



May 19, 2006

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Re: Comments on the proposed 2006 changes to ORSANCO's *Pollution Control Standards*

1. BACKGROUND

The following comments are provided by Kentucky Waterways Alliance (KWA), West Virginia Rivers Coalition (WVRC), and the numerous other organizations that have signed on to this letter in response to the proposed changes to the Ohio River Valley Water Sanitation Commission's (ORSANCO's) *Pollution Control Standards*.¹

KWA's mission is to protect and restore Kentucky's waterways. KWA has a long history of involvement in issues and standards affecting water quality. KWA's nearly 500 members and over 30 member groups care deeply about and recreate on and in Kentucky's waterways.

WVRC is a nonprofit organization with nearly 2,500 members nationwide. Most of our members are residents of West Virginia, neighboring states, and the District of Columbia. Our constituency includes approximately 50 affiliate organizations and a multitude of watershed groups within West Virginia. All have a vested interest in WVRC's mission: To conserve and restore West Virginia's exceptional rivers and streams.

The Ohio River forms the border between Kentucky, West Virginia, and other ORSANCO states. ORSANCO's *Pollution Control Standards* are critically important for KWA and WVRC members that recreate in the river. They are also important because of their potential to set precedents for weaker standards in ORSANCO compact states.

Illnesses caused by contact with or consumption of sewage can range from cholera, hepatitis, gastroenteritis, and respiratory infections to giardiasis, cryptosporidiosis, and dysentery. Small children, the elderly, cancer patients, and others with serious illnesses—20-25 percent of the U.S. population—are particularly vulnerable and are highly susceptible to outbreaks of pathogens.

¹ *Ohio River Valley Water Sanitation Commission Pollution Control Standards for discharges to the Ohio River: Proposed 2006 Revision.*

We support several of the proposed changes to the *Pollution Control Standards*, including, among others:

- Year-round protection of the public water supply use.
- Change to more protective 1Q10 flow when determining the appropriate design flow for acute criteria.
- Adding specific information clarifying that the minimum level of treatment for wastewater discharges is secondary treatment.

However, **fundamentally oppose** many proposed changes including, among others:

- Changes to the bacteria standards that jeopardize safe recreational use and result in lowered standards for human health protection.²
- Changes to the bacteria standards that remove incentives for communities with combined sewer overflows (CSOs) to eliminate raw sewage discharges into the Ohio River.³
- Changes to the mixing zone policy that would allow an additional 28 pounds of mercury to be discharged into the Ohio River every year from a single facility in West Virginia.

This comment letter provides detailed explanations for our support of and opposition to these and other proposed changes.

2. THE OHIO RIVER IS A SOURCE OF PLENTIFUL AND PERSISTENT RECREATIONAL ACTIVITIES

The Ohio River— meaning “beautiful river” in the Iroquois language— is formed by the confluence of the Allegheny and Monongahela rivers at Pittsburgh, Pa. From this point, the historic river flows 981 miles through hundreds of riverside communities toward its confluence with the Mississippi River near Cairo, Il. Throughout these communities, the river provides numerous local benefits, including a reliable source of drinking water, multiple recreational opportunities, diverse fish and wildlife habitats, and expanding opportunities for economic development and waterfront revitalization.

ORSANCO agrees that the Ohio River “provides drinking water to nearly three million people, is a warm water habitat for aquatic life, [and] provides numerous recreational opportunities...”⁴

These recreational opportunities include, but are not limited to: hunting, fishing, floating, power boating, water skiing, canoeing, kayaking, rowing, wading, and swimming.

Some of these uses, such as hunting and fishing, likely occurred prior to European settlement. Other recreational uses increased decades ago: A 1979 recreational use survey determined that use of the Ohio River for recreational purposes was increasing. The study also suggested that future use plans for the Ohio River must consider recreation among the multiple uses of the river.⁵

² Ibid. Section IV(C).

³ Ibid.

⁴ *Ohio River Valley Water Sanitation Commission, Pollution Control Standards for discharges to the Ohio River, 2003 Revision*. Page 1.

⁵ Leuthart, C.A. and H.T. Spencer. Abstract to “Recreation and the Ohio River”. *Water Resources Bulletin* (15)(1): February 1979. Pages 220-226.

In more recent decades, the Ohio has been used considerably more for recreation. A recreational use survey funded by Ohio, West Virginia, Kentucky, and Indiana was conducted on 491 miles of the Ohio River during 1991 and 1992. The survey discovered that not only was recreational use along the Ohio increasing from the 1980s, but also that activity such as sports fishing was potentially a generous source of revenue for each state. Fishing pressure was estimated at 2.5 million angler hours, which translates to an estimated economic value of \$34 million. Comparisons of the 1992 data with a 1981 West Virginia survey demonstrate that recreational use and angler success have both increased significantly. Total fishing pressure increased by 225 percent from 1981 to 1992 for the Ohio River bordering West Virginia.⁶

A more recent 1993 survey by ORSANCO and the National Park Service illustrates the magnitude of positive economic impacts to be realized by achieving water quality improvements on the Ohio River.⁷

Even today, the use of the Ohio for recreation continues to be prosperous, beneficial, celebrated, and even competitive, as evidenced by a continued flurry of recreational activity proposed for this summer:

- On May 20, 2006, the Brundage Memorial Regatta will be held in Parkersburg, W.Va.⁸
- On June 4, 2006, a bass fishing tournament is scheduled on the river near Ravenswood, W.Va.⁹
- On July 7-8, 2006, the fifth annual Paddle Fest 2006 includes a wide range of activities, including numerous races on the Ohio River.¹⁰
- On July 22-23, 2006, the swimming segment of a triathlon includes both a children's and an adult event and is scheduled on the river near Louisville, Ky.¹¹
- On September 6-11, 2006, the Great Ohio River Paddle—an annual multi-day educational and paddling event—will be held to foster further interest in protecting and improving the condition of the river. The event covers up to 240 miles of the Ohio River, ranging from 2 to 14 days of paddling. Since its inception in 2003, more than 200 paddlers have participated and hundreds of people educated about Ohio River conservation at stops in different Ohio River communities.¹²
- On September 16-17, 2006, a bass fishing tournament is scheduled on the Ohio near Moundsville, W.Va.¹³

