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

NOV 23 2016

The Honorable Randy C. Huffman, Secretary
West Virginia Department of Environmental Protection
601 57th Street, S.E.
Charleston, West Virginia 25304

Dear Secretary ~~Huffman~~ Randy:

I am transmitting to you the final list of water bodies that the U.S. Environmental Protection Agency (EPA) is adding to West Virginia's 2014 list of water quality limited segments pursuant to Clean Water Act, Section 303(d), and 40 CFR 130.7(d)(2). Enclosure 1 identifies the waterbodies added by EPA.

On May 11, 2016 EPA took action on West Virginia's 2014 Section 303(d) List, partially approving and partially disapproving West Virginia's submission of its list of waters pursuant to Section 303(d) of the Clean Water Act. Consistent with the Clean Water Act (CWA) and its implementing regulations, EPA provided public notice and solicited public comment on its identification of additional waterbodies for inclusion on West Virginia's 2014 Section 303(d) List. Enclosure 2 summarizes comments received and EPA's response. Based on comments received, including comments submitted by the West Virginia Department of Environmental Protection (WVDEP), EPA's final list of waterbodies reflects a determination to add to West Virginia's 2014 Section 303(d) list 28 of the 61 waters that EPA initially proposed to add.

EPA appreciates the detailed stressor identification information provided by WVDEP staff that described approved Total Maximum Daily Loads that will address some of the impairments identified on EPA's proposed list of waters. The final list of waters EPA is adding to West Virginia's 2014 303(d) list reflects the coordination between our staffs. If you have any questions, please do not hesitate to contact me or have your staff contact Mr. Mark Ferrell, EPA's West Virginia Liaison, at (304) 542-0231.

Sincerely,

Shawn M. Garvin
Regional Administrator

Enclosures (2)

cc: Mr. Scott Mandirola (WVDEP)

Enclosure 1: Final list of waters EPA is adding to West Virginia's 2014 Section 303(d) List

WV Code	Waterbody Name	Length (miles)	Impaired Length (miles)	Criteria Affected	Source	HUC8 Name	HUC8
WVBST-60	Panther Creek	7.4	mouth to RM 7.4	CNA-Biological	Unknown	Tug Fork	5070201
WVK-49-L	Eightmile Fork	2.7	entire length	CNA-Biological	Unknown	Upper Kanawha	5050006
WVK-64-I	Fivemile Fork	3.4	entire length	CNA-Biological	Unknown	Upper Kanawha	5050006
WVK-64-J-1	Slabcamp Hollow	1.3	entire length	CNA-Biological	Unknown	Upper Kanawha	5050006
WVK-64-K	Hurricane Fork	3.4	entire length	CNA-Biological	Unknown	Upper Kanawha	5050006
WVK-66-B	Bufflick Fork	2.3	entire length	CNA-Biological	Unknown	Upper Kanawha	5050006
WVK-66-B.5	Martin Hollow	1.2	entire length	CNA-Biological	Unknown	Upper Kanawha	5050006
WVK-76-C-1	Dempsey Branch	3.9	entire length	CNA-Biological	Unknown	Upper Kanawha	5050006
WVKC	Coal River	2.4	RM 11.3 to RM 13.7	CNA-Biological	Unknown	Coal	5050009
WVKE-76	Birch River	10.9	RM 24.6 to 35.5	CNA-Biological	Unknown	Elk	5050007
WVKE-98-C	Left Fork/Holly River	21	Mouth to RM 21	CNA-Biological	Unknown	Elk	5050007
WVKG-5-N	Sugarcamp Branch	3	entire length	CNA-Biological	Unknown	Gauley	5050005
WVM-22.8	UNT/Monongahela River RM 126.32	0.6	entire length	CNA-Biological	Unknown	Upper Monongahela	5020003
WVMC-60-D	Blackwater River	26.5	RM 7.9 to HW	CNA-Biological	Unknown	Cheat	5020004
WVMC-60Dry	Dry Fork/Black Fork/Cheat River	11.9	RM 27.6 to HW	CNA-Biological	Unknown	Cheat	5020004
WVMC-60-F	Otter Creek	8	Mouth to RM 8	CNA-Biological	Unknown	Cheat	5020004
WVMC-60-T(S)	Gandy Creek	1.8	Mouth to RM 1.8	CNA-Biological	Unknown	Cheat	5020004
WVMT-11-A	Shelby Run	3.5	entire length	CNA-Biological	Unknown	Tygart Valley	5020001

WV Code	Waterbody Name	Length (miles)	Impaired Length (miles)	Criteria Affected	Source	HUC8 Name	HUC8
WVMT-4	Goose Creek	0.9	Mouth to RM 0.9	CNA-Biological	Unknown	Tygart Valley	5020001
WVMT-43.8	UNT/Tygart Valley River RM 81.92	0.5	entire length	CNA-Biological	Unknown	Tygart Valley	5020001
WVMTM-16-0.5A	UNT/Cassity Fork RM 0.76	1.3	entire length	CNA-Biological	Unknown	Tygart Valley	5020001
WVMY	Youghiogheny River	6.9	entire portion in WV	CNA-Biological	Unknown	Youghioghe ny	5020006
WVO-10	Eighteenmile Creek	4	entire length	CNA-Biological	Unknown	Raccoon-Symmes	5090101
WVO-9-F	Bear Hollow Creek	5.9	entire length	CNA-Biological	Unknown	Raccoon-Symmes	5090101
WVOG-124	Pinnacle Creek	23.8	RM 3.7 to HW	CNA-Biological	Unknown	Upper Guyandotte	5070101
WVOG-lo	Guyandotte River (Lower)	45	RM 35.6 to HW	CNA-Biological	Unknown	Lower Guyandotte	5070102
WVOGM-8-B-6	UNT/Left Fork RM 2.48/Mill Creek	1.3	entire length	CNA-Biological	Unknown	Lower Guyandotte	5070102
WVPSB-1.65	UNT/South Branch Potomac River RM 10.37	2	entire length	CNA-Biological	Unknown	South Branch Potomac	2070001

Enclosure 2

Responsiveness Summary Concerning Comments Received on EPA's Public Notice Dated June 2, 2016, Regarding EPA's Decision to Partially Approve West Virginia's 2014 Clean Water Act Section 303(d) List of Water Quality-Limited Segments and Associated Pollutants and Partially Disapprove West Virginia's submission to the extent that West Virginia did not evaluate certain water quality information and therefore did not identify certain water quality-limited segments.

