UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
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CHICAGO, IL 60604-3590

JUN 2 4 2019

REPLY TO THE ATTENTION OF:

WW-16J

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

Dear Mr. Kim:

Thank you for your agency's letter of July 13, 2018, submitting Illinois' new and revised water quality standards for the Chicago Area Waterway System (CAWS) and Lower Des Plaines River (LDPR) for review and approval by the U.S. Environmental Protection Agency in accordance with Section 303(c) of the Clean Water Act (CWA). Submission of this rule package was complete with the receipt of the Illinois Attorney General's certification letter, dated April 18, 2019 and received by EPA on April 25, 2019.

Consistent with Section 303(c) of the Clean Water Act and federal regulations at 40 CFR § 131.21, EPA is required to review and approve all new or revised State water quality standards. EPA has reviewed the information submitted in support of the new or revised standards and hereby approves the rule revisions pursuant to Section 303(c) of the CWA and federal regulations at 40 CFR § 131.21.

As required under Section 7 of the ESA and federal regulations at 50 CFR Part 402, EPA evaluated whether approval of these standards would affect federally-listed threatened or endangered species or designated critical habitat. EPA determined that the action may affect, but is not likely to adversely affect, one or more listed aquatic, aquatic-dependent or wetland species. Further, EPA determined that the action will not destroy or adversely modify designated critical habitat.

To date, EPA has initiated, but not completed, consultation with U.S. Fish and Wildlife Service on the new or revised standards. EPA has determined that this approval action does not violate Section 7(d) of the ESA, which prohibits irreversible or irretrievable commitments of resources that have the effect of foreclosing the formulation or implementation of reasonable and prudent alternatives. EPA concluded, as described in the record, that there are not impacts of concern during the interim period until consultation is completed.

EPA is aware that Illinois is considering a number of petitions for time limited water quality standards (TLWQS) that are currently pending before the Illinois Pollution Control Board pertaining to some of the criteria that EPA is approving in this action. EPA encourages Illinois

EPA's Review of Revisions to Illinois' Water Quality Standards:
Chicago Area Waterway System and Lower Des Plaines River Water Quality and Indigenous Aquatic Life Standards (35 Ill. Adm. Code 302 Subpart D)
And Use Designations (35 Ill. Adm. Code 303 Subpart B)
Under Section 303(c) of the Clean Water Act
WQSTS # IL2018-883

Date: JUN 2 4 2019

I. Executive Summary

On April 25, 2019, the U.S. Environmental Protection Agency received from the Illinois Environmental Protection Agency (IEPA) a rule revision package containing changes to the State's water quality standards (WQS) rules found in 35 Ill. Adm. Code 302 Subpart D and 35 Ill. Adm. Code 303 Subpart B applicable to the Chicago Area Waterway System (CAWS) and Lower Des Plaines River (LDPR). Illinois' rule revisions at 35 Ill. Adm. Code 303 Subpart B designate uses to protect aquatic life and human health for 14 segments of the CAWS and the revisions at 35 Ill. Adm. Code 302 Subpart D establish water quality criteria to protect those uses.

As discussed in Section II of this document, EPA has determined that these rules are consistent with the relevant requirements of the Clean Water Act (CWA) and federal regulations at 40 CFR Part 131 and therefore approves the WQS revisions. Consistent with the requirements of the Endangered Species Act (ESA), EPA evaluated the potential impacts of its approval of the adopted rules on federally-protected species and designated critical habitat. As discussed in Section IV of this document, EPA developed a biological evaluation (BE) that evaluates potential effects of its approval. Additionally, consistent with the "EPA Policy on Consultation and Coordination with Indian Tribes," EPA evaluated whether approval of the adopted rules may affect the interests of federally-recognized tribes. EPA concluded that approval will not impact tribal interests and that, therefore, tribal consultation is unnecessary.

II. EPA Review of IEPA's Submittal

WQS requirements of CWA sections 101(a)(2) and 303(c)(2) are implemented through federal regulations contained in 40 CFR Part 131. Consistent with federal regulations at 40 CFR § 131.21, new or revised WQS do not become effective for CWA purposes until they are approved by EPA. The criteria by which EPA evaluates State-adopted WQS are identified in 40 CFR § 131.5(a)(1) through 40 CFR § 131.5(a)(8); EPA reviews each of these criteria below. Because the revisions included in this rule package do not affect Illinois' existing antidegradation policy or its implementation, grant any WQS variances, or affect Illinois' compliance schedule provisions, the WQS requirements in 40 CFR § 131.5(a)(3), (4) and (5) are not relevant in considering whether to approve Illinois' adopted WQS.

A. Whether the State has adopted designated water uses that are consistent with the requirements of the Clean Water Act. (40 CFR § 131.5(a)(1))

Section 101(a)(2) of the CWA states:

> it is 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.

Section 303(c)(2)(A) of the CWA requires states to establish WQS for their waters, taking into consideration the use of waters for "propagation of fish and wildlife" among other uses. The federal regulations at 40 CFR § 131.10 govern designation of uses for surface waters. With respect to the uses specified in Section 101(a)(2) of the CWA (hereafter collectively referred to as "101(a)(2) uses"), states must adopt uses consistent with those specified in Section 101(a)(2) of the CWA or demonstrate why attaining these uses is not feasible through a use attainability analysis (UAA). As specified at 40 CFR § 131.10(g) and (h)(1), states may not remove a designated use if it is an existing use.

1. WQS for the CAWS and LDPR prior to Illinois' recent adoption of new and revised WQS

Illinois' WQS provide that all waters of the state are designated for "General Use" unless a specific use designation has been otherwise established. *See* 35 Ill. Admin. Code 303.201. 35 Ill. Admin. Code 302.202 provides:

> The General Use standards will protect the State's water for aquatic life (except as provided in Section 302.213)[1], wildlife, agricultural use, secondary contact use and most industrial uses and ensure the aesthetic quality of the State's aquatic environment. Primary contact uses are protected for all General Use waters whose physical configuration permits such use.

The General Use designation, therefore, includes the uses specified in Section 101(a)(2) of the CWA. Illinois has also adopted numeric and narrative criteria for the General Use waters. *See* 35 Ill. Admin. Code 302.201-302.212.

Until Illinois' recent revisions, no specific use designation had been established for three CAWS segments:

- North Shore Channel extending from Lake Michigan to the North Side Sewage Treatment Works (hereinafter referred to as the "Upper North Shore Channel");
- A 6.8-mile segment of the Calumet River extending from the O'Brien Locks and Dam to Lake Michigan; and

[1] Section 302.2013 was repealed in 2002, *see* 35 Ill. Admin. Code 302.212, and so this provision no longer has any applicability.

- Lake Calumet Connecting Channel.

Consequently, the use designation for those three segments had been General Use.

The other 11 segments of the CAWS and LDPR had been specifically designated as "Secondary Contact and Indigenous Aquatic Life" (hereinafter referred to as "Indigenous Aquatic Life Waters"), and thus neither the General Use designation nor the General Use criteria applied to those segments. Illinois' WQS required that these segments instead meet the WQS of 35 Ill. Admin. Code 302 Subpart D. *See* 35 Ill. Admin. Code 303.441, as it existed under Illinois law prior to September 9, 2011[2]. The 11 segments that had been "Indigenous Aquatic Life Waters" are:

- Lower Des Plaines River from the Brandon Road Lock and Dam to the Interstate 55 bridge (hereinafter referred to as the "Upper Dresden Island Pool");
- Lower North Shore Channel from North Side Water Reclamation Plant to confluence with North Branch of the Chicago River;
- North Branch of the Chicago River from its confluence with North Shore Channel to its confluence with South Branch of the Chicago River and Chicago River;
- South Branch of the Chicago River;
- Calumet-Sag Channel;
- Calumet River from O'Brien Lock and Dam to its confluence with Grand Calumet River and Little Calumet River;
- Little Calumet River from its confluence with Calumet River and Grand Calumet River to its confluence with Calumet-Sag Channel;
- Grand Calumet River;
- Lake Calumet;
- Chicago Sanitary and Ship Canal (CSSC); and
- Lower Des Plaines River from its confluence with the CSSC to the Brandon Road Lock and Dam (hereinafter referred to as the "Brandon Pool").

