
			pH	3/2001
2040	Tub Run	WVMC-60-D-2	(Aluminum, Iron, Manganese)	3/2001
			pH	3/2001
2041	UNT/Bull Run RM 1.6	WVMC-11-0.1A	Aluminum	3/2001
			pH	3/2001
2042	UNT/Bull Run RM 2.1	WVMC-11-C	Iron	3/2001
			Manganese	3/2001
			pH	3/2001
2043	UNT/Glade Run RM 1.06	WVMC-17-A-1-A	Aluminum	3/2001
			Iron	3/2001
			Manganese	3/2001
			pH	3/2001
2044	UNT/Glade Run RM 1.36	WVMC-17-A-1-B	Aluminum	3/2001
			Iron	3/2001
			Manganese	3/2001
			pH	3/2001
2045	UNT/Morgan Run RM 1.1	WVMC-23-0.2A	Aluminum	3/2001
			Manganese	3/2001
			pH	3/2001
2046	UNT/Beaver Creek RM 1.68	WVMC-12-B-1-C	(Aluminum, Iron, Manganese)	3/2001
			pH	3/2001
2047	UNT/Big Sandy Creek RM 2.9	WVMC-12-0.2A	(Aluminum, Iron, Manganese)	3/2001
			pH	3/2001
2048	UNT/Cheat Lake RM 4.0	WVMC-0.5	(Aluminum, Iron, Manganese)	3/2001
			pH	3/2001
2049	UNT/Cheat Lake RM 7.7	WVMC-2.3	(Aluminum, Iron, Manganese)	3/2001
			pH	3/2001
2050	UNT/Cheat Lake RM 8.5	WVMC-2.4	(Aluminum, Iron, Manganese)	3/2001
			pH	3/2001

Supplemental Table B - Previously Listed Waters - TMDL Developed - 2002

ID#	Stream Name	Stream Code	Criteria	TMDL Date
2501	UNT/Church Creek RM 1.24	WVMC-23-A-1	Aluminum	3/2001
			Iron	3/2001
			Manganese	3/2001
			pH	3/2001
2052	UNT/Heather Run RM 1.5	WVMC-24-A	Aluminum	3/2001
			Iron	3/2001
			Manganese	3/2001
			pH	3/2001
2053	UNT/South Fork RM 0.6	WVMC-16-A-1	Aluminum	3/2001
			Iron	3/2001
			Manganese	3/2001
			pH	3/2001
2054	Webster Run	WVMC-12-B-0.5	(Aluminum, Iron, Manganese)	3/2001
			pH	3/2001
	SHENANDOAH (JEFFERSON) WATERSHED - HUC# 02070007			
2056	Shenandoah River	WVS	PCB's	9/2001
	SOUTH BRANCH POTOMAC WATERSHED - HUC# 02070001			
2057	Anderson Run	WVPSB-18	Fecal coliform	2/1998
2058	Lunice Creek	WVPSB-26	Fecal coliform	2/1998
2059	Mill Creek	WVPSB-25	Fecal coliform	2/1998
2060	South Branch Potomac River	WVP-21	Fecal coliform	2/1998
	UPPER KANAWHA WATERSHED - HUC# 05050006			
2061	Big Fork	WVK-65-DD-2	(Aluminum, Iron, Manganese)	9/2001
2062	Cedar Creek	WVK-65-Q	pH	9/2001
2063	Fifteenmile Creek	WVK-65-R	(Aluminum, Iron, Manganese)	9/2001
2064	Hickory Camp Branch	WVK-65-P	(Aluminum, Iron, Manganese)	9/2001
			CNA-Biological	9/2001
			pH	9/2001
2065	Jones Branch	WVK-65-C	(Aluminum, Iron, Manganese)	9/2001

Supplemental Table B - Previously Listed Waters - TMDL Developed - 2002

ID#	Stream Name	Stream Code	Criteria	TMDL Date
2066	Long Branch/Tenmile Fork	WVK-65-M-1	(Aluminum, Iron, Manganese)	9/2001
			pH	9/2001
2067	Long Branch/Mossy Creek	WVK-65-Y-2	(Aluminum, Iron, Manganese)	9/2001
2068	Lykins Creek	WVK-65-W	(Aluminum, Iron, Manganese)	9/2001
			pH	9/2001
2069	Packs Branch	WVK-65-DD	(Aluminum, Iron, Manganese)	9/2001
2070	Paint Creek	WVK-65	Aluminum	9/2001
			pH	9/2001
2071	Skitter Creek	WVK-65-T	(Aluminum, Iron, Manganese)	9/2001
2072	Spring Branch	WVK-65-S	pH	9/2001
2073	Tenmile Fork	WVK-65-M	(Aluminum, Iron, Manganese)	9/2001
			pH	9/2001
2074	UNT/Paint Creek RM 16.77	WVK-65-Q.3	(Aluminum, Iron, Manganese)	9/2001
			pH	9/2001
2075	UNT/Paint Creek RM 16.97	WVK-65-Q.5	(Aluminum, Iron, Manganese)	9/2001
			pH	9/2001
	UPPER OHIO NORTH WATERSHED - HUC# 05030101			
2076	Ohio River (Upper North Section)	WVO-UN	PCB's	9/2002
2077	Tomlinson Run Lake	WVO(L)-102-(1)	Siltation	9/1998

