



STATEMENT OF CONSIDERATION

Relating to

- 401 KAR 10:026 (Not Amended After Comments)
- 401 KAR 10:029 (Not Amended After Comments)
- 401 KAR 10:030 (Not Amended After Comments)
- 401 KAR 10:031 (Amended After Comments)

Energy and Environment Cabinet  
 Department for Environmental Protection  
 Division of Water

I. A public hearing on 401 KAR 10:026, 10:029, 10:030, and 10:031 was held on September 24, 2015 at 6:00 p.m. at 300 Fair Oaks Lane, Conference Room 301D, Frankfort, Kentucky. The Division of Water also received written comments during the public comment period.

II. The following people submitted comments:

<u>Name</u>	<u>Agency/Organization/Entity/Other</u>	<u>Comments</u>
Kori Andrews, Environmental Specialist Smith Mgmt Group	Kentucky Soybean Association	Written
Virgil Lee Andrews, Jr. Field Supervisor	US Fish and Wildlife Service	Written
Carol Becht		Written
Bill Bissett, President	Kentucky Coal Association	Written
Carl R. Breeding, Attorney	Kentucky League of Cities	Written
Sammie Brian		Written
Diane Casey		Written
Rafael Castro		Written
Mary Clark		Written
Alida Cornelius		Written
Lloyd R. Cress, Jr., Attorney	Kentucky Association of Manufacturers	Written
Lloyd R. Cress, Jr., Attorney	Kentucky Chemical Industry Council	Written
Mark Engler		Written
Tom FitzGerald, Director	Kentucky Resources Council	Written
Annie Godfrey, Chief Water Quality Standards Region 4	U.S. Environmental Protection Agency	Written
Hank Graddy, Attorney	Sierra Club, Cumberland Chapter	Written and Verbal
Tim Joice,		

Water Policy Director	Kentucky Waterways Alliance	Written
Jessica Kane		Written
Benjamin Luckett, Attorney	Appalachian Mountain Voices	Written
John Lyons,		
Director of Operations	Strand Associates	Written
Robert Mayton		Written
Zina Merkin		Written
Anna Murray		Written
Jana Ornstein		Written
John Ornstein		Written
Judith Petersen,		
Executive Director	Kentucky Waterways Alliance	Written and Verbal
James Pugh		Written
Kevin Sheridan,		
Regional HSE Mgr	Westlake Chemical Corporation	Written
Margaret Stewart		Written
Teresa Streza		Written
Bryan Sunderland		
Senior VP, Public Affairs	Kentucky Chamber of Commerce	Written
Perry Thomas		Written
Troy Tucker		Written
Monica Unseld		Written
Heather Varda		Written
Barbara Warner		Written
J. Weber		Written
Will Willis		Written

III. The following people from the promulgating administrative body responded to the written and verbal comments:

Name and Title

Peter Goodmann, Director, Division of Water  
 Andrea Keatley, Water Quality Branch Manager, Division of Water  
 Randall Payne, Environmental Scientist, Division of Water  
 Carole Catalfo, Internal Policy Analyst, Division of Water

IV. Summary of Comments and Responses for 401 KAR 10:026, 10:029, 10:030, and 10:031. The following comments and responses are grouped by administrative regulation. General comments related to the entire package are listed first, then comments specific to 401 KAR 10:026, 10:029, 10:030, and 10:031.

- (1) Subject Matter: 401 KAR Chapter 10, Public input
  - (a) Commenter: Lloyd Cress, Jr., Kentucky Association of Manufacturers and Kentucky Chemical Industry Council

Comment: The commenters applaud the Cabinet's proactive efforts to seek stakeholder input prior to formally filing regulations regarding the subject matter.

(b) Response: The Division acknowledges the comment.

(2) Subject Matter: 401 KAR 10:001, Definitions

(a) Commenter: Kevin Sheridan, Westlake Chemical Corporation

Comment: Add or clarify the following definitions: "Cumulative impact", "Assimilative capacity", "As soon as practicable", "Feasible", and "Zone of Attenuation".

(b) Response: While the Division appreciates the suggestion, most of the terms listed apply to permitting in 401 KAR Chapter 5 rather than Chapter 10. The Division will be reviewing 401 KAR Chapter 5 in the future and will consider changes at that time.

(3) Subject Matter: 10:026, Amendment to introductory language

(a) Commenter: Tom FitzGerald, Kentucky Resources Council

Comment: Rather than using "shall be" in the Necessity, Function, and Conformity paragraph, simply say they "are" for clarity

(b) Response: Regulatory language is prescribed by KRS 13A and the standards of the Legislative Research Commission (LRC). The use of "shall" indicates mandatory language. Current regulatory language standards required this change.

(4) Subject Matter: 10:026, Additional Outstanding State Resource Waters (OSRW)

(a) Commenter: Carol Becht, Sammie Brian, Diane Casey, Rafael Castro, Mary Clark, Alida Cornelius, Mark Engler, Jessica Kane, Robert Mayton, Zina Merkin, Anna Murray, Jana Ornstein, John Ornstein James Pugh, Margaret Stewart, Teresa Streza, Perry Thomas, Troy Tucker, Monica Unseld, Heather Varda, Barbara Warner, J. Weber, Will Willis

Comment: The additional waters added to the Outstanding waters list is applauded, but there are surely many more waters of high value around the state that should be on this list. Furthermore, at present, there are very little additional standards applied to these waters. The state should develop additional protections for these important waters.

(b) Response: The Division acknowledges the comment and encourages the public to make specific recommendations or follow the redesignation procedures contained in 10:026, Sections 2 through 4, and 10:031, Section 8.

(5) Subject Matter: 10:026, Standards applied to OSRW

(a) Commenter: Virgil Lee Andrews, Jr., U.S. Fish and Wildlife Service

Comment: The USFWS supports the additional 20 streams or stream segments added to the OSRW list. However, it is concerned that more protective standards associated with OSRW designation are not applied to waters that support federally-listed species but for which there is no documented occurrence. The USFWS would like to work with the Division of Water and federal EPA to identify stream reaches and watershed conditions where the occurrence of federally-listed species is likely but not documented, and therefore surveys for threatened or endangered species should be required prior to issuing Clean Water Act authorizations to determine the appropriate designated use for this stream reach.

(b) Response: The Division acknowledges the comment and encourages specific recommendations or following the redesignation procedures contained in 10:026, Sections 2 through 4, and 10:031, Section 8.

(6) Subject Matter: 10:026, Request for additional OSRW

(a) Commenter: Virgil Lee Andrews, Jr., U.S. Fish and Wildlife Service

Comment: The USFWS requests that Kentucky consider adding the following to its OSRWs based on federally-listed aquatic species:

Ohio River

Henderson County – Ohio River near River Mile 782.3 due to an extant population of the federally-endangered fat pocketbook (*Potamilis capax*)

Davis County – Ohio River near Rockport IL due to an extant population of the federally-endangered sheepsnose (*Plethobasus cyphus*)

Oldham County – Ohio River near 18-Mile Island due to an extant population of the federally-endangered sheepsnose (*Plethobasus cyphus*)

Campbell County – Ohio River in the reach that runs from the Beckford Powerstation (mile post 452.8) to the confluence with the Little Miami River (mile post 464) due to an extant population of the federally-endangered sheepsnose (*Plethobasus cyphus*)

Cumberland River

Bell County – Fourmile Creek of the Cumberland River between mile posts 1.7 and 2.5 due to an extant population of the federally-endangered blackside dace (*Chrosomus cumberlandensis*)

Livingston County – Cumberland river near River Mile 5.0 due to an extant population of the federally-endangered fat pocketbook (*Potamilis capax*)

Livingston County – Cumberland River north of Horseshoe Bend due to an extant population of the federally-endangered fat pocketbook (*Potamilis capax*) and spectaclecase (*Cumberlandia montana*)

Whitley County – Slick Shoals branch of the Cumberland River due to an extant population of the federally-endangered blackside dace (*Chrosomus cumberlandensis*)

Green River

Henderson County – Green River near River Mile 5.8 due to an extant population of the federally-endangered fat pocketbook (*Potamilis capax*)

Others

Bell County – Sugar Run due to an extant population of the federally-endangered blackside dace (*Chrosomus cumberlandensis*)

McCreary County – Wolf Creed, a direct tributary of the Big South Fork near the village of Yamacraw due to an extant population of the federally-endangered blackside dace (*Chrosomus cumberlandensis*)

(b) Response: The Division appreciates and will consider this information. The Division is not redesignating these streams and stream segments as OSRWs at this time because it will require additional information which it will seek from USFWS. The Division will examine these waters for inclusion during the next Triennial Review.

