BEFORE THE ILLINOIS POLLUTION CONTROL BOARD

IN THE MATTER OF:

WATER QUALITY STANDARDS AND EFFLUENT LIMITATIONS FOR THE CHICAGO AREA WATERWAY SYSTEM AND THE LOWER DES PLAINES RIVER: PROPOSED AMENDMENTS TO 35 ILL. ADM. CODE PARTS 301, 302, 303 and 304	))))))	R08-9 (D) (Rulemaking – Water)

NOTICE OF FILING

TO: Mr. John T. Therriault
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(VIA ELECTRONIC MAIL)

Ms. Marie E. Tipsord
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(VIA FIRST CLASS MAIL)

(SEE PERSONS ON ATTACHED SERVICE LIST)

PLEASE TAKE NOTICE that I have today filed with the Office of the Clerk of the Illinois Pollution Control Board **PRE-FILED TESTIMONY OF LIAL F. TISCHLER ON BEHALF OF EXXONMOBIL OIL CORPORATION**, a copy of which is herewith served upon you.

Respectfully submitted,

EXXONMOBIL OIL CORPORATION,

Dated: November 22, 2013

By: /s/ Katherine D. Hodge
Katherine D. Hodge

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CERTIFICATE OF SERVICE

I, Katherine D. Hodge, the undersigned, hereby certify that I have served the attached **PRE-FILED TESTIMONY OF LIAL F. TISCHLER ON BEHALF OF EXXONMOBIL OIL CORPORATION** upon:

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by depositing said documents in the United States Mail, postage prepaid, in Springfield, Illinois on November 22, 2013.

/s/ Katherine D. Hodge
Katherine D. Hodge

MOBO:041/Fil/ NOF-COS – Pre-Filed Testimony of Lial F. Tischler

BEFORE THE ILLINOIS POLLUTION CONTROL BOARD

IN THE MATTER OF:

WATER QUALITY STANDARDS AND EFFLUENT LIMITATIONS FOR THE CHICAGO AREA WATERWAY SYSTEM AND THE LOWER DES PLAINES RIVER: PROPOSED AMENDMENTS TO 35 ILL. ADM. CODE PARTS 301, 302, 303 and 304	))))))	R08-9 (D) (Rulemaking – Water)

PRE-FILED TESTIMONY OF LIAL F. TISCHLER
ON BEHALF OF EXXONMOBIL OIL CORPORATION

NOW COMES EXXONMOBIL OIL CORPORATION ("ExxonMobil"), by and through its attorneys, HODGE DWYER & DRIVER and submits the following PRE-FILED TESTIMONY OF LIAL F. TISCHLER for presentation at the December 2013 hearings scheduled in the above-referenced matter.

I. INTRODUCTION

My name is Lial F. Tischler, and I am a partner in the environmental engineering consulting firm of Tischler/Kocurek ("T/K"). I have prepared this testimony for ExxonMobil, which is directly affected by the water quality standards ("WQS") for the Upper Dresden Island Pool ("UDIP") stretch of the Lower Des Plaines River ("LDPR").

T/K is a consulting environmental engineering firm consisting of two partners — Dianna Kocurek, P.E., B.C.E.E., and myself. T/K has provided consulting engineering services to industry and municipalities for over 28 years. Our areas of professional practice include wastewater treatment and disposal, water quality assessment and monitoring, solid and hazardous waste management, and air emissions estimation and permitting for wastewater management facilities. T/K also serves as a technical consultant to the American Petroleum Institute, American Chemistry Council, Pharmaceutical Research and Manufacturers of America and the Utilities Water Act

Group, often evaluating and preparing comments on proposed United States Environmental Protection Agency ("USEPA") regulations.

I received a B.S. in Civil Engineering from Texas Western College (now the University of Texas at El Paso) in 1964, a M.S. degree in Environmental Health Engineering from the University of Texas at Austin in 1966, and a Ph.D. in Civil Engineering from the University of Texas at Austin in 1968. I am a licensed Texas Professional Engineer since 1973 and a Board Certified Environmental Engineer (B.C.E.E.) by the American Academy of Environmental Engineers. My résumé and list of publications are attached to this testimony as Exhibit A.

I have directed over forty comprehensive field water quality studies in multiple states and several foreign countries, including the development of site-specific water quality criteria and revisions to designated uses. I've prepared comments on and served on stakeholder groups for development and implementation of water quality standards and criteria promulgated under the authority of Clean Water Act ("CWA") Section 303 by the USEPA, seven states[1] and the Commonwealth of Puerto Rico. I reviewed and prepared comments on the Great Lakes Water Quality Guidance (40 C.F.R. Part 132), USEPA's Advanced Notice of Proposed Rule Making for the surface Water Quality Standards Rule (63 Fed. Reg. 36742 (July 87, 1998)), and USEPA's proposed changes to the federal Water Quality Standards Rule for CWA Section 303(d) listing procedures and implementation of Total Maximum Daily Loads ("TMDLs") (64 Fed. Reg. 46012, 46057 (August 23, 1999)). I am currently drafting comments on USEPA's Proposed Water Quality Standards Regulatory Clarifications published at 78 Fed. Reg. 54518 (September 4, 2013).

[1] Arizona, Oklahoma, Indiana, Louisiana, New Jersey, Texas and Wisconsin.

ExxonMobil owns and operates a petroleum refinery that is located in Channahon, Illinois that discharges treated wastewater, cooling water, miscellaneous utility waters, and storm water to the UDIP of the LDPR, as authorized by National Pollutant Discharge Elimination System ("NPDES") Permit No. IL0002861. The ExxonMobil Joliet Refinery ("Refinery") wastewater management system exceeds the requirements of the USEPA's definitions of best available technology ("BAT") and complies with water quality-based effluent limitations ("WQBELs") that achieve all Illinois surface WQS applicable to discharges to the LDPR, including any applicable General Use standards that apply to the LDPR downstream of the Interstate 55 ("I-55") Bridge, the Lower Dresden Island Pool ("LDIP"). The Refinery discharges at the downstream end of the UDIP, only 1,600 feet upstream of the upper boundary of the LDIP. Exhibit B, Figure 1 is an annotated satellite map of the area surrounding the Refinery showing the location of the principal surface features discussed in this testimony, including the boundary of the UDIP and LDIP.

Any changes to the existing designated uses and applicable water quality criteria of the UDIP could have technical and economic impacts on Refinery operations. Accordingly, ExxonMobil has a direct interest in the proposed water quality criteria for the UDIP.

On October 26, 2007, the Illinois Environmental Protection Agency ("Illinois EPA") filed a proposal to amend the Illinois Pollution Control Board's ("Board") rules for Secondary Contact Recreation and Indigenous Aquatic Life Use to update the designated uses and water quality criteria for the Chicago Area Waterways System

("CAWS") and the LDPR.[2] This rulemaking was assigned Docket No. R08-9 by the Board.

On March 18, 2010, the Board issued an order severing the R08-9 Rulemaking into Subdockets A, B, C, and D.[3] Subdocket C was created to address "the issues involving proposed aquatic life uses," and Subdocket D was created to address "the issues dealing with water quality standards and criteria which are necessary to meet the aquatic life use designations." *Id.* at 1.

In its First Notice Opinion and Order in Subdocket C, the Board proposed to designate the UDIP as General Use waters, but agreed to "examine water quality standards for UDIP in Subdocket D to ensure that the UDIP can meet the water quality standards applicable under the General Use standard."[4] On October 3, 2013, the Board issued its Second Notice Opinion and Order in Subdocket C and proposed to designate the aquatic life use for the UDIP as Upper Dresden Island Pool Aquatic Life Use Waters ("UDIP ALU"), as requested by ExxonMobil and others in their comments on the Subdocket C First Notice.[5] The numeric and narrative WQS for the UDIP ALU that are being considered in Subdocket D can therefore properly represent the unique, site-specific physical, chemical, and ecological conditions that are thoroughly documented in the extensive record for Subdocket C.

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[2] Proposed Amendments, *In the Matter of Water Quality Standards and Effluent Limitations for the Chicago Area Waterway System and the Lower Des Plaines River: Proposed Amendments to 35 Ill. Adm. Code Parts 301, 302, 303 and 304*, R08-9 (Ill.Pol.Control.Bd. Oct. 26, 2007) (filing hereafter cited as "Proposed Amendments" and rulemaking hereafter cited as "R08-9").

[3] Board Order, R08-9 (Ill.Pol.Control.Bd. Mar. 18, 2010).

[4] First Notice Opinion and Order, R08-9(C) at 221 (Ill.Pol.Control.Bd. Feb. 21, 2013) (hereafter "Subdocket C First Notice").

[5] Second Notice Opinion and Order, R08-9(C) (Oct. 3, 2013) (hereafter "Subdocket C Second Notice").

I have been retained by ExxonMobil to evaluate and comment on the water quality criteria that will be adopted in Subdocket D. Illinois EPA proposes that the appropriate standards for the UDIP be the standards that were proposed to the Board in 2007,[6] as amended by Illinois EPA in May 2013[7] and in Comments to Subdocket C on November 4, 2013.[8]

My testimony addresses the following specific topics that are relevant to establishing these water quality criteria:

1. The ability of a state to adopt subcategories of designated CWA Section 101(a)(2) uses and criteria that are appropriate to protect the subcategorized use.

2. Recognition of the sources of chlorides in the UDIP and the adoption of appropriate numeric criteria consistent with the aquatic life use designation.

3. The importance of WQS variances because of the considerable uncertainty as to the existing water quality in the UDIP and whether or not the numeric criteria that will be adopted in Subdocket D are currently being achieved.

4. The importance of compliance schedules for discharges that become subject to new and/or more restrictive water quality criteria adopted in Subdocket D.

5. The need for multi-discharger/water body WQS variance provisions for constituents such as temperature, chlorides, and mercury, in the event that the numeric criteria established in Subdocket D are set at levels that cannot currently be achieved in the UDIP.

6. The importance of including provisions in the temperature standards for the UDIP ALU to account for existing upstream thermal sources that have WQS variances or a CWA Section 316(a), 33 U.S.C. § 1326, thermal

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[6] *See* Proposed Amendments.

[7] *See* Illinois Environmental Protection Agency's Motion to Amend the Regulatory Proposal Filed in 2007, R08-9(D) (Ill.Pol.Control.Bd. May 24, 2013) (hereafter "Subdocket D Motion to Amend").

[8] *See* Comments of the Illinois Environmental Protection Agency on the Illinois Pollution Control Board's Subdocket C Second Notice Opinion and Order, R08-9(C) at 15 (Ill.Pol.Control.Bd. Nov. 4, 2013) (hereafter cited as "Illinois EPA Subdocket C Second Notice Comments").

variance, which may render it impossible for the Refinery to achieve the revised temperature standards.

7. Whether or not IEPA's proposed temperature standards for UDIP ALU will be correctly derived to represent the temperature regime in the impounded surface waters of the UDIP.

Before presenting testimony on these issues, I request that the Board take official notice of the USEPA's recently proposed regulation entitled "Water Quality Standards Regulatory Clarifications" published at 78 Fed. Reg. 54518 (Sept. 4, 2013) ("Clarifications Rule"), included as Exhibit C. The following excerpt from the introductory section of the rulemaking preamble describes USEPA's purpose:

> ...the EPA has had an ongoing dialogue with states, tribes and stakeholders on key issues that are central to assuring effective implementation of the WQS program. As part of this process, the Agency has considered several fundamental questions in evaluating opportunities to improve implementation of the WQS program including which recurring implementation issues would benefit most from a regulatory clarification or update....
>
> As a result of this evaluation and consideration of continuing input from states, tribes and stakeholders, the EPA is proposing changes to key program areas of its WQS regulation at 40 CFR part 131 that the Agency believes will result in improved regulatory clarity and more effective program implementation....[9]

In the preamble to this proposed regulation, which would insert clarifying language into several provisions of 40 C.F.R. Part 131 "Water Quality Standards," USEPA describes its interpretations of certain CWA WQS provisions that are of considerable importance to the Subdocket C and D rules. Specifically, USEPA elaborates on provisions relating to the following:

- designated uses;

[9] 78 Fed. Reg. 54521.

- the appropriateness of subcategories for designated aquatic life uses that are Section 101(a)(2) uses;
- the use of single and multi-source variances from WQS; and
- the importance and use of compliance schedules.

A better understanding of USEPA's interpretations is clearly useful to the Board in this rulemaking, as this rulemaking is followed by USEPA review and approval per CWA Section 303(c) before the WQS are in effect.

II. CRITERIA FOR USE SUBCATEGORIES

The Board's proposed UDIP ALU is consistent with principles and interpretations discussed in the preamble to USEPA's Clarifications Rule regarding the appropriateness of subcategories of CWA Section 101(a)(2) designated uses, including aquatic life uses, and adoption of numeric water quality criteria that are protective of those uses. 78 Fed. Reg. 54522-23. USEPA presents several examples of situations where a single, statewide aquatic life use and the accompanying criteria (e.g., Illinois' General Use waters and corresponding standards) cannot be achieved in a surface water segment for one or more reasons (generally, due to one or more of the six 40 C.F.R. § 131.10(g) factors), but where that segment has an existing aquatic life use, which is a subcategory of aquatic life uses, and a corresponding numeric criteria adopted to protect that use. USEPA's examples are analogous to the conditions in the UDIP and fully support the Board's decision to propose the UDIP ALU. Furthermore, the preamble to the proposed Clarifications Rule states that USEPA intends to grant states "considerable discretion" in defining subcategories of uses and the applicable water quality criteria to protect such uses. 78 Fed. Reg. 54523.

This subcategorization approach is consistent with Illinois EPA's Subdocket C Second Notice Comments, which explain the concept of an interim goal that does not represent a biological condition that is highly natural, but rather, a condition that is a reasonably attainable step toward a highly natural condition. Illinois EPA Subdocket C Second Notice Comments at 5-7. In fact, Illinois EPA presents a graphic depicting a continuum of waterway naturalness. *Id.* at 9. All of the waterways represented by different positions on this continuum could conceivably have unique WQS.

Therefore, when setting WQS and incorporating USEPA's recommended criteria, all systems cannot be treated equally. WQS must be adapted for the particular use subcategory. As explained by Illinois EPA in Subdocket C Second Notice Comments, "relatively few waters in the eastern and Midwestern United States and perhaps none in Illinois" can reasonably be expected to attain a highly natural biological condition. *Id.* at 5-6. Thus, in many cases, a use subcategory may call for a WQS that is less restrictive than that necessary for a highly natural stream. For example, given the physical restrains of the UDIP, it is inappropriate to develop thermal seasonal standards based on data from waterways that are entirely unimpacted by thermal loading and thermal water source limitations.

USEPA's discussion of principles and interpretations in the preamble to the proposed Clarifications Rule validates the Board's proposal for the UDIP ALU and should guide the Board's development of numeric water quality criteria for Subdocket D. USEPA's interpretation of the discretion allowed to states in the development of numeric criteria are particularly relevant to the future UDIP ALU criteria for temperature, chlorides, dissolved oxygen, and potentially copper.

III. CHLORIDE CRITERION

The preamble to the proposed Clarifications Rule clearly reiterates USEPA's interpretation that 40 C.F.R. Part 131 authorizes states to establish site-specific water quality criteria for subcategorized aquatic life uses. The Board's proposed adoption of the UDIP ALU presents the opportunity to establish chloride criteria that are protective of the existing and designated aquatic life use, while at the same time recognizing the fact that the UDIP has seasonal elevated concentrations of chloride that exceed the proposed criterion of 500 mg/L. The record for this rulemaking clearly documents that the use of salt (sodium chloride) to deice roadways in the Greater Chicago Metropolitan Area results in chloride concentrations that intermittently exceed 500 mg/L in the months from November through April and that these elevated concentrations are caused by the use of salt that is applied to roadways during freezing conditions for motorist safety.[10]

Throughout this rulemaking, Illinois EPA and various stakeholders have been discussing the proposed water quality standard for chlorides. In the Illinois EPA's original proposed amendments to Parts 301, 302, 303, and 304, Illinois EPA states with regards to chlorides:

> The Illinois EPA expects that there will be violations of the chloride standard during the winter months when road salting takes place to address winter weather events and the safety of Illinois motorists. This problem is not unique to the CAWS and Lower Des Plaines River and the Illinois EPA has issued National Pollutant Discharge Elimination System stormwater permits to municipalities requiring the implementation of best management practices and other programs to minimize storm related water quality impacts from salts and other contaminants. The Agency hopes to

[10] September 23, 2013 Hearing Transcript, R08-09(D) at 34 (Ill.Pol.Control.Bd. Sept. 23, 2013) (hereafter Sept. 23, 2013 Tr.); July 29, 2013 Hearing Transcript, R08-9(D) at 117 (Ill.Pol.Control.Bd. July 29, 2013); Attachment 1, Pre-Filed Testimony of James E. Huff, P.E. for Citgo Petroleum Corporation and PDV Midwest, LLC, R08-9(C) (Ill.Pol.Control.Bd. Oct. 8, 2010).

> continue to work with state and local government entities to mitigate the potential harm to aquatic life from these practices.[11]

At this time, however, to our knowledge, Illinois EPA has not addressed this issue with storm water permits issued to state and local government entities along the LDPR.

Illinois EPA has not yet determined how to address the seasonal chloride issue resulting from road salt and has not articulated the type of best management practices ("BMP") that would be appropriate in these circumstances for municipalities and facilities along the LDPR. In order to address the issues raised by stakeholders in regards to the proposed chlorides WQS, the Board and Illinois EPA should consider the approach that USEPA has suggested for addressing dissolved oxygen ("DO") issues resulting from combined sewer overflows ("CSOs").

The Metropolitan Water Reclamation District of Greater Chicago ("MWRD") has been in discussions with regulators and environmental groups with respect to WQSs for the CAWS and, in particular, the aquatic life designated uses and aquatic life WQS for DO.[12] In a recent filing with the Board, MWRD included a June 26, 2012 letter from USEPA that discusses approval of WQS and variances in accordance with Section 303(c) of the CWA.[13] Although the discussion pertains specifically to a potential variance request, USEPA acknowledges that there is an opportunity in that situation to potentially claim that a human-caused source of pollution prevents attainment of the DO criterion for a portion of the CAWS. The "human-caused condition" is referring to the Use

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[11] Statement of Reasons, R08-9 at 76-77 (Ill.Pol.Control.Bd. Oct. 26, 2007) (hereafter cited as "SOR").

[12] Report of MWRD and Environmental Groups on Agreement Regarding Proposed Aquatic Life Designated Uses, R08-9(C) (Ill.Pol.Control.Bd. Jan. 9, 2013).

[13] Exhibit A to Report of Metropolitan Water Reclamation District of Greater Chicago and Environmental Groups Regarding Proposed Aquatic Life Designated Uses, R08-9(C and D) (Ill.Pol.Control.Bd. Jan. 9, 2013) (hereafter cited as "June 2012 USEPA Letter").

Attainability Analysis ("UAA") factor at 40 C.F.R. § 131.10(g)(3): "Human caused conditions or sources of pollution prevent the attainment of the use and cannot be remedied or would cause more environmental damage to correct than to leave in place."

Just as CSOs are a human-caused condition contributing to the nonattainment of the proposed DO standard in the waterways, road salting is a human-caused condition that results seasonally in chloride concentrations in excess of the proposed numeric standard.[14] In addition, USEPA stated with regard to chlorides in this rulemaking that "[i]f Illinois wants to take the effects of deicing activities in the Chicago area into account in the water quality standards for the CCSC, Illinois could attempt to do so as part of the IPCB's proceedings pertaining to aquatic life use designations and criteria...."[15] Accordingly, the Board should adopt an aquatic life water quality criterion for chlorides that is consistent with these current conditions, relying on the human-caused conditions UAA factor.

A number of states have adopted, and USEPA has approved, chloride criteria for specific surface water segments that have designated high aquatic life use but have elevated chloride concentrations. These states, typically western and mid-western states where natural ambient chloride concentrations exceed the USEPA's recommended criteria, have based their criteria on statistical analyses of ambient chloride historic data. Examples of state site-specific chloride criteria that equal or exceed 500 mg/L are shown in Exhibit D.

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[14] *See generally* Pre-filed Testimony of J. Huff, R08-9(C) (Ill.Pol.Control.Bd. Feb. 2, 2011); Transcript of March 9, 2011 Hearing, R08-9(C) (Ill.Pol.Control.Bd. Mar. 18, 2011).

[15] Comments of United States Environmental Protection Agency submitted by Susan Hedman, Regional Director regarding CITGO Petroleum Corporation and PDV Midwest Refining, L.L.C. v. IEPA, PCB 12-94, R08-9(D) at 2 (Ill.Pol.Control.Bd. Mar. 19, 2013).

All of these waters with USEPA-approved chloride criteria are designated as protective of aquatic life uses, demonstrating that viable, indigenous aquatic ecosystems can exist in "fresh" surface waters with chloride concentrations that exceed Illinois EPA's proposed criterion of 500 mg/L, sometimes at concentrations that are orders of magnitude greater.

The chloride criteria established by other states to recognize existing chloride concentrations are relevant to the LDPR because it is documented in the UAA that the existing aquatic life use in the river is being achieved at the ambient chloride concentrations.[16] I recognize that in these states the elevated chloride concentrations in the subject streams are due to natural conditions and that the elevated concentrations in the UDIP are due to human activity. However, what these other states' chloride standards demonstrate is that aquatic life uses consistent with the CWA Section 101(a) requirements are achievable at chloride concentrations that occur in the UDIP. Therefore, chloride criteria for the UDIP ALU that are based on the existing ambient water quality are scientifically justified and protective of the aquatic ecosystem.

The Board could choose to adopt seasonal chloride criteria for the UDIP ALU to better represent that historic record that shows elevated concentrations only between November and April. Alternatively, it could establish an annual average chloride standard such as Texas, Oklahoma, and Wyoming use to address the variable chloride concentrations that occur throughout the year. Either of these approaches to establishment of segment-specific chloride criteria is scientifically justified and is consistent with the requirements of 40 C.F.R. Part 131.

[16] SOR, Attachment A (hereafter cited as "LDPR UAA").

IV. VARIANCES

The records for Subdocket C and Subdocket D document the high degree of uncertainty that exists with respect to compliance with the possible numeric water quality criteria that will be adopted by the Board for the UDIP ALU. The Board's Subdocket C Second Notice revised the decision to designate the UDIP as General Use aquatic life and proposed a new UDIP ALU, which is consistent with Illinois EPA's original recommendation that the UDIP should not be classified as a General Use water. The UDIP ALU provides the Board with more flexibility to craft numeric water quality criteria that are specific to the physical, chemical, and biological characteristics of the UDIP.

Because the Board has only recently proposed the UDIP ALU, the numeric water quality criteria that will be proposed in Subdocket D have only recently been articulated by Illinois EPA. *See* Illinois EPA Subdocket C Second Notice Comments. However, previous Illinois EPA Subdocket D testimony indicated that it believes that the General Use criteria should be applicable to the UDIP ALU for most water quality constituents, but there were concerns regarding temperature and chloride. Sept. 23, 2013 Tr. The LDPR UAA also indicated that the General Use criteria for DO and copper may also be unachievable in the UDIP and thus would require site-specific criteria. The UDIP has also been placed on the Illinois CWA Section 303(d) list as impaired due to mercury in fish tissue, although there is little water column data for mercury to document that the WQS for this metal has been exceeded.

Because of the limited amount of ambient monitoring data for the UDIP, it is uncertain whether or not the new water quality criteria that will be adopted in Subdocket

D may result in an essentially immediate determination that the UDIP is an impaired surface water pursuant to CWA Section 303(d). The majority of the flow in the UDIP consists of treated wastewater, CSOs (recognizing the TARP has reduced these), and urban runoff from the Greater Chicago Metropolitan Area. Therefore, there is a great potential that if a new/revised water quality criterion is exceeded in the UDIP, upstream sources will be responsible for most or all of the contributions of the pollutants causing the impairment. When a surface water is determined to be impaired under CWA Section 303(d), mixing zones for point source dischargers are not allowed per 35 Ill. Admin. Code § 302.102(b)(9), thus, dischargers such as ExxonMobil, would be required to achieve the relevant water quality criterion end-of-pipe. Depending upon the particular constituent that is causing the impairment, it may or may not be technically feasible or economically reasonable to achieve the numeric criterion in the discharge. Furthermore, if the upstream sources are the principle contributors of the pollutants causing the discharge, it is possible that even if a discharger can achieve the water quality criterion in its effluent, this reduction in pollutants will have no measurable effect on the impaired condition of the surface water.

NPDES permittees discharging to the UDIP, including ExxonMobil, have concerns relating to compliance with new and revised numeric water quality criteria because for one or more constituents in their discharges, the upstream pollutant loadings will determine whether such new criteria will be achieved in the UDIP, as only 10 percent of the flow in the LDPR originates from the Upper Des Plaines River. Sept. 23, 2013 Tr. at 98-99. Relief such as that described in the proposed Clarifications Rule

variance provisions at 40 C.F.R. 131.14[17] is therefore essential to assure that permittees can continue to operate their facilities while they make the necessary efforts to comply with applicable WQBELs. In fact, if upstream sources are controlled sufficiently to result in compliance with the water quality criteria in the UDIP upstream of existing point sources, it is probable that the existing point sources, including the Refinery could install technically feasible and economically reasonable treatment and control technologies that, in combination with authorized mixing zones, would assure compliance with the applicable water quality criteria.

USEPA Region 5 indicated to the MWRD in the June 2012 USEPA Letter that it will allow WQS variances that meet one or more of the 40 C.F.R. § 131.10(g) factors. However, USEPA effectively vacated the existing Illinois variance provisions at Title IX of the Environmental Protection Act ("Act"), 415 ILCS 5/35-38, in its March 15, 2013 letter to Illinois EPA disapproving a variance for CITGO Petroleum Corporation and PDV Midwest Refining, L.L.C. from the total dissolved solids ("TDS") water quality criterion for the Chicago Sanitary and Ship Canal ("CSSC").[18] USEPA stated in its letter to Illinois EPA that WQS variances authorized by the Board must be approved by USEPA and must be justified using one or more of the 40 C.F.R. § 131.10(g) factors. *Id.* at 1. USEPA's disapproval letter stated that the language in 415 ILCS 5/35 that justifies a variance based on "compliance with any rule or regulation, requirement or order of the Board would impose an arbitrary or unreasonable hardship" is not an allowable basis for a variance based on USEPA's interpretation of Part 131. *Id.* USEPA's interpretation of

[17] In the current rules, variances are only mentioned at 40 C.F.R. § 131.13 in a list of "general policies" for water quality standards adopted by states at their discretion.

[18] Mar. 15, 2013 Letter from Susan Hedman, Regional Administrator, Region 5, USEPA to John M. Kim, Illinois EPA, P.C. 1367, R08-9(D) (Ill.Pol.Control.Bd. Mar 19, 2013).

the Federal WQS regulation is that a variance authorized for a single water quality criterion constitutes the temporary removal of the designated use. *Id.* at 1-2. This interpretation requires the applicant for the variance and Illinois EPA to justify any requested variance using one or more of the factors at 40 C.F.R. § 131.10(g). *Id.* at 1. This requirement may be problematic in the case of a surface water segment for which Illinois EPA and the Board have previously stated that none of these factors are applicable, e.g., the UDIP.

There is nothing in the existing Part 131 rules to support USEPA's interpretation that a variance for a single discharger and single pollutant constitutes the removal of an existing or designated use, because from a scientific standpoint, the fact that a surface water body exceeds a numeric water quality criterion does not necessarily equate to not achieving the use that the criterion is intended to protect. This position is consistent with the testimony of Mr. Scott Twait at the public hearing on September 23, 2013:

> Mr. Read: Is it Illinois EPA's understanding that a variance or an adjusted standard can be granted with Clean Water Act Section 303(c) approval that alters the numerical water quality standard and yet protects the existing use?
>
> Mr. Twait: Yes.

Sept. 23, 2013 Tr. at 56.

The national criteria published by USEPA pursuant to CWA Section 304(a) are often overprotective for many surface waters. Some states authorize WQS variances specifically to give a discharger, a group of dischargers, or the state time to develop site-specific or segment-specific numeric water quality criteria. The best examples of this use of variances are variances that are authorized by states for development of site-specific criteria for metals such as copper or zinc, using for example, USEPA's water effects ratio

("WER") procedures. In these cases, the designated aquatic life uses in the subject surface waters are clearly being achieved even though the numeric criteria adopted by the states are being exceeded and must be adjusted to represent site-specific water chemistry. USEPA's Water Quality Standards Handbook discusses the development and importance of site-specific criteria for water quality constituents, but many states do not develop such criteria unless the CWA Section 304(a) criteria are shown to be too restrictive.[19] The water quality standards variance procedures recognized by 40 C.F.R. § 131.13 and proposed 40 C.F.R. § 131.14 are essential regulatory policy to allow such standards to be developed and adopted without causing undue economic effects on point and nonpoint dischargers that cannot meet overly protective water quality criteria.

Because USEPA has essentially vacated the existing Illinois variance rule, it is essential that the Board consider how to authorize variances that comply with the proposed 40 C.F.R. § 131.14, which must include justification using one or more of the 40 C.F.R. § 131.10(g) factors. USEPA has provided its interpretation on how such variances can be authorized in the Clarifications Rule.

ExxonMobil has previously stated its disagreement with the Illinois EPA and Board decisions that none of the 40 C.F.R. 131.10(g) factors are applicable to the aquatic life use designation for the UDIP in comments filed in Subdocket C. I believe that ExxonMobil's position on this issue is correct — a water body whose low stream flows consist of greater than 90 percent treated wastewater and whose high flows are dominated by urban runoff from one of the largest metropolitan areas of the U.S., Sept. 23, 2013 Tr. at 98-99, and which is used as a navigation waterway and has multiple pools and dams, meets at least three of the six factors at 40 C.F.R. § 131.10(g). I believe that the Board's

[19] Water Quality Standards Handbook: Second Edition, USEPA, EPA-823-B-12-002 (Mar. 2012).

reversal of its earlier position on the General Use designation and its proposal of the UDIP ALU is an implicit recognition of these factors, even if the Board takes the position that none of them apply to the use designation.

I believe that in the context of a temporary variance from an adopted numeric water quality criterion for one or more specific constituents, such as chloride, the Board should reassess the applicability of 40 C.F.R. § 131.10(g) factors to the UDIP and in the proposed rules clarify that a previous finding that one or more of these factors don't apply for purposes of designating a use is not a finding that they are not applicable for the purposes of authorizing a WQS variance. It is essential that the Board assure that the Subdocket D rules provide a usable set of procedures for a discharger to obtain a WQS variance from the final numeric aquatic life criteria for the UDIP ALU because of the considerable uncertainty in whether or not all criteria can be achieved in this stream that consists primarily of treated effluent from upstream sources.

V. COMPLIANCE SCHEDULES

The existing Board rules at 35 Ill. Adm. Code § 309.148 allow Illinois EPA to authorize compliance schedules in NPDES permits when a discharger is determined to have a reasonable potential to cause or contribute to an exceedance of a water quality standard. USEPA's proposed Clarifications Rule emphasizes the justification and importance of compliance schedules for NPDES permittees to achieve new WQBELs that are added to their permits and has proposed a new provision at 40 C.F.R.§ 131.15 to clarify the requirements for such schedules. 78 Fed. Reg. 54536-54537. The Clarifications Rule has also indicated that compliance schedules of up to the 5-year life of an NPDES permit are approvable if justified by site-specific conditions.

It is possible that some dischargers, including the Refinery, may have to request compliance schedules to research, evaluate (including pilot studies), design and install control equipment and/or develop and implement practices in order to achieve WQBELs that result from adoption of numeric water quality criteria for the UDIP ALU. The Board should assure that its adoption of numeric criteria in Subdocket D do not in any way affect the ability of dischargers to obtain compliance schedules as authorized by 35 Ill. Adm. Code § 309.148 and proposed 40 C.F.R. 131.15.