Summary of Actions

Section 303(d) of the Clean Water Act (CWA) requires states to "identify those waters within its boundaries for which the effluent limitations are not stringent enough to implement any water quality standard applicable to such waters." In other words, states are required to identify all waters for which existing pollution controls or requirements are inadequate to provide for attainment and maintenance of water quality standards. The means by which a state identifies these waters has been commonly referred to as a state's 303(d) list of impaired waters.

Pursuant to Section 303(d) of the CWA, on April 13, 2015, the West Virginia Department of Environmental Protection (WVDEP) submitted a list of impaired waters to the U.S. Environmental Protection Agency (EPA) for approval or disapproval. EPA reviewed the list of impaired waters and supporting documentation. EPA's review was based on whether the state developed its list in compliance with Section 303(d) of the CWA and EPA's implementing regulations, including whether the state had assembled and evaluated existing and readily available water quality-related data and information, provided a technically defensible rationale for not using data, and reasonably identified waters still requiring TMDLs.

On May 11, 2016, EPA partially approved and partially disapproved the State's 2014 303(d) list for the reasons set forth in Enclosure 1 to EPA's May 11, 2016 letter. Pursuant to CWA Section 303(d)(2) and EPA's implementing regulations at 40 C.F.R. 130.7(d)(2), after disapproving a state's Section 303(d) list for failure to list a water not meeting applicable water quality standards, EPA must identify waters that EPA proposes to add to the Section 303(d) list and provide the public with notice and an opportunity to comment on EPA's proposed list of waters.

On June 2, 2016, EPA published in the Federal Register (Register / Vol. 81, No. 106 / Thursday, June 2, 2016 / Notices) a Notice and Initial Request for Public Comment to solicit comments on its proposed inclusion of 61 water quality limited segments on West Virginia's 2014 Section 303(d) list.

Among other things, in its partial disapproval decision documents, EPA recognized that West Virginia, in addition to considering the health of the macroinvertebrate community, also assesses ambient levels of various parameters against numeric water quality criteria established to protect the aquatic life use. EPA stated that if WVDEP or others believe the most probable stressor to the aquatic life in any waters is the pollutant for which a TMDL already has been established, a justification that the TMDL already established will achieve water quality standards should be provided during EPA's public comment period.

In response to EPA's Federal Register publication, WVDEP provided stressor identification analyses for 33 of the waters that EPA had proposed to add to the West Virginia's Section 303(d) list. Analysis of this stressor identification demonstrates that there are approved TMDLs that will address the

impairment identified by EPA for West Virginia's narrative water quality criteria as applied to aquatic life in those 33 waters. As the Section 303(d) list is identified in EPA's regulations as the list of waters still requiring TMDLs (40 C.F.R. § 130.7(b)), EPA will not add these 33 waters to West Virginia's final 2014 Section 303(d) list. After consideration of the comments received, EPA will add the remaining 28 waters it had proposed to add to West Virginia's Section 303(d) list. Table 1 attached hereto identifies those waters that EPA now adds to West Virginia's 2014 Section 303(d) list and Table 2 identifies the waters for which WVDEP has provided information demonstrating that an existing TMDL will address the impairment for West Virginia's narrative water quality criteria as applied to the aquatic life use.

Summary of Public Comments

EPA received comments from the following commenters in response to our Public Notice dated June 2, 2016, Regarding EPA's Decision to partially approve and partially disapprove West Virginia's 2014 Clean Water Act Section 303(d) list of water quality-limited segments and associated pollutants.

(1) West Virginia Rivers Coalition, emailed comment letter dated July 6, 2016, from Angie Rosser and Autumn Byson, on behalf of its members and the following ten organizations: Kanawha Forest Coalition (Chad Cordell), Ohio Valley Environmental Coalition (Janet Keating), Mountain Lakes Preservation Alliance (April Keating), West Virginia Highlands Conservancy (Cynthia Ellis and Cindy Rank), West Virginia Center on Budget and Policy (Ted Boettner), League of Women Voters of West Virginia (Nancy Novak and Helen Gibbins), West Virginia Focus: Reproduction Education and Equality (Margaret Chapman Pomponio), West Virginia Citizens Action Group (Gary Zuckett), West Virginia Surface Owners' Rights Organization (Julie Archer), and West Virginia Chapter of the Sierra Club (Jim Kotcon).

(2) L.P. Mineral LLC, mailed undated comment letter from Russell L. Bolyard received on July 6, 2016.

(3) Laurita Energy, LLC, mailed undated comment letter from Russell L. Bolyard received on July 6, 2016.

(4) West Virginia Coal Association, emailed comment letter dated July 5, 2016, from Jason D. Bostic.

(5) West Virginia Department of Environmental Protection, emailed comment letter dated July 5, 2016, from Scott G. Mandirola.

West Virginia Rivers Coalition Comments and EPA Responses

Comment 1: West Virginia Rivers Coalition, on behalf of its members and the ten organizations identified above, support EPA's decision to partially approve and disapprove West Virginia's 2014 Section 303(d) list of water quality-limited segments and associated pollutants.

EPA Response 1:
No response needed.

Comment 2: West Virginia Rivers Coalition is further encouraged by EPA's proposal to list 61 new stream segments to the 303(d) list, as biologically impaired, as the result of evaluations using the "Genus Level Index of Most Probable Stream Status" (GLIMPSS).

EPA Response 2:
No response needed.

L.P. Mineral, LLC and Laurita Energy, LLC comments* and EPA Responses
*Two commenters, L.P. Mineral, LLC and Laurita Energy, LLC, submitted essentially identical comment letters. Accordingly, their comments will be addressed together.