(7) Subject Matter: 10:026, Inadequate data to support OSRW

(a) Commenter: Kori Andrews, Kentucky Soybean Association, Bryan Sunderland, Kentucky Chamber of Commerce, Bill Bissett, Kentucky Coal Association

Comment: The supplement in support of adding OSRW stream segments merely lists the stream segment, the designated river mile points, and the threatened or endangered species. It provides no information regarding the underlying sample data, including how, when, or where it was collected. Without an opportunity to review or question the underlying data, the public and

regulated community lacks a basis to comment on the merits of an OSRW designation. On September 15, 2015 pursuant to an Open Records Request, the Kentucky Chamber of Commerce received more than 250 pages of data not included in the public record. The Division should not proceed with additional stream designations until the data can be adequately reviewed.

(b) Response: The Division agrees that sufficient information should be made available and properly evaluated before a stream is listed as OSRW. As required by 401 KAR 10:026, Sections 2 through 4, the Division presented two supplemental documents with the triennial review package of proposed updates, edits and proposals: 1) *Biological and Water Quality Characteristics of Streams Proposed for the Antidegradation Category of Exceptional Waters*; and 2) *Outstanding State Resource Water Use Designation for 20 Stream or Stream Segments in the Commonwealth*. Each of these documents followed prescribed requirements outlined in 401 KAR 10:030 and 401 KAR 10:031, respectively. All OSRWs proposed for redesignation based on the presence of federally listed threatened or endangered species were based on reports from agency or partner agency biosurveys for freshwater mussel community composition evaluation or fish community composition.

(8) Subject Matter: 10:026, Certification by Kentucky Division of Fish & Wildlife

(a) Commenter: Kevin Sheridan, Westlake Chemical Corporation

Comment: The Kentucky Division of Fish & Wildlife should be required to certify that waters categorized as OSRWs do in fact contain the organisms found in the federal listing, and be required to revisit and recertify those streams contain those organisms every 5 years.

(b) Response: The agency agrees that sufficient information should be made available and properly evaluated before a stream is listed as OSRW. Data from freshwater mussel surveys, fish surveys, and analysis of aquatic habitat and communities by professional biologists are required to verify the existence of a population of federally-listed threatened or endangered species and the habitat to support these species. If a future extirpation of a population of threatened or endangered species from an OSRW occurs, that condition does not preclude the waterbody from having the demonstrable qualities or other attributes of an OSRW. However, if that designated use is no longer supported and the waterbody lacks the physical and chemical qualities to restore the use, a Use Attainability Analysis (UAA), as required by 401 KAR 10:026, Sections 2 through 4 and 401 KAR 10:031, Section 8, may be undertaken and the data subsequently presented to the Division for consideration through the Triennial Review procedures. A copy of EPA's UAA guidance can be found at <http://www2.epa.gov/wqs-tech/use-attainability-analysis-uaa>. Any entity may petition the Cabinet to change the designated use of a waterbody through a UAA.

Additionally, The Division of Water does not have authority to compel another state or federal agency to certify that waters listed as OSRWs for the presence of threatened or endangered species do in fact contain the organisms found in the federal listing.

(9) Subject Matter: 10:026, Procedures for reconfirming OSRW

(a) Commenter: Kori Andrews, Kentucky Soybean Association, Lloyd R. Cress, Jr., Kentucky Association of Manufacturers and Kentucky Chemical Industry Council, Bryan Sunderland, Kentucky Chamber of Commerce, Bill Bissett, Kentucky Coal Association

Comment: There does not appear to be any program or regulatory process for revisiting or reconfirming stream designations as OSRWs based on the presence of threatened or endangered species, such as macroinvertebrate bioassessment index scores or other scientific

data or analyses. The Division should develop procedures for periodic review of OSRWs to determine whether the classification remains valid.

(b) Response: The agency agrees that sufficient information should be made available and properly evaluated before a stream is listed as OSRW. Data from freshwater mussel surveys, fish surveys, and analysis of aquatic habitat and communities by professional biologists are required to verify the existence of a population of federally-listed threatened or endangered species and the habitat to support these species. If a future extirpation of a population of threatened or endangered species from an OSRW occurs, that condition does not preclude the waterbody from having the demonstrable qualities or other attributes of an OSRW. However, if that designated use is no longer supported and the waterbody lacks the physical and chemical qualities to restore the use, a Use Attainability Analysis (UAA), as required by 401 KAR 10:026, Sections 2 through 4 and 401 KAR 10:031, Section 8, may be undertaken and the data subsequently presented to the Division for consideration through the Triennial Review procedures. A copy of EPA's UAA guidance can be found at <http://www2.epa.gov/wqs-tech/use-attainability-analysis-uaa>. Any entity may petition the Cabinet to change the designated use of a waterbody through a UAA.

(10) Subject Matter: 10:026, Request for redesignation analysis and confirmation of the presence of threatened or endangered species.

(a) Commenter: Lloyd R. Cress, Jr., Kentucky Association of Manufacturers and Kentucky Chemical Industry Council, Carl R. Breeding, Kentucky League of Cities, Bryan Sunderland, Kentucky Chamber of Commerce, Bill Bissett, Kentucky Coal Association

Comment: The commenters request a detailed, written analysis for redesignating or recategorizing any stream segment, and confirmation that threatened or endangered species are present in those stream segments.

(b) Response: The Division agrees that sufficient information should be made available and properly evaluated before a stream is listed as OSRW. As required by 401 KAR 10:026, Sections 2 through 4, the Division presented two supplemental documents with the triennial review package of proposed updates, edits and proposals: 1) *Biological and Water Quality Characteristics of Streams Proposed for the Antidegradation Category of Exceptional Waters*; and 2) *Outstanding State Resource Water Use Designation for 20 Stream or Stream Segments in the Commonwealth*. Each of these documents followed prescribed requirements outlined in 401 KAR 10:030 and 401 KAR 10:031, respectively. All OSRWs proposed for redesignation based on the presence of federally listed threatened or endangered species were based on reports from agency or partner agency biosurveys for freshwater mussel community composition evaluation or fish community composition. All water bodies and segments proposed for categorization under the Antidegradation Policy, Exceptional Waters, are based on the Division's biological monitoring program data. Analysis of data respective of each proposed water body resulted in water quality and biological community composition that support exceptional qualities that qualify as meeting the requirements prescribed in 401 KAR 10:030, Section 1(2)(a) for categorization.

(11) Subject Matter: 10:026, request for delay in stream designations until recently provided data is reviewed

(a) Commenter: Kevin Sheridan, Westlake Chemical Corporation, Bryan Sunderland, Kentucky Chamber of Commerce, Bill Bissett, Kentucky Coal Association

Comment: An analysis should be conducted regarding whether a particular substance and its concentration within a KPDES permit is likely to be detrimental to a listed species or habitat. The provided data does not include reports or information to support 10 of the new mussel site listings on the Ohio River, and a proposed OSRW stream segment due to blackside dace is based on a June 2012 email report of the species observed in small pools in an otherwise dry stream bed. On September 15, 2015 pursuant to an Open Records Request, the Kentucky Chamber of Commerce received more than 250 pages of data not included in the public record. The Division should not proceed with additional stream designations until the data can be adequately reviewed.