As described at 35 Ill. Admin. Code 302.402, the Indigenous Aquatic Life Waters use designation was:

> Intended for those waters not suited for general use activities but which will be appropriate for all secondary contact uses and which will 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.

Thus, the Indigenous Aquatic Life Waters use designation did not include the uses specified in Section 101(a)(2) of the CWA. Illinois' WQS also included aquatic life numeric and narrative

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[2] 35 Ill. Admin. Code 303.441 divided the CAWS and LDPR into 10 specified segments. In the revisions that are the subject of today's action, the IPCB subdivided the LDPR into two segments. This is why this document refers to 11 segments that had been previously designated as "Indigenous Aquatic Life Waters," rather than 10 segments.

criteria applicable to the Indigenous Aquatic Life Waters use designation that were less stringent than those for General Use waters. *See* 35 Ill. Admin. Code 302.403-302.410.

2. Illinois' new and revised use designations

In October 2007, the IEPA filed an omnibus proposal with the Illinois Pollution Control Board (IPCB) to revise the recreational and aquatic life standards for all segments of the CAWS and LDPR. On March 18, 2010, the IPCB broke the omnibus CAWS and LDPR rulemaking process into four subdockets to separately address issues related to recreational use designations (Subdocket A); issues related to disinfection and whether disinfection would be necessary to meet recreational use designations (Subdocket B); issues related to aquatic life use designations (Subdocket C); and issues related to criteria necessary to meet aquatic life use designations (Subdocket D).

On February 6, 2014, the IPCB concluded its rulemaking process in Subdocket C by adopting a Final Rule that consists of new and revised aquatic life use designations for 14 CAWS and LDPR segments. On June 18, 2015, the IPCB concluded its rulemaking process in Subdocket D by adopting a Final Rule that consists of new and revised water quality criteria to protect the uses adopted in Subdocket C. As part of the Final Rule for Subdocket D, the IPCB also revised 35 Ill. Adm. Code 302.401(b), 302.402 and 303.204 to require that the Chicago River meet the General Use standards.

As part of the state administrative record the IPCB relied on in revising the aquatic life use designations for the CAWS segments, the IEPA provided Use Attainability Analyses (UAAs) for the CAWS and LDPR that addressed the attainability of recreational and aquatic life uses. The Lower Des Plaines River Use Attainability Analysis (LDPR UAA) and Chicago Area Waterway System Use Attainability Analysis (CAWS UAA) evaluate fish and macroinvertebrate communities in the CAWS and LDPR using data from routine biological surveys conducted by Metropolitan Water Reclamation District of Greater Chicago (MWRD) between 1993 and 2002 and biological surveys conducted specifically for the UAAs. To assess whether specific stream segments are currently attaining the aquatic life uses specified in Section 101(a)(2) of the CWA or have attained those uses in the past, the UAAs evaluated the fish and macroinvertebrate data using Ohio's Index of Biotic Integrity (IBI) for boatable streams and Illinois' Macroinvertebrate Biotic Index (MBI), which were developed and calibrated to provide a direct measure of the ecological condition of a stream's aquatic communities. While Illinois has developed its own IBI for fish, it was calibrated for use on smaller wadeable streams than the large rivers of the CAWS and LDPR. Therefore, as discussed in the LDPR UAA, a subcommittee composed of biological experts representing government, environmental and industry groups determined that Ohio's IBI for boatable streams would be more appropriate for the LDPR because "it had been calibrated for use on large rivers that had been sampled using the methods applied to past studies on the Lower Des Plaines River" (LDPR UAA, 6-3). For the same reasons, the CAWS stakeholder advisory group determined that Ohio's IBI for boatable streams would also be more appropriate for the CAWS. The UAAs also evaluated physical habitat in each stream segment using Ohio's Qualitative Habitat Evaluation Index (QHEI) to determine whether specific stream segments have the potential to support biological communities consistent with Section 101(a)(2) of the CWA. As with the fish IBI, Ohio's QHEI was determined to be more appropriate for the

LDPR and CAWS than Illinois' Stream Habitat Assessment Procedure, which is designed for use on small headwater streams (LDPR UAA, p. 4-16). Ohio routinely uses the QHEI to evaluate the biological potential of rivers and streams.

In addition to the CAWS UAA and LDPR UAA, the IPCB subsequently received extensive testimony, technical information and public comments on the IEPA's proposal pertaining to recreational and aquatic life standards for the CAWS and LDPR. In evaluating the attainable aquatic life use for each segment, the IPCB considered "water quality, habitat, and biological conditions, including primarily fisheries and macroinvertebrates" (First Notice, p. 177).

Based on the results of the UAAs and the subsequent testimony and public comments provided on the UAAs, the IPCB concluded that:

> "[b]oth CAWS and LDPR have shown improvement since these waters were last classified. However, certain segments that are classified as General Use have been unable to attain the water quality standards of General Use or to meet the CWA goals of 'protection and propagation of fish, shellfish and wildlife.' Other segments have shown improvement in fish diversity and water quality but still cannot yet meet the CWA goal" (First Notice, p. 172-173).

Consequently, the IPCB maintained the General Use designation for the Chicago River but determined that it is infeasible for the remaining segments of the CAWS and LDPR to attain the aquatic life aspects of Illinois' General Use.

To account for the improvements to the biological conditions in the CAWS and LDPR, Illinois updated the designated uses that apply to the CAWS and LDPR by repealing the Indigenous Aquatic Life Waters use and establishing three new aquatic life use designations applicable to 14 segments[3] of the CAWS and LDPR that reflect a lower biological potential in these waters as compared with the General Use but a higher biological potential as compared with the prior aquatic life use designation for the CAWS and LDPR (Indigenous Aquatic Life Waters) that the new use designations are replacing, as follows:

- Upper Dresden Island Pool Aquatic Life Use Waters (35 Ill. Adm. Code 303.230(a)) – "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

[3] Illinois' revised WQS at 35 Ill. Adm. Code 303.230, 303.235 and 240 divide the CAWS and LDPR into 13 specified segments. However, as discussed in Section II.A.1 above, Illinois' previously applicable WQS had designated a portion of the Calumet River as Indigenous Aquatic Life Waters, while no specific use designation had been established for the remainder of the Calumet River and, thus, the use designation for that portion had been General Use. Consequently, Illinois' adoption of CAWS ALU A for the Calumet River resulted in two separate use changes for the two segments of the Calumet River. This is why this document refers to 14 segments of the CAWS and LDPR rather than 13 segments.

aquatic life may include, but is not limited to, largemouth bass, bluntnose minnow, channel catfish, orangespotted sunfish, smallmouth bass, shorthead redhorse, and spottail shiner."