VI. MULTI-DISCHARGER/WATER BODY VARIANCES

The proposed Clarifications Rule clarifies that states may issue multi-discharger, or even statewide, variances from water quality criteria when they are justified by existing conditions. In the preamble to the proposed rule USEPA states that:

> Similarly, if a state or tribe believes that the designated use and criterion is unattainable as it applies to multiple permittees because they are all experiencing challenges in meeting their WQBELs for the same pollutant for the same reason, regardless of whether or not they are located on the same water body, a state or tribe may streamline its variance process by granting one variance that applies to all these dischargers (i.e., a multiple discharger variance) so long as the variance is consistent with the CWA and implementing regulations.

78 Fed. Reg. 54532.

The Clarifications Rule also discusses the use of waterbody variances that have similar objectives that include, as stated by USEPA:

> Where a state or tribe can demonstrate that the designated use and criterion currently in place for a specific pollutant is not attainable immediately (or for a limited period of time) for an entire water body, the state or tribe may adopt a waterbody variance as an alternative to a designated use change for the water body so long as the variance is consistent with the CWA and implementing regulation. In such an instance, the variance applies to the water body itself, rather than to any specific source or sources. A waterbody variance provides time for the state or tribe to work with both point and nonpoint sources to determine and implement adaptive management approaches on a

> waterbody/watershed scale to achieve pollutant reductions and strive toward attaining the water body's designated use and associated criteria.

78 Fed. Reg. 54532.

Substantial evidence is presented in Subdocket C that the numeric water quality criteria proposed for the UDIP ALU for temperature, chlorides, and perhaps other constituents such as copper are currently exceeded and are attributable to existing wastewater and runoff loadings both in and above the river segment. The consequences of adopting such criteria that are currently exceeded in the river are that the segment becomes an impaired surface water under CWA Section 303(d), mixing zones for the constituents causing the impairment are not available, and every NPDES permitted discharge must achieve the numeric criteria end-of-pipe. Achieving water quality criteria end-of-pipe may be technically infeasible or economically unreasonable for some constituents and/or dischargers and, equally important, would not have any measurable effect on the surface water quality if the sources of those constituents are principally non-point sources or are dominant point sources with extended compliance schedules. Theoretically, this problem could be addressed in a TMDL for the water body and constituent, but from a practical standpoint, TMDLs take many years to complete and implement when non-point sources are significant contributors of the constituents of concern.

Subdocket D testimony from Illinois EPA's expert, Mr. Scott Twait, acknowledged that major upstream sources are the dominant causes of existing thermal and chemical conditions in the UDIP that may exceed the proposed Subdocket D criteria. *See* Sept. 23, 2013 Tr. He testified to the need for addressing the dominant upstream point and nonpoint discharges before establishing WQBELs for downstream dischargers

in the interest of both equity and achieving water quality that complies with the criteria expeditiously. *Id.* at 41. Mr. Twait referred to a concept of "cascading" implementation of WQBELs (upstream to downstream) over time although he was uncertain as to the method that Illinois EPA would use to achieve this objective. *Id.* at 41-47.

My experience with the CWA, USEPA's WQS and NPDES permitting rules, and the implementation of water quality standards in a number of states suggests that although Mr. Twait's conceptual cascading implementation of water quality standards in permits is logical and appropriate, the only available regulatory mechanisms for accomplishing this are the Part 131 variance procedures and the CWA Section 304 TMDL program. Of these two approaches, the multi-discharger/waterbody variance procedure is the more efficient and expeditious method and would not be nearly as disruptive and time-consuming as the TMDL process for a complex water body such as the UDIP. The multi-discharger/waterbody variance approach would allow Illinois EPA to include BMP requirements in NPDES permits as appropriate to the particular discharge that would, as USEPA requires, result in continuous progress toward achieving the WQS that are exceeded under existing conditions.

The Board should adopt regulations that allow multi-discharger/waterbody water quality variances for constituents including, as a minimum, temperature, mercury and chloride, for the UDIP ALU. These variance procedures should be adopted either before the Subdocket D criteria are adopted or as a component of the Subdocket D criteria.

I want to briefly describe the need for such variances for the UDIP ALU using mercury and chloride as examples. I will discuss the temperature issues in the later sections of this testimony.

A. Mercury

Illinois currently lists the UDIP ALU as impaired by mercury based on analysis of fish tissue samples.[20] However, there are no water column data for mercury in the R08-09 docket documenting that the 12 ng/L General Use criterion for mercury is exceeded in the UDIP. If the Board adopts the 12 ng/L mercury water column mercury concentration as the criterion for the UDIP ALU, there will be a difficult to resolve conflict between the fish tissue-based Section 303(d) listing and any water column mercury data that show compliance with the 12 ng/L criterion. However, under current USEPA policy, if a water body is designated as impaired for a constituent, all renewed NPDES permits should be based on an approved TMDL that will assure that the impairment will be removed. States have made different interpretations, and USEPA rules are ambiguous, on the issue of what are allowable interim NPDES permit limits for a constituent causing an impairment during the period from the designation of impairment until the final TMDL is adopted and implemented. Many states establish permit limits at existing effluent quality for constituents subject to TMDLs for the interim period before final TMDL implementation. Some states have interpreted 40 C.F.R. § 122.44 to require them to issue NPDES permits with WQBELs that are set equal to the applicable water quality criterion (i.e., no mixing zone allowances) the first time the NPDES permit is renewed following the Section 303(d) listing, which typically places point source dischargers in untenable positions if major upstream sources or non-point sources are the principal cause of the impairment.

[20] Illinois Integrated Water Quality Report and Section 303(d) List - 2012, available at http://www.epa.state.il.us/water/tmdl/303d-list.html (last accessed Nov. 7, 2013).

Mercury is the most prominent National example of the situation where impairment of surface waters that is primarily caused by point source dischargers is almost non-existent. Beginning with the Savannah River mercury TMDL, which found that 99 percent of the river loading was due to atmospheric deposition of mercury, states and USEPA have consistently documented that with the exception of very few watersheds, impairment of water quality by mercury is caused by atmospheric deposition and not by point sources.[21] In 2001 USEPA issued a publication entitled *Mercury Maps* that demonstrates that only control of the atmospheric deposition of mercury would reduce fish tissue concentrations of mercury to acceptable levels in the vast majority of U.S. watersheds.[22]

In Illinois rulemaking R06-25, addressing mercury control of emissions from large combustion sources, Ms. Marcia Willhite, Chief of the Illinois EPA Bureau of Water, testified as follows:

> It was determined that the total of all wastewater dischargers to receiving streams and rivers in Illinois provide an average annual loading of 45 pounds of mercury per year. This, in comparison, was only 0.64% of the total annual emissions (2002) of mercury (7022 pounds per year), from coal-fired power plants in Illinois.[23]

Ms. Willhite further testified that other states have realized large reductions in mercury levels in fish as a result of addressing mercury emissions:

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[21] TMDL for Total Mercury in the Middle/Lower Savannah River, GA, USEPA (Feb. 28, 2001), available at http://www.epa.gov/owow/tmdl/examples/mercury/ga_savfinal.pdf (last accessed Nov. 7, 2013).

[22] Mercury Maps, A Quantitative Spatial Link Between Air Deposition and Fish Tissue, USEPA, EPA-823-R01-009 (Sept. 2001), available at http://water.epa.gov/scitech/datait/models/maps/upload/2006_12_27_models_maps_report.pdf (last accessed Nov. 7, 2013).

[23] Testimony of Marcia Willhite, *In the matter of: Proposed New 35 Ill. Adm. Code 225 Control of Emissions from Large Combustion Sources (Mercury)*, R06-25 at 3 (Apr. 27, 2006).

> From its experience over the last decade, Florida has concluded that reduction in local atmospheric emissions of mercury has led to >75 percent declines in the tissues of fish and wildlife in less than 15 years since peak deposition.

Id. at 4.

The consequences of this situation are that even if point source dischargers all achieved the applicable mercury water quality criterion at the end-of-pipe on a river that is impaired by mercury, they would have no measurable effect on the impairment. Conversely, if the atmospheric deposition of mercury could be controlled, state water quality criteria for mercury could be achieved if point sources were controlled by BMPs without the necessity of unproven and economically infeasible end-of-pipe treatment. Following promulgation of 35 Ill. Admin Code Part 225 regarding mercury air pollution controls, Illinois EPA has not ascertained whether or not fish tissue levels have attenuated in Illinois as is the case in Florida.

States with significant numbers of mercury-impaired waters, particularly those that are subject to the Great Lakes Water Quality Guidance, 40 C.F.R. Part 132, responded to this finding by adopting either statewide or water body variances for mercury (and in one case a statewide TMDL) to avoid assigning mercury WQBELs to NPDES permittees that are technically infeasible and economically unreasonable. USEPA has approved these state approaches that require point sources to adopt BMPs for mercury control but do not impose infeasible numeric limits in NPDES permits. Exhibit E lists examples of states that have adopted mercury water quality criterion variances.

The necessity of a multi-discharger/waterbody variance for mercury for the UDIP ALU is apparent from the existing situation (the 303(d) listing), and I urge the Board to adopt a provision allowing such a variance as a part of the Subdocket D rulemaking.

B. Chloride

The record contains substantial comments and data, including Pre-First Notice comments filed by ExxonMobil[24] and a Response to Pre-First Notice Comments filed by ExxonMobil,[25] which address the proposed numeric water quality standard of 500 mg/L for the UDIP ALU. As discussed earlier in this testimony, the Board and Illinois EPA have the necessary historic ambient data to craft appropriate and protective site-specific chloride criteria for the UDIP ALU. 40 C.F.R. Part 131 and USEPA's proposed Clarifications Rule clearly allow numeric criteria that differ from USEPA's Section 304 water quality criteria, which are published only as guidance. I recommend that the Board adopt site-specific chloride criteria for the UDIP ALU to recognize the existing seasonal chloride concentrations, which are protective of the existing aquatic life use that is attained in the river. However, should the Board choose to adopt the proposed chloride criterion of 500 mg/L for the UDIP ALU, or any other chloride criterion that cannot be achieved by the existing water quality in the UDIP, it should simultaneously adopt a provision at Subdocket D to establish a multi-discharger variance procedure for dischargers of chloride to the UDIP ALU.

VII. TEMPERATURE CRITERIA AND IMPLEMENTATION

The existing water temperature standards for the UDIP and LDIP are shown on Figure 2 of Exhibit B. They are, from upstream to downstream, as follows:

1. The indigenous aquatic life standard with a maximum temperature of 93° Fahrenheit (F), which can be exceeded 5 percent of the time, but can never exceed 100° F. 35 Ill. Admin. Code § 302.408. This standard currently applies to the UDIP.

[24] Pre-First Notice Comments of ExxonMobil Oil Corporation on the Proposed Aquatic Life Use Designation of the Lower Des Plaines River, R08-9 (C) (Ill.Pol.Control.Bd. Mar. 5, 2012).

[25] Response to Pre-First Notice Comments, R08-9 (C) (Ill.Pol.Control.Bd. Mar. 19, 2012).

2. The adjusted temperature standard AS 96-10 imposes a temperature standard that is variable month-to-month and can be exceeded no more than 2 percent of the time in a 12-month period, and must never exceed 93° F.[26] The determination of compliance with AS 96-10 is at the I-55 Bridge and applies to the LDIP.

3. The General Use temperature standards, 35 Ill. Adm. Code § 302.211, apply in the Illinois River, downstream of the confluence of the LDPR and the Kankakee River.

A. Background

The reason for these multiple temperature standards is that Midwest Generation operates three coal-fired steam electric power generation stations (Joliet 9, Joliet 29, and Will County) that use once-through cooling water systems. The Will County station discharges into the CSSC near mile marker 296.[27] The location of the two Joliet generating stations, and the ExxonMobil Refinery, are shown on Figure 1 of Exhibit B and the temperature standards are shown on Figure 2.

Both of these Midwest Generation thermal discharges flow into the UDIP approximately one-half mile downstream of the Brandon Road Lock and Dam and approximately seven miles upstream of the I-55 Bridge. The cooling water flows through these two systems average 315.5 million gallons per day ("MGD") and 1,073 MGD for Joliet 9 and Joliet 29, respectively. Thus, the average cooling water flow entering the UDIP is 1,388 MGD. The seven day, 1 in 10 year low flow ("7Q10") for the river in the UDIP is 971 MGD (1,503 cubic feet per second ("cfs")), so the combined average once through cooling water flows for Joliet 9 and Joliet 29 are approximately 43 percent

[26] *In the Matter of: Petition of Commonwealth Edison Company for an Adjusted Standard from 35 Ill. Adm. Code 302.211(d) and (e)*, AS 96-10 (Ill.Pol.Control.Bd. Mar. 16, 2000).

[27] The Fisk and Crawford generating stations, located further upstream, were shut down in 2012.

greater than the upstream river flow. This means that under low flow conditions, the two power stations are actually recirculating a portion of their effluent to the UDIP back into their intakes, thus increasing the temperature of water that has already been heated by the system. During the drought in the summer of 2012, the stream flow in the UDIP dropped below 646 MGD (1,000 cubic feet per second),[28] and thus this recirculation effect was enhanced.

The Joliet 29 station has supplemental ("helper") cooling towers that can be used to reduce discharge temperatures when downstream temperatures approach the applicable WQS. Midwest Generation may also curtail power generation, if necessary, to lower the effluent and thus river temperatures.

The thermal load associated with the cooling water discharges from these two stations drives the temperature in the river downstream until the LDPR-Illinois River confluence is reached, approximately twelve miles downstream of the discharges from the stations. During every month of the year, the river temperature in the lower seven miles of the UDIP and the entire five mile stretch of the LDIP are a function of the thermal discharges from the two power stations. Historically, the river temperatures measured at the I-55 Bridge typically are close to the existing applicable WQS during the warmer months and can approach the standards during spring and fall when river flows are low and air temperatures are higher than normal.

Even with the existing temperature standards for the UDIP (35 IAC 302.408) and LDIP (AS 96-10), which are essentially tailored to the existing thermal discharges from the two power stations, Midwest Generation has needed additional relief in the form of provisional variances from the standards due to low flows in the river and extreme hot

[28] Provisional Variance – Water, IEPA 13-14 (Aug. 3, 2012).

weather in 2011 and 2012, coupled with high customer demand for electricity.[29] In these instances, Midwest Generation sought and received authorization from Illinois EPA to exceed 93° F maximum temperature by up to 3° F and to exceed the allotted number of excursion hours per year (2%) that the 93° F maximum temperature could be exceeded in the LDIP reach downstream of I-55. The provisional variances do not address other downstream UDIP or LDIP dischargers.

B. Refinery Discharges

The Refinery discharges treated process wastewater, cooling water, other utility water, and storm water to the Des Plaines River under the authorization of NPDES Permit No. IL 0002861. The Joliet Refinery has ten permitted outfalls, seven stormwater, plus three that are combined into a 48-inch diameter pipe and discharged into the Des Plaines River through a manmade open channel. Outfall 001 is the treated process effluent, Outfall 002 is noncontact cooling water, boiler blowdown and miscellaneous utility wastewater, and Outfall 003 is primarily storm water run-off. The discharge channel enters the UDIP approximately 1,600 feet upstream of the I-55 Bridge, which is where the LDIP segment begins.

The permitted average discharge from Outfall 001 is 4.32 MGD and 10.476 MGD from Outfall 002. Storm water flows from Outfall 003 are intermittent. Thus, the combined effluent flow that enters the UDIP is approximately 14.8 MGD. This flow is approximately 1.5 percent of the 7Q10 flow in the UDIP. Because the Refinery effluent flow is a small fraction of the river flow, the water quality impacts of the effluent on the river are small, and for many effluent constituents, undetectable.

[29] Provisional Variance – Water, IEPA 12- 02 (July 27, 2011); Provisional Variance – Water, IEPA 13-3 (July 3, 2012); Provisional Variance – Water, IEPA 13-6 (July 12, 2012); Provisional Variance – Water, IEPA 13-10 (July 20, 2012); Provisional Variance – Water, IEPA 13-14 (Aug. 3, 2012).

The once-through cooling water used in the Refinery is pumped from the UDIP at a location approximately 1,200 feet upstream of the discharge point. Thus, the Refinery intake water temperature is controlled by the thermal discharges of the two upstream power stations.

Both the once-through cooling water/boiler water (Outfall 002) and the treated process wastewater effluent add heat to the intake water. Storm water is discharged at approximately the ambient air temperatures. The temperature in Outfall 002, which is predominantly once-through cooling water, varies seasonally depending upon the temperature of the intake water. The treated process effluent temperature is less variable because the heat sources within the refinery processes are relatively constant and the temperature in the biological treatment system must be maintained consistently above 70° F to achieve proper treatment performance (e.g., nitrification to treat ammonia). Because the flow at Outfall 002 constitutes about 71 percent of the total Refinery discharge, the temperature of the once-through cooling water primarily determines the effluent temperature.

The Refinery once-through cooling system and process effluent increase the thermal loading of the intake water by a maximum of 104 million British Thermal Units per hour ("MBTU/hr"). In comparison, the two Midwest Generation power stations add about 7,000 MBTU/hr of heat load to the river when the supplemental cooling towers at Joliet 29 are not being used.[30]

The Joliet Refinery has a requirement in its NPDES permit to conduct modeling of thermal impacts of the Refinery effluent. This modeling is to be finalized for submittal in 2014. Preliminary modeling results indicate a maximum temperature rise above the

[30] Provisional Variance – Water, IEPA 13-3 (July 3, 2012).

intake water temperature at the I-55 Bridge of 0.4° F in the winter and 0.2° F in the summer. Thus, in the absence of elevated intake temperatures, the Refinery is able to use the Illinois mixing provisions of 35 Ill. Admin. Code § 302.102 to demonstrate compliance with existing UDIP and LDIP WQS. However, as noted earlier in the background section, there has been a history of thermal excursion events. To date, Illinois EPA has provided no indication to the Refinery that thermal mixing status will change.

However, because Illinois EPA is proposing the adoption of a new temperature standard for the UDIP ALU, ExxonMobil is justifiably concerned that it could have its thermal mixing disallowed due to upstream thermal loadings to the river, and be given permit limits for temperature that will be infeasible to achieve.

C. Proposed Temperature Standards

The Board indicated in both its Subdocket C First Notice and Subdocket C Second Notice that the UDIP ALU temperature standards would likely have to be adjusted to acknowledge the existing conditions.[31] In 2007 Illinois EPA proposed revised temperature standards for the UDIP at 35 Ill. Adm. Code § 302.408 which would establish a maximum temperature of 88.7° F and variable average temperatures for 17 separate periods during the year. This proposed standard was withdrawn by Illinois EPA in a motion to the Board on May 24, 2013 in response to the Board's Subdocket C First Notice proposal to classify the aquatic life use for the UDIP as General Use waters. Subdocket D Motion to Amend. Following the Board's Subdocket C Second Notice, which proposed designating the UDIP as UDIP ALU, Illinois EPA proposed reinstating

[31] Subdocket C First Notice at 43; Subdocket C Second Notice at 221.

the thermal standards from its 2007 proposal, and incorporating revisions (more stringent for most period averages) from its May 24, 2013 Subdocket D Motion to Amend and Subdocket C Comments. Illinois EPA Subdocket C Second Notice Comments at 15-17.

As illustrated in Exhibit B Figure 3, Illinois EPA's current proposal would apply temperature standards for the UDIP that would be substantially more restrictive than the General Use standards that apply downstream of I-55. In addition, in spite of two large power stations, the current proposal for the UDIP is substantially more stringent (Daily Maximum and summertime Period Averages) than the proposal for the upstream Brandon Pool. I believe that Illinois EPA's basis for this proposed standard, which is supposed to represent the ambient river temperature in the absence of point source thermal loadings, is not scientifically justified. I will discuss the issue of setting the appropriate temperature standard later in my testimony.

D. Options for Addressing Thermal Loadings in the UDIP

The Refinery's concern with more stringent thermal standards for the UDIP ALU has been effectively articulated in the testimony of Scott Twait of Illinois EPA. *See* Sept. 23, 3013 Tr. In his testimony, Mr. Twait acknowledges that thermal sources downstream of major upstream thermal sources should not be expected to comply immediately with revised temperature standards for the UDIP. He suggests some form of "cascading" implementation of the temperature standards, wherein the major upstream thermal sources would be addressed to assure compliance with the water quality standards so that downstream thermal sources would not have to comply with temperature standards when the water upstream from them does not comply with those standards.

As I see the current situation regarding establishing temperature standards for the UDIP ALU, the Board has several options:

1. The Board could adopt the existing UDIP temperature standard (currently 35 Ill. Admin. Code § 302.408), which is less restrictive than the General Use standard.

2. The Board could adopt the General Use temperature standard, which would be compatible with the current LDIP standard. This action would require some form of relief such as the cascading implementation of the standard or inclusion of a multi-discharger variance provision in the rule to prevent undue hardship to existing thermal sources that are downstream of thermal sources that dominate the river temperature regime.

3. The Board could adopt another set of UDIP ALU-specific temperature standards. This could include the standards proposed by Illinois EPA in Subdocket C Second Notice Comments or a scientifically supported alternative. This action would also require some form of relief such as the cascading implementation of the standard or inclusion of a multi-discharger variance provision in the rule.

The Board could justify adopting the existing temperature standards on the basis that the existing indigenous aquatic life biota is adequately protected. Adoption of the existing temperature standards does not mean that UDIP ALU will permanently be subject to elevated temperatures that exceed the downstream General Use standards. The CWA requires a triennial review of the WQS and Illinois EPA, and the Board will have a continuing opportunity to revise the temperature standards in the future.

In the alternative, if the Board adopts the General Use temperature standards for the UDIP ALU, then the evidence in the Subdocket C and Subdocket D records clearly shows that the standards will not be met on the date of adoption. The advantage of this option is that Illinois EPA can require the power stations on the UDIP to perform the demonstration required by the General Use standards at 35 Ill. Adm. Code § 302.211(f) which requires that:

> The owner or operator of a source of heated effluent which discharges 150 megawatts (0.5 billion British thermal units per hour) or more shall demonstrate in a hearing before this Pollution Control Board (Board) not less than 5 nor more than 6 years after the effective date of these regulations or, in the case of new sources, after the commencement of operation, that discharges from that source have not caused and cannot be reasonably expected to cause significant ecological damage to the receiving waters. If such proof is not made to the satisfaction of the Board appropriate corrective measures shall be ordered to be taken within a reasonable time as determined by the Board.

Based on this demonstration, Illinois EPA and the Board can determine if revised temperature standards for the UDIP ALU are necessary which would require "corrective measures" by the power stations or, in the alternative if the existing UDIP temperature standards are sufficiently protective. If revised temperature standards are appropriate, they can be adopted in a future triennial review.

In the interim, this will place all thermal dischargers on the UDIP in jeopardy of receiving temperature limitations in NPDES permits in the next permit cycle that cannot be met immediately. In the case of thermal dischargers downstream of the Joliet power stations, such as the Refinery, if temperature limits incorporating General Use temperature standards were placed in their renewed permits, assuming that they could not be granted mixing zones because the river would be impaired for temperature, they would be faced with installing sufficient cooling to achieve the WQS end-of-pipe at great expense.

Illinois EPA's expert, Mr. Twait, has testified in Subdocket D that the agency would address this issue with some type of cascading implementation of the temperature standards that addresses the major thermal sources first. However, Mr. Twait acknowledges that this approach raises some concerns and that Illinois EPA has not yet formulated a policy to accomplish this. Therefore, I'm concerned that the existing

regulatory authority to accomplish this implementation approach is unclear. The USEPA could determine that this approach is not authorized by Federal regulations, as it has with Illinois' existing water quality standards variance procedures. A strict interpretation of the NPDES rules at 40 C.F.R. § 122.44 suggests that new WQBELs must be placed in permits upon renewal if the source has a reasonable potential to cause or contribute to the exceedance of a water quality standard. Although compliance schedules are available for such WQBELs, these would be inadequate if the major upstream sources could not comply within the typical 3 to 5 year schedule allowed, which is probable in the case of the two Joliet power stations.

Because of this, if the Board elects to adopt UDIP ALU temperature standards that are either equal to the General Use standards, or more restrictive standards such as those suggested by Illinois EPA in Subdocket C Second Notice Comments, then it should also adopt provisions allowing multi-discharger or waterbody variances for temperature as discussed earlier in this testimony. Single discharger variances are another alternative, but they would be cumbersome and unnecessary given that multiple sources, including the power stations, would require a variance if the new UDIP ALU temperature standards are more restrictive than the existing standards.

E. CWA Section 316(a) Variance

Another alternative approach for addressing thermal loads in the UDIP if more restrictive temperature standards than the existing standards are adopted is to use the CWA Section 316(a) thermal variance procedures to allow sources to demonstrate that existing thermal loadings are protective of a "balanced, indigenous aquatic population" in the UDIP. The Board is currently in the process of promulgating procedural rules to

accommodate CWA Section 316(a).[32] Midwest Generation has developed a very large amount of biological data for the UDIP over a number of years. These data can serve as the basis for a Section 316(a) variance that would allow maintenance of a temperature regime that is protective of the existing, indigenous aquatic life population. If the Section 316(a) approach is adopted by the Board, this would not preclude the need for interim relief through the use of multi-discharger/waterbody variances until the Section 316(a) process is completed. The proposed rule should include a period of interim relief (or authorize a site-specific variance) to give affected dischargers the time required to obtain CWA Section 316(a) variances.

F. Basis for Temperature Criteria

The proposed summer UDIP temperature standards in the 2007 Illinois EPA proposal relied on a report by Yoder and Rankin that used a temperature "model" based on thermal effects data for freshwater fish to calculate average and maximum standards.[33] The Thermal Report provided temperature standard recommendations for three classes of resident aquatic species ("RAS") reflecting fish that may inhabit a "modified use" water, which they assume is representative of the LDPR segments. These classes are: (1) modified use RAS 1; (2) modified use RAS 2; and (3) secondary contact/indigenous aquatic life. For each class of RAS, the Thermal Report provides temperature criteria for four proportions of the species: 100, 90, 75 and 50 percent. Table 3 in the Thermal

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[32] *See In the Matter of: Procedural Rules for Alternative Thermal Effluent Limitations Under Section 316(a) of the Clean Water Act: Proposed New 35 Ill. Adm. Code Part 106, Subpart K and Amended Section 304.141(c)*, R13-20 (Ill.Pol.Control.Bd.).

[33] SOR at 80-87; SOR, Attachment GG (Temperature Criteria Options for the Lower Des Plaines River, Chris O. Yoder and Edward T. Rankin, Center for Applied Bioassessment and Biocriteria (Oct. 11, 2005)) as revised by SOR, Attachment HH (Letter from Chris O. Yoder to Toby Frevert) (Attachment GG and Attachment HH collectively cited as "Thermal Report").

Report was used to develop revisions to Illinois EPA's proposed UDIP summer temperature standards.

The temperature standards recommendations used by Illinois EPA as the basis for the proposed summer criteria are described by Yoder and Rankin as the "survival (long term)" and "survival short term" maximum temperatures. SOR at 84-86. Illinois EPA proposed to use the "period average" and "daily maximum" temperatures for modified use RAS 2 at the 100 percent proportion of species from Table 3 in the Thermal Report as the summer UDIP temperature criteria.

Illinois EPA's proposal uses a constant daily maximum temperature for the entire year and 17 period average temperature standards to represent seasonal variation. The period average temperatures for 13 "non-summer" periods were calculated using the least restrictive of the 75th percentile from data collected from MWRD effluent and the 90th percentile from data collected from the Route 83 station on the Cal Sag Channel. The Cal-Sag Channel Route 83 station was selected because it was not directly influenced by thermal sources. Subdocket D Motion to Amend at 8.

Although Illinois EPA had a comprehensive study and long-term monitoring records on which it based its proposed temperature criteria for the UDIP, there are several assumptions that it made that underlie the proposed criteria in the SOR. These assumptions include:

1. The modified RAS 2 species assemblage that consists of 27 species was used as the basis for the summer daily and period maximum temperatures. Note that the modified RAS 1 assemblage, which has one fewer fish species, gives the same temperatures.

2. The 100 percent proportion of RAS temperature standard was specified.

3. MWRD effluent and the Cal-Sag Channel Route 83 station is representative of the non-summer temperatures in the UDIP in the absence of the existing thermal loadings.

The first assumption, that the RAS 2 fish species assemblage is consistent with the modified ALU in the UDIP makes a substantial difference in the summer period average and daily maximum temperatures. If Illinois EPA had chosen to use the secondary contact/indigenous species category in Yoder and Rankin's Table 3, which has 9 RAS in the data base, the daily maximum would be 1.3° F greater than the proposed value (90.3° F vs. 88.7° F) and the summer period average would be 1.6° F greater. Given that neither Yoder and Rankin in their Thermal Report nor Illinois EPA in its SOR compared the RAS 2 species list with the fish species actually present in the UDIP, the assumption that RAS 2 is more representative than the secondary contact/indigenous species class is unproven and may not be representative of the attainable UDIP ALU.

An equally important assumption is whether to use the 100 percent proportion of the RAS as the basis for the selected summer temperature criteria or to use the 90 percent proportion. This decision has about the same amount of result in terms of temperature increase as using the secondary contact/indigenous species class to select the summer temperature criteria. The 90 percent RAS 2 daily maximum temperature criterion is 90.1° F compared to the 88.7° F at 100 percent. There is a similar difference for the summer period average temperature. I would ask the Board to note that USEPA's guidance for developing water quality criteria for toxic chemicals uses a 95 percent protection level on the basis that:

> Because aquatic ecosystems can tolerate some stress and occasional adverse effects, protection of all species at all times is not deemed necessary.[34]

Illinois EPA's proposed rule does allow exceedance of the daily maximum temperature limit 2 percent of the time in a twelve month period ending with any month, so it addresses this issue to some extent. However, the selection of a RAS consisting of 27 species was arbitrary as stated in the SOR: "...Des Plaines River between the Brandon Road Lock and Dam and the I-55 Bridge has incrementally more diverse aquatic life and higher quality habitat than the rest of the CAWS and Lower Des Plaines River." SOR at 83. It could just as justifiably been based on the secondary contact/indigenous species class (9 species) or the 90 percent protection level of RAS 2 (24 species). I recommend that the Board revisit this assumption of the appropriate aquatic life protection use objective.

With respect to the non-summer periods, the Board should require additional justification for use of temperature data from MWRD and the Cal-Sag Channel Route 83 station. Specifically, the physical and hydrologic conditions of any upstream station that is unimpacted by local thermal sources should be comparable to corresponding conditions in the UDIP, which is an impounded pool. Temperature regimes in impounded surface waters are strongly influenced by the physical and hydrologic characteristics of the impoundment and natural heating and cooling are substantially different from freely flowing rivers. Establishing temperature criteria for an impounded

[34] Guidelines for Deriving Numerical National Water Quality Criteria for the Protection of Aquatic Organisms and their Uses, Office of Research and Development, USEPA, PB85-227049 (Jan. 1985), available at http://water.epa.gov/scitech/swguidance/standards/criteria/current/upload/2009_01_13_criteria_85guidelines.pdf (last accessed Nov. 8, 2013).

surface water using data from a river site with higher stream velocities is not likely to result in representative temperature criteria for the impoundment.

The selection of the 75th percentile/90th percentile as the basis for a maximum period average temperature is also too conservative as a limit. USEPA's statistical basis for maximum monthly average permit limits is the 95th percentile.[35] The 95th percentile assures that only one month out of every 20 months has a 50 percent probability of exceeding a limit strictly by chance. In contrast, basing temperature maximum monthly (period) average limits on a 75th percentile of an ambient temperature distribution means that one month (period) out of every four has a 50 percent probability of exceeding the limit.