(b) Response: Water quality standards for specific substances (pollutants) are based on what is protective of water quality and habitat; water quality standards are not technology-based standards. Consideration of implementation of the water quality standard within a KPDES permit occurs as part of the permit process. As required by 401 KAR 10:026, Sections 2 through 4, the Division presented two supplemental documents with the triennial review package of proposed updates, edits and proposals: 1) *Biological and Water Quality Characteristics of Streams Proposed for the Antidegradation Category of Exceptional Waters*; and 2) *Outstanding State Resource Water Use Designation for 20 Stream or Stream Segments in the Commonwealth*. Each of these documents followed prescribed requirements outlined in 401 KAR 10:030 and 401 KAR 10:031, respectively. All OSRWs proposed for redesignation based on the presence of federally listed threatened or endangered species were based on reports from agency or partner agency biosurveys for freshwater mussel community composition evaluation or fish community composition. All water bodies and segments proposed for categorization under the Antidegradation Policy, Exceptional Waters, are based on the Division's biological monitoring program data. Analysis of data respective of each proposed water body resulted in water quality and biological community composition that support exceptional qualities that qualify as meeting the requirements prescribed in 401 KAR 10:030, Section 1(2)(a) for categorization.

(12) Subject Matter: 10:026, Fish consumption as a designated use

(a) Commenter: Tim Joice, Kentucky Waterways Alliance, Tom FitzGerald, Kentucky Resources Council, Hank Graddy, Sierra Club, Cumberland Chapter

Comment: The Division should adopt fish consumption as an official designated use, rather than an "implied" use. The EPA interprets the Clean Water Act Section 101(a)(2) to include protection of aquatic life for human consumption, and 401 KAR 10:031 conveys fish consumption as a use.

(b) Response: The Division appreciates the interest in protecting aquatic life for human consumption and has adopted water quality standards for that purpose. The Division has listed waterbodies on the Clean Water Act 303(d) list of impaired waters because of the levels of some pollutants (e.g. PCBs, dioxins, mercury) in fish tissues. Additionally, the Division of Water, the Kentucky Department of Fish and Wildlife Resources, and the Kentucky Department of Public Health have issued fish consumption advisories based on the occurrence of some pollutants in fish tissue and the potential risks posed to human health. The Division is evaluating the ramifications of adding "fish consumption" as a designated use, but declines to take the suggested action at this time. The procedures to petition the Division to designate or redesignate a new use for appropriate water bodies are established in 401 KAR 10:026, Sections 2 through 4.

(13) Subject Matter: 10:026, Additional OSRW

(a) Commenter: Hank Graddy, Sierra Club, Cumberland Chapter

Comment: The water quality of many waters is high enough to warrant elevation to OSRW as illustrated by monitoring performed by the Division of Water, USFWS, KDFWR, ORSANCO, and others.

(b) Response: The Division agrees that there are many high quality waters in Kentucky and has a demonstrated history of re-designating waterbodies as OSRWs where data demonstrates that those waterbodies support federally-listed threatened or endangered species, or where data indicates that the waterbody has exceptional and sustainable water quality or habitat. The Division encourages the public to make specific recommendations or follow the re-designation procedures contained in 10:026, Sections 2 through 4, and 10:031, Section 8.

(14) Subject Matter: 10:026, Support for additional OSRW

(a) Commenter: Tim Joice, Kentucky Waterways Alliance, Hank Graddy, Sierra Club, Cumberland Chapter

Comment: The commenters support the proposed additions to OSRW and lengthening existing OSRW.

(b) Response: The Division appreciates the support for the proposed OSRWs and will re-designate waterbodies as OSRWs where data demonstrates that those waterbodies support federally-listed threatened or endangered species, or where data indicates that the waterbody has exceptional and sustainable water quality or habitat. The Division encourages the public to make specific recommendations or follow the re-designation procedures contained in 10:026, Sections 2 through 4, and 10:031, Section 8.

(15) Subject Matter: 10:029, Variance procedures and reinstatement of mixing zones for bioaccumulative chemicals of concern (BCC)

(a) Commenter: Kevin Sheridan, Westlake Chemical Corporation

Comment: Kentucky should move to a variance procedure to reinstate mixing zones and clarify the availability of zones of initial dilution for BCC. The EPA supports variance procedures and schedules of compliance in its water quality standards amendments published in the Federal Register on August 21, 2015. Decisions made, proposed, and under consideration by ORSANCO indicate the ban on BCC mixing zones should be revisited. Comments being received by ORSANCO on this issue should be evaluated for the Triennial Review.

(b) Response: The Division agrees that the factors mentioned in the comment are factors to be considered when issuing a variance to water quality standards, including the prohibition of mixing zones for bioaccumulative contaminants of concern (BCC) in 401 KAR 10:029, Section 4(1)(h). The mixing zone prohibition was established when 401 KAR 10:029 was amended in 2003. The Division believes it is not appropriate to revisit the mixing zone prohibition for BCC. Exceptions to water quality criteria (variances), including the mixing zone prohibition for BCC are available pursuant to 401 KAR 10:031, Sections 10 and 11.

(16) Subject Matter: 10:029, New analysis required for mixing zones

(a) Commenter: Kevin Sheridan, Westlake Chemical Corporation

Comment: Mixing zone elimination was based on The Water Quality Guidance for the Great Lakes System (1995). Three critical factors require new analysis of this basis: 1/ The impact of BCC in free flowing rivers and streams is far different from static lakes; 2/ minimal economic impact was anticipated which was included in its December 2003 Statement of

Consideration and does not hold true, and 3/ the assertion that water quality standards are below analytical detection methods no longer holds true, though in some cases there is no EPA-approved method which achieves the required detection level.

(b) Response: The Division agrees that the factors mentioned in the comment are factors to be considered when issuing a variance to water quality standards, including the prohibition of mixing zones for bioaccumulative contaminants of concern (BCC) in 401 KAR 10:029, Section 4(1)(h). The mixing zone prohibition was established when 401 KAR 10:029 was amended in 2003. The Division believes it is not appropriate to revisit the mixing zone prohibition for BCC. Exceptions to water quality criteria (variances), including the mixing zone prohibition for BCC are available pursuant to 401 KAR 10:031, Sections 10 and 11.

(17) Subject Matter: 10:029, Extension of mixing zone phase-out

(a) Commenter: Lloyd R. Cress Jr., Kentucky Association of Manufacturers and Kentucky Chemical Industry Council, Carl R. Breeding, Kentucky League of Cities, Bryan Sunderland, Kentucky Chamber of Commerce, Bill Bissett, Kentucky Coal Association

Comment: The Division should extend the phase-out period for mixing zones related to BCCs which are currently in a state of flux. An extension would permit the process to continue without adversely impacting the regulated community or environment.

(b) Response: The Division agrees that the factors mentioned in the comment are factors to be considered when issuing a variance to water quality standards, including the prohibition of mixing zones for bioaccumulative contaminants of concern (BCC) in 401 KAR 10:029, Section 4(1)(h). The mixing zone prohibition was established when 401 KAR 10:029 was amended in 2003. The Division believes it is not appropriate to revisit the mixing zone prohibition for BCC. Exceptions to water quality criteria (variances), including the mixing zone prohibition for BCC are available pursuant to 401 KAR 10:031, Sections 10 and 11.

(18) Subject Matter: 10:029, BCC establishment and mixing zone extension

(a) Commenter: Bryan Sunderland, Kentucky Chamber of Commerce, Bill Bissett, Kentucky Coal Association

Comment: The Division should reevaluate how water column concentration criteria are established for BCCs and, in the interim, extend the availability of mixing zones for compliance with such water column-based standards by revising 10:029 Section 4.

