

BEFORE THE ILLINOIS POLLUTION CONTROL BOARD

| | | |
|------------------------|---|--------------------|
| FLINT HILLS RESOURCES |) | |
| JOLIET, LLC, |) | |
| |) | |
| Petitioner, |) | |
| |) | |
| v. |) | PCB _____ |
| |) | (Variance - Water) |
| ILLINOIS ENVIRONMENTAL |) | |
| PROTECTION AGENCY, |) | |
| |) | |
| Respondent. |) | |

NOTICE OF FILING

| | |
|----------------------------------|--|
| TO: Mr. John T. Therriault | Division of Legal Counsel |
| Assistant Clerk of the Board | Illinois Environmental Protection Agency |
| Illinois Pollution Control Board | 102I North Grand Avenue East |
| James R. Thompson Center | Post Office Box 19276 |
| 100 West Randolph, Suite 11-500 | Springfield, Illinois 62794-9276 |
| Chicago, Illinois 60601 | (VIA FIRST CLASS MAIL) |
| (VIA ELECTRONIC MAIL) | |

PLEASE TAKE NOTICE that I have today filed with the Office of the Clerk of the Illinois Pollution Control Board an **ENTRY OF APPEARANCE FOR KATHERINE D. HODGE, ENTRY OF APPEARANCE FOR MATTHEW C. READ, and PETITION FOR VARIANCE (TEMPERATURE STANDARDS)**, copies of which are herewith served upon you.

Respectfully submitted,

FLINT HILLS RESOURCES JOLIET, LLC,
Petitioner,

DATE: July 21, 2015

By: /s/ Katherine D. Hodge
One of Its Attorneys

Katherine D. Hodge
Matthew C. Read
HODGE DWYER & DRIVER
3150 Roland Avenue
Post Office Box 5776
Springfield, Illinois 62705
(217) 523-4900

CERTIFICATE OF SERVICE

I, Katherine D. Hodge, the undersigned, hereby certify that I have served the attached ENTRY OF APPEARANCE FOR KATHERINE D. HODGE, ENTRY OF APPEARANCE FOR MATTHEW C. READ, and PETITION FOR VARIANCE (TEMPERATURE STANDARDS) upon:

John T. Therriault
Assistant Clerk of the Board
Illinois Pollution Control Board
James R. Thompson Center
100 West Randolph Street, Suite 11-500
Chicago, Illinois 60601

via electronic mail, on July 21, 2015; and upon:

Division of Legal Counsel
Illinois Environmental Protection Agency
1021 North Grand Avenue East
Post Office Box 19276
Springfield, Illinois 62794-9276

by depositing said documents in the United States Mail, postage prepaid, in Springfield, Illinois on July 21, 2015.

/s/ Katherine D. Hodge
Katherine D. Hodge

BEFORE THE ILLINOIS POLLUTION CONTROL BOARD

| | | |
|------------------------|---|--------------------|
| FLINT HILLS RESOURCES |) | |
| JOLIET, LLC, |) | |
| |) | |
| Petitioner, |) | |
| |) | |
| v. |) | PCB _____ |
| |) | (Variance - Water) |
| ILLINOIS ENVIRONMENTAL |) | |
| PROTECTION AGENCY, |) | |
| |) | |
| Respondent. |) | |

ENTRY OF APPEARANCE OF KATHERINE D. HODGE

NOW COMES Katherine D. Hodge, of the law firm HODGE DWYER & DRIVER, and hereby enters her appearance in this matter on behalf of Flint Hills Resources Joliet, LLC.

Respectfully submitted,

DATE: July 21, 2015

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

Katherine D. Hodge
HODGE DWYER & DRIVER
3150 Roland Avenue
Post Office Box 5776
Springfield, Illinois 62705
(217) 523-4900

BEFORE THE ILLINOIS POLLUTION CONTROL BOARD

| | | |
|------------------------|---|--------------------|
| FLINT HILLS RESOURCES |) | |
| JOLIET, LLC, |) | |
| |) | |
| Petitioner, |) | |
| |) | |
| v. |) | PCB _____ |
| |) | (Variance – Water) |
| ILLINOIS ENVIRONMENTAL |) | |
| PROTECTION AGENCY, |) | |
| |) | |
| Respondent. |) | |

ENTRY OF APPEARANCE OF MATTHEW C. READ

NOW COMES Matthew C. Read, of the law firm HODGE DWYER & DRIVER, and hereby enters his appearance in this matter on behalf of Flint Hills Resources Joliet, LLC.

Respectfully submitted,

DATE: July 21, 2015

By: /s/ Matthew C. Read
Matthew C. Read

Matthew C. Read
HODGE DWYER & DRIVER
3150 Roland Avenue
Post Office Box 5776
Springfield, Illinois 62705
(217) 523-4900

BEFORE THE ILLINOIS POLLUTION CONTROL BOARD

| | | |
|-------------------------------|---|--------------------|
| FLINT HILLS RESOURCES JOLIET, |) | |
| LLC, |) | |
| |) | |
| Petitioner, |) | |
| |) | |
| v. |) | PCB _____ |
| |) | (Variance – Water) |
| ILLINOIS ENVIRONMENTAL |) | |
| PROTECTION AGENCY, |) | |
| |) | |
| Respondent. |) | |

PETITION FOR VARIANCE (TEMPERATURE STANDARDS)

NOW COMES Flint Hills Resources Joliet, LLC (“FHR”), by and through its attorneys, HODGE DWYER & DRIVER, and, pursuant to Section 35(a) of the Illinois Environmental Protection Act (“Act”), 415 ILCS 5/35(a), and 35 Ill. Admin. Code § 104.100 *et seq.*, hereby petitions the Illinois Pollution Control Board (“Board”) for a variance from the deadline for complying with temperature standards at 35 Ill. Admin. Code §§ 302.408(b), (c), (d), (e), (f), and (i) (“Temperature Standards”) for its Channahon Facility (“Facility”) pursuant to the terms and conditions outlined in this Petition for Variance (“Petition”).¹

FHR, as more fully discussed below, is requesting that the Board grant a three-year variance from the July 1, 2018 deadline for complying with the Temperature Standards. This variance from the applicable requirements of the Temperature Standards is necessary because the Temperature Standards impose an arbitrary and unreasonable hardship on FHR. In addition, certain factors prevent the Lower Des Plaines River (“LDPR”) from fully attaining its designated use.

¹ FHR is not pursuing alternative thermal effluent limitations under 35 Ill. Admin. Code § 304.141(c) but, instead, is asking for a delay in the effective date of the Temperature Standards and time to study and select a compliance approach.

Due to potentially elevated temperature caused by upstream dischargers, the LDPR temperature at FHR's discharge point may already be above the Temperature Standards when the Facility is expected to comply on July 1, 2018, thereby potentially eliminating the opportunity for FHR to comply with such standards through the use of allowed mixing. Given the uncertainty surrounding the operational status of upstream dischargers, the impact to FHR's allowed mixing at the time the Temperature Standards become applicable is not clear. Without mixing, FHR will need to develop an alternative compliance approach. On the other hand, if allowed mixing remains available, FHR likely will be able to maintain compliance without any alternative compliance approach. The compliance path will depend primarily on the temperature of the LDPR, which is greatly affected by upstream dischargers. Without more time, FHR cannot determine the appropriate compliance approach. Therefore, compliance with the Temperature Standards on July 1, 2018 imposes an arbitrary and unreasonable hardship. A variance will allow FHR time to pursue an appropriate compliance plan, which may include installing controls. Notably, the Board recently signaled that this is "exactly the type of circumstance" that could be addressed by a variance.²

FHR's request follows the recent adoption of the Temperature Standards by the Board.³ The Temperature Standards became effective on July 1, 2015. Since this Petition is filed within 20 days after the effective date of the rule, the operation of the Temperature Standards shall be stayed as to FHR pending the disposition of the Petition. *See* 415 ILCS 5/38(b).

In summary, FHR is requesting a three-year variance, or until July 1, 2021, from the deadline for complying with applicable requirements of the Temperature Standards as set forth at

² Order, *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) at 9 (Ill.Pol.Control.Bd. June 4, 2015) (rulemaking, hereinafter "R08-9").

³ Adopted Rule, Final Notice, R08-9(D) (Ill.Pol.Control.Bd. June 18, 2015).

35 Ill. Admin. Code §§ 302.408 (b), (c), (d), (e), (f) and (i). In the meantime, the interim standard adopted by the Board at 35 Ill. Admin. Code § 302.408(b) should apply to FHR, and FHR agrees to comply with the Thermal Limitations upon expiration of the variance.

I. COMPLIANCE WITH THE TEMPERATURE STANDARDS ON JULY 1, 2018 IMPOSES AN ARBITRARY AND UNREASONABLE HARDSHIP ON FHR

The Temperature Standards impose thermal limitations on dischargers that are far more stringent than past limitations. Dischargers upstream from the Facility add a significant heat load to the LDPR and may cause the thermal Water Quality Standard to be exceeded in the stretch of the LDPR into which the Facility discharges, thereby potentially eliminating the opportunity for FHR to comply with the Temperature Standards using allowed mixing. Given the uncertainty surrounding upstream dischargers, the status of FHR's allowed mixing as of July 1, 2018 is not clear. Without mixing, FHR will need additional time to study and select a compliance approach. Since the Temperature Standards are newly promulgated, FHR and other dischargers are not afforded adequate time to determine whether compliance approaches other than allowed mixing are necessary and, if they are, to select and implement the proper one. Potential permitting solutions identified by the Illinois Environmental Protection Agency ("Illinois EPA") do not solve FHR's problem.

A. The Temperature Standards Include Major Changes to Numeric Thermal Limits and the Addition of Narrative Standards

The Board adopted the Temperature Standards in the R08-9 (D) rulemaking. The Temperature Standards are applicable to the stretch of the LDPR into which the Facility discharges. Specifically, the Facility discharges into waters designated as Upper Dresden Island Pool ("UDIP") Aquatic Life Use ("ALU") Waters. *See* 35 Ill. Admin. Code § 303.230. Under the new standard, initially UDIP ALU Waters must: "not exceed temperature (STORET number

(° F) 00011 and (° C) 00010) of 34° C (93° F) more than 5% of the time, or 37.8° C (100° F) at any time.” 35 Ill. Admin. Code § 302.408(b). These are the same thermal limitations that applied to UDIP ALU Waters before the Board adopted the Temperature Standards.

However, on July 1, 2018, new thermal limitations will apply to UDIP ALU Waters that are far more stringent than the existing limitations. Specifically, the following numeric and narrative thermal standards in Sections 302.408 (c), (d), (e), (f), and (i) will apply to UDIP ALU Waters at that time:

- c) There shall be no abnormal temperature changes that may adversely affect aquatic life unless caused by natural conditions.
 - d) The normal daily and seasonal temperature fluctuations that existed before the addition of heat due to other than natural causes shall be maintained.
 - e) The maximum temperature rise above natural temperatures shall not exceed 2.8° C (5° F).
 - f) Water temperature at representative locations in the main river shall not exceed the maximum limits in the applicable table in subsections (g), (h), and (i), during more than one percent of the hours in the 12-month period ending with any month. Moreover, at no time shall the water temperature exceed the maximum limits in the applicable table that follows by more than 1.7°C (3.0° F).
- * * *
- i) Water temperature for the Upper Dresden Island Pool Aquatic Life Use waters, as defined in 35 Ill. Adm. Code 303.230, shall not exceed the limits in the following table in accordance with subsection (f):

| Months | Daily Maximum (°F) |
|----------|--------------------|
| January | 60 |
| February | 60 |
| March | 60 |
| April | 90 |
| May | 90 |
| June | 90 |
| July | 90 |

| | |
|-----------|----|
| August | 90 |
| September | 90 |
| October | 90 |
| November | 90 |
| December | 60 |

35 Ill. Admin. Code §§ 302.408(c)-(f), (i).

Most notably, the daily maxima plunge to 60°F for winter months. 35 Ill. Admin. Code § 302.408(i). Excursion hours are reduced from five percent of the time to one percent of the hours in any 12-month period ending with any month. 35 Ill. Admin. Code § 302.408(f). And the upper thermal limit is reduced to 3°F above the daily maximum. *Id.* The previous “not to exceed” limit of 100°F is essentially replaced by a limit of 93°F during summer months and 63°F in winter months.

Thermal limitations previously applicable to the LDPR did not contain any narrative thermal limitations. But the new thermal limits prohibit any “abnormal temperature changes that may adversely affect aquatic life unless caused by natural causes.” 35 Ill. Admin. Code § 302.408(c). Further, “normal daily and seasonal temperature fluctuations that existed before the addition of heat due to other than natural causes shall be maintained.” 35 Ill. Admin. Code § 302.408(d). Finally, “[t]he maximum temperature rise above natural temperatures shall not exceed 2.8°C (5°F).” These standards are based on the Board’s thermal limitations for General Use Waters and are significantly more stringent than previously applicable standards.

B. Upstream Discharges Add Significant Heat Load to the LDPR and Jeopardize the Future Availability of Allowed Mixing for FHR

Midwest Generation L.L.C. (“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 and impact the temperature in the Lower Des Plaines River.⁴ The Will County Station is a two-unit steam electricity facility with 897 megawatts of capacity and a design circulating water flow rate of approximately 864 million gallons per day (“MGD”). *Id.* at 1-2. It discharges into the Chicago Sanitary and Ship Canal (“CSSC”) near river mile 295.5. *Id.* at 1-2. The Will County Station does not employ cooling towers. *Id.* at 1.

The Joliet Station 9 and Joliet Station 29 operate in Will County, approximately one mile southwest of the City of Joliet. *Id.* at 2. The Joliet Station 9 is capable of producing 341 megawatts of electricity with a design circulating water flow rate of approximately 376 MGD and does not employ cooling towers. *Id.* The Joliet Station 29 has two generation units which are capable of producing approximately 1,100 megawatts of electricity and a design circulating water flow rate of approximately 1,325 MGD. *Id.* The Joliet Station 29 has helper cooling towers, which are not designed for long-term, continuous runs. *Id.* Both of these stations discharge thermal effluent into the LDPR (UDIP ALU Waters) approximately one-half mile downstream of the Brandon Road Lock and Dam and approximately seven miles upstream of the I-55 Bridge. *Id.* The location of the two Joliet generating stations and the FHR Facility are shown on Exhibit 1.

The Board previously issued an adjusted standard that applies to the thermal discharges from these three stations at the I-55 Bridge in lieu of General Use thermal standards.⁵ In particular, the following standards apply in lieu of the General Use standards at 35 Ill. Admin. Code § 302.211(d) and (e):

⁴ Provisional Variance – Water, IEPA 13-3 at 1 (July 3, 2012).

⁵ *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) (Adjusted Standard, hereinafter “AS 96-10”).

| | °F | | °F |
|------------|----|------------|----|
| Jan. | 60 | June 16-30 | 91 |
| Feb. | 60 | July | 91 |
| Mar. | 65 | Aug. | 91 |
| Apr. 1-15 | 73 | Sept. | 90 |
| Apr. 16-30 | 80 | Oct. | 85 |
| May 1-15 | 85 | Nov. | 75 |
| May 16-31 | 90 | Dec. | 65 |
| June 1-15 | 90 | | |

Opinion and Order of the Board, AS 96-10 at 5 (Ill.Pol.Control.Bd. Mar 16, 2000). “The standards may be exceeded by no more than 3 degrees Fahrenheit during 2% of the hours in the 12-month period ending December 31, except at no time shall Midwest’s generation stations cause the water temperature at the I-55 Bridge to exceed 93 degrees Fahrenheit.” *Id.*

Even under these alternative limits, Midwest Generation requested additional relief in the form of provisional variances from the standards due to low flows in the river, extreme hot weather, and high customer demand for electricity in 2011 and 2012.⁶ This relief was requested in the summer months of July and August. 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. *Id.*

The recently adopted Temperature Standards contain more stringent summer limits and fewer excursion hours. Further, the limits will be imposed in the UDIP, not downstream at the I-55 Bridge. Absent any operational changes, it is logical to conclude that Midwest Generation discharges could lead to thermal exceedances in the UDIP ALU Waters, including at the discharge point of the Facility. Indeed, Midwest Generation recently filed comments with the

⁶ 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).

Board explaining that “[t]he three electric generation stations would not be able to comply with the proposed General Use thermal water quality standards.”⁷

C. **Uncertainties Resulting From Upstream Dischargers Make Compliance with the Temperature Standards on July 1, 2018 an Arbitrary and Unreasonable Hardship**

It is an arbitrary and unreasonable hardship for FHR to immediately comply with the Temperature Standards on July 1, 2018 due to the operational uncertainties surrounding large upstream thermal dischargers. FHR cannot properly design a compliance plan or controls until the temperature characteristics of UDIP ALU Waters are settled. A three-year variance from the effective date of the Temperature Standards will allow FHR to assess compliance strategies of upstream dischargers with the most profound impact on the LDPR, characterize the thermal impact on the LDPR, select an appropriate compliance approach, and implement that compliance approach. Allowing time for the compliance strategies of upstream dischargers to unfold will provide more certainty and allow FHR to understand the long-term thermal characteristic of the LDPR. Only then can FHR tailor a compliance approach.

Midwest Generation has stated that its three electric generation stations upstream of FHR will be able to comply with the Temperature Standards. Instead, Midwest Generation appears to be considering the use of a thermal variance to achieve compliance. *Id.* Whether Midwest Generation achieves compliance with Temperature Standards, within three years, or obtains relief from the Temperature Standards through a variance or by obtaining alternative thermal limitations, downstream dischargers will not have time to craft and implement an appropriate compliance plan before the more stringent Temperature Standards become applicable. That is because compliance strategies for thermal dischargers are dependent on the temperature of the

⁷ Midwest Generation L.L.C. Comments to Illinois Pollution Control Board Second Notice Opinion and Order R08-9 (Subdocket D) Proposed Thermal Water Quality Standards, R08-9(D) (Ill.Pol.Control.Bd. June 1, 2015) (attached as Exhibit 2).

LDPR and are limited when receiving waters exceed the thermal water quality standards. Until Midwest Generation achieves compliance or obtains regulatory relief, the thermal characteristics of the LDPR will not be settled. If Midwest Generation achieves compliance with the Temperature Standards, the water temperature in the LDPR could be substantially lower than it is today. On the other hand, if Midwest Generation obtains a variance or alternative thermal standards, it is reasonable to believe that water temperatures in the receiving waters will remain elevated. The compliance path chosen by Midwest Generation, the timing of which is uncertain, will greatly impact the approach chosen by FHR.

In the absence of the elevated receiving water temperatures, the Facility would rely upon the Illinois allowed mixing provisions at 35 Ill. Admin. Code § 302.102 to demonstrate compliance with the Temperature Standards. But mixing is not allowed “where the water quality standard for the constituent in question is already violated in the receiving water.” 35 Ill. Admin. Code § 302.102(b)(9).

If no mixing is allowed, and the Facility cannot mix with receiving waters to achieve compliance, then it must meet the water quality standards at the end-of-pipe. For FHR, that means potentially installing significant and costly thermal controls. Whether the thermal water quality standard is exceeded in the receiving water is dependent, in large part, on the thermal load added by upstream dischargers.

Further, regardless of whether allowed mixing is available, downstream dischargers cannot properly design thermal compliance strategies until the LDPR is characterized. Here, an accurate thermal characterization of the LDPR for the future cannot be performed until Midwest Generation achieves compliance with Temperature Standards or obtains a variance or alternative thermal standards.

In summary, it is not clear whether Midwest Generation will comply with the Temperature Standards or seek regulatory relief. Given this uncertainty, it is an arbitrary and unreasonable hardship for the Facility to comply with the Temperature Standards on July 1, 2018.

D. Illinois EPA's Suggested Permitting Approach does not Solve FHR's Problem

Illinois EPA will incorporate the new Temperature Standards into NPDES permits. But there is no reliable method for prioritizing regulation of large upstream thermal dischargers in advance of smaller downstream dischargers. The Temperature Standards may be imposed on downstream dischargers in NPDES permits before large upstream dischargers comply or obtain regulatory relief.

Illinois EPA witness, Scott Twait, acknowledged in testimony that it would be unfair or unwise to introduce revised thermal standards in permits for downstream facilities with a thermal discharge before addressing larger upstream dischargers.⁸ To address this concern, Illinois EPA suggested a type of cascading implementation of the temperature standards that would address the major upstream thermal sources first. *Id.* at 40-41. However, Mr. Twait acknowledges that this approach raises concerns. For example, different dischargers have different renewal application deadlines. *Id.* at 41. And it is not clear how an NPDES permit modification of a downstream discharger would further disrupt this process. *Id.* at 40-42, 48. A variance is necessary since Illinois EPA cannot provide an adequate permitting solution to the downstream discharger conundrum.

⁸ September 23, 2013, Hearing Transcript, R08-9(D) at 41 (Ill.Pol.Control.Bd. Sept. 23, 2013) (attached as Exhibit 3).

II. REGULATIONS FROM WHICH VARIANCE IS SOUGHT

FHR is seeking a three-year variance from the deadline to comply with Temperature Standards at 35 Ill. Admin. Code §§ 302.408 (b), (c), (d), (e), (f), and (i). Section 302.408 states, in relevant part:

- b) The temperature standards in subsections (c) through (i), will become applicable beginning July 1, 2018. Starting July 1, 2015, the waters designated at 35 Ill. Adm. Code 303 as Chicago Area Waterway System Aquatic Life Use A, Chicago Area Waterway System and Brandon Pool Aquatic Life Use B, and Upper Dresden Island Pool Aquatic Life Use will not exceed temperature (STORET number (° F) 00011 and (° C) 00010) of 34° C (93° F) more than 5% of the time, or 37.8° C (100° F) at any time.
- c) There shall be no abnormal temperature changes that may adversely affect aquatic life unless caused by natural conditions.
- d) The normal daily and seasonal temperature fluctuations that existed before the addition of heat due to other than natural causes shall be maintained.
- e) The maximum temperature rise above natural temperatures shall not exceed 2.8° C (5° F).
- f) Water temperature at representative locations in the main river shall not exceed the maximum limits in the applicable table in subsections (g), (h), and (i), during more than one percent of the hours in the 12-month period ending with any month. Moreover, at no time shall the water temperature exceed the maximum limits in the applicable table that follows by more than 1.7° C (3.0° F).

* * *

- i) Water temperature for the Upper Dresden Island Pool Aquatic Life Use waters, as defined in 35 Ill. Adm. Code 303. 230, shall not exceed the limits in the following table in accordance with subsection (f):

| Months | Daily Maximum (°F) |
|-----------|--------------------|
| January | 60 |
| February | 60 |
| March | 60 |
| April | 90 |
| May | 90 |
| June | 90 |
| July | 90 |
| August | 90 |
| September | 90 |
| October | 90 |
| November | 90 |
| December | 60 |

35 Ill. Admin. Code § 302.408. The Temperature Standards are applicable to FHR's Facility because it discharges to a stretch of the LDPR designated as UDIP ALU Waters. *See* 35 Ill. Admin. Code § 303.230. The Temperature Standards became effective on July 1, 2015.

III. ACTIVITY OF FHR

A. Description of FHR's Channahon Facility and Operations

FHR acquired the Facility in 2004. The prior owner began operating in 1957. The Facility is located on a 270-acre tract of land located in Channahon, Illinois. The site is approximately 41 miles Southwest of Chicago. To the immediate East and Southeast of the Facility is the Des Plaines River. To the immediate North is Tank Properties, LLC and to the immediate South is the BP Amoco landfill.

The Facility employs approximately 250 employees, who operate, maintain, and manage the facility, which operates 24 hours a day, 7 days a week.

The Facility manufactures isophthalic acid, maleic anhydride, and trimellitic anhydride. These products are manufactured using various chemical processes onsite including some exothermic chemical reactions. The Facility is configured with separate and distinct production

areas for each of the primary products produced. The production areas are a combination of outdoor and indoor equipment dedicated to that production area.