Rowing clubs and crew teams are once again popular forms of recreation on the Ohio River. The University of Louisville has a competitive rowing team with sixty members on the water almost

⁶ Schell, et al. OHIO RIVER RECREATIONAL USE SURVEY. Ohio Division of Wildlife: Athens, OH. (Abstract from the 1998 Southern Division of the American Fisheries Society Midyear Meeting held in Lexington, Kentucky.)

⁷ Vicory, A.H. and A.K. Stevenson. 1993. "What's a River Worth, Anyway? A resource valuation of the Ohio River." Ohio River Valley Water Sanitation Commission: Cincinnati, OH.

⁸ www.row2k.com/calendar/index.cfm?type=week.

⁹ West Virginia Bass Federation: www.wvbass.com/tournament.html.

¹⁰ <http://ohioriverway.org/paddlefest/>.

¹¹ www.sommersports.com/events/triamerica/tour/louisville/.

¹² www.ohioriverfdn.org/events/gorp04/gorp.html.

¹³ West Virginia Bass Federation: www.wvbass.com/tournament.html.

daily. When an oar enters the water, the person seated behind the rower is splashed in the face with water. Tori Murden McClure, world class rower and Vice-President of Spalding University in Louisville, Ky., said:

“We row thirty strokes a minute at race pace. [If ORSANCO’s proposals are approved] I’ll get more bacteria splashed in my face thirty times a minute. I for one am out on the river six days a week year-round in a racing shell that has four inches of freeboard. We use more caution when the water is running high to avoid floating debris, but we’ve never avoided rowing because the river was running with filth from people who cannot be bothered with treating their waste.”¹⁴

There are also active rowing clubs or crew teams along the river in Pittsburgh, Pa.; Huntington, Parkersburg, and Vienna, W.Va.;¹⁵ Cincinnati, Ohio; and Louisville and Paducah, Ky.

Formal comments on ORSANCO’s Web site also document numerous current uses of the Ohio River for recreation.

3. WATER CONTACT RECREATION IS AN EXISTING AND DESIGNATED USE FOR THE OHIO RIVER

A wide variety of recreational activities are existing uses of the Ohio River, and recreation is a designated use for the Ohio. The Clean Water Act (CWA), the ORSANCO compact, and ORSANCO’s *Pollution Control Standards* all clarify ORSANCO’s responsibility to protect and maintain water quality sufficient to support these existing and designated recreational uses.

3.1 The Clean Water Act protects existing uses

Considering both the past and present recreational uses along the Ohio River detailed above, both full body and secondary contact recreation are existing uses for the Ohio River. “Existing uses” are defined in the CWA as “those uses actually attained in the water body on or after November 28, 1975, whether or not they are included in the water quality standards.”¹⁶

Federal regulations requires that “existing instream water uses and the level of water quality necessary to protect the existing uses shall be maintained and protected.”¹⁷ Furthermore, states may only remove designated uses that are not existing uses.¹⁸

3.2 ORSANCO is committed to protecting uses

Article VI of the original ORSANCO compact states that, “the guiding principle of this Compact shall be that pollution by sewage or industrial wastes originating within a signatory State shall not injuriously affect the various uses of the interstate waters.”

¹⁴ E-mail from Ms. McClure to Judith Petersen, April 10, 2006.

¹⁵ W.Va. rowing clubs are listed at www.usrowing.org/NewToRowing/RowingClubsByState_USRowingRegion/clubwv.aspx.

¹⁶ 40 CFR 131.3(e).

¹⁷ 40 CFR 131.12(a)(1).

¹⁸ 40 CFR 131.10(g).

Section I of ORSANCO's *Pollution Control Standards*, "Authority and Purpose," mandates that, "all waters in the District be placed and maintained in a satisfactory, sanitary condition, available for certain beneficial uses. It is the mission of the Commission to insure protection of these uses and to preserve the waters for other legitimate purposes."

In Section III, ORSANCO lists "suitable for recreation purposes" as one of the designated uses of the Ohio River and states that, "no degradation of the water quality of the Ohio River that would interfere with or become injurious to these uses shall be permitted."

4. ORSANCO CANNOT REMOVE OR DOWNGRADE EXISTING USES, AND HAS NOT JUSTIFIED REMOVING OR DOWNGRADING DESIGNATED USES

ORSANCO cannot remove or downgrade existing recreational uses, and ORSANCO has failed to provide justification for removing or downgrading designated recreational uses along the Ohio River.

Several of the proposed changes to the 2003 *Pollution Control Standards* result in some or all of the recreational uses of the Ohio River being eliminated or downgraded. Although the CWA maintains provisions for removing or downgrading designated uses under certain circumstances, as stated above, it is illegal to remove designated uses if they are existing uses, unless a more stringent use is being added.

A specific process is required before a designated use can be removed or downgraded: "A State must conduct a use attainability analysis as described in 131.30(g) whenever: the State wishes to remove a designated use that is specified in section 101 (a) (2) of the Act or to adopt subcategories of uses specified in Section 101(a)(2) of the Act which require less stringent criteria."¹⁹

Use Attainability Analysis (UAA) is defined as a "structured scientific assessment of the factors affecting the attainment of the use which may include physical, chemical, biological, and economic factors as described in §131.10(g)."²⁰

The purpose of a UAA is to determine what specific designated uses are attainable. At a minimum, uses are deemed to be "attainable" when they can be achieved through the imposition of traditional technology-based effluent limits and reasonable and cost-effective best management practices (BMPs) for nonpoint source control.²¹ Uses can only be removed through a UAA under certain very specific situations.²²

We recognize that ORSANCO is not a state or tribal agency with delegated CWA authority; however, **it seems unwise at best for ORSANCO to adopt standards that cannot be enacted**

¹⁹ 40 CFR 131.10(j)(2).

