

BEFORE THE ILLINOIS POLLUTION CONTROL BOARD

IN THE MATTER OF:

WATER QUALITY STANDARDS AND)
EFFLUENT LIMITATIONS FOR THE) R08-9(C)
CHICAGO AREA WATERWAY SYSTEM) (Rulemaking – Water)
AND THE LOWER DES PLAINES RIVER:)
PROPOSED AMENDMENTS TO 35 Ill.)
Adm. Code Parts 301, 302, 303 and 304)

NOTICE OF FILING

TO: Mr. John T. Therriault	Ms. Marie E. Tipsord
Assistant Clerk of the Board	Hearing Officer
Illinois Pollution Control Board	Illinois Pollution Control Board
100 West Randolph Street	100 West Randolph Street
Suite 11-500	Suite 11-500
Chicago, Illinois 60601	Chicago, Illinois 60601
(VIA ELECTRONIC MAIL)	(VIA FIRST CLASS MAIL)

(SEE PERSONS ON ATTACHED SERVICE LIST)

PLEASE TAKE NOTICE that I have today filed with the Office of the Clerk of the Illinois Pollution Control Board **EXXONMOIBL OIL CORPORATION'S RESPONSE TO PRE-FIRST NOTICE COMMENTS**, a copy of which is herewith served upon you.

Respectfully submitted,

EXXONMOBIL OIL CORPORATION,

Dated: March 19, 2012

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

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CERTIFICATE OF SERVICE

I, Katherine D. Hodge, the undersigned, hereby certify that I have served the attached **EXXONMOBIL OIL CORPORATION'S RESPONSE TO PRE-FIRST**

NOTICE COMMENTS upon:

Mr. John T. Therriault
Assistant Clerk of the Board
Illinois Pollution Control Board
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via electronic mail on March 19, 2012; and upon:

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by depositing said documents in the United States Mail, postage prepaid, in Springfield,
Illinois on March 19, 2012.

/s/ Katherine D. Hodge
Katherine D. Hodge

Mobo:041/Fil/ NOF-COS -ExxonMobil's Response to Pre-First Notice Comments

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

**EXXONMOBIL OIL CORPORATION'S
RESPONSE TO PRE-FIRST NOTICE COMMENTS**

NOW COMES EXXONMOBIL OIL CORPORATION (“ExxonMobil”), by and through its attorneys, HODGE DWYER & DRIVER, and pursuant to the February 3, 2012 Hearing Officer Order, submits the following Response to Pre-First Notice Comments in Subdocket C.

I. INTRODUCTION

On March 5, 2012, ExxonMobil filed Pre-First Notice Comments related to the reasons why the record before the Illinois Pollution Control Board (“Board”) warrants the adoption of an aquatic life use designation for the Upper Dresden Island Pool (“UDIP”) that does not meet Clean Water Act (“CWA”) goals. *See* Pre-First Notice Comments of ExxonMobil Oil Corporation on the Proposed Aquatic Life Use Designation of the Lower Des Plaines River, *In the Matter of: Water Quality Standards and Effluent Limitations for the Chicago Area Waterway System and Lower Des Plaines River: Proposed Amendments to 35 Ill. Adm. Code 301, 302, 303 and 304*, R08-9 (Ill.Pol.Control.Bd. Mar. 5, 2012) (hereinafter rulemaking is cited as “R08-9” and comments cited as “ExxonMobil Comments”). At that time, other participants in this rulemaking filed comments related to the use designation for the UDIP. The Hearing Officer previously determined that

commenters may file responsive comments by March 19, 2012. Hearing Officer Order, R08-9 (Ill.Pol.Control.Bd. Feb. 3, 2012). Pursuant to that order, ExxonMobil now responds to comments filed by other participants in Subdocket C.

II. ILLINOIS EPA'S JUSTIFICATION FOR ITS PROPOSED AQUATIC LIFE USE FOR THE UDIP IS BASED ON A SELECTIVE EVALUATION OF THE PHYSICAL, CHEMICAL, AND BIOLOGICAL DATA AND IS NOT SUPPORTED BY THE TOTAL WEIGHT OF THE EVIDENCE IN THE RECORD.