I recommend that when the Board adopts temperature criteria for the UDIP ALU in Subdocket D that it considers each of the following factors:

1. The temperature standards should be based on protecting aquatic life that is representative of the existing uses of the UDIP. Selection of a list of fish species on an arbitrary assumption is not a scientific basis for setting a standard.

2. The temperature standards do not have to protect 100 percent of the species 100 percent of the time, as USEPA has recognized in guidelines for development of numeric water quality criteria.

3. It is not appropriate to base a maximum period temperature average (approximately equivalent to a maximum monthly average) on the 75th percentile (or 90th percentile) of ambient temperature data. This assumption results in period temperature averages that will be exceeded once in every four periods (or 10 periods for the 90th percentile) due to natural variation. The 95th percentile, which USEPA recommends for water quality criteria implementation, is more appropriate.

[35] Appendix E, Technical Support Document for Water Quality-based Toxics Control, USEPA, EPA/505/2-90-001 (Mar. 1991), available at http://water.epa.gov/scitech/datait/models/upload/2002_10_25_npdes_pubs_owm0264.pdf (last accessed Nov. 8, 2013).

4. The Cold Shock provisions, as proposed by Illinois EPA in the Subdocket D Motion to Amend discussed at length at the July 29, 2013 public hearing should be removed from the proposed rule. The Illinois EPA was unable to substantiate that the Cold Shock phenomenon has ever occurred in Illinois. If not completely removed, the rule should include a Cold Shock threshold below which the provisions do not apply. I would suggest a threshold of 0.5 billion British thermal units per hour (150 megawatts), which is the existing threshold in the General Use WQS for conducting thermal demonstrations (*see* 35 Ill. Admin. Code § 302.211(f)).

VIII. CONCLUDING STATEMENT

I appreciate the opportunity to offer this testimony to the Board on the very important decisions it will make in Subdocket D to establish numeric water quality criteria for the UDIP. I urge the Board to consider all of the potential implications, not only on the water quality of the UDIP, but also on the point source dischargers to the waterbody. The CWA allows the Board to use the subcategorization of uses to establish protective standards that also recognize existing limiting conditions on aquatic life. The Board has already recognized this fact when it set the recreation standards (i.e., incidental contact) for the UDIP in Subdocket B.

Notwithstanding the Board's current decision that none of the 40 C.F.R. § 131.10(g) factors apply to the UDIP, I respectfully disagree with this decision in that it is clear that physical characteristics and upstream sources, both upstream of and within the UDIP, influence the achievable water quality. The UAA found that several of the Part 131.10(g) factors apply and that is why it recommended a modified aquatic life use for the UDIP. The Board needs to carefully consider the basis for each numeric criterion that it will adopt in Subdocket D and the effects that immediate implementation of such criteria will have on dischargers to the UDIP. The Board should recognize that it has the authority to revise the standards in future rulemaking required by the CWA triennial

review process and that adopting standards now that protect the existing aquatic life use and provide for progress toward higher aquatic life use in the future is an acceptable approach.

Regardless of what final numeric criteria for the UDIP ALU are adopted, I recommend that the Board include in the rule procedures for single and multi-discharger/waterbody variances from the final criteria. Illinois EPA's testimony makes it clear that it has not developed an implementation plan to prevent an undue burden on UDIP dischargers that contribute amounts of water quality constituents that would not cause or contribute to the exceedance of WQS. These non-major dischargers of constituents that exceed the adopted WQS could be faced with WQBELs in their permits that would be technically infeasible or economically unreasonable to achieve because of on-going impacts from major upstream sources of the constituents (point and non-point). Illinois EPA's suggestion of "cascading implementation" is a reasonable policy, but in the absence of practical WQS variance procedures, it may be impossible to implement. Therefore, it is essential that the final rule include variance procedures that are consistent with USEPA's proposed Clarifications Rule.

I again thank the Board for the opportunity to offer these comments and would be pleased to answer any questions.

Respectfully submitted,

EXXONMOBIL OIL CORPORATION,

Dated: November 22, 2013

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MOBO:041/Fil/ Subdocket D-Tischler Testimony

Exhibit A

Résumé and Publication List

Lial F. Tischler

Environmental Engineer

Personal Information

Date of Birth: 22 August 42

Education

B.S. in Civil Engineering, Texas Western College, 1964
M.S. in Environmental Health Engineering, University of Texas at Austin, 1966
Ph.D. in Civil Engineering (Environmental), University of Texas at Austin, 1968

Professional Affiliations

Registered Professional Engineer (Texas No. 32768)
Water Environment Federation (past Chairman, Toxic Substances Committee)
American Society of Civil Engineers
Board Certified Environmental Engineer, American Academy of Environmental Engineers
Society of Environmental Toxicology and Chemistry

Honorary Affiliations and Awards

Sigma Xi
Society of American Military Engineers, Outstanding Engineering Student, 1964
Chemical Manufacturers Association Quality and Services Award, 1995

Work Experience

1986 to Present	Tischler/Kocurek, Partner
1976 to 1988	Adjunct Associate Professor, University of Texas at Austin
1973 to 1986	Engineering-Science, Inc. Vice President, Manager of Southwest Operations (1981-1986) Vice President, Deputy Manager of Southwest Region (1977-1981) Associate and Manager, Austin Office (1975-1977) Manager, Austin Office (1973-1975)
1970 to 1973	Texas Water Development Board Director, Systems Engineering Division (1971-1973) Hydrologist, Office of Planning (1971) Systems Engineer (1970)
1968 to 1970	U.S. Army, Medical Service Corps, Captain Sanitary Engineer, Army Environmental Hygiene Agency (1969-1970) Division Sanitary Engineer, 2d Infantry Division (1968-1969)

Qualifications

Wastewater

- Treatability and preliminary engineering studies on industrial wastewaters, including chemical specific reduction studies and waste characterization studies — Includes studies focusing on removal of specific organic chemicals such as polychlorinated dibenzo-p-dioxins and dibenzofurans, all forms of biological treatment, nutrient removal, cyanide removal, oil and grease removal, and heavy metals removal. Direct treatability studies to determine site-specific biodegradation constants for hazardous air pollutants and other volatile organic and inorganic compounds. Types of wastewater evaluated include: organic chemical manufacturing, pharmaceutical manufacturing, plastics and synthetic resins, petroleum refining, petroleum exploration, transportation and storage, pulp and paper, wood products (lumber, plywood, OSB), pesticides manufacturing, electronic equipment and components, synthetic rubber, nuclear weapons manufacturing, cast iron foundries, glass manufacturing, centralized waste treatment facilities, and domestic sewage (POTWs).

- Treatment system operational assistance for biological (e.g., suspended growth and fixed film processes of all types), physical and chemical treatment processes (e.g., oil/solids separation, metals removal, filtration, chemical oxidation) — wastewaters treated by these systems include petroleum refineries, organic chemicals, pharmaceuticals, plastics and synthetic fibers, pulp and paper, wood products, cast iron foundries, synthetic rubber, pesticides, mixed industrial wastewaters (centralized waste treatment), and domestic sewage. Projects included on-site evaluations followed by recommendations for improvements and oversight following implementation of the recommended actions.

- Permit application preparation, negotiation with regulatory agencies, public hearings and administrative hearings on permits — this work includes NPDES permits issued by U.S. Environmental Protection Agency (EPA) regions, state NPDES permits, and state-only permits. Performed wastewater permit support services for clients in over 30 states, Puerto Rico, Virgin Islands and nine EPA regions. Prepare and oversee preparation of permit applications and technical evaluations of technology-based limits and water quality-based effluent limits to support requested permit provisions. Review of draft permits for accuracy and consistency with applicable regulations is a major component of this work. Preparation of comments on draft permits, presentation of comments at public meetings and hearings, and expert testimony at evidentiary hearings on contested permit conditions.

- Toxicity identification evaluations/toxicity reduction evaluations (TIE/TRE) — provided technical oversight, evaluations, and prepared TIE/TRE final reports for POTWs, petroleum refineries, organic chemical plants, synthetic polymer and rubber plants, centralized waste treatment facilities, and a cast iron foundry that failed acute and/or chronic whole effluent toxicity (WET) tests and successfully identified and controlled the toxicant(s). Toxicants identified include organic and inorganic compounds.

- Applications for a fundamentally different factors (FDF) variance from effluent limitations guidelines. — prepared, submitted, and negotiated FDF variances for organic chemical, plastics and synthetic fibers (OCPSF) plants and pharmaceutical manufacturing plants. Two of the clients obtained variances from the U.S. EPA from the effluent guidelines and standards.

Surface Water Quality

- Water quality modeling, mixing zone analyses, and design of effluent diffusers — this work includes planning and implementing field studies of mixing (tracers) and modeling discharges with EPA's Plumes, DKHDEN, and CORMIX models. Designed or redesigned high-rate diffusers for more than 20 industrial plants and POTWs in six states and Puerto Rico and assisted owners in obtaining NPDES permits for these diffusers. Provided technical direction on several field mixing zone studies. Modeled water quality and directed modeling studies for multiple constituents, including dissolved oxygen, dissolved salts, temperature, nutrients and algal dynamics in streams and estuaries in multiple locations.

- Water quality surveys and studies. — Planned, managed, and prepared final reports on major water quality studies for private and public clients. These studies involved collection of physical, hydrologic, chemical, and biological data necessary to document existing water quality and to develop calibrated and verified water quality models. Most of the studies also included development of a calibrated water quality model and use of the model to predict future treatment and non-point source control requirements. Example projects include: City of Austin — Nationwide Urban Runoff Program, Republic of Korea Han River Master Plan, Fox River Industrial Rivers Study Committee — Fox River waste load allocation, City of Phoenix, Beijing Municipal Environmental Protection Bureau, and the Thailand Pollution Control Department.

- Site-specific water quality standards development and use attainability analyses — planning, management, report preparation, negotiation, and testimony in public hearings for development and approval of site-specific use designations and chemical-specific criteria. Clients include POTWs, stakeholder groups, and industrial plants. This work includes development and state approval of site-specific metals criteria (e.g., aluminum, copper, nickel, zinc) for over 12 clients using the water effects ratio (WER) and/or partitioning coefficient methods.

- Total maximum daily loading (TMDL) analyses/technical support/guidance — projects include preparing technical guidance manuals, comments, and technical evaluations, and participating as a member of TMDL stakeholder groups. Clients include trade associations (e.g., American Chemistry Council, American Petroleum Institute, East Harris County Manufacturers Association, Texas Association of Dairymen), stakeholder groups (Delaware Estuary Municipal-Industrial Coalition, Texas Commission on Environmental Quality TMDL guidance stakeholders group), and individual companies and cities. Types of pollutants addressed in the TMDLs include polychlorinated dibenzo-p-dioxins and dibenzofurans, nutrients, heavy metals, pesticides, polynuclear aromatic hydrocarbons and dissolved oxygen.

Hazardous and Solid Wastes

- Remedial investigations of existing and closed treatment and disposal sites. — work included technical direction, development and implementation of work plans, preparation of final reports, and negotiation with regulatory authorities. Types of sites include chemical plants, petroleum refineries, nuclear weapons manufacture, lead mines, aerospace manufacturing, glass manufacturing, and cast iron foundries.

- Ground water monitoring programs and ground water modeling — work included planning, management, oversight and evaluation of ground water quality data from monitoring programs. This

work included development of groundwater monitoring plans and location and design of monitoring wells. Development and application of ground water hydrologic models to evaluate transport of pollutants. Clients include chemical plants, aerospace manufacturing plants, petroleum refineries, cast iron foundries, nuclear weapons plants and a major municipal government (Beijing Municipal Environmental Protection Bureau).

- Feasibility studies for corrective action. — evaluation and costs of alternatives for remediation of past contamination. Types of sites include nuclear weapons manufacturing, chemical plants, lead mines and petroleum refineries. Clients include private firms, government, and trade associations.

- Treatability studies and preliminary engineering of waste management systems. — technical oversight and report preparation of studies on solid waste management systems for petroleum refineries, POTWs, cities, and chemical plants.

- Site selection for treatment/disposal operations— planned, managed, and prepared the final report for two environmental site selection studies for planned hazardous waste management facilities.

- Closure plans and closure certification. — performed closure evaluations, prepared closure plans, and certified closure of hazardous and solid waste sites for chemical plants, synthetic rubber plants, aerospace manufacturing plant, and cast iron foundry.

- Permit application preparation and negotiation with regulatory agencies. — prepared permit applications and negotiated hazardous and solid waste permit provisions with regulatory agencies for petroleum refineries, chemical and plastic plants, cast iron foundries.

- Waste analysis plans — prepared hazardous waste analysis plans for refineries, chemical plants, foundries, and POTWs.

Water Supply

- Assessment of water availability — evaluated availability of surface and ground water for government and private clients at two sites.

- Assessment of suitability of treated water for human and/or process use — collected and evaluated chemical and biological data for government and industrial clients to determine acceptability as a drinking water supply.

- Performed audits of drinking water system compliance with state and federal regulations at multiple industrial treatment facilities.

Regulatory Advocacy

- Technical assistance and preparation of comments on industrial effluent limitations guidelines, water quality-based permitting regulations, water quality criteria, surface water quality evaluation methods, hazardous and solid waste regulations, drinking water regulations, NPDES permitting regulations, impaired waters listing and TMDL regulations, cooling water intake structures, ocean acidification, hazardous air pollutant emissions regulations, and analytical methods — clients include the American Petroleum Institute, American Chemistry Council, Pharmaceutical Research

and Manufacturers of America, New Jersey Business and Industry Association, Western States Petroleum Association, Texas Paper Industry Environmental Committee, East Harris County Manufacturers Association, Industry Water Coalition of New Jersey, National Mining Association, Texas Association of Dairymen, and numerous private companies.

- Preparation/presentation of technical comments and provide public testimony on water quality standards — clients include trade associations (e.g., Texas Chemical Council, Texas Forestry Association, Louisiana Chemical Council, Great Lakes Water Quality Coalition, American Chemistry Council, Utilities Water Act Group, Industry Joint Water Coalition of New Jersey, American Petroleum Institute, Pharmaceutical Research and Manufacturers of America), Barceloneta Wastewater Treatment Corporation (Puerto Rico), Port of Corpus Christi Authority and individual public and private clients.

- Preparation of petroleum refining industry BAT review for the Ontario Petroleum Association and the Petroleum Association for the Conservation of the Canadian Environment. Technical assistance to Ontario Ministry of the Environment for scoping petroleum refining industry study. Presented discussion of BAT standards development to Ministry staff working on their development of industrial standards (Municipal Industrial Strategy for Abatement).

- Expert Testimony in public hearings, agency actions. — testimony given on water quality issues and proposed projects for chemical plants, electric utilities, cities, state agencies and trade associations.

Litigation

- Expert witness — qualified as an expert and testified on ground water hydrology and contamination, surface water hydrology and surface water quality, biological and physical-chemical treatment of municipal and industrial wastewater, federal and state water quality regulations, and federal and state hazardous and solid waste regulations. Testimony has been provided on behalf of government and private clients.

- Technical brief preparation — prepared technical briefs to support challenges of federal regulations. Clients included trade associations and a POTW.

Environmental Audits

Audits include wastewater, hazardous/solid waste, oil and hazardous material handling, polychlorinated biphenyls, asbestos, air emissions and potable water.

- In-depth evaluation of wastewater treatment at an organic chemicals manufacturing plant including collection and analysis of samples.

- Audits of two semiconductor manufacturing plants, eight organic chemicals manufacturing plants, six synthetic polymer plants, four tire plants, two cast iron foundries, one defense products plant, one petroleum refinery, one calcium carbide manufacturing plant and one glass plant.

Air

- Permit assistance and negotiations with regulatory agencies — planning, permit application preparation, and assistance in the negotiation of new source review (NSR) construction permits, prevention of significant deterioration (PSD) permits, and state operating permits (including Clean Air Act Title V permits) for industrial and government clients. Industries include petroleum refining, chemicals, synthetic rubber and pulp and paper. Government clients include POTWs and a port authority.

- Estimation of volatile organic compound (VOC) and hazardous air pollutant (HAP) emissions from wastewater collection systems and treatment units — use WATER9 and TOXCHEM models to estimate air emissions for annual emissions inventories, permit applications, and to demonstrate compliance with National Emission Standards for Hazardous Air Pollutants. Provided technical assistance and prepared comments on EPA rules for HAPs and VOCs for trade associations including the American Chemistry Council, American Petroleum Institute, and Pharmaceutical Research and Manufacturers of America. Industrial facilities for which emissions have been estimated include organic chemical and resins plants, industrial POTWs, petroleum refineries, pharmaceutical manufacturing plants, pesticide manufacturing plants, and centralized waste treatment facilities.

- Technical assistance for maximum available control technology (MACT) wastewater compliance — assist clients in planning, provide technical support, and conduct studies to support multiple companies efforts to comply with the EPA MACT rules including the SOCMI HON, pharmaceutical MACT, pesticide manufacturing MACT, polymers manufacturing MACT, OSWRO MACT, miscellaneous organic chemicals (MON) MACT and related rules. Directed studies for development of site-specific biodegradation rates for HAPs at over 18 manufacturing sites (organic chemical plants, petroleum refineries, pharmaceutical plants, centralized waste treatment facilities, and pesticide plants).

LIAL F. TISCHLER
Environmental Engineer

PUBLICATIONS

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Exhibit B

UDIP Map and Temperature Standards

Figure 1: Upper Dresden Island Pool with Identified Point Dischargers

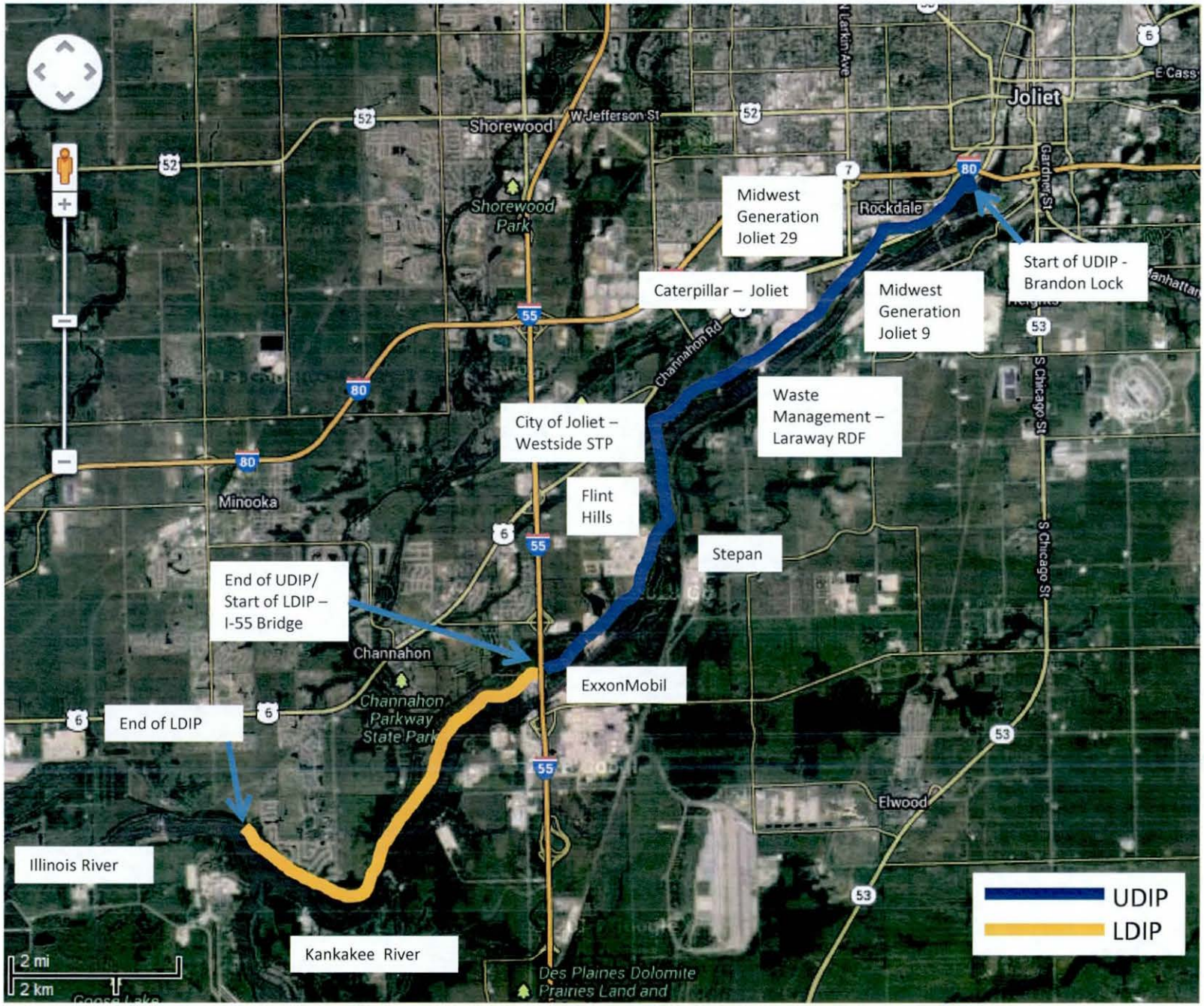
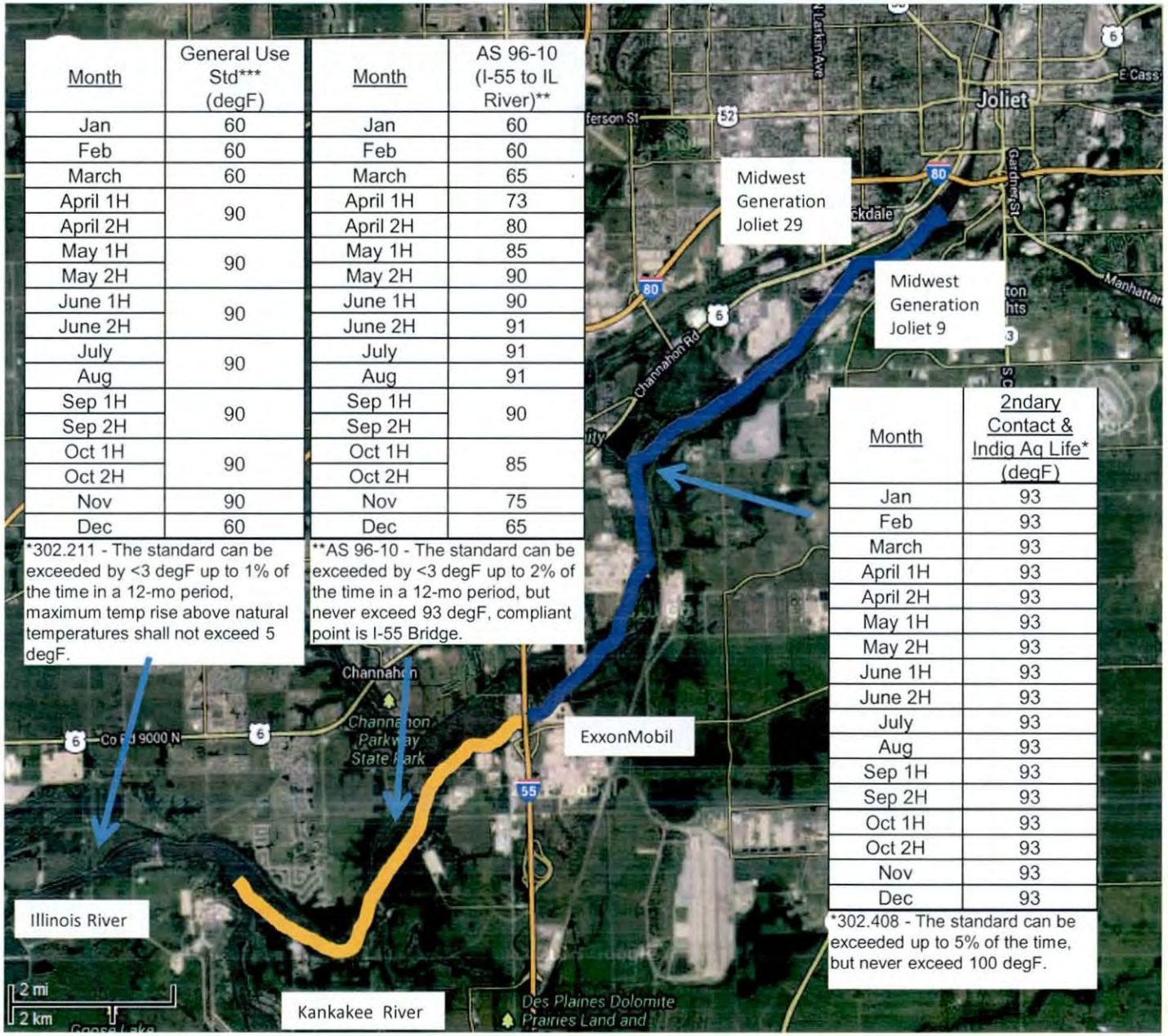


Figure 2: Current Temperature Standards for the Dresden Island Pool



Month	General Use Std*** (degF)
Jan	60
Feb	60
March	60
April 1H	90
April 2H	
May 1H	90
May 2H	
June 1H	90
June 2H	
July	90
Aug	
Sep 1H	90
Sep 2H	
Oct 1H	90
Oct 2H	
Nov	90
Dec	60

*302.211 - The standard can be exceeded by <3 degF up to 1% of the time in a 12-mo period, maximum temp rise above natural temperatures shall not exceed 5 degF.

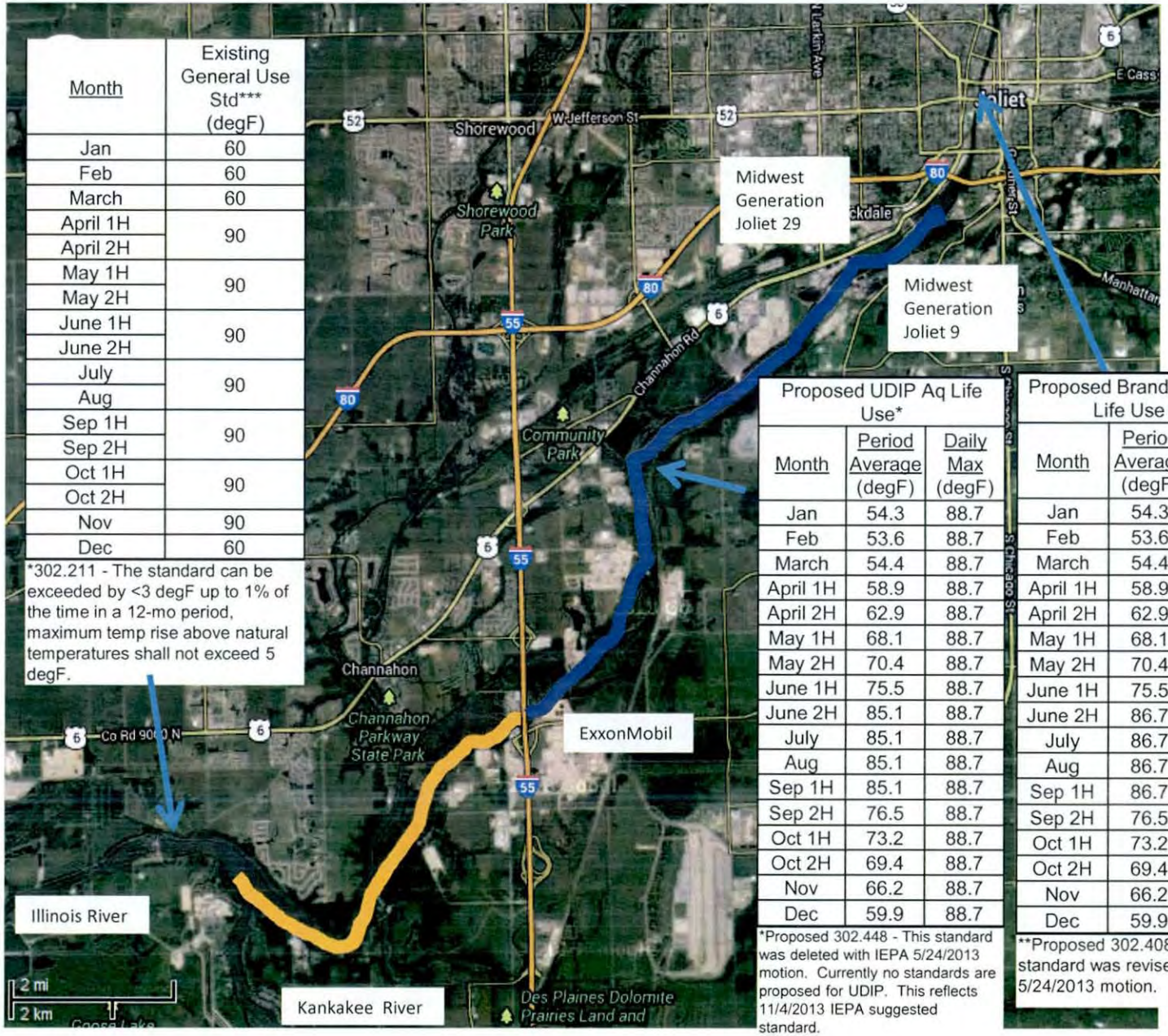
Month	AS 96-10 (I-55 to IL River)**
Jan	60
Feb	60
March	65
April 1H	73
April 2H	80
May 1H	85
May 2H	90
June 1H	90
June 2H	91
July	91
Aug	91
Sep 1H	90
Sep 2H	
Oct 1H	85
Oct 2H	
Nov	75
Dec	65

**AS 96-10 - The standard can be exceeded by <3 degF up to 2% of the time in a 12-mo period, but never exceed 93 degF, compliant point is I-55 Bridge.

Month	2ndary Contact & Indig Aq Life* (degF)
Jan	93
Feb	93
March	93
April 1H	93
April 2H	93
May 1H	93
May 2H	93
June 1H	93
June 2H	93
July	93
Aug	93
Sep 1H	93
Sep 2H	93
Oct 1H	93
Oct 2H	93
Nov	93
Dec	93

*302.408 - The standard can be exceeded up to 5% of the time, but never exceed 100 degF.

Figure 3: Proposed Temperature Standards for the Dresden Island Pool



Month	Existing General Use Std*** (degF)
Jan	60
Feb	60
March	60
April 1H	90
April 2H	
May 1H	90
May 2H	
June 1H	90
June 2H	
July	90
Aug	
Sep 1H	90
Sep 2H	
Oct 1H	90
Oct 2H	
Nov	90
Dec	60

*302.211 - The standard can be exceeded by <3 degF up to 1% of the time in a 12-mo period, maximum temp rise above natural temperatures shall not exceed 5 degF.

Proposed UDIP Aq Life Use*		
Month	Period Average (degF)	Daily Max (degF)
Jan	54.3	88.7
Feb	53.6	88.7
March	54.4	88.7
April 1H	58.9	88.7
April 2H	62.9	88.7
May 1H	68.1	88.7
May 2H	70.4	88.7
June 1H	75.5	88.7
June 2H	85.1	88.7
July	85.1	88.7
Aug	85.1	88.7
Sep 1H	85.1	88.7
Sep 2H	76.5	88.7
Oct 1H	73.2	88.7
Oct 2H	69.4	88.7
Nov	66.2	88.7
Dec	59.9	88.7

*Proposed 302.448 - This standard was deleted with IEPA 5/24/2013 motion. Currently no standards are proposed for UDIP. This reflects 11/4/2013 IEPA suggested standard.

