

BEFORE THE ILLINOIS POLLUTION CONTROL BOARD

ILLINOIS DEPARTMENT OF)	
TRANSPORTATION,)	
)	
Petitioner,)	PCB ___
)	(Variance-Water)
v.)	
)	
ILLINOIS ENVIRONMENTAL PROTECTION)	
AGENCY,)	
)	
Respondent.)	

PETITION FOR VARIANCE

The Illinois Department of Transportation (“IDOT”), pursuant to Section 35(a) of the Illinois Environmental Protection Act (“Act”), 415 ILCS 5/35(a), and Part 104 of Title 35 of the Illinois Administrative Code, 35 Ill. Admin. Code § 104.100 *et seq.*, hereby petitions the Illinois Pollution Control Board (“Board”) for a variance authorizing discharges from its drainage ditches into the Chicago Area Waterways System (“CAWS”) pursuant to the terms and conditions outlined in this Petition for Variance (“Petition”).

In Docket 2008-009, the Board has been engaged in an extensive rulemaking process regarding designated uses, effluent limitations and water quality standards for the CAWS. Subdocket D has involved the setting of water quality standards for the protection of aquatic life. The Board has now adopted final aquatic life water quality standards for the CAWS, effective July 1, 2015. (39 Ill. Reg. 9388, 9423, 9433 (July 10, 2015)) Included in that rulemaking are new standards for chlorides.

During the rulemaking, it was noted that most reaches of the CAWS are not currently meeting the new chlorides standards. Regulated parties pointed out that effluent limits based on the new standards may be difficult or impossible to meet, and the costs of installing

technological controls at their facilities would be enormous. Therefore, it was requested that the Board provide a delay in the application of the new standards, so stakeholders could convene and develop options for addressing these concerns while making progress in reducing chloride levels in the CAWS. The Board granted this request, specifying that the new chlorides standards would not apply until July 1, 2018.

IEPA has asked the Metropolitan Water Reclamation District (“MWRD”), due to its role as a significant stakeholder on CAWS issues, to convene and lead a work group, including IDOT, to address chloride issues during the 3-year time period provided by the Board. An initial stakeholder meeting was held on January 27, 2015, and the next meeting will be held on August 4, 2015.¹ IDOT is committed to working closely with IEPA and the other stakeholders to move that process forward. The goals would be that, before the end of the 3-year period provided by the Board, the stakeholders will have developed, and begun implementing, a set of best management practices (BMPs) for addressing chloride issues, and will have taken action to develop and propose, for adoption by the Board, appropriate mechanisms to address compliance issues, possibly including a water quality variance.

IDOT appreciates the Board’s willingness to provide that 3-year time period before compliance with the new chloride standards is required. However, some confusion has arisen regarding the legal character of that delay in the compliance requirement. As the Board is aware (and has noted recently in this rulemaking), Section 28 of the IEPA statute provides that if a party wants to obtain a stay of the effectiveness of a Board rule, then that party must apply for a variance (or adjusted standard, which is not relevant here) within 20 days of the effective date of the rule. In the current situation, it is not entirely clear whether the “effective date” of the new

¹ Documents regarding those meetings are included in the concurrent Petition for Variance submitted by MWRD as Exhibit 1.

chloride standards is July 1, 2015 or July 1, 2018. The Board has previously stated that the new standards do not apply until 2018. However, the full CAWS rule, as adopted in the Illinois Register, specifies that the effective date is July 1, 2015. And, the chloride provision does not clearly state otherwise. Therefore, based upon an official interpretation for our purposes, we believe that the effective date is 2015, and that in order to obtain a stay, a variance application must be filed by July 21, 2015. As outlined above, this Petition is to obtain that variance.

We understand that, as the Board adopted the CAWS rule, the new chloride standards do not apply to the CAWS reaches, and may not be implemented in IDOT's permits, until after July 1, 2018. Therefore, it is presumed that IDOT does not need a variance to take effect until after that date, and it does not need a stay of the standards to take effect until after that date. However, it is not guaranteed that the entire work group process, and the variance (or other relief) process will be completed by then, including US EPA approval of any variance.