(b) Response: Water quality standards for specific substances (pollutants) are based on what is protective of water quality and habitat; water quality standards are not technology-based standards. Consideration of implementation of the water quality standard within a KPDES permit occurs as part of the permit process. The mixing zone prohibition was established when 401 KAR 10:029 was amended in 2003. The Division believes it is not appropriate to revisit the mixing zone prohibition for BCC. Exceptions to water quality criteria (variances), including the mixing zone prohibition for BCC are available pursuant to 401 KAR 10:031, Sections 10 and 11.

(19) Subject Matter: 10:029, Mixing zone ban continuation

(a) Commenter: Tim Joice, Kentucky Waterways Alliance, Hank Graddy, Sierra Club, Cumberland Chapter

Comment: ORSANCO has proposed to remove a BCC mixing zone ban and suggests that individual states consider the ban on a case-by-case basis. The commenter strongly favors maintaining the BCC mixing zone ban to provide continuity and consistency through the Ohio

River Basin. In a recent survey, 87% of Kentuckians supported the mixing zone ban and enforcing clean water rules, rather than allowing toxic levels of mercury pollution.

(b) Response: The mixing zone prohibition was established when 401 KAR 10:029 was amended in 2003. The Division believes it is not appropriate to revisit the mixing zone prohibition for BCC. Exceptions to water quality criteria (variances), including the mixing zone prohibition for BCC are available pursuant to 401 KAR 10:031, Sections 10 and 11.

(20) Subject Matter: 10:030, Technical amendment

(a) Commenter: Lloyd R. Cress Jr., Kentucky Association of Manufacturers and Kentucky Chemical Industry Council

Comment: The commenters appreciate the correction of a technical error at Section 1(2)(a)(2).

(b) Response: The Division appreciates KAM bringing this issue to its attention and has corrected this technical error in the proposed regulation.

(21) Subject Matter: 10:030, Introductory language

(a) Commenter: Tom FitzGerald, Kentucky Resources Council, Hank Graddy, Sierra Club, Cumberland Chapter

Comment: KRS 224.70-100 “declares” the Commonwealth’s policy with respect to water quality, and the Division should not attempt to change statutory language in a regulation in violation of KRS 13A.120(2)(i).

(b) Response: Regulatory language is prescribed by KRS 13A and the standards of the Legislative Research Commission (LRC). The use of “shall” indicates mandatory language. Current regulatory language standards required this change.

(22) Subject Matter: 10:030, Designation methodology weakens Clean Water Act antidegradation mandate

(a) Commenter: Tim Joice, Kentucky Waterways Alliance, Hank Graddy, Sierra Club, Cumberland Chapter, Tom FitzGerald, Kentucky Resources Council

Comment: Changes to the “designation” methodology fail to address the more fundamental problem that the “designation” methodology weakens the Clean Water Act antidegradation mandate. The Division should replace this approach with a “parameter by parameter” approach. 10% assimilative capacity exceptions weaken antidegradation protection. The commenters oppose substitution of the Six Year Road Plan for highway project specific Clean Water Act-based antidegradation analysis which fails to provide the public with adequate notice.

(b) Response: EPA approved Kentucky’s antidegradation methodology implementation in 2005. Several environmental groups challenged EPA’s approval by filing a lawsuit in federal court (*Kentucky Waterways Alliance, et al. v. Stephen L. Johnson, et al.*, 426 F.Supp.2d [W.D. Ky. 2006]). Plaintiffs’ arguments to the district court included the issues raised in this comment. On September 3, 2008, the U.S. Court of Appeals for the Sixth Circuit upheld EPA’s approval of Kentucky’s waterbody-by-waterbody approach to classifying waters for antidegradation purposes, rather than the parameter-by-parameter approach, but remanded the approval of 401 KAR 10:030, Kentucky’s antidegradation policy implementation methodology regulation. (*Kentucky Waterways Alliance, et al. vs. Stephen L. Johnson, et al.*, 540 F.3d 466). Working with a stakeholder group, the Cabinet amended 401 KAR 10:030 to contain three of six

exceptions that were determined to be consistent with the Sixth Circuit's remand, including "a new or expanded discharge that the applicant demonstrates shall not consume more than ten (10) percent of the available assimilative capacity of the receiving stream outside of a designated mixing zone or zone of initial dilution for each new or increased pollutant in the discharge". This approach is consistent with 40 CFR 131.12, which authorizes *de minimis* degradation. It is generally accepted that a less than 10 percent consumption of available assimilative capacity is considered a *de minimis* lowering of water quality. EPA approved the amendments to 401 KAR 10:030 including the Division's determination that the alternative planning and evaluation process for projects conducted as part of the Transportation Cabinet's six-year road plan to satisfy applicable antidegradation requirements. The Division understands that the Transportation Cabinet's six-year road plan satisfies the public notice requirements for that project process.

(23) Subject Matter: 10:031, EPA recommended ammonia criteria

(a) Commenter: Annie Godfrey, U.S. EPA, Region 4

Comment: On August 22, 2013, EPA published new recommended 304(a) criteria for ammonia. This information was transmitted to the Division in a letter in January 2014. The Division has not revised its criteria in this proposed regulation. EPA requests that the Division review this latest recommendation and revise, as necessary, the current ammonia criteria in the regulation.

(b) Response: The Division appreciates EPA's request and is currently analyzing the potential regulatory impact of adopting the recommended ammonia criteria into Kentucky's water quality standards.

(24) Subject Matter: 10:031, EPA recommended ammonia criteria

(a) Commenter: Carol Becht, Sammie Brian, Diane Casey, Rafael Castro, Mary Clark, Alida Cornelius, Mark Engler, Jessica Kane, Robert Mayton, Zina Merkin, Anna Murray, Jana Ornstein, John Ornstein James Pugh, Margaret Stewart, Teresa Streza, Perry Thomas, Troy Tucker, Monica Unseld, Heather Varda, Barbara Warner, J. Weber, Will Willis, Tim Joice, Kentucky Waterways Alliance, Tom FitzGerald, Kentucky Resources Council, Hank Graddy, Sierra Club, Cumberland Chapter,

Comment: The state should adopt EPA's new ammonia criteria to better protect our aquatic species, like freshwater mussels.

(b) Response: The Division appreciates the recommendation and is currently analyzing the potential regulatory impact of adopting the recommended ammonia criteria into Kentucky's water quality standards.

(25) Subject Matter: 10:031, Foundation for adopting ammonia criteria

(a) Commenter: Tim Joice, Kentucky Waterways Alliance, Tom FitzGerald, Kentucky Resources Council, Hank Graddy, Sierra Club, Cumberland Chapter

Comment: The Division should examine OSRWs with threatened and endangered mussel species and propose to adopt ammonia criteria for those waterbodies, which will establish a foundation for adopting ammonia criteria for all waterbodies in the next Triennial Review and provide increased protection for OSRWs.

(b) Response: The Division appreciates the recommendation and is currently analyzing the potential regulatory impact of adopting the recommended ammonia criteria into Kentucky's

water quality standards.

(26) Subject Matter: 10:031, Adoption of more protective water quality criteria

(a) Commenter: Tim Joice, Kentucky Waterways Alliance

Comment: The Division should develop and adopt additional water quality criteria in addition to dissolved oxygen parameter in 401 KAR 10:031, Section 8(2) that are more protective of water quality, and should consider adopting ammonia as an additional criteria for OSRW if the ammonia criteria is not otherwise adopted.

(b) Response: The Division appreciates the recommendation and is currently analyzing the potential regulatory impact of adopting the recommended ammonia criteria into Kentucky's water quality standards.