Comment 3: L.P. Mineral, LLC and Laurita Energy, LLC considers this federal 303(d) listing action as the latest in a series of efforts by EPA to interfere with West Virginia's administration of its water quality standards and Clean Water Act Section 402 NPDES permitting programs by "hijacking" the interpretation and implementation of the state's approved narrative water quality criteria. L.P. Mineral, LLC believes EPA has selectively interpreted the federal CWA in order to undertake this listing decision to transform a mere methodology into a regulatory standard beyond the purpose for which anyone ever intended.

EPA Response 3:
Pursuant to EPA's longstanding regulations, "[e]ach State shall assemble and evaluate all existing and readily available water quality-related data and information to develop the [303(d)] list…" 40 C.F.R. § 130.7(b)(5). States also must provide EPA with a description of the methodology used to develop their Section 303(d) lists and a rationale for any decision not to use existing and readily available data. *Id.* §§ 130.7(b)(6)(i) & (iii). All existing and readily available data must be evaluated. If, after evaluating the data, a State has a technically defensible basis for not using certain data, the State may provide that basis to EPA and EPA may determine to approve the Section 303(d) list even though the data was evaluated but not used. Consistent with the regulations and EPA's longstanding guidance, failure to provide a technically defensible rationale for a decision to exclude data from consideration is a basis for partial disapproval of a State's Section 303(d) list. See, e.g., *Guidance for 2006 Assessment, Listing and Reporting Requirements Pursuant to Sections 303(d), 305(b) and 314 of the Clean Water Act* at p. 37 (July 29, 2005). In this case, WVDEP did not evaluate a category of existing and readily available data – specifically, genus-level macroinvertebrate data. To the extent WVDEP believed it had evaluated this set of data, it did not provide a technically defensible rationale for not using that data in development of the 2014 Section 303(d) list. EPA's action neither constitutes selective interpretation nor selective implementation of longstanding regulations and guidance cited above.

EPA's evaluation of the genus-level data using the Genus Level Index of Most Probable Stream Status (GLIMPSS) methodology neither takes over West Virginia's interpretation of its water quality standards nor transforms GLIMPSS from an assessment tool into a water quality standard. Both the applicable federal regulations and EPA's guidance distinguish between assessment methodologies and water quality standards. *See, e.g.,* 40 C.F.R. § 130.7(b)(5). An assessment methodology is simply a decision process used to assess whether waters are achieving water quality standards. By way of example, consistent with 40 C.F.R. § 130.7(b)(6)(i), WVDEP provides in the narrative portion of its 2014 Integrated Report (at pages 10-16) a description of a variety of methodologies (which WVDEP calls "decision criteria") that it uses to develop its Section 303(d) list. These decision criteria are not themselves water quality standards, but rather the assessment methodologies used by WVDEP to

consider existing and readily available data to determine whether water quality standards are or are not being achieved. EPA's use of the GLIMPSS methodology has the same effect as other decision criteria used by WVDEP.

Particularly in the case of a narrative water quality criterion or a numeric criterion that lacks a duration or frequency component, States often utilize some set of decision criteria to assess whether waters are achieving water quality standards. Unlike water quality standards, EPA neither approves nor disapproves assessment methodologies, including West Virginia's decision criteria described at pages 10-16 of the narrative portion of its 2014 Integrated Report. EPA's use of the GLIMPSS assessment methodology likewise does not constitute an approval or promulgation of a water quality standard pursuant to 33 U.S.C. § 1313(c).

EPA's action on WVDEP's 2014 list also does not foreclose WVDEP from developing and implementing its own assessment methodology for future 303(d) lists. If and when WVDEP develops and applies a methodology for assessing its narrative criteria as applied to aquatic life, WVDEP is free to assess, in future listing cycles, the waters EPA is adding to the 2014 Section 303(d) list. EPA will consider WVDEP's evaluation of existing and readily available information at that time.

While EPA neither approves nor disapproves the states' priority ranking submittal and is under no obligation per 40 CFR 130.7(b)(4) or the CWA to include a priority ranking or schedule for TMDL development to waters added to a states' § 303(d) list, EPA anticipates that the waters added by EPA will be incorporated by WVDEP into its next priority ranking. Given the significant technical evaluation necessary for TMDL development and WVDEP's efforts to develop a new assessment methodology that may impact future TMDL endpoints, EPA believes it would be appropriate for WVDEP to consider its anticipated development of a new methodology when it develops its priority ranking.

EPA has not engaged in any effort to "interfere with West Virginia's administration of its water quality standards and Clean Water Act Section 402 NPDES permitting programs" nor has EPA taken over the interpretation of West Virginia's approved narrative water quality criteria. EPA's action does not selectively interpret the CWA and does not transform an assessment tool into a regulatory standard.

Comment 4: L.P. Mineral, LLC and Laurita Energy, LLC believes a plain reading of the provisions of the CWA makes it crystal clear that EPA cannot rely on a mere assessment methodology to satisfy the requirements of the statute with respect to stream listing decisions. Further, EPA's attempts to do so by relying on the Genus-Level Index of Most Probable Stream Status (GLIMPSS) will transform a renounced internal insect measurement scheme into a water quality standard and create an illegitimate federal water quality criterion for the State of West Virginia, contrary to the CWA, the West Virginia Water Pollution Control Act and the state Administrative Procedures Act.

EPA Response 4:

EPA's action does not transform the GLIMPSS assessment methodology into a water quality criterion. See EPA Response 3 above. EPA further notes that GLIMPSS is not a "renounced" assessment methodology. At the request of WVDEP, EPA worked with WVDEP to develop GLIMPSS to assess West Virginia's waters. GLIMPSS is a next generation index designed to provide higher resolution than the WVDEP's existing family-level West Virginia Stream Condition Index (WVSCI). After WVDEP expressed concern in 2010 that GLIMPSS was not peer reviewed, GLIMPSS went through external peer review, was published online in the journal *Environmental Monitoring &*

Assessment (May 2012), and appeared in the hard copy version of the journal, Volume 185 Number 2 (May 2012). *See* Pond GJ, Bailey JE, Lowman BM, Whitman MJ. 2012. Calibration and validation of a regionally and seasonally stratified macroinvertebrate index for West Virginia wadeable streams. *Environ Mon Assess* 185: 1515-1540. EPA's National Wadeable Streams Assessment and several neighboring states (Kentucky, Ohio, Pennsylvania, Maryland, and Tennessee) use genus-level assessment tools comparable with GLIMPSS.