Supplemental Table B - Previously Listed Waters - TMDL Developed - 2002

ID#	Stream Name	Stream Code	Criteria	TMDL Date
HYDROLOGIC GROUP B				
ELK WATERSHED - HUC# 05050007				
2078	Buffalo Creek	WVKE-50	(Aluminum, Iron, Manganese)	9/2001
2079	Elk River	WVK-43	Aluminum	9/2001
			Iron	9/2001
			Lead	9/2001
2080	Left Fork	WVKE-26-A	(Aluminum, Iron, Manganese)	9/2001
			pH	9/2001
2081	Morris Creek	WVKE-26	(Aluminum, Iron, Manganese)	9/2001
			pH	9/2001
2082	Pheasant Run	WVKE-50-T	(Aluminum, Iron, Manganese)	9/2001
			pH	9/2001
LOWER KANAWHA WATERSHED - HUC# 05050008				
2083	Armour Creek	WVK-30	Dioxin	9/2000
2084	Flat Fork	WVKP-33	PCB's	9/2001
2085	Kanawha River (Lower Section Only)	WVO-20-lo	Dioxin	9/2000
2086	Pocatalico River	WVK-29	Dioxin	9/2000
2087	Ridenour Lake	WVK(L)-30-A-(1)	Aluminum	9/1999
			Iron	9/1999
			Nutrients	9/1999
			Siltation	9/1999

Supplemental Table B - Previously Listed Waters - TMDL Developed - 2002

ID#	Stream Name	Stream Code	Criteria	TMDL Date
	NORTH BRANCH POTOMAC WATERSHED - HUC# 02070002			
2088	Fourmile Run	WVPNB-17-C	(Aluminum, Iron, Manganese)	9/2001
			pH	9/2001
2089	Helmick Run	WVPNB-17-E	(Aluminum, Iron, Manganese)	9/2001
			pH	9/2001
2090	Laurel Run	WVPNB-17-B.5	pH	9/2001
2091	Laurel Run (flows into Mount Storm Lake)	WVPNB-17-D	(Aluminum, Iron, Manganese)	9/2001
			pH	9/2001
2092	Stony River	WVPNB-17	(Aluminum, Iron, Manganese)	9/2001
			pH	9/2001
	TYGART VALLEY WATERSHED - HUC# 05020001			
2093	Anglins Run	WVMT-29	(Aluminum, Iron, Manganese)	3/2001
			pH	3/2001
2094	Beaver Creek	WVMT-37	(Aluminum, Iron, Manganese)	3/2001
			pH	3/2001
2095	Berkely Run	WVMT-11	(Aluminum, Iron, Manganese)	3/2001
			pH	3/2001
2096	Berry Run	WVMT-11-B-1	(Aluminum, Iron, Manganese)	3/2001
			pH	3/2001
2097	Birds Creek	WVMT-12-H	(Aluminum, Iron, Manganese)	3/2001
			pH	3/2001
2098	Blacklick Run	WVMTB-18-B-2	Iron	3/2001
2099	Brains Creek	WVMT-12-G-2	(Aluminum, Iron, Manganese)	3/2001
			pH	3/2001
2100	Bridge Run	WVMTB-11-B.7	(Aluminum, Iron, Manganese)	3/2001
			pH	3/2001
2101	Buckhannon River	WVMTB	Iron	9/1998
2102	Bull Run	WVMTB-18-B	Iron	3/2001
2103	Cassity Fork	WVMTM-16	(Aluminum, Iron, Manganese)	3/2001
			pH	3/2001
2104	Devil Run	WVMTM-4	(Aluminum, Iron, Manganese)	3/2001
			pH	3/2001

Supplemental Table B - Previously Listed Waters - TMDL Developed - 2002

ID#	Stream Name	Stream Code	Criteria	TMDL Date
2105	Fink Run	WVMTB-11	(Aluminum, Iron, Manganese)	3/2001
			pH	3/2001
2106	Ford Run	WVMT-27	(Aluminum, Iron, Manganese)	3/2001
			pH	3/2001
2107	Foxgrape Run	WVMT-26-B	Aluminum	3/2001
2108	Frost Run	WVMT-24-A	(Aluminum, Iron, Manganese)	3/2001
			pH	3/2001
2109	Glade Run	WVMT-18-C	(Aluminum, Iron, Manganese)	3/2001
			pH	3/2001
2110	Goose Creek	WVMT-4	(Aluminum, Iron, Manganese)	3/2001
			pH	3/2001
2111	Grassy Run	WVMT-41	(Aluminum, Iron, Manganese)	3/2001
			pH	3/2001
2112	Hell Run	WVMTM-6	(Aluminum, Iron, Manganese)	3/2001
			pH	3/2001
2113	Herods Run	WVMTB-30	pH	3/2001
2114	Island Run	WVMT-36	(Aluminum, Iron, Manganese)	3/2001
			pH	3/2001
2115	Laurel Run	WVMT-39	(Aluminum, Iron, Manganese)	3/2001
			pH	3/2001
2116	Left Fork/Little Sandy Creek	WVMT-18-E-3	(Aluminum, Iron, Manganese)	3/2001
			pH	3/2001
2117	Left Fork/Sandy Creek	WVMT-18-G	(Aluminum, Iron, Manganese)	3/2001
2118	Left Fork/Buckhannon River	WVMTB-32	Iron	9/1998
2119	Little Hackers Creek	WVMT-26-C	Aluminum	3/2001
2120	Little Pecks Run	WVMTB-5-B	Iron	3/2001
			Manganese	3/2001
2121	Little Racoon Run	WVMT-12-C-2	(Aluminum, Iron, Manganese)	3/2001
2122	Little Sandy Creek	WVMT-18-E	(Aluminum, Iron, Manganese)	3/2001
			pH	3/2001
2123	Long Run	WVMT-11-B	(Aluminum, Iron, Manganese)	3/2001
			pH	3/2001
2124	Lost Run	WVMT-5	(Aluminum, Iron, Manganese)	3/2001
			pH	3/2001