B. Identification of Permits, Location of Points of Discharge, and Nature and Amount of Discharge

The Facility discharges water to the LDPR as authorized by NPDES Permit No. IL 0001643 (attached as Exhibit 4). The Facility has five permitted outfalls. Outfall 001 is located directly east of the wastewater treatment plant and discharges treated process water, lab wastewater, fire field wastewater, impacted groundwater, utility water and alternate route for sanitary waste, and treated stormwater. Outfalls 002, 003, and 005 are located along the eastern edge of the property, adjacent to the Des Plaines River, and discharge stormwater, non-process wastewater, and hydrostatic test wastewater. Outfall 004 is located near Outfall 001 and discharges treated sanitary wastes. The permitted average flows from Outfalls 001 and 004 are 2.318 MGD and 0.025 MGD respectively. Flows from Outfalls 002, 003, and 005 are intermittent. In the absence of elevated intake temperatures, the Facility would be able to use the Illinois allowed mixing provision at 35 Ill. Admin. Code § 302.102 to demonstrate compliance with thermal standards.

C. Prior Variances Issued to FHR or Any Predecessor Regarding Similar Relief

Based upon best knowledge and belief, neither FHR, nor any of the Facility's prior owners have been issued a prior variance regarding relief that is similar to what is requested in this Petition.

D. Number of Persons Employed & Age of Facility

FHR acquired the Facility in 2004. The prior owner began operating the facility in 1957. Currently, there are approximately 250 full time FHR employees at the Facility, and at least 180 full time employees of contractors that work at the Facility.

E. Nature and Amount of Materials Used In Activity for Which Variance Is Sought and a Full Description of the Particular Process or Activity in Which the Materials Will be Used

The permitted average flows from Outfalls 001 and 004 are 2.318 MGD and 0.025 MGD respectively. Flows from Outfalls 002, 003, and 005 are intermittent. The Facility's primary waste treatment process for treating process sewer water consists of an anaerobic, aerobic, clarification, and air floatation process. The anaerobic reactor must be operated at 100° F. After the anaerobic reactor, natural heat loss to the atmosphere results in ambient cooling as the water passes in parallel through four aerobic treatment basins, and then in parallel through three clarifiers, and finally one air floatation channel before heading to Outfall 001. This process typically contributes 60 - 80 % of the discharge annually to Outfall 001. The second contributor to Outfall 001 is a process for treating the clean water utility streams from the process. Clean water utility streams include cooling tower blowdown, boiler blowdown, water filter backwash, and reject water from our reverse osmosis and filtration systems. This process consists of a storage tank and anthracite filters. FHR's Outfall 004 is the effluent from the sanitary sewer system, which includes an aerobic and clarification process. This process contributes approximately 6 gpm of flow to the river.

F. A Description of the Relevant Pollution Control Equipment Already in Use

FHR does not operate pollution control equipment designed to remove heat. However, the aeration basins cool the water by virtue of their operation but cooling is not their intended function. Their function is to add oxygen to enhance the biological degradation of the material prior to the air floatation unit.

IV. COMPLIANCE WITH THE REGULATION CANNOT BE ACHIEVED BY THE COMPLIANCE DEADLINE

Put simply, compliance cannot be achieved by the compliance deadline of July 1, 2018 because it is not clear what will be required to achieve compliance with the Temperature Standards on that date. The Facility's approach for achieving compliance will be directly related to the significant upstream thermal impacts on the LDPR at that time. FHR does not know what the significant upstream thermal impacts to the LDPR will be at the time the more stringent Temperature Standards become applicable. Upstream dischargers, and in particular Midwest Generation, may obtain regulatory relief and continue to discharge a significant thermal load, thereby eliminating the opportunity for the Facility to rely on allowed mixing to achieve compliance with the Temperature Standards. Even if Midwest Generation immediately seeks to obtain regulatory relief, it is not clear what conditions will be attached to it. On the other hand, operation may be curtailed at Midwest Generation to achieve compliance with the Temperature Standards. Since the Facility's compliance approach depends heavily on the temperature of the receiving waters, the appropriate compliance approach is not clear yet given the array of possible upstream impacts. Since Midwest Generation has until July 1, 2018 before it must comply with the more stringent Temperature Standards, FHR may not understand the magnitude of the upstream thermal load for several years after the effective date of the rule. In the event pollution controls are necessary, FHR will not have sufficient time to identify and implement its compliance approach.

V. EFFORTS NECESSARY TO ACHIEVE IMMEDIATE COMPLIANCE

In light of the uncertainty surrounding upstream dischargers, it is not clear how FHR will achieve immediate compliance on July 1, 2018. FHR could immediately begin constructing controls to cool its effluent, but controls may not be necessary, and the size of controls is directly

dependent on the thermal characteristics of the LDPR, which is in flux. Until FHR characterizes the thermal conditions in the LDPR, controls cannot be appropriately designed. Given the uncertainty related to upstream discharges, FHR needs additional time to develop compliance alternatives and the corresponding cost for each alternative.

VI. COMPLIANCE PLAN AND SUGGESTED CONDITIONS

The Temperature Standards impose an arbitrary and unreasonable hardship on FHR. Accordingly, a delay in compliance with the Temperature Standards is warranted. FHR proposes that the Facility complies with applicable requirements by July 1, 2021. In the meantime, FHR proposes to study the thermal characteristics of the LDPR, develop compliance options, select a compliance option, and implement it by the time the variance expires. Given the uncertainty related to upstream discharges, FHR needs additional time to develop a preferred compliance approach, determine the estimated costs involved in each phase and the total cost to achieve compliance, and to implement that compliance approach.

FHR proposes the following condition should the Board grant this variance request:

- a. FHR shall comply with the applicable Temperature Standards at 35 Ill. Admin. Code §§ 304.408 (b), (c), (d), (e), (f), and (i) by July 1, 2021.
- b. Before July 1, 2021, FHR shall comply with the following thermal water quality standard: UDIP ALU Waters must not exceed a temperature (STORET number (° F) 00011 and (° C) 00010) of 34° C (93° F) more than 5% of the time, or 37.8° C (100°F) at any time.”
- c. Before July 1, 2018, FHR shall study compliance options, including but not limited to, identifying the opportunity for allowed mixing and installing thermal controls.
- d. Before July 1, 2019, FHR shall select a compliance option.
- e. FHR will provide periodic reports to the Board describing its progress with compliance efforts.

VII. ENVIRONMENTAL IMPACT

Granting FHR's requested variance will have virtually no impact on the temperature of the LDPR, assuming upstream dischargers continue to discharge a significant thermal load. To the best of FHR's belief and knowledge, it expects only minimal temperature impacts in the LDPR due to its discharge, if the variance is granted. However, in the event the variance is not granted and the receiving waters exceed water quality standards, then FHR's discharge would be expected to meet the Temperature Standards by July 1, 2018. Given the relatively small impact of FHR's discharge, the LDPR would remain virtually unchanged. Given the uncertainty related to upstream discharges, FHR needs additional time to develop an understanding of the impact of its discharge.

VIII. PROPOSED VARIANCE PERIOD

FHR proposes a three-year variance, or until July 1, 2021, from the deadline for complying with applicable requirements of the Temperature Standards as set forth at 35 Ill. Admin. Code § 302.408 (b), (c), (d), (e), (f) and (i). Since the more stringent Temperature Standards do not apply to UDIP ALU Waters until July 1, 2018, FHR proposes that the variance begins on that day.

IX. CONSISTENCY WITH FEDERAL LAW

Under Title IX of the Act, 415 ILCS 5/35-38, the Board is responsible for granting variances when a petitioner demonstrates that immediate compliance with the Board regulation(s) would impose an "arbitrary or unreasonable hardship" on the petitioner. 415 ILCS 5/35(a). The Board may grant a variance, however, only to the extent consistent with applicable federal law. *See* 415 ILCS 5/35(a).

Section 104.208(b) of the Board rules states the following with regard to consistency with federal law for all petitions for variances from the Board's water regulations:

- b) All petitions for variances from Title III of the Act, from 35 Ill. Adm. Code. Subtitle C, Ch. I "Water Pollution", or from water pollution related requirements of any other Title of the Act or Chapter of the Board's regulations, must indicate whether the Board may grant the relief consistent with the Clean Water Act (CWA) (33 USC 1251 et seq.), USEPA effluent guidelines and standards, any other federal regulations, or any area-wide waste treatment management plan approved by the Administrator of USEPA pursuant to Section 208 of the CWA (33 USC 1288).

35 Ill. Admin. Code § 104.208(b). In this instance, there are no applicable federal laws or regulations that preclude granting the instant variance request.

However, the United States Environmental Protection Agency ("USEPA") has discussed limiting variances to instances when a demonstration is made similar to that made for a change of use. Variances in Water Quality Standards, Memorandum, Edwin L. Johnson, Director, Office of Water Regulations and Standards, USEPA to Water Division Directors (Mar. 15, 1985) (attached as Exhibit 5). As described in USEPA's Water Quality Standards Handbook, "a state or tribe may adopt a WQS variance if the state or tribe can satisfy the same substantive and procedural requirements as a designated use removal, which are described in 40 C.F.R. 131.10(g)." Water Quality Standards Handbook, Chapter 5: General Policies (40 C.F.R. 131.13) (Updated Sept. 2014) (attached as Exhibit 6). Factors listed at 40 C.F.R. § 131.10(g) are commonly referred to as "UAA factors." These factors include the following:

- (1) Naturally occurring pollutant concentrations prevent the attainment of the use; or
- (2) Natural, ephemeral, intermittent or low flow conditions or water levels prevent the attainment of the use, unless these conditions may be compensated for by the discharge of sufficient volume of effluent discharges without violating State water conservation requirements to enable uses to be met; or

- (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; or
- (4) Dams, diversions or other types of hydrologic modifications preclude the attainment of the use, and it is not feasible to restore the water body to its original attainment of the use; or
- (5) Physical conditions related to the natural features of the water body, such as the lack of a proper substrate, cover, flow, depth, pools, riffles, and the like, unrelated to water quality, preclude attainment of aquatic life protection uses; or
- (6) Controls more stringent than those required by sections 301(b) and 306 of the Act would result in substantial and widespread economic and social impact.

Id. at §§ 131.10(g)(1)-(6).

USEPA Region 5 recently disapproved a variance issued by the Board to CITGO Petroleum Corporation and PDV Midwest Refining, L.L.C. because “Illinois did not provide appropriate technical and scientific data and analyses demonstrating that the indigenous aquatic life designated use was not attainable for any of the reasons specified at 40 C.F.R. 131.10(g)...”⁹

USEPA proposed clarifying revisions to its water quality standards regulations in September 2013.¹⁰ The proposed revisions include codifying requirements for water quality standard variances and variance renewals. *Id.* In the preamble, USEPA explained that it interprets its regulations to authorize a water quality standard variance only where a state demonstrates that the variance meets the same requirements as a permanent designated use

⁹ Letter from Susan Hedman, USEPA Region 5 Administrator to John M. Kim, Director, Illinois EPA at 2 (Mar. 15, 2013), Public Comment, *CITGO Petroleum Corporation and PDV Midwest Refining, L.L.C.*, PCB 12-94 (Ill.Pol.Control.Bd. Mar. 15, 2013) (attached as Exhibit 7); accord Exhibit B to Recommendation of the Illinois Environmental Protection Agency, *Sanitary District of Decatur v. Illinois Environmental Protection Agency*, PCB 14-111 (Ill.Pol.Control.Bd. Apr. 7, 2014) (Letter from Tinka G Hyde, Director, USEPA Region 5 Water Division to Marcia T. Willhite, Chief, Bureau of Water (Mar 21, 2014)) (attached as Exhibit 8).

¹⁰ *Water Quality Standard Regulatory Clarifications*, 78 Fed. Reg. 54,518 (Sept. 4, 2013) (included as Exhibit 9)

change. *Id.* at 54,531. “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 the long term goal.” *Id.* USEPA proposes to add a regulatory provision specifying that in order to document the need for a variance, the state must demonstrate that attaining the use and criterion is not feasible because of one of the six factors listed in 40 C.F.R. § 131.10(g). *Id.* at 54,534.

The LDPR at the point of the Facility’s discharge is designated UDIP ALU Waters.

These are designated as follows:

- a) Lower Des Plaines River from the Brandon Road Lock and Dam to the Interstate 55 bridge is designated as the Upper Dresden Island Pool Aquatic Life Use. These waters are capable of maintaining, and shall have quality sufficient to protect, aquatic-life populations consisting of individuals of tolerant, intermediately tolerant, and intolerant types that are adaptive to the unique flow conditions necessary to maintain navigational use and upstream flood control functions of the waterway system. Such aquatic life may include, but is not limited to, largemouth bass, bluntnose minnow, channel catfish, orangespotted sunfish, smallmouth bass, shorthead redhorse, and spottail shiner.

35 Ill. Admin. Code § 303.230(a). As such, they must meet the Temperature Standards. *Id.* at 303.230(b).

Here, there are natural conditions, human caused conditions, hydrologic modifications, and physical conditions that will prevent attainment of the UDIP ALU during the lifetime of this variance. In addition, controls more stringent than those required by sections 301(b) and 306 of the Act would result in substantial and widespread economic and social impact. Accordingly, all six UAA factors apply and justify this variance. Therefore, the requirements for removing a use are satisfied, and the variance is justified under USEPA’s interpretation of the variance process.

X. WAIVER OF REQUEST FOR HEARING

Pursuant to 35 Ill. Admin. Code § 104.204(n), Flint Hills waives its right to a hearing on this Petition.

XI. AFFIDAVIT IN SUPPORT

In support of this Petition, FHR is filing the Affidavit of Michael J. Brose (Attached as Exhibit 10).

XII. CONCLUSION

It is an arbitrary and unreasonable hardship to require FHR to comply with the Temperature Standards earlier than July 1, 2021. In addition, UAA factors prevent the LDPR from fully attaining its designated use. A three-year variance from the effective date of the Temperature Standards will allow FHR to delay spending resources at this time to comply with the Temperature Standards until there is more certainty as to upstream dischargers and the long-term characteristic of the waterway.

WHEREFORE, Petitioner, Flint Hills Resources Joliet, LLC respectfully requests that the Board grant a three-year variance, until July 1, 2021, for compliance with the Temperature Standards.

Respectfully submitted,

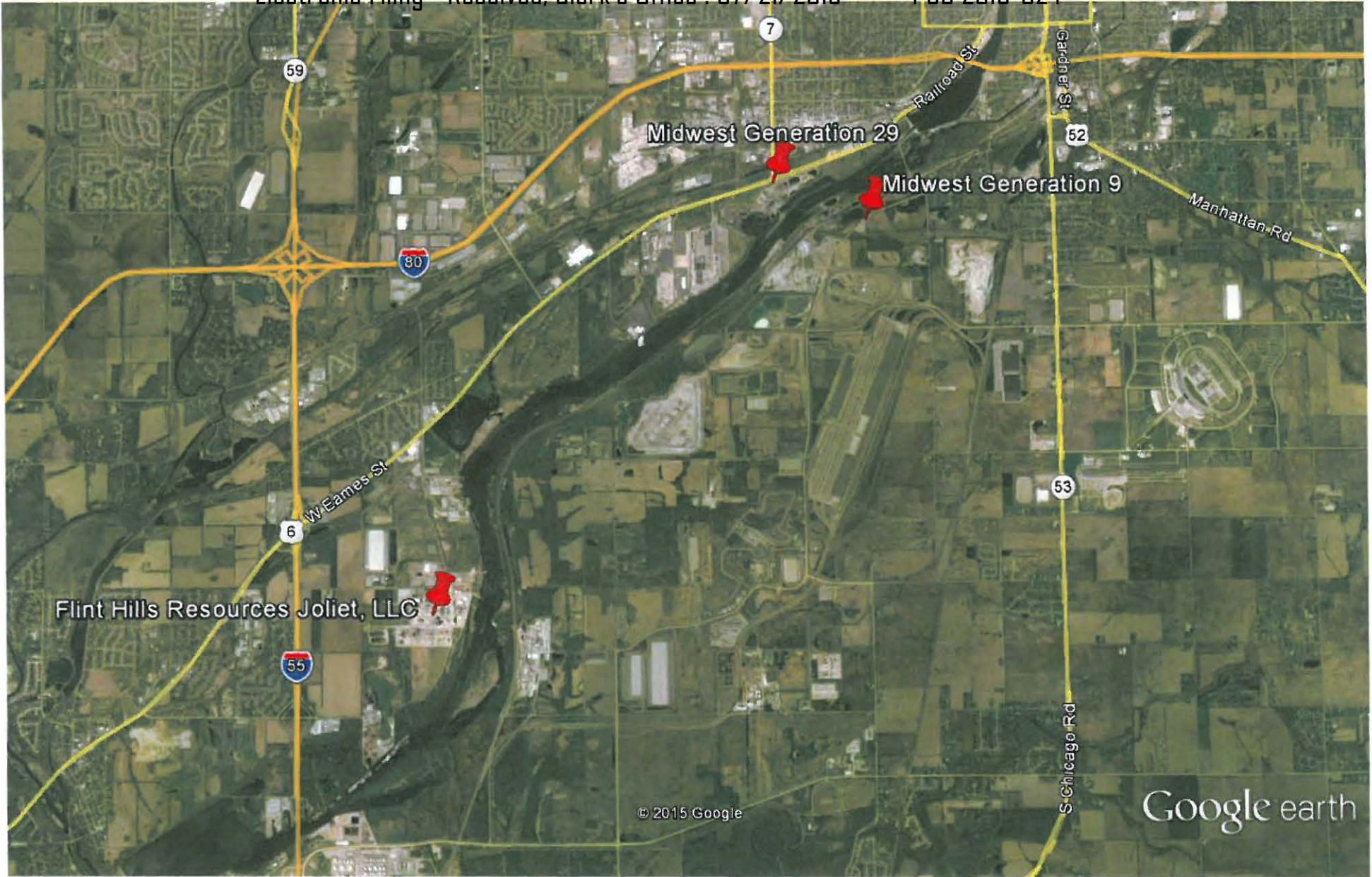
Flint Hills Resources Joliet, LLC,
Petitioner,

DATE: July 21, 2015

By: /s/ Katherine D. Hodge
One of Its Attorneys

Katherine D. Hodge
Matthew C. Read
HODGE DWYER & DRIVER
3150 Roland Avenue
Post Office Box 5776
Springfield, Illinois 62705
(217) 523-4900

EXHIBIT 1



Google earth





**MIDWEST GENERATION LLC COMMENTS TO ILLINOIS POLLUTION CONTROL BOARD
SECOND NOTICE OPINION AND ORDER R08-09 (SUBDOCKET D)
PROPOSED THERMAL WATER QUALITY STANDARDS**

June 1, 2015

SUMMARY

If finalized in its current form, the Illinois Pollution Control Board's (the "Board") proposed thermal water quality standard for the Chicago Sanitary and Ship Canal and Lower Des Plaines River would, without special and uncertain thermal variance relief, result in the closure of certain industrial facilities along the Chicago Sanitary and Ship Canal and the Lower Des Plaines River. Midwest Generation LLC ("MWG") operates three electric generating stations with thermal discharges that would be affected by the proposed rule. The three electric generation stations would not be able to comply with the proposed General Use thermal water quality standards. The IPCB's proposed three-year extension of the effective date of these standards would not solve the problem because three years is not enough time to develop the appropriate thermal standards for these thermal discharges. MWG supports a six-year extension of the thermal water quality standards for existing sources to allow enough time to (1) design and obtain concurrence from regulators on which studies should be performed, (2) conduct the biological and thermal studies, (3) consult with regulators on the studies' results and proposed variance terms; (4) prepare a thermal variance petition for filing with the Board and (5) allow adequate time for both the Board variance proceeding and subsequent U.S. EPA review of any Board-approved thermal variance(as well as possible legal challenges).

TIME TO OBTAIN CONCURRENCE AND PROCESS SITE-SPECIFIC VARIANCES

The Board's Second Notice Opinion proposes revised thermal water quality standards for the Chicago Area Waterway System (CAWS) and the Lower Des Plaines River (LDPR) that are significantly more stringent than existing thermal water quality standards, particularly for thermal discharges to the Aquatic Life Use B (ALU B) and the Upper Dresden Island Pool (UDIP) water segments at issue in the UAA Subdocket D. ALU B waters include the Chicago Sanitary and Ship Canal (CSSC) and the Brandon Pool, which is located immediately downstream of the CSSC. The UDIP use designation includes solely the stretch of the LDPR located from the I-55 Bridge upstream to the Brandon Pool. The Board's Second Notice Opinion and Order proposes to adopt the existing General Use thermal water quality standards as the new thermal water quality standards for the ALU B and UDIP water segments, as well as for other waterbodies in the CAWS previously classified as Aquatic Life Use A (ALU A) waters in the prior UAA R08-09 (Subdocket C) rulemaking. The ALU A, ALU B and UDIP use designations apply to waters that do not fully attain the Clean Water Act's fishable goals for aquatic life. By regulatory definition, these three use designations are lower quality waters than those Illinois waters classified as General Use waters. Nevertheless, the Board's Second Notice Opinion and Order proposes to adopt the General Use thermal water quality standards for the ALU A, ALU B and UDIP use waters. The General Use thermal water quality standards are the strictest of the existing thermal water quality standards under Illinois law. As the Subdocket D First Notice Opinion and Order provides, the IPCB has selected the proposed General Use thermal water quality standards for these waters "by default" because the IPCB did not find acceptable any of the alternative standards proposed by the rulemaking participants. The IPCB expressly acknowledges that existing thermal dischargers who participated in the rulemaking may not be able to comply with the proposed General Use thermal standards and may need to seek alternative relief. The Board proposes to address the existing thermal dischargers' inability to comply by extending the effective date of the thermal standards by three years.



Page 2

MWG operates three electric generating stations with thermal discharges that would be affected by the proposed rule. The Will County Station discharges to the CSSC (a Use B water). The two Joliet Stations discharge to the UDIP Use waters, located downstream of the CSSC. The three electric generation stations would not be able to comply with the proposed General Use thermal water quality standards. The IPCB's proposed three-year extension of the effective date of these standards would not provide adequate regulatory relief to ensure that appropriate thermal standards for these thermal discharges will be applied before the expiration of the proposed extension.

The Proposed Three-Year Extension is Insufficient

In proposing a three-year extension of the General Use thermal standards, the IPCB expressed a preference that any revision of the existing thermal water quality standards for these waters should instead start with a rulemaking to update the General Use standards using current science and consistent methods which would then be followed by a second rulemaking to develop new thermal standards for lower use waters like the CAWS and UDIP. (Second Notice Order at pp. 71, 78-79) It is unreasonable to expect that these two sequential rulemakings could be initiated and completed within a three-year period. Moreover, it is unreasonable to enact "temporary" thermal standards for these waters which threaten to cause the shutdown of MWG's electric-generating stations and the concomitant loss of jobs. Further, given the multi-year effort behind the thermal standards proposal, it is highly improbable that the Illinois Environmental Protection Agency and the IPCB will complete the process of two thermal standards rulemakings within a three-year period.

The Board's proposed three-year extension of the proposed General Use thermal standards' effective date would not provide an adequate amount of time for individual thermal dischargers to seek and obtain alternative thermal standards relief. The IPCB's Second Notice Order (at p. 15) indicates that before seeking such relief, MWG needs to collect additional "more recent" biological data on these waterways, which necessitates the design and implementation of future in-stream biological studies to collect such additional data. Such in-stream studies usually require a minimum of two years to collect such data and the warmer summer months need to be included in the study period. Because there is not an adequate amount of time to design and begin implementing such studies during the summer of 2015, the earliest that such studies could begin collecting such warm weather data is in the summer of 2016. Upon completion of the studies, additional time is then needed to evaluate the new data, consult with regulators regarding the studies' findings and the proposed thermal variance terms, and to initiate the process for obtaining alternative thermal standards relief. All of this could not be accomplished in three years.