Comment 5: L.P. Mineral, LLC and Laurita Energy, LLC claims EPA is acting in clear defiance of the CWA and the courts, and is attempting to bypass the legal rulemaking process related to water quality standards and substitute its own judgment for that of the West Virginia Legislature and WV DEP, to implement a political agenda related to coal mining activities that occur in Appalachia and West Virginia.

EPA Response 5:
See response to No. 3 above.

Consistent with its Integrated Reporting guidance, EPA's list of proposed waters that are not attaining West Virginia's narrative criteria as applied to aquatic life is based upon use of a peer-reviewed multi-metric community level biological assessment tool. Biological assessment tools, such as GLIMPSS, provide direct measures of the cumulative response of the biological community to all sources of stress by measuring the condition of the aquatic life. GLIMPSS, like most multi-metric community level biological assessment tools, does not identify the impairing stressor or the source of the impairment. Prior to TMDL development, the impairing stressor must be identified. EPA has developed guidance to assist states in identifying the impairing stressor.

Recognizing that WVDEP is in the process of developing a new assessment methodology and given the significant technical evaluation necessary for TMDL development and the uncertain status of TMDL endpoints developed pursuant to a superseded methodology, EPA believes it would be appropriate for WVDEP to consider anticipated development of a new methodology when it develops its priority ranking for TMDL development.

EPA's actions are intended to protect human health and the environment in West Virginia regardless of the pollutant source. To the extent the comment implies that it is EPA's intent to identify only waters impaired by one specific activity, EPA notes that it has not identified the cause of the impairment in its proposed or final lists of waters to be added to the Section 303(d) list.

Comment 6: L.P. Mineral, LLC and Laurita Energy, LLC believes GLIMPSS cannot be a water quality standard because it has not been promulgated as one and approved by the West Virginia Legislature.

EPA Response 6:
EPA agrees that GLIMPSS is not a water quality standard. GLIMPSS is a peer-reviewed multi-metric community-level biological assessment methodology that is used as an assessment tool. It provides a direct measurement of the cumulative response of the biological community to all sources of stress by measuring the condition of the aquatic resources directly and was used by EPA as such. See Response Nos. 3 & 5. EPA's regulations and guidance distinguish between assessment methods and water quality standards. EPA's action also does not foreclose WVDEP from developing and implementing its own assessment methodology in the future, so long as that assessment methodology is

consistent with West Virginia's water quality standards and scientifically sound. If and when WVDEP develops an assessment methodology, and such methodology is applied in connection with future Section 303(d) lists, WVDEP is free to undertake its own assessment of the waters EPA is adding to the 2014 Section 303(d) list. EPA will consider WVDEP's evaluation of existing and readily available information at that time. Recognizing that WVDEP is in the process of developing a new assessment methodology, and given the significant technical evaluation necessary for TMDL development and the uncertain status of TMDL endpoints developed pursuant to a superseded methodology, EPA believes it would be appropriate for WVDEP to consider anticipated development of a new methodology when it develops its priority ranking for TMDL development.

West Virginia Coal Association (WVCA) Comments and EPA Responses

Comment 7: WVCA considers this federal 303(d) listing action as the latest in a series of efforts by EPA to interfere with West Virginia's administration of its water quality standards and CWA Section 402 NPDES permitting programs by "hijacking" their interpretation and implementation of the state's approved narrative water quality criteria. WVCA believes EPA has selectively interpreted the federal CWA in order to undertake this listing decision that would transform a mere methodology into a regulatory standard beyond the purpose for which anyone ever intended.

EPA Response 7:
See EPA Response 3.

Comment 8: WVCA asserts EPA has based its overlisting decisions on the Genus-Level Index of Most Probable Stream Status (GLIMPSS), an unsanctioned measurement technique that has never been used by West Virginia to affect CWA-related policy or permitting decisions. EPA will eviscerate federal and state rulemaking procedures to further extend its own interpretations of West Virginia's approved narrative water quality criteria to the state's CWA regulatory programs.

EPA Response 8:
See Response Nos. 3, 5 and 6. With respect to the commenter's assertion that GLIMPSS is an "unsanctioned" measurement technique, see Response No. 4. While GLIMPSS has not been used in West Virginia for CWA 303(d) assessment purposes, it has been used for other purposes, including assessment of water quality trends. Scientists from West Virginia University with whom WVDEP has contracted to provide technical support for development of a new assessment methodology, stated in a workplan prepared for WVDEP that "GLIMPSS represents a significant improvement over [WVSCI] due to its reliance on higher taxonomic resolution as well as its applicability across ecoregions and seasons."

Comment 9: WVCA believes EPA's listing action is counter to the will and intent of the West Virginia Legislature. If WVDEP's internal use of GLIMPSS implies it was a standard that should be afforded deference in 303(d) listing actions, then EPA is required to reject its use entirely and require WVDEP to pursue the formal CWA rulemaking process for revising water quality standards.

EPA Response 9:
See Response Nos. 3, 6 and 8. GLIMPSS is simply an existing, peer-reviewed, scientifically accepted aquatic life designated use assessment method. EPA's action does not depend upon WVDEP's use of GLIMPSS in other contexts. While EPA continues to recommend that WVDEP incorporate

GLIMPSS into a future assessment methodology, EPA specifically recognizes that its action here does not foreclose WVDEP from developing and implementing a different assessment method, so long as that tool is consistent with West Virginia's water quality standards and is consistent with applicable science.

Comment 10: WVCA believes EPA's position on the use of GLIMPSS appears to be targeted solely at West Virginia. WVCA challenges EPA to provide examples of other states where 303(d) listing decisions for the narrative criterion are required to be based on benthic macroinvertebrate data. In the absence of such information, EPA's actions are clearly politically motivated and not technical in nature.