Proposed Brandon Pool Aq Life Use B**		
Month	Period Average (degF)	Daily Max (degF)
Jan	54.3	90.3
Feb	53.6	90.3
March	54.4	90.3
April 1H	58.9	90.3
April 2H	62.9	90.3
May 1H	68.1	90.3
May 2H	70.4	90.3
June 1H	75.5	90.3
June 2H	86.7	90.3
July	86.7	90.3
Aug	86.7	90.3
Sep 1H	86.7	90.3
Sep 2H	76.5	90.3
Oct 1H	73.2	90.3
Oct 2H	69.4	90.3
Nov	66.2	90.3
Dec	59.9	90.3

**Proposed 302.408(c) - This standard was revised in IEPA 5/24/2013 motion.

Exhibit C

Proposed Clarifications Rule

FEDERAL REGISTER

Vol. 78 Wednesday,
No. 171 September 4, 2013

Part II

Environmental Protection Agency

40 CFR Part 131
Water Quality Standards Regulatory Clarifications; Proposed Rule

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 131

[EPA–HQ–OW–2010–0606; FRL–9839–7]

RIN 2040–AF 16

Water Quality Standards Regulatory Clarifications

AGENCY: Environmental Protection Agency (EPA).

ACTION: Proposed rule.

SUMMARY: The Environmental Protection Agency (EPA) is proposing changes to the federal water quality standards (WQS) regulation which helps implement the Clean Water Act. The changes will improve the regulation's effectiveness in restoring and maintaining the chemical, physical, and biological integrity of the nation's waters. The EPA is seeking comments from interested parties on these proposed revisions. The core of the current regulation has been in place since 1983; since then, a number of issues have been raised by states, tribes, or stakeholders or identified by the EPA in the implementation process that will benefit from clarification and greater specificity. The proposed rule addresses the following key program areas: Administrator's determinations that new or revised WQS are necessary, designated uses, triennial reviews, antidegradation, variances to WQS, and compliance schedule authorizing provisions.

DATES: Comments must be received on or before December 3, 2013.

ADDRESSES: Submit your comments, identified by Docket identification (ID) No. EPA–HQ–OW–2010–0606, by one of the following methods:

- *Federal eRulemaking Portal: http://www.regulations.gov.* Follow the online instructions for submitting comments.
- *Email: ow-docket@epa.gov.*
- *Mail:* Water Docket, Environmental Protection Agency, Mail Code 2822T, 1200 Pennsylvania Ave. NW., Washington, DC 20460. Attention: Docket ID No. EPA–HQ–OW–2010–0606.
- *Hand Delivery:* EPA Docket Center, EPA West Room 3334, 1301 Constitution Ave. NW., Washington, DC 20004, Attention: Docket ID No. EPA–HQ–OW–2010–0606. Such deliveries are only accepted during the Docket Center's normal hours of operation. Special arrangements should be made for deliveries of boxed information by calling 202–566–2426.

Instructions: Direct your comments to Docket ID No. EPA–HQ–OW–2010–0606. The EPA's policy is that all comments received will be included in the public docket without change and may be made available online at *http://www.regulations.gov,* including any personal information provided, unless the comment includes information claimed to be Confidential Business Information (CBI) or other information whose disclosure is restricted by statute. Do not submit information that you consider to be CBI or otherwise protected through *http://www.regulations.gov* or email. The *http://www.regulations.gov* Web site is an "anonymous access" system, which means the EPA will not know your identity or contact information unless you provide it in the body of your comment. If you send an email comment directly to the EPA without going through *www.regulations.gov* your email address will be automatically captured and included as part of the comment that is placed in the public docket and made available on the Internet. If you submit an electronic comment, the EPA recommends that you include your name and other contact information in the body of your comment and with any disc you submit. If the EPA cannot read your comment due to technical difficulties and cannot contact you for clarification, the EPA may not be able to consider your comment. Electronic files should avoid the use of special characters, any form of encryption, and be free of any defects or viruses. For additional information about the EPA's public docket visit the Docket Center homepage at *http://www.epa.gov/epahome/dockets.htm.*

Docket: All documents in the docket are listed in the *http://www.regulations.gov* index. Although listed in the index, some information is not publicly available (e.g., CBI or other information whose disclosure is restricted by statute). Certain other materials, such as copyrighted material, will be publicly available only in hard copy. Publicly available docket materials are available either electronically in *http://www.regulations.gov* or in hard copy at the Office of Water Docket Center, EPA/DC, EPA West, Room 3334, 1301 Constitution Ave. NW., Washington, DC. The Public Reading Room is open from 8:30 a.m. to 4:30 p.m., Monday through Friday, excluding legal holidays. The telephone number for the Public Reading Room is (202) 566–1744; the telephone number for the Office of Water Docket Center is (202) 566–2426.

FOR FURTHER INFORMATION CONTACT: Janita Aguirre, Standards and Health Protection Division, Office of Science and Technology (4305T), Environmental Protection Agency, 1200 Pennsylvania Avenue NW., Washington, DC 20460; telephone number: 202–566–1860; fax number: 202–566–0409; email address: *WQSRegulatoryClarifications@epa.gov.*

SUPPLEMENTARY INFORMATION: This supplementary information section is organized as follows:

Table of Contents

I. General Information

A. Does this action apply to me?

State and tribal governments responsible for administering or overseeing water quality programs may be directly affected by this rulemaking, as states and authorized tribes[1] may

[1] Hereafter referred to as "states and authorized tribes" or "states and tribes." "State" in the Clean

need to consider and implement new provisions, or revise existing provisions, in their water quality standards (WQS or standards). Entities such as industrial dischargers or publicly owned treatment works that discharge pollutants to waters of the United States may be indirectly affected by this rulemaking because WQS may be used in determining permit limits under the National Pollutant Discharge Elimination System (NPDES) or in implementing other Clean Water Act (CWA or the Act) regulatory programs. Citizens concerned with water quality and WQS implementation may also be interested in this rulemaking, although they might not be directly impacted. Categories and entities that may potentially be affected include the following:

Category	Examples of potentially affected entities
States and Tribes	States and authorized tribes (tribes eligible to administer WQS under the CWA).
Industry	Industries discharging pollutants to waters of the United States.
Municipalities	Publicly owned treatment works or other facilities discharging pollutants to waters of the United States.

This table is not intended to be exhaustive, but rather provides a guide for entities that may be directly or indirectly affected by this action. It lists the types of entities of which the EPA is aware could be potentially affected by this action. Other types of entities not listed in the table might be affected through implementation of WQS that are revised as a result of this rule. If you have questions regarding the applicability of this action to a particular entity, consult the person listed in the preceding **FOR FURTHER INFORMATION CONTACT** section.

B. What should I consider as I prepare my comments for the EPA?

1. Resubmitting Relevant Comments From 2010 Stakeholder and Public Listening Sessions

From August through December 2010, the EPA held multiple listening sessions with stakeholders and the public, as well as consultation sessions with states, tribes, and representatives of state and local elected officials, concerning the general directions of this proposed rule. The EPA considered the views and comments received from these sessions in developing this proposal. The proposal published today has evolved substantially from the materials the EPA shared at that time. If you submitted comments in response to any of those sessions and wish for these comments to be considered during the public comment period for this proposed rulemaking, you must resubmit such comments to the EPA in accordance with the instructions outlined in this document.

2. Submitting Confidential Business Information (CBI)

Do not submit this information to the EPA through *http://www.regulations.gov* or email. Clearly mark the part or all of the information that you claim to be CBI. For CBI information in a disc that you mail to the EPA, mark the outside of the disc as CBI and then identify electronically within the disc the specific information that is claimed as CBI. In addition to one complete version of the comment that includes information claimed as CBI, a copy of the comment that does not contain the information claimed as CBI must be submitted for inclusion in the public docket. Information so marked will not be disclosed except in accordance with procedures set forth in 40 Code of Federal Regulations (CFR) part 2.

3. Tips for Preparing Your Comments

When submitting comments, remember to:

- Identify the rulemaking by docket number and other identifying information (subject heading, **Federal Register** date and page number).
- Follow directions. The agency may ask you to respond to specific questions or organize comments by referencing a CFR part or section number.
- Submit any and all comments on any portion of the rulemaking that you wish to be considered.
- Explain why you agree or disagree, suggest alternatives, and substitute language for your requested changes.
- Describe any assumptions and provide any technical information and/or data that you used.
- If you provide an estimate of potential costs or burdens, explain how you arrived at your estimate in sufficient detail to allow for it to be reproduced.
- Provide specific examples to illustrate your concerns, and suggest alternatives.
- Explain your views as clearly as possible.
- Make sure to submit your comments by the comment period deadline identified.

II. Background

A. What is the statutory and regulatory history of the WQS regulation and program?

The CWA—initially enacted as the Federal Water Pollution Control Act Amendments of 1972 (Pub. L. 92–500) and subsequent amendments—establishes the basic structure in place today for regulating pollutant discharges into the waters of the United States. In the Act, Congress established the national objective to "restore and maintain the chemical, physical, and biological integrity of the Nation's waters," and to achieve "wherever attainable, an interim goal of water quality which provides for the protection and propagation of fish, shellfish, and wildlife and for recreation in and on the water" (sections 101(a) and 101(a)(2)).

The CWA establishes the basis for the current WQS regulation and program. Section 301 of the Act provides that "the discharge of any pollutant by any person shall be unlawful" except in compliance with specific requirements of Title III and IV of the Act, including industrial and municipal effluent limitations specified under section 304 and "any more stringent limitation, including those necessary to meet WQS, treatment standards or schedule of compliance established pursuant to any State law or regulation." Section 303(c) of the Act addresses the development of state and authorized tribal WQS and provides for the following:

(1) WQS shall consist of designated uses and water quality criteria based upon such uses;

(2) States and authorized tribes shall establish WQS considering the following possible uses for their waters—propagation of fish, shellfish and wildlife, recreational purposes, public water supply, agricultural and

Water Act and this document refers to a state, the District of Columbia, the Commonwealth of Puerto Rico, the Virgin Islands, Guam, American Samoa, and the Commonwealth of the Northern Mariana Islands.

industrial water supplies, navigation, and other uses;

(3) State and tribal standards must protect public health or welfare, enhance the quality of water, and serve the purposes of the Act;

(4) States and tribes must review their standards at least once every 3 years; and

(5) The EPA is required to review any new or revised state and tribal standards, and is also required to promulgate federal standards where the EPA finds that new or revised state or tribal standards are not consistent with applicable requirements of the Act or in situations where the Administrator determines that federal standards are necessary to meet the requirements of the Act.

The EPA established the core of the current WQS regulation in a final rule issued in 1983.[2] This rule strengthened previous provisions that had been in place since 1977 and moved them to a new 40 CFR part 131 (54 FR 51400, November 8, 1983). The resulting regulation describes how the WQS envisioned in the CWA are to be administered. It clarifies the content of standards and establishes more detailed provisions for implementing the provisions of the Act. The following are examples of how the regulation has interpreted and implemented the CWA provisions regarding standards:

- Establishes procedures to recognize the importance of designating beneficial uses to achieve the CWA section 101(a)(2) interim goal with regard to protecting aquatic life and recreational uses, and to provide states and tribes the option of establishing sub-categories of uses, such as cold water and warm water aquatic life designations (§ 131.10).
- Provides detail concerning the adoption of numeric water quality criteria, including authorizing the modification of the EPA's national recommended criteria to reflect site-specific conditions, the use of criteria methodologies different from the EPA's recommendations so long as they are scientifically defensible, and the use of narrative criteria where numeric criteria cannot be derived or to supplement numeric criteria (§ 131.11).
- Incorporates and clarifies the Act's emphasis on the importance of preserving existing uses and identifying and preserving high quality and outstanding resource waters through longstanding antidegradation provisions. These provisions are designed to protect existing uses and the level of water quality necessary to support these uses; to protect high quality waters and provide a transparent analytic process for states and tribes to determine whether limited degradation of such waters is appropriate and necessary (§ 131.12).

In support of the 1983 regulation, the EPA has issued a number of guidance documents, such as the "Water Quality Standards Handbook" (WQS Handbook),[3] that have provided guidance on the interpretation and implementation of the WQS regulation, and on scientific and technical analyses that are used in making decisions that would impact WQS. The EPA also developed the "Technical Support Document for Water Quality-Based Toxics Control" [4] (TSD) that provided additional guidance for implementing state and tribal WQS.

The part 131 regulation has been modified twice since 1983. First, in 1991 the EPA added §§ 131.7 and 131.8 regarding tribes, pursuant to section 518 of the CWA (56 FR 64893, December 12, 1991). Section 518, which was enacted in 1987, included provisions extending the ability to participate in the WQS program to Indian tribes. Second, in 2000 the EPA promulgated § 131.21(c), commonly known as the "Alaska Rule," to clarify that new and revised standards adopted by states and tribes and submitted to the EPA after May 30, 2000 become applicable standards for CWA purposes only when approved by the EPA (65 FR 24641, April 27, 2000).

B. How has the public provided EPA input on the national WQS Program in the past?

The EPA received comments, data, and information from over 6,000 commenters in developing "Final Water Quality Guidance for the Great Lakes System" in 1995 (60 FR 15366, March 23, 1995). The final Guidance represented more than six years of intensive, cooperative efforts that included participation by the eight Great Lakes states, the EPA, and other Federal agencies in open dialogue with citizens, local governments, municipalities, academia, the environmental community, and industries located in the Great Lakes ecosystem. This process entailed a thorough review and analysis of the federal water quality program and opportunities for greater clarity, focus, and improved implementation. The final Guidance is codified in 40 CFR part 132 and helps establish consistent, enforceable, and long-term protections from all types of pollutants, with short-term emphasis on the types of bio-accumulative contaminants that accumulate in the food web and pose a threat to the Great Lakes System. While not all provisions of the Final Guidance may be necessary or appropriate for the national Water Quality Standards Program, the EPA considered the input received from the public through the development of the Final Guidance during the preparation of this proposed rule.

In 1998, the EPA issued an Advance Notice of Proposed Rulemaking (ANPRM) to discuss and invite comment on over 130 aspects of the federal WQS regulation and program, with a goal of identifying specific changes that might strengthen water quality protection and restoration, facilitate watershed management initiatives, and incorporate evolving water quality criteria and assessment science into state and tribal WQS programs. (63 FR 36742, July 7, 1998). In response, the EPA received over 3,200 specific written comments from over 150 comment letters. The EPA also held three public meetings during the 180-day comment period where additional comments were received and discussed.

Although the EPA chose not to move forward with a rulemaking after the ANRPM, as a result of the input received, the EPA identified a number of high priority issue areas for which the Agency has developed guidance, provided technical assistance and continued further discussion and dialogue to assure more effective program implementation. For example, many ANPRM commenters expressed the need for additional assistance on establishing designated uses of water bodies and the process to follow when making designated uses more or less protective. In order to receive input from a broad set of stakeholders on these topics, the EPA held a follow-up national symposium on designated uses on June 3–4, 2002 in Washington, DC. Approximately 200 interested citizens, government officials, and regulated parties attended this open meeting, which included presentations from a variety of stakeholders and an expert panel representing different

[2] In this preamble, the EPA uses the term "water quality standards regulation" to mean subparts A, B, and C of part 131. These three subparts, comprising §§ 131.1 through 131.22, contain general provisions, requirements for establishing standards, and procedures for review and revision of standards, respectively. Part 131 also includes a subpart D that contains the text of WQS the EPA has promulgated to replace or augment state and tribal standards.

[3] First edition, December 1983; second edition, EPA 823–B–94–005a, August 1994.

[4] First edition, EPA 440/4–85–032, September 1985; revised edition, EPA 505/2–90–001, March 1991.

viewpoints.[5] In addition, the EPA held four co-regulator workshops between February 2005 and April 2006 with state, interstate, and tribal partners, and gathered further input and feedback on the establishment, adjustment, and implementation of designated uses.[6]

C. Why is the EPA proposing changes to the Federal WQS regulation?

The core requirements of the current WQS regulation have been in place for over 30 years. These requirements have provided a strong foundation for water quality-based controls, including water quality assessments, impaired waters lists, and total maximum daily loads (TMDLs) under CWA section 303(d), as well as for water quality-based effluent limits (WQBELs) in NPDES discharge permits under CWA section 402. As with the development and operation of any program, however, a number of policy and technical issues have recurred over the past 30 years in individual standards reviews, stakeholder comments, and litigation that the EPA believes would be addressed and resolved more efficiently by clarifying, updating and revising the federal WQS regulation to assure greater public transparency, better stakeholder information, and more effective implementation.

From 2008 through 2010, the EPA held ongoing discussions with state and tribal partners and other stakeholders. These discussions addressed a wide-range of issues, from which a subset has been identified as significant areas of continuing concern. In 2010, the EPA held listening sessions with the public, states and tribes to obtain feedback on this subset of issues. The agenda, background material, list of participants and the public transcripts may be viewed at *http://water.epa.gov/lawsregs/lawsguidance/wqs_listening.cfm#records*. Section III of the EPA's proposal describes the key areas the EPA has chosen to address based on input received and the EPA's proposed regulatory approaches. The EPA believes that states, tribes, other stakeholders, and the public will benefit from clarification in these key areas to better understand and make proper use of available CWA tools and flexibilities, while maintaining open and transparent public participation. Clear regulatory requirements and improved implementation will provide a more transparent and well-defined pathway for restoring and maintaining the biological, chemical, and physical integrity of the nation's waters. The changes the EPA is proposing today add or modify specific regulatory provisions to address key areas described below.

[5] Proceedings from the national symposium on designated uses can be found at *http://water.epa.gov/scitech/swguidance/standards/uses/symposium_index.cfm*.

[6] A summary of the co-regulator workshops and a link to the use attainability analysis (UAA) case studies can be found at *http://water.epa.gov/scitech/swguidance/standards/uses/uaa/info.cfm*.

III. Program Areas for Proposed Regulatory Clarifications

A. Introduction

As discussed in section II.C, the EPA has had ongoing dialogue with states, tribes and stakeholders on key issues that are central to assuring effective implementation of the WQS program. As part of this process, the Agency has considered several fundamental questions in evaluating opportunities to improve implementation of the WQS program including which recurring implementation issues would benefit most from a regulatory clarification or update, whether there are emerging issues that could be more effectively addressed through regulatory revisions, whether the regulation continues to have the appropriate balance of consistency and flexibility for states and tribes, and whether the resulting program effectively facilitates public participation in standards decisions.

As a result of this evaluation and consideration of continuing input from states, tribes and stakeholders, the EPA is proposing changes to key program areas of its WQS regulation at 40 CFR part 131 that the Agency believes will result in improved regulatory clarity and more effective program implementation, and lead to environmental improvements in water quality. This proposed rulemaking requests comment on regulatory revisions in the following six key issue areas: (1) Administrator's determination that new or revised WQS are necessary, (2) designated uses, (3) triennial reviews, (4) antidegradation, (5) WQS variances, and (6) compliance schedule authorizing provisions.

B. Administrator's Determinations That New or Revised WQS Are Necessary

1. The EPA Proposal

The EPA is proposing to amend paragraph (b) of § 131.22 to add a requirement that an Administrator's determination must be signed by the Administrator or his or her duly authorized delegate, and must include a statement that the document is a determination for purposes of section 303(c)(4)(B) of the Act.

2. Background and Rationale for Revision

Section 303(c)(4)(B) of the CWA provides the EPA Administrator with authority to determine that a new or revised WQS is necessary to meet the CWA requirements, typically in those situations where a state or tribe fails or is unable to act in a manner consistent with the CWA. Such a determination is made at the Administrator's discretion, after evaluating all relevant factors. An Administrator's determination triggers the requirement for the EPA to promptly prepare and publish proposed regulations setting forth a revised or new WQS for the waters of the United States involved, and for the EPA to promulgate such WQS unless the state or tribe adopts and the EPA approves such WQS before the EPA promulgation.

The EPA is concerned that the process whereby the Administrator determines that new or revised standards are necessary is not always clearly understood or interpreted by the public and stakeholders. In some instances, this lack of understanding has led to a mistaken conclusion that the EPA has made a CWA 303(c)(4)(B) determination when, in fact, the EPA did not make nor intend to make a determination. For example, Agency memoranda or documents articulating areas where states' WQS may need improvements have sometimes been construed or alleged by stakeholders to be official Administrator determinations that obligate the EPA to propose and promulgate federal WQS for such states. In order to ensure effective implementation of the national WQS program, to provide direct, clear, and transparent feedback on state and tribal actions, and to maintain an open and constructive dialogue with states, tribes and stakeholders on important water quality issues, it is essential that the EPA have the ability to provide feedback, and states and tribes have the opportunity to consider and evaluate the Agency's views, without fear of litigation triggering a duty on the part of the EPA to propose and promulgate WQS before either a state, tribe or the Agency believes such a course is appropriate or necessary.

The EPA believes that this revision would establish a more transparent process for the Administrator to announce any determination made under section 303(c)(4)(B) of the Act. Such a revision will allow the EPA to effectively provide direct and specific written recommendations to states and tribes on areas where WQS improvements should be considered,

without the possibility that such recommendations will be construed as a determination that obligates the EPA to propose and promulgate new or revised standards.

The public's ability under Section 553(e) of the Administrative Procedure Act (5 U.S.C. 553(e)) to petition the EPA to issue, amend, or repeal a rule, would not be affected by this proposed revision.

The EPA invites comments on the proposed amendment to paragraph (b) of § 131.22. The EPA also invites comment on any other options it should consider or on the interpretations expressed in this section.

C. Designated Uses

1. The EPA Proposal

First, the EPA is proposing to amend paragraph (g) at § 131.10 to provide that where a state or tribe adopts new or revised water quality standards based on a use attainability analysis (UAA), it must adopt the highest attainable use (HAU). States and tribes must also adopt criteria, as specified in § 131.11(a), to protect that use. The EPA is also proposing to add a definition of HAU at § 131.3(m). Specifically, the EPA is proposing to define HAU as "the aquatic life, wildlife, and/or recreation use that is both closest to the uses specified in section 101(a)(2) of the Act and attainable, as determined using best available data and information through a use attainability analysis defined in § 131.3(g)."

Second, the EPA is making appropriate edits to § 131.10(g) to be clear that the factors listed in § 131.10(g) must be used when a UAA is required by § 131.10(j), and is restructuring § 131.10(k) to clearly articulate when a UAA is not required.

2. Background

Designated uses communicate a state's or tribe's environmental management objectives for its waters and drive on-the-ground water quality decision-making and improvements. To establish appropriate WQS, states and tribes define the water quality goals of a water body first by designating the use(s) and second by setting criteria that protect those uses. WQS are the foundation for other CWA requirements applicable to a water body, such as WQBELs for point source dischargers, as well as assessment of waters and establishment of TMDLs for waters not meeting applicable WQS. Designated uses play such an important role in the effective implementation of the CWA. The EPA believes it is essential to provide clear and concise regulatory requirements for states and tribes to follow (1) when adopting a use specified in section 101(a)(2) or sub-categories of such uses for a water body for the first time, or (2) when removing or revising a currently adopted use specified in section 101(a)(2) of the Act, or a sub-category of such a use. This is particularly important in light of recurring input and questions on this issue and the potential for conflicting interpretations and inconsistent case-by-case WQS program implementation.

Under section 303 (33 U.S.C. 1313) of the CWA, states and authorized tribes are required to develop WQS for waters of the United States within their state. WQS shall include designated use or uses to be made of the water and criteria to protect those uses. Such standards shall be established taking into consideration the use and value of waters for public water supplies, propagation of fish and wildlife, recreation, agricultural uses, industrial uses, navigation and other purposes (CWA 303(c)(2)(A)). Designated uses are defined at 40 CFR 131.3(f) as the "uses specified in water quality standards for each water body or segment whether or not they are being attained." A "use" is a particular function of, or activity in, a particular water body that requires a specific level of water quality.

Section 101(a)(2) of the CWA establishes the national goal that "wherever attainable, an interim goal of water quality which provides for the protection and propagation of fish, shellfish, and wildlife and provides for recreation in and on the water" be achieved by July 1, 1983. CWA section 303(c)(2)(A) requires state and tribal WQS to "protect the public health or welfare, enhance the quality of the water and serve the purposes of this [Act]." The WQS regulation at 40 CFR part 131 interprets and implements these provisions through requirements that WQS protect the uses specified in section 101(a)(2) of the Act unless those uses are shown to be unattainable, effectively creating a rebuttable presumption of attainability.[7] Thus, it has been the EPA's interpretation that the uses specified in section 101(a)(2) of the Act are presumed attainable unless a state or tribe affirmatively demonstrates through a UAA[8] that 101(a)(2) uses are not attainable as provided by one of six regulatory factors at § 131.10(g).[9]

The current WQS regulation at 40 CFR 131.10 requires states and tribes to specify appropriate uses to be achieved and protected; requires that WQS ensure attainment and maintenance of WQS of downstream waters; allows for sub-categories of uses (e.g., to differentiate between cold water and warm water fisheries) and seasonal uses; describes when uses are attainable; lists six factors of which at least one must be satisfied to justify removal of uses specified in Section 101(a)(2) that are not existing uses; prohibits removal of existing uses; requires states and authorized tribes to revise WQS to reflect uses that are presently being attained but not designated; and establishes when a state or tribe is or is not required to conduct a UAA. States and tribes have flexibility when managing their designated uses consistent with the CWA and implementing regulation.

More specifically, the current WQS regulation requires a UAA when designating uses that do not include the uses specified in section 101(a)(2) of the CWA, when removing a designated use specified in section 101(a)(2) of the Act, or when adopting sub-categories of such uses that require less stringent criteria. The phrase "uses specified in section 101(a)(2) of the Act" refers to uses that provide for the protection and propagation of fish (including aquatic invertebrates), shellfish, and wildlife, and recreation in and on the water, as well as for the protection of human health when consuming fish, shellfish, and other aquatic life.[10] "Sub-category of a use specified in section 101(a)(2) of the Act" refers to any use that reflects the subdivision of uses specified in section 101(a)(2) of the Act into smaller, more homogenous groups of waters with the intent of reducing variability within the group. 40 CFR 131.10(c) provides that states and authorized tribes may adopt sub-categories of a use and set the appropriate criteria to reflect varying needs of such sub-categories of uses. States and tribes have broad discretion to determine the appropriate level of specificity to use in identifying and defining designated uses, and nothing in this proposal is intended to narrow that discretion. However, the EPA has found that the clearer, more accurate, and

[7] *See* 40 CFR 131.2; 131.5(a)(4); 131.6(a),(f); 131.10(g), (j), (k).

[8] *See* 40 CFR 131.3(g). A UAA is a structured scientific assessment of the factors affecting the attainment of the use that may include physical, chemical, biological, and economic factors as described in § 131.10(g).

[9] EPA's "rebuttable presumption" that the uses specified in CWA section 101(a)(2) are presumed attainable, unless demonstrated to be unattainable through a UAA, has been upheld in *Idaho Mining Association v. Browner*, 90 F. Supp. 2d 1078 (D. Idaho 2000).

[10] *http://water.epa.gov/scitech/swguidance/standards/upload/2000_10_31_standards_shellfish.pdf.*

refined the designated uses are in describing the state's or tribe's objective for a water body, the more effective those use designations can be in driving the management actions necessary to restore and protect water quality.[11]

The current regulation at § 131.10(g) and (h)(1) provides that states and tribes may not remove a designated use if it would also remove an existing use unless a use requiring more stringent criteria is added. Existing uses are "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." Existing uses are known to be "attained" when both the use *and* the water quality necessary to support the use has been achieved.[12] The EPA recognizes, however, that all the necessary data may not be available. Where data may be limited, inconclusive, or not available, states and tribes have discretion to determine whether an existing use has been attained, based on either the use or the water quality. It is important to note that the prohibition on removing an existing use is not intended to apply to a situation where the state or tribe wishes to remove a use where removal would result in improving the condition of a water body. The intent of the regulation is to further the objective in CWA section 101(a) to "restore and maintain the chemical, physical, and biological integrity" of the nation's waters, not to prevent actions that make the water body more like its minimally impacted condition. For example, if a warm water fishery exists behind a dam, the existing use provision would not prevent the state from removing that dam because doing so would likely restore the natural cold water aquatic ecosystem.

3. Rationale for Revision

Adoption of Highest Attainable Use

As discussed above, states and tribes have flexibility to designate and revise uses in accordance with the provisions of § 131.10 which implements the requirement in 303(c)(2)(A) that standards shall be set to serve the purposes of the Act as set forth in Section) 101(a)(2) and 303(c)(2)(A). However, the EPA believes that it may be appropriate to provide greater clarity in the regulations implementing this requirement. For example, as part of the UAA process, a state or tribe may be able to demonstrate that a use supporting a particular class of aquatic life is not attainable. However, if some less sensitive aquatic organisms are able to survive at the site under current or attainable future conditions, the goals of the CWA are not served by simply removing the aquatic life use designation and applicable criteria without determining whether there is some alternate 101(a)(2) use or subcategory of such a use that is feasible to attain. The UAA process can be used to identify the highest aquatic life use that is attainable (i.e., highest attainable use). Under this proposal, the state or tribe would be required to designate that highest attainable use. However, as noted above, states and tribes have broad discretion to determine the appropriate level of specificity to use in identifying and defining designated uses, and nothing in this proposal is intended to narrow that discretion. To further clarify this in rule text, the proposal would add the following language to 131.10(g): "To meet this requirement, States may, at their discretion, utilize their current use categories or subcategories, develop new use categories or subcategories, or adopt another use which may include a location-specific use." Thus, while a state or tribe may wish to establish a new or revised use category or subcategory to meet the proposed HAU requirement, the state or tribe could also comply with this requirement by adopting the highest attainable use from its currently established use categories or subcategories or by adopting a location-specific use, or another defensible approach.

The EPA's current regulation at 40 CFR 131.6(a) requires that each state's or tribe's water quality standards submitted to the EPA for review must include "use designations consistent with the provisions of sections 101(a)(2) and 303(c)(2) of the Act." Sections 131.10(g) and 131.10(j) implement the CWA by authorizing a state or tribe to designate uses that do not include the uses specified in section 101(a)(2) or to remove protection for a use specified in section 101(a)(2) (or subcategory of such a use) only through a UAA. If the state or tribe demonstrates through a UAA that a 101(a)(2) use, or a subcategory of such a use, is not attainable, then in order to comply with this regulatory requirement, the state or tribe will need to adopt use designations that continue to serve the 101(a)(2) goal by protecting the highest attainable use unless the state or tribe has shown that no use specified in section 101(a)(2) is attainable.

This proposal is intended to clearly articulate a requirement to adopt the HAU in the EPA's regulation. HAU is defined in this proposal as "the aquatic life, wildlife, and/or recreation use that is both closest to the uses specified in section 101(a)(2) of the Act and attainable, as determined using best available data and information through a use attainability analysis defined in § 131.3(g)." With this definition, the EPA recognizes and affirms the primary role accorded to states and tribes under the CWA in establishing categories of designated uses and assigning those uses to specific water bodies within their jurisdiction. The EPA intends for states and tribes to use their existing use classification scheme to meet the HAU requirement whenever the state or tribe determines that it is appropriate to do so. The EPA is not requiring states and tribes to revise their use categorization scheme by developing new use categories or subcategories, although states and tribes are encouraged to develop them if they find it practical and appropriate to do so. While the EPA believes that there is often value in specifying more narrowly targeted aquatic life uses (e.g., warm water or cold water fishery), the EPA also recognizes that it may not be practical for states or tribes to adopt fine gradations of aquatic life uses in many cases. The proposed rule would thus not affect a state or tribe's discretion to determine the appropriate level of specificity in establishing designated uses.

When adopting the HAU, states and tribes must also adopt criteria to protect that use, as specified in § 131.11(a). Requiring the HAU to be adopted as an essential part of the UAA process is important to adequately implement both CWA sections 101(a)(2) and 303(c)(2)(A). Where uses specified in section 101(a)(2) are unattainable, it is important that states and tribes still strive to attain uses that continue to serve the purposes of the Act and also enhance the quality of the water.