²⁰ 40 CFR 131.3(g).

²¹ 40 CFR 131.10(d).

²² 40 CFR 131.10(g) and (h).

or do not have the underlying scientific analysis to be enacted in delegated states that form the Compact.

Although detailed comments about each proposed change to ORSANCO's *Pollution Control Standards* are listed below, **make no mistake that our first position concerning the removal or sub-categorization of the existing and designated recreational uses for the Ohio River is that ORSANCO's proposed changes are illegal under the CWA and cannot be implemented by Compact states.**

5. DETAILED COMMENTS ON ORSANCO'S PROPOSALS

4.1 II. Definitions, H. "Dry Weather Flow Conditions" definition

4.1.1. Proposed change

ORSANCO proposes to add a definition for "Dry Weather Flow Conditions."

4.1.2. Comment

In general, we support the definition and resulting clarification of "dry weather flow conditions" to meet the definition provided by EPA in the Combined Sewer Overflow Control Policy. However, by including groundwater infiltration as a part of the definition we believe it is counterproductive to the control measures communities subject to Phase I or Phase II Stormwater Permits are required to undertake. These communities are required to identify and limit groundwater infiltration into their system.

4.2 II. Definitions, K. "Mixing Zone" definition

4.2.1. Proposed change

ORSANCO proposes to add the sentence "Water quality criteria must be met at the edge of the mixing zone" to the definition of a mixing zone.

4.2.2. Comment

We support this addition and believe that it helps clarify the area included in a mixing zone.

4.3 IV. Water Quality Criteria, B. Aquatic Life Protection

4.3.1. Proposed change

Several changes and clarifications are proposed for this section.

4.3.2. Comment

We support these changes. Under Part 6(e), "Chemical Constituents," we commend ORSANCO for changing the acute criteria from a 7Q10 to a 1Q10 flow. We believe these changes will be more protective of water quality in the Ohio River.

4.4 IV. Water Quality Criteria, C. Human Health Protection, 1. BACTERIA, Paragraph a

4.4.1. Proposed change

Deletes the wording “for the months of November through April,” and adds the statement “Public water supply use shall be protected at all times.”

4.4.2. Comment

We support these changes; however, we suggest that ORSANCO add an *E. coli* standard for the protection of public water supplies to supplement the current fecal coliform standard. In 1986, EPA determined that *E. coli* would provide a better indicator of the presence of disease causing organisms.

4.5 IV. Water Quality Criteria, C. Human Health Protection, 1. BACTERIA, Paragraph b

4.5.1. Proposed changes

ORSANCO proposes to change this section to read as follows:

b. Protection of contact recreation use – during the months of May through October, contact recreation use shall be protected whenever the river velocity is 2 miles per hour or less.

i. Fecal coliform bacteria content shall not exceed 200/100 mL as a monthly geometric mean based on not less than 5 samples per month; nor exceed 500/100 mL in more than 10 percent of all samples taken during the month, or

ii. *Escherichia coli* bacteria content shall not exceed 130/100 mL as a monthly geometric mean, based on not less than five samples per month, nor exceed 400/100 mL in more than 10 percent of the samples taken during the month.

4.5.2. General comments

We do not support any of the proposed changes to this section and ask that this section not be changed from the currently approved language in the 2003 *Pollution Control Standards*.

The changes that are proposed would completely undermine protection of existing uses, contrary to the Clean Water Act’s mandate.²³ As a result, during the months of May through October, whenever the velocity **at any point** on the Ohio River exceeds two miles per hour, **recreational uses are not protected at all**. During this time, the proposed allowable fecal coliform levels would rise tenfold to harmful and excessive levels, from 200/100 mL to 2,000/100 mL.

Another effect of this change is that when the velocity of the river exceeds 2 miles/hour there would be **no limit established for *E. coli* bacteria at all** since there is no *E. Coli* limit specified in the Standards for the protection of public water supply use.

²³ 40 CFR 131.10(h)(1), 131.12(a)(1).

ORSANCO's own data indicate that this proposed change, on average, would impact recreational uses in the river at least 18 percent of the time— or more than once a week. An analysis by the Courier Journal shows that during May through October 2005, portions of the river near Louisville flowed at estimated speeds faster than 2 mph on 39 days, or 21 percent of the time.²⁴

Furthermore, the proposed changes also increase the allowable levels of fecal coliform and *E. coli* during the months of May through October under any other flow conditions of the Ohio River to more than double.

We see no justification for these proposed increases in bacteria levels. Indeed the only possible outcome is an increase in illnesses among people using the river for recreation. Other possible outcomes include but are not limited to an increase in drinking water treatment and testing analysis costs under the Safe Drinking Water Act. Has ORSANCO completed any health or economic analysis to quantify the number of additional waterborne illnesses possible or the potential increase in water utility rates if this proposal is approved?

We believe this proposal jeopardizes people's health and is not protective of the existing and designated recreational use of the Ohio River. **We oppose this change.**

Please note that the "General Discussion" of existing and designated uses provided above applies explicitly to this proposal.

We will further discuss and support our opposition to these changes below; however, we have one change to propose for consideration first.