EPA Response 10:

EPA provided separate correspondence to WVCA in response to the commenter's request for information on August 15, 2016. That correspondence is attached to this document in Appendix 1. In addition to the information provided August 15, 2016, EPA notes that many of West Virginia's neighboring states utilize a genus level macroinvertebrate index of biotic integrity (IBI) for Section 303(d) assessments. For example, Pennsylvania, Maryland, Kentucky, Tennessee and Ohio all employ genus level macroinvertebrate IBIs for Section 303(d) listing purposes.

Comment 11: WVCA believes EPA relies exclusively on the regulatory mandate at 40 CFR 130.7(b)(5). In its May 11, 2016 letter to WVDEP, EPA writes "due to WVDEP's decision not to evaluate existing and readily-available data regarding whether certain waters are achieving West Virginia's narrative criteria ..." EPA has an obligation to take action to ensure that the federal requirements are satisfied." Nothing is further from the truth. EPA's interpretation of WVDEP's position represents a contrived reading of the state submission and a convenient application of 40 CFR 130.7 as a means to provide a basis for the federal listing action. WVDEP did not ignore "existing and readily-available information." WVDEP considered all available information and made the decision consistent with statutory instructions provided by the West Virginia Legislature. Insect scores alone were not sufficient to classify streams as "biologically impaired". WVDEP is not "unable to carry out the requirements set forth in 40 CFR 130.7(b)(5)"

EPA Response 11:

See Response Nos. 3, 6 and 10. EPA's action took no position as to whether WVDEP is "unable to carry out the requirements set forth in 40 CFR 130.7(b)(5)," and that statement does not appear in EPA's action on West Virginia's 2014 Section 303(d) list. With respect to whether WVDEP "ignored" information, it is plain from WVDEP's exclusive reliance on WVSCI that WVDEP did not evaluate genus-level data for purposes of its 2014 Section 303(d) list. EPA noted that, to the extent WVDEP believes it did evaluate genus-level data, WVDEP failed to provide a technically sound rationale for not using that data in development of the 2014 Section 303(d) list. That continues to be the case.

Comment 12: WVCA believes WVDEP did consider all available information. The only reasonable conclusion is that EPA disagrees with WVDEP. EPA cannot substitute its own policy judgment for that of the State of West Virginia. EPA's tenuous reliance on the provisions of 40 CFR 130.7(b)(7) is evidence that this proposed 303(d) listing action is another example of EPA's arrogant denial of the rightful state prerogatives under the CWA. EPA relied on provisions of 40 CFR 130.7 and has ignored other, more substantive provisions of the CWA that govern its actions relative to 303(d) listing actions such as CWA Section 303(d)(l)(a).

If the cause of the alleged impairment cannot be linked to "effluent limitations" developed to protect a "water quality standard" as required by CWA Section 303(d)(l)(a), then listing a stream is not appropriate. Simply classifying a stream as "biologically impaired" is far from enough to satisfy the requirements of the CWA, since the biological conditions of the stream can be influenced by other factors, independent of any effluent limitation or water quality standard, such as habitat and seasonal variation.

EPA Response 12:

See Response Nos. 3, 4, 5, 6, 10 & 11. To the extent the commenter asserts that EPA relied upon 40 C.F.R. § 130.7(b)(7), the reference does not exist. EPA assumes the commenter intended to refer to 40 C.F.R. § 130.7(b)(5) and responded as such.

To the extent the commenter states that EPA's action goes beyond the requirements of the Clean Water Act because EPA has not identified an "effluent limitation" linked to the impairment of West Virginia's narrative water quality criteria applied to aquatic life, the commenter appears to misconstrue Section 303(d)(1)(A) and the applicable regulations. Section 303(d)(1)(A) states: "Each State shall identify those waters within its boundaries for which the effluent limitations required by section 1311(b)(1)(A) and section 1311(b)(1)(B) of this title are not stringent enough to implement any water quality standard applicable to such waters...." EPA's implementing regulations direct States to include on their lists "any segment where it is known that water quality does not meet applicable water quality standards, and/or is not expected to meet applicable water quality standards, even after the application of the technology-based effluent limitations required by sections 301(b) and § 306..." 40 C.F.R. § 130.2(j). As has been long established by the courts, Section 303(d)(1)(A) requires listing where application to point sources of technology-based effluent limitations are insufficient to achieve water quality standards and even where the waters are impaired solely from nonpoint sources of pollution to which no effluent limitations would apply. *Pronsolino v. Nastri,* 291 F.3d 1123 (9th Cir. 2002), *cert. denied,* 539 U.S. 926 (2003)*; Cf. Dioxin/Organochlorine Center v. Clarke*, 57 F.3d 1517 (9th Cir. 1995).

To the extent the commenter asserts that impairments that are not caused by a pollutant do not need to be identified on the Section 303(d) list, the commenter is correct. Biological assessment tools, such as GLIMPSS, provide direct measures of the cumulative response of the biological community to all sources of stress by measuring the condition of the aquatic resources. GLIMPSS, like most multi-metric community level biological assessment tools, does not identify the impairing stressor or the source of the impairment. The fact that the specific cause of impairment is not known does not provide a basis for excluding the segment from the Section 303(d) list. The water should be listed unless it can be demonstrated that no pollutant(s) causes or contributes to the impairment. Prior to establishing a TMDL for such segments, the pollutant causing the impairment must be identified. If the assessment of new data and information demonstrates that the impairment is not associated with a pollutant and is attributable only to other types of pollution (e.g., flow or habitat alteration) the segment may be removed from the 303(d) list, if there are no other pollutants impairing it, and reclassified and identified in the Integrated Report as impaired, but not requiring a TMDL (e.g., Category 4C). WVDEP conducts an extensive stressor identification analysis prior to TMDL development. If that stressor identification analysis demonstrates that no pollutant(s) causes or contributes to the impairment, no TMDL need be developed for that water.

Comment 13: WVCA believes the foundation for EPA's listing decision rests on a methodology, the GLIMPSS, not a water quality standard. EPA cannot rely on an unsanctioned practice to satisfy the requirements of CWA Section 303(d)(1)(a).

EPA Response 13:
See Response Nos. 3, 4, and 6.