- Chicago Area Waterways System Aquatic Life Use A (35 Ill. Adm. Code 303.235(a)) – "are capable of maintaining, and shall have quality sufficient to protect, aquatic life populations predominated by individuals of tolerant and intermediately tolerant types that are adaptive to the unique physical conditions, flow patterns, and operational controls necessary to maintain navigational use, flood control, and drainage functions of the waterway system. Such aquatic life may include, but is not limited to, fish species, such as channel catfish, largemouth bass, bluegill, black crappie, spotfin shiner, orangespotted sunfish, common carp, and goldfish."
- Chicago Area Waterways System and Brandon Pool Aquatic Life Use B (35 Ill. Adm. Code 303.240(a)) – "are capable of maintaining, and shall have quality sufficient to protect, aquatic life populations predominated by individuals of tolerant types that are adaptive to unique physical conditions and modifications of long duration, including artificially constructed channels consisting of vertical sheet-pile, concrete and rip-rap walls designed to support commercial navigation, flood control, and drainage functions in deep-draft, steep-walled shipping channels. Such aquatic life may include, but is not limited to, fish species, such as common carp, golden shiner, bluntnose minnow, yellow bullhead, and green sunfish."

As described in Illinois' Statement of Reasons, the three aquatic life uses represent three levels of biological potential based on the extent of modification that has occurred and the sensitivity of the biological organisms the stream is expected to support. With the exception of recreational uses, for which Illinois established separate designated uses, the three designated uses established by these rules protect the same categories of uses (aquatic life, human health, etc.) as the General Use, and thus, for those categories of uses are sub-categories of the General Use consistent with 40 CFR § 131.10(c), which provides that "States may adopt sub-categories of a use and set the appropriate criteria to reflect varying needs of such uses, for instance, to differentiate between cold water and warm water fisheries." Compared with the General Use (Illinois' designated use that includes the aquatic life use specified in Section 101(a)(2) of the CWA), the three aquatic life uses established in this rulemaking provide protection for more tolerant aquatic life populations "that are adaptive to the unique physical conditions" of these waters.

As described below, the IPCB evaluated the biological and habitat survey data for each segment to determine the current biological condition and the attainable biological condition based on current physical habitat and the potential for restoration. Based on the results of that process, the IPCB designated the highest aquatic life use that best matched the current and future attainable aquatic life use for each segment.

3. EPA's review of Illinois' new and revised use designations

Section 101(a)(2) of the CWA states:

> It is 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. [emphasis added]

As specified at 40 CFR § 131.10(j), a UAA is required whenever:

> (1) The State designates for the first time, or has previously designated for a water body, uses 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 that requires criteria less stringent than previously applicable.

As specified at 40 CFR § 131.10(k), a UAA is not required whenever:

> (1) The State designates for the first time, or has previously designated for a water body, uses that include the uses specified in section 101(a)(2) of the Act; or
> (2) The State designates a sub-category of a use specified in section 101(a)(2) of the Act that requires criteria at least as stringent as previously applicable; or
> (3) The State wishes to remove or revise a designated use that is a non-101(a)(2) use. In this instance, as required by paragraph (a) of this section, the State must submit documentation justifying how its consideration of the use and value of water for those uses listed in paragraph (a) appropriately supports the State's action, which may be satisfied through a use attainability analysis.

a. Designated use changes requiring a UAA

As discussed in Section II.A.1 above, no specific use designation had been established for the Upper North Shore Channel, the Calumet River from Lake Michigan to the O'Brien Lock and Dam, and the Lake Calumet Connecting Channel and, thus, the aquatic life use designation for those three segments had been General Use. The adopted rules effectively remove the General Use from these waters by establishing the Chicago Area Waterway System Aquatic Life Use A designation at 35 Ill. Adm. Code 303.235(a) and (b) and specifically designating these waters as such by listing the segments at 35 Ill. Adm. Code 303.235(c). As described in Section II.B of this document, in order to protect these revised uses, Illinois determined that the CAWS ALU A use requires less stringent criteria than is necessary to protect the General Use designation. Therefore, EPA determined that a UAA was required, per 40 CFR § 131.10(j)(2).

Per 40 CFR § 131.10(g), if a State adopts a new or revised WQS based on a required UAA, the State must adopt the highest attainable use and demonstrate that it is not feasible to attain the use or uses based on at least one of the six reasons specified in 40 CFR § 131.10(g)(1) – (6). These reasons are excerpted below:

> (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 condition or to operate such modification in a way that would result in the 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.

Additionally, 40 CFR § 131.10(h)(1) specifies that states may not remove designated uses if "they are existing uses, as defined in §131.3, unless a use requiring more stringent criteria is added." 40 CFR § 131.3(e) defines existing uses as "those uses actually attained in the water body on or after November 28, 1975, whether or not they are included in the water quality standards."

For revisions to designated uses that require a UAA, Illinois' designation of revised aquatic life use designations for the surface waters identified in Illinois' revised WQS is consistent with the CWA and federal regulations and may be approved by EPA if the supporting documentation demonstrates that:

1) Illinois is not removing a designated use that is an existing use of the segment, as defined at 40 CFR § 131.3(e), unless Illinois is adding a use requiring more stringent criteria (40 CFR § 131.10(h)(1));
2) it is not feasible to attain the aquatic life aspect of Illinois' General Use per 40 CFR § 131.10(g); and
3) Illinois has adopted the highest attainable use for the segment, as defined at 40 CFR § 131.3(m).

As described below, Illinois' designation of CAWS ALU A for the Upper North Shore Channel, the Calumet River from Lake Michigan to the O'Brien Lock and Dam, and the Lake Calumet Connecting Channel complies with these requirements.

i. Illinois' demonstration that it is not removing an existing use for the three segments previously designated as General Use

Illinois had previously evaluated the designated uses for Upper North Shore Channel and Calumet River from Lake Michigan to the O'Brien Lock and Dam in 1971 as part of WQS revisions for the entire CAWS and LDPR and in 1987 when it re-designated these two segments as General Use. However, neither of these previous evaluations were based on surveys of the biological life and, therefore, do not indicate whether any of these three segments have actually attained the aquatic life aspect of Illinois' General Use since November 28, 1975.

In designating CAWS ALU A for these waters, the IPCB considered data included in the LDPR UAA and the CAWS UAA from routine biological surveys conducted by Metropolitan Water Reclamation District of Greater Chicago (MWRD) between 1993 and 2002 and biological surveys conducted specifically for the UAAs. The biological survey data for each of these three segments indicate that fish and macroinvertebrate communities are currently composed of mostly tolerant or moderately tolerant species. Additionally, the historic biological survey results did not indicate that any of the segments had supported diverse biological communities consistent with the aquatic life aspect of Illinois' General Use at any point during the data record. Furthermore, the overall biological communities, as measured by the IBI and MBI scores, were indicative of fair to poor water quality conditions and would not be considered protective of the diverse biological communities consistent with the aquatic life aspect of Illinois' General Use. Consequently, based on the available data, Illinois concluded, and EPA confirms that, in removing the General Use from these three segments, Illinois did not remove an existing use, consistent with 40 CFR § 131(h)(1).

ii. Illinois' demonstration that it is not feasible for the three segments previously designated as General use to attain the aquatic life aspect of Illinois' General Use

For the Upper North Shore Channel, the Calumet River from Lake Michigan to the O'Brien Lock and Dam, and the Lake Calumet Connecting Channel, the IPCB determined through a UAA that it is infeasible for these segments to attain the full Section 101(a)(2) goal use for aquatic life based on the factors listed at 40 CFR § 131.10(g)(3), (4) and (5).