As a result of our investigation of the existing and designated recreational uses of the Ohio River we believe the river is indeed used for recreation year round. We therefore propose that **ORSANCO eliminate the exclusion of the months between November and April to provide year round protection of recreational Ohio River users.**

4.5.3. Comments on using velocity to limit recreational uses

Our initial objection to the proposed changes is the lack of protection for contact recreational use whenever the river velocity is two miles per hour or more. By attempting to define a limiting maximum flow value whereby bacteria criteria necessary to safely support recreational use of the river is waived, ORSANCO has ignored a basic tenant of the CWA that guaranteed the protection of recreational uses in the nation's waters. This is evident when examining the guidance in EPA's Water Quality Standards Handbook Chapter 2, Recreation (2.1.3) which states: "Physical factors, which are important in determining attainability of aquatic life uses, may not be used as the basis for not designating a recreational use consistent with the CWA section 101(a)(2) goal. This precludes States from using 40 CFR 131.10(g) factor 2 (pertaining to low-flows) and factor 5 (pertaining to physical factors in general). The basis for this policy is that States and EPA have an obligation to do as much as possible to protect the health of the

²⁴ Bruggers, James. 2006. River users could face water-quality dangers. Courier Journal, Louisville, Ky. www.courier-journal.com/apps/pbcs.dll/article?AID=/20060413/NEWS0101/604130390. April 13.

public. In certain instances, people will use whatever water bodies are available for recreation, regardless of the physical conditions.”

ORSANCO misuses the 1978 document used to derive a 2-mph limiting velocity.²⁵ The instream flow study and models used in the referenced document were never meant to provide limiting “safe” velocities for recreational use. Rather, the study attempted to quantify the minimum flow velocities necessary for a wide variety of recreational uses. The following table shows the highest acceptable stream velocities from the 1978 document.

Activity	Highest acceptable stream velocity (mph)
Boating rowing-rafting-drifting	10
Boating high power	8
Boating canoeing-kayaking	7
Boating low power	5
Boating tubing-floating	5
Fishing boat power	3
Fishing boat non-power	3
Fishing wading	2
Water contact wading	2
Water contact swimming	2
Water contact water skiing	2
Boating sailing	1

Note: Velocities in miles per hour calculated by multiplying velocities in feet per second by 0.68, and then rounding.

Furthermore, even if the study and the associated models could be used to estimate limiting safe velocities for recreational uses, the modeling would need to be completed for the Ohio River rather than using values obtained in the 1978 instream flow document.

Startlingly, the single value chosen by ORSANCO from the study was one of the lowest velocities listed in the document. Even if the commission believed the 1978 study could be used to determine a safe limiting velocity (a conclusion completely disputed herein) and further assuming the commission believed they did not need to run specific models for the Ohio River to determine valid velocities— there was no reason to choose 2 mph for recreational use. The 1978 document provided a 10-mph value in the report that applied to rowing, rafting, and/or drifting— all existing and designated recreational uses of the Ohio River.

The Water Quality Standards Handbook also quotes regulations, which state “ ...even though it may not make sense to encourage use of a stream for swimming because of the flow, depth or velocity of the water, the States and EPA must recognize that swimming and/or wading may

²⁵ *Methods of Assessing Instream Flow for Recreation*. FWS/OBS-78/34, Instream Flow Information Paper: No 6, June 1978.

occur anyway. In order to protect public health, States must set criteria to reflect recreational uses if it appears that recreation will in fact occur in the stream.”²⁶

EPA could hardly make it clearer that using velocity to attempt to limit the recreational uses of the Ohio River is not an appropriate or legal option under the CWA. Indeed as discussed in detail above we believe that this change actually removes the existing and designated recreational uses of the Ohio River and is expressly prohibited.

As previously mentioned above in our comments on existing and designated uses, the Ohio River is in fact used during various flow conditions, including high water. EPA has stated that “kayakers or surfers may actually seek out high flow or unsafe waters in which to recreate.”²⁷ We will not repeat all of the examples cited above; however, three current examples of high water recreational use of the Ohio River include:

- The swimming segment of a triathlon on the river near Louisville, Ky. includes both an adult and children’s segment scheduled for July 22-23, 2006.²⁸ The following text is taken from the race: “The swim is in the Ohio River. The course features an in-water start and is one loop... Although historically the River is calm in July, should the current be greater than one knot (1 knot = 1.15 mph), the swim course will be switched to a point-to-point format with swimmers swimming with the current.” This event will take place whether or not the river is flowing fast.
- The Falls of the Ohio are also used at high flows and high velocities. According to American Whitewater: “The Falls of the Ohio is one of the most distinctive paddling locations in the United States. Within sight of downtown Louisville, Kentucky, is one of the premier high flow runs.”²⁹
- Richard Ruggieri, who coaches the University of Louisville women’s rowing team, said coaches and rowers are careful to make sure that their daily workouts in the river are safe. He said a river speed of 2 mph would not be enough on its own to keep them out of the water.³⁰

In summary, eliminating the recreational use bacteria standard whenever velocity of the river exceeds 2 mph would allow fecal coliform levels to increase to 2,000/100 mL, and would allow *E. Coli* bacteria to increase without limit. **We oppose this change. This change would result in the exposure of untold numbers of recreational users to dangerous levels of pathogens.**

4.5.4. Comments on increasing the allowable limit of fecal coliform bacteria in individual samples taken during a month

First it should be noted that EPA, since 1986, has recommended that agencies use an *E. coli* bacteria standard.

²⁶ US EPA Water Quality Standards Handbook: Second Edition, EPA-823-B-94-005a, August 1994, 2.1.3 Recreation, Page 2-2.

²⁷ EPA, Draft Implementation Guidance for Ambient Water Quality Criteria for Bacteria – 1986 (EPA-823-D-00-001, January 2000), p.34-5.

²⁸ www.sommersports.com/events/triamerica/tour/louisville/.

²⁹ www.americanwhitewater.org/rivers/id/3436/.