(27) Subject Matter: 10:031, Support no ammonia criteria

(a) Commenter: Lloyd R. Cress Jr., Kentucky Association of Manufacturers and Kentucky Chemical Industry Council, Carl R. Breeding, Kentucky League of Cities

Comment: The commenters support the decision to not amend the criteria for ammonia which require additional study and analysis.

(b) Response: The Division appreciates the comment and notes that it is currently analyzing the potential regulatory impact of adopting the recommended ammonia criteria into Kentucky's water quality standards.

(28) Subject Matter: 10:031, Fecal coliform standard

(a) Commenter: Carl R. Breeding, Kentucky League of Cities, Bill Bissett, Kentucky Coal Association, Bryan Sunderland, Kentucky Chamber of Commerce

Comment: The commenters support elimination of the fecal coliform standard, but ask the Division to eliminate the standard immediately (or by January 1, 2017 – Kentucky Chamber) rather than wait until 2019.

(b) Response: The Division appreciates the support for this change. The fecal coliform standard is being phased out as the KPDES permits that contain the standard expire, with the last ones scheduled to expire in 2019. The standard is not included in KPDES permits currently being issued.

(29) Subject Matter: 10:031, Fecal coliform standard

(a) Commenter: Tim Joice, Kentucky Waterways Alliance, Hank Graddy, Sierra Club, Cumberland Chapter

Comment: The commenters support eliminating the fecal coliform criteria.

(b) Response: The Division appreciates the support for this change.

(30) Subject Matter: 10:031, Mercury criteria

(a) Commenter: Carol Becht, Sammie Brian, Diane Casey, Rafael Castro, Mary Clark, Alida Cornelius, Mark Engler, Jessica Kane, Robert Mayton, Zina Merkin, Anna Murray, Jana Ornstein, John Ornstein James Pugh, Margaret Stewart, Teresa Streza, Perry Thomas, Troy Tucker, Monica Unseld, Heather Varda, Barbara Warner, J. Weber, Will Willis

Comment: The Ohio is also being polluted by excess amounts of mercury, both in Kentucky and upriver. We should at least be reducing mercury pollution within our own borders.

(b) Response: The Division shares the concern regarding the need to remove mercury

from waterways. In that regard, the Division has established water quality criteria, including a mixing zone prohibition for BCC to protect Kentucky waters.

(31) Subject Matter: 10:031, Mercury criteria and fish tissue availability

(a) Commenter: Bryan Sunderland, Kentucky Chamber of Commerce, Bill Bissett, Kentucky Coal Association

Comment: The water quality criteria should provide that fish tissue data, when available, for methylmercury and other BCCs would take precedence over water column concentration data to determine compliance with the standard. This would ensure that existing discharges of mercury are not causing an exceedance of the human health standard for fish consumption while avoiding redesigning treatment systems to achieve an extremely stringent water column criterion as an end-of-pipe standard that has not been shown to protect the designated use.

(b) Response: The Division agrees that fish tissue data should have precedence over water column data. Many of the BCC of concern require additional research to derive criteria protective of human consumption based on tissue residue. However, the methylmercury criterion was developed to protect human consumption of fish flesh from exposure to methylmercury at a concentration ( 0.3 mg/Kg) derived as protective of human health based on a consumption rate of two eight-ounce meals per month. This criterion considers the integration of mercury into fishes from multiple sources and pathways. Additionally, the criterion accounts for both the total mercury load in a waterbody, and the rate of methylation of mercury in the waterbody. The Division appreciates the comment and plans to continue investigating the implementation of this tissue-based criterion for Clean Water Act §402 purposes.

(32) Subject Matter: 10:031, Water column translators

(a) Commenter: Tim Joice, Kentucky Waterways Alliance, Tom FitzGerald, Kentucky Resources Council, Hank Graddy, Sierra Club, Cumberland Chapter

Comment: If fish tissue is used to determine stream health while ignoring water column numbers, the agency should propose water column-based translators of a protective fish tissue number. If the Division does not adopt ORSANCO's criteria of 0.012 µg/L for mercury, it should propose a translator of the currently utilized 0.3mg/kg methylmercury standard for fish tissue.

(b) Response: The Division shares the concern regarding the need to remove mercury from waterways. Kentucky's current water column chronic criterion for total mercury of 0.051µg/L was adopted from the EPA 304(a) national recommended human health criteria and approved by EPA. EPA subsequently promulgated a fish tissue-based methylmercury criterion. EPA adopted the fish tissue criterion for methylmercury because it was more protective of human health than using total mercury in the water column. The methylation rate of mercury in a given water body, spatial- and temporal variation in the distribution of the mercury column, and the biokinetic accumulation of mercury by fishes were important factors missing from the derived water column criterion. The Division recognizes fish tissue as the preferred medium upon which to base the human health criterion for mercury.

(33) Subject Matter: 10:031, Mercury criteria should be strengthened

(a) Commenter: Tim Joice, Kentucky Waterways Alliance, Tom FitzGerald, Kentucky Resources Council, Hank Graddy, Sierra Club, Cumberland Chapter

Comment: The Division should maintain the BCC mixing zone ban, and further

strengthen protections against toxic mercury pollution by adopting a more protective mercury water column standard, such as ORSANCO's 0.012 ug/L. This would simultaneously provide more protection for Kentucky's waters, aquatic life, and residents, while bypassing the commenter's previous concern regarding the use of mixing zones to achieve ORSANCO standards within Kentucky.

(b) Response: The Division shares the concern regarding the need to remove mercury from waterways. In that regard, the Division has established water quality criteria, including a mixing zone prohibition for BCC to protect Kentucky waters. Water column criteria for mercury are not in line with what current science indicates, tissue-based criteria, as the preferred basis to develop protective human health criteria for this bioaccumulative pollutant. The tissue-based criterion directly corresponds with and informs consumers of the potential health risks from locally-consumed fishes. Kentucky includes in its standards the EPA-recommended methylmercury criterion used to protect human health. Please see the Response to Comment 32 for additional information. With regard to protection of aquatic life, Kentucky's water quality standards contain the current national 304(a) criteria for mercury.

(34) Subject Matter: 10:031, Nutrient pollution

(a) Commenter: Carol Becht, Sammie Brian, Diane Casey, Rafael Castro, Mary Clark, Alida Cornelius, Mark Engler, Jessica Kane, Robert Mayton, Zina Merkin, Anna Murray, Jana Ornstein, John Ornstein James Pugh, Margaret Stewart, Teresa Streza, Perry Thomas, Troy Tucker, Monica Unseld, Heather Varda, Barbara Warner, J. Weber, Will Willis

Comment: The state needs to do more to address nutrient pollution, evidenced by the recent blue-green algae bloom on the Ohio River, and in Kentucky's lakes in recent years

(b) Response: The Division agrees that nutrient pollution is an important issue for Kentucky waters, as well as downstream waters. The Division is implementing a comprehensive Nutrient Reduction Strategy to reduce nutrient pollution from point sources and non-point sources. The Division is also working toward developing numeric nutrient criteria. Algal blooms are significant issues affected by many variables in addition to nutrients. The Division is working with numerous federal, state, and local partners to better understand blue-green algal blooms, their causes, monitoring strategies, remedial strategies, and communication issues.

(35) Subject Matter: 10:031, Numeric nutrient criteria

(a) Commenter: Tim Joice, Kentucky Waterways Alliance, Tom FitzGerald, Kentucky Resources Council, Hank Graddy, Sierra Club, Cumberland Chapter

Comment: The Division should propose numeric nutrient criteria, especially considering the recent rise of harmful algal blooms (HABs) in the Ohio River, and that "nutrient/biological indicators" remain a leading cause of impairment to the state's waters. The Division has spent over a decade collecting data, monitoring, and assessing streams but continues to cite incomplete data and inconclusive analyses as its rationale for postponing numeric nutrient criteria.