The IPCB cited the CAWS UAA, which documented hydrologic modifications such as dams, flow control and channelization, consistent with factor 4, preclude attainment of the aquatic life component of the General Use for each of these three segments. The IPCB determined that these segments lack high quality habitat due to the historic hydrologic modifications: "the habitat quality in most of the segments is impacted by human caused conditions, which include channel morphology, hydrology and flow regime, and bank and riparian conditions" (Second Notice, p. 38). Consistent with this, physical habitat surveys conducted for the UAAs found fair to poor habitat conditions in each of the segments with modified habitat attributes such as silty substrates, low sinuosity and lack of pool and riffle development typically associated with historic channelization and/or impoundment. As measured by QHEI score, the habitat in these segments would not be expected to support diverse biological communities consistent with the full CWA aquatic life goal use.

Based on the information summarized above, the IPCB concluded that:

> The flows in CAWS are highly regulated and original flows were diverted through man-made canals to reduce contamination to Lake Michigan in the early 1900s; and the original waterbodies that make up CAWS have been highly modified to support navigation, stormwater and wastewater conveyance and public use. These modifications along with flow regulation prevent the attainment of a high quality aquatic life designated use. (First Notice, p. 30)

Consequently, the IPCB concluded that dams, diversions or other hydrologic modifications preclude attainment of the full Section 101(a)(2) aquatic life use.

Consistent with 40 CFR §131.10(g)(4), the IPCB also evaluated whether it is feasible to restore the segments to their original condition or to operate the hydrologic modifications in such a way that would result in the attainment of the aquatic life use. For the system as a whole, the IPCB concurred with the CAWS UAA, which concluded that "[s]ince these waterways are maintained for navigational uses critical to the economic vitality of the City, the potential for dramatic improvement to create aquatic habitat to support a higher designated use would likely be unproductive and would severely conflict with important navigational uses" (CAWS UAA, p. 5-4). The IPCB added that "[s]pecifically, adding flow from Lake Michigan is legally prohibited and allowing flow reduction to protect against floods during stormwater events is essential" (Proposed Second Notice, p. 38).

To assess whether any individual segment could be restored, the IPCB considered the CAWS UAA and the LimnoTech "Chicago Area Waterway System Habitat Evaluation and Improvement Study" (hereinafter referred to as the "LimnoTech Habitat Study"), which both evaluated the potential for habitat improvements in each specific segment as follows:

- The CAWS UAA evaluated the potential for habitat restoration on each segment and concluded that "the waterways would need to undergo major habitat creation and/or restoration to improve the fish and macroinvertebrate assemblages" (CAWS UAA, p. 5-5). The CAWS UAA process incorporated feedback from stakeholders asked about their perceptions of each segment while taking "into consideration uses that are anticipated within the next 10 years and the feasibility of restoration actions that might be required to attain such a designation" (CAWS UAA, p. 5-13). Stakeholders were "encouraged to exercise optimism" when responding in order to identify the "highest attainable uses consistent with CWA goals" (CAWS UAA, p. 5-13). Stakeholder feedback was incorporated into the recommendations for each segment.
- The LimnoTech "Chicago Area Waterway System Habitat Evaluation and Improvement Study" (hereafter referred to as the "LimnoTech Habitat Study") prepared for MWRD evaluated each segment with the following objectives:
    - Given the habitat impairments identified in the Study, determine what physical habitat improvements, if any, can feasibly be implemented in the CAWS.
    - Determine, to the extent possible with existing information, what the potential benefit of habitat improvement in the CAWS would be to fish.

- Estimate the potential cost of habitat improvement (LimnoTech Habitat Study, p. 1-2).

To accomplish this, LimnoTech conducted a statistical analysis of fish and habitat data to identify the specific habitat attributes most strongly correlated with fish community quality. LimnoTech then conducted a literature review to identify potential habitat improvement measures and evaluate which specific habitat attributes could potentially be improved. For each individual segment, LimnoTech estimated the effect of implementing the identified habitat improvement measures on fish communities in that segment. LimnoTech concluded that the identified improvements would not significantly alter the relative habitat index scoring of the CAWS reaches and that the predicted percent change in habitat index scores would be less than the variability in the fish data.

In addition to the studies above, the IPCB received and considered several comments submitted during the rulemaking process about the potential for habitat improvements and on-going or planned restoration projects on the CAWS. Most notably, MWRD and several environmental groups held joint discussions "with the hope of resolving some of the issues pertaining to aquatic life uses and aquatic life water quality standards for dissolved oxygen" (January 9, 2013 Report of MWRDGC and Environmental Groups Regarding Proposed Aquatic Life Designated Uses). The joint discussions included forming a habitat improvement committee that "developed a selection of recommendations based upon real site conditions" (November 21, 2011 Joint Status Report). These discussions resulted in an agreement between MWRD and the environmental groups on a set of habitat improvement projects and a plan for implementation. In addition, after developing the set of habitat improvement projects, the groups agreed that "[t]he record supports an aquatic life use 'A' designation for all portions of the CAWS other than the [CSSC] and Bubbly Creek" (January 9, 2013 Report of MWRDGC and Environmental Groups Regarding Proposed Aquatic Life Designated Uses).

Based on the evaluations listed above and the comments received, the IPCB determined that, for each of the three segments previously designated as General Use, it is infeasible to restore these segments to their original condition or to operate the hydrologic modifications in a way that would result in attainment of the General Use.

EPA concludes that Illinois demonstrated that it is infeasible for the Upper North Shore Channel, the Calumet River from Lake Michigan to the O'Brien Lock and Dam, and the Lake Calumet Connecting Channel to attain the aquatic life aspect of Illinois' General Use (and so it is infeasible to attain the aquatic life uses specified in Section 101(a)(2) of the CWA) because hydrologic modifications preclude attainment of the use and it is not feasible to restore the waterbodies to their original condition or to operate such modifications in a way that would result in attainment of the use, consistent with 40 CFR § 131.10(g)(4). Consequently, EPA concludes that the designation of CAWS ALU A for these three segments is consistent with 40 CFR § 131.10(g)(4).

iii. Illinois' demonstration that it has adopted the highest attainable use for each of the three segments previously designated as General Use

As discussed in Section II.A.2 above, Illinois established three new aquatic life use designations applicable to the CAWS and LDPR that represent three levels of biological potential based on the extent of modification that has occurred and the sensitivity of the biological organisms the stream is expected to support.

As described in the IPCB's First Notice, "[i]n considering the ability of each stream segment to meet the CWA aquatic life goal, the [IPCB] analyzed three conditions or qualities for each segment of CAWS and LDPR, where no one set of conditions takes precedent over others. These three conditions are water quality, habitat, and biological conditions, including primarily fisheries and macroinvertebrates" (p. 177).

The IPCB considered biological survey data from the CAWS UAA, LDPR UAA and LimnoTech Habitat Study and designated segments as UDIP ALU, CAWS ALU A or CAWS ALU B based on the tolerance level of the biological communities. As defined in 35 Ill. Adm. Code Part 303, the CAWS ALU B is intended for waterbodies that could potentially support only tolerant types, CAWS ALU A is intended for waterbodies that could potentially support intermediately tolerant and tolerant types, and UDIP ALU is intended for waterbodies that could potentially support tolerant, intermediately tolerant, and intolerant types of aquatic life. Based on habitat quality and biological survey results, the IPCB determined that the Upper North Shore Channel, the Calumet River from Lake Michigan to the O'Brien Lock and Dam, and the Lake Calumet Connecting Channel had habitat that could potentially support aquatic life populations consisting of intermediately tolerant types in addition to tolerant types but would not be expected to support intolerant types. Therefore, the IPCB designated these three segments as CAWS ALU A.