³⁰ Bruggers, James. 2006. River users could face water-quality dangers. Courier Journal, Louisville, Ky. www.courier-journal.com/apps/pbcs.dll/article?AID=/20060413/NEWS0101/604130390. April 13.

By proposing this change to IV. Water Quality Criteria for part C.1.b., ORSANCO has proposed to increase the allowable limit of fecal coliform bacteria in any individual sample(s) from 400/100 mL to 500/100 mL as long as the monthly geometric mean of all the samples does not exceed 200/100 mL.

ORSANCO provides no justification or reference for this increase in the allowable level of fecal coliform bacteria in the proposed standards. However, this proposed change is a result of the wet-weather workgroup recommendation to “change the contact recreational use designation” of the Ohio River to “Light Use”. (See parallel discussion below for *E. coli* bacteria.) In this instance however, ORSANCO extrapolates even further to derive fecal coliform criteria from corresponding *E. coli* bacteria criteria when no such criteria ever existed in 40 CFR 131.

We oppose this change.

4.5.5. Comments on increasing the allowable limit of *E. coli* bacteria in individual samples taken during a month

By proposing this change to IV. Water Quality Criteria for part C.1.b., ORSANCO has proposed to increase the allowable limit of *E. coli* bacteria in any individual sample(s) from 240/100 mL to 400/100 mL as long as the monthly geometric mean of all the samples does not exceed 130/100 mL. Single sample maximums are intended to prevent against acute health effects resulting from single exposures. Indeed, that is the very reason that EPA’s water quality criteria for bacteria indicators includes both a single sample maximum limit and a 30 day geometric mean limit.³¹

People recreating in the water are not exposed to a geometric mean, they are exposed to the actual level at the time of use. Illnesses caused by contact with or consumption of sewage are serious and are detailed above in Section 1. Bacteria limits do not protect against risks from viruses and other pathogens that occur in raw sewage, because these pathogens are much more resistant environmentally and experience different treatment effectiveness.³² By increasing the one-time exposure level, ORSANCO is potentially subjecting untold numbers of recreational users to harmful health impacts.

ORSANCO provides no justification or reference for this increase in the allowable level of *E. coli* bacteria in the proposed standards. However, this proposed change is a result of the wet-weather workgroup recommendation to “change the *contact recreational use* designation” of the Ohio River to “*Light Use*.”

All recreational users deserve protection, no matter how many others use the river. ORSANCO has no solid count of recreational users in the Ohio to support a light use designation. Even if such data were available, it would not be sufficient because the light use designation does not apply to inland waters.

While ORSANCO never states in the proposed standards that they are proposing to change from *Contact Recreation* to *Light Use Recreation*, the corresponding change in the bacteria standard is indeed proposed in this section. Once again, ORSANCO has used the underlying regulations

³¹ EPA, Ambient Water Quality Criteria for Bacteria –1986 (EPA440/5-84-002).

³² See 63 Fed. Reg. 36742, 36778 (July 7, 1998).

improperly. To derive the “Light Use” definition ORSANCO relied upon regulations for coastal and Great Lakes recreation waters.³³ However, regulations developed specifically for coastal beaches and lakes with public beaches cannot apply to a mainstem river with no beaches. In fact, the coastal standards themselves state: “Section 502(21)(B) explicitly excludes from the definition of coastal recreation waters ‘inland waters; or...waters upstream of the mouth of a river or stream having an unimpaired natural connection with the open sea.’ ”³⁴

We oppose this change.

4.5.6. Comments on eliminating the single sample limit of *E. coli* bacteria

By proposing this change to IV. Water Quality Criteria for part C.1.b., ORSANCO has proposed to **completely eliminate** the current single sample maximum of 240/100 mL.

As mentioned above, single sample maximums are intended to prevent against acute health effects resulting from single exposures, and that is the very reason that EPA’s water quality criteria for bacteria indicators includes both a single sample maximum limit and a 30 day geometric mean limit.

ORSANCO provides no justification or reference for eliminating the single sample limit in the proposed standards.

Not only does ORSANCO provide no justification to support either

- the proposal to increase the allowable levels of bacteria (fecal coliform and *E. coli*) in individual samples or
- the proposed changes to the regulations that eliminate the single sample limit for *E. coli*, but these changes also do not properly follow EPA’s guidance. In fact, “EPA recommends that states and authorized tribes adopt water quality criteria for bacteria containing both the geometric mean and single sample maximum components and use both components when assessing and determining attainment of waters designated for primary contact recreation.”³⁵

EPA’s rationale for the bacteria criteria is based on a recognition of the need to protect recreational users from acute exposure to high levels of bacteria that are frequently present following overflow events. Conversely, geometric means are a useful tool for looking backwards in time to determine compliance, but they are not useful for protecting people from one-time exposure to elevated levels of bacteria. As explained above, in addition to bacteria, sewage contains viruses, parasites and other pathogens that can cause a variety of diseases including cryptosporidium and giardia. Single sample maximums are absolutely necessary for protecting human health.³⁶

³³ 40 CFR 131, Water Quality Standards for Coastal and Great Lakes Recreation Waters.

³⁴ 40 CFR 131.

³⁵ EPA, Ambient Water Quality Criteria for Bacteria –1986 (EPA440/5-84-002). See also EPA, Draft Implementation Guidance for Ambient Water Quality Criteria for Bacteria – 1986 (EPA-823-D-00-001, January 2000).

³⁶ EPA, Implementation Guidance for Ambient Water Quality Criteria for Bacteria, May 2002 Draft.

4.6 IV. Water Quality Criteria, C. Human Health Protection, 4. OTHER TOXIC SUBSTANCES

4.6.1. Proposed change

The proposed changes deletes a reference to EPA Section 304(a) of the CWA, but retains the actual standards in Appendix E.

