Background Summary of Proposed Revisions

Changes Proposed in Response to Comments Received

As a result of the input received in the Initial Comment Period, the Commission is proposing a number of changes to its Standards. The revisions proposed in response to those comments are summarized as follows (The complete text of the Standards and the proposed revisions can be found in Section VII of this document):

Section II. Definitions

- Addition of a definition of Dry Weather Conditions as II.H; subsequent definitions would be renumbered accordingly.
- Addition of the phrase "Water quality criteria must be met at the edge of the mixing zone" to the definition of Mixing Zone.
- Addition of a definition of the National CSO Control Policy as II.L; subsequent definitions would be renumbered accordingly.

Section IV. Water Quality Criteria

- Editorial changes to the first sentences of Sections IV.B and IV.C.
- Addition of the term "safeguarded" to the narrative Biological criterion (Section IV.B.1).
- Specification of the one day, ten year low flow as the design stream flow for acute aquatic life criteria (Section IV.B.6.e).
- Deletion of reference to US EPA 304(a) criteria. Those criteria will be considered for adoption and inclusion in Appendix E rather than automatically adopted by reference.

Section V. Waste Water Discharge Requirements

- Addition of the phrase "cause or contribute to a violation" (of water quality criteria) to Section V.A.1.
- Revision of Section V.A.2 to specify that the discharger must maintain the outlet marker.
- Specification of 85 percent removal of Biochemical Oxygen Demand (BOD) and Suspended Solids as part of the minimum level of sewage treatment at conventional facilities, and 65 percent removal of BOD and suspended solid at alternative treatment facilities.
- Editorial changes to Section V.B.3 –Prohibition of Dry Weather Discharges (from combined sewer systems).
- Addition of conditions under which effluent limits for industrial wastes may be based on net discharge of pollutants.

Section VI. Mixing Zone Designation

- Incorporation of VI.I into VI.C to emphasize that both current sections address mixing zones for acute aquatic life criteria.
- Revision of Section VI.G to stipulate that dischargers of Bioaccumulative Chemicals of Concern (BCCs) that were in existence on or before October 16, 2003 must eliminate mixing zones for such chemicals no later than October 16, 2013.

Wet Weather Proposal

In the 2002-03 review of the Commission Standards, comments were received recommending that the Commission include a provision to address wet weather conditions. The Commission agreed that this was an important issue and established a work group of state agency and US EPA personnel to develop recommendations. The work group began by adopting the following guiding principles:

1. A reasonable target must be established for control of wet weather pollution sources; this target must be as fixed as possible and not subject to periodic change.
2. Pathogen criteria established to protect water supply use should be met at all times.
3. Pathogen criteria established to protect recreation should be met at all times when the river is otherwise safe for contact recreational use.
4. All sources of pathogens should be required to provide a reasonable level of control. For Combined Sewer Overflows, this includes the Nine Minimum Controls and a Long Term Control Plan.
5. The public needs to receive clear information regarding the risks of contact recreation in the Ohio River.
6. Decisions that involve the balancing of risk to the public in recreational use of the river versus cost to the public in order to control pathogens need to be made with considerable public involvement.
7. The approach taken to develop wet weather standards for the Ohio River should be appropriate for use on other waterbodies in the Ohio River watershed and across the US that are affected by urban wet weather sources of pollution.

The work group considered several alternative approaches. A series of public workshops was held in cities along the Ohio River to receive input. Based on the input received and its continuing deliberations, the work group agreed on seven recommendations; those recommendations led to several proposed revisions to the Commission Standards.

Recommendation #1

Ensure that the language in the Pollution Control Standards regarding the fecal coliform criterion is adequate to provide year-round protection of public water supplies.

Proposal

Section IV.C.1.a. In stream Water Quality Criteria -- Human Health Protection -- Bacteria (Pg. 9). Remove wording “for the months of November through April.”

Recommendation #2

Revise the language in the Pollution Control Standards to allow 10 percent of stream samples to exceed the E. coli maximum criterion of 240 CFU/100 mL. This would make it consistent with the Fecal coliform stream criterion and the Fecal coliform and E. coli effluent limitations, which allow 10 percent of samples to exceed the maximum criterion.

Proposal

Section IV.C.1.c. Human Health Protection – Bacteria (Pg. 10). Change "nor exceed 240/100mL in any sample" to "nor exceed 240/100mL in more than 10 percent of all samples taken during any month."

Recommendation #3

Review US EPA's definitions of "moderate", "lightly used", and "infrequently used" terminology to describe full body contact recreation for applicability to the Ohio River along with the corresponding bacteria criteria.