In determining the HAU to adopt in place of an unattainable aquatic life, wildlife, and/or recreation use, states and tribes should use the same regulatory factors (at 40 CFR 131.10(g)) and data analysis that were used to evaluate attainability. When conducting this review and soliciting input from the public, states and tribes should consider not only what is currently attained, but also what is attainable in the future after achievable gains in water quality are

[11] EPA notes that a use may meet the description of a "sub-category of a use specified in section 101(a)(2) of the Act," but not provide an equal level of protection as a use specified in section 101(a)(2) of the Act. If a state wishes to designate such a sub-category, a UAA would be required, consistent with § 131.10(j).

[12] *See http://water.epa.gov/scitech/swguidance/standards/upload/Smithee-existing-uses-2008-09-23.pdf.*

realized. Such a prospective analysis may involve the following:

- Identifying the current and expected condition for a water body;
- Evaluating the effectiveness of best management practices (BMPs) and associated water quality improvements;
- Examining the efficacy of treatment technology from engineering studies; and
- Using water quality models, loading calculations, and other predictive tools.

Once a state or tribe has determined the HAU, there are several different approaches it may wish to consider for articulating the designated use in the relevant water quality standards regulations. The EPA's intent is for a state or tribe to have the flexibility to choose its preferred approach for articulating the HAU in regulation. The EPA provides the following example approaches, but does not intend states and tribes to be limited to only these approaches. The EPA invites comments on other approaches or examples that states and tribes could use when articulating the HAU, or examples of scenarios where the following approaches may not be appropriate. The EPA emphasizes that states and tribes are not required to develop new use categories or subcategories to meet the HAU requirement.

1. Use a refined designated use structure that is already adopted into state or tribal regulation: Where a state or tribe already has a refined designated use structure adopted into state regulations, they could consider adopting the "next best" attainable use that already exists in the use structure as the HAU. For example, consider a state with the following four aquatic life uses: exceptional, high, modified, and limited aquatic life use—each with associated dissolved oxygen criteria that protect the use. The state determines through a UAA (based on a factor at § 131.10(g)) that a particular stream cannot attain the designated "high aquatic life use" and associated dissolved oxygen criterion due to a low head dam and resulting impoundment. Because the dam cannot be removed or operated in such a way as to attain the dissolved oxygen criteria needed to protect the expected biological community at the site, the state adopts the "modified aquatic life use" and dissolved oxygen criterion to protect the revised use. The UAA documents that the "modified aquatic life use" reflects the HAU despite the disturbed condition of the water body.

2. Revise the current designated use structure to include more refined uses and/or sub-categories of uses: Some states or authorized tribes may not have a refined designated use structure adopted into their state or tribal regulations, but rather have a general use category expressed as a "general aquatic life use," "fish and wildlife use," "recreation use," and so on. If a state or tribe finds that its only option upon determining that such a general use category is not attainable is to remove it altogether, a state or tribe may wish to consider revising its current designated use framework to include more refined uses and/or sub-categories, and adopt criteria to protect those uses.

For example, a state or tribe may be able to adequately demonstrate (consistent with 40 CFR 131.10(g)(2)) that natural conditions or water levels preclude the attainment of a use and associated water quality criteria. The state or tribe may document that it is infeasible to attain an aquatic life use associated with fish because the water is naturally intermittent. However, intermittent streams provide essential habitat for different types of aquatic life (e.g., aquatic invertebrates). Such an aquatic life use is likely attainable if not already attained. Therefore, in this scenario the state or tribe may wish to adopt a refined "intermittent aquatic life use" and criteria to protect that use in its statewide designated use framework because such a use category reflects the naturally expected aquatic life use for intermittent streams that could be applied to multiple streams in the state.

As another example, some states have chosen to refine their use categories to reflect the various biological communities that might be expected in a water body. If a state is interested in revising its current designated use structure, it may wish to define its uses based on the composition and structure of the aquatic life expected for each use with associated biological and dissolved oxygen criteria adopted into regulation. Incorporating such refinements into designated uses allows the state to tailor its use designations to reflect the actual biological community expected.

3. Designate a location-specific use and adopt criteria to protect that use: A state or tribe may determine that a use is unattainable for one particular parameter (e.g., altered pH due to highly mineralized geology, or a combined sewer overflow (CSO)-impacted use) or suite of parameters in a specific location. In such situations, the state or tribe may choose to adopt a use that more accurately reflects the location-specific expectations, such as a "pH limited aquatic life use," a "habitat limited aquatic life use," or a "minerals limited aquatic life use." The state or tribe would then adopt a new set of criteria to protect that use, but could adopt all the same criteria levels as were protective of the original use, except for the parameter or parameters limiting the location-specific use. Such an approach would not require a state or tribe to add the location-specific use in its framework, but it could do so if later if it finds that other waters will fall into the same category.

The concept of HAU should not to be confused with "site-specific criteria." A site-specific criterion is designed to protect the current unchanged designated use, but the criterion value may be different from the statewide or otherwise applicable criterion because it is tailored to account for site-specific conditions that may cause a given chemical concentration to have a different effect on one site than on another. By contrast, the criterion supporting a newly established highest attainable use is designed to protect the revised use associated with a different aquatic community expected in the water body.

In addition to this proposal requiring states and tribes to adopt the HAU, the EPA recommends that states and tribes consider the HAU during a triennial review. If new information becomes available during a triennial review to indicate that a use higher than what is currently designated is attainable, states and tribes should revise their WQS to reflect the HAU. As with the HAU requirement, states and tribes are not required to revise their currently established use categories during triennial review to allow for more refined designation of higher uses, though they may wish to consider doing so.

Revisions To Clarify When a UAA Is and Is Not Required

The EPA's proposal also revises § 131.10(g) to clarify that the factors at § 131.10(g) are only required to be considered when § 131.10(j) requires a UAA. The current language in § 131.10(g) is ambiguous on this point and thus has led to confusion as to whether § 131.10(g) applies to all use revisions or only those actions addressed in § 131.10(j). The EPA's 1998 ANPRM stated that the EPA's position, at the time, was that a UAA is not limited to actions addressed in § 131.10(j). However, the EPA has implemented the CWA to focus on uses specified in § 101(a)(2) and now believes that the better interpretation of its regulations is that the factors in 131.10(g) are only required to be considered when a state or tribe is demonstrating that a use specified in § 101(a)(2) or a subcategory of such a use is not attainable through a UAA.

The EPA's interpretation is supported by § 131.10(j), that explains when a UAA is required, and § 131.3(g) that defines a UAA 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)." When §§ 131.3(g), 131.10(g) and (j) are read together, it is clear that the factors at § 131.10(g) are only required to be considered when the state or tribe must do a UAA under § 131.10(j). This proposal adds language to §§ 131.10(g) and 131.10(j) to clarify the relationship between these two provisions and the intent of these provisions to implement CWA sections 101(a)(2) and 303(c)(2)(A). For all other designated uses, this proposal uses the term "uses not specified in section 101(a)(2)" to refer to uses discussed in section 303(c)(2)(A) but not included in section 101(a)(2). Section 303(c)(2)(A) and the EPA's regulation at § 131.10(a) requires the state or authorized tribe to take into consideration the "use and value" of water for public water supplies, propagation of fish and wildlife, recreational purposes, agricultural, industrial and other purposes, and also taking into consideration their use and value for navigation. The UAA demonstration satisfies this requirement for uses specified in 101(a)(2). And while states and authorized tribes are not required by regulation to conduct a UAA using factors at § 131.10(g) when designating and removing a use not specified in 101(a)(2), the EPA recognizes that UAAs may provide valuable information to a state or authorized tribe when deciding how to manage their waters and demonstrate consideration of a water's "use and value."

Finally, the EPA is proposing to clarify § 131.10(k) to state when a UAA is *not* required. Specifically, § 131.10(k) is revised to articulate that a UAA is not required when a state or authorized tribe designates or has designated uses specified in section 101(a)(2) of the Act for a water body for the first time, removes a designated use that is not specified in section 101(a)(2) of the Act, or adopts a subcategory that requires criteria as stringent as the previously applicable criteria. The current structure of 131.10(j)(2) and 131.10(k) could result in situations where a UAA is not required by 131.10(k) but is required by 131.10(j)(2) thus leading to confusion. The EPA intends to eliminate this confusion by restructuring 131.10(k) as proposed.

The EPA invites comments on the proposed addition of 40 CFR 131.3(m), and the proposed amendments to § 131.10(g), § 131.10(j) and § 131.10(k). The EPA also invites comment on any other options it should consider or on the interpretations expressed in this section.

D. Requirements of Triennial Reviews

1. The EPA Proposal

The EPA is proposing to amend the triennial review requirements of paragraph (a) of § 131.20 to clarify that a state or tribe shall re-examine its water quality criteria during its triennial review to determine if any criteria should be revised in light of any new or updated CWA section 304(a) criteria recommendations to assure that designated uses continue to be protected.

2. Rationale for Revision

Sections 303(a) through (c) of the CWA require that states and tribes adopt WQS applicable to their interstate and intrastate waters and that the EPA review and approve or disapprove these standards based on whether they are consistent with the Act. Section 303(c)(1) further requires states and tribes to hold public hearings at least once every 3 years for the purpose of reviewing applicable WQS and, as appropriate, modifying and adopting standards. The state or tribe decides whether and how to modify or adopt its WQS; however, any new or revised standards shall be submitted to the EPA for review and approval or disapproval.

The EPA adopted regulations in 1983 implementing these provisions at 40 CFR 131.20. This regulation requires that states and tribes hold a public hearing to review applicable WQS at least once every 3 years (i.e., a "triennial review") and, as appropriate, modify and adopt standards. Public hearings on WQS provide an essential opportunity for stakeholders and the general public to participate in the WQS-setting process to provide input and raise issues to appropriate officials. In addition, the regulation requires states and tribes to consider whether any new information has become available that indicates if uses specified in CWA section 101(a)(2) that were previously unattainable are now attainable. 40 CFR 131.20(c) provides that the results of these reviews be submitted to the EPA (see also § 131.6(f)).

Stakeholders have expressed concern that states and tribes may retain criteria in their WQS that are no longer protective of designated uses for multiple triennial review cycles, despite the availability of new or updated EPA CWA section 304(a) criteria recommendations. While states and tribes are not required to use EPA's 304(a) criteria recommendations, the EPA agrees that it is important for states and tribes to consider any new or updated 304(a) criteria as part of their triennial review, in order to ensure that state or tribal water quality criteria reflect current science and protect applicable designated uses. In this regard, 40 CFR 131.20(a) requires that any waterbody segment with WQS that does not include the uses specified in CWA section 101(a)(2) be re-examined and updated if new information becomes available to indicate that previously unattainable CWA section 101(a)(2) uses are now attainable. However, because 40 CFR 131.20(a) does not include a parallel statement regarding criteria that support these uses, states and tribes may not re-evaluate their existing criteria to ensure that the criteria continue to be protective of the designated uses when new or updated 304(a) criteria recommendations become available. As a result, the EPA is proposing to include an explicit reference to 304(a) recommended criteria at 131.20(a), to ensure that new or updated 304(a) criteria are considered during triennial review.

The EPA invites comments on the proposed amendments to paragraph (a) of § 131.20. The EPA also invites comment on any other options it should consider or on the interpretations expressed in this section.

E. Antidegradation Implementation

The EPA is proposing to amend several provisions of § 131.12 related to implementing the antidegradation requirements. These include (1) clarifying the options available to states and tribes when identifying Tier 2 high quality waters, (2) clarifying that states and tribes must conduct an alternatives analysis in order to support state and tribal decision-making on whether to authorize limited degradation of high quality water, and (3) specifying that states and tribes must develop and make available to the public implementation methods for their antidegradation policies. The EPA is also proposing to add language to § 131.5(a) describing the EPA's authority to review and approve or disapprove state-adopted or tribal-adopted antidegradation policies. The language at § 131.5(a) will further specify that if a state or tribe has chosen to formally adopt implementation methods as water quality standards, the EPA would review whether those implementation methods are consistent with 131.12.

Background

Section 101(a) of the CWA emphasizes the prevention of water pollution and expressly includes the objective "to restore and *maintain* the chemical, physical and biological integrity of the Nation's waters (33 U.S.C. 1251) (emphasis added). The antidegradation requirements that the EPA incorporated by regulation in 1983 into 40 CFR 131.12 implement the maintenance aspect of CWA section 101(a) and are an essential component of the overall WQS program. Although designated uses and criteria are the primary tools states and tribes use to achieve the CWA 101(a) goals, antidegradation complements these by providing a framework for maintaining existing uses, for protecting waters that are either attaining or are of a higher quality than necessary to support the CWA 101(a)(2) goals, and for protecting state/tribal identified Outstanding National Resource Waters (ONRWs). Antidegradation plays a critical role in allowing states and tribes to maintain and protect the valuable resource of high quality water by ensuring that decisions to allow a lowering of high quality water are made in a transparent public manner and are based on a sound technical record.

In the Water Quality Act of 1987, Congress expressly affirmed the principle of antidegradation that is reflected in section 101 of the Act. In those amendments to the CWA, Congress incorporated a reference to antidegradation policies in section 303(d)(4)(B) of the Act (33 U.S.C. 1313(d)(4)(B)): "Standard Attained—For waters identified under paragraph (1)(A) where the quality of such waters equals or exceeds levels necessary to protect the designated use for such waters or otherwise required by applicable WQS, any effluent limitation based on a total maximum daily load or other waste load allocation established under this section, or any WQS established under this section, or any permitting standard may be revised only if such revision is subject to and consistent with the antidegradation policy established under this section" (emphasis added). This provision not only confirms that an antidegradation policy is an integral part of the CWA, but also explains the relationship of the antidegradation policy to other CWA regulatory programs.[13] Antidegradation reviews are applicable to revisions to effluent limitations based on a TMDL, wasteload allocation, or water quality standard, but they are not required for revisions to a TMDL, wasteload allocation, or water quality standard.[14]

High quality waters provide support for aquatic life and recreation and support unique and significant ecologies and species habitat. These attributes confer a special degree of resiliency and resistance to adverse effects, particularly as the nation's waters face an increasing degree of stress from anthropogenic influences. Therefore, maintenance and protection of high quality waters has never been more important.

Protection of waters that meet or exceed levels necessary to support the CWA uses is central to supporting both economic and community growth and sustainability. Such waters contribute to our public health, aquatic ecosystems, drinking water supplies, and to the welfare of families and communities. The health and growth of tourism, recreation, fishing, and businesses and the jobs they create rely on a sustainable source of clean water. Degradation of water quality may result in increasing public health risks, declining aquatic communities and ecological diversity, and increasing treatment costs that must be borne by ratepayers and local governments. Maintenance of waters that exceed levels necessary to support the CWA uses can sometimes save time and economic resources for a community in the long-term. Using an antidegradation program to prevent the degradation of a water body may be more cost-effective and efficient than long-term restoration efforts. In addition, maintaining a water body in its initial high quality condition helps ensure the preservation of unique attributes that may ultimately be impossible to fully restore in a number of situations.

Currently, 40 CFR 131.12 requires states and tribes to adopt an antidegradation policy and identify implementation methods for that policy. The state's or tribe's policy must provide protection for all existing uses, hereafter referred to as "Tier 1" protection (40 CFR 131.12(a)(1)). The policy must also require the maintenance and protection of high quality ("Tier 2") waters unless the state or authorized tribe finds that "allowing lower water quality is necessary" to accommodate "important economic or social development in the area in which the waters are located," a process hereby referred to as "Tier 2 review" (40 CFR 131.12(a)(2)). Additionally, the policy must provide for the maintenance and protection of water quality in ONRWs, identified by the state or tribe, hereinafter referred to as "Tier 3" waters (40 CFR 131.12(a)(3)). This proposal focuses on different aspects of state and tribal implementation methods to ensure effective and transparent implementation of Tier 2 high quality water antidegradation protection provisions.

In this regard, the EPA indicated in its 1998 ANPRM that "on a national scale, antidegradation is not being used as effectively as it could be," a concern that continues today and is echoed by stakeholders who have identified antidegradation as an underused component of water quality protection. Although the federal antidegradation regulation is intended to help states and tribes protect and maintain high quality waters, the number of waters that are identified as impaired continues to grow. The benefits of high quality waters may be jeopardized if states and tribes do not consider the long-term consequences of lowering water quality or evaluate the alternatives that might be available to reduce the need to accommodate increased pollution.

While the EPA has issued guidance in the past to help facilitate state and tribal implementation of the regulatory antidegradation provisions, the EPA received substantial feedback from stakeholders that existing CWA antidegradation regulatory provisions and related guidance have not been fully successful in ensuring consistent and effective implementation of Tier 2 high quality water protections. Moreover, states have recognized the limits of national guidance in the area of CWA implementation. Most recently on March 30, 2011, the Environmental Council of the States published a resolution entitled "Objection to U.S. Environmental Protection Agency's Imposition of Interim Guidance, Interim Rules, Draft Policy and Reinterpretation Policy" in which it states that the "EPA should minimize the use of interim guidance, interim rules, draft policy and reinterpretation policy and eliminate the practice of directing its regional or national program managers to require compliance by states with the same in the implementation of delegated programs." For these and the other reasons discussed above, the EPA is, therefore, revising its regulation to update the requirements for transparent and effective state and tribal antidegradation implementation.

[13] *PUD No. 1 of Jefferson County v. Washington Department of Ecology*, 511 U.S. 700, 705 (1994) ("A 1987 amendment to the Clean Water Act makes clear that section 303 also contains an 'antidegradation policy . . .'").

[14] *Native Village of Point Hope v. U.S. Envtl. Prot. Agency*, No. 3:11–cv–00200–TMB, slip op. at 24–25 (D. Alaska Sept. 14, 2012).

1. The EPA Proposal—Part 1: Identification of High Quality Waters

The EPA is proposing to add paragraph (b)(1) to § 131.12 to provide that high quality waters may be identified on a parameter-by-parameter basis or on a water body-by-water body basis, as long as the state or tribal implementation methods ensure that waters are not excluded from Tier 2 protection solely because not all of the uses specified in CWA section 101(a)(2) are attained. The EPA's established view is that either method of identifying high quality waters is acceptable, but is proposing today to codify that flexibility for states and tribes into regulation. By "the uses specified in CWA section 101(a)(2)" the EPA means the uses and functions encompassed within the CWA section 101(a)(2), such as aquatic life support, wildlife support, consumption of aquatic life, and recreation.

The nationally applicable water quality standards regulation at § 131.12 describes high quality waters as those where the quality of the waters exceed levels necessary to support the propagation of fish, shellfish, and wildlife and recreation in and on the water (i.e., the CWA goals articulated in section 101(a)(2)). States typically use one of two approaches to identify high quality waters. While the EPA specified in the "Water Quality Guidance for the Great Lakes System" that high quality waters subject to 40 CFR part 132 must be identified using a parameter-by-parameter approach, the WQS regulation applicable to all states and tribes (at 40 CFR part 131) does not currently specify how a state or tribe must identify its high quality waters for purposes of the antidegradation requirements. States and tribes using a parameter-by-parameter approach identify which waters are of high quality for purposes of a Tier 2 review at the time the activity that would lower water quality is proposed. Under this approach, when an activity is proposed that would potentially lower water quality in any high quality water, the state or tribe would determine for which parameters the water quality is better than applicable criteria developed to support the CWA 101(a)(2) uses. Each parameter for which water quality would be lowered by the permitted activity is considered independently and, once a parameter is determined to exist at a level that is better than applicable criteria, the state or tribe would conduct a Tier 2 review for that parameter. In contrast, states and tribes using a water body-by-water body approach typically identify high quality waters in advance on a list by weighing a variety of factors to classify a water body's overall quality. If an activity is proposed that would potentially lower water quality, the state would first determine if that water body is on its Tier 2 list, and thus eligible for Tier 2 review.

The EPA has found, however, that it is currently possible for high quality waters to be identified on a water body-by-water body basis in a manner that the EPA believes may be contrary to the intent of the antidegradation provisions. In some cases, states or tribes have implemented antidegradation such that, where a water body is listed on the CWA section 303(d) list based on one or more parameters affecting only one of the CWA 101(a)(2) uses, the state or tribe automatically considers the water no longer high quality. As a result, the state or tribe would no longer conduct Tier 2 reviews before allowing a lowering of water quality for any parameter. However, individual Section 303(d) listings can be a potentially poor indicator of the overall quality of a surface water because, although one or more of the uses specified in 101(a)(2) is listed as impaired, one or more other uses specified in 101(a)(2) might still be attained and the water quality may be higher than necessary to support such use(s). Such a means of identifying high quality waters would categorically deny Tier 2 protection to a water body that is still of high quality with respect to other uses specified in CWA 101(a)(2).

If a water body can be excluded from Tier 2 protection solely because one of the uses specified in 101(a)(2) is not being attained, without a holistic evaluation of the water body, it is possible that a large number of state and tribal waters would never be subject to Tier 2 review for any parameter. Yet those waters may in fact be high quality waters relative to other unimpaired uses. Thus, such water bodies could be degraded further without a public participation process. For example, mercury is widely prevalent in U.S. waters and is known to bioaccumulate in fish tissue, thus affecting the water body's ability to support protection and propagation of aquatic life. A recent statistically based EPA sampling survey found predator species fish tissue in 49 percent of the sampled population of lakes in the conterminous United States with surface areas greater than or equal to 1 hectare exceeded the EPA's recommended 0.3 ppm tissue-based mercury criterion ("National Study of Chemical Residues in Lake Fish Tissue," EPA 823–R–09–006). If all states and tribes used an approach for identifying high quality water whereby any impairment rendered the water body ineligible for Tier 2 protection, almost half of the lakes would automatically be excluded from Tier 2 high quality water protection. The EPA's view is that this approach would not be consistent with the objectives of the CWA and the intent of the antidegradation regulation.

The EPA recognizes that there may be multiple ways for a state or tribe to develop a water body-based approach for identifying high quality waters consistent with the goals of the CWA and the antidegradation regulation. The EPA understands that in some cases, § 131.12(a)(2) has been interpreted to mean that if any one of the uses reflecting CWA 101(a)(2) goals is not supported, that the water body as a whole cannot be considered high quality. The regulatory language, however, is derived from the language in CWA 101(a)(2) that specifies it is a national goal to achieve water quality that provides for "the protection and propagation of fish, shellfish, and wildlife and provides for recreation in and on the water." The intent of this CWA statement is to strive towards all of the uses specified in the provision and not to stop striving towards all of the uses simply because one of them is not being achieved. The EPA's proposal and interpretation of 40 CFR 131.12(a)(2) is consistent with the intent of the CWA.

Rather than excluding a water body from Tier 2 protection solely because not all of the uses specified in CWA section 101(a)(2) are attained, the EPA would expect the state or tribe to consider a combination of chemical, biological, and physical characteristics in identifying high quality waters. In other words, the EPA would expect the state or tribe to use all the relevant available data to conduct an overall holistic assessment of these characteristics in order to determine whether a water body would receive Tier 2 protection. Some of the factors a state or tribe may consider include, but are not limited to, existing aquatic life uses including aquatic assemblages, habitat, hydrology, geomorphic processes, and landscape condition; existing recreational uses and recreational significance; and the overall value and significance of the water body from an ecological and public-use perspective. Numerous tools, such as biological, habitat, hydrologic, geomorphic, and landscape assessments or the environmental impact statement rating system, could be useful to states and tribes in making and supporting these judgments.

For purposes of better understanding this proposal, consider the following examples.

- *Water Body A has aquatic life and recreational designated uses and is listed as impaired for methylmercury and bacteria, pursuant to CWA section 303(d).* Under this proposed rule, a state or tribe using a water body-by-water body approach could exclude Water Body A from its Tier 2 list because the state or tribe could show that high levels of methylmercury prevent the attainment of protection and propagation of fish, shellfish and wildlife, *and* that high levels of bacteria prevent attainment of recreation in and on the water.
- *Water Body B has aquatic life and recreational designated uses and is listed pursuant to CWA section 303(d) as impaired for methylmercury, but not for bacteria or any other pollutant necessary to protect recreation.* Under a water body-by-water body approach, the proposed rule would prohibit the state or tribe from excluding Water Body B from its Tier 2 list solely because the water body cannot attain protection and propagation of aquatic life due to methylmercury. Water Body B is still attaining recreation in and on the water as specified in section 101(a)(2) of the Act.

The EPA invites comments on the proposed addition of paragraph (b)(1) to § 131.12. Additionally, the EPA is considering whether to specify how a state or tribe determines for which parameters Tier 2 review must be conducted depending on the approach used to identify high quality waters. The EPA requests comment on whether, once a high quality water is identified, the Tier 2 review process for that water body should differ depending on the approach used to identify it as high quality. As the EPA has explained before in the ANPRM and in the "Water Quality Guidance for the Great Lakes System" (40 CFR part 132), for high quality waters identified through the parameter-by-parameter approach, states and tribes conduct Tier 2 reviews for all parameters for which the water quality has been identified as better than the applicable criteria developed to support the CWA 101(a)(2) uses. Each parameter for which water quality would be lowered by the permitted activity is considered independently and, once a parameter is determined to exist at a level that is better than applicable criteria developed to support the CWA 101(a)(2) uses, the state or tribe would conduct a Tier 2 review for that parameter.

The EPA has made a variety of different statements about how Tier 2 reviews are conducted once the water body is identified as Tier 2 using a water body-by-water body approach.[15] [16] Thus, for the water body-by-water body approach the EPA could specify that Tier 2 reviews must be conducted for all parameters for which the water quality has been identified as better than the applicable criteria developed to support the CWA 101(a)(2) uses.

Alternatively, the EPA could specify that for waters identified as high quality on a water body-by-water body basis, Tier 2 reviews are only required for parameters associated with the 101(a)(2) uses currently being supported. For example, in Water Body B above, a Tier 2 review would only be required for each parameter that is better than the applicable criteria to protect recreation. And, a Tier 2 review would not be required for any parameter only associated with the aquatic life use (i.e., and not also associated with the recreation use).

The EPA could also specify that states and tribes have discretion on how to conduct the Tier 2 reviews. The EPA also invites comments on any other options it should consider or on the interpretations expressed in this section.

2. The EPA Proposal—Part 2: Alternatives Analysis

The EPA is proposing to add paragraph (b)(2) to 40 CFR 131.12 to ensure that states and tribes will only make a finding that lowering water quality is necessary, as required in § 131.12(a)(2), after conducting an alternatives analysis that evaluates a range of non-degrading and minimally degrading practicable alternatives that have the potential to prevent or minimize the degradation associated with the proposed activity. This proposal also provides that if a state or tribe can identify any practicable alternatives, the state or tribe must choose one of those alternatives to implement when authorizing a lowering of high water quality.

Section 131.12(a)(2) also provides that high quality water shall be maintained and protected unless the state or tribe finds (after satisfaction of public participation and intergovernmental coordination requirements) that "allowing lower water quality is necessary to accommodate important economic or social development in the area in which the waters are located" (40 CFR 131.12(a)(2)). As discussed previously, this process is called a Tier 2 review. Tier 2 review calls for the state or tribe to investigate two questions: (1) Whether allowing lower water quality is necessary to accomplish the proposed activity, typically by examining alternative ways of accomplishing the activity through an alternatives analysis; and (2) whether the proposed activity that will result in lower water quality will accommodate important economic or social development, through a socio-economic analysis. States and tribes may determine the order in which to complete the two aspects of the finding. In addition, states have discretion to decide there is no need to answer the second question if the answer to the first question is "no." For example, a state or tribe may choose to first ask whether lowering of water quality is necessary to accomplish the proposed activity, and if the answer is "no," decide at that point not to investigate whether the proposed activity will accommodate important economic or social development. While this finding is a state or tribal responsibility, the EPA recognizes that states and tribes may establish processes requiring the entity responsible for conducting the proposed activity to provide information or conduct the necessary evaluations.

Although the existing regulation implies that the state or tribe must have a means of evaluating whether a lowering of water quality is necessary to accomplish the proposed activity, currently there is no explicit requirement to conduct an alternatives analysis. Even if a state or tribe conducts an alternatives analysis, the regulation does not specify that, where there is a practicable alternative, the state or tribe must select an alternative for implementation. For these purposes, the term "practicable" means that the alternatives considered must be available for the proposed activity, technologically possible, able to be done or put into practice successfully at the site in question, and economically viable. This lack of specificity can result in situations where a state or tribe does not evaluate less-degrading or non-degrading alternatives to the proposed activity, and thus lacks a reasoned basis for determining if the proposed lowering of water quality is necessary to accomplish the proposed activity, or not. The EPA's view is that this lack of specificity can lead to state or tribal decisions to lower water quality without appropriately making a finding that a

[15] See "EPA Region VIII Guidance: Antidegradation Implementation; Requirements, Options, and EPA Recommendations Pertaining to State/Tribal Antidegradation Programs," August, 1883, page 14, *http://water.epa.gov/scitech/swguidance/standards/adeg/upload/Region8_ch2_pg5-20.pdf.*

[16] See "Proposed Water Quality Standards for Kentucky," November 2002, page 68977, *http://www.epa.gov/fedrgstr/EPA-WATER/2002/November/Day-14/w28922.htm.*

lowering is necessary, contrary to section 131.12(a)(2).

This issue was considered carefully as part of the development of updated water quality requirements for the Great Lakes states in 1995. The regulation at 40 CFR part 132, Appendix E, addresses it by requiring that any entity seeking to degrade high water quality must submit an antidegradation demonstration for consideration by the state. This demonstration includes an analysis identifying any cost-effective pollution prevention alternatives and techniques, as well as an analysis identifying alternative or enhanced treatment techniques (and their relative costs) that are available to the entity and that would eliminate or significantly reduce the extent to which the increased loading results in a lowering of water quality. States and tribes should tailor the level of detail and documentation in antidegradation reviews to the specific circumstances encountered. The state or tribe then uses that information to determine whether or not the lowering of water quality is necessary.

Under the approach proposed today, the state or tribe would conduct its alternatives analysis by considering a range of non-degrading and minimally degrading practicable alternatives to the proposed activity. Similar to the alternatives analysis provided for in 40 CFR part 132, this evaluation would include a consideration of any non-degrading or minimally degrading cost-effective pollution prevention alternatives and enhanced treatment techniques, but would not be limited to those. For example, alternatives could include no discharge, pollution prevention measures, process changes, reduction in the scale of the project, advanced or different treatment technologies, water recycling and reuse, land application, seasonal or controlled discharge options avoiding critical water quality periods, and alternative discharge locations, if such measures were practicable.

Once the state or tribe has identified a range of practicable alternatives, the state or tribe would evaluate the alternatives in terms of the extent of degradation that would result. By initially considering practicable alternatives that represent a range from non-degrading to minimally degrading as opposed to simply identifying the single least degrading alternative, the state or tribe then has a basis to make the required finding, considering the implications and technological and economic practicability of the alternatives more holistically, and considering any impacts beyond the direct effects on water quality, such as cross-media impacts (e.g., impacts on land due to land application of pollutants found in water). This will allow the state or tribe to determine whether the lowering of water quality is necessary to accommodate important economic or social development per Part 131.12(a)(2). As reflected in the Great Lakes System regulation at Part 132, the EPA believes states and tribes should tailor the level of detail and documentation of alternatives analyses in antidegradation reviews to the significance and magnitude of the particular circumstances encountered.

The EPA invites comment on the proposed addition of paragraph (b)(2) to § 131.12. The EPA also invites comment on any other options it should consider or on the interpretations expressed in this section.