Comment 14: WVCA believes EPA's proposed listing action relies exclusively on GLIMPSS data for several West Virginia streams. At its core, the GLIMPSS is a narrowly focused measurement of benthics that, as WVDEP has recently recognized, cannot serve as the sole factor in measuring compliance with West Virginia's narrative water quality standards. Because of its narrow focus, the GLIMPSS may have some restricted utility as an individual assessment methodology that is part of holistic evaluation, but it is far too limited to measure compliance with West Virginia's water quality standards. Standing alone, the GLIMPSS is not a scientifically defensible basis for accurately measuring the aquatic ecosystem within a particular stream reach. For EPA to base any federal listing decisions on the GLIMPSS, per the requirements of CWA Section 303(d)(1)(a), it must be a water quality standard.

EPA Response 14:
See Response Nos. 3, 4, 5 and 6. The commenter appears to confuse water quality standards with assessment tools (also called decision criteria or methodologies) used to determine whether water quality standards are being achieved. EPA's regulations clearly distinguish between water quality standards and methodologies used to determine whether those water quality standards are being achieved and clearly articulate that states can use decision criteria, or methodologies, to develop their Section 303(d) lists. *See* 40 C.F.R. §§ 130.7(b)(6)(i) & (iii). GLIMPSS is a peer-reviewed, scientifically defensible assessment tool and EPA's use of GLIMPSS is consistent with use of genus-level assessment tools by surrounding states.

EPA notes that the comment borrows language (e.g., "holistic") from Senate Bill 562. WVDEP has informed EPA that WVDEP does not consider SB 562 to be a water quality standard subject to EPA review under Section 303(c) of the Clean Water Act, 33 U.S.C. § 1313(c), but rather an instruction to WVDEP by the West Virginia Legislature to undertake development of an assessment methodology. *See* Letter from Cabinet Secretary Huffman to Regional Administrator Garvin (Dec. 20, 2012). EPA has not made a determination related to whether or not SB562 constitutes a water quality standards change. Until this determination is made, SB 562 is not a water quality standard for purposes of federal law. 33 U.S.C. § 1313(c); 40 C.F.R. § 131.21.

To the extent the commenter asserts that assessment of macroinvertebrates is insufficient to assess the aquatic ecosystem, other states rely on a similar tool and as a general matter assessment of macroinvertebrates is a good surrogate for assessment of the broader aquatic community. As stated on page 21 of EPA's Wadeable Stream Assessment (EPA 841-B-06-002 December 2006), macroinvertebrates are good indicators of biological integrity "because of their inherent capacity to integrate the effects of the stressors to which they are exposed, in combination and over time."

While EPA believes that macroinvertebrates can serve as an appropriate surrogate for the broader aquatic community, EPA supports independent assessment of multiple assemblages for assessing water bodies. It is well established that different assemblages respond differently to stressors and thus may be indicators for different kinds of impacts. For that reason, assessments of different assemblages frequently do not correlate well. Accordingly, EPA strongly recommends assessing

different assemblages independently and strongly discourages combining assessments of different assemblages into a single assessment. Multiple indices should be applied independently, the results of which should be additive, increasing protection for each additional assemblage, and increasing the chances of supporting the overall aquatic life use. Combining assessments of different assemblages into a single assessment runs a risk of obscuring significant impacts due to the lack of correlation among stressor response of various assemblages.[1] For example, the Maryland Department of the Environment (MDE) utilizes both macroinvertebrate and fish community data for aquatic life use assessments. For 303(d) listing purposes, MDE will consider a site as impaired if either the macroinvertebrate or fish assemblage data indicate an aquatic life use impairment.

EPA supports WVDEP's plans to develop an updated biological assessment methodology that is scientifically defensible and meets the needs of WV Senate Bill 562. In fact, EPA grant money is being used by WVDEP to develop additional data to support methodology development.

Comment 15: WVCA believes that if EPA feels so strongly about insect assessments as the only appropriate way to measure compliance with narrative standards under the CWA, then WVCA eagerly anticipates EPA's response to its request for information where similar insect assessments have been imposed by the federal agency in non-coal mining states outside of the Appalachian region.

EPA Response 15:

Please see Response Nos. 10 and 14. In addition, EPA supports and encourages states to use multiple aquatic assemblages to assess the aquatic life use of streams, rivers, lakes and estuaries. Macroinvertebrates are not the only indicator that can be used to evaluate the aquatic life use. For example, EPA's National Rivers and Streams Assessment (NRSA) collects macroinvertebrate, fish and periphyton data sets to assess waterbody health. All three of those data sets are evaluated independently as a means to assess water quality conditions in NRSA reports. In addition, EPA technical staff frequently assist states with the development of new or revised IBIs for assessing attainment with state narrative water quality standards.

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[1] Freund, J. G., and J. T. Petty. 2007. Response of fish and macroinvertebrate bioassessment indicies to water chemistry in a mined Appalachian watershed. Environmental Management 39:707-720.

Harding, J.S., E.F. Benfield, P.V. Bolstad, G.S. Helfman, and E.B.D. Jones III. 1998. Stream biodiversity: the ghost of land use past. Proceedings of the National Academy of Sciences 95: 14843-14847.

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Pond, G. J., M. E. Passmore, F. A. Borsuk, L. Reynolds, and C. J. Rose. 2008. Downstream effects of mountaintop coal mining: comparing biological conditions using family- and genus-level macroinvertebrate bioassessment tools. Journal of the North American Benthological Society 27(3)717-737.

Yates, A.G. and R. C. Bailey. 2011. Effects of taxonomic group, spatial scale and descriptor on the relationship between human activity and stream biota. Ecological Indicators 11(3): 759-771.

Carlisle, D.M. C. P. Hawkins, M. R. Meador, M. Potapova, and J. Falcone. 2008. Biological assessments of Appalachian streams based on predictive models for fish, macroinvertebrate, and diatom assemblages. Journal of the North American Benthological Society 27(1)16-37.

United States Environmental Protection Agency. 1990. Biological Criteria National Program Guidance for Surface Waters. EPA-440/5=90-004. Office of Water Regulations and Standards, Washington, D.C.