For these reasons, the adoption of section 302.408 of the proposed Second Notice Order rules should be amended to provide for a six-year extension for existing thermal dischargers in the effective date of the General Use Thermal Standards.

Sincerely,

A handwritten signature in black ink that reads "Jonathan Baylor". The signature is written in a cursive, flowing style.

Jonathan Baylor
Vice President, Asset Management

EXHIBIT 3

Pages 37 - 49 from Hearing, *In the Matter of: Water Quality Standards and Effluent Limitations for the Chicago Area Waterway Systems and Lower Des Plaines River Proposed Amendments to 35 Ill. Adm. Code 301, 302, 303, and 304*, R 08-9(D) (Sept. 23, 2013) (9:30 A.M.).

1 May through October on a five-year cycle.

2 MS. TIPSORD: I'm confused by the
3 nine times. Nine times at Ruby Street Joliet,
4 nine times at Brandon Pool I-55?

5 MR. TWAIT: The nine times at Ruby
6 Street it's an ambient station that we have. We
7 go out there. I think it comes out to every six
8 weeks. So we get nine samples a year and they do
9 that year in, year out. The other two stations at
10 Brandon Road and I-55 when we do an intensive
11 basin survey we do that once every five years then
12 they take three samples during the summer at those
13 stations.

14 MS. TIPSORD: Thank you.

15 MR. READ: I think we can move to
16 question two. The First Notice Opinion and Order
17 in Sub Docket C lists five constituents that were
18 reviewed as part of the LDPR Use Attainability
19 Analysis ("UAA") and, at that time, were not
20 meeting the General Use standards. This is at the
21 First Notice at 220.

22 Based on current data, what
23 constituents would Illinois EPA conclude are not
24 currently meeting the General Use standards in the
L.A. COURT REPORTERS, LLC. (312) 419-9292

1 LDPR, or that may not meet the standards in the
2 near future due to predicted trends?

3 MR. TWAIT: The IEPA intensive basin
4 water quality data collected in 2008 indicates
5 compliance with General Use standards. However,
6 only three samples were collected at each of the
7 two sites. MWRD collected water quality data from
8 2008 to 2010 for the Upper Dresden Island Pool.
9 Four stations were sampled 13 times within the
10 Upper Dresden Island Pool and results indicated
11 possible noncompliance with fecal chloroform.
12 However, there is not a fecal chloroform standard.
13 I'm sorry. So it doesn't need to meet fecal
14 chloroform and just as a side note all the other
15 standards I believe were being met from that data
16 set and MWRD has discontinued this particular
17 monitoring program.

18 MR. READ: So do you have any
19 predicted trends based on that?

20 MR. TWAIT: No, I don't know that we
21 do. I did not look at what would be predicting
22 it. The data looks like it could meet the General
23 Use standard with the possible exception of
24 chloride since the Sanitary and Ship Canal has
L.A. COURT REPORTERS, LLC. (312) 419-9292

1 high chlorides. That might be a problem also, but
2 the Agency's data collection did not demonstrate
3 that.

4 MR. READ: And that would be based
5 on Sanitary and Ship Canal data?

6 MR. TWAIT: Yes, since that's the
7 major water source.

8 MR. READ: Subpart A --

9 MS. TIPSORD: Excuse me, Mr. Read.
10 Mr. Dimond has a follow up. I apologize.

11 MR. READ: It's all right.

12 MR. DIMOND: Tom Dimond on behalf of
13 Stepan. Mr. Twait, the intensive sampling that
14 was the basis for your prior answer, did you
15 indicate that that was done during the summer
16 months?

17 MR. TWAIT: Yes, I believe I did.

18 MR. DIMOND: Okay. So if it was
19 done during the summer months, you wouldn't see
20 residual impact from snow melt salting during that
21 period, right?

22 MR. TWAIT: No.

23 MR. DIMOND: Thank you.

24 MS. TIPSORD: Go ahead, Mr. Read.
L.A. COURT REPORTERS, LLC. (312) 419-9292

1 MR. READ: To my Subpart A now.
2 What is the process Illinois EPA envisions by
3 which an existing point source discharge is
4 transitioned to the new water quality standards?

5 MR. TWAIT: The Agency's plan is to
6 address the new water quality standards when the
7 NPDES permit is renewed and the Agency has been
8 talking about how best to sequence them or whether
9 it would be better to sequence from upstream to
10 downstream or to do them collectively and we have
11 not made a decision on what the best approach
12 would be.

13 MS. TIPSORD: Ms. Franzetti has a
14 follow up.

15 MR. READ: Just to what he just
16 said. By upstream to downstream, do you mean in
17 the entire system or just the UDIP?

18 MR. TWAIT: The Agency hasn't made
19 that decision.

20 MS. TIPSORD: Go ahead,
21 Ms. Franzetti.

22 MS. FRANZETTI: Mr. Twait, I'm a
23 little confused on how you would do that because
24 if you're saying you're going to handle it when
L.A. COURT REPORTERS, LLC. (312) 419-9292

1 the permits are up for renewal, don't all the
2 different dischargers have different renewal dates
3 and so how would you be able to do any sort of
4 sequencing?

5 MR. TWAIT: Yes, I'm not sure how
6 the Agency will go about doing that, but we
7 acknowledge that it would be -- for temperature,
8 it would be unfair or unwise to work on the
9 downstream facilities first before the larger
10 upstream facilities. So I'm not quite sure how
11 the Agency will handle that.

12 MR. READ: To follow that same line.
13 What if an upstream discharger would need a
14 modification that can take time and effect the
15 compliance schedule?

16 MR. TWAIT: A compliance schedule
17 would be applicable.

18 MR. READ: For the downstream?

19 MR. TWAIT: For any of the
20 dischargers.

21 MS. TIPSORD: Let me see if I -- I'm
22 a little confused on how the Agency anticipates
23 working on doing this. So what you're saying is
24 let's just say, for example, we'll use the
L.A. COURT REPORTERS, LLC. (312) 419-9292

1 district because they are probably the discharger
2 that is furthest upstream and I'm making these
3 numbers up, this is not in the record, but let's
4 say they discharge at 100 degrees all the time for
5 thermals. You would not change the standards, the
6 effluent standards for anyone downstream all the
7 way to I-55 until you first addressed the
8 district's discharge?

9 MR. TWAIT: I'm not quite sure how
10 the Agency is going to handle it, but one thing
11 that I can see is that if the district was
12 influencing the waterway the entire way and so the
13 water quality standards were being exceeded, but
14 they were meeting the secondary contact standards
15 and then you had a small discharger that goes in
16 there, he is not going to be able to get a mixing
17 zone if the upstream waters are not meeting the
18 water quality standards. So if we worked on his
19 permit first, then he would have to meet the limit
20 at the end of his pipe. I think that's
21 problematic.

22 I think the upstream discharger
23 would need to do what they need to do so that the
24 water quality standards met at the next downstream
L.A. COURT REPORTERS, LLC. (312) 419-9292

1 discharger and so they can determine if they might
2 be a small facility whether mixing is available or
3 mixing is not available.

4 MS. TIPSORD: Okay. That actually
5 brings me to a question, something we talked about
6 before in these hearings. Is your understanding
7 if the water quality standards were exceeded in
8 the stream, the water quality standards will have
9 to be met in the effluent at the discharge point,
10 is that correct, or will there be mixing?

11 MR. TWAIT: I believe that is
12 correct. The Agency can't give mixing where the
13 upstream standards are being violated.

14 MS. TIPSORD: Okay.

15 MR. TWAIT: And I don't mean it just
16 as violated once. I'm talking about a repetitive
17 violation where it would end up on the 303(d)
18 list.

19 MS. TIPSORD: Thank you. Sorry.

20 MR. RAO: If an upstream discharger
21 has, like, four years left on their permit before
22 renewal, is the Agency going to wait for that four
23 years or will they be able to revisit the permit
24 on a more timely scale?

1 MR. TWAIT: I don't know the answer
2 to that. I know that the Agency could open it up.
3 Resource-wise I don't know if the Agency will be
4 able to do that or will do that.

5 MS. TIPSORD: Mr. Harley?

6 MR. HARLEY: Keith Harley, for
7 Citizens Against Ruining the Environment. In that
8 scenario that was just described by Mr. Rao, the
9 obligation of the permit applicant is merely to
10 have their application submitted at that five-year
11 deadline, is that correct?

12 MR. TWAIT: I believe it's six
13 months prior to their expiration date.

14 MR. HARLEY: And what would be a
15 common period of time in addition to that for the
16 Agency to review and issue a draft permit, conduct
17 a public hearing and conclude with a final permit?

18 MR. TWAIT: It's going to vary.
19 Some small facilities get through without having a
20 hearing and they might be reissued shortly after
21 their permit expires and other major facilities it
22 might take a number of years.

23 MR. HARLEY: Thank you.

24 MS. TIPSORD: Mr. Dimond?
L.A. COURT REPORTERS, LLC. (312) 419-9292

1 MR. RAO: Also, just one more. You
2 mentioned earlier that you would include a
3 compliance period in the permit, which may range
4 from three years or longer. So in this scenario
5 where the renewal is like four years away after
6 the Board adopts a rule so the Agency will give a
7 compliance period after that four years is over
8 when you have reviewed the permit or will there be
9 specific situations where if it's a major
10 discharger you're going to look at it and see
11 whether they need to start with particular
12 compliance?

13 MR. TWAIT: That's an answer
14 somebody above me would have to answer. I don't
15 know the answer to that. The Agency has the
16 ability to reopen those permits on a more timely
17 manner. I don't know that their resources will
18 allow them to do that.

19 MR. RAO: Okay.

20 MR. DIMOND: Tom Dimond on behalf of
21 Stepan. Mr. Twait, in a situation where there is
22 an upstream discharger, you know, on temperature
23 that is creating -- that is creating an issue --
24 if no mixing -- if the exceedances are
L.A. COURT REPORTERS, LLC. (312) 419-9292

1 sufficiently repetitive that no mixing zone is
2 allowed, what -- has the Agency really thought
3 through what kind of relief the downstream
4 discharger might be able to receive and, if so,
5 you know, for example, would you consider not
6 applying the water quality standards at the end of
7 the pipe? And, if so, have you discussed that
8 with EPA and their acceptability of that in a
9 permit?

10 MR. TWAIT: No, we have not. I
11 think the Agency would be best served by making
12 the upstream facilities comply with the water
13 quality standard at the edge of their mixing zone
14 and then the downstream facilities can have
15 mixing.

16 MR. DIMOND: Thank you.

17 MS. TIPSORD: Mr. Andes?

18 MR. ANDES: Fred Andes for the MWRD.
19 Mr. Twait, are you aware of policies from US EPA
20 indicating that in issuing permits the Agency can
21 consider expected reductions from other sources in
22 the watershed?

23 MR. TWAIT: No, I was not. I don't
24 write permits for the most part. So, no, I was
L.A. COURT REPORTERS, LLC. (312) 419-9292

1 not.

2 MS. TIPSORD: Mr. Harley and then
3 we'll go back to Mr. Read.

4 MR. HARLEY: Just for purposes of
5 clarifying the record. In the situation that
6 you're describing where you are going upstream to
7 downstream, if that large upstream facility is in
8 the very beginning of its permit cycle, it could
9 be at least five and maybe more years before the
10 permit would be issued for that large upstream
11 facility, is that correct?

12 MR. TWAIT: It's possible.

13 MR. HARLEY: And the sequencing that
14 you would describe would be that you would wait
15 until the next permit cycle for those downstream
16 facilities after that?

17 MR. TWAIT: I'm not exactly sure how
18 the Agency would handle that.

19 MR. HARLEY: Thank you. Mr. Read?

20 MR. READ: This is another follow
21 up. If one of the downstream discharger needed a
22 modification of their permit in the meantime
23 before the upstream discharger obtained
24 compliance, how would that work?

1 MR. TWAIT: I'm not sure.

2 MR. READ: I think we covered B. So
3 based on your answer to number two about the
4 parameters of concern, you're anticipating mixing
5 zones being available?

6 MR. TWAIT: If the upstream data
7 demonstrates that the water quality standards are
8 being met, then mixing would be available.

9 MR. READ: When -- if they were
10 determined not to be met -- I know we just ran
11 through some --

12 MR. TWAIT: Yes. If they're not
13 being met, then a mixing zone would not be
14 available.

15 MR. READ: Would there then be a
16 TMDL study performed for the constituents?

17 MR. TWAIT: If it made it to the
18 303(d) list, that would be the next step.

19 MR. READ: And then there would be a
20 waste allocation based on the TMDL study?

21 MR. TWAIT: Yes.

22 MR. READ: Can you talk a little bit
23 about who performs this study and what kind of
24 resources the Agency has for these studies?
L.A. COURT REPORTERS, LLC. (312) 419-9292

1 MR. TWAIT: Are you asking about the
2 TMDL study?

3 MR. READ: Yes.

4 MR. TWAIT: Typically, the Agency is
5 having a consultant do the TMDL. I believe the
6 Agency has recently started to do some of the
7 TMDL's themselves, but typically it's a
8 consultant.

9 MR. READ: Is there a group then
10 whether it's the Agency or the consultant advising
11 a group --

12 THE COURT REPORTER: I'm sorry?

13 MR. READ: Advising a group at the
14 agency or is there an agency group that works on
15 these that -- what section is this talking about?

16 MR. TWAIT: I can't remember the
17 name of the group, but there is a group at the
18 Agency that oversees these.

19 MR. READ: Does that group have a
20 priority of streams or how do they prioritize what
21 streams gets the TMDL?

22 MR. TWAIT: They have a priority
23 system when they publish the 303(d) list.

24 MR. READ: Do you know the basis for
L.A. COURT REPORTERS, LLC. (312) 419-9292



ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

1021 NORTH GRAND AVENUE EAST, P.O. BOX 19276, SPRINGFIELD, ILLINOIS 62794-9276 • (217) 782-3397

PAT QUINN, GOVERNOR

JOHN J. KIM, INTERIM DIRECTOR

217/782-0610

September 5, 2012

Flint Hills Resources Chemical Intermediates, LLC
 P.O. Box 941
 Joliet, Illinois 60434

Re: Flint Hills Resources Chemical Intermediates, LLC – Joliet Plant
 NPDES Permit No. IL0001643
 Final Permit

Gentlemen:

Attached is the final NPDES Permit for your discharge. The Permit as issued covers discharge limitations, monitoring, and reporting requirements. The failure of you to meet any portion of the Permit could result in civil and/or criminal penalties. The Illinois Environmental Protection Agency is ready and willing to assist you in interpreting any of the conditions of the Permit as they relate specifically to your discharge.

The Agency made the following change to the final permit.

1. Special Condition 14 was updated in the permit. The condition outlines new requirements in the Stormwater Pollution Prevention Plan.

The Permit as issued is effective as of the date indicated on the first page of the Permit. You have the right to appeal any condition of the Permit to the Illinois Pollution Control Board within a 35 day period following the issuance date.

To assist you in meeting the self-monitoring and reporting requirements of your reissued NPDES permit, a supply of preprinted Discharge Monitoring report (DMR) forms for your facility is being prepared. These forms will be sent to you prior to the initiation of DMR reporting under the reissued permit. Additional information and instructions will accompany the preprinted DMRs upon their arrival.

Should you have questions concerning the Permit, please contact James M. Cowles at 217/782-0610.

Sincerely,

Alan Keller, P.E.
 Manager, Permit Section
 Division of Water Pollution Control

SAK:DEL:JMC:11090101 IL0001643 Flint Hills Resources

Attachment: Final Permit

cc: Records
 Compliance Assurance Section
 Des Plaines Region
 US EPA
 CMAP
 Billing

NPDES Permit No. IL0001643

Illinois Environmental Protection Agency

Division of Water Pollution Control

1021 North Grand Avenue East

Post Office Box 19276

Springfield, Illinois 62794-9276

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM

Reissued (NPDES) Permit

Expiration Date: August 31, 2017

Issue Date: September 5, 2012

Effective Date: September 5, 2012

Name and Address of Permittee:

Flint Hills Resources Chemical Intermediates, LLC
P.O. Box 941
Joliet, Illinois 60434

Facility Name and Address:

Flint Hills Resources Chemical Intermediates, LLC
23425 Amoco Road
Channahon, Illinois 60410
(Will County)

Discharge Number and Name:

001: Treated Process Water, Lab Wastewater, Fire Field Wastewater,
Impacted Groundwater, Utility Water and Alternate Route for Sanitary
Waste, Treated Stormwater

Receiving Waters:

Des Plaines River

002, 003, and 005: Stormwater, Non-Process Wastewater, and
Hydrostatic Test Wastewater

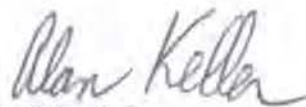
Des Plaines River

004: Treated Sanitary Wastes

Des Plaines River

In compliance with the provisions of the Illinois Environmental Protection Act, Title 35 of Ill. Adm. Code, Subtitle C and/or Subtitle D, Chapter 1, and the Clean Water Act (CWA), the above named permittee is hereby authorized to discharge at the above location to the above-named receiving stream in accordance with the standard conditions and attachments herein.

Permittee is not authorized to discharge after the above expiration date. In order to receive authorization to discharge beyond the expiration date, the permittee shall submit the proper application as required by the Illinois Environmental Protection Agency (IEPA) not later than 180 days prior to the expiration date.



Alan Keller, P.E.
Manager, Permit Section
Division of Water Pollution Control

SAK:JMC:11090101 IL0001643 Flint Hills Resources

NPDES Permit No. IL0001643

Effluent Limitations and Monitoring

| PARAMETER | LOAD LIMITS lbs/day DAF (DMF) | | CONCENTRATION LIMITS mg/l | | SAMPLE FREQUENCY | SAMPLE TYPE |
|---|----------------------------------|------------------|------------------------------|------------------|---------------------|----------------|
| | 30 DAY AVERAGE | DAILY MAXIMUM | 30 DAY AVERAGE | DAILY MAXIMUM | | |
| 1. From the effective date of this permit until the expiration date, the effluent of the following discharge(s) shall be monitored and limited at all times as follows: | | | | | | |
| Outfall(s): 001* | | | | | | |
| Design Average Flow = 2.318 MGD (Long Term Average Flow = 1.22 MGD) | | | | | | |
| Flow (MGD) | | | | | Daily | Continuous |
| TOC | | | **** | **** | 1/Day | Composite |
| pH | See Special Condition 2. | | | | 1/Day | Grab |
| BOD ₅ | 186.16 | 432.35 | 20 | 40 | 3/Week | Composite |
| Total Suspended Solids | 312.75 | 864.69 | 25 | 50 | 1/Day | Composite** |
| Manganese | 9.307 | 21.617 | 1 | 2 | 1/Week | Composite |
| Acenaphthene | 0.124 | 0.334 | 0.022 | 0.059 | *** | Grab |
| Acrylonitrile | 0.543 | 1.368 | 0.096 | 0.242 | *** | Grab |
| Benzene | 0.209 | 0.769 | 0.037 | 0.136 | *** | Grab |
| Carbon Tetrachloride | 0.102 | 0.215 | 0.018 | 0.038 | *** | Grab |
| Chlorobenzene | 0.085 | 0.158 | 0.015 | 0.028 | *** | Grab |
| 1,2,4-Trichlorobenzene | 0.385 | 0.792 | 0.068 | 0.14 | *** | Grab |
| Hexachlorobenzene | 0.085 | 0.158 | 0.015 | 0.028 | *** | Grab |
| 1,2-Dichloroethane | 0.385 | 1.193 | 0.068 | 0.211 | *** | Grab |
| 1,1,1-Trichloroethane | 0.119 | 0.305 | 0.021 | 0.054 | *** | Grab |
| Hexachloroethane | 0.119 | 0.305 | 0.021 | 0.054 | *** | Grab |
| 1,1-Dichloroethane | 0.124 | 0.334 | 0.022 | 0.059 | *** | Grab |
| 1,1,2-Trichloroethane | 0.119 | 0.305 | 0.021 | 0.054 | *** | Grab |
| Chloroethane | 0.588 | 1.515 | 0.104 | 0.268 | *** | Grab |
| 2-Chlorophenol | 0.175 | 0.554 | 0.031 | 0.098 | *** | Grab |
| 1,2-Dichlorobenzene | 0.435 | 0.922 | 0.077 | 0.163 | *** | Grab |
| 1,3-Dichlorobenzene | 0.175 | 0.249 | 0.031 | 0.044 | *** | Grab |
| 1,4 Dichlorobenzene | 0.085 | 0.158 | 0.015 | 0.028 | *** | Grab |
| 1,1-Dichloroethylene | 0.090 | 0.140 | 0.016 | 0.025 | *** | Grab |

NPDES Permit No. IL0001643

Effluent Limitations and Monitoring

| PARAMETER | LOAD LIMITS lbs/day DAF (DMF) | | CONCENTRATION LIMITS mg/l | | SAMPLE FREQUENCY | SAMPLE TYPE |
|-----------------------------|----------------------------------|------------------|------------------------------|------------------|---------------------|----------------|
| | 30 DAY AVERAGE | DAILY MAXIMUM | 30 DAY AVERAGE | DAILY MAXIMUM | | |
| 1,2-Trans-dichloroethylene | 0.119 | 0.305 | 0.021 | 0.054 | *** | Grab |
| 2,4-Dichlorophenol | 0.221 | 0.633 | 0.039 | 0.112 | *** | Grab |
| 1,2-Dichloropropane | 0.865 | 1.301 | 0.153 | 0.23 | *** | Grab |
| 1,3-Dichloropropylene | 0.164 | 0.249 | 0.029 | 0.044 | *** | Grab |
| 4,6-Dinitro-o-cresol | 0.441 | 1.566 | 0.078 | 0.277 | *** | Grab |
| Phenol | 0.085 | 0.147 | 0.015 | 0.026 | *** | Grab |
| Bis (2-ethylhexyl)phthalate | 0.582 | 1.578 | 0.103 | 0.279 | *** | Grab |
| Di-n-butyl phthalate | 0.153 | 0.322 | 0.027 | 0.057 | *** | Grab |
| Diethyl phthalate | 0.458 | 1.148 | 0.081 | 0.203 | *** | Grab |
| Dimethyl phthalate | 0.107 | 0.266 | 0.019 | 0.047 | *** | Grab |
| Benzo (a)anthracene | 0.124 | 0.334 | 0.022 | 0.059 | *** | Grab |
| Benzo (a)pyrene | 0.130 | 0.345 | 0.023 | 0.061 | *** | Grab |
| 3,4 Benzofluoranthene | 0.130 | 0.345 | 0.023 | 0.061 | *** | Grab |
| Benzo (k)fluoranthene | 0.124 | 0.334 | 0.022 | 0.059 | *** | Grab |
| Chrysene | 0.124 | 0.334 | 0.022 | 0.059 | *** | Grab |
| Acenaphthylene | 0.124 | 0.334 | 0.022 | 0.059 | *** | Grab |
| Anthracene | 0.124 | 0.334 | 0.022 | 0.059 | *** | Grab |
| 2,4-Dimethylphenol | 0.102 | 0.204 | 0.018 | 0.036 | *** | Grab |
| 2,6-Dinitrotoluene | 1.442 | 3.625 | 0.255 | 0.641 | *** | Grab |
| 2,4-Dinitrotoluene | 0.639 | 1.612 | 0.113 | 0.285 | *** | Grab |
| Ethylbenzene | 0.181 | 0.611 | 0.032 | 0.108 | *** | Grab |
| Fluoranthene | 0.141 | 0.385 | 0.025 | 0.068 | *** | Grab |
| Methylene Chloride | 0.226 | 0.503 | 0.04 | 0.089 | *** | Grab |
| Methyl Chloride | 0.486 | 1.074 | 0.086 | 0.19 | *** | Grab |
| Hexachlorobutadiene | 0.113 | 0.277 | 0.02 | 0.049 | *** | Grab |
| Naphthalene | 0.124 | 0.334 | 0.022 | 0.059 | *** | Grab |

NPDES Permit No. IL0001643

Effluent Limitations and Monitoring

| PARAMETER | LOAD LIMITS lbs/day DAF (DMF) | | CONCENTRATION LIMITS mg/l | | SAMPLE FREQUENCY | SAMPLE TYPE |
|---------------------|----------------------------------|------------------|------------------------------|------------------|---------------------|----------------|
| | 30 DAY AVERAGE | DAILY MAXIMUM | 30 DAY AVERAGE | DAILY MAXIMUM | | |
| Nitrobenzene | 0.153 | 0.385 | 0.027 | 0.068 | *** | Grab |
| 2-Nitrophenol | 0.232 | 0.390 | 0.041 | 0.069 | *** | Grab |
| 4-Nitrophenol | 0.407 | 0.701 | 0.072 | 0.124 | *** | Grab |
| 2,4-Dinitrophenol | 0.401 | 0.696 | 0.071 | 0.123 | *** | Grab |
| Fluorene | 0.124 | 0.334 | 0.022 | 0.059 | *** | Grab |
| Chloroform | 0.119 | 0.260 | 0.021 | 0.046 | *** | Grab |
| Phenanthrene | 0.124 | 0.334 | 0.022 | 0.059 | *** | Grab |
| Pyrene | 0.141 | 0.379 | 0.025 | 0.067 | *** | Grab |
| Tetrachloroethylene | 0.124 | 0.317 | 0.022 | 0.056 | *** | Grab |
| Toluene | 0.147 | 0.452 | 0.026 | 0.08 | *** | Grab |
| Trichloroethylene | 0.119 | 0.305 | 0.021 | 0.054 | *** | Grab |
| Vinyl Chloride | 0.588 | 1.515 | 0.104 | 0.268 | *** | Grab |
| Chromium (total) | 6.277 | 15.660 | 1 | 2 | *** | Composite |
| Copper | 4.654 | 10.810 | 0.5 | 1.0 | *** | Composite |
| Cyanide (total) | 0.931 | 2.161 | 0.1 | 0.2 | *** | Composite |
| Lead | 1.809 | 3.902 | 0.2 | 0.4 | *** | Composite |
| Nickel | 9.307 | 21.617 | 1 | 2 | *** | Composite |
| Zinc | 5.937 | 14.758 | 1 | 2 | *** | Composite |
| Xylene(s) | | | | | | |
| | | | Monitor Only | | 1/Quarter***** | Grab |

*See Special Condition 15.