Consequently, EPA concludes that the designation of CAWS ALU A for the Upper North Shore Channel, the Calumet River from Lake Michigan to the O'Brien Lock and Dam, and the Lake Calumet Connecting Channel is consistent with requirement at 40 CFR § 131.10(g) for states to adopt the highest attainable use as defined in 40 CFR § 131.3(m).

b. Designated use changes not requiring a UAA

The remaining 11 segments affected by this rulemaking had been designated as Indigenous Aquatic Life Waters. The adopted rules re-designate these segments by replacing the previously applicable Indigenous Aquatic Life Waters use with newly adopted aquatic life uses (UDIP ALU, CAWS ALU A and CAWS ALU B) that reflect upgraded aquatic life goals for those segments. As described in Section II.B of this document, in order to protect these upgraded uses, Illinois determined that these new aquatic life uses require more stringent criteria than had been necessary to protect the prior Indigenous Aquatic Life use designations. Therefore, EPA determined that a UAA was not required for these revised use designations, per 40 CFR § 131.10(k)(2).

Though a UAA was not required for these designations, the IPCB considered and evaluated the biological survey data for these segments in the CAWS and LDPR UAAs based on the same

considerations described in Section II.A.3 above for the three segments previously designated as General Use. As described in the documentation listed in Section II.E.1.b, the IPCB determined that it is still infeasible for each of these segments to attain the aquatic life aspect of Illinois' General Use (and so it is infeasible to attain the aquatic life uses specified in Section 101(a)(2) of the CWA) because hydrologic modifications preclude attainment of the use and it is not feasible to restore the waterbodies to their original condition. Additionally, the IPCB considered biological survey data from the CAWS and LDPR UAAs and designated each segment as CAWS ALU A, CAWS ALU B or UDIP ALU based on the extent of hydrologic modification and tolerance level of the biological communities currently attained by each segment.

Because these use designations do not change whether or not the State has designated an aquatic life use for these segments consistent with Section 101(a)(2) of the CWA and the revised designated uses are an upgrade requiring criteria at least as stringent as previously applicable per 40 CFR § 131.10(k)(2), EPA concludes that these changes are consistent with the CWA and federal regulations at 40 CFR § 131.10.

4. Conclusion Regarding Use Designations

In summary, EPA concludes that, for the 14 CAWS and LDPR segments designated as CAWS ALU A, CAWS ALU B or UDIP ALU in this rulemaking, IEPA adequately demonstrated that hydrologic modifications preclude attainment of the full Section 101(a)(2) aquatic life use and it is not feasible to restore the water body to its original condition or to operate such modification in a way that would result in attainment of the use, consistent with 40 CFR § 131.10(g)(4). Additionally, in adopting a revised WQS based on a required UAA for the Upper North Shore Channel, the Calumet River from Lake Michigan to the O'Brien Lock and Dam, and the Lake Calumet Connecting Channel, Illinois did not remove an existing use from these segments and adopted the highest attainable use for each segment, consistent with 40 CFR § 131.10(g). Consequently, EPA concludes that these 14 use designations are consistent with the CWA and 40 CFR § 131.10.

B. Whether the State has adopted criteria that protect the designated water uses based on sound scientific rationale consistent with § 131.11. (40 CFR § 131.5(a)(2))

40 CFR § 131.11(a) provides that

> States must adopt those water quality criteria that protect the designated use. Such criteria must be based on sound scientific rationale and must contain sufficient parameters or constituents to protect the designated use.

40 CFR § 131.11(b)(1) provides that states should establish numeric water quality criteria based on:

(i) 304(a) Guidance; or
(ii) 304(a) Guidance modified to reflect site-specific conditions; or
(iii) Other scientifically defensible methods.

1. Illinois' decision to apply most of its General Use criteria to the CAWS and LDPR

As discussed in Section II.A above, Illinois' "General Use" designation is the use designation that corresponds to the uses specified in Section 101(a)(2) of the CWA. Illinois's WQS include criteria that EPA has approved as being based on sound scientific rationale and protective of the General Use waters, including criteria necessary to protect the aquatic life component of Illinois' General Use designation. Those criteria are specified at 35 Ill. Adm. Code 302 Subpart B.

As also discussed above, the CAWS ALU A, CAWS ALU B and UDIP ALU aquatic life use designations reflect a lower biological potential in these waters as compared with the General Use but a higher biological potential as compared with the prior aquatic life use designation for the CAWS and LDPR that the new use designations are replacing. Notwithstanding the fact that the new aquatic life use designations do not equate to the aquatic life component of the General Use designation, with exceptions described below in Section II.B.2 of this document, Illinois chose to apply its General Use aquatic life criteria or criteria more stringent than its General Use aquatic life criteria for the new aquatic life use designations. Specifically, Illinois chose to apply a criterion more stringent than its General Use criteria for copper, and chose to apply its General Use criteria for the following parameters: ammonia, benzene, cadmium (dissolved), chloride, chromium (hexavalent, total), cyanide[4], ethylbenzene, fluoride, iron (dissolved), lead (dissolved), manganese (dissolved), nickel (dissolved), other toxic substances (narrative), pH, sulfate, temperature, toluene, total residual chlorine, xylene(s) and zinc (dissolved). Illinois also chose to apply its General Use criteria for the protection of human health related to the consumption of fish for the following parameters: benzene, mercury (total) and selenium (total).

Because those criteria are protective of the aquatic life use component of Illinois' General Use designation (a use designation that corresponds to the aquatic life uses specified in Section 101(a)(2) of the CWA), there is a sound scientific rationale to conclude that those criteria are also protective of the less-than-Section 101(a)(2) aquatic life uses that Illinois has adopted for the CAWS and LDPR.

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[4] For cyanide, Illinois chose to apply the acute General Use criterion to the CAWS and LDPR aquatic life uses and a chronic criterion applicable to a subset of General Use waters reflecting the fact that rainbow trout are not present. Specifically, Illinois has previously adopted a site-specific chronic criterion for cyanide reflecting the absence of rainbow trout for General Use waters in the Salt Creek, Higgins Creek, West Branch of the DuPage River and Des Plaines River (located in rule at 35 Ill. Adm. Code 303.444). Because the site-specific chronic criterion for cyanide is protective of General Use waters where rainbow trout are not present, and because Illinois' General Use designation corresponds to the aquatic life uses specified in Section 101(a)(2), there is a sound scientific rationale to conclude that the site-specific chronic criterion for cyanide is also protective of the less-than-Section 101(a)(2) aquatic life uses that Illinois has adopted for the CAWS and LDPR since rainbow trout are not present in those waters.

2. Illinois' decision to adopt criteria other than its General Use criteria for the CAWS and LDPR

For some parameters, consistent with 40 CFR § 131.11(b)(1), Illinois chose to base its criteria on EPA's 304(a) Guidance or EPA's 304(a) Guidance modified to reflect site-specific conditions.

a. Water quality criteria based on 304(a) Guidance

Consistent with Section 304(a) of the CWA, EPA publishes national recommended water quality criteria that accurately reflect the latest scientific knowledge regarding criteria necessary to protect the aquatic life uses specified in Section 101(a)(2) of the CWA. As discussed in Chapter 3 of EPA's WQS Handbook, EPA's 304(a) criteria recommendations, if not exceeded, generally ensure adequate water quality for protection of a 101(a)(2) aquatic life designated use (p. 2) and "[i]f a state or authorized tribe relies on 304(a) criteria recommendations (or other up-to-date EPA guidance documents), they may reference and rely on the data in those documents and may not need to create duplicative or new material for inclusion in their records" (p. 3).

Illinois adopted criteria that are consistent with EPA's current 304(a) criteria recommendations for five parameters: arsenic (trivalent, dissolved), chromium (trivalent, dissolved), mercury (dissolved), phenols[5] and silver (dissolved). As discussed above, EPA's 304(a) criteria recommendations are developed to ensure protection of the aquatic life uses specified in Section 101(a)(2) and incorporate the latest scientific knowledge.