3. The EPA Proposal—Part 3: Developing and Making Available to the Public Antidegradation Implementation Methods

The EPA is proposing to add paragraph (b) to 40 CFR 131.12 to specify that states and tribes must develop and make available to the public antidegradation implementation methods to improve program implementation, ensure consistency with the CWA, and provide transparency as to applicable state and tribal antidegradation review requirements. The EPA is also making changes to language in § 131.5(a) describing the EPA's authority to review and approve or disapprove state-adopted or tribal-adopted antidegradation policies. The language in § 131.5(a) further specifies that if a state or tribe has chosen to formally adopt implementation methods as water quality standards, the EPA would review whether those implementation methods are consistent with § 131.12. In addition to the proposed requirements included in this proposal, the EPA is considering and requesting comment on whether the EPA should include a requirement that antidegradation implementation methods be adopted as WQS and thus subject to the EPA's review and approval or disapproval. Alternatively, the EPA is considering and requesting comment on whether the EPA should specify that states and tribes may, but are not required to, adopt antidegradation implementation methods as WQS.

Currently there is confusion whether the existing regulations require states and tribes to adopt antidegradation implementation methods as WQS. Stakeholders have raised concerns that some states and tribes have not developed or made publically available antidegradation implementation methods, despite the fact that the regulation requiring this was established in 1983. Specifically, they are concerned that the absence of such methods reduces transparency in the implementation of states' and tribes' policies, and potentially limits the ability to ensure protection of existing uses, high quality waters, and ONRWs to the full extent required by the regulation. The CWA at section 101(e) specifically states that "public participation in the development, revision, and enforcement of any regulations, standard, effluent limitation, plan, or program established . . . under this Act shall be provided for, encouraged, and assisted. . . ." The EPA encourages states and tribes to provide a robust and transparent process for developing and making available to the public their antidegradation implementation methods and for implementing those methods in specific cases.

Section 501(a) of the CWA (33 U.S.C. 1361(a)) authorizes the EPA Administrator to "prescribe such regulations as are necessary to carry out [her] functions under this Act." The CWA, under section 303(c), also specifies that the EPA Administrator must review and approve new or revised WQS after determining they are consistent with applicable requirements under the CWA. The EPA believes that antidegradation implementation methods are an important component of implementing antidegradation policies. Thus, the EPA is considering and requesting comment on whether the EPA should include a requirement that implementation methods be formally adopted as WQS and thus subject to the EPA's review and approval or disapproval. Formal adoption of implementation methods as WQS, along with EPA review under section 303(c) of the Act, would help ensure the consistent and effective implementation of the state or tribe's antidegradation provisions so that waters will be maintained and protected in accordance with the objectives of the Act.[17] At the same time, the EPA acknowledges the primary role of states and tribes in establishing and implementing water quality standards. The EPA is thus alternatively considering and requesting comment on whether to specify in rule that states and tribes may, but are not required to, adopt antidegradation implementation methods as WQS subject to EPA approval. In this case,

[17] As of 2013, the EPA is aware of 25 states that have adopted antidegradation implementation methods entirely into rule.

states and tribes must develop antidegradation implementation methods, and must make them available to the public, but they would not be subject to EPA review and approval or disapproval unless the state or tribe chose to formally adopt them as WQS.

Additionally, antidegradation is an essential part of WQS and state and tribal approaches to implementing antidegradation requirements may have direct implications for NPDES permits, as well as other federal permits and licenses for activities that affect water quality. The EPA believes that this may be an additional reason why the regulations should require states and tribes to formally adopt, after providing an opportunity for public involvement, and obtain EPA approval for antidegradation implementation methods. Lastly, state and tribal antidegradation programs that have antidegradation implementation methods adopted into regulations are more transparent to stakeholders and the public, as well as provide greater clarity to regulated industry.

The "Water Quality Guidance for the Great Lakes System" (40 CFR part 132) provides that an acceptable antidegradation policy and implementation methods are required elements of a state's or tribe's WQS program for waters of the Great Lakes system. That regulation requires that Great Lakes states and tribes adopt provisions into their policy and implementation methods that are consistent with a list of specifications, including details on how high quality waters are to be identified and on the components of antidegradation Tier 2 reviews.

Consistent with this "Water Quality Guidance for the Great Lakes System" requirement and for the reasons explained, the EPA is considering and seeking comments on a revision to the antidegradation regulation at 40 CFR 131.12 that would require states and tribes to adopt antidegradation implementation methods in order to improve program implementation, ensure consistency with CWA, and provide transparency as to applicable state or tribal antidegradation review requirements. If the EPA were to finalize such a requirement, the EPA would expect that a state or tribe's adopted implementation methods would describe how the state or tribe intended to implement each aspect of its policy, consistent with § 131.12(a), as well as how antidegradation decisions would be documented. This would provide sufficient information so that the public and the EPA would understand the extent to which activities affecting water quality are being authorized consistent with the state's or tribe's antidegradation policy and other CWA requirements.

The EPA invites comments on the proposed addition of paragraph (b) to § 131.12. As previously mentioned, there is confusion whether the existing regulations require states and tribes to adopt antidegradation implementation methods as WQS. The EPA requests comment on whether the EPA should require, as part of Section 131.12(b), that implementation methods be adopted as WQS and thus subject to the EPA's review and approval or disapproval. If the EPA makes adoption of implementation methods a requirement, the EPA is also considering corresponding revisions to sections 131.5(a) and 131.6(d). Specifically, the EPA requests comment on whether a corresponding revision should be made to section 131.6(d) to clarify that implementation methods are one of the minimum requirements for a water quality standards submission. Alternatively, the EPA is requesting comment on whether the EPA should explicitly specify in regulation that states and tribes are not required to adopt antidegradation implementation method as WQS. Finally, the EPA invites comments on any other options it should consider or on the interpretations expressed in this section.

4. Minimum Elements of an Antidegradation Implementation Method

The EPA's basis for taking approval or disapproval action on a state's or a tribe's antidegradation policy is whether the policy is consistent with the CWA and the water quality standards regulations at 40 CFR § 131.12. While the current regulations do not require states or tribes to adopt antidegradation implementation methods as water quality standards, if a state or tribe chooses to do so, the EPA would review a state's or tribe's implementation methods on the basis of ensuring that the methods do not undermine the state's or tribe's own antidegradation policy. This proposed revised antidegradation regulation continues to provide for a wide range of state and tribal approaches to antidegradation. States and tribes have considerable discretion in how they address each of the elements of antidegradation implementation specified in the regulation. To facilitate development of implementation methods, the EPA is providing in this preamble a list of the areas states' and tribes' implementation methods would need to address, at a minimum, to be consistent with the WQS regulation. This list is based on requirements currently found in the federal antidegradation regulation, as well as proposed requirements found in this action. Again, how states and tribes address each of these areas in their methods is within their discretion, as long as it does not undermine their antidegradation policy or is otherwise inconsistent with the Act or EPA's regulations.

a. Scope and applicability: the state or tribe should describe the scope and applicability of their antidegradation policy.

b. Existing uses protection: the state or tribe will ensure the maintenance and protection of all existing uses and the water quality necessary to protect the existing uses.

c. High quality water protection

i. Identification of high quality water: the state or tribe will identify high quality waters on a parameter-by-parameter basis or a water body-by-water body basis, as long as the state's or tribe's implementation methods ensure that waters are not excluded from Tier 2 protection solely because not all of the uses specified in CWA section 101(a)(2) are attained.

ii. Alternatives analysis and social/economic analysis: the state or tribe will determine whether the lowering of water quality that would result from a proposed activity is necessary to accommodate important economic or social development in the area in which the waters are located through an alternatives analysis and a social and/or economic analysis.

iii. Public participation and intergovernmental coordination: the state or tribe will ensure full satisfaction of the public participation and intergovernmental coordination provisions of the state's or tribe's continuing planning process in any finding that will allow lower water quality.

iv. Requirements for point and nonpoint sources: the state or tribe will ensure that there shall be achieved the highest statutory and regulatory requirements for all new and existing point sources and all cost-effective and reasonable best management practices for nonpoint source control when allowing a lowering of water quality.

d. ONRW protection: the state or tribe will ensure the maintenance and protection of water quality for waters identified as ONRWs.

e. Thermal Discharges: The state or tribe will ensure consistency with Section 316 of the Act in cases that involve potential water quality impairment associated with thermal discharges.

5. How does this proposal affect states or authorized Tribes for which the EPA has promulgated antidegradation implementation methods?

The revised WQS regulation will apply to all states, authorized tribes, and territories, regardless of whether or not the EPA has previously promulgated an antidegradation policy or implementation methods for the state or tribe. Therefore, any previously promulgated antidegradation policies or implementation methods may require revision to meet the new requirements of Section 131.12.

F. WQS Variances

1. Background

The EPA has encouraged states and tribes to utilize WQS variances [18] (hereafter referred to as "variances"), where appropriate, as an important WQS tool that provides states and tribes time to make progress towards attaining a designated use and criteria. The EPA has offered input and support for variances through Office of General Counsel legal decisions,[19] guidance, memoranda, and approval actions for many years. These documents specifically explain the EPA's interpretation that variances may be granted if the state or authorized tribe demonstrates that the variance meets the same requirements as a permanent [20] designated use change, even though the WQS regulation lacks explicit provisions on the issue. As a result, the EPA has heard from states, tribes, and stakeholders that there is confusion, inconsistency, and mixed interpretations about how, when, and where variances may be used appropriately (e.g., with regard to nutrients and implementation of numeric nutrient criteria). In particular, the EPA has found that this WQS tool is underutilized. For example, since tracking WQS variance submittals in 2004, four EPA Regions have never received a WQS variance submittal. However, the EPA has found that where states and tribes and their stakeholders have more specificity in regulation regarding variances, such as those states and tribes covered by the "Water Quality Guidance for the Great Lakes System" (i.e., Great Lakes Initiative) rulemaking at 40 CFR part 132, they are successfully adopting and submitting WQS variances. This proposed rule is intended to provide this specificity nationally.

The CWA specifies a national goal at Section 101(a) to restore and maintain the chemical, physical and biological integrity of the Nation's waters and an interim goal in Section 101(a)(2) that, "wherever attainable," water quality provide for the protection and propagation of fish, shellfish, and wildlife and provides for recreation in and on the water. In implementing the CWA, the regulation at 40 CFR 131.10 establishes provisions relating to the management of designated uses. In 1977, an Office of General Counsel legal decision considered the practice of temporarily downgrading the WQS as it applies to a specific discharger rather than permanently downgrading an entire water body or waterbody segment(s) and determined that such a practice is acceptable under the EPA's existing regulations as long as the variance is adopted consistent with the substantive and procedural requirements for permanently downgrading a designated use. In other words, a state or tribe may change the standard in a more targeted way rather than remove the standard all together. The EPA further explained that it would be appropriate to grant a variance based on any of the six factors for removing a designated use as listed in § 131.10(g).[21]

The state practice described in the Office of General Counsel legal decision became known as adopting a "variance" to WQS. Specifically, a variance is a time-limited designated use and criterion that is targeted to a specific pollutant(s), source(s), and/or water body or waterbody segment(s) that reflects the highest attainable condition during the specified time period. Variances are different from changes to the designated use and associated criteria in that they are intended as a mechanism to provide time for states, authorized tribes and stakeholders to implement adaptive management approaches that will improve water quality where the designated use and criterion currently in place are not being met, but still retain the designated use as a long term goal. Variances are limited in scope and are an environmentally preferable tool over a designated use change because variances retain designated use protection for all pollutants as they apply to all sources with the exception of those specified in the variance. Even the discharger who is given a variance for one particular constituent is required to meet the applicable criteria for all other constituents. The variance is given for a limited time period and the discharger must either meet the WQS upon the expiration of this time period or the state or tribe must adopt a new variance or re-justify the current variance subject to EPA review and approval. Thus, when properly applied, a variance can lead to improved water quality over time, and in some cases, full attainment of designated uses due to advances in treatment technologies, control practices, or other changes in circumstances, thereby furthering the objectives of the CWA.

Presently, the nationally applicable WQS regulation only mentions variances in 40 CFR 131.13. This provision indicates that variance policies are general policies affecting the application and implementation of WQS, and that states and tribes may include variances policies in their state and tribal standards, at their discretion. The EPA provided variance procedure requirements when it promulgated WQS for Kansas (§ 131.34(c)), Puerto Rico (§ 131.40(c)), and the Great Lakes System (40 CFR part 132, Appendix F, Procedure 2). However, the nationally applicable regulation does not explicitly address questions such as when a variance can be granted, how a variance must be justified, what is required during the term of the variance, or for how long a variance can be granted. The EPA's established position has been that variances, as time-limited and narrow use revisions, are appropriate WQS tools that must go through public review and require the EPA's review and approval.[22] This position is supported by the EPA's practice regarding variances.[23] Today, we recognize a more direct link to the CWA Section 101(a)

[18] The EPA distinguishes WQS variances, as described in today's proposed rulemaking, from variances as described in the EPA's permitting regulation at §§ 122.2 and 125.3.

[19] The EPA's memoranda discussing variances are available on the EPA's Web site at *http://water.epa.gov/scitech/swguidance/waterquality/standards/handbook/chapter05.cfm#section3.*

[20] "Permanent" is used here and throughout this section to contrast between the time-limited nature of variances and designated use changes in accordance with 40 CFR 131.10 that require a revision to a State's water quality standards to reverse. In accordance with 40 CFR 131.20, waters that "do not include the uses specified in section 101(a)(2) of the Act shall be re-examined every 3 years to determine if new information has become available. If such new information indicates that the uses specified in section 101(a)(2) of the Act are attainable, the State shall revise its standards accordingly."

[21] Variances in Water Quality Standards, March 15, 1985, Memo from Edwin L. Johnson, Director of the Office of Water Regulations and Standards, to the Regional Water Division Directors and the Advanced Notice of Proposed Rulemaking at 63 FR 36759.

[22] The EPA addressed variances in its Kansas and Puerto Rico promulgations and part 132 Great Lakes Water Quality Guidance regulations (Published March 23, 1995, *http://www.ecfr.gov/cgi-bin/text-idx?c=ecfr&SID=105020ee867fe139a8d0965b23bf7557&rgn=div5&view=text&node=40:23.0.1.1.19&idno=40*).

[23] The EPA's WQS Handbook, 1994: *http://water.epa.gov/scitech/swguidance/standards/handbook/chapter05.cfm#section3*

goal of "restore and maintain" for variances. WQS variances are consistent with the "restore" aspect of the goal since variances are intended to allow incremental environmental progress in achieving designated uses. As described in detail in section III.F.2, the EPA is proposing a set of variance provisions that are in many ways parallel to the regulations in 131.10, but are tailored to better fit the circumstances where variances will allow for environmental progress toward achieving the goals of the CWA. The EPA notes that its understanding and past practice allows for variances whether or not those uses are specified in Section 101(a)(2), however, the demonstration may differ.

States and tribes have expressed that variances are useful in a number of circumstances where the state or tribe has demonstrated that the designated use and criterion are not attainable today (or for a limited period of time), but may be attainable in the longer term. Examples include when:

- Attaining the designated use and criterion is not feasible under the current conditions (e.g., attainment of numeric nutrient criteria would result in substantial and widespread social and economic impact) but could be feasible should circumstances change (e.g., development of less expensive pollution control technology or a change in local economic conditions); or
- The state or tribe does not know whether the designated use and criterion can be attained, but feasible progress toward attaining the designated use and criterion can still be made by implementing known controls and tracking environmental improvements (e.g., complex use attainability challenges involving legacy pollutants).

There are a variety of tools available to states, tribes and dischargers that can provide time to meet regulatory requirements; however, the most common regulatory tools considered are variances and permit compliance schedules. Which tool is appropriate depends upon the circumstances. Variances can be appropriate to address situations where it is known that the designated use and criterion are unattainable today (or for a limited period of time) but feasible progress could be made toward attaining the designated use and criterion. A permit compliance schedule, on the other hand, may be appropriate when the use is attainable, but the permittee needs additional time to modify or upgrade treatment facilities in order to meet its WQBEL such that a schedule and resulting milestones will lead to compliance "as soon as possible" with the WQBEL based on the currently applicable WQS. (See CWA section 507(17) for a definition of "Schedules of compliance" and 40 CFR 122.47).

The EPA is proposing and soliciting comment on revisions to the WQS regulation that will provide more specificity and clearer requirements on the development and use of variances. Such revisions will establish requirements to help improve water quality by allowing states and tribes time to work with stakeholders to address any challenges and uncertainties associated with attaining the designated use and the associated criterion. These revisions will also provide assurance that further feasible progress toward the designated use and criterion will be made during the variance period.

The EPA's proposed regulatory provisions for variances at § 131.14 address the following key topic areas: (1) Applicability, (2) submission requirements, (3) implementing variances, (4) how to renew a variance, and (5) conforming changes to §§ 131.34 and 131.40. A discussion of this proposal and the rationale for each proposed regulatory provision follows.

2. Rationale and the EPA Proposal

a. Part 1—Applicability of Variances

i. The Scope of a Variance

To provide clarity, promote consistency, and avoid conflicting interpretations of WQS variances, the EPA is proposing a new regulatory definition for WQS variance at § 131.14. A water quality standards variance (WQS variance) is a time-limited use and criterion for a specified pollutant(s), permittee(s), and/or water body or waterbody segment(s) that reflect the highest attainable condition during the specified time period. Variances are WQS subject to EPA review and approval or disapproval and must be consistent with § 131.14. As WQS, variances are subject to § 131.20(a) and thus must be reviewed on a triennial basis. States and tribes continue to have broad discretion on the structure of their triennial reviews and can decide whether and how to modify or adopt WQS as a result of a triennial review. The EPA is also proposing to specify at § 131.14(a)(1) that all other applicable water quality standards not specifically addressed by the variance remain applicable.

Typically, states find variances that apply to a specific pollutant(s) and discharger(s) to be most useful. If a state believes that the designated use and criterion is unattainable for a period of time because the discharger cannot meet its WQBEL, the state may grant a discharger-specific variance so long as the variance is consistent with the CWA and implementing regulation.

Similarly, if a state or tribe believes that the designated use and criterion is unattainable as it applies to multiple permittees because they are all experiencing challenges in meeting their WQBELs for the same pollutant for the same reason, regardless of whether or not they are located on the same water body, a state or tribe may streamline its variance process by granting one variance that applies to all these dischargers (i.e., a multiple discharger variance) so long as the variance is consistent with the CWA and implementing regulations. The EPA recognized the utility of a multiple discharger variance and its distinction from an individual discharger variance in the "Water Quality Guidance for the Great Lakes System: Supplementary Information Document" (SID; EPA–820–B–95–001; March 1995). The EPA provided further clarification regarding multiple discharger variances in the "Water Quality Standards for the State of Florida's Lakes and Flowing Waters; Final Rule" (75 FR 75790, December 6, 2010). More recently in March 2013, the EPA provided a set of frequently asked questions to assist states and tribes in developing credible rationales for multiple discharger variances. [24]

Where a state or tribe can demonstrate that the designated use and criterion currently in place for a specific pollutant is not attainable immediately (or for a limited period of time) for an entire water body, the state or tribe may adopt a waterbody variance as an alternative to a designated use change for the water body so long as the variance is consistent with the CWA and implementing regulation. In such an instance, the variance applies to the water body itself, rather than to any specific source or sources. A waterbody variance provides time for the state or tribe to work with both point and nonpoint sources to determine and implement adaptive management approaches on a waterbody/watershed scale to achieve pollutant reductions and strive toward attaining the water body's designated use and associated criteria.

States and tribes retain discretion as to whether, when, and where to adopt variances. However, consistent with the

[24] *Discharger-specific Variances on a Broader Scale: Developing Credible Rationales for Variances that Apply to Multiple Dischargers*, EPA–820–F–13–012, March 2013 (*http://water.epa.gov/scitech/swguidance/standards/upload/Discharger-specific-Variances-on-a-Broader-Scale-Developing-Credible-Rationales-for-Variances-that-Apply-to-Multiple-Dischargers-Frequently-Asked-Questions.pdf*).

EPA's current position, should a state or tribe choose to grant a variance, it is subject to the EPA's review and approval or disapproval—regardless of the scope of the variance.

The EPA invites comment on its proposal and on any other options it should consider or on the interpretations expressed in this section. The EPA also invites comment on the applicability of variances to individual dischargers, multiple dischargers and to entire water bodies.

ii. An EPA Approved Variance Is Only Applicable for CWA Section 402 Permitting Purposes and in Issuing Certifications Under Section 401 of the Act

The proposed WQS regulation at 40 CFR 131.14(a)(2) would specify that where a state or authorized tribe adopts a variance, the state or tribal regulations must continue to reflect the underlying designated use and criterion unless the state or tribe adopts and the EPA approves a revision to the designated use and criterion as consistent with § 131.10 or § 131.11. The interim requirements specified in the variance apply only for CWA section 402 permitting purposes and in issuing certifications under section 401 of the Act for the pollutant(s), permittee(s) and/or water body or waterbody segment(s) covered by the variance.

To date, the EPA's available guidance has characterized variances as temporary changes to the designated use; however, such a characterization might imply that the variance replaces the designated use while the variance is in effect. This has led to conflicting interpretations of how variances affect the implementation of WQS through CWA programs, such as NPDES permits and the CWA 303(d) requirements.

The CWA and implementing regulation direct the states to add waters that are not attaining *any* applicable WQS to their 303(d) impaired waters list. Specifically, CWA section 303(d)(1)(A) states that "each state shall identify those waters within its boundaries for which the effluent limitations required by section 301(b)(1)(A) and section 301(b)(1)(B) of this title are not stringent enough to implement *any* water quality standards applicable to such waters"(emphasis added). Stakeholders have expressed concern that if the interim requirements do not replace the designated use and criterion, there will effectively be two WQS applicable for purposes of implementing the CWA section 303(d) program where a variance has been approved. However, the interim requirements *do not replace* the designated use and criteria for the water body as a whole. Discharger-specific variances affect the development of WQBELs for the discharger(s) specified in the variance; they do not affect the designated use and criterion that apply to the rest of the water body. In addition, variances are time-limited and intended as a tool to facilitate water quality improvements, not to revise the long term goals for a water body. Therefore, any implementation of CWA section 303(d) must continue to be based on the underlying designated uses and criteria for the water body rather than the interim requirements.

By requiring state and tribal regulations to maintain the underlying designated use and criterion where a variance is approved, the proposed regulation will ensure it is clear that the interim requirements associated with a variance do not replace the designated use and criterion. This will, in turn, facilitate a consistent interpretation regarding how variances affect the implementation of WQS through the various CWA programs and how variances are to be used to support feasible progress toward attaining the underlying designated use and criteria.

The EPA invites comment on its proposal and on any other options it should consider or on the interpretations expressed in this section.

iii. Relationship to Technology-Based Requirements in CWA Sections 301(b) and 306

The EPA is proposing to add paragraph (a)(3) to 40 CFR 131.14 to specify that a variance shall not be granted if the designated use and criterion can be achieved by implementing technology-based effluent limits required under sections 301(b) and 306 of the Act.

As with designated use changes, variances are not permissible if the WQS can be attained by implementing technology-based effluent limits required under section 301(b) and 306 of the Act. Section 301(b)(1)(A), (B), and section 306 of the Act provide for technology-based requirements through effluent limitations guidelines and new source performance standards. These technology-based requirements represent the minimum level of control that must be imposed in a permit (40 CFR 125.3). Because variances are allowed only where the designated use and criterion are demonstrated to be unattainable during the term of the variance, it would not be appropriate to use a variance if the designated use and criterion can be attained by implementing the technology-based requirements of the Act.

The EPA invites comment on its proposal and on any other options it should consider or on the interpretations expressed in this section.

b. Part 2—Submission Requirements

This section describes the relevant information that a state or authorized tribe must submit to the EPA when requesting the EPA's review and approval of a variance.

i. Components of a Variance

1. Identifying Information—Pollutant(s), Permittee(s), Location

The EPA is proposing to add paragraph (b)(1)(i) at 40 CFR 131.14 requiring states and authorized tribes to identify, in the variance, the pollutant(s), the permittee(s), and/or the water body or waterbody segment(s) to which the variance applies.

This proposed regulatory revision will require all variances to specify for what, to whom, and/or where the variance applies, which will help ensure full transparency and public participation on the applicability and scope of the variance. This will alleviate any inconsistencies in the way states and tribes have articulated where, when and how the variance applies.

The EPA invites comment on its proposal and on any other options it should consider or on the interpretations expressed in this section.

2. Numeric Interim Requirements That Apply During a Variance

The EPA is proposing to add paragraph (b)(1)(ii) at 40 CFR 131.14 to require that a variance must specify (1) the highest attainable interim use and numeric criterion that will apply during the term of the variance or (2) an interim numeric effluent condition that reflects the highest attainable condition for a specific permittee(s) during the term of the variance. Neither (1) nor (2) shall result in any lowering of the currently attained water quality, unless a time-limited lowering of water quality is necessary during the term of a variance for restoration activities, consistent with § 131.14(b)(2)(ii).

As variances have been implemented to date, some states and tribes have not identified in the variance the interim requirements that shall apply for permitting purposes during the term of the variance. Specifying the interim requirements to be met during the variance will provide the legal basis for permit writers to develop permit limits that derive from and comply with a WQS, as required by the permitting regulations at 40 CFR 122.44(d)(vii)(A).

As discussed in Section III.C, the EPA is proposing a requirement that a state

or tribe adopts the highest attainable use closest to the 101(a)(2) goals when it has demonstrated that the use specified in CWA section 101(a)(2) or a subcategory of such a use is not attainable based on a UAA. The EPA is proposing that a similar requirement apply to variances such that if states or tribes can demonstrate that a use specified in section 101(a)(2) or subcategory of such a use is not attainable for the variance period, then the state or tribe must adopt a variance reflecting the highest attainable condition during the term of the variance. Such a requirement ensures that feasible progress will be made towards the designated use and the criterion to protect that use during the period of the variance.

Requiring that states and tribes establish interim requirements that apply for purposes of CWA section 402 permitting and in issuing certifications under section 401 of the Act, and that such requirements reflect the highest attainable condition during the variance, creates a framework for variances to provide states and tribes with time to implement adaptive management approaches that drive progress towards meeting the designated use and criterion in a transparent and accountable manner—a key environmental benefit of a variance. This is consistent with previous EPA statements in the EPA's WQS Handbook and 1998 ANPRM that discuss the EPA's position regarding the progress to be made during the term of the variance towards attaining the designated use and criterion.[25]

A state's or tribe's determination or identification of the highest attainable interim use need not be complex. A state or tribe could simply include the phrase "variance affected" or "variance modified" to the current use description or the state or tribe could describe the interim use by identifying the parameter included in the variance, such as "pH-limited" use as a way to provide transparency. States and tribes may find it appropriate to adopt such "variance modified" uses as the highest attainable interim use, rather than adopting an alternate use from the state or tribe's current use classification system, as they might be more likely to do if they were making a permanent change to a designated use. To determine the numeric criterion that protects the highest attainable interim use, a state or tribe shall determine the condition that is both feasible to attain and closest to the protection afforded by the designated use and criteria. A state's or tribe's determination of the highest attainable condition and numeric interim requirements to apply during a waterbody variance should include consideration and evaluation of pollutant reductions from all contributing sources. This could include an evaluation of the point source controls, pollutant minimization plans and NPS pollutant reductions that could be achieved in the water body.

Rather than identifying the highest attainable interim use and interim numeric criterion, a state or tribe may choose to specify in its variance that the applicable interim water quality standard shall be defined by a numeric effluent condition that reflects the highest attainable condition for a specific permittee(s) during the term of the variance. Adopting a numeric effluent condition that reflects the highest attainable condition is reasonable because the resulting instream concentration reflects the highest attainable interim use and interim criterion and, therefore, the interim numeric effluent condition is acting as a surrogate for the interim use and interim criterion. If current effluent quality represents the highest attainable condition for a specific permittee(s), then this would become the interim requirement during the term of the variance. In situations where a variance addresses a pollutant(s) for which no feasible wastewater treatment option can be identified, an interim numeric water quality-based effluent condition reflecting the levels currently achievable and a requirement to develop and implement a Pollutant Minimization Program (PMP)[26] together would constitute the highest attainable effluent condition.

The EPA invites comment on its proposal and on any other options it should consider or on the interpretations expressed in this section.

3. Expiration Date

The EPA is proposing to add paragraph (b)(1)(iii) at 40 CFR 131.14 to require that all variances must include an expiration date and that variances must be as short as possible but expire no later than 10 years after the date the state or tribe adopts the variance, consistent with § 131.14(b)(2).

Variances are time-limited; therefore, in order to promote consistency and clarity and to ensure that variances are truly time-limited, the EPA is proposing that all variances include an explicit expiration date. Such expiration date must be consistent with the demonstration that a variance is needed for a specified period of time based on one of the factors identified in proposed § 131.14(b)(2), must be as short as possible, and cannot exceed 10 years. Establishing an expiration date will ensure that the conditions of a variance will be thoroughly re-evaluated and subject to a public review on a regular and predictable basis to determine (1) whether conditions have changed such that the designated use and criterion are now attainable; (2) whether new or additional information has become available to indicate that the designated use and criterion are not attainable in the future (i.e., data or information supports a use change/refinement); or (3) whether feasible progress is being made toward the designated use and criterion and that additional time is needed to make further progress (i.e., whether a variance may be renewed).

The EPA believes that up to 10 years is a reasonable duration for a variance, as it represents two 5-year NPDES permit terms and provides adequate opportunity to implement measures to make feasible progress. A maximum of 10 years is also sufficient to reflect changing circumstances, such as the availability of new economic information or affordable treatment technology that may impact whether or not a variance is still warranted.

The EPA invites comment on its proposal and on any other options it should consider or on the interpretations expressed in this section.

ii. Demonstrating the Need for a Variance—Supporting Documentation

The EPA is proposing to add paragraph (b)(2) at 40 CFR 131.14 to specify that in order to document that a variance is needed for uses specified in section 101(a)(2) or sub-categories of such uses, the state or tribe must demonstrate that attaining the designated use and criterion is not feasible during the term of the variance because of one of the factors listed in § 131.10(g) or because actions necessary to facilitate restoration through dam removal or other significant wetland or stream reconfiguration activities preclude attainment of the designated use and criterion while the actions are being implemented.

[25] The EPA's 1994 WQS Handbook stated that "EPA has approved state adopted variances in the past and will continue to do so if ...reasonable progress is being made toward meeting the standards." The EPA's 1998 ANPRM indicated that the EPA was considering revising its regulations to include a requirement that before a variance may be granted the applicant must include documentation that "...reasonable progress will be made toward meeting the underlying or original standard." The EPA did not propose a revised regulation at that time.

[26] A PMP is a structured process to reduce loadings of a pollutant by identifying, preventing and reducing loadings, improving processes and improving wastewater treatment.

The regulation at 40 CFR 131.10(g) identifies six factors that may be used to demonstrate, through a UAA, when a use specified in section 101(a)(2) of the Act, or a subcategory of such a use, is unattainable. The EPA's current position (and its longstanding practice) is that one of these same § 131.10(g) "attainability" factors must be used by states and tribes to justify why and for how long a variance is necessary for uses specified in section 101(a)(2) or sub-categories of such uses. In developing this proposed regulation, the EPA considered other situations where a variance may be appropriate and the EPA concluded that the current § 131.10(g) factors do not accommodate situations where a variance may be necessary to facilitate short-term efforts to restore the natural physical features (i.e., natural geomorphology) of a system. Specifically, this is meant to address the situation when a time-limited exceedance of a criterion might be expected while efforts for dam removal or significant wetlands or stream reconfiguration/restoration efforts are underway to facilitate restoration of the natural physical features of a water body. The proposed new factor is intended only to cover the length of time necessary to remove the dam or the length of time in which stream restoration activities are actively on-going. Although such a variance might not directly impact a NPDES permittee, it may be necessary to allow states and tribes to certify that any federal license or permit that may result in the discharge of pollutants in state/tribal jurisdiction will still meet their state/tribal WQS, under CWA section 401.