**See Special Condition 22.

***See Special Condition 16.

****Report Concentration (mg/l) – See Special Condition 11.

*****See Special Condition 17.

NPDES Permit No. IL0001643

Effluent Limitations and Monitoring

| PARAMETER | LOAD LIMITS lbs/day DAF (DMF) | | CONCENTRATION LIMITS mg/l | | SAMPLE FREQUENCY | SAMPLE TYPE |
|-------------------------------|----------------------------------|------------------|------------------------------|------------------|---------------------|----------------|
| | 30 DAY AVERAGE | DAILY MAXIMUM | 30 DAY AVERAGE | DAILY MAXIMUM | | |
| Outfall: 004* DAF = 0.025 MGD | | | | | | |
| DAF: 0.025 MGD | | | | | | |
| Flow | | | | | Daily | Continuous |
| pH | See Special Condition 1. | | | | 1/Week | Grab |
| CBOD ₅ | 5.21 | 10.43 | 25 | 50 | 1/Week | Composite |
| Total Suspended Solids | 6.26 | 12.51 | 30 | 60 | 1/Week | Composite |

*See Special Condition 7.

Outfalls: 002*, 003* and 005*

| | | | | | | |
|------------------------|--|--|--------------|--|---------|-------------|
| Flow | | | Monitor Only | | 1/Month | Measurement |
| pH | | | Monitor Only | | 1/Month | Grab** |
| Total Suspended Solids | | | Monitor Only | | 1/Month | Composite** |
| Oil and Grease | | | Monitor Only | | 1/Month | Grab** |
| Manganese | | | Monitor Only | | 1/Month | Grab** |
| TOC*** | | | Monitor Only | | 1/Month | Grab** |

*See Special Condition 14.

**See Special Condition 13.

***Report Concentration (mg/l) – See Special Condition 11.

Hydrostatic Test Water Discharge Requirements from Outfalls 002, 003, and 005.

| PARAMETER | LOAD LIMITS lbs/day DAF (DMF) | | CONCENTRATION LIMITS mg/l | | SAMPLE FREQUENCY | SAMPLE TYPE |
|--------------------------------|----------------------------------|------------------|------------------------------|------------------|---------------------------|----------------|
| | 30 DAY AVERAGE | DAILY MAXIMUM | 30 DAY AVERAGE | DAILY MAXIMUM | | |
| Outfalls: 002*, 003*, and 005* | | | | | | |
| Flow | See Special Condition 7. | | | | Daily When Discharging | Measurement |
| pH | See Special Condition 1. | | | | Daily When Discharging | Grab |
| Total Suspended Solids | | | 15 | 30 | Daily When Discharging | Grab |
| Iron (Total) | | | 2.0 | 4.0 | Daily When Discharging | Grab |
| Oil and Grease | | | 15 | 30 | Daily When Discharging | Grab |
| Total Residual Chlorine** | | | | 0.05 | Daily When Discharging | Grab |

*See Special Condition 20 for allowable hydrostatic test water and other discharges allowed to stormwater outfalls.

**See Special Condition 21 for addition requirements for Hydrostatic Test Water Discharges from Outfalls 002, 003, and 005.

NPDES Permit No. IL0001643

Special Conditions

SPECIAL CONDITION 1. (Outfall 004) The pH shall be in the range 6.0 to 9.0. The monthly minimum and monthly maximum values shall be reported on the DMR form.

SPECIAL CONDITION 2. (Outfall 001) The pH shall be in the range of 6.0 to 10.0. The monthly minimum and monthly maximum values shall be reported on the DMR form.

SPECIAL CONDITION 3. The Permittee shall record monitoring results on Discharge Monitoring report (DMR) Forms using one such form for each outfall each month.

In the event that an outfall does not discharge during a monthly reporting period, the DMR Form shall be submitted with no discharge indicated.

The Permittee may choose to submit electronic DMRs (eDMRs) instead of mailing paper DMRs to the IEPA. More information, including registration information for the eDMR program, can be obtained on the IEPA website, <http://www.epa.state.il.us/water/edmr/index.html>.

The completed Discharge Monitoring report forms shall be submitted to IEPA no later than the 25th day of the following month, unless otherwise specified by the permitting authority (See Special Condition 17).

Permittees not using eDMRs shall mail Discharge Monitoring reports with an original signature to the IEPA at the following address:

Illinois Environmental Protection Agency
Division of Water Pollution Control
1021 North Grand Avenue East
Post Office Box 19276
Springfield, Illinois 62794-9276

Attention: Compliance Assurance Section, Mail Code # 19

SPECIAL CONDITION 4. Flow shall be reported in units of Million Gallons per Day (MGD) as a monthly average and daily maximum value.

SPECIAL CONDITION 5. The provisions contained in 40 CFR 122.41 M and N are applicable to this permit.

SPECIAL CONDITION 6. The use or operation of this facility shall be by or under the supervision of a Certified Class K operator.

SPECIAL CONDITION 7. If an applicable effluent standard or limitation is promulgated under Sections 301(b)(2)(C) and (D), 304(b)(2), and 307(a)(2) of the Clean Water Act and that effluent standard or limitation is more stringent than any effluent limitation in the permit or controls a pollutant not limited in the NPDES Permit, the Agency shall revise or modify the permit in accordance with the more stringent standard or prohibition and shall so notify the permittee.

SPECIAL CONDITION 8. Samples taken in compliance with the effluent monitoring requirements shall be taken at a point representative of the discharge, but prior to entry into the receiving stream.

SPECIAL CONDITION 9. For the purpose of this permit, the discharge from outfall 004 is limited to treated sanitary wastewater, free from process and other wastewater discharges.

SPECIAL CONDITION 10. For the purpose of this permit, the discharge from Outfall 001 shall be limited to process water, fire field waste water, impacted groundwater, lab wastewater, utility water and alternate route for sanitary waste. In the event that the permittee shall require a change in use of water treatment additives reviewed as part of the renewal application, the permittee must request a change in this permit in accordance with the Standard Conditions -- Attachment H.

SPECIAL CONDITION 11. Testing for toxic organic pollutants at outfalls 001, 002, 003, and 005 shall be performed utilizing analytical test methods approved under 40 CFR 136 or other approved procedures. Laboratory results shall be reported on the DMR's in units of mg/L down to analytical detection limits which shall be comparable with the method detection limits in 40 CFR 136.

SPECIAL CONDITION 12. The permittee shall conduct biomonitoring of the effluent from outfall 001 in May of each year.

Biomonitoring

1. Acute Toxicity - Standard definitive acute toxicity tests shall be run on at least two trophic levels of aquatic species (fish, invertebrate) representative of the aquatic community of the receiving stream. Testing must be consistent with Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms (Fifth Ed.) EPA/821-R-02-012. Unless substitute tests are pre-approved; the following tests are required:

NPDES Permit No. IL0001643

Special Conditions

- a. Fish - 96 hour static LC₅₀ Bioassay using fathead minnows (*Pimephales promelas*).
 - b. Invertebrate 48-hour static LC₅₀ Bioassay using *Daphnia magna*.
2. Test Samples - The above tests shall be conducted using 24-hour composite samples unless otherwise authorized by the IEPA.
 3. Reporting - Results shall be reported according to EPA/821-R-02-012, Section 12, Report Preparation, and shall be submitted to IEPA, Bureau of Water, Compliance Assurance Section within one week of receipt from the laboratory.
 4. Toxicity Reduction Evaluation - Should the results of the biomonitoring program identify toxicity, the IEPA may require that the Permittee prepare a plan for toxicity reduction evaluation and identification. This plan shall be developed in accordance with Toxicity Reduction Evaluation Guidance for Municipal Wastewater Treatment Plants, EPA/833B-99/002, and shall include an evaluation to determine which chemicals have a potential for being discharged in the plant wastewater, a monitoring program to determine their presence or absence and to identify other compounds which are not being removed by treatment, and other measures as appropriate. The Permittee shall submit to the IEPA its plan for toxicity reduction evaluation within ninety (90) days following notification by the IEPA. The Permittee shall implement the plan within ninety (90) days or other such date as contained in a notification letter received from the IEPA.

The IEPA may modify this Permit during its term to incorporate additional requirements or limitations based on the results of the biomonitoring. In addition, after review of the monitoring results, the IEPA may modify this Permit to include numerical limitations for specific toxic pollutants. Modifications under this condition shall follow public notice and opportunity for hearing.

SPECIAL CONDITON 13. Stormwater Sampling Procedures:

All samples shall be collected from the discharge resulting from a storm event greater than 0.1 inches and at least 72 hours from previously measurable (greater than 0.1 inch rainfall) storm event. Where feasible, the variance in the duration of the event and the total rainfall of the event should not exceed 50 percent from the average or median rainfall event in that area.

A grab sample shall be taken during the first 30 minutes of the discharge (or as soon thereafter as practicable), and composite shall be taken for the entire event with first sample taken during first 30 minutes of discharge (or as soon thereafter as practicable).

If no measurable rainfall event takes place in a reporting month, then sampling shall be conducted on the dry weather flow conditions of outfalls, 002, 003, and 005. In these instances, an 8 h-hour composite sample will be collected with two aliquots drawn during the first collection, one of which will be grab sample.

Grab and composite samples are defined as follows:

Grab Sample: An individual sample of at least 100 milliliters collected during the first 30 minutes (or as soon thereafter as practicable) of the discharge. This sample is to be analyzed separately from the composite sample. If sampling on dry weather base flow, the grab sample shall be collected at the same time as the first aliquot collected for an 8-hour composite sample.

Composite Sample: A composite shall consist of a combination of a minimum of one sample aliquots taken in each hour of discharge for the entire event, with each aliquot being at least 100 milliliters and collected with a minimum period of fifteen minutes between aliquot collections. The first aliquot shall be collected during the first 30 minutes of discharge when sampling during a rain event. If sampling on dry weather base flow, the composite shall consist of at least three aliquots collected over an 8-hour period. Aliquots shall be collected at times such that they are representative of the 8-hour period, and each aliquot shall be at least 100 milliliters in volume. Aliquots may be collected manually or automatically.

SPECIAL CONDITION 14.

STORM WATER POLLUTION PREVENTION PLAN (SWPPP)

- A. A storm water pollution prevention plan shall be maintained by the permittee for the storm water associated with industrial activity at this facility. The plan shall identify potential sources of pollution which may be expected to affect the quality of storm water discharges associated with the industrial activity at the facility. In addition, the plan shall describe and ensure the implementation of practices which are to be used to reduce the pollutants in storm water discharges associated with industrial activity at the facility and to assure compliance with the terms and conditions of this permit. The permittee shall modify the plan if substantive changes are made or occur affecting compliance with this condition.

1. Waters not classified as impaired pursuant to Section 303(d) of the Clean Water Act.

Unless otherwise specified by federal regulation, the storm water pollution prevention plan shall be designed for a storm event equal to or greater than a 25-year 24-hour rainfall event.

NPDES Permit No. IL0001643

Special Conditions

2. Waters classified as impaired pursuant to Section 303(d) of the Clean Water Act

For any site which discharges directly to an impaired water identified in the Agency's 303(d) listing, and if any parameter in the subject discharge has been identified as the cause of impairment, the storm water pollution prevention plan shall be designed for a storm event equal to or greater than a 25-year 24-hour rainfall event. If required by federal regulations, the storm water pollution prevention plan shall adhere to a more restrictive design criteria.

B. The operator or owner of the facility shall make a copy of the plan available to the Agency at any reasonable time upon request.

Facilities which discharge to a municipal separate storm sewer system shall also make a copy available to the operator of the municipal system at any reasonable time upon request.

C. The permittee may be notified by the Agency at any time that the plan does not meet the requirements of this condition. After such notification, the permittee shall make changes to the plan and shall submit a written certification that the requested changes have been made. Unless otherwise provided, the permittee shall have 30 days after such notification to make the changes.

D. The discharger shall amend the plan whenever there is a change in construction, operation, or maintenance which may affect the discharge of significant quantities of pollutants to the waters of the State or if a facility inspection required by paragraph H of this condition indicates that an amendment is needed. The plan should also be amended if the discharger is in violation of any conditions of this permit, or has not achieved the general objective of controlling pollutants in storm water discharges. Amendments to the plan shall be made within 30 days of any proposed construction or operational changes at the facility, and shall be provided to the Agency for review upon request.

E. The plan shall provide a description of potential sources which may be expected to add significant quantities of pollutants to storm water discharges, or which may result in non-storm water discharges from storm water outfalls at the facility. The plan shall include, at a minimum, the following items:

1. A topographic map extending one-quarter mile beyond the property boundaries of the facility, showing: the facility, surface water bodies, wells (including injection wells), seepage pits, infiltration ponds, and the discharge points where the facility's storm water discharges to a municipal storm drain system or other water body. The requirements of this paragraph may be included on the site map if appropriate. Any map or portion of map may be withheld for security reasons.

2. A site map showing:

i. The storm water conveyance and discharge structures;

ii. An outline of the storm water drainage areas for each storm water discharge point;

iii. Paved areas and buildings;

iv. Areas used for outdoor manufacturing, storage, or disposal of significant materials, including activities that generate significant quantities of dust or particulates.

v. Location of existing storm water structural control measures (dikes, coverings, detention facilities, etc.);

vi. Surface water locations and/or municipal storm drain locations

vii. Areas of existing and potential soil erosion;

viii. Vehicle service areas;

ix. Material loading, unloading, and access areas.

x. Areas under items iv and ix above may be withheld from the site for security reasons.

3. A narrative description of the following:

i. The nature of the industrial activities conducted at the site, including a description of significant materials that are treated, stored or disposed of in a manner to allow exposure to storm water;

ii. Materials, equipment, and vehicle management practices employed to minimize contact of significant materials with storm water discharges;

iii. Existing structural and non-structural control measures to reduce pollutants in storm water discharges;

Special Conditions

- iv. Industrial storm water discharge treatment facilities;
 - v. Methods of onsite storage and disposal of significant materials.
4. A list of the types of pollutants that have a reasonable potential to be present in storm water discharges in significant quantities. Also provide a list of any pollutant that is listed as impaired in the most recent 303(d) report.
 5. An estimate of the size of the facility in acres or square feet, and the percent of the facility that has impervious areas such as pavement or buildings.
 6. A summary of existing sampling data describing pollutants in storm water discharges.
- F. The plan shall describe the storm water management controls which will be implemented by the facility. The appropriate controls shall reflect identified existing and potential sources of pollutants at the facility. The description of the storm water management controls shall include:
1. Storm Water Pollution Prevention Personnel - Identification by job titles of the individuals who are responsible for developing, implementing, and revising the plan.
 2. Preventive Maintenance - Procedures for inspection and maintenance of storm water conveyance system devices such as oil/water separators, catch basins, etc., and inspection and testing of plant equipment and systems that could fail and result in discharges of pollutants to storm water.
 3. Good Housekeeping - Good housekeeping requires the maintenance of clean, orderly facility areas that discharge storm water. Material handling areas shall be inspected and cleaned to reduce the potential for pollutants to enter the storm water conveyance system.
 4. Spill Prevention and Response - Identification of areas where significant materials can spill into or otherwise enter the storm water conveyance systems and their accompanying drainage points. Specific material handling procedures, storage requirements, spill cleanup equipment and procedures should be identified, as appropriate. Internal notification procedures for spills of significant materials should be established.
 5. Storm Water Management Practices - Storm water management practices are practices other than those which control the source of pollutants. They include measures such as installing oil and grit separators, diverting storm water into retention basins, etc. Based on assessment of the potential of various sources to contribute pollutants, measures to remove pollutants from storm water discharge shall be implemented. In developing the plan, the following management practices shall be considered:
 - i. Containment - Storage within berms or other secondary containment devices to prevent leaks and spills from entering storm water runoff. To the maximum extent practicable storm water discharged from any area where material handling equipment or activities, raw material, intermediate products, final products, waste materials, by-products, or industrial machinery are exposed to storm water should not enter vegetated areas or surface waters or infiltrate into the soil unless adequate treatment is provided.
 - ii. Oil & Grease Separation - Oil/water separators, booms, skimmers or other methods to minimize oil contaminated storm water discharges.
 - iii. Debris & Sediment Control - Screens, booms, sediment ponds or other methods to reduce debris and sediment in storm water discharges.
 - iv. Waste Chemical Disposal - Waste chemicals such as antifreeze, degreasers and used oils shall be recycled or disposed of in an approved manner and in a way which prevents them from entering storm water discharges.
 - v. Storm Water Diversion - Storm water diversion away from materials manufacturing, storage and other areas of potential storm water contamination. Minimize the quantity of storm water entering areas where material handling equipment or activities, raw material, intermediate products, final products, waste materials, by-products, or industrial machinery are exposed to storm water using green infrastructure techniques where practicable in the areas outside the exposure area, and otherwise divert storm water away from exposure area.
 - vi. Covered Storage or Manufacturing Areas - Covered fueling operations, materials manufacturing and storage areas to prevent contact with storm water.

Special Conditions

- vii. Storm Water Reduction - Install vegetation on roofs of buildings within adjacent to the exposure area to detain and evapotranspire runoff where precipitation falling on the roof is not exposed to contaminants, to minimize storm water runoff; capture storm water in devices that minimize the amount of storm water runoff and use this water as appropriate based on quality.
 6. Sediment and Erosion Prevention - The plan shall identify areas which due to topography, activities, or other factors, have a high potential for significant soil erosion. The plan shall describe measures to limit erosion.
 7. Employee Training - Employee training programs shall inform personnel at all levels of responsibility of the components and goals of the storm water pollution control plan. Training should address topics such as spill response, good housekeeping and material management practices. The plan shall identify periodic dates for such training.
 8. Inspection Procedures - Qualified plant personnel shall be identified to inspect designated equipment and plant areas. A tracking or follow-up procedure shall be used to ensure appropriate response has been taken in response to an inspection. Inspections and maintenance activities shall be documented and recorded.
- G. Non-Storm Water Discharge - The plan shall include a certification that the discharge has been tested or evaluated for the presence of non-storm water discharge. The certification shall include a description of any test for the presence of non-storm water discharges, the methods used, the dates of the testing, and any onsite drainage points that were observed during the testing. Any facility that is unable to provide this certification must describe the procedure of any test conducted for the presence of non-storm water discharges, the test results, potential sources of non-storm water discharges to the storm sewer, and why adequate tests for such storm sewers were not feasible.
- H. Quarterly Visual Observation of Discharges - The requirements and procedures for quarterly visual observations are applicable to all outfalls covered by this condition.
1. You must perform and document a quarterly visual observation of a storm water discharge associated with industrial activity from each outfall. The visual observation must be made during daylight hours. If no storm event resulted in runoff during daylight hours from the facility during a monitoring quarter, you are excused from the visual observations requirement for that quarter, provided you document in your records that no runoff occurred. You must sign and certify the document.
 2. Your visual observation must be made on samples collected as soon as practical, but not to exceed 1 hour or when the runoff or snow melt begins discharging from your facility. All samples must be collected from a storm event discharge that is greater than 0.1 inch in magnitude and that occurs at least 72 hours from the previously measureable (greater than 0.1 inch rainfall) storm event. The observation must document: color, odor, clarity, floating solids, settled solids, suspended solids, foam, oil sheen, and other obvious indicators of storm water pollution. If visual observations indicate any unnatural color, odor, turbidity, floatable material, oil sheen or other indicators of storm water pollution, the permittee shall obtain a sample and monitor for the parameter or the list of pollutants in Part E.4.
 3. You must maintain your visual observation reports onsite with the SWPPP. The report must include the observation date and time, inspection personnel, nature of the discharge (i.e., runoff or snow melt), visual quality of the storm water discharge (including observations of color, odor, floating solids, settled solids, suspended solids, foam, oil sheen, and other obvious indicators of storm water pollution), and probable sources of any observed storm water contamination.
 4. You may exercise a waiver of the visual observation requirement at a facility that is inactive or unstaffed, as long as there are no industrial materials or activities exposed to storm water. If you exercise this waiver, you must maintain a certification with your SWPPP stating that the site is inactive and unstaffed, and that there are no industrial materials or activities exposed to storm water.
 5. Representative Outfalls - If your facility has two or more outfalls that you believe discharge substantially identical effluents, based on similarities of the industrial activities, significant materials, size of drainage areas, and storm water management practices occurring within the drainage areas of the outfalls, you may conduct visual observations of the discharge at just one of the outfalls and report that the results also apply to the substantially identical outfall(s).
 6. The visual observation documentation shall be made available to the Agency and general public upon written request.
- I. The permittee shall conduct an annual facility inspection to verify that all elements of the plan, including the site map, potential pollutant sources, and structural and non-structural controls to reduce pollutants in industrial storm water discharges are accurate. Observations that require a response and the appropriate response to the observation shall be retained as part of the plan. Records documenting significant observations made during the site inspection shall be submitted to the Agency in accordance with the reporting requirements of this permit.

NPDES Permit No. IL0001643

Special Conditions

- J. This plan should briefly describe the appropriate elements of other program requirements, including Spill Prevention Control and Countermeasures (SPCC) plans required under Section 311 of the CWA and the regulations promulgated there under, and Best Management Programs under 40 CFR 125.100.
- K. The plan is considered a report that shall be available to the public at any reasonable time upon request.
- L. The plan shall include the signature and title of the person responsible for preparation of the plan and include the date of initial preparation and each amendment thereto.
- M. Facilities which discharge storm water associated with industrial activity to municipal separate storm sewers may also be subject to additional requirement imposed by the operator of the municipal system

Construction Authorization

Authorization is hereby granted to construct treatment works and related equipment that may be required by the Storm Water Pollution Prevention Plan developed pursuant to this permit.