Therefore, there is a risk that after the 3-year period has passed, the chloride standards will become effective, and compliance with those standards will be required, without any final mechanism being in place to address the compliance concerns. If that happens, IDOT could be faced with substantial compliance and liability issues and could be subject to penalties for not meeting standards that, based on currently available information, may be impossible to meet. To avoid that result, IDOT is now submitting a request for a variance, within the timeframe provided for obtaining a stay of the chloride standards, July 21, 2015.

It is important to note that other regulated parties located on the CAWS will face similar risks as described here for IDOT. Therefore, the Board should consider issuing a variance and stay of the chloride standards that applies to all dischargers into the CAWS, to ensure that the dischargers are not unfairly penalized if the chloride work group process has not been completed

by the end of the 3-year compliance period. This relief would only be needed on an interim basis, since once the work group has completed its work, we would expect that a full suite of BMPs would have been developed, and implementation begun, and a permanent regulatory mechanism – whether a variance or some other device – would have been developed, applied for, and obtained, with all required approvals. At that point, the permanent regulatory structure would replace the temporary variance and stay. This process would ensure that while on the pathway toward ultimate resolution of the chloride issue, improvements in discharge levels would be made, while undue compliance risks and unnecessary costs would be avoided. If the Board determines that it cannot grant this relief to all dischargers to the CAWS, then it should, at a minimum, issue such variances to IDOT, based on this petition, and to all other dischargers to the CAWS that submit appropriate variance petitions.

I. REQUIREMENTS FROM WHICH A VARIANCE IS SOUGHT

- a) A statement describing the regulation, requirement, or order of the Board from which a variance is sought. If variance from a regulation is sought, the statement must include the Illinois Administrative Code citation to the regulation as well as the effective date of that regulation. If variance from a requirement or order of the Board is sought, the statement must include the citation to that requirement or order of the Board promulgating that requirement, including docket number;

As noted above, the Board has adopted new aquatic life standards for the CAWS, including for chlorides. These standards were adopted by an Opinion and Order of the Board in Docket R2008-09, Subdocket D, dated June 18, 2015. The final rules appeared in the Illinois Register on July 10, 2015 (30 Ill. Reg. 9388, 9423, 9433). The chlorides standards, which are in 35 IAC 302.407(g)(2) and (g)(3), are not currently met on a consistent basis, and cannot be met on a consistent basis during the term of the variance that is being requested by IDOT.

IDOT is operating under an existing Illinois R40 National Pollutant Discharge Elimination System (“NPDES”) permit which is required for IDOT maintained facilities,

including IDOT's roadside ditches. This permit requires IDOT to not cause or contribute to violations of water quality standards, including those now established in the R2008-09 rulemaking. IDOT also receives Water Quality Certifications under Section 401 of the Clean Water Act, which would also be subject to the R2008-09 rulemaking.² Consequently, it is necessary for IDOT to be issued a five-year variance for the permit in the form suggested in this Petition in order to avoid the imposition of an arbitrary or unreasonable hardship on IDOT as a permittee.

II. ACTIVITY OF IDOT

b) A complete and concise description of the nature of petitioner's activity that is the subject of the proposed variance, including:

A. The location of, and area affected by, the petitioner's activity.

IDOT is the major public transportation agency in Illinois. We maintain roadways and associated ditches throughout the state. IDOT has an active Storm Water Management Plan that provides guidance on how IDOT will reduce storm water runoff to protect the waterways and satisfy the appropriate water quality requirements.

B. The location of points of discharge, and, as applicable, the identification of the receiving waterway or land, or, if known, the location of the nearest air monitoring station maintained by the Agency.