4.6.2. Comment

We do not oppose this change.

4.7 V. Waste Water Discharge Requirements, A. General, Paragraph 1

4.7.1. Proposed change

ORSANCO proposed minor wording changes in this paragraph.

4.7.2. Comment

We support this change.

4.8 V. Waste Water Discharge Requirements, A. General, Paragraph 3

4.8.1. Proposed change

ORSANCO proposes to add the words “and maintain.”

4.8.2. Comment

We strongly support this change and commend ORSANCO for its effort.

4.9 V. Waste Water Discharge Requirements, B. Sewage, 1. MINIMUM LEVEL OF TREATMENT, Paragraphs a.i and b.i

4.9.1. Proposed change

Adds the same sentence—“The monthly average percent removal shall not be less than 85 percent.”—to both paragraphs, to apply to biochemical oxygen demand and suspended solids.

4.9.2. Comment

We strongly support both of the above additions and commend ORSANCO for proposing these additions. These language additions tie the minimum level of treatment to the secondary treatment standards— clarifying the minimum removal levels expected from permittees discharging wastewater into the Ohio River.

4.10 V. Waste Water Discharge Requirements, B. Sewage, 1. MINIMUM LEVEL OF TREATMENT, d. Bacteria, Paragraph i

4.10.1. Proposed change

Deletes the limitation that the bacteria criteria only apply during the months of November through April.

4.10.2. Comment

We strongly support this change. However, we suggest that a further clarification be added to make it clear that the 2,000/100 mL standard is for the protection of public water supplies. Without this addition the section may appear to present a conflict with sections ii and iii below.

4.11 V. Waste Water Discharge Requirements, B. Sewage, 1. MINIMUM LEVEL OF TREATMENT, d. Bacteria, Paragraph ii

4.11.1. Proposed change

Allows the maximum value in up to 10 percent of the samples collected in a month for fecal coliform to be significantly higher by changing the limit from 400/100 mL to 500/100 mL.

4.11.2. Comment

We strongly oppose this change for reasons detailed previously. See our comments above related to Section IV. Water Quality Criteria, C. Human Health Protection, 1. BACTERIA, Paragraph b.

4.12 V. Waste Water Discharge Requirements, B. Sewage, 1. MINIMUM LEVEL OF TREATMENT, d. Bacteria, Paragraph iii

4.12.1. Proposed change

Allows the maximum value in up to 10 percent of the samples collected in a month for *E. coli* bacteria to be significantly higher by changing the limit from 240/100 mL to 400/100 mL.

4.12.2. Comment

We strongly oppose this change for reasons detailed previously. See our comments above related to Section IV. Water Quality Criteria, C. Human Health Protection, 1. BACTERIA, Paragraph b.

In addition we do not believe EPA ever intended for there be a geometric mean applied to the *E. coli* bacteria standard and request that this be changed to reflect that no single sample should exceed 240/100 mL.

4.13 V. Waste Water Discharge Requirements, B. Sewage, 2. ALTERNATIVE TREATMENT, a. Biochemical Oxygen Demand, Paragraph i

4.13.1. Proposed change

Adds a sentence that specifies the monthly average percent removal shall not be less than 65 percent.

4.13.2. Comment

We strongly support this change, which is again reflective of ORSANCO now specifically requiring wastewater dischargers to meet at a minimum the secondary treatment standards set by US EPA and specified in 40 CFR 133.

4.14 V. Waste Water Discharge Requirements, B. Sewage, 2. ALTERNATIVE TREATMENT, b. Suspended Solids

4.14.1. Proposed change

Adds a sentence that specifies the monthly average percent removal shall not be less than 65 percent.

4.14.2. Comment

We strongly support this change, which is again reflective of ORSANCO now specifically requiring wastewater dischargers to meet at a minimum the secondary treatment standards set by US EPA and specified in 40 CFR 133.

4.15 V. Waste Water Discharge Requirements, B. Sewage, 3. COMBINED SEWER SYSTEMS, a. Prohibition of Dry Weather Discharges

4.15.1. Proposed change

Changes the language to reflect the addition of a definition of dry weather flow condition and clarifies the limited set of set circumstances under which a dry weather discharge is permitted.

4.15.2. Comment

In general, we support the definition and resulting clarification of “dry weather flow conditions” to meet the definition provided by EPA in the Combined Sewer Overflow Control Policy. However, we are concerned that the language that is proposed in this section is a weakening of this section from the 2003 *Standards*.

The 2003 *Pollution Control Standards* forbid CSO-related dry weather discharges unless, “there has been rainfall greater than trace amounts or significant melting of frozen precipitation during the immediately preceding 24 hours, or unless the discharge is caused by river elevation at or above the established flood stage.”

The proposed change relaxes the allowance of dry weather discharges by stating, “No combined sewer overflow to the Ohio River shall occur under dry weather flow conditions unless the discharge is caused by elevated river stage.”

The proposed change also removes the language specifying that an “elevated river stage” is a situation during which the river level is “at or above the established flood stage.” This lack of specificity is questionable because it provides an uncertain amount of latitude for defining “elevated river stage.” It is our concern that decisions about when the river is “elevated” could then be interpreted somewhat arbitrarily.

The proposed change should maintain the language from the 2003 standards, stating: “...or unless the discharge is caused by river elevation at or above the established flood stage.”

Please also see our comments above on the new definition of “dry weather flow.”

4.16 V. Waste Water Discharge Requirements, B. Sewage, 3. COMBINED SEWER SYSTEMS, b. System Overflows During Wet Weather, references to EPA policy

4.16.1. Proposed change

The section first proposes to delete the reference to EPA policy.

4.16.2. Comment

We have no objection to this change.