This Authorization is issued subject to the following condition(s).

- N. If any statement or representation is found to be incorrect, this authorization may be revoked and the permittee there upon waives all rights there under.
- O. The issuance of this authorization (a) does not release the permittee from any liability for damage to persons or property caused by or resulting from the installation, maintenance or operation of the proposed facilities; (b) does not take into consideration the structural stability of any units or part of this project; and (c) does not release the permittee from compliance with other applicable statutes of the State of Illinois, or other applicable local law, regulations or ordinances.
- P. Plans and specifications of all treatment equipment being included as part of the stormwater management practice shall be included in the SWPPP.
- Q. Construction activities which result from treatment equipment installation, including clearing, grading and excavation activities which result in the disturbance of one acre or more of land area, are not covered by this authorization. The permittee shall contact the IEPA regarding the required permit(s).

REPORTING

- R. The facility shall submit an electronic copy of the annual inspection report to the Illinois Environmental Protection Agency. The report shall include results of the annual facility inspection which is required by Part I of this condition. The report shall also include documentation of any event (spill, treatment unit malfunction, etc.) which would require an inspection, results of the inspection, and any subsequent corrective maintenance activity. The report shall be completed and signed by the authorized facility employee(s) who conducted the inspection(s). The annual inspection report is considered a public document that shall be available at any reasonable time upon request.
- S. The first report shall contain information gathered during the one year time period beginning with the effective date of coverage under this permit and shall be submitted no later than 60 days after this one year period has expired. Each subsequent report shall contain the previous year's information and shall be submitted no later than one year after the previous year's report was due.
- T. If the facility performs inspections more frequently than required by this permit, the results shall be included as additional information in the annual report.
- U. The permittee shall retain the annual inspection report on file at least 3 years. This period may be extended by request of the Illinois Environmental Protection Agency at any time.

Annual inspection reports shall be mailed to the following address:

Illinois Environmental Protection Agency
Bureau of Water
Compliance Assurance Section
Annual Inspection Report
1021 North Grand Avenue East
Post Office Box 19276
Springfield, Illinois 62794-9276

NPDES Permit No. IL0001643

Special Conditions

V. The permittee shall notify any regulated small municipal separate storm sewer owner (MS4 Community) that they maintain coverage under an individual NPDES permit. The permittee shall submit any SWPPP or any annual inspection to the MS4 community upon request by the MS4 community.

SPECIAL CONDITION 15. The facility will be required to calculate the reportable concentration values at Outfall 001 if the sampling point is located after the wastewater treatment plant effluent and the Utility wastewaters have mixed.

Utility wastewater consists of boiler blow down, non- contact cooling water blow down, and utilities reverse osmosis wastewater.

Reportable Concentration Value = Measured Concentration Value times (Total Waste Stream (Utility Wastewater plus Waste Water Treatment Plant flow) divided by Waste Water Treatment flow)

Flows shall be determined by flow meters, calculation, or best professional estimate depending on the wastewater flows occurring during monitoring.

The calculated actual concentration shall be reported on the DMR with an example of the calculation attached to the submitted DMR with flows utilized per test date.

pH is not subject to this condition.

SPECIAL CONDITION 16. The facility has been granted a waiver of monitoring for some of the OCPSF regulated pollutants found in 40 CFR 414 Subpart I pursuant to 40 CFR 122.44 (a)(2).

The compounds that will have continued monitoring are 2,4-dimethyl phenol, benzene, bis(2-ethylhexyl)phthalate, ethylbenzene, methyl chloride, methylene chloride, naphthalene, toluene, phenol, chromium, copper, lead, nickel and zinc. Monitoring for these compounds will be required 2/Year. See Special Condition 17 for monitoring and reporting schedule.

All other OCPSF regulated pollutants under 40 CFR 414 Subpart I will not be required to be monitored. This waiver is good for the term of the permit but may be revoked, with notice and opportunity for hearing, upon notification that the facility's processes or raw materials have changed or other evidence is provided that would indicate the introduction of a waived pollutant parameter into the waste stream. Certification of no process change or raw material change is required to continue the monitoring waiver and shall be submitted with the renewal application for this permit.

The permittee shall provide the Illinois Environmental Protection Agency with information on any new chemical that contains a known amount of any of the waived OCPSF chemicals which the facility proposes to utilize in the process of development, production, and wastewater treatment. The information to be submitted to the Agency may include the following:

1. Brand name
2. Function of the chemical
3. Material Safety Data Sheet
4. Manufacturer Technical Specifications Data, if available
5. Proposed use at the facility including frequency, duration, and rate of use
6. An evaluation of the potential routes of entry into the waste water system

The Agency will conduct a timely evaluation of the information to determine the chemical's impact, if any, on the monitoring waiver described in this Condition. Agency approval of the new chemical must be received by the permittee prior to the new chemical's use at the facility. Upon review of the submitted information, the Agency shall advise the permittee if the monitoring waiver is to be revoked for any of the OCPSF regulated pollutants upon use of the new chemical.

Please refer to Special Condition 18, and 19 for addition procedures required for the monitoring waiver.

SPECIAL CONDITION 17. The analytical results or reports shall be submitted according to the following schedule.

| <u>Frequency:</u> | <u>Reporting Date:</u> |
|-------------------|---|
| 1/Month or Less | Following Month DMR |
| 1/Quarter* | Following Month DMR after Quarter |
| 2/Year** | Reported on the July, and January DMRs |
| 1/Year | Reported in the Following Year on the January DMR |

Special Conditions

*Quarters are January-March, April-June, July-September, and October-December

**Samples taken during January-June reported in July, and during July-December reported in January.

SPECIAL CONDITION 18. The facility will be required to monitor all OCPSF regulated pollutants found in 40 CFR 414 Subpart I pursuant to 40 CFR 414 Subpart O in the influent waste stream prior to the wastewater treatment system within six months of permit renewal submission.

The required testing shall be submitted with the renewal submittal package.

The influent monitoring shall be at a point that monitors the process waste stream prior to mixing with any other dilutional waste streams or impacted stormwater/groundwater.

The Agency may use this information to remove constituents from the monitoring waiver request granted.

SPECIAL CONDITION 19. If the permittee proposes to use a water treatment additive in the waste treatment facility or in the non-contact cooling water system not currently in use at the facility, the following information must be submitted to the Agency for review and approval prior to the additive's use.

1. Brand name.
2. The function of the water treatment additive.
3. The Material Safety Data Sheet (MSDS) for the additive, which must include:
 - a. Product Ingredients.
 - b. Aquatic life toxicity estimates for the product.
4. The proposed application rate of the product, including:
 - a. The frequency and duration of usage.
 - b. The dose (ppm) and the application rate (gallons/day) within the system.
 - c. The volume (MGD) of water the product is applied into.
5. Information regarding the fate of the product within the system, such as:
 - a. Neutralization – Dechlorination or pH buffering.
 - b. Degradation – Breakdown within the system, with a retention pond, or from biological treatment.
 - c. Internal dilution with other waste streams prior to outfall.
6. A flow diagram showing the point of application within the system.
7. The final outfall from which the additive would be discharged.
8. The estimated concentration of the final product.

The Agency will conduct a timely evaluation of the information to determine the water treatment additive's impact, if any, on the waste treatment system or the non-contact cooling water system. The additive shall not be used until Agency approval has been issued.

SPECIAL CONDITION 20. Hydrostatic Test Water and Other Discharges allowed to Outfall 002, 003, and 005.

For the purpose of this Permit, discharges from Outfalls 002, 003, and 005 shall be limited to storm water, free from process and other wastewater discharges except that the following non-stormwater discharges are authorized from Outfalls 002, 003, and 005: discharges from fire fighting activities; fire hydrant flushings and test waters; waters used to wash vehicles without the use of detergents only if performed in unconnected areas to the stormwater system; waters used to control uncontaminated dust; irrigation drainage from; lawn watering; routine external building washdown that does not include detergents; pavement washwaters outside process area where spills or leaks of toxic or hazardous material have not occurred (unless all spilled material has been removed) and where detergents are not used; air condenser condensate; condensate from refrigerants; foundation drains not contaminated or adjacent to process areas; and hydrostatic test waters as long as they are used in new piping and equipment so that the water does not come into contact with process chemicals and materials.

Hydrostatic test water must comply with requirements established on page 6 of this permit and Special Condition 21.

The permittee may discharge additional hydrostatic waste water from other sources not listed above if the field office verifies that the system being tested is free of all process wastewater and chemical materials. See Special Condition 21(d) for contact information.

All discharges allowed above shall adhere to Special Conditions 21(a), 21(b), and 21(c).

SPECIAL CONDITION 21. Hydrostatic Test Water Requirements from Outfalls 002, 003, and 005.

- a. In addition to other requirements of this permit, no effluent shall contain settleable solids, floating debris, visible oil, grease, scum, or sludge solids. Color (including color resulting from dyes or tracers in the hydrostatic test water) odor and turbidity shall be reduced to below obvious levels.
- b. Appropriate measures shall be taken to prevent water quality impacts resulting from soil erosion due to the discharge. The discharge

Special Conditions

flow rate shall be controlled so as not to cause scouring or other damage to stream beds or banks.

- c. Solid wastes such as straw used for filtering or erosion control shall be disposed of in accordance with state and federal law.
- d. The permittee shall provide telephone notification to the IEPA Des Plaines Regional Office at, 815/987-7760, at least 1 week prior to any hydrostatic pipeline testing which may result in a discharge.
- e. When test water is discharged to the same waterbody from which it was withdrawn, compliance with the numerical effluent standards is not required when effluent concentrations in excess of the standards result entirely from influent contamination, evaporation, and/or the incidental addition of traces of materials not utilized or produced in the hydrostatic test activity that is the source of the waste.
- f. When the wastewater contains or could contain total residual chlorine (TRC), the permittee will be required to test for TRC as described on page 6 of this permit.

All samples for total residual chlorine (TRC) shall be analyzed by an applicable method contained in 40 CFR 136, equivalent in accuracy to low-level amperometric titration. Any analytical variability of the method used shall be considered when determining the accuracy and precision of the results obtained.

The water quality standards for TRC (0.011 mg/L ave. and 0.019 mg/L max.) are below the method detection level (0.05 mg/L) as described in 40 CFR 136. Therefore, for the purpose of this permit, the method detection level will be utilized to determine compliance with the permit limit for TRC. A measurement of <0.05 mg/L reported on the DMR shall not be considered a violation of the water quality based effluent limit. This reporting threshold is being established to determine compliance and does not authorize the discharge of TRC in excess of the water quality based effluent limit.

g. Except for the situation described in (A) below, the permittee shall only discharge hydrostatic test water to the origin from which the source water was drawn. For all treatment programs, including chlorination, written notification to the Illinois EPA shall be submitted and shall include a complete description of the proposed treatment process as well as information explaining the basis of design. Only those treatment programs approved by the Illinois EPA may be implemented. The permit may be modified to include additional limits and conditions following public notice and opportunity for hearing.

(A)The permittee may discharge hydrostatic test water from any municipal source to any of the watersheds identified above provided the water will not cause any violation of water quality standards. If the source water is chlorinated then the water must meet the limit for total residual chlorine listed on page two of this permit prior to discharge. The permittee shall provide written notification to the Illinois EPA in the event that treatment processes other than chlorination are to be utilized for biological treatment. The notification shall include a description of the proposed treatment process along with basis of design information. Only those treatment programs approved by the Illinois EPA may be implemented. The permit may be modified to include additional limits and conditions based on the alternative treatment proposed. Any modification of the permit will follow public notice and opportunity for a public hearing.

CONSTRUCTION AUTHORIZATION

Authorization is hereby granted to construct treatment works and related equipment that may be required to treat hydrostatic test water.

This Authorization is subject to the following conditions:

1. If any statement or representation is found to be incorrect, this authorization may be revoked and the permittee thereupon waives all rights thereunder.
2. The issuance of this authorization (a) does not release the permittee from any liability for damage to persons or property caused by or resulting from the installation, maintenance or operation of the proposed facilities; (b) does not take into consideration the structural stability of any units or part of this project; and (c) does not release the permittee from compliance with other applicable statutes of the State of Illinois, or other applicable local law, regulations or ordinances.
3. Plans and specifications of all treatment equipment for the control of biological organisms, including but not limited to zebra mussels, shall be submitted to the Illinois EPA for approval prior to construction and operation.
4. Any modification of or deviation from the plans and specifications originally submitted must be approved by the Illinois EPA prior to initiation.

Construction activities which result from treatment equipment installation, including clearing, grading and excavation activities which result in a disturbance of one acre or more of land area are not covered by this authorization. The permittee shall contact the Illinois EPA regarding required permits.

NPDES Permit No. IL0001643

Special Conditions

SPECIAL CONDITION 22: Total Suspended Solids Sampling Procedure

The permittee may collect 8 individual grab samples for total suspended solids for Outfall 001 and report the results as a mathematical composite on the DMR's, provided that the 8 individual grab samples will be collected as periodic intervals during the operating hours of the facility over a 24-hr period, and the mathematical composite will be representative of the discharge from Outfall 001.

Attachment H

Standard Conditions**Definitions**

Act means the Illinois Environmental Protection Act, 415 ILCS 5 as Amended.

Agency means the Illinois Environmental Protection Agency.

Board means the Illinois Pollution Control Board.

Clean Water Act (formerly referred to as the Federal Water Pollution Control Act) means Pub. L 92-500, as amended. 33 U.S.C. 1251 et seq.

NPDES (National Pollutant Discharge Elimination System) means the national program for issuing, modifying, revoking and reissuing, terminating, monitoring and enforcing permits, and imposing and enforcing pretreatment requirements, under Sections 307, 402, 318 and 405 of the Clean Water Act.

USEPA means the United States Environmental Protection Agency.

Daily Discharge means the discharge of a pollutant measured during a calendar day or any 24-hour period that reasonably represents the calendar day for purposes of sampling. For pollutants with limitations expressed in units of mass, the "daily discharge" is calculated as the total mass of the pollutant discharged over the day. For pollutants with limitations expressed in other units of measurements, the "daily discharge" is calculated as the average measurement of the pollutant over the day.

Maximum Daily Discharge Limitation (daily maximum) means the highest allowable daily discharge.

Average Monthly Discharge Limitation (30 day average) means the highest allowable average of daily discharges over a calendar month, calculated as the sum of all daily discharges measured during a calendar month divided by the number of daily discharges measured during that month.

Average Weekly Discharge Limitation (7 day average) means the highest allowable average of daily discharges over a calendar week, calculated as the sum of all daily discharges measured during a calendar week divided by the number of daily discharges measured during that week.

Best Management Practices (BMPs) means schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the pollution of waters of the State. BMPs also include treatment requirements, operating procedures, and practices to control plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage.

Aliquot means a sample of specified volume used to make up a total composite sample.

Grab Sample means an individual sample of at least 100 milliliters collected at a randomly-selected time over a period not exceeding 15 minutes.

24-Hour Composite Sample means a combination of at least 8 sample aliquots of at least 100 milliliters, collected at periodic intervals during the operating hours of a facility over a 24-hour period.

8-Hour Composite Sample means a combination of at least 3 sample aliquots of at least 100 milliliters, collected at periodic intervals during the operating hours of a facility over an 8-hour period.

Flow Proportional Composite Sample means a combination of sample aliquots of at least 100 milliliters collected at periodic intervals such that either the time interval between each aliquot or the volume of each aliquot is proportional to either the stream flow at the time of sampling or the total stream flow since the collection of the previous aliquot.

- (1) **Duty to comply.** The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the Act and is grounds for enforcement action, permit termination, revocation and reissuance, modification, or for denial of a permit renewal application. The permittee shall comply with effluent standards or prohibitions established under Section 307(a) of the Clean Water Act for toxic pollutants within the time provided in the regulations that establish these standards or prohibitions, even if the permit has not yet been modified to incorporate the requirements.
- (2) **Duty to reapply.** If the permittee wishes to continue an activity regulated by this permit after the expiration date of this permit, the permittee must apply for and obtain a new permit. If the permittee submits a proper application as required by the Agency no later than 180 days prior to the expiration date, this permit shall continue in full force and effect until the final Agency decision on the application has been made.
- (3) **Need to halt or reduce activity not a defense.** It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.
- (4) **Duty to mitigate.** The permittee shall take all reasonable steps to minimize or prevent any discharge in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment.
- (5) **Proper operation and maintenance.** The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with conditions of this permit. Proper operation and maintenance includes effective performance, adequate funding, adequate operator staffing and training, and adequate laboratory and process controls, including appropriate quality assurance procedures. This provision requires the operation of back-up, or auxiliary facilities, or similar systems only when necessary to achieve compliance with the conditions of the permit.
- (6) **Permit actions.** This permit may be modified, revoked and reissued, or terminated for cause by the Agency pursuant to 40 CFR 122.62 and 40 CFR 122.63. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance, does not stay any permit condition.
- (7) **Property rights.** This permit does not convey any property rights of any sort, or any exclusive privilege.
- (8) **Duty to provide information.** The permittee shall furnish to the Agency within a reasonable time, any information which the Agency may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with the permit. The permittee shall also furnish to the Agency upon request, copies of records required to be kept by this permit.

- (2) If the permittee monitors any pollutant more frequently than required by the permit, using test procedures approved under 40 CFR 136 or as specified in the permit, the results of this monitoring shall be included in the calculation and reporting of the data submitted in the DMR.
- (3) Calculations for all limitations which require averaging of measurements shall utilize an arithmetic mean unless otherwise specified by the Agency in the permit.
- (f) **Twenty-four hour reporting.** The permittee shall report any noncompliance which may endanger health or the environment. Any information shall be provided orally within 24-hours from the time the permittee becomes aware of the circumstances. A written submission shall also be provided within 5 days of the time the permittee becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and time; and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance. The following shall be included as information which must be reported within 24-hours:
- (1) Any unanticipated bypass which exceeds any effluent limitation in the permit.
 - (2) Any upset which exceeds any effluent limitation in the permit.
 - (3) Violation of a maximum daily discharge limitation for any of the pollutants listed by the Agency in the permit or any pollutant which may endanger health or the environment.
The Agency may waive the written report on a case-by-case basis if the oral report has been received within 24-hours.
- (g) **Other noncompliance.** The permittee shall report all instances of noncompliance not reported under paragraphs (12) (d), (e), or (f), at the time monitoring reports are submitted. The reports shall contain the information listed in paragraph (12) (f).
- (h) **Other information.** Where the permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application, or in any report to the Agency, it shall promptly submit such facts or information.
- (13) **Bypass.**
- (a) Definitions.
 - (1) Bypass means the intentional diversion of waste streams from any portion of a treatment facility.
 - (2) Severe property damage means substantial physical damage to property, damage to the treatment facilities which causes them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.
 - (b) Bypass not exceeding limitations. The permittee may allow any bypass to occur which does not cause effluent limitations to be exceeded, but only if it also is for essential maintenance to assure efficient operation. These bypasses are not subject to the provisions of paragraphs (13)(c) and (13)(d).
 - (c) Notice.
 - (1) Anticipated bypass. If the permittee knows in advance of the need for a bypass, it shall submit prior notice, if possible at least ten days before the date of the bypass.
 - (2) Unanticipated bypass. The permittee shall submit notice of an unanticipated bypass as required in paragraph (12)(f) (24-hour notice).
 - (d) Prohibition of bypass.
 - (1) Bypass is prohibited, and the Agency may take enforcement action against a permittee for bypass, unless:
 - (i) Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage;
 - (ii) There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventive maintenance; and
 - (iii) The permittee submitted notices as required under paragraph (13)(c).
 - (2) The Agency may approve an anticipated bypass, after considering its adverse effects, if the Agency determines that it will meet the three conditions listed above in paragraph (13)(d)(1).
- (14) **Upset.**
- (a) Definition. Upset means an exceptional incident in which there is unintentional and temporary noncompliance with technology based permit effluent limitations because of factors beyond the reasonable control of the permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.
 - (b) Effect of an upset. An upset constitutes an affirmative defense to an action brought for noncompliance with such technology based permit effluent limitations if the requirements of paragraph (14)(c) are met. No determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review.
 - (c) Conditions necessary for a demonstration of upset. A permittee who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs, or other relevant evidence that:
 - (1) An upset occurred and that the permittee can identify the cause(s) of the upset;
 - (2) The permitted facility was at the time being properly operated; and
 - (3) The permittee submitted notice of the upset as required in paragraph (12)(f)(2) (24-hour notice).
 - (4) The permittee complied with any remedial measures required under paragraph (4).
 - (d) Burden of proof. In any enforcement proceeding the permittee seeking to establish the occurrence of an upset has the burden of proof.
- (15) **Transfer of permits.** Permits may be transferred by modification or automatic transfer as described below:
- (a) Transfers by modification. Except as provided in paragraph (b), a permit may be transferred by the permittee to a new owner or operator only if the permit has been modified or revoked and reissued pursuant to 40 CFR 122.62 (b) (2), or a minor modification made pursuant to 40 CFR 122.63 (d), to identify the new permittee and incorporate such other requirements as may be necessary under the Clean Water Act.
 - (b) Automatic transfers. As an alternative to transfers under paragraph (a), any NPDES permit may be automatically



WASHINGTON, D.C. 20460

OFFICE OF
WATER

MAR 15 1985

MEMORANDUM

SUBJECT: Variances in Water Quality Standards
TO: Water Division Directors

Numerous questions have been raised regarding the granting of variances to water quality standards. The Preamble to the water quality standards regulations discusses limiting the granting of a variance that "... based on a demonstration that meeting the standard would cause substantial and widespread economic and social impact, the same test as if the State were changing a use..."

A interpretation by our Office of General Counsel, provides a better determination on what factors can be considered in allowing variances from water quality standards. The OGC interpretation is that any of the factors recognized in the regulation for justifying a stream use downgrade, not just the substantial and widespread economic and social impact test, may be used to support a variance.

Our previous interpretation was somewhat illogical as it allowed more opportunity for a permanent change in standards than it did for a temporary, short-term change which could be granted by a variance. Under Section 510 of the Clean Water Act, States have the right to establish more stringent standards than suggested by EPA. Therefore, as long as any temporary water quality standards modification conforms to the requirements established in Section 131.10 (g) of the regulation for downgrading uses, such an approach is acceptable as it would lead to only a temporary change to a water quality standard rather than a downgrade, and thus would be more stringent than the Federal requirements.

This interpretation does not change the regulation which provides that States may have general policies affecting the application and implementation of standards. It does affect the discussion of variances contained in the Preamble to the regulation and the guidance included in the WQS Handbook, page 1-9. No other aspect of the variance policy and guidance is altered by this new interpretation. This memorandum should be kept as part of your permanent file for interpreting water quality standards.

- 2 -

Overall, we expect the impact of this change to be minimal as the discussion of variances appears to far outweigh its actual affects on the program. Often the confusion surrounding variances obscures the fact that what is really being discussed are specialized permit conditions, scheduling adjustments, site-specific criteria, or actual downgrading actions.