The Illinois Environmental Protection Agency's ("Illinois EPA") comments on Subdocket C address, among other things, testimony and evidence presented by participants on the proposed aquatic life use designation for the UDIP. Illinois EPA reasserts its claim that the aquatic life use of the UDIP should be "consistent with the Clean Water Act's interim aquatic-life goal of balanced populations of fish and other aquatic-life." Post-Hearing Comments of the Illinois Environmental Protection Agency for Subdocket C, R08-9 at 24 (Ill.Pol.Control.Bd. Mar. 5, 2012) (hereinafter cited as "Illinois EPA Comments"). Illinois EPA claims that participants fail to meet the burden imposed by the CWA to justify designating an aquatic life use that represents a condition that is less natural than the CWA aquatic life goal. *Id.* at 24-25. As described in the Pre-First Notice Comments of ExxonMobil, the physical, chemical and biological data for the UDIP do not support Illinois EPA's proposed aquatic life use designation for the UDIP, which describes waters "capable of maintaining aquatic life populations consisting of individuals of tolerant, intermediately tolerant and intolerant types...."

ExxonMobil's comments specifically cited data and evaluations in the rulemaking record, including the fact that the Lower Dresden Island Pool ("LDIP") does not support intolerant species of aquatic life even though it has water quality (dissolved oxygen

levels, temperatures, and toxic constituent concentrations) that achieves the General Use aquatic life criteria. ExxonMobil Comments at 5-6, 11-12. This evidence demonstrated very clearly that the physical and chemical habitat of the UDIP cannot support or maintain a sustainable population of tolerant, intermediately tolerant and intolerant aquatic species.

A. Basis for Illinois EPA's Proposal

In its post-hearing comments, Illinois EPA cites to testimony from two of its experts as justification for its proposed UDIP use designation. First, Illinois EPA restates the testimony of Roy Smoger, stating, in part, as follows:

Illinois EPA primarily bases these proposed aquatic-life uses and designations on direct measurements and observations of the chemical and physical conditions in these waters and how foreseeable improvements in these conditions – or lack thereof – relate to the potential biological condition.

Illinois EPA Comments at 12 (quoting Pre-Filed Testimony of Roy Smoger, R08-9 at 2-3 (Ill.Pol.Control.Bd. Dec. 21, 2007)).

However, Illinois EPA did not adhere to this methodology for justifying its conclusion that the UDIP can attain the proposed aquatic life use, which is equivalent to the existing General Use designation. Instead, Illinois EPA relies on a small subset of the available habitat data and ignores the totality of the physical, chemical, and biological data to justify its proposed use designation. For example, Illinois EPA appears to ignore the fact that effluent flow from public wastewater treatment plants constitutes more than 90% of the low flow in the Lower Des Plaines River (“LDPR”) and nearly the entire flow during winter, as explained in the LDPR Use Attainability Analysis prepared for Illinois EPA. Statement of Reasons, Attachment A – Lower Des Plaines River Use Attainability

Analysis Final Report (Dec. 2003), R08-09 at 1-8 (Ill.Pol.Control.Bd. Oct. 26, 2007) (hereinafter cited as (“UAA”)).

B. QHEI Scores

Illinois EPA’s comments also reference testimony by Rob Sulski as the basis for its conclusion that the habitat in the UDIP is conducive to maintaining an aquatic life population with the abundance and diversity that is consistent with the CWA goal of a fishable water body. Illinois EPA Comments at 13 (citing Pre-Filed Testimony of Rob Sulski, R08-9 at 13-17 (Ill.Pol.Control.Bd. Dec. 21, 2007)). Specifically, Illinois EPA quotes Mr. Sulski as stating that “Qualitative Habitat Evaluation Index [“QHEI”] scores for UDIP range from 45 to 80, which according to the report prepared by the Center for Applied Bioassessment and Biocriteria correspond to fair to excellent biological potential.” *Id.*

However, Mr. Sulski’s testimony ignores the QHEI scores presented in the UAA. Table 4.7 in the UAA presents eight “selected site” measurements of QHEI for the UDIP which ranged from 40 to 63 and averaged 52.5. UAA at 4-32. In fact, these eight QHEI scores are a subset of a total of 36 QHEI scores for the UDIP that are presented in Table 4.4 of the UAA. UAA at 4-26. The average QHEI score for the UDIP using all scores is 51, which represents, at best, a “fair” aquatic life habitat. The UAA, which was commissioned by Illinois EPA, states in its conclusion on habitat that the “QHEI scores for the study area are below the recommended minimum value of 60 used by [the Ohio Environmental Protection Agency] to define warm water habitat use that is consistent with goals of the Clean Water Act.” UAA at 4-33. Furthermore, the UAA unequivocally states that the “major causes of the degraded habitat are considered irreversible....” UAA

at 4-34. It should also be noted that the majority; and perhaps all, of the QHEI scores presented by the UAA and Illinois EPA are for areas of the UDIP that are outside of the navigation channel; any QHEI scores at stations located in the navigational channel would have been lower than those located outside of the dredged channel.