Points of discharge for IDOT-maintained drainage ditches are bridges and structures built over or near waterways. The identified waterways are rivers and streams located within Illinois near the bridges and structures. The closest air monitoring station to each point is unknown, and not relevant for the requested variance.

C. An identification, including docket number, of any prior variance issued to the petitioner and, if known, the petitioner's predecessors, concerning similar relief.

² The NPDES permit as well as the 401 Water Quality certifications will hereinafter be referred to collectively as "the permit" or "the permits."

There have been no variances issued to IDOT concerning similar relief in the past.

- D. An identification, including number, of the environmental permits held by petitioner for the activity which may be affected by grant of variance.

The following permit held by IDOT would be affected by the grant of the requested variances:

NPDES Permit No. ILR400493
Issue Date: February 20, 2009
Effective Date: April 1, 2009
Expiration Date: March 31, 2014

Also, Certifications received under Section 401 of the Clean Water Act on an as-needed basis would also presumably be affected by grant of the variance.

- E. The number of persons employed by the petitioner's facility at issue and the age of that facility.

IDOT has a 280 highway maintenance employees in Cook, DuPage and Will Counties. IDOT maintains 8,250 lane miles within Cook, DuPage and Will Counties. IDOT operates 21 facilities in the relevant area – 14 facilities in Cook County, 2 in DuPage County, and 5 in Will County.

- F. The nature and amount of the materials used in the process or activity for which the variance is sought and a full description of the particular process or activity in which the materials are used.

Within the IDOT highway system, the roadside ditches control highway runoff. Almost all IDOT maintained ditches function as vegetated swales. In rare instances there are closed ditches that move the roadway runoff to a location further downstream within the watershed.

- G. A description of the relevant pollution control equipment already in use.

IDOT institutes BMPs for application and storage of road salt, which is used for winter storm maintenance. These BMPs include calibration of application equipment, training of staff in

best practices, use of applied technology, including, but not limited to, Road Weather Information Systems (RWIS), mobile pavement temperature sensors, Maintenance Decision Support Systems, and the use of meteorology services focused on the effects of weather on transportation systems. As an example, RWIS provides pavement temperatures and meteorology services as well as forecasts for pavement temperatures, which allows IDOT to strategically apply the appropriate amount of road salt at the correct temperature and time in order to avoid over/under salting. Storage practices include coverage of all IDOT maintained road salt through the use of salt domes. IDOT actively participates in workgroups focused on minimizing the environmental impact of our snow and ice operations. IDOT also funds and participates in research programs focused on winter maintenance. IDOT shares this information with other public agencies in Illinois. IDOT attends national conferences in which other agencies' best practices for winter maintenance activities are learned, brought back to IDOT, and implemented when practicable. All of these practices help to reduce negative environmental impact and protect the motoring public.

H. The nature and amount of emissions, discharges or releases of the constituent in question currently generated by the petitioner's activity.

Chloride data has not been collected from IDOT maintained roadside ditches within the CAWS.

III. COMPLIANCE WITH THE REGULATION CANNOT BE ACHIEVED BY THE COMPLIANCE DATE

- c) Data describing the nature and extent of the present or anticipated failure to meet the regulation, requirement, or order of the Board from which variance is sought and facts that support petitioner's argument that compliance with the regulation, requirement, or order of the Board was not or cannot be achieved by any required compliance date;

Results from sampling for chloride levels in the CAWS during the period 2010 through 2014 (Exhibit 12 of the Petition concurrently filed by MWRD) indicate that many of the reaches do not consistently meet the new winter standards. This will result in stringent effluent limits being imposed on IDOT. There is only one way for IDOT to reduce input of chloride to the CAWS, and that is to reduce road salt usage. This is the case for other dischargers as well. Reducing chloride inputs from all sources will reduce the level of chlorides coming into the CAWS. This would be done primarily through implementation of alternative deicing practices. A number of communities in the Northern U.S and Canada have been researching and applying these types of practices to address chloride water quality concerns.³ The effectiveness of these practices in reducing chloride loadings to waterways, and in reducing ambient chloride levels in those waterways, has varied significantly across the range of communities and programs.⁴ There are many factors that will affect the success of these programs, and in order to be effective, a program needs to be developed on a watershed-specific basis, taking into account the unique factors that are present in that situation – including consideration of any public safety issues that could result from reducing use of road salt for de-icing operations. Even with such a tailored program, there is often a significant lag time between implementation of the program and seeing a significant improvement in water quality,⁵ so it is critical to include, as a component of the