Proposal

In 40CFR131, Water Quality Standards for Coastal and Great Lakes Recreation Waters, US EPA sets forth definitions that specifically apply to the Great Lakes and coastal marine waters:

"Designated bathing beach waters are those coastal recreation waters that, during the recreation season, are heavily used (based upon and evaluation of use within the state) and may have: a lifeguard, bathhouse facilities, or public parking for beach access. States may include any other waters in this category even if the waters do not meet these criteria."

"Moderate use coastal recreation waters are those coastal recreation waters that are not designated bathing beach waters but typically, during the recreation season, are used by at least half of the number of people as at typical designated bathing beach waters within the state. States may also include light use or infrequent use coastal recreation waters in this category."

"Light use coastal recreation waters are those coastal recreation waters that are not designated bathing beach waters but typically, during the recreation season, are used by less than half of the number of people as at typical bathing beach waters within the state, but are more than infrequently used. States may also include infrequent use coastal recreation waters in this category."

"Infrequent use coastal recreation waters are those coastal recreation waters that are rarely or occasionally used."

Based on observation by ORSANCO staff and state agency personnel, the Ohio River seems to fit in the category of "Light Use". Contact recreation consists more of water skiers and wave runners than swimmers. Based on EPA's recommended criteria for "Light Use", that would change the E. coli single sample maximum from 240/100 mL to 409/100 mL. The latter value is rounded to 400/100mL in the proposed revisions, and an equivalent fecal coliform criterion of 500/100mL is also proposed.

Recommendation #4
Review the various risk-levels to determine the appropriate level for the Ohio River.

Proposal
ORSANCO's current E. coli criteria correspond to a risk level of 8 illnesses per 1000 swimmers as defined in the 1986 Ambient Water Quality Criteria document. US EPA's 2002 Draft Implementation Guidance for Ambient Water Quality Criteria for Bacteria listed alternative criteria based on other risk-based illness rates. More recent finalized documents (40CFR131, Nov. 2004) do not specify alternative criteria, but follow along with the 1986 Ambient Criteria document.

Therefore, there does not seem to be a scientific or regulatory justification for selecting an illness rate other than to stay with what is currently in place -- 8 illnesses per 1000 swimmers.

*** Note that the criteria for marine waters are based on 19 illnesses per 1000 swimmers.

Recommendation #5
Define a high flow condition that would apply to temporary suspension of the contact recreational use and corresponding criteria.

Proposal
Through an extensive search, there was only one document found describing flow-related recreational use issues, *Methods of Assessing Instream Flows for Recreation*, published in June 1978 by US Fish and Wildlife Service and US EPA. It specifies, for contact water skiing, a physically limiting stream velocity of 3.0 feet per second which is equivalent to 2 miles per hour. (The physically limiting velocity for power fishing boating is 3.4 miles per hour).

A review of historical recreation season flows at Cincinnati (mid-pool) indicates that velocities exceed 2 miles per hour approximately 18 percent of the time at Cincinnati (velocities exceed 3 miles per hour approximately 8-9 percent of the time and exceed 3.4 miles per hour approximately 4 percent of the time).

It is proposed to revise Section IV.C.1.b. to stipulate that the contact recreation criteria do not apply when river velocity exceeds 2 miles per hour.

Recommendation #6
Review the public notification language in the Pollution Control Standards for possible revision.

Proposal

Current language in the standards is in Section V.B.3.b.8. Combined Sewer Systems. It indicates that combined sewer overflows due to wet weather will not be in violation of wastewater discharge requirements section provided that the system is operated in accordance with the nine minimum controls (and LTCP) one of which is: 8) Public notification to ensure that the public receives adequate notice of CSO occurrences and CSO impacts.

No specific language is being proposed, however input on additional needs is requested. The US EPA has an implementation guidance document for the nine minimum controls which has additional detail on public notification requirements.

Recommendation #7

Propose language for the standards similar to Indiana's wet weather CSO language regarding suspension of the contact recreational use and associated criteria above a certain design storm for CSO communities with an approved LTCP and UAA.

Proposal

Section V.B.3.b. Wastewater Discharge Requirements – Combined Sewer Systems – System Overflows During Wet Weather.

Add on to last paragraph, page 14: "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. At or above such conditions, contact recreation bacteria criteria specified in Sections IV.C.1.b and IV.C.1.c, and wastewater discharge requirements specified in Sections V.B.1.d.ii and V.B.1.d.iii will not apply for a period not to exceed two days following the condition.

*** Above, existing language is underlined and bold wording is added.