Supplemental Table B - Previously Listed Waters - TMDL Developed - 2002

ID#	Stream Name	Stream Code	Criteria	TMDL Date
2125	Maple Run	WVMT-18-E-1	(Aluminum, Iron, Manganese)	3/2001
			pH	3/2001
2126	Middle Fork River/Tygart Valley River	WVMTM	Aluminum	3/2001
			pH	3/2001
2127	Mud Lick	WVMTB-11-B	Iron	3/2001
			Manganese	3/2001
2128	Mud Run	WVMTB-5-C	(Aluminum, Iron, Manganese)	3/2001
2129	Mudlick Run	WVMTB-18-B-3	Iron	3/2001
2130	Panther Fork	WVMTB-27	pH	9/1998
2131	Panther Run	WVMTM-16-A	(Aluminum, Iron, Manganese)	3/2001
			pH	3/2001
2132	Pecks Run	WVMTB-5	(Aluminum, Iron, Manganese)	3/2001
			pH	3/2001
2133	Raccoon Creek	WVMT-12-C	(Aluminum, Iron, Manganese)	3/2001
			pH	3/2001
2134	Roaring Creek	WVMT-42	(Aluminum, Iron, Manganese)	3/2001
			pH	3/2001
2135	Sandy Creek	WVMT-18	(Aluminum, Iron, Manganese)	3/2001
			pH	3/2001
2136	Shelby Run	WVMT-11-A	(Aluminum, Iron, Manganese)	3/2001
			pH	3/2001
2137	Squires Creek	WVMT-12-H-1	(Aluminum, Iron, Manganese)	3/2001
			pH	3/2001
2138	Sugar Run	WVMTB-10-A	(Aluminum, Iron, Manganese)	3/2001
2139	Swamp Run	WVMTB-29	(Aluminum, Iron, Manganese)	3/2001
			pH	3/2001
2140	Tenmile Creek	WVMTB-25	Aluminum	9/1998
			Iron	9/1998
2141	Three Fork Creek	WVMT-12	(Aluminum, Iron, Manganese)	3/2001
			pH	3/2001
2142	Turkey Run	WVMTB-10	(Aluminum, Iron, Manganese)	3/2001
			pH	3/2001

Supplemental Table B - Previously Listed Waters - TMDL Developed - 2002

ID#	Stream Name	Stream Code	Criteria	TMDL Date
2143	Tygart Valley River	WVMT	(Aluminum, Iron, Manganese)	3/2001
			Aluminum	3/2001
			pH	3/2001
2144	UNT/Pecks Run RM 3.62	WVMTB-5-0.8A	(Aluminum, Iron, Manganese)	3/2001
			pH	3/2001
2145	UNT/Tygart Valley River RM 75.2 (Harding)	WVMT-40.5	(Aluminum, Iron, Manganese)	3/2001
			pH	3/2001
2146	Whiteoak Run	WVMTM-8	(Aluminum, Iron, Manganese)	3/2001
			pH	3/2001

Supplemental Table B - Previously Listed Waters - TMDL Developed - 2002

ID#	Stream Name	Stream Code	Criteria	TMDL Date
HYDROLOGIC GROUP C				
MIDDLE OHIO NORTH WATERSHED - HUC# 05030201				
2147	Ohio River (Middle North Section)	WVO-mn	PCB's	9/2002
MIDDLE OHIO SOUTH WATERSHED - HUC# 05030202				
2148	Ohio River (Middle South Section)	WVO-ms	Dioxin	9/2000
			PCB's	9/2002
2149	Turkey Run Lake	WVO(L)-37-(1)	Aluminum	9/1999
			Iron	9/1999
			Nutrients	9/1999
			Siltation	9/1999
TUG FORK WATERSHED - HUC# 05070201				
2150	Adkin Branch	WVBST-110	(Aluminum, Iron, Manganese)	9/2002
2151	Atwell Branch	WVBST-70-O	(Aluminum, Iron, Manganese)	9/2002
2152	Badway Branch	WVBST-78-G	(Aluminum, Iron, Manganese)	9/2002
2153	Ballard Harmon Branch	WVBST-122	(Aluminum, Iron, Manganese)	9/2002
2154	Beartown Branch	WVBST-70-I	(Aluminum, Iron, Manganese)	9/2002
2155	Belcher Branch (at Venus)	WVBST-111	(Aluminum, Iron, Manganese)	9/2002
2156	Belcher Branch (at Pageton)	WVBST-116	(Aluminum, Iron, Manganese)	9/2002
2157	Chafin Branch	WVBST-40-D	(Aluminum, Iron, Manganese)	9/2002
2158	Clear Fork	WVBST-76	(Aluminum, Iron, Manganese)	9/2002
2159	Coontree Branch	WVBST-78-E	(Aluminum, Iron, Manganese)	9/2002
2160	Cub Branch	WVBST-60-D	(Aluminum, Iron, Manganese)	9/2002
2161	Dry Branch	WVBST-119	(Aluminum, Iron, Manganese)	9/2002
2162	Grapevine Branch/Tug Fork River	WVBST-107	(Aluminum, Iron, Manganese)	9/2002
2163	Grapevine Branch/Dry Fork	WVBST-70-F	(Aluminum, Iron, Manganese)	9/2002
2164	Grapevine Creek	WVBST-43	(Aluminum, Iron, Manganese)	9/2002
2165	Harmon Branch	WVBST-113	(Aluminum, Iron, Manganese)	9/2002
2166	Harris Branch	WVBST-104	(Aluminum, Iron, Manganese)	9/2002