West Virginia Department of Environmental Protection and EPA Responses

Comment 16: WVDEP identified 33 streams for which it concluded the implementation of existing TMDLs would resolve the identified stressors. WVDEP requests EPA's consideration of WVDEP's analysis and remove these 33 streams from the overlist.

EPA Response 16:

EPA thanks WVDEP for the additional analysis and has evaluated the information provided by WVDEP on stressor identification of 33 of EPA's proposed waters. For the 33 streams WVDEP's stressor identification analysis identifies a pollutant for which a TMDL already has been established as the causative pollutant of the biological impairment, EPA agrees that the impairment of the 33 waters would be adequately addressed through these approved TMDLs. Those waters have been removed from EPA's final list of waters to be added to WV's 2014 303(d) list.

EPA notes that if the TMDLs are fully implemented and the narrative criteria as applied to aquatic life in any waters are still not being attained, the waters should be relisted as impaired.

Comment: 17: The West Virginia Legislature passed Senate Bill 562, requiring WVDEP to establish a procedure for determining compliance with the biologic component of the narrative water quality standard. This procedure must take into consideration the holistic health of an aquatic ecosystem. The West Virginia Legislature made the policy decision that the biologic health of a stream or stream segment must be measured using more factors than simply a benthic macroinvertebrate score taken at one point in a watercourse. WVDEP maintains it is inappropriate for EPA to use the proposed alternative method since it is not state-sanctioned, in accordance with SB562 and does not include a specific method for considering uncertainty. WVDEP believes EPA is openly defying the West Virginia Legislature and is attempting to bypass the legal rulemaking process.

EPA Response 17:

See Response No. 14. EPA supports WVDEP's efforts to develop an assessment of stream health that is scientifically defensible, and federal funds are being used by WVDEP to develop additional data to support WVDEP's methodology development. As stated in previous communications with WVDEP, EPA biologists are available to provide technical support to WVDEP for the development of an updated bioassessment methodology.

EPA's action consists simply of application of a peer-reviewed, scientifically supported assessment tool to an existing and readily available data set. EPA's action does not constitute approval or promulgation of a water quality standard pursuant to 33 U.S.C. 1313(c) and does not foreclose WVDEP from re-assessing the waters based upon a different methodology so long as that methodology is consistent with its water quality standards and is scientifically supported.

To the extent the commenter asserts that the GLIMPSS methodology does not consider uncertainty, the commenter is incorrect. Using the distribution of scores from all sites that are considered reference sites, a threshold score representing the 5th percentile of reference sites was identified as the lowest GLIMPSS score that was considered as fully supportive of the narrative criteria as applied to aquatic life. Adherence to impairment thresholds (based on the 5th percentile of region- and season-specific reference distributions) is statistically appropriate. Choosing the 5th percentile of

reference infers that if a new site scores below that threshold then it is not part of the reference distribution at α=0.05 (acceptable error rate). Hence, the null hypothesis is that a new site is a member of the unimpaired (reference) population. Use of the 5th percentile of reference sites is a more conservative approach (i.e., will identify fewer waters as impaired) than the approach taken by surrounding states, which set their thresholds at 10th or even 25th percentile of reference. As a general matter, the reference sites will have experienced some alteration and thus represent some degree of departure from truly natural conditions. To account for this, many states (Virginia for example) use the 10th percentile of reference, or even the 25th percentile of reference. GLIMPSS uses a 5th percentile of reference because of the high quality and general confidence in West Virginia's reference samples as representative of something closer to natural conditions.

The assessment error probability is the same as the percentile of the reference distribution (5%) or the probability of a false positive (i.e., the error of assessing a site as impaired, but it is not). In light of this low probability of a false positive, extending the impairment threshold to scores below this 5th percentile results in a high risk of failure to detect degradation (false negative). When using the 5th percentile as an impairment threshold, all variability in field sampling and laboratory processing (uncertainty) are already accounted for in the reference population distribution, and therefore any site that scores below this threshold would be deemed statistically impaired at the α=0.05 level. GLIMPSS variability is very low whether referring to same-day duplicates, reference site re-visits, or entire regional and seasonal reference site distributions. These comparisons indicate that there is high confidence in single sample GLIMPSS scores. Combined, all of these factors would suggest that there is no need to add additional measures to account for "uncertainty" in applying GLIMPSS scores for assessment purposes.

Table 1: Final list of waters EPA is adding to West Virginia's 2014 Section 303(d) List

WV Code	Waterbody Name	Length (miles)	Impaired Length (miles)	Criteria Affected	Source	HUC8 Name	HUC8
WVBST-60	Panther Creek	7.4	mouth to RM 7.4	CNA-Biological	Unknown	Tug Fork	5070201
WVK-49-L	Eightmile Fork	2.7	entire length	CNA-Biological	Unknown	Upper Kanawha	5050006
WVK-64-I	Fivemile Fork	3.4	entire length	CNA-Biological	Unknown	Upper Kanawha	5050006
WVK-64-J-1	Slabcamp Hollow	1.3	entire length	CNA-Biological	Unknown	Upper Kanawha	5050006
WVK-64-K	Hurricane Fork	3.4	entire length	CNA-Biological	Unknown	Upper Kanawha	5050006
WVK-66-B	Bufflick Fork	2.3	entire length	CNA-Biological	Unknown	Upper Kanawha	5050006
WVK-66-B.5	Martin Hollow	1.2	entire length	CNA-Biological	Unknown	Upper Kanawha	5050006
WVK-76-C-1	Dempsey Branch	3.9	entire length	CNA-Biological	Unknown	Upper Kanawha	5050006
WVKC	Coal River	2.4	RM 11.3 to RM 13.7	CNA-Biological	Unknown	Coal	5050009
WVKE-76	Birch River	10.9	RM 24.6 to 35.5	CNA-Biological	Unknown	Elk	5050007
WVKE-98-C	Left Fork/Holly River	21	Mouth to RM 21	CNA-Biological	Unknown	Elk	5050007
WVKG-5-N	Sugarcamp Branch	3	entire length	CNA-Biological	Unknown	Gauley	5050005
WVM-22.8	UNT/Monongahela River RM 126.32	0.6	entire length	CNA-Biological	Unknown	Upper Monongahela	5020003
WVMC-60-D	Blackwater River	26.5	RM 7.9 to HW	CNA-Biological	Unknown	Cheat	5020004
WVMC-60Dry	Dry Fork/Black Fork/Cheat River	11.9	RM 27.6 to HW	CNA-Biological	Unknown	Cheat	5020004
WVMC-60-F	Otter Creek	8	Mouth to RM 8	CNA-Biological	Unknown	Cheat	5020004
WVMC-60-T(S)	Gandy Creek	1.8	Mouth to RM 1.8	CNA-Biological	Unknown	Cheat	5020004
WVMT-11-A	Shelby Run	3.5	entire length	CNA-Biological	Unknown	Tygart Valley	5020001
WVMT-4	Goose Creek	0.9	Mouth to RM 0.9	CNA-Biological	Unknown	Tygart Valley	5020001
WVMT-43.8	UNT/Tygart Valley River RM 81.92	0.5	entire length	CNA-Biological	Unknown	Tygart Valley	5020001