Edwin L. Johnson, Director
Office of Water Regulations
and Standards (WH-551)

c c : Bill Whittington
Peter Perez
Cathy Winer
Net Notzen



Advanced Search

A-Z Index

[LEARN THE ISSUES](#) | [SCIENCE & TECHNOLOGY](#) | [LAWS & REGULATIONS](#) | [ABOUT EPA](#)

SEARCH

Water: Handbook

[Contact Us](#) [Share](#)
[Water Home](#)[Drinking Water](#)[Education & Training](#)[Grants & Funding](#)[Laws & Regulations](#)[Our Waters](#)[Pollution Prevention & Control](#)[Resources & Performance](#)[Science & Technology](#)[Analytical Methods & Laboratories](#)[Applications & Databases](#)[Climate Change & Water](#)[Contaminants of Emerging Concern](#)[Drinking Water](#)[Monitoring & Assessment](#)[Research & Risk](#)[Assessment](#)[Surface Water Standards & Guidance](#)[Wastewater Technology](#)[Water Infrastructure](#)[What You Can Do](#)

You are here: [Water](#) » [Science & Technology](#) » [Surface Water Standards & Guidance](#) » [Water Quality Standards](#) » [Handbook](#) » [Water Quality Standards Handbook – Chapter 5: General Policies \(40 CFR 131.13\)](#)

Water Quality Standards Handbook – Chapter 5: General Policies (40 CFR 131.13)

EPA-820-B-14-004

September 2014

[Table of Contents](#)[Introduction](#)[5.1 Mixing Zones](#)[5.1.1 Recommended Contents of State and Tribal Mixing Zone Policies](#)[5.1.2 Situations in Which Mixing Zones May Not Be Appropriate](#)[5.1.3 Mixing Zones for the Discharge of Dredged or Fill Material](#)[5.1.4 Mixing Zones for Aquaculture Projects](#)[5.2 Critical Low Flows for Water Quality Criteria Implementation](#)[5.3 Variances from Water Quality Standards](#)

Introduction

As specified in [40 CFR 131.13](#), states and authorized tribes may, at their discretion, adopt certain policies into their water quality standards (WQS) that generally affect how their WQS are applied or implemented. Examples of such general policies include those affecting mixing zones, critical low flows, and WQS variances.^{1/} As the regulation indicates, states and tribes are not required to adopt general policies. However, if a state or tribe chooses to adopt a general policy, such policies are subject to EPA review and approval or disapproval under Section 303(c) of the [Clean Water Act \(CWA\)](#) if they constitute new or revised WQS (see [Chapter 1](#) of this Handbook). This chapter provides an overview of three types of general WQS policies. In particular, Section 5.1 of this chapter discusses mixing zones, Section 5.2 discusses critical low flows, and Section 5.3 discusses variances.

5.1 Mixing Zones

A mixing zone is a limited area or volume of water where initial dilution of a discharge takes place and where certain numeric water quality criteria may be exceeded. The [CWA](#) does not require that all criteria be met at the exact point where pollutants are discharged into a receiving water prior to the mixing of such pollutants with the receiving water. Sometimes it is possible to expose aquatic organisms to a pollutant concentration above a criterion for a short duration within a limited, clearly defined area of a waterbody while still maintaining the designated use of the waterbody as a whole. Where this is the case, a state or authorized tribe may find it appropriate to allow ambient concentrations of a pollutant above the criterion in small areas near point-source outfalls (i.e., mixing zones).

Mixing zones do not constitute new state or tribal criteria or changes to the state- or tribe-adopted and EPA-approved criteria. Therefore, the narrative and/or numeric criteria for the waterbody are still the applicable criteria within the boundaries of the mixing zone. A mixing zone simply authorizes an applicable criterion to be exceeded within a defined area of the waterbody while still protecting the designated use of the waterbody as a whole. Since 1983, the guidance in this Handbook has described mixing zones as areas where criteria may be exceeded rather than areas where criteria do not apply.

By authorizing a mixing zone, states and tribes allow some portion of the waterbody to mix with and dilute particular wastewater discharges before evaluating whether the waterbody as a whole is meeting its criteria. In addition to the WQS regulation at [40 CFR 131.13](#) described above, the use of dilution is supported by the National Pollutant Discharge Elimination System (NPDES) permitting regulation at [40 CFR 122.44\(d\)\(1\)\(ii\)](#), which requires the permitting authority to consider, where appropriate, “the dilution of the effluent in the receiving water” when determining whether a discharge causes, has the reasonable potential to cause, or contributes to an instream excursion above a criterion. Depending on the state or tribal WQS and implementation policies, a consideration of dilution could be expressed in the form of a

dilution allowance or a mixing zone. A dilution allowance typically is expressed as the flow or portion of the flow of a river or stream and is typically applied in flowing waters where rapid and complete mixing occurs. A mixing zone is typically applied in any waterbody type in which incomplete mixing occurs. For more information, see Chapter 6 of the *NPDES Permit Writers' Manual (2010)*.

While mixing zones serve to dilute concentrations of pollutants in effluent discharges, they also allow increases in the mass loading of the pollutant to the waterbody (more so than would occur if no mixing zone were allowed). Therefore, if not applied appropriately, a mixing zone could adversely affect mobile species passing through the mixing zone as well as less mobile species (e.g., benthic communities) in the immediate vicinity of the discharge. Because of these and other factors, mixing zones should be applied carefully so that they do not result in impairment of the designated use of the waterbody as a whole or impede progress toward the CWA goals of restoring and maintaining the physical, chemical, and biological integrity of the Nation's waters. Keeping this in mind, a state or tribe has the discretion to choose whether to authorize mixing zones and adopt a mixing zone policy. However, as described below, if a state or tribe chooses to adopt a mixing zone policy, such a policy is generally considered a new or revised WQS that must be adopted into state or tribal law and approved by the EPA before it is effective for CWA purposes.

An important note is that "mixing zone" is used in multiple ways. A *mixing zone policy* is a legally binding state or tribal policy that is adopted into WQS and describes the general characteristics of and requirements associated with mixing zones without taking into account site-specific information. The EPA generally views such mixing zone policies as constituting new or revised WQS that require EPA review and approval or disapproval under Section 303(c) of the CWA. Consistent with the four-part test described in *What is a New or Revised Water Quality Standard Under CWA Section 303(c)? Frequently Asked Questions (2012)* and Chapter 1 of this Handbook, a state or tribal mixing zone policy is a legally binding provision that is adopted into state or tribal law (part one), and it addresses the criteria component of WQS (part two). Additionally, a mixing zone policy expresses a desired condition in the waterbody to allow flexibility in meeting the applicable criteria within certain areas of the waterbody (part three), and if it is a new provision or revises an existing policy (part four), it clearly meets the requirements to be a new or revised WQS.

On the other hand, an *individual, site-specific mixing zone* is authorized for a particular point-source discharge in accordance with a state or tribal mixing zone policy and accounts for the site-specific characteristics of a particular discharge and receiving water. An individual mixing zone is defined and implemented through the NPDES permitting process. The EPA does not view individual mixing zones as constituting new or revised WQS requiring EPA review under Section 303(c). Like a mixing zone policy, an individual mixing zone is a legally binding provision that is established pursuant to state or tribal law (part one), and it addresses the criteria component of WQS (part two). However, unlike a mixing zone policy, an individual mixing zone does not express or establish a desired condition in the waterbody (part three). Instead, the individual mixing zone is used to establish appropriate water quality-based effluent limits (WQBELs) for a specific discharger's NPDES permit. An individual mixing zone also does not establish a new provision or revise an existing provision (part four). Rather, it implements a WQS (i.e., the state or tribal mixing zone policy) for a specific discharger using site-specific information.

Additionally, any time an effluent is discharged into a receiving water, there will be a zone of *actual or physical mixing* in which the discharge and receiving water naturally mix regardless of whether a mixing zone, in the regulatory sense, has been authorized. Such actual mixing is described using field studies and a water quality model and is used in establishing an individual, site-specific mixing zone for a particular discharge.

The authorization of mixing zones under incompletely mixed discharge and receiving water situations pre-dates the CWA. The EPA's current mixing zone guidance, contained in this Handbook, the *Technical Support Document for Water Quality-based Toxics Control (TSD) (1991)*, and the *NPDES Permit Writers' Manual (2010)*, evolved from previous guidance from the EPA and its predecessor agencies on the use of mixing zones as a regulatory tool to address the incomplete mixing of wastewater discharges in receiving waters. This Handbook describes the EPA's recommendations for state and tribal mixing zone policies. The other two documents listed above describe the technical and permitting aspects of defining individual, site-specific mixing zones for point-source discharges during the NPDES permitting process. Additional information on mixing zones can also be found in the EPA's *Compilation of EPA Mixing Zone Documents (2006)* and *Advanced Notice of Proposed Rulemaking for Water Quality Standards (1998)*.

5.1.1 Recommended Contents of State and Tribal Mixing Zone Policies

The EPA recommends that states and authorized tribes adopt, at a minimum, a definitive statement into their WQS specifying whether the state or tribe intends to authorize mixing zones. Consistent with the discussion above, where a mixing zone is authorized, water quality criteria are met at the edge of the mixing zone during critical low-flow conditions (which are described in Section 5.2 of this chapter) so that the designated use of the waterbody as a whole is protected. If a state or tribe chooses to adopt a mixing zone policy, such a policy should ensure the following:

- Mixing zones do not impair the designated use of the waterbody as a whole.

Pollutant concentrations within the mixing zone are not lethal to organisms passing through the mixing zone.

2/

- Pollutant concentrations within the mixing zone do not cause significant human health risks considering likely pathways of exposure.
- Mixing zones do not endanger critical areas such as breeding or spawning grounds, habitat for threatened or endangered species, areas with sensitive biota, shellfish beds, fisheries, drinking water intakes and sources, or recreational areas.

Because pollutant concentrations may exceed numeric criteria within mixing zones, these elevated concentrations could adversely affect the productivity of the waterbody and have unanticipated ecological consequences. Therefore, the EPA recommends that the use of mixing zones in the development of WQBELS in NPDES permits be carefully evaluated and appropriately limited on a case-by-case basis in light of the overarching requirement to protect the designated use of the waterbody as a whole pursuant to [40 CFR 131.10](#).

Due to potential additive or synergistic effects of certain pollutants that could result in the designated use of the waterbody as a whole not being protected, state and tribal mixing zone policies should specify, and permitting authorities should ensure, that mixing zones do not overlap. Additionally, the EPA recommends that permitting authorities evaluate the cumulative effects of multiple mixing zones within the same waterbody. The EPA has developed a holistic approach to determine whether a mixing zone is appropriate based on such cumulative effects considering all of the impacts to the designated uses of the waterbody (see *Allocated Impact Zones for Areas of Non-Compliance (1995)*). If the total area affected by elevated concentrations within all mixing zones combined is small compared to the total area of the waterbody in which the mixing zones are located, then mixing zones are likely to have little effect on the designated use of the waterbody as a whole, provided that they do not impinge on unique or critical habitats. As understanding of pollutant impacts on ecological systems evolves, states and tribes may find specific cases in which no mixing zone is appropriate.

States and tribes that choose to adopt mixing zone policies should describe the general procedures for defining and implementing mixing zones in terms of location, maximum size, shape, outfall design, and in zone water quality, at a minimum. Such policies should be sufficiently detailed to support regulatory actions, issuance of permits, and determination of best management practices for nonpoint sources.

The EPA recommends that specific characteristics of an individual mixing zone for a specific discharger be defined on a case by case basis using the state or tribal mixing zone policy. This site-specific assessment would ideally take into consideration the physical, chemical, and biological characteristics of the discharge (including the type of pollutant discharged) and receiving waterbody; the life history and behavior of organisms in the receiving waterbody; and the designated uses of the waterbody.

Location

States and authorized tribes should restrict the potential locations of mixing zones as a way to protect stationary benthic organisms and human health from the potential adverse effects of elevated pollutant levels. In addition, states and tribes should prohibit mixing zones where they may endanger biologically important and other critical areas that the state, tribe, or federal government has identified. These include breeding and spawning grounds, habitat for threatened or endangered species, areas with sensitive biota, shellfish beds, fisheries, drinking water intakes and sources, and recreational areas.

Pollutant concentrations above the chronic aquatic life water quality criterion may prevent sensitive taxa from living and reproducing successfully within the mixing zone. In this regard, benthic and territorial organisms may be of greatest concern in protecting aquatic life within a mixing zone. The higher the pollutant concentrations occurring within the mixing zone, the more taxa are likely to be adversely affected, thereby affecting the structure and function of the ecological community and, potentially, the designated use of the waterbody as a whole.

For protection of human health, states and tribes should restrict mixing zones such that they do not result in significant human health risks when evaluated using reasonable assumptions about exposure pathways. For example, where drinking water contaminants are a concern, the mixing zones should not encroach on drinking water intakes and sources. Where fish tissue residues are a concern (either because of measured or predicted residues), mixing zones should not result in significant human health risks to average and sensitive subpopulations of consumers of fish and shellfish after considering exposure duration of the affected aquatic organisms in the mixing zone and the patterns of fisheries use in the area. Where waters are designated for primary contact recreation, mixing zones for bacteria should not result in significant human health risks to people recreating in such waters. In all cases, it is critical that the designated use of the waterbody as a whole is protected.

In order to protect the designated uses of the waterbody as a whole, pollutant concentrations within any mixing zone should not be lethal to mobile, migrating, and drifting organisms in the waterbody or cause significant human health risks considering likely pathways of exposure. One means of achieving these objectives is to limit the size of the mixing zone.

Most states and authorized tribes allow mixing zones as a matter of policy but also specify general spatial dimensions that limit their size. States and tribes have developed various methods of defining the maximum allowable size of mixing zones for various types of waters. State and tribal policies dealing with streams and rivers often limit mixing zone widths, cross sectional areas, and/or flow volumes and allow lengths to be determined on a case by case basis. For lakes, estuaries, and coastal waters, dimensions are usually specified by surface area, width, cross sectional area, and/or volume. The EPA recommends that states and tribes use methods that result in quantitative measures sufficient for permitting authorities to develop QWBELs in a transparent and straightforward manner.

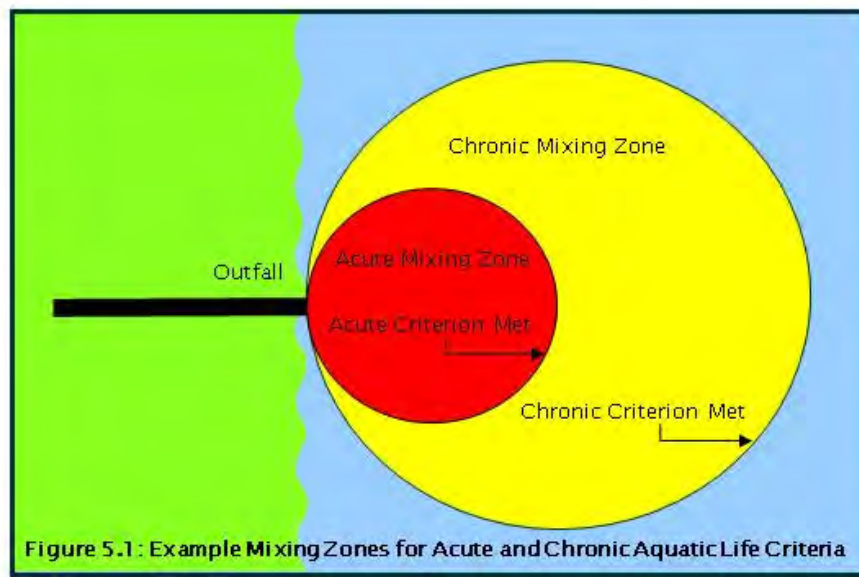
If a mixing zone is authorized for a specific discharge, the permitting authority then defines the actual size of an individual, site-specific mixing zone for the specific discharge on a case-by-case basis using the general size restrictions in the state or tribal mixing zone policy. The area or volume of an individual mixing zone or group of mixing zones should be as small as practicable so that it does not interfere with the designated uses or with the established community of aquatic life in the segment for which the uses are designated.

In general, where a state or tribe has both acute and chronic aquatic life water quality criteria as well as human health criteria for the same pollutant, states and tribes may establish independent mixing zone size specifications that apply to each criteria type. For aquatic life criteria, there may be up to two types of mixing zones: one for the acute criterion and one for the chronic criterion (see Figure 5.1).

In the zone immediately surrounding the outfall, both the acute and the chronic criteria may be exceeded, but the acute criterion is met at the edge of this zone, which is often referred to as the acute mixing zone or the zone of initial dilution. The acute mixing zone is sized to prevent lethality to passing organisms in order to protect the designated use of the waterbody as a whole.

In the next mixing zone, which is often called the chronic mixing zone, the chronic criterion may be exceeded, but the acute criterion is met. The chronic criterion is met at the edge of the chronic mixing zone. The chronic mixing zone is sized to protect the designated use of the waterbody as a whole.

Where the state or tribe also has human health criteria for the pollutant of concern, the human health mixing zone is sized to prevent significant human risks in order to protect the designated use of the waterbody as a whole.



For a particular pollutant found in a particular discharge, the magnitude, duration, frequency, and any authorized mixing zone associated with each of the criteria types (i.e., human health and acute and chronic aquatic life) will determine which criterion most limits the allowable discharge. In all cases, the permitting authority should evaluate the

size of the site-specific mixing zone to determine its effect on the designated use of the waterbody as a whole. Section 2.2.2 of the [TSD \(1991\)](#) contains information for determining whether a mixing zone's size is appropriate.

State and tribal mixing zone policies should identify zones of passage within waterbodies that contain migrating, free-swimming, or drifting organisms. Zones of passage are continuous water routes of such volume, area, and quality as to allow the passage of free swimming and drifting organisms without significant adverse effects on their populations. Many species migrate for spawning and other purposes. Not only do migrating species (e.g., anadromous and catadromous species) need to be able to reach suitable spawning areas, their young (and in some cases the adults) require a safe return route to their growing and living areas. Elevated pollutant concentrations within a mixing zone can create barriers that hinder or prevent safe migration. Therefore, mixing zones should be sized and located appropriately within the waterbody to provide a continuous zone of passage that protects migrating, free-swimming, and drifting organisms.

Shape

The waterbody type, outfall design, and characteristics of the discharge will determine the shape of a mixing zone. The shape should be a simple configuration that is easy to locate in a waterbody and that avoids impingement on biologically important areas. In lakes, a circle with a specified radius is generally preferable, but other shapes may be appropriate in the case of unusual site requirements.

"Shore hugging" plumes should be avoided in all waterbodies. Shore areas are often the most biologically productive and sensitive areas of a waterbody, and they are often used for recreation. Shore-hugging plumes generally do not mix as well with receiving waters and, thus, do not dilute as well as mixing zones with other shapes that do not hug shorelines. Because shore-hugging plumes tend to keep unmixed water over the benthic area or in the recreational area, they are more likely to adversely affect the designated uses of the waterbody.

Outfall Design

Because outfall design affects the amount of initial mixing that occurs, state and tribal mixing zone policies should instruct dischargers to utilize the best practicable engineering design of the outfall to maximize initial mixing. Sometimes, modifying the design of the diffuser, the location of the outfall, or other outfall design characteristics can reduce significant adverse impacts to the waterbody because different design characteristics have different effects on mixing. Many different factors affect how well the outfall design allows the discharge to mix with the receiving water including the following:

- The height of the outfall with respect to the surface and bottom of the waterbody.
- The distance of the end of the pipe to the nearest bank (i.e., whether the outfall is in the middle of the waterbody or close to one side).
- The angle of the discharge.
- The type of diffuser that is used (i.e., single-port or multi-port diffuser).

Section 4.4.1 of the [TSD \(1991\)](#) describes recommendations for outfall design in more detail.

In-zone Water Quality

States and authorized tribes should ensure that a minimum level of water quality is maintained within a mixing zone. Mixing zones should attain the "free from" narrative water quality criteria that are applicable to all waters in a state or reservation. For example, the EPA recommends that mixing zones be free from the following:

- Materials in concentrations that will cause acutely toxic conditions to aquatic life.^{3/}
- Materials in concentrations that settle to form objectionable deposits.
- Floating debris, oil, scum, and other material in concentrations that form nuisances.
- Substances in concentrations that produce objectionable color, odor, taste, or turbidity.
- Substances in concentrations that produce undesirable aquatic life or result in a dominance of nuisance species.

5.1.2 Situations in Which Mixing Zones May Not Be Appropriate

As discussed above, states and authorized tribes are not required to allow mixing zones. Even if a state or tribe chooses to allow mixing zones generally, it may also choose to define in its policy circumstances under which mixing zones are prohibited (e.g., for particular pollutants and/or waterbodies). Likewise, where the state or tribe generally allows mixing zones, the permitting authority may decide that a mixing zone is not appropriate for a particular discharge on a site-specific basis.^{4/} States and tribes should conclude that mixing zones are not appropriate in the following situations:

- Where they may impair the designated use of the waterbody as a whole.
- Where they contain pollutant concentrations that may be lethal to passing organisms.
- Where they contain pollutant concentrations that may cause significant human health risks considering likely pathways of exposure.
- Where they may endanger critical areas such as breeding and spawning grounds, habitat for threatened or endangered species, areas with sensitive biota, shellfish beds, fisheries, drinking water intakes and sources, and recreational areas.

Additionally, states and tribes should carefully consider whether mixing zones are appropriate where a discharge contains bioaccumulative, pathogenic, persistent, carcinogenic, mutagenic, or teratogenic pollutants or where a discharge containing toxic pollutants may attract aquatic life.

Bioaccumulative pollutants are one example of a pollutant for which mixing zones may not be appropriate because they may cause significant human health risks such that the designated use of the waterbody as a whole may not be protected.^{5/} Therefore, the EPA recommends that state and tribal mixing zone policies do not allow mixing zones for discharges of bioaccumulative pollutants. The EPA adopted this approach in 2000 when it amended its 1995 *Final Water Quality Guidance for the Great Lakes System at 40 CFR Part 132* to phase out mixing zones for existing discharges of bioaccumulative pollutants within the Great Lakes Basin and ban such mixing zones for new discharges within the Basin.

Because fish tissue contamination tends to be a far-field problem affecting entire or downstream waterbodies rather than a near-field problem being confined to the area within a mixing zone, a state or tribe may find it appropriate to restrict or eliminate mixing zones for bioaccumulative pollutants in certain situations such as the following:

- Where mixing zones may encroach on areas often used for fish harvesting, particularly for stationary species such as shellfish.
- Where there are uncertainties in the protectiveness of the water quality criteria or the assimilative capacity of the waterbody.

Chapter 3 of this Handbook and Chapter 5 of *Methodology for Deriving Ambient Water Quality Criteria for the Protection of Human Health (2000)* provide additional information about bioaccumulation, and Section 4.3.4 of the *TSD (1991)* discusses preventing bioaccumulation problems for human health in calculating WQBELs.

Another example of a pollutant for which a mixing zone may not be appropriate is bacteria. Because bacteria mixing zones may cause significant human health risks and endanger critical areas (e.g., recreational areas), the EPA recommends that state and tribal mixing zone policies do not allow mixing zones for bacteria in waters designated for primary contact recreation. The presumption in a river or stream segment designated for primary contact recreation is that primary contact recreation can safely occur throughout the segment and, therefore, that bacteria levels will not exceed criteria throughout the segment. Epidemiological studies have demonstrated that illness rates are higher when the criteria are exceeded compared to when those criteria are not exceeded (see Sections 3.2 and 3.3 of the EPA's *Recreational Water Quality Criteria (2012)*). Therefore, people recreating in or through a bacteria mixing zone (where bacteria levels may be elevated above the criteria levels) may be exposed to greater risk of gastrointestinal illness than would otherwise be allowed by the state or tribal criteria for protection of the recreation use. Given this presumption, states and tribes should carefully evaluate whether authorizing a mixing zone that results in elevated levels of bacteria in a river or stream designated for primary contact recreation will adversely affect the designated use. If so, then states and tribes should not authorize such mixing zones because they could result in a significant human health risk.

A third example of a situation in which the EPA recommends that states and tribes prohibit a mixing zone is when an effluent is known to attract biota. In such cases, a continuous zone of passage around the mixing area will not protect aquatic life. Although most toxic pollutants elicit a neutral or avoidance response, there are some situations in which aquatic life are attracted to a toxic discharge and, therefore, can potentially incur significant exposure. For example, temperature can be an attractive force and may counter an avoidance response to a particular pollutant. Therefore, the organisms would tend to stay in the mixing zone rather than passing through or around it. Innate behavior such as migration may also counter an avoidance response and cause fish to incur significant exposure.