Supplemental Table B - Previously Listed Waters - TMDL Developed - 2002

ID#	Stream Name	Stream Code	Criteria	TMDL Date
2167	Honeycamp Branch	WVBST-78-D	(Aluminum, Iron, Manganese)	9/2002
2168	Indian Grave Branch	WVBST-120-A	(Aluminum, Iron, Manganese)	9/2002
2169	Jed Branch	WVBST-102	(Aluminum, Iron, Manganese)	9/2002
2170	Jump Branch	WVBST-115-D	(Aluminum, Iron, Manganese)	9/2002
2171	Laurel Branch	WVBST-115-F	(Aluminum, Iron, Manganese)	9/2002
2172	Left Fork/Davy Branch	WVBST-85-A	(Aluminum, Iron, Manganese)	9/2002
2173	Left Fork/Sandlick Creek	WVBST-109-B	(Aluminum, Iron, Manganese)	9/2002
2174	Lick Fork	WVBST-43-A	(Aluminum, Iron, Manganese)	9/2002
2175	Little Creek	WVBST-120	(Aluminum, Iron, Manganese)	9/2002
2176	Little Indian Creek	WVBST-100	(Aluminum, Iron, Manganese)	9/2002
2177	Loop Branch	WVBST-117	(Aluminum, Iron, Manganese)	9/2002
2178	Mate Creek	WVBST-40	Aluminum	9/2002
2179	Mauchlinville Branch	WVBST-42-B	(Aluminum, Iron, Manganese)	9/2002
			pH	9/2002
2180	McClure Branch	WVBST-115-B	(Aluminum, Iron, Manganese)	9/2002
2181	Mill Branch	WVBST-118	(Aluminum, Iron, Manganese)	9/2002
2182	Millseat Branch	WVBST-121	(Aluminum, Iron, Manganese)	9/2002
2183	Millstone Branch	WVBST-24-O	(Aluminum, Iron, Manganese)	9/2002
2184	Mitchell Branch/Tug Fork River	WVBST-105	(Aluminum, Iron, Manganese)	9/2002
2185	Mitchell Branch/Mate Creek	WVBST-40-C	(Aluminum, Iron, Manganese)	9/2002
2186	Moorecamp Branch	WVBST-78-I	(Aluminum, Iron, Manganese)	9/2002
2187	Newson Branch	WVBST-78-H	(Aluminum, Iron, Manganese)	9/2002
2188	Panther Creek	WVBST-60	(Aluminum, Iron, Manganese)	9/2002
2189	Pigeon Creek	WVBST-24	Aluminum	9/2002
			Iron	9/2002
			Manganese	9/2002
			pH	9/2002
2190	PowderMill Branch	WVBST-3	(Aluminum, Iron, Manganese)	9/2002
2191	Puncheoncamp Branch/Little Creek	WVBST-120-B	(Aluminum, Iron, Manganese)	9/2002
2192	Puncheoncamp Branch/Browns Creek	WVBST-98-A	(Aluminum, Iron, Manganese)	9/2002
2193	Right Fork/Sandlick Creek	WVBST-109-A	(Aluminum, Iron, Manganese)	9/2002
2194	Road Fork	WVBST-115-G	(Aluminum, Iron, Manganese)	9/2002
2195	Rock Narrows Branch	WVBST-103	(Aluminum, Iron, Manganese)	9/2002

Supplemental Table B - Previously Listed Waters - TMDL Developed - 2002

ID#	Stream Name	Stream Code	Criteria	TMDL Date
2196	Rutherford Branch	WVBST-40-B	(Aluminum, Iron, Manganese)	9/2002
			pH	9/2002
2197	Sams Branch	WVBST-123	(Aluminum, Iron, Manganese)	9/2002
2198	Sandlick Creek	WVBST-109	(Aluminum, Iron, Manganese)	9/2002
2199	Scissorsville Branch	WVBST-42-A	(Aluminum, Iron, Manganese)	9/2002
			pH	9/2002
2200	Shabbyroom Branch	WVBST-78-B	(Aluminum, Iron, Manganese)	9/2002
2201	Shannon Branch	WVBST-94	(Aluminum, Iron, Manganese)	9/2002
2202	South Fork/Tug Fork River	WVBST-115	(Aluminum, Iron, Manganese)	9/2002
2203	Spice Creek	WVBST-115-E	(Aluminum, Iron, Manganese)	9/2002
2204	Sprouse Creek	WVBST-38	Aluminum	9/2002
			Iron	9/2002
2205	Stonecoal Branch	WVBST-78-F	(Aluminum, Iron, Manganese)	9/2002
2206	Sugarcamp Branch	WVBST-106	(Aluminum, Iron, Manganese)	9/2002
2207	Sugartree Creek	WVBST-32	(Aluminum, Iron, Manganese)	9/2002
2208	Tea Branch	WVBST-115-A	(Aluminum, Iron, Manganese)	9/2002
2209	Thacker Creek	WVBST-42	(Aluminum, Iron, Manganese)	9/2002
			pH	9/2002
2210	Tug Fork River	WVBST	Aluminum	9/2002
			Iron	9/2002
2211	Turnhole Branch	WVBST-112	(Aluminum, Iron, Manganese)	9/2002
2212	Upper Shannon Branch	WVBST-95	(Aluminum, Iron, Manganese)	9/2002
2213	Williamson Creek	WVBST-33	(Aluminum, Iron, Manganese)	9/2002