³ See, for example, Kilgore, Gharabaghi, Perera, *Ecological benefit of the road salt code of practice* (2013); Transportation Association of Canada, *Syntheses of Best Practices – Road Salt Management, Chapter 11 – Successes in Road Salt Management: Case Studies* (April 2013); DuPage River Salt Creek Workgroup/CDM, *Chloride Usage Education and Reduction Program Study: Final Report* (Aug. 16, 2007); New Hampshire Department of Environmental Services, *Chloride Reduction Implementation Plan for Dinsmore Brook Watershed, Windham, NH*

⁴ See Stone, Emelko, Marsalek, Price, Rudolph, Saini, Tighe, *Assessing the Efficacy of Current Road Salt Management Programs* (July 26, 2010), for University of Waterloo and National Water Research Institute

⁵ Meals, Dressing, Davenport, *Lag Time in Water Quality Response to Best Management Practices: A Review*, J. Environ. Qual. 39:85-96 (2010) (attached to MWRD Petition as Exhibit 22).

program, an adaptive management element, so that as results are seen (or not seen), the program can be adjusted to improve the long-term situation.

The right mix of chloride BMPs for the CAWS can, obviously, not be determined right now, immediately after the new standards have been adopted. It will take significant time and effort, involving the regulatory agencies and other stakeholders, to review relevant data, assess various options, and come to a consensus as to the proper measures that should be applied – and as to the schedule for implementation. That work will be the primary function of the Work Group that the MWRD, at the request of IEPA, is currently leading and of which IDOT is a member. The next Work Group meeting is scheduled for a few weeks from now on August 4, 2015. The materials provided to the participants in the first Work Group meeting make it clear that development of an effective suite of BMPs for the CAWS is the main goal of the Work Group. That BMP program will then be the foundation for a legally and scientifically sound regulatory compliance structure for chlorides in the CAWS. Whether that turns out to be some kind of “group” or “waterbody” variance, or individual variances for specific dischargers that are all based on a common program, or some other type of mechanism, will be determined by the group, in consultation with the regulatory agencies. The goal will be to get all of this work – the development of the BMP program, as well as the creation and regulatory approval of the compliance structure - complete before July 1, 2018, when the new chlorides standards will become legally applicable. That way, there will be a seamless transition between the 3-year “work period” and the later “compliance period.” Measures to reduce chloride loadings will be developed, then implemented, then assessed for effectiveness so that necessary adjustments can be made.

IV. EFFORTS NECESSARY TO ACHIEVE IMMEDIATE COMPLIANCE

- d) A description of the efforts that would be necessary for the petitioner to achieve immediate compliance with the regulation, requirement, or Board order at issue. All possible compliance alternatives, with the corresponding costs for each alternative, must be set forth and discussed. The discussion of compliance alternatives must include the availability of alternate methods of compliance, the extent that the methods were studied, and the comparative factors leading to the selection of the control program proposed for compliance. The discussion of the costs of immediate compliance may include the overall capital costs and the annualized capital and operating costs;

The efforts that would be needed for IDOT to achieve immediate compliance with the new chloride standards (and the efforts needed to achieve compliance in 3 years) are discussed above. The cost of an effective BMP program for the CAWS area has not yet been estimated; that will be one of the issues that the Work Group will address over the next 3 years.