The report by Rankin that analyzes habitat in various waterways presents only two QHEI scores for the UDIP, which were measured in 2004 (45.5 and 69.5), and states that the upstream site, which had the high QHEI score, “may not be typical of the downstream reaches....” Statement of Reasons, Attachment R – Analysis of Physical Habitat Quality and Limitations to Waterways in the Chicago Area, R08-09 at 3, 13 (Ill.Pol.Control.Bd. Oct. 26, 2007) (hereinafter cited as the “Rankin Report.”) Of note, the 45.5 QHEI score, from a location described as “South Shore,” is just above a score of 45, which is considered to reflect “poor” habitat. *See id.* at 2. Attachment S to Illinois EPA’s Statement of Reasons contains QHEI scores from 2006 at three locations in the UDIP. Statement of Reasons, Attachment S, R08-09 at 1 (Ill.Pol.Control.Bd. Oct. 26, 2007). That document reports QHEI scores for the UDIP of 43.5, 77 and 81.5. *Id.*

Based on these QHEI data, it is unclear why Mr. Sulski believes it is accurate to describe QHEI scores in the UDIP as ranging from 45 to 80. However, it is clear that such a general description does not adequately describe the scores or the total distribution of scores over all locations in the UDIP. Furthermore, the QHEI scores do not support his conclusion about the appropriate aquatic life use.

If all of the available QHEI data introduced into the record by Illinois EPA (as described above) are combined, there are a total of 41 QHEI measurements with a mean score of 53. The 95% upper confidence interval on the mean score is 55.1, which is less

than the QHEI of 60 that the Ohio Environmental Protection Agency indicates is the minimum score required to achieve the “balanced” fish and benthic populations necessary to meet CWA goals. In fact, 22.5% of the QHEI scores for the UDIP are 45 or below, which is interpreted as “poor” physical habitat according to the Rankin Report. See Rankin Report at 2. There are eight QHEI scores that are greater than 60, so 23 of the stations sampled in the UDIP are in the “fair” category of habitat scores. *Id.* Most if not all of these QHEI scores are for sites that are not in the active navigation channel and dock areas, which would have much poorer habitat and would lower the overall UDIP habitat score. On the other hand, the highest scores are in sections of the UDIP that the Rankin Report and the UAA characterize as not representative of the majority of the stream segment.

C. Benthic Habitat

Illinois EPA’s defense of its proposed UDIP aquatic life use ignores benthic physical habitat and its limitations on benthic macroinvertebrate populations, which are an essential part of a balanced indigenous aquatic life use because these animals are an essential component of the aquatic food chain. The UAA report concludes the following:

Benthic habitat in the entire study area has limited epifaunal substrate suitable for invertebrates, including woody debris, cobbles, stable substrate, and under cut banks. In both the Brandon and Dresden Pools the water is impounded, reducing stream velocity and creating deep-water habitat that is not optimum for a diverse benthic macroinvertebrate community.

UAA at 5-17. Furthermore, the UAA acknowledges that “[d]isturbance of the sediments impedes colonization of benthic organisms.” *Id.*

Illinois EPA’s Comments do not address the poor benthic habitat and its effect on the diversity and abundance of benthic macroinvertebrates, when in fact the benthic

community is an essential component of any analysis of use designation. This information should be considered when assessing the physical, chemical, and biological data as a whole when attempting to justify the appropriate aquatic life use.

D. Absence of Intolerant Species

As pointed out in ExxonMobil's Pre-First Notice Comments, the UAA and all other available data in the record do not justify the conclusion that the habitat of the UDIP supports or can support intolerant species in sustainable populations. The UAA's discussion on the metrics for the Index of Biotic Integrity ("IBI") for the LDPR, including the UDIP, states that intolerant fish species were very rare or absent in all samples, including in the LDIP (below Interstate 55). UAA at 6-13. The UAA attributes the lack of intolerant species of fish to poor habitat and possibly thermal and/or dissolved oxygen stresses. *Id.* However, because no intolerant species were identified in the LDIP, which the UAA evaluation indicates is not subject to either thermal or low dissolved oxygen stresses, it is apparent that the physical habitat limitations, such as the channelized, impounded pools, regular and substantial barge traffic, and the effluent-dominated flow and chemical characteristics of the UDIP are the environmental conditions that preclude the development of sustainable populations of intolerant fish species.