Supplemental Table B - Previously Listed Waters - TMDL Developed - 2002

ID#	Stream Name	Stream Code	Criteria	TMDL Date
HYDROLOGIC GROUP D				
LITTLE KANAWHA WATERSHED - HUC# 05030203				
2214	Hurricane W S Rs	WVK(L)-22-(1)	Iron	9/1998
			Nutrients	9/1998
			Siltation	9/1998
2215	Little Kanawha River	WVO-47	Aluminum	9/2000
			Iron	9/2000
2216	Mountwood Lake	WVLK(L)-10-(1)	Siltation	9/1998
2217	Oil Creek	WVLK-94	Aluminum	9/2000
2218	Reedy Creek	WVLK-25	Aluminum	9/2000
			Iron	9/2000
2219	Saltlick Creek	WVLK-95	Aluminum	9/2000
			Iron	9/2000
2220	Saltlick Pond 9	WVLK(L)-95-(1)	Siltation	9/2000
2221	Sand Fork	WVLK-86	Aluminum	9/2000
			Iron	9/2000
2222	Spring Creek	WVLK-31	Aluminum	9/2000
			Iron	9/2000
LOWER NEW WATERSHED - HUC# 05050004				
2223	Dunloup Creek	WVKN-22	Aluminum	9/2002
			Fecal coliform	9/2002
			Iron	9/2002
2224	Meadow Fork	WVKN-22-B	(Aluminum, Iron, Manganese)	9/2002
			pH	9/2002

Supplemental Table B - Previously Listed Waters - TMDL Developed - 2002

ID#	Stream Name	Stream Code	Criteria	TMDL Date
	MONONGAHELA WATERSHED - HUC# 05020003			
2225	Birchfield Run	WVM-15	(Aluminum, Iron, Manganese) pH	9/2002 9/2002
2226	Booths Creek	WVM-10	(Aluminum, Iron, Manganese) pH	9/2002 9/2002
2227	Brand Run	WVM-11	(Aluminum, Iron, Manganese) pH	9/2002 9/2002
2228	Buffalo Creek	WVM-23	Aluminum	9/2002
2229	Camp Run	WVM-2.1	(Aluminum, Iron, Manganese) pH	9/2002 9/2002
2230	Cobun Creek	WVM-9	Aluminum Iron Manganese pH	9/2002 9/2002 9/2002 9/2002
2231	Crafts Run	WVM-4-A	(Aluminum, Iron, Manganese) pH	9/2002 9/2002
2232	Deckers Creek	WVM-8	(Aluminum, Iron, Manganese) pH	9/2002 9/2002
2233	Deep Hollow	WVM-8-A.7	(Aluminum, Iron, Manganese) pH	9/2002 9/2002
2234	Dents Run	WVM-7	Aluminum Iron Manganese	9/2002 9/2002 9/2002
2235	Dillan Creek	WVM-8-G	(Aluminum, Iron, Manganese)	9/2002
2236	Flaggy Meadow Run	WVM-14	Aluminum Iron	9/2002 9/2002
2237	Fleming Fork	WVM-23-N-1	(Aluminum, Iron, Manganese)	9/2002
2238	Glady Run	WVM-8-D	(Aluminum, Iron, Manganese) pH	9/2002 9/2002
2239	Hartman Run	WVM-8-0.5A	(Aluminum, Iron, Manganese) pH	9/2002 9/2002
2240	Indian Creek	WVM-17	Aluminum	9/2002

Supplemental Table B - Previously Listed Waters - TMDL Developed - 2002

ID#	Stream Name	Stream Code	Criteria	TMDL Date
2241	Joes Run	WVM-23-R	(Aluminum, Iron, Manganese) pH	9/2002 9/2002
2242	Kanes Creek	WVM-8-I	(Aluminum, Iron, Manganese) pH	9/2002 9/2002
2243	Laurel Run/Monongahela River	WVM-2.7	(Aluminum, Iron, Manganese) pH	9/2002 9/2002
2244	Laurel Run/Deckers Creek	WVM-8-H	(Aluminum, Iron, Manganese) pH	9/2002 9/2002
2245	Mays Run	WVM-10-E	(Aluminum, Iron, Manganese) pH	9/2002 9/2002
2246	Mod Run	WVM-23-K	(Aluminum, Iron, Manganese)	9/2002
2247	Monongahela River	WVM	Aluminum	9/2002
2248	Owl Creek	WVM-10-D	(Aluminum, Iron, Manganese) pH	9/2002 9/2002
2249	Parker Run	WVM-20	(Aluminum, Iron, Manganese) pH	9/2002 9/2002
2250	Pharaoh Run	WVM-21	Iron	9/2002
2251	Robinson Run/Paw Paw Creek	WVM-22-C	(Aluminum, Iron, Manganese) pH	9/2002 9/2002
2252	Robinson Run/Monongahela River	WVM-4	(Aluminum, Iron, Manganese) pH	9/2002 9/2002
2253	Scott Run	WVM-6	Aluminum Iron Manganese	9/2002 9/2002 9/2002
2254	Slabcamp Run	WVM-8-F	(Aluminum, Iron, Manganese) pH	9/2002 9/2002
2255	Sugar Run	WVM-22-K	(Aluminum, Iron, Manganese) pH	9/2002 9/2002
2256	UNT/Booths Creek RM 6.24	WVM-10-F	(Aluminum, Iron, Manganese) pH	9/2002 9/2002
2257	UNT/Dents Run RM 3.57	WVM-7-C	(Aluminum, Iron, Manganese) pH	9/2002 9/2002