(b) Response: The Division agrees that nutrient pollution is an important issue for Kentucky waters, as well as downstream waters. The Division is implementing a comprehensive Nutrient Reduction Strategy to reduce nutrient pollution from point sources and non-point sources. Algal blooms are significant issues affected by many variables in addition to nutrients. The Division is working with numerous federal, state, and local partners to better understand blue-green algal blooms, their causes, monitoring strategies, remedial strategies, and communication issues.

The Division is working towards developing numeric nutrient criteria for streams, lakes, and reservoirs. It is critical in this process to recognize and account for regional differences in background nutrient levels, as well as to understand the complex responses of biological communities to nutrient gradients. Considerable resources have been and will be directed to the collection and analysis of monitoring data to that purpose, and the Division is using insights gained from these efforts to develop sound criteria to protect Kentucky's diverse waterbodies.

Since EPA's national recommended criteria were published in the early years of the last decade, there has been an overall acknowledgement that the results from that effort were premature. The broad scale of nutrient regions defined by EPA's work do not account for differences in nutrient expectations at an ecoregion scale and the coarse resolution of recommended criteria are not necessarily protective of waters in a given state or ecoregion. Therefore, the Division continues to conduct data collection and analyses to craft meaningful criteria for Kentucky.

The attention that has been devoted to HAB (photosynthetic bacteria that can fix nitrogen under certain conditions) events is a clear illustration of the complexity of water quality triggers and responses that are often thought to correspond with nutrient enrichment of waterbodies. Nutrients may be only a minor component, and not a limiting factor, in a HAB manifestation. For example, HABs occur in oligotrophic waters. Significant academic research is being conducted on how other environmental factors (e.g. turbidity, temperature, pH, season, etc.) may drive these complex events.

(36) Subject Matter: 10:031, Partial nutrient criteria

(a) Commenter: Tim Joice, Kentucky Waterways Alliance, Tom FitzGerald, Kentucky Resources Council, Hank Graddy, Sierra Club, Cumberland Chapter

Comment: Current scientific thought suggests that even if nutrient loading was significantly reduced, the sediment contains so much excess nutrients that it may take several years for cessation of algal blooms. The Division should take reference reach streams, identify benchmark nutrient levels, and begin setting stringent limits on dischargers in nearby waterways to begin reducing nutrients to more naturally-functioning levels. Many states around Kentucky have proposed partial criteria.

(b) Response: The Division agrees that nutrient pollution is an important issue for Kentucky waters, as well as downstream waters. The Division is implementing a comprehensive Nutrient Reduction Strategy to reduce nutrient pollution from point sources and non-point sources. The Division is also actively developing numeric nutrient criteria.

Accurately characterizing nutrient levels in reference streams is an important component of the Division's ongoing work in developing numeric nutrient criteria for streams. Regional differences in geology and soils contribute to considerable variation in nutrients; therefore, identifying appropriate reference conditions and collecting data at sufficient resolution is critical to understanding these patterns. However, the Division recognizes that nutrients often may be elevated above background levels with no evidence of eutrophication problems. Considerable progress has been made through focused data collection and analysis in recent years to understand regional differences in how stream biological communities respond to elevated nutrients. The Division will consider these insights along with reference conditions in the effort to develop nutrient criteria for streams.

(37) Subject Matter: 10:031, Regional nutrient criteria

(a) Commenter: Tim Joice, Kentucky Waterways Alliance, Hank Graddy, Sierra Club, Cumberland Chapter

Comment: If the Division has found enough correlation between nutrient level and aquatic life response in certain regions of the state, it should move forward with adopting numeric nutrient criteria in those regions.

(b) Response: The Division agrees that nutrient pollution is an important issue for Kentucky waters, as well as downstream waters. The Division is implementing a comprehensive Nutrient Reduction Strategy to reduce nutrient pollution from point sources and non-point sources. The Division is also actively developing numeric nutrient criteria.

Accurately characterizing nutrient levels in reference streams is an important component of the Division's ongoing work in developing numeric nutrient criteria for streams. Regional differences in geology and soils contribute to considerable variation in nutrients; therefore, identifying appropriate reference conditions and collecting data at sufficient resolution is critical to understanding these patterns. However, the Division recognizes that nutrients often may be elevated above background levels with no evidence of eutrophication problems. Considerable progress has been made through focused data collection and analysis in recent years to understand regional differences in how stream biological communities respond to elevated nutrients. The Division will consider these insights along with reference conditions in the effort to develop nutrient criteria for streams.

(38) Subject Matter: 10:031, Nutrient criteria is inadequate

(a) Commenter: Hank Graddy, Sierra Club, Cumberland Chapter

Comment: As part of the litigation regarding nutrient and selenium standards, the Cabinet provided language which appears to remove earlier language that the commenter was concerned about. Though some of the "pollution prevention" language in the earlier narrative nutrient water quality standard was restored, the nutrient standard is still inadequate.

(b) Response: There have been no changes to the narrative nutrient criterion the EPA approved on November 15, 2013. The changes the commenter refers to may be changes in the implementation language in CWA §402 permits.

(39) Subject Matter: 10:031, Pentachlorophenol

(a) Commenter: Annie Godfrey, U.S. EPA, Region 4

Comment: The proposed regulation removes the current pH based equation and replaces it with singular values for acute (19ug/L) and chronic (15ug/L). However, EPA still recommends the pH based equation as the applicable criterion. Region 4 recommends that the equation be reinstated here.

(b) Response: The Division appreciates the comment and has corrected this error.

(40) Subject Matter: 10:031, Selenium footnotes and acute criterion removal

(a) Commenter: Annie Godfrey, U.S. EPA, Region 4

Comment: In reviewing the revisions to this criteria, it appears that the cited footnotes are incorrect. Footnote 10 should be removed from the egg/ovary value and footnote 12 reinserted. Otherwise, the Division should consider removing 'of whole fish tissue' from footnote 10 for clarity. EPA notes that the KDOW proposes to remove the acute criterion for selenium. Based on our understanding of how KDOW implements water quality standards, EPA is concerned that certain facilities, especially those with non-continuous discharges, will not have limits that would

protect designated uses within the Commonwealth for this pollutant. EPA requests that KDOW outline the reasonable potential procedures that KDOW will use to assure that these facilities receive appropriate limits, where necessary, to meet water quality standards and protect designated uses.

(b) Response: The Division appreciates the comment and has corrected the footnotes accordingly in its amendments to the regulation.

Kentucky is not proposing a revised acute water column criteria because selenium is bioaccumulative and toxicity primarily occurs through dietary exposure that may cause chronic endpoint effects that are protected via the chronic water quality selenium criteria. In accordance with statements and science made available by EPA there have been few, if any, acute exposure, water column-only selenium aquatic toxicity events documented in the literature. The kinetics of selenium accumulation and depuration are sufficiently slow that attainment of the Kentucky chronic water criteria concentration by ambient 30-day averages affords protection under all conditions and will protect sensitive aquatic life species even where concentrations exhibit a high degree of variability.

Therefore, the Division believes that the reasonable potential analysis of non-continuous discharges, conducted pursuant to 40 CFR 122.44(d) is appropriately conducted with regards to whether the discharge has reasonable potential to result in sustained instream concentrations in excess of 5 µg/L.

(41) Subject Matter: Selenium standard is not protective

(a) Commenter: Carol Becht, Sammie Brian, Diane Casey, Rafael Castro, Mary Clark, Alida Cornelius, Mark Engler, Jessica Kane, Robert Mayton, Zina Merkin, Anna Murray, Jana Ornstein, John Ornstein James Pugh, Margaret Stewart, Teresa Streza, Perry Thomas, Troy Tucker, Monica Unseld, Heather Varda, Barbara Warner, J. Weber, Will Willis

Comment: The changes to the selenium standard, while needed to address previous issues, is not enough to truly protect streams from mining pollution.