4.17 V. Waste Water Discharge Requirements, B. Sewage, 3. COMBINED SEWER SYSTEMS, b. System Overflows During Wet Weather, suspending bacteria criteria for two days after it rains

4.17.1. Proposed change

Addition of significant new language with following bold face font representing the new text:

“In addition, the system must be operated in accordance with an approved Long Term Control Plan, where required, and the discharge must not interfere with the attainment of the water quality criteria set forth in Section IV, **except as follows for combined sewer systems with an approved, fully implemented, long term control plan and approved Use Attainability Analysis (UAA):**

The approved Long Term Control Plan and UAA will identify the conditions, at or above which, the contact recreation use and associated bacteria criteria cannot be achieved, and will identify alternative bacteria criteria that can be achieved. The alternative bacteria criteria may apply for a period not to exceed two days following the condition.”

4.17.2. Comment

We strongly object to this proposal for several reasons. First, it completely undermines the Clean Water Act’s protection of existing uses. As we have documented above the Ohio has grown in attraction as a source of recreational opportunity for boaters and swimmers alike, especially during times of wet weather, which also coincides with the times when most overflows occur. Because these existing recreational uses are not confined to dry weather days, ORSANCO’s proposal to allow bacteria in water at levels that are not protective of these uses violates the Clean Water Act. The Act and EPA rules unequivocally require the protection of existing uses, and do not allow any exceptions to this requirement.³⁷

In addition, because the proposal would remove a pollution standard that encourages the reduction of excessive discharges from nonpoint sources of pollution during wet weather— the time during which such an influence is most needed. With this policy in place, it is unlikely that any incentive will remain for nonpoint sources of bacterial pollution such as farms, unregulated storm sewers, and numerous other sources to reduce, amend, or wholly eliminate these sources.

³⁷ 40 CFR 131.10(h)(1), 131.12(a)(1).

To some degree, ORSANCO's proposal is problematic because, according to EPA's CSO Control Policy [Section I(B)], permitting authorities "are encouraged to evaluate water pollution control needs on a watershed management basis and coordinate CSO control efforts with other point and nonpoint source control activities." ORSANCO's proposal to provide the above-mentioned suspension of water quality criteria during wet weather dissociates from this idea because it includes no mention of further coordinating an effort to evaluate how to incorporate other point and nonpoint source control measures into the process. Instead, it abandons this effort and essentially leaves a loophole through which nonpoint sources could pollute indiscriminately during wet weather.

Next, according to the CSO Control Policy [Section II(C)], in any approved long term control plan, it is the responsibility of the permittee to develop and implement control plans that will ultimately result in compliance with the requirements of the Clean Water Act. The policy states:

"The selected controls should be designed to allow cost effective retrofitting if additional controls are subsequently determined to be necessary to meet water quality standards, including existing and designated uses."

Rather, ORSANCO's proposal temporarily suspends recreational uses and seeks to exempt permittees from the requirements of additional controls that may be necessary to meet water quality standards. The purpose of implementing a long term control policy still remains achieving compliance with the Clean Water Act, particularly protection of water quality and designated uses.³⁸

One reason for eliminating or at a minimum controlling CSOs is that these discharges contain a number of harmful pollutants in addition to high level of pathogens. EPA's CSO Control Policy reiterates:

"CSOs often contain high levels of suspended solids, pathogenic microorganisms, toxic pollutants, floatables, nutrients, oxygen-demanding organic compounds, oil, grease, and other pollutants. CSOs can cause exceedances of water quality standards. Such exceedances may pose risks to human health, threaten aquatic life and its habitat, and impair the use and enjoyment of the Nation's waterways."³⁹

Section II(A) of the CSO Control Policy states:

"A primary objective of the long-term CSO control plan is to meet water quality standards, including the designated uses through reducing risks to human health and the environment by eliminating, relocating, or controlling CSOs to the affected waters."

Unlike variances to water quality standards, which are temporary and must be renewed periodically based on new justifications, this proposal would suspend water quality standards

³⁸ EPA CSO Control Policy: "Supplementary Information."

³⁹ Ibid. Section I(A).

forever. This is more evidence that ORSANCO’s overall approach to wet weather issues is unnecessarily blunt.

Lastly, KWA and WVRC still contend that a UAA cannot be used to remove an existing use.

“A state may remove a designated use from its water quality standards only if the designated use is not an existing use. An existing use is a use actually attained in the water body on or after November 28, 1975. Furthermore, a State may not remove a designated use that will be attained by implementing the technology-based effluent limits required under sections 301(b) and 306 of the Clean Water Act and by implementing cost-effective and reasonable best management practices for nonpoint source controls.”⁴⁰

KWA and WVRC stand firm in the belief that recreational use is both an existing and designated use for the Ohio River. More so, we contend that the implementation and use of “reasonable best management practices” has been limited in recent years, excluding new possibilities for controlling nonpoint sources of pollution. Studies in Europe have shown that using rooftop gardens and sustainable development practices can significantly reduce runoff from urban centers. KWA and WVRC encourage federal, state, and local authorities to begin implementing sustainable development practices into zoning and building standards. We also encourage serious efforts to implement effective storm water programs that significantly reduce runoff from both point and nonpoint sources. After reviewing numerous CSO inspection forms in West Virginia, we have discovered that a significant amount of revenue is exhausted with keeping silt and debris from blocking infrastructure. Many overflows are the result of clogged gates, blocked pipes, and other similar occurrences. Too much money is spent simply bringing in emergency crews to fix sewage overflow problems, oftentimes after hours or during holidays when workers accumulate overtime pay.

4.18 V. Waste Water Discharge Requirements, C. Industrial Wastes, Including Toxic Wastes, Paragraph 2

4.18.1. Proposed change

ORSANCO proposes to add seven bullet points clarifying net discharge of pollutants for effluent limitations.