Additionally, as shown in Table 1 below, Illinois adopted dissolved oxygen criteria consistent with EPA's current 304(a) criteria recommendations. EPA's current 304(a) criteria recommendations for dissolved oxygen include separate sets of criteria to protect early life stages (all embryonic and larval stages and all juvenile forms to 30-days following hatching) and other life stages in warmwater conditions. Additionally, EPA's 304(a) criteria recommendations include different chronic criteria based on the acceptable level of effect on aquatic communities. For the CAWS ALU A and CAWS ALU B uses, Illinois determined that those waterbodies already had limited growth potential for aquatic life and, with the exception of daily mean criteria, adopted dissolved oxygen criteria consistent with EPA's 304(a) criteria recommendations for moderate production impairment. Illinois determined that daily mean criteria were not necessary to protect those uses because the acute ("at any time") criteria would not allow dissolved oxygen levels below EPA's 304(a) daily mean criteria recommendations. Additionally, Illinois determined that the CAWS ALU B waters do not have the potential to

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[5] Since Illinois' adoption of these criteria, EPA has published an updated 304(a) criteria recommendation for phenols. However, the human health criterion Illinois adopted for phenols in the CAWS is consistent with the 304(a) criteria recommendation at the time of adoption and, thus, is considered consistent with the most up-to-date science and considered to be protective of the designated use at the time of adoption. As required under 40 CFR § 131.20(a), EPA encourages Illinois to consider whether to adopt new or revised criteria for phenols in the CAWS when conducting its next triennial review.

consistently support early life stages of fish and did not adopt criteria to protect early life stages for those waters.

Table 1: Comparison of Illinois' adopted criteria for the CAWS and LDPR with EPA's 304(a) criteria recommendations.

Segment	Applicable period	Criterion (mg/L)			
		At any time	Daily mean averaged over 7 days	Daily mean averaged over 30 days	Daily min averaged over 7 days
304(a) (No production impairment)	Early life stages	5.0	6.0		
304(a) (No production impairment)	Other life stages	3.0		5.5	4.0
304(a) (Moderate production impairment)	Early life stages	5.0	5.0		
304(a) (Moderate production impairment)	Other life stages	3.0		4.0	
UDIP ALU	Mar. - Jul.	5.0	6.0		
UDIP ALU	Aug. - Feb.	3.5		5.5	4.0
CAWS ALU A	Mar. - Jul.	5.0	5.0*		
CAWS ALU A	Aug. - Feb.	3.5		4.0*	4.0
CAWS ALU B	Year-round	3.5		4.0*	4.0

*Illinois' adopted rules for the CAWS and LDPR do not include daily mean criteria for the CAWS ALU A and CAWS ALU B uses because Illinois determined that the acute "at any time" criteria would not allow dissolved oxygen levels below EPA's 304(a) daily mean criteria recommendations for moderate production impairment. The values in the table are included only for convenience to compare with EPA's 304(a) criteria recommendations.

Because criteria based on EPA's Section 304(a) criteria are protective of 101(a)(2) uses, there is a sound scientific rationale to conclude that those criteria are also protective of the less-than-Section 101(a)(2) aquatic life uses that Illinois has adopted for the CAWS and LDPR.

b. Chloride criteria applicable to the CSSC between December 1 and April 30

Specific to the CSSC, Illinois adopted chloride criteria that replace the otherwise applicable chloride criteria during the period between December 1 and April 30. To calculate these criteria, Illinois considered data from biological surveys and modified the toxicity dataset used to calculate Iowa's chloride criteria[6] (approved by EPA on May 19, 2010) by removing the

[6] Since Illinois developed the chloride criteria for the CSSC, more recent chloride toxicity tests for other taxa (e.g., mayflies) have become available. However, with the exception of toxicity data for rotifers, these tests were not available at the time Illinois developed its chloride criteria

following six genera from the dataset: American eel (*Anguilla*), threespine stickleback (*Gasterosteus*), guppy (*Poecilia*), chorus frog (*Pseudacris*), mussel (*Lampsilis*) and cladoceran (*Ceriodaphnia*). Additionally, Illinois replaced the fingernail clam (*Sphaerium*) included in the Iowa dataset with a different genus of fingernail clam (*Musculium*).

For the American eel, threespine stickleback, guppy, chorus frog and *Lampsilis* mussel, the IPCB considered biological survey data specifically collected from the CSSC that demonstrated that those genera have not been found in the CSSC. Additionally, the IPCB received and considered testimony that fish and invertebrate communities within the CSSC are limited to only tolerant types by the physical habitat of the CSSC such that the removed species would not be expected to be present in the CSSC and an electric fish barrier (installed to prevent non-native Asian carp from reaching Lake Michigan) prevents fish migration from other waterbodies. Similarly, the IPCB determined that *Ceriodaphnia dubia* does not occur in the CSSC during the period in which the site-specific criteria apply (December 1 through April 30) based on the biological survey data. For the fingernail clam, Illinois concluded based on the biological surveys that *Sphaerium* fingernail clams do not occur in the CSSC but that other fingernail clams are present in the CSSC and added toxicity data for *Musculium* fingernail clams to represent those organisms. The resulting dataset that Illinois used to calculate the criterion includes eight fish genera, one frog genus and one mussel genus that Illinois determined either are present in the CSSC or should be retained as surrogates for untested taxa that would be expected to be present in the CSSC.

EPA reviewed Illinois' supporting documentation and concluded that, while biological survey data for the CSSC between December and April were limited, the available survey data support Illinois' modifications of the chloride criteria database to reflect the species that occur in the CSSC. For american eel, threespine stickleback, guppy and chorus frog, the available survey data from other times of the year (between May and November) indicate that those taxa are not present in the CSSC. For *Lampsilis* mussel, *Ceriodaphnia* and *Sphaerium* fingernail clams, the available survey data indicate that those taxa may be present in the CSSC during other times of the year but the data from December through April, while limited, support Illinois' conclusion that those taxa are not present in the CSSC during the period in which the criteria apply. In addition, EPA reviewed comments submitted to IPCB concerning toxicity data for rotifers (*Brachionus plicatilis*) that had been published between when Iowa developed its toxicity dataset and when Illinois calculated the site-specific criteria for the CSSC and normalization of the Musculium data based upon the water chemistry in these waters. EPA concluded that the new and revised toxicity data would not change the conclusion that Illinois' adopted criteria are protective of the use because those would result in less stringent criteria than those adopted by Illinois in this rulemaking.

Therefore, EPA concludes that Illinois' adopted criteria of 990 mg/L and 620 mg/L are protective of aquatic life in the CSSC based upon the record at the time of the criteria's adoption. EPA notes that these criteria are based on field observations of the biological community in the

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for the CSSC. EPA reviewed Illinois' chloride criteria based on the data available at the time Illinois developed its criteria. As discussed in this section, inclusion of the rotifer data would have resulted in less stringent criteria.

CSSC. Federal regulations at 40 CFR § 131.20(a) require that, "[t]he State shall also re-examine any waterbody segment with water quality standards that do not include the uses specified in section 101(a)(2) of the Act every three 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." Consistent with these requirements, Illinois should regularly review any new data that becomes available as a part of the triennial review process to ensure that the criteria protect existing and designated uses in the CSSC.

3. Conclusion regarding criteria

For the reasons described above, EPA concludes in accordance with 40 CFR § 131.5(a)(2) and § 131.11(a) that Illinois' criteria for the CAWS and LDPR are based on sound scientific rationale and protective of Illinois' new aquatic life use designations for the CAWS and LDPR.