In determining whether or not to grant a variance for uses specified in section 101(a)(2) and sub-categories of such uses (and subsequently submit such a variance to the EPA for review and approval), the state or tribe must consider and evaluate whether the available information supports a conclusion that the designated use and criteria are not feasible to attain during the variance period based on one of the factors listed in § 131.14(b)(2).

A factor that has been commonly used to demonstrate the need for a discharger specific variance is § 131.10(g)(6), which provides that a state or tribe may remove a designated use if "[c]ontrols more stringent than those required by sections 301(b) and 306 of the Act would result in substantial and widespread economic and social impact." The Interim Economic Guidance for Water Quality Standards, published March 1995 (see *http://water.epa.gov/scitech/swguidance/standards/economics/*) provides guidance on the types of information that a state or tribe should consider evaluating and include in its record to support a variance based on § 131.10(g)(6).[27]

The state's or tribe's record for granting a variance based on "Human caused conditions or sources of pollution prevent the attainment of the use and cannot be remedied or would cause more environmental damage to correct than to leave in place" [28] may include, but not be limited to, consideration and evaluation of the following types of available information:

- Monitoring data to determine the current ambient conditions.
- Data/maps showing the geographical extent of the problem.
- Engineering studies and literature of the relevant remediation alternatives and best management practices that could be implemented and documentation that none of the alternatives or practices, if implemented, would result in attaining the designated use and criteria within the variance timeframe.
- Description, with supporting information from the scientific literature, of the environmental impacts associated with the remedial alternatives and an analysis of what could be done in an environmentally safe manner. Such an analysis would facilitate a determination of whether the human caused condition or source of pollution would cause more environmental harm to remedy than to leave in place.
- Modeling data showing the associated pollutant reductions achievable within the timeframe of the variance compared to reductions needed to achieve the designated use and criteria.

A variance should be a transparent mechanism that allows a state, tribe or discharger a defined period of time to conduct any necessary studies so long as the state or tribe demonstrates the need for the variance in accordance with the regulations and the state or tribe retains the applicable criteria for all other pollutants. The EPA commonly receives questions about whether permit compliance schedules can be used for this purpose. Permit compliance schedules may only be used in situations where time is needed for a permittee to come into compliance with the WQBEL in the permit, not to provide time to address uncertainty regarding the appropriateness or attainability of the WQS.

The EPA invites comment on its proposal and on any other options it should consider or on the interpretations expressed in this section.

iii. Identifying and Documenting the Controls for Other Sources Related to the Pollutant(s) and Location(s) Specified in a Waterbody Variance That Could Be Implemented

The EPA is proposing to add paragraph (b)(3) at § 131.14 to specify that, in addition to the other requirements under 131.14(b), for a waterbody variance (one not limited to a specific discharger or dischargers), a state or tribe must include an *identification and documentation* of any cost-effective and reasonable BMPs for nonpoint sources related to the pollutant(s) and location(s) specified in the variance that could be implemented water body wide to make progress towards attaining the designated use and criterion. A state or tribe must provide public notice and comment for any such documentation.

Because other sources of pollution (e.g., nonpoint sources) can have a significant bearing on whether the designated use and associated criterion for the entire water body are attainable, it is essential for states and tribes to consider and provide information to the public regarding the impact that controlling other sources through application of cost-effective and reasonable BMPs could have on water quality before granting a waterbody variance. Doing so could inform the state's or tribe's assessment of what interim actions may be needed to make feasible progress towards attaining the designated use and criterion related to the pollutant(s) and location(s) specified in the variance, as well as what the highest attainable interim designated use and criterion may be and for how long they may be needed.

A similar requirement is set out in the WQS regulation at § 131.10(d) and (h)(2) which specifies that a use is deemed attainable and cannot be removed if it can be achieved by the imposition of/implementing effluent limits required under sections 301(b) and 306 of the Act as well as cost-effective and reasonable best management practices for nonpoint source control. The EPA's current position is that before removing a designated use states and tribes must first evaluate the impact that point and nonpoint source controls might have on water quality. When conducting such an evaluation, states and tribes should consider the impacts from

[27] The § 131.10(g)(6) analysis would include costs of point source controls and the impacts on the surrounding community.

[28] As specified in § 131.10(g)(3) and cross-referenced in § 131.14(b)(2)(i).

implementing any[29] cost-effective and reasonable BMPs for nonpoint source controls water body wide. In situations where it can be demonstrated that a use is precluded by non-anthropogenic stressors (e.g., high levels of a naturally occurring metal in a surface water body), the EPA does not expect states and tribes to evaluate nonpoint source controls, as controlling nonpoint sources would not lead to attainment.

The EPA's proposed requirement for waterbody variances differs from those applicable to designated uses because variances are time-limited and targeted serving as a tool to facilitate progress toward the designated use and criterion. It is unnecessary to require states and tribes to demonstrate that the designated use and criteria are unattainable even if cost effective and reasonable BMPs were implemented, as is required when revising a designated use, because variances do not "permanently" downgrade the designated use but establish a regulatory mechanism by which feasible progress will be made during the term of the variance. Instead, a requirement to identify and document cost-effective and reasonable BMPs for other sources will assist states and tribes in identifying the actions they may need to implement to meet their interim requirements as well as to make feasible progress towards attaining the designated use and criterion.

The EPA invites comment on its proposal and on any other options it should consider or on the interpretations expressed in this section.

c. Part 3—Implementing Variances

The EPA is proposing to add paragraph (c) at 40 CFR 131.14 specifying that variances serve as the basis of a WQBEL included in a NPDES permit for the period the variance is in effect. Any activities required to implement the variance shall be included as conditions of the NPDES permit for the permittee(s) subject to the variance.

When variances are adopted and approved, they serve as the basis of a WQBEL included in a NPDES permit during the variance period. However, any specific actions that will be necessary for the discharger to implement the variance and make such feasible progress are typically at the discretion of the permitting authority. Therefore, in § 131.14(c), the EPA is proposing regulatory language similar to § 131.34(c) and § 131.40(c) linking the requirements of variances to the NPDES permitting process, specifically 40 CFR 122.44(d)(1)(viii)(A) that requires the permitting authority to establish limitations that derive from and comply with the applicable WQS. The EPA believes the proposed regulatory requirement will ensure proper accountability when implementing variances. The proposed provision reflects the provisions in the "Water Quality Guidance for the Great Lakes System" (40 CFR part 132, Appendix F, Procedure 2).

The EPA invites comment on its proposal and on any other options it should consider or on the interpretations expressed in this section.

d. Part 4—How To Renew a Variance

The EPA is proposing to add paragraph (d) at 40 CFR 131.14 to specify that to obtain the EPA's approval of a variance renewal, the state or tribe must meet the requirements of § 131.14 and provide appropriate documentation of the steps taken to meet the requirements of the previous variance. Renewal of the variance may be disapproved if the applicant did not comply with the conditions of the original variance, or otherwise does not meet the requirements of this section. For renewal of a waterbody variance, the state or tribe must also include documentation of whether and to what extent cost-effective and reasonable BMPs have been implemented to address the pollutant(s) subject to the variance and the water quality progress achieved during the variance period.

Although the EPA is proposing to establish a maximum single variance term of no more than 10 years, it recognizes that there may be circumstances in which a renewal of a variance is both necessary and appropriate. As the EPA's 1998 ANPRM articulates, variances are WQS and should be continued or extended only where the initial conditions for granting the variance still apply.[30] If a variance term will expire and the applicant complied with the conditions of the original variance (e.g., feasible progress has been made), but the designated use and criterion remain unattainable, then renewal of a variance may be an appropriate option for the state or tribe to consider.

The EPA is providing an additional requirement for waterbody variances because both point and nonpoint sources are contributing to the water quality challenges. The state or tribe must document whether and to what extent BMPs have been implemented and the water quality progress achieved during the variance period.

This proposed regulation explicitly provides that the EPA may disapprove a renewal of the variance if the applicant did not comply with the conditions of the original variance, or otherwise does not meet the requirements of § 131.14. The EPA recognizes that circumstances out of the permittee, state's or tribe's control may impact the ability to meet the specific conditions and requirements of the variance, even if all required actions to implement the variance were completed. The proposed regulatory language allows the EPA to consider these factors when determining whether to grant a WQS variance renewal. If the EPA disapproves the variance renewal, then the state or tribe must implement its water quality program to meet the applicable designated use and associated criteria or conduct a UAA to justify a revision to the designated use and associated criteria.

The EPA invites comment on its proposal and on any other options it should consider or on the interpretations expressed in this section.

e. Part 5—Variances for the EPA-Promulgated Designated Uses

The EPA is proposing to delete detailed variance procedures promulgated by the EPA in 40 CFR 131.34(c) and 131.40(c) and replace them with language specifying that the appropriate Regional Administrators may grant variances from the EPA-promulgated regulations for Kansas and Puerto Rico consistent with this proposed requirements at § 131.14.

The EPA promulgated variance procedures that the Regional Administrator could use to grant variances from the specific WQS the EPA promulgated for Kansas and Puerto Rico in § 131.34 and 131.40. This proposal reflects the most efficient and transparent approach to ensure that variances granted by the Regional Administrator for the federally promulgated standards in Kansas and Puerto Rico meet the same requirements as the rest of the United States once the EPA finalizes the nationally applicable revisions to 40 CFR part 131.

The EPA invites comment on its proposal and on any other options it should consider or on the interpretations expressed in this section.

G. Provisions Authorizing the Use of Permit-Based Compliance Schedule

1. The EPA Proposal

The EPA is proposing to add a new regulatory provision at § 131.15 to be consistent with the decision of the EPA Administrator in *In the Matter of Star-*

[29] i.e., not just those that may already be required by state regulations.

[30] 63 FR 36759.

Kist Caribe, Inc. (1990 WL 324290 (EPA), 1990 EPA App. LEXIS 45, 3 EAD 172 (April 16, 1990)). This provision would clarify that a permitting authority may only issue compliance schedules for WQBELs in NPDES permits if the state or tribe has authorized issuance of such compliance schedules pursuant to state or tribal law in its water quality standards or implementing regulations. Any such compliance schedule authorizing provision is a WQS subject to the EPA's review and approval. The proposed provision would also clarify that individual compliance schedules issued pursuant to such authorizing provisions are not themselves WQS but must be consistent with CWA section 502(17), the state's or tribe's EPA-approved compliance schedule authorizing provision, and the requirements of 40 CFR 122.2 and 122.47.

2. Rationale for Revision

CWA section 502(17) defines "schedule of compliance" to mean "a schedule of remedial measures including an enforceable sequence of actions or operations leading to compliance with an effluent limitation, other limitation, prohibition, or standard." The EPA's NPDES regulation at 40 CFR 122.2 defines a schedule of compliance as "a schedule of remedial measures included in a 'permit,' including an enforceable sequence of interim requirements . . . leading to compliance with the CWA and regulations." Section 301(b)(1)(C) of the Act specifies that there shall be achieved ". . . not later than July 1, 1977, any more stringent limitation, including those necessary to meet WQS, treatment standards, or schedules of compliance, established pursuant to any State law or regulations (under authority preserved by section 1370 of this title) or any other Federal law or regulation, or required to implement any applicable water quality standard established pursuant to this chapter."

In, *In the Matter of Star-Kist Caribe, Inc.*, the EPA Administrator (in an appeal of an EPA-issued NPDES permit) interpreted CWA 301(b)(1)(C) to mean that (1) after July 1, 1977, permits must require immediate compliance with (i.e., may not contain compliance schedules for) effluent limitations based on WQS adopted before July 1, 1977, and (2) permit compliance schedules are allowed for effluent limitations based on WQS adopted after that date *only* if the state or tribe has clearly indicated in its WQS or implementing regulations that it intends to allow them (i.e., the state's or tribe's WQS or implementing regulations must contain a provision authorizing the use of permit-based compliance schedules). The latter requirement ensures that a permit including such a compliance schedule still meets WQS pursuant to CWA section 301(b)(1)(C).

The EPA's current WQS regulation is silent regarding compliance schedules and compliance schedule authorizing provisions. As a result, despite *Star-Kist*, the EPA is concerned that state/tribal permitting authorities may be including compliance schedules in permits, thus delaying compliance with a WQS-based WQBEL, even though the state/tribe may not have authorized the use of such compliance schedules in its WQS or implementing regulations.

Consistent with the *Star-Kist* decision, a state or tribe has the discretion to include a compliance schedule authorizing provision in its WQS or implementing regulations. Such a provision may also be codified in a state or tribe's NPDES regulations. However, regardless of where it appears, a compliance schedule authorizing provision adopted pursuant to state or tribal law is considered a WQS subject to the EPA's approval under CWA section 303(c)(3). Although a compliance schedule authorizing provision does not describe the desired condition or level of protection of a water body in exactly the same way as a designated use or water quality criteria, it expresses the state's or tribe's intent to allow a delay in meeting the desired condition. Compliance schedule authorizing provisions allow the permitting authority to provide a permittee additional time to comply with a WQBEL that derives from and complies with the applicable WQS beyond the date of permit issuance, which is the date upon which a permittee is otherwise required to comply with its WQBEL. In addition, as articulated in the *Star-Kist* decision, states and tribes may only allow this delay if the applicable WQS is new or revised, after July 1, 1977.

When states and tribes authorize the use of compliance schedules in their WQS or implementing regulations, they ensure that WQBELs subject to appropriately issued compliance schedules are "fully consistent with, and therefore 'meet,' the requirements of the State or tribal water quality standard, as contemplated by [CWA] 301(b)(1)(C)." *Star-Kist* at 175. Once approved pursuant to CWA 303(c)(3), the compliance schedule authorizing provision itself becomes part of the applicable WQS; therefore, any delay in compliance with a WQBEL pursuant to that permit compliance schedule would be consistent with state/tribal WQS. A compliance schedule, as defined by section 502(17) of the Act, that is granted pursuant to a state's or tribe's approved compliance schedule authorizing provision is, on the other hand, a permitting tool and is not itself considered a WQS. The EPA has implemented section 502(17) of the Act in the context of the NPDES permitting program at 40 CFR 122.2 and 122.47. Any compliance schedule, itself, must be consistent with these provisions.

The EPA invites comments on the proposed addition of § 131.15. The EPA also invites comment on any other options it should consider or on the interpretations expressed in this section.

H. Other Changes

1. The EPA Proposal

In the course of developing this proposal, the EPA identified several spelling mistakes, grammatical errors and/or inconsistencies, and incorrect citations in 40 CFR part 131, as well as the need for various conforming edits (e.g., provisions that need to be re-numbered or re-lettered based on a regulatory addition or deletion outlined in this proposal). The EPA is proposing the following changes:

- § 131.2: Change ". . . necessary to protect the uses" to ". . . that protect the designated uses" (consistency with terminology in § 131.11).
- § 131.3(h): Change "technology-bases" to "technology-based" (spelling mistake).
- § 131.3(j): Delete "the Trust Territory of the Pacific Islands."[31] Insert the word "the" in front of "water quality standards program" (grammatical clarification).
- § 131.5(a)(1): Change ". . . has adopted water uses" to ". . . has adopted designated water uses" (grammatical clarification).
- § 131.5(a)(2): Insert ". . . based on sound scientific rationale" (consistency with language in § 131.11).
- § 131.10(j): Insert "and § 131.10(g)" before the word "whenever" (consistency with proposed revisions to § 131.10(g)).
- § 131.10(j)(2): Insert ", to remove a subcategory of such a use," after the first instance of ". . . specified in section 101(a)(2) of the Act" (legal clarification that a UAA is also required when removing a subcategory of a use specified in section 101(a)(2) of the Act without adopting another use in its place).

[31] "The Trust Territory of the Pacific Islands" became the "Commonwealth of the Northern Mariana Islands" in 1986 via Presidential Proclamation. See *http://www.presidency.ucsb.edu/ws/index.php?pid=36688#axzz1XrK7AXLN.*

• § 131.11(a)(2): Change reference from "40 CFR part 35" to "40 CFR part 130" to reflect the correct citation.

• § 131.11(b): Italicize "Form of criteria" (consistency with formatting in § 131.11(a)).

• § 131.12(a)(2): Insert "the protection and" into the phrase "propagation of fish, shellfish and wildlife" to be consistent with CWA 101(a)(2) and the rest of the WQS regulation at part 131. Change "assure" to "ensure" (grammatical clarification).

• § 131.20(b): Change "hold a public hearing" to "hold public hearings" and add "or revising" after "reviewing" (consistency with CWA 303(c) and § 131.20(a)). Insert "EPA's" in front of "public participation regulation" (clarification that 40 CFR part 25 is the EPA's regulation). Delete the phrase "EPA's water quality management regulation (40 CFR 130.3(b)(6))" (nonexistent citation).

The EPA invites comments on the proposed amendments described above. The EPA also invites comment on any other options it should consider or on the interpretations expressed in this section.

IV. When does this action take effect?

Comments on this proposed rulemaking must be received on or before December 3, 2013. Should this proposed rulemaking be finalized, the effective date will likely be 60 days after date of publication of the final rule in the **Federal Register**. For judicial review purposes, the effective date will likely be 60 days after date of publication of the final rule in the **Federal Register**.

The EPA is proposing to require states and tribes to meet the requirements of the final rule on the effective date of the final rule. The EPA's expectation is that, where a new or revised requirement necessitates a change to state or tribal WQS, such changes will occur within the next triennial review that the state or tribe initiates after the EPA's publication of the final rule.

The EPA invites comments on the proposed effective dates. The EPA also invites comment on any other options it should consider or on the interpretations expressed in this section.

V. Economic Impacts on State and Tribal WQS Programs

The EPA evaluated the potential incremental administrative burdens and costs that may be associated with this proposal. Incremental burden and costs are those above and beyond the burden and costs associated with implementation of current WQS regulations. Because this proposal will not establish any requirements directly applicable to regulated entities, the focus of the EPA's economic analysis is to estimate the potential administrative burden and costs to state, tribal, and territorial governments, and the EPA. The EPA's economic analysis is documented in *Economic Analysis for the Water Quality Standards Regulatory Clarifications (Proposed Rule)* and can be found in the docket for this proposal.

The EPA assessed the potential incremental burden and costs associated with this proposed regulation revisions by first identifying those elements of the proposed revisions that may impose incremental burdens and costs. The EPA estimated the incremental number of labor hours potentially required by states and tribes to comply with those elements of the proposed regulations, and then estimated the costs associated with those additional labor hours. The EPA identified four areas where incremental burdens and costs may be anticipated: (1) One-time burden and costs associated with state and tribal rulemaking activities because states and tribes may need to adopt new or revised provisions into their WQS, (2) annual costs associated with designating uses because identifying the highest attainable use when performing a UAA may require additional labor hours, (3) annual costs associated with antidegradation implementation including reviewing a greater number and more complex antidegradation requests, and (4) annual costs associated with additional development and documentation of variance requests. In addition to the proposed requirements included in this proposal, the EPA is considering and requesting comment on whether the EPA should include a requirement that antidegradation implementation methods be formally adopted as WQS and thus subject to the EPA's review and approval or disapproval. Incremental burden and costs were estimated for all 50 states, the District of Columbia, 5 territories, and the 39 Indian tribes authorized to administer a WQS program with WQS approved by the EPA.

Estimates of the incremental administrative burden and costs to state and tribal governments associated with this proposal without the requirement to adopt antidegradation implementation methods as WQS are summarized in the following table:

SUMMARY OF INCREMENTAL ADMINISTRATIVE BURDEN AND COSTS TO STATE AND TRIBAL GOVERNMENTS ASSOCIATED WITH THIS PROPOSAL WITHOUT THE REQUIREMENT TO ADOPT ANTIDEGRADATION IMPLEMENTATION METHODS AS WQS

Provision	One-time			Recurring	
	Burden (hours)	Cost (2013$ millions)	Annualized cost (2013$ millions/year) [1]	Burden (hours/year)	Cost (2013$ millions/year)
Rulemaking Activities	9,500–47,500	$0.46–$2.28	$0.03–$0.15	—	—
Designated Uses	—	—	—	240–1,200	$0.01–$0.06
Antidegradation [2]	—	—	—	97,070–145,605	$4.61–$7.04
Variances	—	—	—	4,620–5,310	$0.22–$0.26
National Total	9,500–47,500	$0.46–$2.28	$0.03–$0.15	101,930–152,115	$4.84–$7.36

'—' = not applicable.

[1] Although the EPA expects these one-time costs to occur once over a 3 year period, they are annualized here at 3% discount rate over 20 years for comparative purposes.

[2] Includes annual costs associated with reviewing a greater number and more complex antidegradation requests.

Estimates of the incremental administrative burden and costs to the EPA associated with this proposal without the requirement to adopt antidegradation implementation methods as WQS are summarized in the following table:

SUMMARY OF POTENTIAL INCREMENTAL ADMINISTRATIVE BURDEN AND COSTS TO THE EPA ASSOCIATED WITH THIS PROPOSAL WITHOUT THE REQUIREMENT TO ADOPT ANTIDEGRADATION IMPLEMENTATION METHODS AS WQS

One-time					Recurring			
Costs to states and tribes (2013$ million)	Costs to the agency [1] (2013$ million)	Annualized cost to the agency [2] (2013$ million per year)	Burden		Costs to states and tribes (2013$ million per year)	Costs to the agency [1] (2013$ million per year)	Burden	
			Hours [3]	FTEs [4]			Hours per year [3]	FTEs per year [4]
$0.46–$2.28	$0.09–$0.46	$0.01–$0.03	1,200–6,040	0.58–2.9	$4.84–$7.36	$0.97–$1.47	12,810–19,470	6.16–9.36

[1] Assuming that the incremental costs to the EPA are equal to 20% of the costs to states and tribes.
[2] Although the EPA expects these one-time costs to occur once over a 3 year period, they are annualized here at 3% discount rate over 20 years for comparative purposes.
[3] Total costs to the Agency divided by hourly wage rate (including overhead and benefits) of $75.55 per hour.
[4] Burden hours to the Agency divided by hours worked by full-time equivalent (FTE) employees per year (2,080 hours per year).

A summary of the combined estimated costs to all potentially affect states, tribes, and the EPA without the requirement to adopt antidegradation implementation methods as WQS are summarized in the following table:

SUMMARY OF POTENTIAL INCREMENTAL ADMINISTRATIVE BURDENS AND COSTS ASSOCIATED WITH THE PROPOSED RULE TO STATES, TRIBES, AND THE EPA WITHOUT THE REQUIREMENT TO ADOPT ANTIDEGRADATION IMPLEMENTATION METHODS AS WQS

Entities	One-time			Recurring	
	Burden (hours)	Cost (2013$ millions)	Annualized cost [1] (2013$ million/ year)	Burden (hours/year)	Cost (2013 $millions/year)
States and tribes	9,500–47,500	$0.46–$2.28	$0.03–$0.15	101,930–152,115	$4.84–$7.36
Agency	1,200–6,040	$0.09–$0.46	$0.01–$0.03	12,810–19,470	$0.97–$1.47
Total	10,700–53,540	$0.55–$2.74	$0.04–$0.18	114,740–171,585	$5.81–$8.83

[1] Although the EPA expects these one-time costs to occur once over a 3 year period, they are annualized here at 3% discount rate over 20 years for comparative purposes.

To estimate the total annual cost of this proposal without the requirement to adopt antidegradation implementation methods as WQS which include both one-time costs and recurring costs, the EPA annualized the one-time costs over a period of 20 years. Using a 20-year annualization period and a discount rate of three percent, total annual costs for this proposal without the requirement to adopt antidegradation implementation methods as WQS are estimated to range from $5.84 million ($0.04 million + $5.81 million) to $9.01 million ($0.18 million + $8.83 million) per year.

In addition to the proposed requirements included in this proposal, the EPA is considering and requesting comment on whether the EPA should include a requirement that antidegradation implementation methods be formally adopted as WQS and thus subject to the EPA's review and approval or disapproval. This additional requirement would require affected entities to develop or revise antidegradation implementation methods, and adopt the implementation methods in WQS, resulting in one-time (nonrecurring) burden and costs. Estimates of the incremental administrative burden and costs to state and tribal governments associated with this proposal including the requirement to adopt antidegradation implementation methods into WQS are summarized in the following table:

SUMMARY OF INCREMENTAL ADMINISTRATIVE BURDEN AND COSTS TO STATE AND TRIBAL GOVERNMENTS ASSOCIATED WITH THIS PROPOSAL WITH THE REQUIREMENT TO ADOPT ANTIDEGRADATION IMPLEMENTATION METHODS AS WQS

Provision	One-time			Recurring	
	Burden (hours)	Cost (2013$ millions)	Annualized cost [1] (2013$ millions/ year)	Burden (hours/year)	Cost (2013$ millions/year)
Rulemaking Activities	9,500–47,500	$0.46–$2.28	$0.03–$0.15	—	—
Designated Uses	—	—	—	240–1,200	$0.01–$0.06
Antidegradation	33,600–67,200	1.61–3.23	0.11–0.22	97,070–145,605	4.61–7.04
Variances	—	—	—	4,620–5,310	0.22–0.26
National Total	43,100–114,700	2.07–5.51	0.14–0.37	101,930–152,115	4.84–7.36

'—' = not applicable.
[1] Although the EPA expects these one-time costs to occur once over a 3 year period, they are annualized here at 3% discount rate over 20 years for comparative purposes.

Estimates of the incremental administrative burden and costs to the EPA associated with this proposal including the requirement to adopt antidegradation implementation

methods into WQS are summarized in the following table:

SUMMARY OF POTENTIAL INCREMENTAL ADMINISTRATIVE BURDEN AND COSTS TO THE EPA ASSOCIATED WITH THIS PROPOSAL WITH THE REQUIREMENT TO ADOPT ANTIDEGRADATION IMPLEMENTATION METHODS AS WQS

One-time					Recurring			
Costs to states and tribes (2013$ million)	Costs to the agency[1] (2013$ million)	Annualized cost to the agency[2] (2013$ million per year)	Burden		Costs to states and tribes (2013$ million per year)	Costs to the agency[1] (2013$ million per year)	Burden	
			Hours[3]	FTEs[4]			Hours per year[3]	FTEs per year[4]
$2.07–$5.51	$0.41–$1.10	$0.03–$0.07	5,480–14,570	2.63–7.01	$4.84–$7.36	$0.97–$1.47	12,810–19,470	6.16–9.36

[1] Assuming that the incremental costs to the EPA are equal to 20% of the costs to states and tribes.
[2] Although the EPA expects these one-time costs to occur once over a 3 year period, they are annualized here at 3% discount rate over 20 years for comparative purposes.
[3] Total costs to the Agency divided by hourly wage rate (including overhead and benefits) of $75.55 per hour.
[4] Burden hours to the Agency divided by hours worked by full-time equivalent (FTE) employees per year (2,080 hours per year).

A summary of the combined estimated costs of this proposal to all potentially affect states, tribes, and the EPA including the requirement to adopt antidegradation implementation methods into WQS are summarized in the following table.

SUMMARY OF POTENTIAL INCREMENTAL ADMINISTRATIVE BURDENS AND COSTS ASSOCIATED WITH THE PROPOSED RULE TO STATES, TRIBES, AND THE EPA WITH THE REQUIREMENT TO ADOPT ANTIDEGRADATION IMPLEMENTATION METHODS AS WQS

Entities	One-time			Recurring	
	Burden (hours)	Cost (2013$ millions)	Annualized cost[1] (2013$ millions/year)	Burden (hours/year)	Cost (2013 $millions/year)
States and tribes	43,100–114,700	$2.07–$5.51	$0.14–$0.37	101,930–152,115	$4.84–$7.36
Agency	5,480–14,570	$0.41–$1.10	$0.03–$0.07	12,810–19,470	$0.97–$1.47
Total	48,580–129,270	$2.48–$6.61	$0.17–$0.44	114,740–171,585	$5.81–$8.83

[1] Although the EPA expects these one-time costs to occur once over a 3 year period, they are annualized here at 3% discount rate over 20 years for comparative purposes.

To estimate the total annual cost of this proposal including the requirement to adopt antidegradation implementation methods as WQS which include both one-time costs and recurring costs, the EPA annualized the one-time costs over a period of 20 years. Using a 20-year annualization period and a discount rate of three percent, total annual costs for this proposal with the requirement to adopt antidegradation implementation methods as WQS are estimated to range from $5.98 million ($0.17 million + $5.81 million) to $9.27 million ($0.44 million + $8.83 million) per year.

In addition to estimating potential burden and costs, the EPA also evaluated the potential benefits associated with this proposal. States, tribes, stakeholders, and the public will benefit from the proposed clarifications of the WQS regulations by ensuring better utilization of available WQS tools that allow states and tribes the flexibility to implement their WQS in an efficient manner while providing transparency and open public participation. Although associated with potential administrative burden and costs in some areas, this proposal has the potential to partially offset these costs by reducing regulatory uncertainty and consequently increasing overall program efficiency. Furthermore, more efficient and effective implementation of state and tribal WQS has the potential to provide a variety of economic benefits associated with cleaner water including the availability of clean, safe, and affordable drinking water, water of adequate quality for agricultural and industrial use, and water quality that supports the commercial fishing industry and higher property values. Nonmarket benefits of this proposal include the protection and improvement of public health and greater recreational opportunities. The EPA acknowledges that achievement of any benefits associated with cleaner water would involve additional control measures, and thus costs to regulated entities and non-point sources, that have not been included in the economic analyses for this proposed rule. The EPA has not attempted to quantify either the costs of such control measures that might ultimately be required as a result of this rule, or the benefits they would provide. Complete details on how the EPA evaluated burden, costs, and benefits are documented in *Economic Analysis for the Water Quality Standards Regulatory Clarifications (Proposed Rule)* included in the docket for this proposal.

The EPA invites comments on its economic analysis. Specifically, the EPA invites comments on the accuracy of the burden and costs estimates presented in this proposal, and any actual state or tribal data that may help to refine these estimates. This proposal does not establish any requirements directly applicable to regulated point sources or nonpoint sources of pollution, although the EPA recognizes that these sources could potentially incur costs as a result of changes to WQS adopted by states and tribes as a result of this rule (states and tribes could also adopt new or revised WQS independent of this proposed rule). However, unlike some other EPA WQS rules for which an economic analysis was prepared, this proposal does not lend itself to identification of readily predictable outcomes regarding changes to state water quality standards that might result. Likewise, the EPA could

not predict requirements that could ultimately be imposed on NPDES permittees and nonpoint sources. Thus, the EPA has not analyzed potential costs or cost savings associated with any consequences of revised state or tribal WQS. Nonetheless, the EPA is interested in the potential implications of this proposal for regulated entities and non-point sources and on whether and how it should incorporate such costs in its economic analysis of the rule.

VI. Statutory and Executive Order Reviews

A. Executive Order 12866: Regulatory Planning and Review and Executive Order 13563: Improving Regulation and Regulatory Review

Under Executive Order (E.O.) 12866 (58 FR 51735, October 4, 1993), this action is a "significant regulatory action." Accordingly, the EPA submitted this action to the Office of Management and Budget (OMB) for review under E.O.s 12866 and 13563 (76 FR 3821, January 21, 2011) and any changes made in response to OMB recommendations have been documented in the docket for this action.

In addition, the EPA prepared an analysis of the potential costs and benefits associated with this action. This analysis is contained in "Economic Analysis for the Proposed Revisions to Water Quality Standards Regulatory Revisions." A copy of the analysis is available in the docket for this action and the analysis is briefly summarized in Section V of the preamble.