WV Code	Waterbody Name	Length (miles)	Impaired Length (miles)	Criteria Affected	Source	HUC8 Name	HUC8
WVMTM-16-0.5A	UNT/Cassity Fork RM 0.76	1.3	entire length	CNA-Biological	Unknown	Tygart Valley	5020001
WVMY	Youghiogheny River	6.9	entire portion in WV	CNA-Biological	Unknown	Youghiogheny	5020006
WVO-10	Eighteenmile Creek	4	entire length	CNA-Biological	Unknown	Raccoon-Symmes	5090101
WVO-9-F	Bear Hollow Creek	5.9	entire length	CNA-Biological	Unknown	Raccoon-Symmes	5090101
WVOG-124	Pinnacle Creek	23.8	RM 3.7 to HW	CNA-Biological	Unknown	Upper Guyandotte	5070101
WVOG-lo	Guyandotte River (Lower)	45	RM 35.6 to HW	CNA-Biological	Unknown	Lower Guyandotte	5070102
WVOGM-8-B-6	UNT/Left Fork RM 2.48/Mill Creek	1.3	entire length	CNA-Biological	Unknown	Lower Guyandotte	5070102
WVPSB-1.65	UNT/South Branch Potomac River RM 10.37	2	entire length	CNA-Biological	Unknown	South Branch Potomac	2070001

Table 2: Waters removed from EPA's proposed list of waters to add to WV's 2014 303(d) List

WV Code	Waterbody Name	Length (mi)
WVKE-76-L	Powell Creek	5.5
WVMT-12-C-2	Little Raccoon Creek	2.6
WVMT-12-G	Fields Creek	6.9
WVMT-20	Big Cove Run	5.8
WVMT-23-B	Raccoon Creek	6.8
WVMT-23-C	Brushy Fork	8.4
WVMT-23-G	Jimmy Run	3.1
WVMT-24-A	Frost Run	2
WVMT-24-C-2	Bills Creek	5.5
WVMT-40	Big Laurel Run	5.4
WVMT-42-B	Flatbush Fork	5.1
WVMT-42-B-1	UNT/Flatbush Fork RM 1.80	1.5
WVMT-42-E	UNT/Roaring Creek RM 11.0	1.1
WVMT-43	Leading Creek	21.5
WVMT-43-O	Laurel Run	3.2
WVMT-48	Kings Run	4.4
WVMT-64-A	Right Fork/Mill Creek	6.1
WVMTB-24	Laurel Run/Buckhannon River	2.5
WVMTB-30	Herods Run	2.7
WVMTB-7	Sand Run	13.6
WVMTM-10	Laurel Creek/Middle Fork River	5.4
WVMTM-13	Long Run	7.8
WVMTM-8	White Oak Run	1.7
WVPSB-18-A	Mudlick Run	8.2
WVPSB-18-A-0.8	UNT/Mudlick Run RM 2.88	5.3
WVPSB-18-A-0.8-B	UNT/UNT RM 1.62/Mudlick Run RM 2.88	1.9
WVPSB-18-A-1	Turnmill Run	3.9
WVPSB-18-B	Walnut Bottom Run	5.5
WVPSB-21.5-G	UNT/UNT RM 4.07/South Branch Potomac River RM 59.19	1.9
WVPSB-25-B	North Mill Creek	13.4
WVPSB-35	Deer Run	8.3
WVSNF-1-A	UNT/Capon Run RM 4.49	2.1
WVSNF-2	Crab Run	2.8

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
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Jason Bostic, Vice-President
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AUG 15 2016

Dear Mr. Bostic,

Thank you for your July 5, 2016, letter to the U.S. Environmental Protection Agency (EPA) providing comments on EPA's proposal to add water quality limited segments to West Virginia's 2014 Section 303(d) list. EPA will respond to your substantive comments in EPA's responses to all of the comments received on EPA's proposed action. The comments received and EPA's responses to comments will be part of EPA's final action on West Virginia's 2014 Section 303(d) list.

This letter is responding to your specific request for examples where EPA has added segments to a state Section 303(d) list "using benthic assessment information or mandated the use of specific benthic methodologies in the development of impaired stream listings." Please be aware that, as a general matter, Freedom of Information Act (FOIA) requests should be directed to the appropriate Region's FOIA Officer. *See* 40 CFR 2.102(a). In addition, the FOIA generally does not require that EPA generate information or respond to questions. Nevertheless, as a courtesy, EPA is responding to your question. The Region is aware of three instances where EPA has added waters to a state 303(d) list using benthic macroinvertebrate bioassessment data:

1. Florida 2002 303(d) list
2. Oregon 2010 303(d) list
3. West Virginia 2012 303(d) list, 2014 303(d) list

Enclosed is a CD with decision documents related to each of the actions listed above. If you have any additional questions, please contact Mr. William Richardson at 215-814-5675 or richardson.william@epa.gov.

Sincerely,

Evelyn S. MacKnight

Evelyn S. MacKnight, Associate Director
Office of Standards, Assessment & TMDLs