5.1.3 Mixing Zones for the Discharge of Dredged or Fill Material

In conjunction with the Department of the Army, the EPA has developed guidelines at [40 CFR Part 230](#) for evaluating discharges of dredged or fill material into navigable waters, which include provisions at [40 CFR 230.11\(f\)](#) for determining the acceptability of mixing zones for such material. Discharges of dredged or fill material are generally temporary and result in short term disruption to the waterbody rather than constituting a continuous discharge with long-term disruption beyond the fill area. In authorizing and establishing mixing zones for dredge and fill activities,

the state or authorized tribe's primary consideration should be achieving and protecting the designated uses of the waterbody pursuant to [40 CFR 131.10](#). As such, states and tribes should evaluate the particular pollutants involved for their effects on the designated use. Technical guidance for determining the potential for contaminant-related impacts associated with the discharge of dredged material can be found in *Evaluation of Dredged Material Proposed for Discharge in Waters of the U.S. - Testing Manual: Inland Testing Manual* (1998).

5.1.4 Mixing Zones for Aquaculture Projects

Under Section 318 of the *CWA*, permitting authorities may allow discharges of certain pollutants associated with approved aquaculture projects. Consistent with [40 CFR 122.25](#), an aquaculture project is a defined, managed water area into which certain pollutants are discharged for the maintenance or production of harvestable freshwater, estuarine, or marine plants or animals. The EPA's regulations at [40 CFR 125.11](#) provide that aquaculture project approval must not result in the enlargement of a pre-existing mixing zone beyond the area designated for the original discharge and that the designated project area (which is also defined at [40 CFR 122.25](#)) must not include a portion of a waterbody large enough to expose a substantial portion of the indigenous biota to the conditions within the designated project area. For example, a designated project area should not include the entire width of a stream because all of the indigenous organisms might be exposed to pollutant discharges that would exceed WQS. The areas designated for approved aquaculture projects should be treated in the same manner as other mixing zones.

5.2 Critical Low Flows for Water Quality Criteria Implementation

Pursuant to [40 CFR 131.11\(a\)](#), states and authorized tribes must adopt those water quality criteria that protect designated uses. To ensure that adopted criteria are protective of the designated uses, states and tribes generally establish critical low-flow values to support implementation of the applicable criteria through such programs as NPDES permitting.

Critical low-flow conditions present special challenges to the integrity of the aquatic community and the protection of human health. Dilution is one of the primary mechanisms by which the concentrations of contaminants in effluent discharges are reduced following their introduction into a receiving water. Low flows in the receiving water typically aggravate the effects of effluent discharges because, during a low-flow event, there is less water available for dilution, resulting in higher instream concentrations of pollutants. Therefore, the allowable dilution (which may be only a portion of the critical low flow depending on the state or tribal WQS and implementation procedures) for purposes of determining the need for and establishing QBELs in NPDES permits should ensure protection of the applicable criteria at the calculated critical low-flow value.

The EPA has historically encouraged states and tribes to specify directly within their WQS which calculated critical low-flow values should be used to determine the available dilution for the purposes of determining the need for and establishing QBELs. Such critical low-flow values have historically been reviewed and approved or disapproved by the EPA as new or revised WQS under Section 303(c) of the *CWA*. Likewise, revisions to those critical low-flow values would generally constitute new or revised WQS subject to EPA review and approval or disapproval (see [Chapter 1](#) of this Handbook and *What is a New or Revised Water Quality Standard Under CWA Section 303(c)? Frequently Asked Questions* (2012)).

Most states and tribes generally follow the guidance in the [TSD \(1991\)](#) when adopting critical low-flow values for criteria implementation. The EPA recommends that states and tribes adopt the critical low-flow values for use in steady-state analyses so that criteria are implemented appropriately. If criteria are implemented using inappropriate critical low-flow values (i.e., calculated values that are too high), the resulting control of toxic pollutants may not be fully protective because the resulting ambient concentrations could exceed criteria when such low flows occur. In the case of aquatic life, more frequent excursions than are allowable (e.g., more than once in three years) could result in unacceptable effects on aquatic organisms and designated uses if the appropriate value is not used in the calculations.

In addition to steady-state models, the TSD recommends the use of three dynamic models to perform wasteload allocations. Because dynamic wasteload models do not generally use specific steady-state critical low-flow values but accomplish the same effect by factoring in the probability of occurrence of stream flows based on the historical flow record, this Handbook discusses only steady-state conditions.

In Appendix D of the TSD and *Technical Guidance Manual for Performing Wasteload Allocations, Book VI: Design Conditions - Chapter 1: Stream Design Flow for Steady-State Modeling* (1986), the EPA describes and recommends two methods for calculating acceptable critical low-flow values: the traditional hydrologically based method developed by the United States Geological Survey (USGS) and a biologically based method developed by the EPA.^{6/} The hydrologically based critical low-flow value is determined statistically using probability and extreme values, while the biologically based critical low flow is determined empirically using the specific duration and frequency associated with the

Additionally, the two documents listed above describe the flow values that the EPA recommends for implementing acute and chronic criteria using both methods. Table 5.1 below summarizes these recommendations.

Table 5.1: EPA-recommended Critical Low Flows for Aquatic Life and Human Health Criteria

| Criteria | Hydrologically Based Flow | Biologically Based Flow |
|----------------------|---------------------------|-------------------------|
| Acute Aquatic Life | 1Q10 | 1B3 |
| Chronic Aquatic Life | 7Q10 | 4B3 |
| Human Health | Harmonic mean | |

Using the hydrologically based method, 1Q10 represents the lowest one-day average flow event expected to occur once every ten years, on average, and 7Q10 represents the lowest seven-consecutive-day average flow event expected to occur once every ten years, on average. Using the biologically based method, 1B3 represents the lowest one-day average flow event expected to occur once every three years, on average, and 4B3 represents the lowest four-consecutive-day average flow event expected to occur once every three years, on average.

States and tribes may designate other critical low-flow values to implement the applicable criteria, provided they are scientifically justified. The EPA has also recommended critical low-flow values that differ from the above recommendations for specific pollutants such as 30Q5, 30Q10, and 30B3 for implementing chronic criteria for ammonia.

The EPA does not view the fact that many streams within a state or tribe have no flow at 7Q10 as adequate justification for designating alternative flows. Note that, when a criterion specifies a four day average concentration that should not be exceeded more than once every three years, this condition should not be interpreted as implying that a 4Q3 low flow is appropriate for use as the hydrologically based critical low-flow value for assessing impacts on the receiving water.

The EPA recommends the harmonic mean flow for implementing human health criteria. The concept of a harmonic mean is a standard statistical data analysis technique. The EPA's model for human health effects assumes that such effects occur because of a long-term exposure to low concentrations of a toxic pollutant (e.g., two liters of water per day for seventy years). The harmonic mean flow allows for estimating the concentration of toxic pollutant contained in those two liters of water per day when the daily variation in the flow rate is high. Therefore, the EPA recommends use of the harmonic mean flow in computing critical low flows for human health criteria rather than using other averaging techniques.

In addition to the documents listed above, see the EPA's [Flow 101 webpage](#) and [Advanced Notice of Proposed Rulemaking for Water Quality Standards \(1998\)](#) for additional information on critical low flows.

The EPA notes that the USGS has documented that, in some areas of the United States, there have been changes to the critical low flows in freshwater rivers and streams or increased duration and frequency of low flow occurrence. The source of the reductions may often be anthropogenic in origin such as over-pumping of groundwater, hydrologic alteration including impoundments, or surface water withdrawals. Some of these reductions may persist long enough to cause changes to the critical low-flow values. In addition, prolonged droughts have resulted in a reduction of the low-flow minimums released on regulated rivers or revisions to drought control manuals to allow for further reductions of the low-flow values. During prolonged droughts, there may also be a trend towards increased pumping of groundwater, which may, in turn, lead to a reduction of surface water flows. New water intakes may also permanently change a waterbody's critical low flow.

The following documents provide additional information on changing flow patterns:

- The USGS's [National Water Census - Streamflow webpage](#).
- The USGS's [Groundwater Depletion in the United States \(1900-2008\) \(2013\)](#).
- The USGS's [Alteration of Streamflow Magnitudes and Potential Ecological Consequences: a Multiregional Assessment \(2011\)](#).
- The EPA's [Report on the Environment - Fresh Surface Water webpage](#).

It may be prudent for states and tribes to review and revise, as appropriate, their critical low-flow values during the triennial review process to account for changes to historical flow patterns. Also, NPDES permitting authorities should be aware that these altered historical flow patterns in rivers and streams may render historical flow records less accurate in predicting current and future critical flows. Where appropriate, permitting authorities should consider alternate approaches to establishing critical low-flow conditions that account for these climatic and anthropogenic changes when conducting reasonable potential analyses and in establishing protective WQBELs (see [NPDES Permit Writers' Manual: Inclusion of Climate Change Considerations](#)).

5.3 Variances from Water Quality Standards

A WQS variance is a time-limited designated use and water quality criterion for a specific pollutant(s) or water quality parameter(s) that reflect the highest attainable condition during the term of the WQS variance. A WQS variance may apply to an NPDES-permitted discharger or waterbody/waterbody segment(s). The regulation at [40 CFR 131.13](#) provides that states and authorized tribes may adopt into their WQS general variance policies that describe how they intend to apply and implement variances. Although such variance policies require EPA review and approval, states and tribes are not required to adopt variance policies in order to adopt individual variances. Nevertheless, as opposed to individual mixing zones (discussed in Section 5.1 of this chapter), the individual variances themselves must be adopted into WQS (or other legally binding state or tribal requirements) and approved by the EPA before they can be effective for CWA purposes.

Although the legal authority to adopt a WQS variance is the same as a revision to a designated use, the purpose of a variance is different from that of a designated use revision (described in [Chapter 2](#) of this Handbook). A variance is intended to serve as a mechanism to provide time for states, tribes, and stakeholders to implement actions to improve water quality over an identified period of time when and where the designated use currently in place is not being met. When utilizing a variance, the state or tribe retains the designated use that is currently in place as a long-term goal. As first articulated in 1977 in *Decision of the General Counsel on Matters of Law Pursuant to 40 CFR Section 125.36(m), No. 58*, a state or tribe may adopt a WQS variance if the state or tribe can satisfy the same substantive and procedural requirements as a designated use removal, which are described in [40 CFR 131.10\(g\)](#).

A variance is also different from a permit compliance schedule. While both tools can provide time to meet regulatory requirements, 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 designated use is attainable, but the discharger 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 502(17) for a definition of “schedules of compliance” and [40 CFR 122.47](#).

A variance may be appropriate where a state or tribe determines that the designated use cannot be attained for a period of time because the discharger cannot immediately meet a WQBEL, which is written to meet a particular WQS, or a waterbody/waterbody segment cannot immediately meet the criteria to protect the designated use. Under such circumstances, the variance provides a targeted, time-limited revision to the WQS that reflects the highest attainable condition. These new time-limited WQS then serve as the basis for pollution control requirements during the term of the variance. For WQS variances that apply to aquatic life, wildlife, and recreational uses (i.e., the Section 101(a)(2) uses), this means that attainment of the designated use is infeasible under at least one of the six factors at [131.10\(g\)](#) for at least the term of the variance.

The practical effect of the variance is an NPDES permit containing a WQBEL that complies with a less stringent criterion than would otherwise be in effect in the absence of the variance. However, the underlying designated use and criteria remain in effect for Section 303(d) listing and total maximum daily load development regardless of whether the variance is for a single discharger, multiple dischargers, or a waterbody/waterbody segment. At the end of the variance term, the discharger’s WQBEL must ensure compliance with the underlying designated use and criterion or the state or tribe must obtain a new variance. To obtain a new variance, the state or tribe must again demonstrate that the designated use is not attainable at the point of discharge and again submit the variance to the EPA for review and approval or disapproval.

In many cases, a WQS variance is an environmentally useful tool because a variance exists only for a defined term and retains designated use protection for all pollutants and sources, with the sole exception of those specified in the variance. Even the discharger with a variance for a particular pollutant is required to meet applicable criteria for all other pollutants. Thus, a variance can result in water quality improvements over time and, in some cases, full attainment of designated uses by maintaining existing water quality protections while allowing time for advances in treatment technologies, control practices, or other changes in circumstances.

States and tribes typically adopt a WQS variance for an individual discharger for a specific pollutant in a specific waterbody. However, where multiple dischargers have similar attainment challenges, a state or tribe may streamline its variance process by adopting a multiple-discharger WQS variance. Such a variance applies to several dischargers but may be supported by a single technical rationale justifying the need for the variance. The EPA has previously published information on both individual- and multiple-discharger variances at [40 CFR Part 132](#). For additional information on variances, also see *Discharger-Specific Variances on a Broader Scale: Developing Credible Rationales for Variances that*

Apply to Multiple Dischargers (2015)

- 1/ Throughout this document, the term “states” means the fifty states, the District of Columbia, the Commonwealth of Puerto Rico, the Virgin Islands, Guam, American Samoa, and the Commonwealth of the Northern Mariana Islands. The term “authorized tribe” or “tribe” means an Indian tribe authorized for treatment in a manner similar to a state under CWA Section 518 for purposes of Section 303(c) WQS.
- 2/ Lethality is a function of the magnitude of a pollutant concentration and the duration an organism is exposed to that concentration. Section 4.3.3 of the TSD (1991) describes various methods for preventing lethality to organisms passing through a mixing zone.
- 3/ Acutely toxic conditions are those that are lethal to aquatic organisms that may pass through the mixing zone. The underlying assumption for allowing a mixing zone is that pollutant concentrations in excess of acute and chronic criteria, but below acutely toxic concentrations, may exist in small areas without causing adverse effects to the designated use of the waterbody as a whole.
- 4/ The 1996 memorandum *EPA Guidance on Application of State Mixing Zone Policies in EPA-issued NPDES Permits* describes the circumstances under which the EPA may include a mixing zone in an NPDES permit when the EPA is the permitting authority.
- 5/ However, note that some chemicals of relatively low toxicity such as zinc will bioconcentrate in fish without harmful effects resulting from human consumption.
- 6/ In some EPA documents such as those cited, critical low flow is also called “design flow” or “stream design flow.” These terms are different from a facility or effluent design flow.





UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGIONAL ADMINISTRATOR
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590
MAR 15 2013

RECEIVED
CLERK'S OFFICE

MAR 19 2013

STATE OF ILLINOIS
Pollution Control Board

John M. Kim, Director
Illinois Environmental Protection Agency
1021 North Grand Avenue East
P.O. Box 19276
Springfield, Illinois 62794-9276

Dear Mr. Kim:

On November 15, 2012, the Illinois Environmental Protection Agency (Illinois EPA) transmitted a variance, issued by the Illinois Pollution Control Board (IPCB or the Board) to CITGO Petroleum Corporation and PDV Midwest Refining, L.L.C., for review and approval by the U.S. Environmental Protection Agency in accordance with section 303(c) of the Clean Water Act (CWA). IPCB granted the variance from the total dissolved solids (TDS) criterion in Illinois' water quality standards at 35 Ill. Adm. Code 302.407 for protection of Illinois' indigenous aquatic life designated use for the Chicago Sanitary and Ship Canal (CSSC), a segment of the Chicago Area Waterway System. As described below, EPA disapproves the variance.

IPCB granted the variance in accordance with a state statute that allows the Board to grant regulatory relief when "compliance with any rule or regulation, requirement or order of the Board would impose an arbitrary or unreasonable hardship." The variance effectively removed for a time-limited period the indigenous aquatic life use and removed the TDS criterion necessary to protect that use for that period of time.

The CWA and federal regulations do not allow states to remove designated uses or modify criteria simply because a state believes that such standards "would impose an arbitrary or unreasonable hardship." Instead, under EPA's regulations, a state can only remove a designated use specified in section 101(a)(2) of the CWA, or a subcategory thereof, if, among other things, the state demonstrates that it is not feasible to attain the designated use for one of the reasons specified at 40 CFR 131.10(g). Similarly, states can only modify criteria necessary to protect designated uses if the state provides an adequate scientific rationale demonstrating that the revised criteria protect designated uses.

While Illinois EPA asserts that the variance is justified as a time-limited removal of the indigenous aquatic life designated use, Illinois did not provide appropriate technical and scientific data and analyses to support such a use removal as required by 40 CFR 131.5(a)(4).

Specifically, Illinois did not provide appropriate technical and scientific data and analyses demonstrating that the indigenous aquatic life designated use was not attainable for any of the reasons specified at 40 CFR 131.10(g), and so Illinois did not submit “[u]se designations consistent with the provisions of sections 101(a)(2) and 303(c)(2) of the Act” as required by 40 CFR 131.6(a). Consequently, EPA disapproves Illinois’ effective time-limited removal of the indigenous aquatic life designated use based upon EPA’s conclusion that it was not based upon appropriate technical and scientific data and analyses as required by 40 CFR 131.5(a)(1), 131.5(a)(4), 131.5(a)(5) and 40 CFR 131.10. Furthermore, to the extent that the variance modified Illinois’ criteria for protection of the indigenous aquatic life designated use by effectively eliminating the applicable TDS criterion, EPA disapproves the modification in accordance with 40 CFR 131.5(a)(2) and (5) because no adequate scientific rationale demonstrating that removal of the TDS criterion would be protective of the indigenous aquatic life designated use has been provided as required by 40 CFR 131.6(b), (c) and (f) and 131.11(a). The enclosed document, entitled “Basis for EPA’s Disapproval of IPCB Decision Granting Variance to CITGO Petroleum Corp. and PDV Midwest Refining, L.L.C.,” more fully sets forth the basis for EPA’s decision.

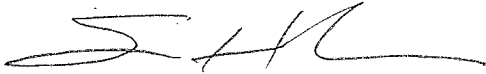
To address this disapproval, Illinois needs to take action so that the indigenous aquatic life designated use and the TDS criterion to protect that use at 35 Ill. Adm. Code 302.407 are fully effective under Illinois law with respect to the CSSC, including with respect to discharges into the CSSC from the oil refinery owned by CITGO Petroleum Corporation and PDV Midwest Refining L.L.C.

The impact of today’s disapproval is that, for CWA purposes, the indigenous aquatic life designated use and the TDS criterion to protect that use at 35 Ill. Adm. 302.407 apply to the CSSC, including with respect to discharges into the CSSC from the oil refinery owned by CITGO Petroleum Corporation and PDV Midwest Refining, L.L.C., notwithstanding IPCB’s variance decision. The use and criterion will apply for CWA purposes until EPA approves a change, deletion, or addition to the water quality standards for the segments impacted by today’s disapprovals, or promulgates standards for those segments. *See* 40 CFR 131.21(e).

If Illinois wants to take the effects of deicing activities in the Chicago area into account in the water quality standards for the CSSC, Illinois could attempt to do so as part of IPCB’s proceedings pertaining to aquatic life use designations and criteria for the Chicago Area Waterway System in IPCB Subdocket Nos. R2008-09(C) and (D). Specifically, Illinois could perform a structured, scientific assessment of the attainability of aquatic life uses, taking into account deicing activities, and of the criteria necessary to protect aquatic life uses, and revise water quality standards accordingly. Illinois could submit any such revisions to EPA for approval, along with the methods used, analyses conducted, scientific rationale and other information demonstrating the appropriateness under federal law of any revised aquatic life designated use for the CSSC and any new or revised criteria for the protection of the revised aquatic life designated use that differ from those specified at 35 Ill. Adm. Code 302.407.

If you have any questions regarding this matter, please contact me or your staff may contact Linda Holst, Chief, Water Quality Branch, at (312) 886-6758.

Sincerely,

A handwritten signature in black ink, appearing to read 'S. Hedman', written in a cursive style.

Susan Hedman
Regional Administrator

Enclosure

cc: Marcia Willhite, Illinois EPA
John Therriault, Illinois Pollution Control Board, Clerk's Office

Basis for EPA's Disapproval of Illinois Pollution Control Board's Decision Granting a Variance to CITGO Petroleum Corp. and PDV Midwest Refining, L.L.C."

Date: **MAR 15 2013**

I. Introduction

On November 15, 2012, the Illinois Environmental Protection Agency (Illinois EPA) submitted a request for the U.S. Environmental Protection Agency to approve in accordance with section 303(c) of the Clean Water Act (CWA), a revision to water quality standards for the Chicago Sanitary and Ship Canal (CSSC). Specifically, Illinois EPA requested that EPA approve an Illinois Pollution Control Board (IPCB) decision granting a "variance" to CITGO Petroleum Corporation and PDV Midwest Refining, L.L.C., from the total dissolved solids (TDS) criterion in Illinois' water quality standards at 35 Ill. Adm. Code 302.407 for protection of Illinois' designated use for aquatic life in the CSSC. *See CITGO Petroleum Corporation and PDV Midwest Refining, L.L.C v. IEPA*, PCB 12-94 (October 18, 2012) (hereinafter "*CITGO Variance Decision*") available at <http://www.ipcb.state.il.us/documents/dsweb/Get/Document-77765>. The IPCB granted the variance in accordance with a state statute that allows IPCB to grant regulatory relief when "compliance with any rule or regulation, requirement or order of the Board would impose an arbitrary or unreasonable hardship." 415 ILCS 5/35(a); *see also CITGO Variance Decision* at 20.

II. Legal Background

A. Designated Uses and Water Quality Criteria

Section 101(a)(2) of the CWA states the national interim goal of achieving by July 1, 1983, "water quality which provides for the protection and propagation of fish, shellfish, and wildlife and provides for recreation in and on the water" (hereafter collectively referred to as "the uses specified in section 101(a)(2)"), wherever attainable. Section 303 of the CWA requires states to adopt water quality standards for waters of the United States within their respective jurisdictions. Section 303(c) of the CWA requires, among other things, that state water quality standards include the designated use or uses to be made of the waters and water quality criteria based upon such uses. Section 303(c)(2)(A) of the CWA requires that water quality standards "protect the public health or welfare, enhance the quality of water and serve the purposes" of the CWA. The EPA's regulations at 40 CFR 131.2 explain that:

"Serve the purposes of the Act" (as defined in sections 101(a)(2) and 303(c) of the Act) means that water quality standards should, wherever attainable, provide water quality for the protection and propagation of fish, shellfish and wildlife and for recreation in and on the water and take into consideration their use and value of [*sic*] public water supplies, propagation of fish, shellfish, and wildlife, recreation in and on the water, and agricultural, industrial, and other purposes including navigation.

EPA's regulations at 40 CFR Part 131 interpret and implement sections 101(a)(2) and 303(c)(2)(A) of the CWA through a requirement that water quality standards include the uses specified in section 101(a)(2) of the CWA, unless those uses have been shown to be unattainable, in which case a state can adopt subcategories of the uses specified in section 101(a)(2) which require less stringent criteria. *See* 40 CFR 131.5(a)(4), 131.6(a), and 131.10(j), and 131.20(a); *see also Idaho Mining Association v. Browner*, 90 F.Supp. 2d 1078, 1092 (D. Id. 2000); 68 Fed. Reg. 40428, 40430-31 (July 27, 2003). 40 CFR 131.10(g) provides that, once a state designates the uses specified in section 101(a)(2) of the CWA or subcategories thereof for a specific water body, the state can only remove the designated use if, among other things, "the [s]tate can demonstrate that attaining the designated use is not feasible [for at least one of the six reasons set forth at 40 CFR 131.10(g)]."

When a state adopts designated uses that include the uses specified in section 101(a)(2) of the CWA or subcategories thereof, the state must also adopt "water quality criteria that protect the designated use." 40 CFR 131.11(a). "Such criteria must be based on sound scientific rationale and must contain sufficient parameters or constituents to protect the designated use." *Id.* Unlike with designated uses, nothing in the CWA or EPA's regulations allows states to relax or modify criteria, based on concepts of attainability, to levels that are not protective of the designated use. Instead, if criteria are not attainable, the CWA and EPA's regulations allow states to (1) remove the current designated use after demonstrating, among other things, that attaining the current designated use is not feasible for one of the 40 CFR 131.10(g) reasons, and replace it with a subcategory of use and, then, (2) adopt new, potentially less stringent, criteria necessary to protect the new designated use.