4. Illinois' Time Limited Water Quality Standards Proceedings

Illinois is considering a number of petitions for "Time Limited Water Quality Standards" (TLWQS) that are currently pending before the IPCB pertaining to the CAWS chlorides, dissolved oxygen and temperature criteria. TLWQS is Illinois' term for water quality standards variances, as defined by 40 CFR § 131.3(o). EPA encourages Illinois to expeditiously resolve those petitions and, to the extent that Illinois chooses to grant them, ensure that the TLWQS comply with EPA's water quality standards variance requirements at 40 CFR § 131.14. Any TLWQS adopted by Illinois must be submitted to EPA for review and approval in accordance with 40 CFR § 131.21.

C. Other items that EPA is taking action on.

In addition to the revisions discussed above, Illinois made several non-substantive revisions to 35 Ill. Adm. Code 302 and 303 to make grammatical edits, update references and clarify intent. As discussed in EPA's 2012 document, titled "What is a New or Revised Water Quality Standard Under CWA 303(c)(3)? Frequently Asked Questions," EPA considers non-substantive edits to existing WQS to constitute new or revised WQS that EPA has the authority and duty to approve or disapprove under CWA Section 303(c)(3).

EPA reviewed these non-substantive revisions and concluded that these revisions do not change the meaning or implementation of the State's existing federally-approved WQS. Therefore, EPA concludes that these reorganizational revisions are consistent with the CWA and federal regulations in 40 CFR Part 131.

Illinois also added language at 35 Ill. Adm. Code 303.401, 303.402 and 303.204 specifying that "[t]he Chicago River must meet the General Use standards." Until Illinois' recent revisions and as discussed in Section III of this document, no specific use designation had been established for the Chicago River and, thus, the use designation for the Chicago River had been General Use. EPA reviewed these revisions and concluded that these revisions do not change the use designations or water quality criteria that apply to the Chicago River but only clarify the

applicable WQS for the Chicago River. Therefore, EPA concludes that these non-substantive clarifying revisions are consistent with the CWA and federal regulations in 40 CFR Part 131.

D. Whether the State has followed applicable legal procedures for revising or adopting standards. (40 CFR § 131.5(a)(6))

In a letter dated April 18, 2019 and received by EPA on April 25, 2019, Matthew J. Dunn of Illinois' Office of the Attorney General certified that the rules were duly adopted and are enforceable in accordance with Illinois state law.

In adopting the rules, the State also provided opportunities for public input consistent with federal requirements at 40 CFR § 131.20(b) and 40 CFR Part 25. On October 26, 2007, IEPA filed a proposal to update the designated uses and criteria that apply to the CAWS and LDPR, which included draft rule language. On November 1, 2007, the IPCB accepted the proposal for hearing and scheduled hearings on the proposal on January 28, 2008 in Chicago, Illinois and on March 10, 2008 in Joliet, Illinois with an allowance for the hearings to continue until business is complete. The IPCB provided public notice of the scheduled hearings through a Notice of Hearing on the IPCB's website published on November 20, 2007. The IPCB held 39 days of hearings between January 28, 2008 and March 18, 2008. During this period, the IPCB received 381 exhibits and more than 500 public comments.

On March 18, 2008, the IPCB divided the proposal into four subdockets addressing different components of the CAWS and LDPR WQS.

On the topic of designated uses (Subdocket C), the IPCB held ten days of hearings in Chicago, IL between November 8, 2010 and August 17, 2011 and accepted comments until October 17, 2011. With the exception of a hearing held on June 27, 2011, the IPCB provided public notice of all scheduled hearings more than 45 days before the hearing through a Notice of Hearing on the IPCB's website. On February 21, 2013, the IPCB issued a first notice opinion and order, which included draft rule language. Illinois subsequently published the first notice in the *Illinois Register*, requesting additional public comment by April 30, 2013. In response to requests, the IPCB granted additional time for comments until August 30, 2013.

On the topic of criteria that are necessary to meet the aquatic life designations (Subdocket D), the IPCB held five days of hearings in Chicago, IL between November 8, 2010 and December 17, 2013. With the exception of a hearing held on September 23, 2013, the IPCB provided public notice of all scheduled hearings more than 45 days before the hearing through a Notice of Hearing on the IPCB's website. On September 18, 2014, the IPCB issued a first notice opinion and order, which was published in the *Illinois Register* on October 3, 2014. The first notice requested additional public comment until November 21, 2014 and responsive comments until December 12, 2014.

As described above, the IPCB held multiple public hearings that were publicized more than 45 days prior to the date of the hearing. For all hearings, the IPCB recorded the hearing and met other requirements for public hearings specified at 40 CFR § 25.5. For all dockets combined, the IPCB received 493 exhibits and 1,400 public comments. IPCB considered and responded to the

public comments before adopting the rules. IPCB proposed amendments to the rules in response to some of the comments. EPA reviewed the comments and IPCB's responses in deciding whether to approve Illinois' new and revised WQS.

E. Whether the State submission meets the requirements included in §131.6 of this part and, for Great Lakes States or Great Lakes Tribes (as defined in 40 CFR § 132.2) to conform to section 118 of the Act, the requirements of 40 CFR 132. (40 CFR § 131.5(a)(8))

40 CFR § 131.6 identifies the minimum requirements of a WQS submission. As described below, IEPA's submittal meets all the relevant requirements of 40 CFR § 131.6.

1. Minimum requirements for WQS submission (40 CFR § 131.6)

a. Use designations consistent with the provisions of section 101(a)(2) and 303(c)(2) of the Act (40 CFR § 131.6(a))

As discussed in Section II.A above, all designated uses adopted as they pertain to uses other than recreation in this rulemaking are consistent with Section 101(a)(2) of the CWA or were otherwise supported with a UAA consistent with 40 CFR § 131.10(j) where required.

b. Methods used and analyses conducted to support WQS revisions (40 CFR § 131.6(b))

The State submitted the following documents in support of these rules:

- Illinois Attorney General's certification letter for CAWS and LDPR Aquatic Life Uses (Subdocket C), dated December 15, 2014 and received December 18, 2014;
- Illinois Attorney General Certification of the adoption of Water Quality Standards, 35 Ill. Adm. Code Part 302, 303 and 309 (Subdocket D), dated April 18, 2019 and received April 25, 2019;
- Transmittal Letter from Marcia T. Willhite, IEPA, to Linda Holst, EPA, dated August 6, 2014 and received August 8, 2014 (Note: IEPA specified that it was only submitting provisions related to the water quality criteria to protect recreation uses and would submit provisions related to aquatic life uses once Subdocket D was completed);
- Transmittal Letter from Alec Messina, Illinois EPA, to Cathy Stepp, dated July 13, 2018 and received August 3, 2018;
- Illinois Register notice of adopted amendments to 35 Ill. Adm. Code 303, with adopted rules, published February 28, 2014;
- Illinois Register notice of adopted amendments to 35 Ill. Adm. Code 302, 302 and 309, with adopted rules, published July 10, 2015;
- IEPA's Amended Regulatory Proposal;
- Joint Committee on Administrative Rules Certification of No Objection to Proposed Rulemaking, dated June 16, 2018;
- Proposed Rule First Notice Opinion and Order of the Board (Subdocket C), dated February 21, 2013;
- Proposed Rule Proposed Second Notice Opinion and Order of the Board (Subdocket C), dated October 3, 2013;