4.18.2. Comment

We do not object to these additions. The language is derived from 40 CFR 132, Appendix. F.

4.19 VI. MIXING ZONE DESIGNATION, Paragraph C

4.19.1. Proposed change

ORSANCO proposes to modify Section VI.C as follows:

“Acute water quality criteria, as specified in Section IV.B.6, will apply at all points within the mixing zone; however, states may at their discretion allow a smaller zone in

⁴⁰ Ibid. Section III (B) (j).

the immediate vicinity of the point of discharge in which acute criteria are exceeded, provided the zone does not impact the water of another state, but the acute criteria must be met at the edge of the acute mixing zone or zone of initial dilution. Acute mixing zones shall be calculated in accordance with one of the approaches presented in appendix F, or by such other method as may be demonstrated to be appropriate to the Commission.”

4.19.2. Comment

The proposed language further confuses ORSANCO’s mixing zone policy. For example, it states that “Acute water quality criteria...will apply at all points within the mixing zone” but it also states that “the acute criteria must be met at the edge of the acute mixing zone or zone of initial dilution.” Must acute criteria be met within or at the edge of the mixing zone?

A second point of confusion is whether ORSANCO is proposing a single type of mixing zone or more than one type of mixing zone. Section C begins by referring to “the mixing zone” but later talks about “the acute mixing zone” and the “zone of initial dilution.”

Before adopting new language on mixing zones, we recommend that ORSANCO carefully review the intent of the changes to the mixing zone policy and clearly modify the language as appropriate.

4.20 VI. MIXING ZONE DESIGNATION, Paragraph G

4.20.1. Proposed change

ORSANCO proposes to modify Section VI.G, which regulates mixing zones for bioaccumulative chemicals of concern (BCCs), to read as follows:

“Mixing zones shall be prohibited for Bioaccumulative Chemicals of Concern (BCCs) as set forth in this paragraph. Discharges [sic] BCCs in existence on or before October 16, 2003 may be allowed until October 16, 2013 to eliminate mixing zones for these chemicals; however, no increase in such discharges will be allowed. Discharges of BCCs that come into existence after October 16, 2003 are subject to this prohibition immediately.”⁴¹

4.20.2. Comment

BCCs bioaccumulate in animals and humans, and are rightfully given special, careful treatment in the ORSANCO regulations. Yet the proposed modification will allow the discharge of more BCCs into the Ohio River.

The current language is as follows:

“Mixing zones shall be prohibited for Bioaccumulative Chemicals of Concern (BCCs) as defined below. Existing discharges with mixing zones for BCCs will be allowed until ten

⁴¹ Ohio River Valley Water Sanitation Commission POLLUTION CONTROL STANDARDS for discharges to the Ohio River Proposed 2006 Revision, Section VI.G.

years from the date of these Pollution Control Standards (October 16, 2003). New discharges of BCCs are subject to this prohibition immediately.”⁴²

This language establishes a prohibition of mixing zones for BCCs, but allows a single exception: existing discharges with mixing zones for BCCs. It is important to distinguish existing discharges **with** mixing zones for BCCs from existing discharges **without** mixing zones for BCCs. If no distinction was to be made between these two categories of dischargers, then the phrase “with mixing zones for BCCs” would not have been included in the regulations.

The new language would allow new mixing zones for BCCs as long as the discharge—not the mixing zone—was in existence on or before October 16, 2003. This change would therefore allow new mixing zones for BCCs for some dischargers that currently cannot get them under the existing regulations. This change would have serious implications.

It was made in direct response to a 2005 National Pollutant Discharge Elimination System (NPDES) permit decision by the West Virginia Department of Environmental Protection (WVDEP) for a facility that discharges mercury, a BCC, to the Ohio River. No mixing zone had ever been granted for mercury in this facility’s previous permits, and WVDEP did not allow a new mixing zone in 2005 based on the ORSANCO prohibition. The discharger is proposing a mixing zone with dilution of 24 times. Therefore, if ORSANCO were to revise this standard, 24 times more mercury will be allowed to discharge from this facility.

ORSANCO is proposing this change without any analysis by its staff or Technical Committee regarding how many facilities the change might affect, and how much of which pollutants might be discharged. In fact, at the February ORSANCO meeting, this change was mentioned almost as a clarification, suggesting no significant impact.

But for the one West Virginia facility alone, this change would allow mercury discharges to increase from 1.2 to 29 pounds per year, a major increase in an important BCC.

We oppose this weakening of the ORSANCO standard. The current mixing zone prohibition for BCCs should be maintained as written.

4.21 Appendix C: Critical Flow Values

4.21.1. Proposed change

ORSANCO proposes to change from the use of the 7Q10 to the 1Q10 flow.

4.21.2. Comment

We support this change. A correction is needed: Footnote 1 should be changed from “Minimum 7-day, 10-year flow” to “Minimum 1-day, 10-year flow” to match the proposed change in the table.

⁴² Ohio River Valley Water Sanitation Commission POLLUTION CONTROL STANDARDS for discharges to the Ohio River 2003 Revision, Section VI.G, emphasis added.

4.22 Appendix D

4.22.1. Proposed change

Appendix D is missing from the proposed new standards.

4.22.2. Comment

While Appendix D is missing, it is referenced in Section IV(B)(7)(a). This must be reconciled.

5. SUMMARY AND CONCLUSIONS

Thank you for the opportunity to comment on ORSANCO's proposed revisions to the *Pollution Control Standards*. KWA and WVRC support several proposed changes to ORSANCO's *Pollution Control Standards*, but have fundamental problems with many others. If enacted, the wet weather and mixing zone proposals would place recreational users at increased risk of illness through contact with raw sewage and mercury. Please feel free to contact the Kentucky Waterways Alliance or West Virginia Rivers Coalition to discuss our comments in more detail.

Sincerely,

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