(b) Response: The national chronic criterion for selenium is 5.0 µg/L. The Division believes the chronic criterion for selenium is protective. This is a matter of current litigation and the Division is optimistic that resolution of this issue will verify that the criterion is protective.

(42) Subject Matter: Selenium chronic number

(a) Commenter: Tim Joice, Kentucky Waterways Alliance, Tom FitzGerald, Kentucky Resources Council

Comment: The chronic number for selenium should likely be even lower to protect fish tissue from chronic accumulation and impact of selenium.

(b) Response: 5µg/L is the current national recommendation for selenium chronic criteria and Kentucky is proposing to re-establish this standard as a stand-alone criterion.

(43) Subject Matter: 10:031, Selenium standard is underprotective

(a) Commenter: Benjamin Luckett, Appalachian Voices

Comment: Based on most recent science, outdated data, and criticism indicating the 5 ug/L selenium standard is underprotective, the Division should instead adopt a more stringent standard.

(b) Response: 5µg/L is the current national recommendation for selenium chronic criteria and Kentucky is proposing to re-establish this standard as a stand-alone criterion.

(44) Subject Matter: 10:031, Fish tissue availability

(a) Commenter: Bryan Sunderland, Kentucky Chamber of Commerce, Bill Bissett, Kentucky Coal Association

Comment: The issue of whether fish tissue data is available is an implementation issue to be determined through the KPDES permitting process, and the commenter requests that the Division confirm that position in its Statement of Consideration.

(b) Response: The Division agrees that the availability of fish tissue for compliance with a permit is an implementation issue. However, the Division has spelled out in the criteria that if fish tissue data are available, fish tissue data shall take precedence over water column data. The Division's standard operating procedure, *Methods for the Collection of Selenium Residue in Fish Tissue Used to Determine KPDES Permit Compliance*, defines how the Division determines whether fish tissue is available for determining compliance with permitted discharges. In cases where fish tissue is available, those data take precedence over water column data.

(45) Subject Matter: 10:031, Fish tissue sampling

(a) Commenter: Benjamin Lockett, Appalachian Voices

Comment: In order to be protective, water column elements must be given primacy in all waters that lack adequate numbers of fish to regularly collect large tissue samples without adversely affecting resident populations, not just in waters that completely lack fish. The Division must also account for "survivor bias" inherent in any fish tissue sampling. To be truly protective of aquatic life, the Division's water column elements need to be given primacy in all waters in which sensitive species could be supported but have been extirpated.

(b) Response: The Division implements its selenium criteria on a tiered approach; fish tissue selenium residue overrides the water column concentration when available. As described in the Division of Water's SOP, *Methods for the Collection of Selenium Residue in Fish Tissue Used to Determine KPDES Permit Compliance*, the presence of fish tissue is determined through procedures of that implementation guidance.

The Division's fish tissue selenium criterion was developed by incorporating the four most sensitive species found in Kentucky, or closely related surrogate species, to selenium toxicity as prescribed by EPA's methods for developing aquatic life toxic criteria. Therefore, the most sensitive species to the toxicity effects of selenium were incorporated to derive the final criterion value. The Division incorporated more stringent parameters used to identify harmful effects from selenium than those minimum guidelines in the EPA guidance document, *Guidelines for deriving numerical national water quality criteria for the protection of aquatic organisms and their uses*. These mentioned elements incorporated in the criterion derivation procedures taken by the Division assures that whatever species comprise a given fish community, the tissue residue criterion provides protection across all fish communities in the Commonwealth.

(46) Subject Matter: 10:031, Water column elements

(a) Commenter: Benjamin Lockett, Appalachian Voices

Comment: Water column elements must be given precedence in both fishless waters and in waters with "new or increased inputs of selenium from a specific source until equilibrium is reached" pursuant to the EPA criterion.

(b) Response: The Division believes that the availability of fish tissue for compliance

with a permit is a preferred approach to determining compliance with a KPDES permit. As such, the Division has spelled out in the criteria that if fish tissue data are available, fish tissue data shall take precedence over water column data.

The Division believes that giving precedence to water column data in waters with “new or increased inputs of selenium from a specific source until equilibrium is reached” establishes a permitting approach based on undefined conditions. Discharges considered “new or increased inputs of selenium” are not defined as to the magnitude, frequency, or duration. The concept of “equilibrium” is also not defined by aquatic condition or by duration. As such, implementing this approach in permits would create legal jeopardy for the Division and the permittee. The Division believes that the most appropriate approach is to rely on the scientifically defensible and reliable use of fish tissue data when available. Selenium is bioaccumulative and toxicity primarily occurs through dietary exposure that may cause chronic endpoint effects that are protected via the chronic water quality selenium criteria. The kinetics of selenium accumulation and depuration are sufficiently slow that attainment of the Kentucky chronic water criteria concentration by ambient 30-day averages affords protection under all conditions and is protective of sensitive aquatic life species even where concentrations exhibit a high degree of variability.

(47) Subject Matter: 10:031, Support for selenium criterion

(a) Commenter: Lloyd R. Cress Jr., Kentucky Association of Manufacturers and Kentucky Chemical Industry Council, Carl R. Breeding, Kentucky League of Cities, Bryan Sunderland, Kentucky Chamber of Commerce, Bill Bissett, Kentucky Coal Association

Comment: The commenters support deletion of the acute criterion for selenium and the amendment to the chronic criterion clarifying that fish tissue data shall take precedence over water column data.

(b) Response: The Division appreciates the support for this approach.

(48) Subject Matter: Support for selenium criteria and request for scientific translator

(a) Commenter: Hank Graddy, Sierra Club, Cumberland Chapter

Comment: The commenter supports the modification to the selenium water quality criteria. The change allows the chronic standard to take precedence when fish are not present for testing. For the next Triennial Review, the state should propose a more scientifically accurate translator of the fish tissue standard to the water column standard.

(b) Response: The Division appreciates the support for this approach. The Division believes the chronic criterion for selenium is protective. This is a matter of current litigation and the Division is optimistic that resolution of this issue will verify that the criterion is protective.

(49) Subject Matter: 10:031, Total residual chlorine

(a) Commenter: Lloyd R. Cress Jr., Kentucky Association of Manufacturers and Kentucky Chemical Industry Council

Comment: The criteria for TRC are inappropriately low and should be revised to reflect field measurability.

(b) Response: The Division appreciates this concern for implementing water quality criteria. The Kentucky total residual chlorine criteria are adopted from EPA national recommended criteria. Water quality standards are developed and established to protect aquatic life even though a criterion may be below instrumentation or method detection limit. The

Division considers that an applicable criterion is met when the EPA-approved, sufficiently sensitive method analytical results of a pollutant measurement occur at an amount above a criterion, but is at the reporting limit, or instrumentation/method detection limit. For example, if a total residual chlorine of 20 µg/L is determined by an EPA-approved test methodology, the water quality criteria for total residual chlorine (19 µg/L and 11 µg/L) are considered to be in compliance with the criteria.

(50) Subject Matter: 10:031, Hydraulic fracturing requires additional water quality protection

(a) Commenter: Carol Becht, Sammie Brian, Diane Casey, Rafael Castro, Mary Clark, Alida Cornelius, Mark Engler, Jessica Kane, Robert Mayton, Zina Merkin, Anna Murray, Jana Ornstein, John Ornstein James Pugh, Margaret Stewart, Teresa Streza, Perry Thomas, Troy Tucker, Monica Unseld, Heather Varda, Barbara Warner, J. Weber, Will Willis

Comment: The recent surge in interest for hydraulic fracturing in Kentucky needs to be addressed in additional water quality protections for our streams and lakes. We can't let the fracking industry take advantage of our waterways the way the coal industry has done.

(b) Response: The Division agrees that all activities, including fracking, should meet water quality criteria. The Division has adopted criteria that it believes is protective of pollutants from fracking operations.