V. ARBITRARY OR UNREASONABLE HARDSHIP

- e) Facts that set forth the reasons the petitioner believes that immediate compliance with the regulation, requirement, or order of the Board would impose an arbitrary or unreasonable hardship;

As explained above, immediate compliance with the new chlorides standards is simply not possible due to the need to use road salt during winter storm maintenance for highway safety issues. Currently, the new standards are not being attained on a consistent basis in the CAWS. An effective BMP program needs to be conducted on a watershed basis and could not be implemented immediately, even if such a program did not present the cost and other practical challenges, which are discussed *supra*. However, an effective BMP program, developed over the next 3 years by the Work Group, may be able to bring about compliance with the new chlorides standards (although the extent to which it would result in compliance is still to be determined). Nonetheless, there is simply no way to make that determination until the full BMP program is

developed. Therefore, at this time, there is no method available to bring about compliance with the new chlorides standards that would not create an arbitrary and unreasonable hardship.

VI. COMPLIANCE PLAN AND SUGGESTED CONDITIONS

f) A detailed description of the compliance plan, including:

A. A discussion of the proposed equipment or proposed method of control to be undertaken to achieve full compliance with the regulation, requirement, or order of the Board.

Over the next 3 years (and longer if necessary), IDOT will continue to work with IEPA and other stakeholders, as well as MWRD, the convener and leader of the CAWS chloride Work Group. During this process, IDOT will help the MWRD facilitate the Work Group's efforts to develop an effective BMP program to reduce chloride loadings to the CAWS, as well as to develop and secure regulatory adoption and approval of a compliance mechanism to address chloride issues as presented in NPDES permits for dischargers to the CAWS. During this time period, the MWRD would provide periodic reports to the Board as to the status of the Work Group's discussions. At the conclusion of the Work Group's efforts, the MWRD (likely with other stakeholders, including IDOT) would provide a final report to the Board, including recommendations and any proposed changes to regulations that are necessary in order to implement the recommendations.

B. A time schedule for the implementation of all phases of the control program from initiation of design to program completion.

As stated above, the MWRD would convene and lead the CAWS chlorides Work Group, of which IDOT is a member, for the next 3 years (and longer if necessary), in its efforts to address chlorides issues in the CAWS. Periodic status reports would be filed with the Board, and a final report would be filed at the conclusion of the Work Group's efforts.

- C. The estimated costs involved for each phase and the total cost to achieve compliance.

The costs to the IDOT of participating in the Work Group efforts have not been estimated. Similarly, the cost of an effective BMP program for the CAWS area has not yet been estimated; that will be one of the issues that the Work Group will address over the next 3 years.

VII. ENVIRONMENTAL IMPACT

- g) A description of the environmental impact of the petitioner's activity including:
- 1) The nature and amount of emissions, discharges, or releases of the constituent in question if the requested variance is granted, compared to that which would result if immediate compliance is required;

Immediate compliance with the new chloride standards is not possible, as discussed in the section above on Arbitrary and Unreasonable Hardship.

- 2) The qualitative and quantitative description of the impact of petitioner's activity on human health and the environment if the requested variance is granted, compared to the impact of petitioner's activity if immediate compliance is required. Cross-media impacts, if any, must be discussed; and

Immediate compliance with the new chloride standards is not possible, as discussed in the section above on Arbitrary and Unreasonable Hardship.

- 3) A statement of the measures to be undertaken during the period of the variance to minimize the impact of the discharge of contaminants on human, plant, and animal life in the affected area, including the numerical interim discharge limitations that can be achieved during the period of the variance;

The interim measures that would be taken during the period of the variance to address chloride issues are described in Section VI above.

- h) Citation to supporting documents or legal authorities whenever they are used as a basis for the petition. Relevant portions of the documents and legal authorities other than Board decisions, reported state and federal court decisions, or state and federal regulations and statutes must be appended to the petition;

Relevant portions of supporting documents and legal authorities will be appended to this Petition in future filings by IDOT.