B. Paperwork Reduction Act

The information collection requirements in this proposed rule have been submitted for approval to the Office of Management and Budget (OMB) under the Paperwork Reduction Act, 44 U.S.C. 3501 et seq. The Information Collection Request (ICR) document prepared by the EPA has been assigned EPA ICR number 2449.01.

The EPA is proposing the WQS Regulatory Clarifications Rule to improve the regulation's effectiveness in helping restore and maintain the chemical, physical, and biological integrity of the nation's waters. The core of the current regulation has been in place since 1983; since then, a number of issues have been raised by stakeholders or identified by the EPA in the implementation process that will benefit from clarification and greater specificity. The proposed rule addresses the following key program areas: (1) Administrator's determinations that new or revised WQS are necessary, (2) designated uses, (3) triennial reviews, (4) antidegradation, (5) variances to WQS, and (5) compliance schedule authorizing provisions. In addition to the proposed requirements included in this proposal, the EPA is considering and requesting comment on whether the EPA should require that antidegradation implementation methods be adopted as WQS and thus subject to the EPA's review and approval or disapproval. This mandatory information collection will ensure the EPA has the needed information to review standards and make approvals or disapprovals in accordance with provisions in the proposed Water Quality Standards Regulatory Clarifications Rule. Under the Clean Water Act (CWA), the EPA is responsible for reviewing and approving or disapproving new and revised WQS submitted by states and tribes. The EPA will use the information required by this proposed rule to carry out its responsibility under the CWA. In reviewing state and tribal standards submissions, the EPA considers whether submissions are consistent with the WQS regulation at part 131. The WQS Regulatory Clarifications Rule will add new requirements to part 131. If the information collection activities in the WQS Regulatory Clarifications Rule are not carried out, specific improvements in the implementation of the WQS program will not take place. In some cases, implementation and control steps such as total maximum daily loads and National Pollutant Discharge Elimination System permits may not be as protective as necessary under the CWA.

Burden is defined at 5 CFR 1320.3(b). The EPA expects that the proposed rule will lead to incremental burden hours and labor costs in the following areas: rulemaking activities, designated uses, antidegradation, and variances to WQS. The EPA estimates the cost of labor from data on state government hourly wage rates (data are not available for tribes). The labor categories chosen as applicable to WQS regulatory revision efforts are Environmental Scientist, Department Manager, Environmental Engineer, and Economist. Given the 2012 labor rates for these categories, inflated to March 2013 dollars using the Bureau of Labor Statistics (BLS) Employment Cost Index for professional and related state and local government workers (116.0/115.0 = 1.01), and accounting for benefits using the BLS Employer Cost for Employee Compensation for state and local professional government workers (32.7% of total compensation is attributable to benefits), the EPA calculated an average hourly wage rate of $48.

The EPA estimates the incremental number of labor hours using historical information and data, and the historical knowledge and best professional judgment of EPA personnel with experience administering the WQS program. A total of 95 governmental entities are potentially affected by the proposed rule: 50 states, the District of Columbia, 6 territories, and 39 tribes that have authority to administer WQS programs. Rulemaking activities result in one-time (nonrecurring) burden and costs. Note that these one-time activities will occur over an initial three-year period. The proposed rule will also require affected entities to undertake the following activities each year: conduct use attainability analyses to determine the highest attainable use, review alternative analyses in antidegradation requests, review additional antidegradation requests for high quality waters, comply with new submission requirements for variances, and review additional variance renewal applications. Given the EPA's estimates of the number and frequency of labor hours associated with each of the proposed provisions, the total one-time incremental burden (during each of the first three years) associated with the proposed rule without requiring adoption of antidegradation implementation methods as WQS ranges from 9,500 hours to 47,500 hours, while the annual incremental burden ranges from 101,930 hours to 152,115 hours. Given an hourly wage rate of $48, these labor hours lead to total one-time costs (incurred during each of the first three years) of approximately $0.46 million to $2.28 million and annual costs of $4.84 million to $7.36 million. These incremental burden and costs are associated with a total of 32 one-time responses per year during the initial three-year period for rulemaking activities. In addition, the number of annual responses is 1,405 responses.

In addition to the proposed requirements included in this proposal, the EPA is considering and requesting comment on whether the EPA should include a requirement that antidegradation implementation methods be formally adopted as WQS and thus subject to the EPA's review and approval or disapproval. This additional requirement would require affected entities to develop or revise antidegradation implementation methods, and adopt antidegradation implementation methods as WQS resulting in one-time (nonrecurring) burden and costs. Including this

additional requirement, the total one-time incremental burden (during each of the first three years) associated with the proposed rule ranges from 43,100 hours to 114,700 hours, while the annual incremental burden remains the same ranging from 101,930 hours to 152,115 hours. Given an hourly wage rate of $48, these labor hours lead to total one-time costs (incurred during each of the first three years) of approximately $2.07 to $5.51 million and annual costs of $4.84 to $7.36 million. These incremental burden and costs are associated with a total of 32 one-time responses per year during the initial three-year period for rulemaking activities. In addition, the number of annual responses is 1,405 responses.

An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number. The OMB control numbers for EPA's regulations in 40 CFR are listed in 40 CFR part 9.

To comment on the Agency's need for this information, the accuracy of the provided burden estimates, and any suggested methods for minimizing respondent burden, the EPA has established a public docket for this rule, which includes this ICR, under Docket ID number EPA–HQ–OW–2010–0606. Submit any comments related to the ICR to the EPA and OMB. See ADDRESSES section at the beginning of this notice for where to submit comments to the EPA. Send comments to OMB at the Office of Information and Regulatory Affairs, Office of Management and Budget, 725 17th Street NW., Washington, DC 20503, Attention: Desk Office for EPA. Since OMB is required to make a decision concerning the ICR between 30 and 60 days after September 4, 2013, a comment to OMB is best assured of having its full effect if OMB receives it by October 4, 2013. The final rule will respond to any OMB or public comments on the information collection requirements contained in this proposal.

C. Regulatory Flexibility Act

The Regulatory Flexibility Act (RFA) generally requires an agency to prepare a regulatory flexibility analysis of any rule subject to notice and comment rulemaking requirements under the Administrative Procedure Act or any other statute unless the agency certifies that the rule will not have a significant economic impact on a substantial number of small entities. Small entities include small businesses, small organizations, and small governmental jurisdictions.

For purposes of assessing the impacts of this rule on small entities, small entity is defined as (1) a small business as defined by the Small Business Administration's (SBA) regulations at 13 CFR 121.201; (2) a small governmental jurisdiction that is a government of a city, county, town, school district or special district with a population of less than 50,000; and (3) a small organization that is any not-for-profit enterprise which is independently owned and operated and is not dominant in its field.

After considering the economic impacts of this proposed rule on small entities, I certify that this action will not have a significant economic impact on a substantial number of small entities. This proposed rule will not impose any requirements on small entities.

State and tribal governments responsible for administering or overseeing water quality programs may be directly affected by this rulemaking, as states and tribes may need to consider and implement new provisions, or revise existing provisions, in their WQS. Small entities, such as small businesses or small governmental jurisdictions, are not directly regulated by this rule. The EPA continues to be interested in the potential impacts of the proposed rule on small entities and welcomes comments on issues related to such impacts.

D. Unfunded Mandates Reform Act

This rule does not contain a Federal mandate that may result in expenditures of $100 million or more for state, local, and tribal governments, in the aggregate, or for the private sector in any one year. The EPA estimates total annual costs to states and tribes to range from $4,840,000 to $7,360,000. Thus, this rule is not subject to the requirements of sections 202 or 205 of the Unfunded Mandates Reform Act of 1995 (UMRA).

This rule is also not subject to the requirements of section 203 of UMRA because it contains no regulatory requirements that might significantly or uniquely affect small governments.

E. Executive Order 13132 (Federalism)

Under section 6(b) of E.O. 13132, the EPA may not issue an action that has federalism implications, that imposes substantial direct compliance costs, and that is not required by statute, unless the Federal government provides the funds necessary to pay the direct compliance costs incurred by state and local governments, or the EPA consults with state and local officials early in the process of developing the proposed action. In addition, under section 6(c) of E.O. 13132, the EPA may not issue an action that has federalism implications and that preempts state law, unless the Agency consults with state and local officials early in the process of developing the proposed action.

The EPA has concluded that the action does not have federalism implications. The EPA is proposing changes to provide clarity and transparency in the WQS regulation that may require state and local officials to reevaluate or revise their standards. However, it will not impose substantial direct compliance costs on state or local governments, nor will it preempt state law. Thus, the requirements of sections 6(b) and 6(c) of the E.O. do not apply to this action.

Consistent with the EPA's policy, the EPA nonetheless consulted with state and local officials early in the process of developing the proposed action to allow them to provide meaningful and timely input into its development. In August and September 2010, the EPA consulted with representatives from states and intergovernmental associations to hear their views on the proposed regulatory changes. Participants expressed concern that the proposed changes may impose a resource burden on state and local governments, as well as infringe on states' flexibility in the areas of antidegradation and designated uses. The EPA's view is that such changes would generally codify the EPA's current practice and provide clear expectations to state and local regulators. Participants urged the EPA to ensure that states with satisfactory regulations in these areas are not unduly burdened by the proposed changes.

Keeping with the spirit of E.O. 13132, and consistent with the EPA's policy to promote communications between the EPA and state and local governments, the EPA specifically solicits comment on this proposed action from state and local officials. In particular, the EPA requests comment on any provision in this proposed rule that state officials believe would impose an undue burden on state water quality standards programs.

F. Executive Order 13175

Subject to the E.O. 13175 (65 FR 67249, November 9, 2000), the EPA may not issue a regulation that has tribal implications, that imposes substantial direct compliance costs, and that is not required by statute, unless the federal government provides the funds necessary to pay the direct compliance costs incurred by tribal governments, or the EPA consults with tribal officials early in the process of developing the proposed regulation and develops a tribal summary impact statement.

The EPA has concluded that this action may have tribal implications. However, it will neither impose substantial direct compliance costs on tribal governments, nor preempt tribal law. To date, 48 Indian tribes have been approved for treatment in a manner similar to a state (TAS) for CWA sections 303 and 401. Of the 48 tribes, 39 have federally approved WQS in their respective jurisdictions. All of these authorized tribes are subject to this proposed rule. However, this rule might impact other tribes as well because federal, state or authorized tribal standards may apply to waters adjacent to the tribal waters. The EPA consulted with tribal officials early in the process of developing this regulation to allow them to provide meaningful and timely input into its development. In August 2010, the EPA held a tribes-only consultation session to hear their views and answer questions of all interested tribes on the targeted areas the EPA is considering for regulatory revision. Tribes expressed the need for additional guidance and assistance in implementing the proposed rulemaking, specifically for development of antidegradation implementation methods and determination of the highest attainable use. The EPA has considered the burden to states and tribes in developing this proposal and, when possible, has chosen to provide sufficient direction and flexibility to allow tribes to spend resources addressing other aspects of their WQS programs. The EPA also intends to release updated guidance in a new edition of the WQS Handbook. The EPA specifically solicits additional comment on this proposed action from tribal officials.

G. Executive Order 13045: Protection of Children From Environmental Health Risks and Safety Risks

This action is not subject to E.O. 13045 (62 FR 19885, April 23, 1997) because it is not economically significant as defined in E.O. 12866, and because the Agency does not believe the environmental health or safety risks addressed by this action present a disproportionate risk to children.

H. Executive Order 13211: Actions Concerning Regulations That Significantly Affect Energy Supply, Distribution, or Use

This action is not a "significant energy action" as defined in E.O. 13211 (66 FR 28355, May 22, 2001), because it is not likely to have a significant adverse effect on the supply, distribution, or use of energy.

I. National Technology Transfer and Advancement Act

Section 12(d) of the National Technology Transfer and Advancement Act of 1995 (NTTAA), Pub. L. 104–113, 12(d) (15 U.S.C. 272 note) directs the EPA to use voluntary consensus standards in its regulatory activities unless to do so would be inconsistent with applicable law or otherwise impractical. Voluntary consensus standards are technical standards (e.g., materials specifications, test methods, sampling procedures, and business practices) that are developed or adopted by voluntary consensus standards bodies. NTTAA directs the EPA to provide Congress, through OMB, explanations when the Agency decides not to use available and applicable voluntary consensus standards.

This proposed rulemaking does not involve technical standards. Therefore, the EPA is not considering the use of any voluntary consensus standards.

J. Executive Order 12898: Federal Actions To Address Environmental Justice in Minority Populations and Low-Income Populations

E.O. 12898 (59 FR 7629, February 16,1994) establishes federal executive policy on environmental justice. Its main provision directs federal agencies, to the greatest extent practicable and permitted by law, to make environmental justice part of their mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of their programs, policies, and activities on minority populations and low-income populations in the United States.

The EPA has determined that this proposed rule will not have disproportionately high and adverse human health or environmental effects on minority or low-income populations because it does not adversely affect the level of protection provided to human health or the environment. This proposed rulemaking does not directly establish water quality standards for a state or tribe. In addition, this proposed rulemaking is national in scope, and therefore is not specific to a particular geographic area(s).

List of Subjects in 40 CFR Part 131

Environmental protection, Indians—lands, Intergovernmental relations, Reporting and recordkeeping requirements, Water pollution control.

Dated: August 20, 2013.

Gina McCarthy,

Administrator.

For the reasons stated in the preamble, the EPA proposes to amend 40 CFR part 131 as follows:

PART 131—WATER QUALITY STANDARDS

■ 1. The authority citation for part 131 continues to read as follows:

Authority: 33 U.S.C. 1251 *et seq.*

Subpart A—General Provisions

■ 2. Amend § 131.2 by revising the first sentence to read as follows:

§ 131.2 Purpose.

A water quality standard defines the water quality goals of a water body, or portion thereof, by designating the use or uses to be made of the water and by setting criteria that protect the designated uses. * * *

■ 3. Amend § 131.3 by revising paragraphs (h) and (j), and adding paragraph (m) to read as follows:

§ 131.3 Definitions.

* * * * *

(h) *Water quality limited segment* means any segment where it is known that water quality does not meet applicable water quality standards, and/or is not expected to meet applicable water quality standards, even after the application of the technology-based effluent limitations required by sections 301(b) and 306 of the Act.

* * * * *

(j) *States* include: The 50 States, the District of Columbia, Guam, the Commonwealth of Puerto Rico, Virgin Islands, American Samoa, the Commonwealth of the Northern Mariana Islands, and Indian Tribes that EPA determines to be eligible for purposes of the water quality standards program.

* * * * *

(m) *Highest attainable use* is the aquatic life, wildlife, and/or recreation use that is both closest to the uses specified in section 101(a)(2) of the Act and attainable, as determined using best available data and information through a use attainability analysis defined in § 131.3(g).

■ 4. Amend § 131.5 by:

■ a. Revising paragraphs (a)(1) and (a)(2);

■ b. Redesignating paragraphs (a)(3) through (a)(5) as (a)(4) through (a)(6) and adding a new paragraph (a)(3); and

■ c. Revising paragraph (b).

The revisions and additions read as follows:

§ 131.5 EPA Authority.

(a) * * *

(1) Whether the State has adopted designated water uses which are consistent with the requirements of the Clean Water Act;

(2) Whether the State has adopted criteria that protect the designated water uses based on sound scientific rationale;

(3) Whether the State has adopted an antidegradation policy consistent with § 131.12(a), and if the State has chosen to adopt implementation methods, whether those implementation methods are consistent with § 131.12;

* * * * *

(b) If EPA determines that the State's or Tribe's water quality standards are consistent with the factors listed in paragraphs (a)(1) through (a)(6) of this section, EPA approves the standards. EPA must disapprove the State's or Tribe's water quality standards and promulgate Federal standards under section 303(c)(4), and for Great Lakes States or Great Lakes Tribes under section 118(c)(2)(C) of the Act, if State or Tribal adopted standards are not consistent with the factors listed in paragraphs (a)(1) through (a)(6) of this section. EPA may also promulgate a new or revised standard when necessary to meet the requirements of the Act.

* * * * *

Subpart B—Establishment of Water Quality Standards

■ 5. Amend § 131.10 by revising paragraph (g) introductory text and paragraphs (j), and (k) to read as follows:

§ 131.10 Designation of uses.

* * * * *

(g) Pursuant to § 131.10(j), States may designate or remove a use or a sub-category of a use as long as the action does *not* remove protection for an existing use, and the State can demonstrate that attaining the use is not feasible because of one of the six factors in this paragraph. If a State adopts new or revised water quality standards based on a use attainability analysis, the State shall also adopt the highest attainable use and the criteria to protect that use. To meet this requirement, States may, at their discretion, utilize their current use categories or subcategories, develop new use categories or subcategories, or adopt another use which may include a location-specific use.

* * * * *

(j) A State must conduct a use attainability analysis as described in § 131.3(g), and § 131.10(g), whenever:

(1) The State designates or has designated uses for a water body for the first time that do not include the uses specified in section 101(a)(2) of the Act, or

(2) The State wishes to remove a designated use that is specified in section 101(a)(2) of the Act, to remove a sub-category of such a use, or to designate a sub-category of such a use which requires criteria less stringent than previously applicable.

(k) A State is not required to conduct a use attainability analysis whenever:

(1) The State designates or has designated uses for a water body for the first time that include the uses specified in section 101(a)(2) of the Act, or

(2) The State wishes to remove a designated use that is not specified in section 101(a)(2) of the Act, or designate a sub-category of a use specified in section 101(a)(2) of the Act which requires criteria at least as stringent as previously applicable.

■ 6. Amend § 131.11 by revising paragraphs (a)(2) and (b) introductory text to read as follows:

§ 131.11 Criteria.

(a) * * *

(2) *Toxic Pollutants.* States must review water quality data and information on discharges to identify specific water bodies where toxic pollutants may be adversely affecting water quality or the attainment of the designated water use or where the levels of toxic pollutants are at a level to warrant concern and must adopt criteria for such toxic pollutants applicable to the water body sufficient to protect the designated use. Where a State adopts narrative criteria for toxic pollutants to protect designated uses, the State must provide information identifying the method by which the State intends to regulate point source discharges of toxic pollutants on water quality limited segments based on such narrative criteria. Such information may be included as part of the standards or may be included in documents generated by the State in response to the Water Quality Planning and Management Regulations (40 CFR part 130).

(b) *Form of criteria:* In establishing criteria, States should:

* * * * *

■ 7. Amend § 131.12 by revising the section heading and paragraphs (a) introductory text and (a)(2), and adding paragraph (b) to read as follows:

§ 131.12 Antidegradation Policy and Implementation Methods.

(a) The State shall develop and adopt a statewide antidegradation policy. The antidegradation policy shall, at a minimum, be consistent with the following:

* * * * *

(2) Where the quality of the waters exceed levels necessary to support the protection and propagation of fish, shellfish, and wildlife and recreation in and on the water, that quality shall be maintained and protected unless the State finds, after full satisfaction of the intergovernmental coordination and public participation provisions of the State's continuing planning process, that allowing lower water quality is necessary to accommodate important economic or social development in the area in which the waters are located. In allowing such degradation or lower water quality, the State shall ensure water quality adequate to protect existing uses fully. Further, the state shall ensure that there shall be achieved the highest statutory and regulatory requirements for all new and existing point sources and all cost-effective and reasonable best management practices for nonpoint source control.

* * * * *

(b) The State shall develop and make available to the public statewide methods for implementing the antidegradation policy adopted pursuant to paragraph (a) of this section. A State's antidegradation implementation methods shall be designed to achieve antidegradation protection consistent with paragraph (a) of this section. Such methods must ensure that:

(1) High quality waters are identified on a parameter-by-parameter basis or on a water body-by-water body basis at the State's discretion, but must not exclude any water body from high quality water protection solely because not all of the uses specified in CWA section 101(a)(2) are attained; and

(2) The State will only make a finding that lowering high water quality is necessary, pursuant to paragraph (a)(2) of this section, after conducting an alternatives analysis that evaluates a range of non-degrading and minimally degrading practicable alternatives that have the potential to prevent or minimize the degradation associated with the proposed activity. If the State can identify any-practicable alternatives, the State must choose one of those alternatives to implement when authorizing a lowering of high water quality.

■ 8. Add § 131.14 to subpart B to read as follows:

§ 131.14 Water quality standards variances.

States may, at their discretion, grant variances subject to the provisions of this section and public participation requirements at § 131.20(b). A water quality standards variance (WQS

variance) is a time-limited designated use and criterion for a specified pollutant(s), permittee(s), and/or water body or waterbody segment(s) that reflect the highest attainable condition during the specified time period. WQS variances are water quality standards subject to EPA review and approval or disapproval and must be consistent with this section. Any such WQS variances adopted after *[effective date of the final rule]* must be consistent with this regulatory section.

(a) *Applicability:*

(1) All applicable WQS not specifically addressed by the WQS variance remain applicable.

(2)(i) Where a state adopts a WQS variance, the State regulations must continue to reflect the underlying designated use and criterion unless the State adopts and EPA approves a revision to the underlying designated use and criterion consistent with § 131.10 or § 131.11.

(ii) The interim requirements specified in the WQS variance are in effect during the term of the WQS variance and apply for CWA section 402 permitting purposes and in issuing certifications under section 401 of the Act for the permittee(s), pollutant(s), and/or water body or waterbody segment(s) covered by the WQS variance. For these limited purposes, the interim requirements will be the standards applicable for purposes of the CWA under 40 CFR 131.21(c)–(e).

(3) A WQS variance shall not be granted if the designated use and criterion addressed by the proposed WQS variance can be achieved by implementing technology-based effluent limits required under sections 301(b) and 306 of the Act.

(b) *Submission Requirements:*

(1) A WQS variance must specify the following:

(i) Identifying information: A WQS variance must identify the pollutant(s), permittee(s), and/or the water body or waterbody segment(s) to which the WQS variance applies.

(ii) WQS that apply during a variance for CWA section 402 permitting purposes and in issuing certifications under section 401 of the Act: A WQS variance must specify:

(A) The highest attainable interim use and interim numeric criterion, or

(B) An interim numeric effluent condition that reflects the highest attainable condition for a specific permittee(s) during the term of the variance. Neither (A) nor (B) of this paragraph shall result in any lowering of the currently attained water quality unless a time-limited lowering of water quality is necessary during the term of a variance for restoration activities, consistent with paragraph (b)(2)(ii) of this section.

(iii) Date the WQS variance will expire: States must include an expiration date for all WQS variances, consistent with paragraph (b)(2) of this section. WQS variances must be as short as possible but expire no later than 10 years after state adoption.

(2) The State must submit a demonstration justifying the need for a WQS variance. For a WQS variance to a use specified in section 101(a)(2) of the Act or a sub-category of such a use, the State must submit a demonstration that attaining the designated use and criterion is not feasible during the term of the WQS variance because:

(i) One of the factors listed in § 131.10(g) applies, or

(ii) Actions necessary to facilitate restoration through dam removal or other significant wetland or stream reconfiguration activities preclude attainment of the designated use and criterion while the actions are being implemented.

(3) For a waterbody variance, the state must identify and document any cost-effective and reasonable best management practices for nonpoint source controls related to the pollutant(s) and location(s) specified in the WQS variance that could be implemented to make progress towards attaining the designated use and criterion. A State must provide public notice and comment for any such documentation.

(c) *Implementing variances in NPDES permits:* Consistent with paragraph (a)(2)(ii) of this section, a WQS variance serves as the basis of a water quality-based effluent limit included in a NPDES permit for the period the variance is in effect. Any limitations required to implement the WQS variance shall be included as conditions of the NPDES permit for the permittee(s) subject to the WQS variance.

(d) *WQS variance renewals:* EPA may approve a WQS variance renewal if the State meets the requirements of this section and provides documentation of the actions taken to meet the requirements of the previous WQS variance. For a waterbody WQS variance renewal, the state must also provide documentation of whether and to what extent BMPs have been implemented to address the pollutant(s) subject to the WQS variance and the water quality progress achieved during the WQS variance period. Renewal of a WQS variance may be disapproved if the applicant did not comply with the conditions of the original WQS variance, or otherwise does not meet the requirements of this section.

■ 9. Add § 131.15 to subpart B to read as follows:

§ 131.15 Compliance schedule authorizing provisions.

A State may, at its discretion and consistent with state law, authorize schedules of compliance for water quality-based effluent limits (WQBELs) in NPDES permits by including a compliance schedule authorizing provision in its water quality standards or implementing regulations. Any such provision is a water quality standard subject to EPA review and approval and must be consistent with sections 502(17) and 301(b)(1)(C) of the Act. Individual compliance schedules issued pursuant to such authorizing provisions are not themselves water quality standards. Individual compliance schedules must be consistent with CWA section 502(17), the state's EPA-approved compliance schedule authorizing provision, and the requirements of §§ 122.2 and 122.47.

Subpart C—Procedures for Review and Revision of Water Quality Standards

■ 10. Amend § 131.20 by revising paragraphs (a) and (b) to read as follows:

§ 131.20 State review and revision of water quality standards.

(a) *State Review.* The State shall from time to time, but at least once every 3 years, hold public hearings for the purpose of reviewing applicable water quality standards and, as appropriate, modifying and adopting standards; in particular, any water body segment with water quality standards that do not include the uses specified in section 101(a)(2) of the Act shall be re-examined every 3 years to determine if any new information has become available. If such new information indicates that the uses specified in section 101(a)(2) of the Act are attainable, the State shall revise its standards accordingly. Similarly, a State shall re-examine its water quality criteria to determine if any criteria should be revised in light of any new or updated CWA section 304(a) criteria recommendations to assure that designated uses continue to be protected. Procedures States establish for identifying and reviewing water bodies for review should be incorporated into their Continuing Planning Process.

(b) *Public Participation.* The State shall hold public hearings for the purpose of reviewing or revising water quality standards, in accordance with provisions of State law and EPA's public participation regulation (40 CFR part 25). The proposed water quality

standards revision and supporting analyses shall be made available to the public prior to the hearing.

* * * * *

■ 11. Amend § 131.22 by revising paragraph (b) to read as follows:

§ 131.22 EPA promulgation of water quality standards.

* * * * *

(b) The Administrator may also propose and promulgate a regulation, applicable to one or more States, setting forth a new or revised standard upon determining such a standard is necessary to meet the requirements of the Act. To constitute an Administrator's determination, such determination must:

(1) Be signed by the Administrator or his or her duly authorized delegate, and

(2) Contain a statement that the document constitutes an Administrator's determination under section 303(c)(4)(B) of the Act.

* * * * *

Subpart D—Federally Promulgated Water Quality Standards

■ 12. Amend § 131.34 by revising paragraph (c) to read as follows:

§ 131.34 Kansas.

* * * * *

(c) *Water quality standard variances.* The Regional Administrator, EPA Region 7, is authorized to grant variances from the water quality standards in paragraphs (a) and (b) of this section where the requirements of § 131.14 are met.

■ 13. Amend § 131.40 by revising paragraph (c) to read as follows:

§ 131.40 Puerto Rico.

* * * * *

(c) *Water quality standard variances.* The Regional Administrator, EPA Region 2, is authorized to grant variances from the water quality standards in paragraphs (a) and (b) of this section where the requirements of § 131.14 are met.

[FR Doc. 2013–21140 Filed 9–3–13; 8:45 am]

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Exhibit D

State Chloride Criteria

State	Water Column Criteria Average (mg/L)	Water Column Criteria Maximum (mg/L)	Aquatic Life Use	Application Basis	Regulatory Citations	Comments
New Mexico		4000	yes	Q>50 cfs	20.6.4.206 NMAC	Pecos River main stem from Sumner Dam to Salt Creek
		6000	yes	Q>50 cfs	20.6.4.207 NMAC	Pecos River main stem from Salt Creek to Brantley Reservoir, Rio Peñasco
		10000	yes	Q>50 cfs	20.6.4.201 NMAC	Pecos River main stem from Black Creek to NM-TX state line
Oklahoma	668	910	yes	Avg = annual	Okla. Admin. Code § 785-45-5-1 Appendix F	Red River from North Fork Confluence to Buck Creek
	3374	4824	yes	Avg = annual	Okla. Admin. Code § 785-45-5-1 Appendix F	Salt Fork of Red River
	567	837	yes	Avg = annual	Okla. Admin. Code § 785-45-5-1 Appendix F	Ponca Lake and Watershed
Kansas		860	yes	Single Value	Kan. Admin. Regs. § 28-16-28e(d) Table 1a	Statewide, can be higher due to natural background
Wyoming	230	860	yes	Avg = chronic	020-080 Wyo. Code R. § 001 Appendix B	Statewide
Texas	2000		yes	Annual average	30 Tex. Admin. Code § 307.10 Appendix A	Red River above Lake Texoma
	5000		yes	Annual average	30 Tex. Admin. Code § 307.10 Appendix A	Brazos River above Possum Kingdom Lake
	1050		yes	Annual average	30 Tex. Admin. Code § 307.10 Appendix A	Canadian River above Lake Meredith
	610		yes	Annual average	30 Tex. Admin. Code § 307.10 Appendix A	Concho River

Exhibit E

State Mercury Variance Policies

State	Rule Citation	Guidance-Implementation Documents	Type of Variance	Point Source NPDES Permit Limits	Point Source NPDES Other Conditions	Variance Application Requirements	Comments
Indiana	327 IAC 5-3.5	Industiral SMV Application Instructions, SMV FAQs	Individual Streamlined Mercury Variance (SMV)	Annual average is based on maximum concentration of 6 or more analyses in 24 months, not > 30 ng/L	Pollutant Minimization Program Plan	Form for SMV, mercury PMPP required with application	If annual average would be >30 ng/L, then an individual variance must be applied for
Maine	06-096 CMR Chapter 519		Interim effluent limits	Average based on 95% upper bound on mean of 3-4 effluent samples, maximum = 1.5 times average	Pollution Prevention Plan		Adjustments to interim limits may be made based on water conservation, production changes, seasonal variations.
Michigan	R 323.1103(9)	Mercury Permitting Strategy, 2004	Multiple discharger variance	Lowest concentration achievable = 10 ng/L annual average	Mercury Pollutant Minimization Plan	Normal NPDES application, no special requirements	Site-specific LCA can be applied for. LCA is based on low-level Hg data collected at a number of POTWs and industrial facilities
Minnesota		Mercury TMDL Implementation Plan, October 2009;Permitting Strategy for Addressing Mercury in Municipal and Industrial Wastewater Permits, 2012	Statewide mercury TMDL	Case by case outside Lake Superior Basin, 40 CFR 132 for in Superior Basin; concentration limits (average and maximum); mass limits for Lake Superior	Mercury Minimization Plan	Normal NPDES application, no special requirements	No increase in TSS mass allowed. Some rivers do not have TMDL yet because of higher fish tissue concentrations - these will be case-by-case limits.
New York	6 NYCRR 702.17(h)	DOW 1.3.10	Statewide, multi-source	General Leval Currently Achievable = 50 ng/L, daily maximum	Mercury Minimization Plan	Normal NPDES application, no special requirements	If permittee cannot meet 50 ng/L, an individual leval currently achievable is assigned with a compliance schedule
Ohio	OAC 3745-1-01(F); OAC 3745-33-07(D)	Permit Guidance 10	Statewide, multi-source	Annual average concentration = 12 ng/L	Plan of study of sources and Pollutant Minimization Program	Filed as addendum to NPDES application. Plan of Study must be included.	General variance available if 30-day avg. WQBEL cannot be achieved. If annual average would be >12 ng/L or 12 ng/L cannot be achieved during permit term, then an individual variance must be applied for
Wisconsin	NR 106.145	Total Mercury Monitoring Procedures For Meeting WPDES Permit Requirements (For Permittees) 5/21/03	Alternative mercury effluent limitation, not applicable to Great Lakes Waters	Daily maximum concentration = 99th percentile of at least 12 samples monitored over a 24-month period	Pollution Minimization Program	Alternative mercury effluent limit application	Individual variances may be applied for.