- Proposed Rule Second Notice Opinion and Order of the Board (Subdocket C), dated November 21, 2013;
- Adopted Rule Final Order Opinion and Order of the Board (Subdocket C), dated February 6, 2014;
- Proposed Rule First Notice Opinion and Order of the Board (Subdocket D), dated September 18, 2014;
- Proposed Rule Second Notice Opinion and Order of the Board (Subdocket D), dated March 19, 2015;
- Adopted Rule Final Notice Opinion and Order of the Board (Subdocket D), dated June 18, 2015;
- Transcripts of public hearings (held March 9, 2011; March 10, 2011; May 15, 2011; May 16, 2011; May 17, 2011; June 27, 2011; August 15, 2011; August 16, 2011; September 23, 2013; November 8, 2013; November 9, 2013; July 29, 2013; and December 17, 2013);
- Relevant hearing exhibits; and
- Relevant public comments.

c. Water quality criteria sufficient to protect the designated uses (40 CFR § 131.6(c))

As discussed in Section II.B above, the criteria adopted to protect the CAWS and LDPR uses are consistent with 40 CFR § 131.11.

d. An antidegradation policy consistent with 40 CFR 131.12 (40 CFR § 131.6(d))

These rules do not affect Illinois' existing, EPA-approved and effective antidegradation policy.

e. Certification by the State Attorney General or other appropriate legal authority within the State that the WQS were duly adopted pursuant to State law (40 CFR § 131.6(e))

Illinois' Office of Attorney General certified the rules in a letter from Matthew J. Dunn to Scott Ireland, dated April 18, 2019.

f. General information which will aid the Agency in determining the adequacy of the scientific basis of the standards which do not include 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 § 131.6(f))

As discussed in sections II.A and II.C above, Illinois submitted documentation based on appropriate technical and scientific data and analyses for all use designations that do not include the uses specified in Section 101(a)(2) of the CWA. The data and analysis used to support the use designations adopted in this rule package are listed in Section II.D.1.b.

The adopted rules do not remove, affect or include any general policies applicable to Illinois' WQS that may affect their application and implementation.

2. Requirements of 40 CFR Part 132

The requirements of 40 CFR Part 132 are not applicable with respect to this action because the water bodies addressed by today's action are not in the Great Lakes System.

III. Items That EPA has Previously Disapproved

On August 18, 2011, the IPCB concluded its rulemaking process in Subdocket A by adopting a Final Rule that consists of new and revised recreational use designations for the CAWS and LDPR. On May 10, 2012, EPA disapproved revisions to 35 Ill. Adm. Code 301.247, 303.204, 303.220(c), 303.225(a) and (d), and 303.227(a) to the extent that the changes removed the aspects of the General Use designation pertaining to activities other than recreation and replaced the General Use criteria that previously applied to the Chicago River, Upper North Shore Channel, and the Calumet River from Lake Michigan to O'Brien Locks and Dam. EPA's basis for its disapproval was that "no rationale ha[d] been provided as required by 40 CFR § 131.6(a), (b), (c) and (f), § 131.10(g) and § 131.11(a)."

As part of this rulemaking and as discussed in Section II.A above, the IPCB revised 35 Ill. Adm. Code 302.401(b), 302.402 and 303.204 to require that the Chicago River meet the General Use standards. These revisions effectively maintain the General Use designation, which includes the aquatic life uses of Section 101(a)(2) of the CWA, for the Chicago River and, thus, are consistent with the CWA and federal regulations at 40 CFR § 131.10. Consequently, EPA approves these revisions and concludes that Illinois has remedied the previous disapproval as it relates to the Chicago River.

As discussed in Section II.A.3 above, the IPCB also submitted documentation demonstrating that it is infeasible for the Upper North Shore Channel and Calumet River from Lake Michigan to the O'Brien Locks and Dam to attain the aquatic life aspects of Illinois' General Use and designated those two segments as CAWS ALU A. As discussed above in Section II.A.4, EPA approves these designations and, therefore, concludes that Illinois has remedied the previous disapproval as it relates to the aquatic life uses for the Upper North Shore Channel and Calumet River from Lake Michigan to the O'Brien Locks and Dam.

On May 10, 2012, EPA also disapproved Illinois' repeal of the last sentence at 35 Ill. Adm. Code 303.441(j), removing the site-specific dissolved oxygen criteria that previously applied for the Lower North Shore Channel because no rationale had been provided as required by 40 CFR § 131.6(b), (c), and (f) and 131.11(a). EPA specified that one way Illinois could address this disapproval is by developing and providing to the EPA "a sound scientific rationale for adoption of criteria for the Lower North Shore Channel that are less stringent than the dissolved oxygen criteria specified at 35 Ill. Adm. Code 303.441(j) so long as they adequately protect the applicable designated uses."

As part of this rulemaking, Illinois adopted revised dissolved oxygen criteria based on EPA's 304(a) criteria recommendations that apply to the CAWS and LDPR, including the Lower North Shore Channel. As discussed in Section II.B.2.a of this document, EPA concludes that these dissolved oxygen criteria are protective of the CAWS and LDPR uses and approves these criteria. Therefore, EPA concludes that Illinois has remedied the previous disapproval as it

relates to the removal of the site-specific dissolved criteria at 35 Ill. Adm. Code 303.441(j) that previously applied for the Lower North Shore Channel.

IV. Endangered Species Act (ESA) Requirements

Consistent with Section 7 of the ESA and federal regulations at 50 CFR Part 402, EPA is required to consult with the U.S. Fish and Wildlife Service (FWS) on any action taken by EPA that may affect federally-listed threatened or endangered species or their critical habitat. Actions are considered to have the potential to affect listed species if listed species are present in the action area.

According to the FWS Section 7 consultation assistance webpage (accessed May 7, 2019, https://www.fws.gov/midwest/endangered/lists/illinois-cty.html), the listed threatened or endangered species in Cook and Will counties, Illinois include northern long-eared bat, piping plover, rufa red knot, eastern massasauga, Hine's emerald dragonfly, rattlesnake-master borer moth, rusty patched bumblebee, eastern prairie fringed orchid, lakeside daisy, leafy-prairie clover, Mead's milkweed, prairie bush-clover and sheepnose mussel. There is no critical habitat in Cook or Will counties in the potential action area of the facility.

Based on a review of the available information for these species, EPA has concluded that approval of Illinois' revised WQS for the CAWS and LDPR will have no effect on piping plover, eastern massasauga, Hine's emerald dragonfly, rattlesnake-borer moth, rusty patched bumblebee, lakeside daisy, leafy-prairie clover, Mead's milkweed, prairie bush-clover and sheepnose mussel. Additionally, EPA has determined that the adopted rules will have no effect on critical habitat. However, based on the potential presence of aquatic, aquatic-dependent, and/or wetland species in the action area, EPA concluded that consultation under Section 7 of the ESA is required. EPA drafted a BE of the effects of the adopted rules on listed species in Cook and Will counties and concluded that its approval of the adopted rules may affect, but is not likely to adversely affect, the northern long-eared bat, rufa red knot and eastern prairie fringed orchid. EPA has initiated but not completed consultation with FWS.

V. 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." EPA consulted the location of tribal lands in the State and determined that there were no tribal lands in the areas of the use change segments in this rule revision package, thus approval of these use changes will not affect any tribal interests.

to expeditiously resolve those petitions and, to the extent that Illinois chooses to grant them, ensure that the TLWQS comply with EPA's water quality standards variance requirements at 40 CFR § 131.14. Any TLWQS adopted by Illinois must be submitted to EPA for review and approval in accordance with 40 CFR § 131.21.

If your staff has any questions regarding this approval, please contact Aaron Johnson of my staff at (312) 886-6845 or johnson.aaronk@epa.gov.

Sincerely,

Joan M. Tanaka

Joan M. Tanaka
Acting Director, Water Division

Enclosure

cc: Sanjay Sofat, Illinois EPA (electronic)
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