(51) Subject Matter: 10:031, Water quality standards for fracking wastewater

(a) Commenter: Tim Joice, Kentucky Waterways Alliance, Tom FitzGerald, Kentucky Resources Council, Hank Graddy, Sierra Club, Cumberland Chapter

Comment: The Division should consider water quality standards for various constituents in fracking wastewater, or flowback/produced water from hydraulic fracturing operations. Hydraulic fracturing is a more recent process in Kentucky and hydrologic and wastewater impacts are of a magnitude greater than nitrogen fracturing. Developing additional water quality standards provides better protections for aquatic life and human health.

(b) Response: The Division agrees that all activities, including fracking, should meet water quality criteria. The Division has adopted criteria that it believes protects from pollutants from fracking operations. However, if additional water quality criteria are necessary for a given pollutant in order to be protective of aquatic life and human health, the commenters should petition the agency to develop or adopt criteria for that pollutant.

(52) Subject Matter: 10:031, Amendment to 401 KAR 5:090 regarding water well sampling and hydraulic fracturing

(a) Commenter: Tim Joice, Kentucky Waterways Alliance, Tom FitzGerald, Kentucky Resources Council, Hank Graddy, Sierra Club, Cumberland Chapter

Comment: 401 KAR 5:090 should be amended to require oil and gas facilities to sample water wells before, during, and after drilling activities within one-half mile of new oil and gas wells, with parameters consistent with fracking wastewater. Colorado and Pennsylvania have similar requirements. If the Division is unwilling to propose such a requirement as part of its regulatory authority, it should be actively and publicly engaged with the Division of Oil and Gas on water sampling requirements.

(b) Response: The Division appreciates the comment, however, the issue is not germane to 401 KAR Chapter 10 (Water Quality Standards) which are the subject of Triennial Review. The Division is engaged with the industry, the Department for Natural Resources, and

environmental interest groups through the Secretary's Oil and Gas workgroup, on these and related issues.

(53) Subject Matter: 10:031, Human health criteria

(a) Commenter: Annie Godfrey, U.S. EPA, Region 4

Comment: In June 2015, EPA published new recommended 304(a) criteria for human health for 94 chemicals. EPA requests that the Division review these latest recommendations and revise, as necessary, the current human health criteria in the regulation

(b) Response: The Division had commenced its Triennial Review and held three pre-promulgation public meetings in May 2015, prior to the publication of the new recommended criteria. The Division understands that the EPA would not require those states that had already begun the Triennial Review process at the time of final publication to consider adopting the recommendations. The Division will consider the final recommendations in its next Triennial Review.

(54) Subject Matter: 10:031, Method detection limits

(a) Commenter: Kevin Sheridan, Westlake Chemical Corporation, Bryan Sunderland, Kentucky Chamber of Commerce, Bill Bissett, Kentucky Coal Association

Comment: Certain proposed or existing water quality standards reflect limits which are below method detection limits of EPA-approved laboratory methods. Such limits should not be adopted into regulation or permits. The Division should develop a clear and consistent approach to reporting and enforcement that assures the regulated community that it is, and will remain, in compliance with its permitted discharge regardless of changes to EPA-approved detection methods. The Division should establish a means of treating all facilities consistently regarding permit limits, especially when approved detection will not determine compliance with water quality standards, and should ensure it can support permitting decisions with adequate and consistent data.

(b) Response: Even though a criterion may be below instrumentation, method detection, or reporting limit, water quality standards are nevertheless developed and established to protect aquatic life. If water quality results indicate the pollutant concentration is at a method detection, below reporting limit or instrument detection limit, the applicable water quality standard is considered met.

(55) Subject Matter: 10:031, Variance availability

(a) Commenter: Kevin Sheridan, Westlake Chemical Corporation

Comment: The Division of Water indicated in an August 2015 presentation that variances are located within 401 KAR 10:031, Section 11 and there is flexibility under both ORSANCO and EPA guidance (40 CFR 131.13). The Division should seek approval of a general variance from EPA via 401 KAR 10:031, Sections 10 and 11, to allow flexibility in changing standards and the ability to meet them.

(b) Response: The Division agrees that practicality and flexibility are important factors in implementing water quality standards. However, water quality standards for specific substances (pollutants) are based on what is protective of water quality and habitat; water quality standards are not technology-based standards. Consideration of implementation of the water quality standards within a KPDES permit occurs as part of the permit process. While there is no process for the state to seek a federal variance to a state regulation/water quality standard, nor is

there authority for a federal agency to grant a variance based on a state regulation, exceptions to water quality criteria (variances) are available pursuant to 401 KAR 10:031, Sections 10 and 11.

(56) Subject Matter: 10:031, Variance availability explanation

(a) Commenter: Bryan Sunderland, Kentucky Chamber of Commerce, Bill Bissett, Kentucky Coal Association

Comment: The Division should explain the availability of exceptions/variances under Kentucky's current water quality standards which have been underutilized by the Division. EPA's recent water quality standard revisions make clear that variance provisions are an important part of state water quality standards, and the Division should consider developing implementation guidance for the regulated community.

(b) Response: The Division agrees that variance provisions are an important factor in implementing water quality standards. Exceptions to water quality criteria (variances) are available pursuant to 401 KAR 10:031, Sections 10 and 11.

(57) Subject Matter: 10:031, Variance availability

(a) Commenter: Lloyd R. Cress Jr., Kentucky Association of Manufacturers and Kentucky Chemical Industry Council

Comment: Kentucky's program for granting variances and exceptions to criteria in 10:031 has been in place for several years. Recent EPA documents endorse states' use of water quality standard variances when economic or technical infeasibility is established. The commenters look forward to future discussions with the Cabinet regarding implementation of existing regulatory mechanisms for variances and exceptions to criteria.

(b) Response: The Division agrees that practicality and flexibility are important factors in implementing water quality standards. Exceptions to water quality criteria (variances) are available pursuant to 401 KAR 10:031, Sections 10 and 11.

(58) Subject Matter: 10:031, Prior suggested changes

(a) Commenter: John Lyons, Strand Associates

Comment: It appears that the Division of water is not advancing any of the suggested changes to 10:031 that were proposed. The existing criteria should be revisited and updated to reflect the wide range of surface waters across the Commonwealth and be structured to more reasonably accommodate intermittent conditions such as rain events. The commenter requests that the Division convene a formal workgroup to review 401 KAR 10:031, Section 7 to evaluate alternative approaches and, if appropriate, develop proposed revisions to the criteria for future promulgation.

(b) Response: The Division did not have adequate time to consider and evaluate the proposed suggested changes to 401 KAR 10:031, Section 7, proffered by the commenter. However, the Division will convene a workgroup of stakeholders in early 2016 to evaluate alternative approaches and, if appropriate, develop proposed revisions to the criteria for future promulgation.

#### IV. Summary of Action Taken by Promulgating Agency

The Division of Water reviewed the comments and, as a result, is not amending 401 KAR 10:026, 10:029, or 10:030. The Division is amending 401 KAR 10:031 as follows:

**Page 14**

**Section 6(1)**

**Table 1**

**Row Relating to “Pentachlorophenol”**

In the fifth column (which is the Warm Water Aquatic Habitat Acute column), insert “e(1.005(pH)-4.869)”.

Delete “19-”.

In the last column (which is the Warm Water Aquatic Habitat Chronic column), insert “e(1.005(pH)-5.134)”.

Delete “15-”.

**Page 14**

**Section 6(1)**

**Table 1**

**Row relating to “Selenium”**

In the last column, after “19.3”, delete “<sup>10</sup>”.

After “11”, insert “<sup>12</sup>”.

**Page 18**

**Section 6(1)**

**Line 5**

Insert the following:

<sup>12</sup>This value is the concentration in µg/g (dry weight) of fish egg/ovary tissue.