B. Variances

EPA has long recognized that, where a state satisfies all of the requirements in 40 CFR Part 131 for removing designated uses (or subcategories of uses), including demonstrating that it is not feasible to attain the designated use for one of the reasons specified at 40 CFR 131.10(g), EPA could also approve a state decision to limit the applicability of the use removal to only a single discharger, while continuing to apply the previous use designation and criteria to other dischargers. Such a state decision, which is often referred to as a "variance," can be approved as being consistent with the requirements of the CWA and 40 CFR Part 131. This is because the state's action in limiting the applicability of an otherwise approvable use removal to a single discharger and to a single pollutant is environmentally preferable and would be more stringent than a full use removal; and states have the right to establish more stringent standards under section 510 of the CWA. *See* 58 FR 20802, 20921-22 (April 16, 1993).

C. Water Quality Standard Submission Requirements and EPA Review Authority

40 CFR 131.6 provides that states must submit, among other things, the following to the EPA for review when they adopt new or revised designated uses and criteria:

- (a) Use designations consistent with the provisions or section 101(a)(2) and 303(c)(2) of the Act.

- (b) Methods used and analyses conducted to support water quality standards revisions.
- (c) Water quality criteria to protect the designated uses.

....
(f) General information which will aid the Agency in determining the adequacy of the scientific basis of the standards which do not include the uses specified in section 101(a)(2) of the Act as well as information on general policies applicable to State standards which may affect their application and implementation.

40 CFR 131.5(a) provides that, in reviewing new or revised use designations and criteria, the EPA must determine, among other things:

- (1) Whether the State has adopted water uses which are consistent with the requirements of the Clean Water Act;
- (2) Whether the State has adopted criteria that protect the designated uses;
-
- (4) Whether the State standards which do not include the uses specified in section 101(a)(2) of the Act are based upon appropriate technical and scientific data and analyses, and
- (5) Whether the State submission meets the requirements included in §131.6 of this part.

40 CFR 131.21(c)(2) provides that new or revised water quality standards that are adopted by states do not become applicable water quality standards for purposes of the CWA until after they have been submitted to and approved by EPA in accordance with section 303(c) of the CWA.

III. Illinois' Water Quality Standards for the CSSC

A. Illinois' Adoption and EPA's Approval of Indigenous Aquatic Life Designated Use and Criteria for the CSSC

As noted above, EPA's regulations at 40 CFR Part 131 interpret and implement sections 101(a)(2) and 303(c)(2)(A) of the CWA through a requirement that water quality standards include the uses specified in section 101(a)(2) of the CWA, unless those uses have been shown to be unattainable for one of the reasons set forth at 40 CFR 131.10(g). When consistent with the requirements of 40 CFR 131.10(g), a state can adopt subcategories of the uses specified in section 101(a)(2) which require less stringent criteria. In 1974, Illinois demonstrated that providing for protection and propagation of fish – *i.e.*, one of the uses specified in section 101(a)(2) of the CWA – was not attainable for several waters in the Chicago area, and so Illinois adopted a subcategory of aquatic life use, referred to as “indigenous aquatic life” that it applied to the CSSC. *See* 35 Ill. Adm. Code 302 Subpart D. Waters designated as indigenous aquatic life waters are supposed to be capable of supporting an indigenous aquatic life limited only by the physical configuration of the body of water, characteristics and origin of the water and the presence of contaminants in amounts that do not exceed the water quality standards listed in Subpart D. 35 Ill. Adm. Code 302.402. Illinois also adopted criteria to protect the indigenous aquatic life designated use, including the total dissolved solids (TDS) criterion of 1,500

milligrams per liter (mg/L) set forth at 35 Ill. Adm. Code 302.407. The indigenous aquatic life use and associated criteria applicable to the CSSC were approved previously by EPA¹

B. Variances Pertaining to the CITGO Petroleum Corporation and PDV Midwest Refining, L.L.C. oil refinery in Lemont, Illinois

The IPCB first granted to CITGO Petroleum Corporation and PDV Midwest Refining, L.L.C. a variance from the TDS criterion on April 21, 2005. *See CITGO Variance Decision* at 3. The variance effectively eliminated the applicability of the TDS criterion of 1,500 mg/L for purposes of deriving a water quality based effluent limit (WQBEL) for TDS in CITGO's National Pollutant Discharge Elimination System permit. The IPCB extended the variance on May 15, 2008, *id.*, and again on October 18, 2012, *id.* at 20. Illinois did not submit either the IPCB's original 2005 variance decision or 2008 extension decision to EPA for review and approval under section 303(c) of the CWA. Consequently, the original 2005 variance and the 2008 extension have never been applicable water quality standards for purposes of the CWA. *See* 40 CFR 131.21(c)(2). On November 15, 2012, Illinois EPA submitted IPCB's October 18, 2012, variance decision to EPA for approval in accordance with section 303(c) of the CWA.

The basis for the variance decision in each instance was IPCB's conclusion that compliance with a WQBEL derived from the TDS criterion "would impose an arbitrary or unreasonable hardship." The variance effectively removed for a time-limited period the indigenous aquatic life designated use and removed the TDS criterion necessary to protect that use for that period of time. Despite statements by Illinois EPA and IPCB that the variances are consistent with federal law (*see* CITGO variance at 17), nothing in the CWA or EPA's water quality standards regulations allows states to remove designated uses or modify criteria on this "hardship" basis alone. Instead, as described above, water quality standards can be revised where it can be demonstrated that it is not feasible to attain a designated use for one of the reasons specified at 40 CFR 131.10(g) (and other requirements are also met); or where criteria are revised based on sound scientific rationale and are protective of applicable designated uses in accordance with 40 CFR 131.6(c) and 131.11(a). As described below, there is no indication in IPCB's 2005, 2008 or 2012 decisions that, in granting and extending the variance, IPCB ever evaluated the feasibility of attaining the indigenous aquatic life use designation in the CSSC utilizing any of the factors in 40 CFR 131.10(g). There also is no indication in IPCB's decisions that removal of the TDS criterion is based upon a sound scientific rationale demonstrating that the indigenous aquatic life designated use would be protected.

¹ EPA first approved the indigenous aquatic life use applied to the CSSC in 1974 and the adoption of the applicable TDS standard in 1979. In 2011, Illinois revised aspects of its water quality standards pertaining to the Chicago Area Waterway System to update certain designated recreational uses. The revisions also impacted some aspects of the indigenous aquatic life designated use and criteria. On May 16, 2012, EPA approved portions of those revisions and disapproved others. Illinois' 2011 revisions, and EPA's May 16, 2012, action, did not result in any substantive change to either the indigenous aquatic life designated use for the CSSC or the criteria for protection of that use at 35 Ill. Adm. Code 302.407. *See* EPA's May 16, 2012, letter and supporting documents, *available at* <http://www.epa.gov/region5/chicagoriver>.

IV. EPA's Action on Illinois' Revised Water Quality Standard for the CSSC

A. "Arbitrary and Unreasonable Hardship"

EPA cannot approve the IPCB's decision granting the variance as a change to water quality standards solely because the state believes that such standards "would impose an arbitrary or unreasonable hardship." Instead, EPA evaluated Illinois EPA's November 15, 2012 submission to determine whether the change to the standards is consistent with the CWA and federal regulations regarding time-limited use removals (often referred to as "variances to water quality standards") and water quality criteria².

B. Time-Limited Use Removal

Illinois EPA, in its November 15, 2012, submission to EPA, asserts that IPCB's variance decision can be justified under 40 CFR 131.10(g)(3) and (g)(6) as a time-limited use removal. Each of these assertions is evaluated below.

1. 40 CFR 131.10(g)(3)

40 CFR 131.10(g)(3) provides that designated uses can be removed "if the [s]tate can demonstrate that attaining the designated use is not feasible because . . . [h]uman 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."

As a threshold matter, to justify removing a designated use under 40 CFR 131.10(g)(3), a state must identify with some specificity the "human caused conditions or sources of pollution [that] prevent the attainment of the use." While the record before IPCB is replete with generalized assertions that winter de-icing activities using road salt and other compounds cause TDS levels in the CSSC to exceed the TDS criterion, there is nothing in the state record that adequately identifies with any specificity where these activities are taking place, what entities are responsible for these activities, and what amount of the total TDS load into the CSSC each entity is responsible for.³ In addition, it is unclear from the record and IEPA's November 15, 2012,

² EPA also evaluated Illinois EPA's subsequent submission of more detailed references to documents and information Illinois EPA believed to be relevant to the review of the CITGO variance (email from S. Sofat to L. Holst, dated 2/4/13).

³ Specifically, a state should develop and evaluate information on the amount of loadings of the pollutant at issue from each source (including any point source that is the subject of a variance request) relative to the other sources and also relative to the total loadings to the water body. Here, although there was testimony in the state administrative record that, during snowmelt, the oil refinery effluent makes up between 0.6 to 1% of the total TDS load in the CSSC (Huff 2005 testimony at 35-36), there is no similar information in the record on the other specific sources of TDS. Information on the relative loadings from each source is important in evaluating potential remedial measures.

submission to EPA whether, and to what extent, the state believes that TDS discharges from the oil refinery are one of the “sources” that prevent attainment of the designated use. In sum, Illinois has not adequately identified the “human caused conditions or sources of pollution [that] prevent the attainment of the use.”

Once a state identifies with specificity the “human caused conditions or sources of pollution [that] prevent the attainment of the use,” then, to justify removing a designated use under 40 CFR 131.10(g)(3), the state must also demonstrate either that the conditions or sources “cannot be remedied” or that implementation of the remedy “would cause more environmental damage to correct than to leave in place.” One way that states can make such a demonstration would be to present information on the cost and technical feasibility of a reasonable range of potential remedial measures that could be implemented so that those “conditions or sources of pollution” no longer prevent the attainment of the use. The state must then demonstrate either that it is not feasible to implement such remedial measures (thereby demonstrating that the “human caused conditions or sources of pollution cannot be remedied”) or that implementation of such remedial measures would “cause more environmental damage to correct than to leave in place.” Here, the state administrative record only includes information regarding the cost, technical feasibility and environmental impacts of remedial measures for one of the sources of pollution – the oil refinery – into the CSSC. The state has not identified – much less evaluated the costs, technical feasibility and environmental impact of – remedial measures for the other sources that the state asserts prevent attainment of the use: *i.e.*, the sources responsible for winter de-icing activities.⁴ Nor has Illinois demonstrated in any other way that the “human caused conditions or sources of pollution” cannot be remedied or that implementation of such a remedy “would cause more environmental damage to correct than to leave in place.”

Because Illinois has not provided sufficient information identifying the “human caused conditions or sources of pollution prevent[ing] attainment of the use,” and has not provided sufficient information demonstrating that such human caused conditions or sources of pollution “cannot be remedied or would cause more environmental damage to correct than to leave in place,” Illinois has not demonstrated that attaining the designated indigenous aquatic life use is not feasible under 40 CFR 131.10(g)(3).

⁴ CITGO appended testimony to its variance request that was presented in a separate rulemaking effort before IPCB in IPCB Docket No. R2008-09(C) regarding the attainability of proposed revisions to the aquatic life use designation and associated chloride criteria that IPCB is considering adopting for the CSSC. Specifically, CITGO appended testimony that “[a]ttainment of chloride criteria [being considered as being necessary to protect the revised aquatic life use designation being considered by IPCB] requires a 50% reduction of deicing salt use,” and that attainable reduction goals could be up to 30%, citing one municipality. However, no such information or analysis is given for the TDS, the pollutant at issue here.

2. 40 CFR 131.10(g)(6)

In regards to 40 CFR 131.10(g)(6), Illinois did provide limited information regarding the costs of one alternative for reducing TDS discharges from the oil refinery using evaporation technology. However, there is nothing in the record providing an evaluation or a demonstration of how implementation of this control or any other controls more stringent than those required by sections 301(b) and 306 of the CWA to control TDS would result in “substantial and widespread economic and social impact.” Consequently, Illinois has not adequately demonstrated “that attaining the designated [indigenous aquatic life] use is not feasible because . . . [c]ontrols more stringent than those required by sections 301(b) and 306 of the [CWA] would result in substantial and widespread economic and social impact.” 40 CFR 131.10(g)(6).

C. Criteria Revision

Illinois EPA also notes in its November 15, 2012, submission that (1) IPCB removed the TDS criterion for Illinois General Use waters in 2008 and (2) Illinois is considering removing the TDS criterion applicable to the CSSC in the context of adopting revised aquatic life use designations and associated criteria in the Chicago Area Waterway System proceedings, in IPCB Docket No. R2008-09.⁵ However, Illinois EPA has not asserted, and the IPCB’s orders do not suggest, that IPCB’s variance decision can be justified as a revision to the criteria for protection of the indigenous aquatic life designated use for the CSSC. Even if Illinois EPA had made such an assertion, IPCB’s variance decision would not be approvable as a modification to criteria. This is because, as described below, the administrative record for the variance decision lacks sufficient scientific rationale as required by 40 CFR 131.6(b), (c) and (f) and 131.11(a) as to why removal of the TDS criterion would be protective of the current indigenous aquatic life use.

The scientific rationale as to why IPCB’s removal of the TDS criterion was protective of the aquatic life uses in General Use waters is that (1) chlorides and sulfates are constituents of TDS; (2) IPCB adopted chloride and sulfate criteria for the General Use waters, and so (3) there is no longer any need to include the TDS criterion as a surrogate parameter for chlorides and sulfates. *See* IPCB’s First Opinion and Order in “Triennial Review of Sulfate and Total Dissolved Solids Water Quality Standards,” Docket No. R07-09 (September 20, 2007), at 26, *available at* <http://www.ipcb.state.il.us/documents/dsweb/Get/Document-58772>. Illinois EPA’s proposal to not include TDS criterion for any aquatic life use designations that are ultimately adopted for the Chicago Area Waterway System relies on the same scientific rationale. *See* IEPA’s Statement of Reasons at 78-79, filed by IEPA on October 26, 2007, in IPCB Docket No. R2008-09, *available at* <http://www.ipcb.state.il.us/documents/dsweb/Get/Document-59147>. IPCB’s variance decision does not include adoption of chloride and sulfate criteria and so is not supported by either the scientific rationale underlying removal of the TDS criterion from the General Use water quality

⁵ Illinois EPA’s proposal to remove the TDS criterion can be found in IPCB’s Docket No. R2008-09. After IEPA initiated those proceedings, Docket No. R2008-09 was broken into four subdockets. Subdocket No. R2008-09(C) pertains to aquatic life use designations for the Chicago Area Water System, including the CSSC. Subdocket No. R2008-09(D) pertains to criteria necessary to protect any revised aquatic life designations.

standards or Illinois EPA's rationale to remove the TDS criterion from future aquatic life use designations for the Chicago Area Waterway System.

There is opinion evidence in the state administrative record from 2005 indicating that incremental increases in TDS levels in the CSSC resulting from operation of an air pollution control wet gas scrubber at the refinery would have no impact on the receiving stream. *See* PCB 05-85 Opinion and Order, April 25, 2005 at 13. The basis for that opinion appears to be evidence presented by the petitioners that (1) even with the incremental TDS increases, the TDS levels outside of the mixing zone in the CSSC during most times of the year would still be substantially below the 1,500 mg/l TDS criterion, and (2) in the rare instances where deicing activities cause TDS levels in the CSSC to exceed 1,500 mg/l at the refinery's discharge point, the incremental increases in the in-stream TDS levels are so small that there is no further adverse impact beyond any adverse impacts resulting from the fact that the TDS levels already exceed 1,500 mg/l. However, nothing in that testimony addresses the question of whether there is a sound scientific rationale for removing the TDS criterion when chloride and sulfate criteria do not replace the existing TDS criterion.

D. Summary of EPA's action to disapprove the CITGO variance

IPCB's variance effectively removed for a time-limited period the indigenous aquatic life designated use and effectively removed the TDS criterion necessary to protect that use for that period of time. EPA disapproves Illinois' variance based upon EPA's conclusion that it was not based upon appropriate technical and scientific data and analyses as required by 40 CFR 131.5(a)(1), 131.5(a)(4), 131.5(a)(5) and 40 CFR 131.10. Furthermore, to the extent that the variance modified Illinois' criteria for protection of the indigenous aquatic life designated use by effectively eliminating the applicable TDS criterion, EPA disapproves the modification in accordance with 40 CFR 131.5(a)(2) and (5) because no adequate scientific rationale demonstrating that removal of the TDS criterion would be protective of the indigenous aquatic life designated use has been provided as required by 40 CFR 131.6(b), (c) and (f) and 131.11(a).

E. Effect of EPA's Action on Endangered and Threatened Species

EPA is disapproving the IPCB's variance decision as explained in this document. This disapproval does not cause any change to Illinois' federally-applicable water quality standards under the CWA. Because there is no change to the State's federally-applicable water quality standards, there is no effect on listed species or their designated habitat. Therefore, Endangered Species Act consultation is not required.

F. Tribal Consultation

On May 4, 2011, EPA issued the "EPA Policy on Consultation and Coordination with Indian Tribes" to address Executive Order 13175, "Consultation and Coordination with Indian Tribal Governments." The EPA Tribal Consultation Policy states that "EPA's policy is to consult on a government-to-government basis with federally recognized tribes when EPA actions and decisions may affect tribal interests."

There are no federally recognized tribes located in the vicinity of the CITGO Petroleum Corporation and PDV Midwest Refining, L.L.C. discharge or downstream within the action area. Therefore, EPA is not engaging in tribal consultation for this action.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590

MAR 21 2014

REPLY TO THE ATTENTION OF:
WQ-16J

Marcia T. Willhite, Chief
Bureau of Water
Illinois Environmental Protection Agency
P.O. Box 19276
Springfield, Illinois 62794-9276

Dear Ms. Willhite:

The Illinois Environmental Protection Agency (IEPA) forwarded to the U.S. Environmental Protection Agency the variance application submitted by the Sanitary District of Decatur (SDD) to the Illinois Pollution Control Board (IPCB) in IPCB Docket No. 2014-11. IEPA requested that EPA review and comment on the application. This letter provides those comments.

SDD's variance application discusses EPA's March 15, 2013, letter that disapproved Illinois' request for approval of a variance for CITGO Petroleum Corp. under section 303(c) of the Clean Water Act (CWA). EPA explained in the March 15, 2013, letter that, under the CWA and EPA's implementing regulations, a variance can only be approved by EPA as a revision to water quality standards in accordance with section 303(c) of the CWA if, among other things, the state can demonstrate that the designated use for the water body at issue is not attainable for at least one of the reasons specified at 40 CFR 131.10(g). As explained in the Federal Register notice of EPA's recently proposed revisions to EPA's water quality standards regulations that is cited in SDD's variance application, this has been EPA's longstanding interpretation of the CWA and EPA's implementing regulations, which EPA has consistently applied since 1977. *See* 78 Fed. Reg. 54518, 54531 (Sept. 4, 2013). This continues to be EPA's interpretation and nothing in the Federal Register notice or in EPA's proposed revisions to its water quality regulations changes that longstanding interpretation.

Thus, for a variance to be approvable by EPA under the section 303(c) of the CWA and EPA's implementing regulations, Illinois will be required to affirmatively demonstrate that it is not feasible to attain the General Use designation for the Sangamon River for one of the reasons specified at 40 CFR 131.10(g). We urge the IEPA and the IPCB to carefully evaluate SDD's variance request to determine whether this threshold has been met. In doing so, IEPA and IPCB should consider whether all alternatives for reducing the discharge of nickel into the Sangamon River have been evaluated and demonstrated to be infeasible; including, but not limited to, all alternatives for treating discharges from SDD's wastewater treatment plant, all alternatives for reducing nickel in the wastewater from the Archer Daniels Midland (ADM) facility before it enters SDD's sewer system such as treatment alternatives and process changes, and all alternatives for eliminating ADM's discharges into SDD's sewer system such as piping ADM's

discharges away from the sewer system to another receiving stream location where there might be more available dilution than currently exists in the portion of the Sangamon River into which SDD discharges. In addition, IEPA and IPCB should recognize that, as explained in EPA's March 15, 2013, letter disapproving the CITGO variance, the feasibility threshold in 131.10(g) is different from the "arbitrary and unreasonable hardship" threshold set forth at 415 ILCS5/35(a).

We hope that these comments are useful as IEPA and IPCB evaluate whether SDD's variance application is consistent with federal requirements. If you have any questions about these comments, please contact Linda Holst at 312-886-6758 or holst.linda@epa.gov or Robie Anson, at 312-886-1502 or anson.robie@epa.gov of my staff.

Sincerely,



Tinka G. Hyde
Director, Water Division

cc: Tim Kluge, Sanitary District of Decatur



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?
 - B. What should I consider as I prepare my comments for the EPA?
- II. Background
 - A. What is the statutory and regulatory history of the WQS regulation and program?
 - B. How has the public provided EPA input on the national WQS Program in the past?
 - C. Why is the EPA proposing changes to the federal WQS regulation?
- III. Program Areas for Proposed Regulatory Clarifications
 - A. Introduction
 - B. Administrator's Determinations That New or Revised WQS Are Necessary
 - C. Designated Uses
 - D. Requirements of Triennial Reviews
 - E. Antidegradation Implementation
 - F. WQS Variances
 - G. Provisions Authorizing the Use of Permit-Based Compliance Schedules
 - H. Other Changes
- IV. When does this action take effect?
- V. Economic Impacts on State and Tribal WQS Programs
- VI. Statutory and Executive Order Reviews
 - A. Executive Order 12866: Regulatory Planning and Review and Executive Order 13563: Improving Regulation and Regulatory Review
 - B. Paperwork Reduction Act
 - C. Regulatory Flexibility Act
 - D. Unfunded Mandates Reform Act
 - E. Executive Order 13132 (Federalism)
 - F. Executive Order 13175
 - G. Executive Order 13045: Protection of Children From Environmental Health Risks and Safety Risks
 - H. Executive Order 13211: Actions Concerning Regulations That Significantly Affect Energy Supply, Distribution, or Use
 - I. National Technology Transfer and Advancement Act
 - J. Executive Order 12898: Federal Actions To Address Environmental Justice in Minority Populations and Low-Income Populations

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 tribes¹ 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 ANPRM, 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/lawguidance/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.

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,

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>.

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 UAA⁸ that 101(a)(2) uses are not attainable as

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).

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

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 attainable 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 it finds that other waters will fall into the same category.

The concept of HAU should not 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/adeq/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 variances¹⁸ (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 permanent²⁰ 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)(vi)(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

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).

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

implementing any²⁹ 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 |

¹ ‘—’ = 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 states, tribes, and the EPA without the implementation methods as WQS are estimated costs to all potentially affect requirement to adopt antidegradation 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 |
| Variations | — | — | — | 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]

BILLING CODE 6560-50-P

EXHIBIT 10

BEFORE THE ILLINOIS POLLUTION CONTROL BOARD


| | | |
|------------------------|---|--------------------|
| FLINT HILLS RESOURCES |) | |
| JOLIET, LLC |) | |
| |) | |
| Petitioner, |) | |
| |) | |
| v. |) | PCB _____ |
| |) | (Variance – Water) |
| ILLINOIS ENVIRONMENTAL |) | |
| PROTECTION AGENCY, |) | |
| |) | |
| Respondent. |) | |

AFFIDAVIT OF MICHAEL J. BROSE

I, Michael J. Brose, being first duly sworn on oath, depose and state as follows:

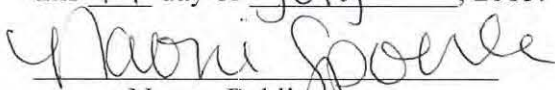
1. I am currently employed as the Plant Manager for Flint Hills Resources Joliet, LLC (“FHR”) in Channahon, Illinois, a position which I have held since May 1, 2014.
2. I participated in the preparation of the Petition for Variance, to the extent it discusses FHR.
3. I have read the Petition for Variance, and based upon my personal knowledge and belief, the facts stated therein with regard to FHR are true and correct.

FURTHER AFFIANT SAYETH NOT.



 Michael J. Brose

Subscribed and sworn to before me
this 17 day of July, 2015.



 Notary Public