Supplemental Table B - Previously Listed Waters - TMDL Developed - 2002

ID#	Stream Name	Stream Code	Criteria	TMDL Date
2258	UNT/Monongahela River (0.66 miles below state line)	WVM-2.6	(Aluminum, Iron, Manganese)	9/2002
			pH	9/2002
2259	UNT/Monongahela River	WVM-23.5	Iron	9/2001
			Manganese	9/2001
2260	UNT/Monongahela River RM 121.8 (Montana)	WVM-20.2	(Aluminum, Iron, Manganese)	9/2002
			pH	9/2002
2261	UNT/Monongahela River RM 128.55 (Millersville)	WVM-25.9	(Aluminum, Iron, Manganese)	9/2002
			pH	9/2002
2262	UNT/Robinson Run RM 1.09	WVM-4-B	(Aluminum, Iron, Manganese)	9/2002
			pH	9/2002
2263	West Run	WVM-3	(Aluminum, Iron, Manganese)	9/2002
			pH	9/2002
2264	Whetstone Run	WVM-23-Q	(Aluminum, Iron, Manganese)	9/2002
			pH	9/2002

Supplemental Table B - Previously Listed Waters - TMDL Developed - 2002

ID#	Stream Name	Stream Code	Criteria	TMDL Date
HYDROLOGIC GROUP E				
CACAPON WATERSHED - HUC# 02070003				
2265	Lost River	WVPC-24	Fecal coliform	9/1998
LOWER OHIO WATERSHED - HUC# 05090101				
2266	Fourpole Creek	WVO-3	Aluminum	9/2002
2267	Ohio River (Lower Section)	WVO-lo	Dioxin	9/2000
			PCB's	9/2002
UPPER OHIO SOUTH WATERSHED - HUC# 05030106				
2268	Bear Rock Lake	WVO(L)-88-D-2-F-(1)	Low D.O	9/1999
			Nutrients	9/1999
			Siltation	9/1999
2269	Burches Run Lake	WVO(L)-83-C-(1)	Nutrients	9/1998
			Siltation	9/1998
2270	Castleman Run Lake	WVO(L)-92-L-(1)	Nutrients	9/1999
			Siltation	9/1999
2271	Ohio River (Upper South Section)	WVO-us	PCB's	9/2002
WEST FORK WATERSHED - HUC# 05020002				
2272	Arnold Run	WVMW-21-P	(Aluminum, Iron, Manganese)	9/2002
2273	Bartlett Run	WVMW-15-K	(Aluminum, Iron, Manganese)	9/2002
			pH	9/2002
2274	Bennett Run	WVMW-13-B-2	(Aluminum, Iron, Manganese)	9/2002
			pH	9/2002
2275	Berry Run	WVMW-15-I	(Aluminum, Iron, Manganese)	9/2002
			pH	9/2002
2276	Big Elk Creek	WVMW-13-B-6	(Aluminum, Iron, Manganese)	9/2002
2277	Bingamon Creek	WVMW-7	Aluminum	9/2002
			Iron	9/2002