If the requested variance involves an existing permit or a pending permit application, a copy of the material portion of the permit or permit application must be appended to the petition;

The relevant permits and permit applications will be appended to this Petition in future filings by IDOT.

VIII. SUGGESTED CONDITIONS OF THE VARIANCE

Any conditions petitioner suggests for the requested variance;

Over the next 3 years (and longer if necessary), IDOT will continue to work with IEPA and other stakeholders, as a participant of the CAWS chloride Work Group. During this process, the MWRD will facilitate the Work Group's efforts to develop an effective BMP program to reduce chloride loadings to the CAWS, as well as to develop, and secure regulatory adoption and approval of, a compliance mechanism to address chloride issues as presented in NPDES permits for dischargers to the CAWS. During this time period, the MWRD will provide periodic reports to the Board as to the status of the Work Group's discussions. At the conclusion of the Work Group's efforts, the MWRD (with other stakeholders if possible) will provide a final report to the Board, including recommendations and any proposed changes to regulations that are necessary in order to implement the recommendations

IX. BEGINNING AND END DATE OF THE VARIANCE

- k) A proposed beginning and ending date for the variance. If the petitioner requests that the term of the variance begin on any date other than the date on which the Board takes final action on the petition, a detailed explanation and justification for the alternative beginning date;

The proposed beginning date for the variance would be the date that the NPDES Permit is modified to include the variance. The term for the variance would be for a maximum of five years, ending no later than the effective date of any regulatory changes that are adopted by the Board to address chloride issues in the CAWS, after submittal of the final report of the CAWS chlorides Work Group, but in any event no later than the expiration date of the applicable Permit.

X. CONSISTENCY WITH FEDERAL LAW

A discussion of consistency with federal law, including an analysis of applicable federal law and facts that may be necessary to show compliance with federal law as set forth in Section 104.208 of this Part;

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. *Id.*

Section 104.28(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 pollution 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).

The requested variances in this matter will be consistent with federal law. More specifically, the variance must meet one or more of the conditions in 40. C.F.R. § 131.10(g) which provides:

(g) States may remove a designated use which is not an existing use, as defined in Sec. 131.3, or establish sub-categories of a use if the State can demonstrate that attaining the designated use is not feasible because:

(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.

Under the circumstances in the present matter, there are natural conditions, man-caused conditions, hydrologic modifications, and physical conditions specific to the CAWS that will prevent attainment of the use during the time period covered by this variance. Therefore, the variance would be justified pursuant to 131.10(g)(2), (g)(3),(g)(4) and (g)(5).

XI. AFFIDAVITS IN SUPPORT

An affidavit from IDOT Natural Resources Review Specialist, Felicia A. Hurley, P.E., is attached as Exhibit 1 to this Petition.

XII. WAIVER OF REQUEST FOR HEARING

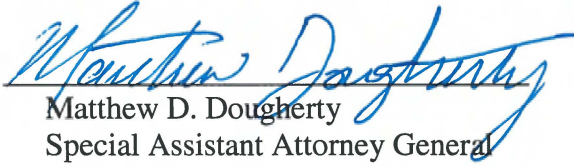
m) A statement requesting or denying that a hearing should be held in this matter.

The IDOT requests that a hearing be held in this matter.

Respectfully submitted,

ILLINOIS DEPARTMENT OF TRANSPORTATION

July 21, 2015

By: 

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BEFORE THE ILLINOIS POLLUTION CONTROL BOARD

ILLINOIS DEPARTMENT OF)	
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VERIFICATION

I, Felicia A. Hurley, Natural Resources Review Specialist, Illinois Department of Transportation, Division of Highways, being duly sworn upon oath, certify that the statements set forth in the Petition for Variance of the Department are true and correct to the best of my knowledge and belief.

Felicia Hurley

SUBSCRIBED AND SWORN TO BEFORE ME
THIS 21st DAY OF JULY, 2015.

Lisa A. Brown

NOTARY PUBLIC