If a weight of evidence approach is used for physical and chemical habitat evaluation of the UDIP, the habitat is clearly inadequate to support Illinois EPA's proposed aquatic life use for the UDIP. Considering the record in its entirety, ExxonMobil reaches conclusions that differ from Illinois EPA when assessing UAA factors. *See* Illinois EPA Comments at 27-47. Illinois EPA selectively used subsets of

the available habitat data to support its proposed aquatic life use, but the totality of data in the record does not support its position that the UDIP can achieve the proposed aquatic life use that will allow sustainable, balanced populations of tolerant, intermediately tolerant, and intolerant aquatic species in the UDIP.

III. OTHER DISCHARGERS ON THE UDIP CORRECTLY CONSIDER THE TOTALITY OF THE PHYSICAL, CHEMICAL, AND BIOLOGICAL DATA WHEN ASSESSING THE APPROPRIATE AQUATIC LIFE USE.

In addition to ExxonMobil, Stepan Company (“Stepan”) and Midwest Generation, LLC (“Midwest Generation”) both submitted comments related to the appropriate aquatic life use designation for the UDIP. Similar to ExxonMobil, both participants consider the totality of data when determining the appropriate use designation for the UDIP.

In particular, Midwest Generation looks to the following conditions, among others, as preventing the attainment of CWA aquatic life use goals in the UDIP: the presence and effect of locks and dams; the flow-controlled nature of the UDIP; extensive sedimentation and high turbidity levels, contaminated sediments; stressors, including nutrients, ammonia, and emerging contaminants; barge traffic; and poor habitat. *See* Midwest Generation Final Comments, R08-9 (Ill.Pol.Control.Bd. Mar. 5, 2012). Midwest Generation develops proposed regulatory language for the aquatic life use designation for the UDIP that reflects the entire record, not simply a small subset of data. *Id.* at 3. ExxonMobil believes this proposed regulatory language adequately captures the nature and potential for the UDIP.

Similarly, Post-Hearing Comments from Stepan consider the totality of the record, including wastewater effluent, sediment conditions, future Asian Carp impacts, locks and dams, and habitat quality. *See* Post-Hearing Comments of Stepan Company,

R08-9 (Ill.Pol.Control.Bd. Mar. 5, 2012). The appropriate aquatic life use designation can only be determined by considering all the data related to the conditions in the UDIP. As demonstrated by ExxonMobil and other dischargers, the totality of evidence present in the record does not support Illinois EPA's proposed use designation for the UDIP.

IV. EXXONMOBIL AGREES THAT ROAD SALT APPLICATION SHOULD BE CONSIDERED WHEN ASSESSING AQUATIC LIFE USE.

The Illinois Environmental Regulatory Group ("IERG") argues that Illinois EPA failed to consider the impact of road salt application when determining the appropriate aquatic life use. Illinois Environmental Regulatory Group's Subdocket C Final Pre-First Notice comments on Aquatic Life Use Designations, R08-9 at 5 (Ill.Pol.Control.Bd. Mar. 5, 2012). IERG notes that chloride levels are seasonally elevated due to road salt application, and appear to implicate UAA factors 3 and 6, which address human-caused sources of pollution and widespread social and economic impact. *Id.* Roads with runoff to the UDIP must be salted during icy and snowy weather to protect drivers from dangerous conditions. Failure to apply salt would result in widespread safety impacts. Consistent with ExxonMobil's discussion above, all data, including data related to road salt application, should be considered when determining the appropriate aquatic life use. Furthermore, ExxonMobil supports IERG's efforts to work with Illinois EPA to address this chloride issue.

V. CONCLUSION

ExxonMobil appreciates the opportunity to provide this response, and it respectfully requests that the Board consider the issues raised above and in previous ExxonMobil comments and revise the aquatic life use designation at proposed Section

303.237 for the UDIP, consistent with the suggested revisions in ExxonMobil Comments filed on March 5, 2012.

Respectfully submitted,

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Dated: March 19, 2012

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