Supplemental Table B - Previously Listed Waters - TMDL Developed - 2002

ID#	Stream Name	Stream Code	Criteria	TMDL Date
2278	Birds Run	WVMW-21-O	(Aluminum, Iron, Manganese)	9/2002
2279	Bonds Run	WVMW-26-A	(Aluminum, Iron, Manganese)	9/2002
2280	Booths Creek	WVMW-2	(Aluminum, Iron, Manganese)	9/2002
2281	Browns Creek	WVMW-23	(Aluminum, Iron, Manganese)	9/2002
2282	Browns Run	WVMW-10	(Aluminum, Iron, Manganese)	9/2002
2283	Brushy Fork	WVMW-21-G	(Aluminum, Iron, Manganese)	9/2002
2284	Buck Run	WVMW-15-J-1	(Aluminum, Iron, Manganese)	9/2002
			pH	9/2002
2285	Buffalo Creek	WVMW-27	(Aluminum, Iron, Manganese)	9/2002
2286	Camp Run	WVMW-15-M	(Aluminum, Iron, Manganese)	9/2002
			pH	9/2002
2287	Charity Fork	WVMW-21-M-5-A	(Aluminum, Iron, Manganese)	9/2002
2288	Cherrycamp Run	WVMW-13-I-2	(Aluminum, Iron, Manganese)	9/2002
2289	Coburn Fork	WVMW-13-N	(Aluminum, Iron, Manganese)	9/2002
			pH	9/2002
2290	Coburns Creek	WVMW-24	(Aluminum, Iron, Manganese)	9/2002
2291	Coons Run	WVMW-3	(Aluminum, Iron, Manganese)	9/2002
			pH	9/2002
2292	Coplin Run	WVMW-21-G-1	(Aluminum, Iron, Manganese)	9/2002
2293	Crooked Run	WVMW-19	(Aluminum, Iron, Manganese)	9/2002
			pH	9/2002
2294	Cunningham Run	WVMW-7-D	Aluminum	9/2002
			Iron	9/2002
2295	Elk Creek	WVMW-21	(Aluminum, Iron, Manganese)	9/2002
2296	Elklick Run	WVMW-7-C	(Aluminum, Iron, Manganese)	9/2002
2297	Fall Run	WVMW-18	(Aluminum, Iron, Manganese)	9/2002
			pH	9/2002
2298	Fitz Run	WVMW-50-C	(Aluminum, Iron, Manganese)	9/2002
			pH	9/2002
2299	Gabe Fork	WVMW-15-J-3	(Aluminum, Iron, Manganese)	9/2002
			pH	9/2002
2300	Gnatty Creek	WVMW-21-M	(Aluminum, Iron, Manganese)	9/2002
2301	Grass Run	WVMW-38-E	(Aluminum, Iron, Manganese)	9/2002
2302	Gregory Run	WVMW-13-D	(Aluminum, Iron, Manganese)	9/2002

Supplemental Table B - Previously Listed Waters - TMDL Developed - 2002

ID#	Stream Name	Stream Code	Criteria	TMDL Date
2303	Hackers Creek	WVMW-31	(Aluminum, Iron, Manganese)	9/2002
			pH	9/2002
2304	Hog Lick Run	WVMW-2-A	(Aluminum, Iron, Manganese)	9/2002
2305	Hooppole Run	WVMW-21-F	(Aluminum, Iron, Manganese)	9/2002
2306	Horners Run	WVMW-2-D	(Aluminum, Iron, Manganese)	9/2002
			pH	9/2002
2307	Isaacs Creek	WVMW-13-C	(Aluminum, Iron, Manganese)	9/2002
2308	Isaacs Run	WVMW-21-Q	(Aluminum, Iron, Manganese)	9/2002
2309	Jack Run/Tenmile Creek	WVMW-13-0.5A	(Aluminum, Iron, Manganese)	9/2002
2310	Jack Run/Simpson Creek	WVMW-15-A	(Aluminum, Iron, Manganese)	9/2002
			pH	9/2002
2311	Jack Run/West Fork River	WVMW-17	(Aluminum, Iron, Manganese)	9/2002
2312	Jerry Run	WVMW-15-H	(Aluminum, Iron, Manganese)	9/2002
			pH	9/2002
2313	Jones Run	WVMW-13-A	(Aluminum, Iron, Manganese)	9/2002
2314	Katys Lick Creek	WVMW-13-E	(Aluminum, Iron, Manganese)	9/2002
2315	Lambert Run	WVMW-16	(Aluminum, Iron, Manganese)	9/2002
			pH	9/2002
2316	Laurel Run/Little Tenmile Creek	WVMW-13-B-4	(Aluminum, Iron, Manganese)	9/2002
2317	Laurel Run/West Fork River	WVMW-8	(Aluminum, Iron, Manganese)	9/2002
2318	Little Isaacs Creek	WVMW-13-C-1	(Aluminum, Iron, Manganese)	9/2002
2319	Little Rockcamp Run	WVMW-13-F-1	(Aluminum, Iron, Manganese)	9/2002
2320	Little Tenmile Creek	WVMW-13-B	(Aluminum, Iron, Manganese)	9/2002
2321	Lost Creek	WVMW-26	(Aluminum, Iron, Manganese)	9/2002
2322	Mare Run	WVMW-36-C.5	(Aluminum, Iron, Manganese)	9/2002
2323	Mudlick Run/Little Tenmile Creek	WVMW-13-B-9	(Aluminum, Iron, Manganese)	9/2002
			pH	9/2002
2324	Mudlick Run/West Fork River	WVMW-9	(Aluminum, Iron, Manganese)	9/2002
			pH	9/2002
2325	Murphy Run/Elk Creek	WVMW-21-A	(Aluminum, Iron, Manganese)	9/2002
			pH	9/2002
2326	Nutter Run	WVMW-21-D	(Aluminum, Iron, Manganese)	9/2002
2327	Patterson Fork	WVMW-13-I-3	(Aluminum, Iron, Manganese)	9/2002
2328	Peters Run	WVMW-13-B-1	(Aluminum, Iron, Manganese)	9/2002

Supplemental Table B - Previously Listed Waters - TMDL Developed - 2002

ID#	Stream Name	Stream Code	Criteria	TMDL Date
2329	Pigotts Run	WVMW-12-A	(Aluminum, Iron, Manganese)	9/2002
2330	Purdys Run	WVMW-2-D-1	(Aluminum, Iron, Manganese) pH	9/2002 9/2002
2331	Right Branch/West Branch/Simpson Creek	WVMW-15-L-2	(Aluminum, Iron, Manganese) pH	9/2002 9/2002
2332	Right Branch/Gnatty Creek	WVMW-21-M-5	(Aluminum, Iron, Manganese)	9/2002
2333	Right Fork Simpson Creek	WVMW-15-J	(Aluminum, Iron, Manganese) pH	9/2002 9/2002
2334	Robinson Run	WVMW-12	(Aluminum, Iron, Manganese)	9/2002
2335	Rockcamp Run	WVMW-13-F	(Aluminum, Iron, Manganese)	9/2002
2336	Sand Lick Run	WVMW-15-J-2	(Aluminum, Iron, Manganese) pH	9/2002 9/2002
2337	Shaw Run	WVMW-13-N-1	(Aluminum, Iron, Manganese) pH	9/2002 9/2002
2338	Shinns Run	WVMW-11	(Aluminum, Iron, Manganese) pH	9/2002 9/2002
2339	Simpson Creek	WVMW-15	(Aluminum, Iron, Manganese)	9/2002
2340	Simpson Fork	WVMW-20	(Aluminum, Iron, Manganese)	9/2002
2341	Smith Run	WVMW-15-B	(Aluminum, Iron, Manganese) pH	9/2002 9/2002
2342	Stewart Run	WVMW-21-S	(Aluminum, Iron, Manganese)	9/2002
2343	Stillhouse Run	WVMW-15-L-1	(Aluminum, Iron, Manganese) pH	9/2002 9/2002
2344	Stone Lick	WVMW-44	(Aluminum, Iron, Manganese)	9/2002
2345	Sweep Run	WVMW-2-C	(Aluminum, Iron, Manganese)	9/2002
2346	Sycamore Creek	WVMW-25	(Aluminum, Iron, Manganese)	9/2002
2347	Tenmile Creek	WVMW-13	(Aluminum, Iron, Manganese)	9/2002
2348	Turkey Run	WVMW-21-E	(Aluminum, Iron, Manganese)	9/2002
2349	UNT/Robinson Run RM 1.08	WVMW-12-B	(Aluminum, Iron, Manganese)	9/2002
2350	UNT/Booths Creek RM 1.4	WVMW-2-0.1A	(Aluminum, Iron, Manganese) pH	9/2002 9/2002
2351	UNT/Booths Creek RM 3.5	WVMW-2-0.5A	(Aluminum, Iron, Manganese) pH	9/2002 9/2002
2352	UNT/Booths Creek RM 8.3	WVMW-2-D.5	(Aluminum, Iron, Manganese)	9/2002

Supplemental Table B - Previously Listed Waters - TMDL Developed - 2002

ID#	Stream Name	Stream Code	Criteria	TMDL Date
2353	UNT/Little Tenmile Creek RM 2.0	WVMW-13-B-1.5	(Aluminum, Iron, Manganese)	9/2002
2354	UNT/Lost Creek RM 3.32	WVMW-26-0.5A	(Aluminum, Iron, Manganese)	9/2002
2355	UNT/Right Fork Simpson Creek RM 1.97	WVMW-15-J-0.3	(Aluminum, Iron, Manganese) pH	9/2002 9/2002
2356	UNT/Simpson Creek RM 1.23	WVMW-15-0.5A	(Aluminum, Iron, Manganese) pH	9/2002 9/2002
2357	UNT/Simpson Creek RM 21.92	WVMW-15-J.5	(Aluminum, Iron, Manganese) pH	9/2002 9/2002
2358	UNT/Simpson Creek RM 23.1	WVMW-15-K.7	(Aluminum, Iron, Manganese) pH	9/2002 9/2002
2359	UNT/Simpson Creek RM 26.94	WVMW-15-N	(Aluminum, Iron, Manganese) pH	9/2002 9/2002
2360	UNT/Tenmile Creek RM 10.82	WVMW-13-E.7	(Aluminum, Iron, Manganese)	9/2002
2361	UNT/West Branch RM 0.6	WVMW-15-L-0.5	(Aluminum, Iron, Manganese) pH	9/2002 9/2002
2362	UNT/West Fork River RM 20.42	WVMW-14.2	(Aluminum, Iron, Manganese) pH	9/2002 9/2002
2363	UNT/West Fork River RM 11.44 (at Hutchinson)	WVMW-7.1	(Aluminum, Iron, Manganese) pH	9/2002 9/2002
2364	UNT/West Fork RM 13.1 (at Viropa)	WVMW-8.5	(Aluminum, Iron, Manganese) pH	9/2002 9/2002
2365	UNT/West Fork RM 13.9	WVMW-9.5	(Aluminum, Iron, Manganese) pH	9/2002 9/2002
2366	Ward Run	WVMW-50-D	(Aluminum, Iron, Manganese)	9/2002
2367	Washburncamp Run	WVMW-22-A	(Aluminum, Iron, Manganese)	9/2002
2368	West Branch/Simpson Creek	WVMW-15-L	(Aluminum, Iron, Manganese) pH	9/2002 9/2002
2369	West Fork River	WVMW	Aluminum Iron	9/2002 9/2002

SUPPLEMENTAL

SECTION C

TMDL Developed -

Below Listing Criteria

Supplemental Table C - TMDL Developed - Below Listing Criteria - 2002

ID#	Stream Name	Stream Code	Criteria	TMDL Date
HYDROLOGIC GROUP A				
	SOUTH BRANCH POTOMAC WATERSHED - HUC# 02070001			
3001	South Fork/South Branch Potomac River	WVPSB-21	Fecal coliform	2/1998
3002	North Fork/South Branch Potomac River	WVPSB-28	Fecal coliform	2/1998