# **BEFORE THE ILLINOIS POLLUTION CONTROL BOARD**

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# **NOTICE OF ELECTRONIC FILING**

PLEASE TAKE NOTICE that on August 21, 2020, I electronically filed with the Clerk

of the Pollution Control Board of the State of Illinois, the RIVER ADVOCATES' REPLY

BRIEF, a copy of which is attached hereto and herewith served upon you.

Dated: August 21, 2020

Respectfully Submitted,

# **River Advocates**

Friends of the Chicago River Openlands Sierra Club, Illinois Chapter

By:

Molly Kordas

Molly Kordas Staff Attorney **Openlands** 25 E. Washington St., Suite 1650 Chicago, Illinois 60602 312-863-6274 mkordas@openlands.org

# **BEFORE THE ILLINOIS POLLUTION CONTROL BOARD**

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VILLAGE OF CHANNAHON,	)	PCB 19-48 (Riverside)
CHANNAHON ILLINOIS, COOK COUNTY	)	
COUNTY DEPARTMENT OF	)	
TRANSPORTATION AND HIGHWAYS,	)	(Time-Limited Water Quality
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SKYWAY CONCESSION COMPANY LLC,	)	
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# REPLY BRIEF OF OPENLANDS, FRIENDS OF THE CHICAGO RIVER AND SIERRA CLUB, ILLINOIS CHAPTER

# FRIENDS OF THE CHICAGO RIVER, OPENLANDS and the SIERRA CLUB,

# ILLINOIS CHAPTER (collectively "River Advocates") by and through their attorneys, submit

the following REPLY BRIEF regarding the petition for a Time Limited Water Quality Standard (TLWQS) for chloride, pursuant to PCB 2016-014.

#### I. Introduction

The River Advocates in their initial post-hearing brief explained that the proposed TLWQS should be amended to provide greatly improved monitoring, and implementation of controls on chloride pollution through a transparent process that would allow public participation and feasible citizen enforcement. Petitioners have filed briefs with recommendations that, if adopted by the Board without changes, would not fully allow enforcement and make it very difficult to determine the efficacy of best management practices (BMPs) to be implemented under the variance.

Monitoring should be conducted at strategic locations *throughout* the watershed to protect sensitive species and other aquatic life uses known to be present in the Chicago Area Waterway System (CAWS) and the Lower Des Plaines River (LDPR). The TLWQS should include conditions for public input on best practices to reduce chloride levels in subject waterways, as well as an annual review by the workgroups and subsequent amendments to these plans. All conditions, including implementation of BMPs, monitoring and public engagement throughout the variance process, should be enforceable as permit conditions.

# II. <u>Adequate Environmental Monitoring Data Is Essential to Protect Existing Aquatic</u> Life Uses and Avoid Degradation of Water Quality in the CAWS and LDPR.

Petitioners initially asserted that the success of the variance could properly be assessed solely by monitoring what leaves the system, proposing to monitor for compliance in only two locations downstream. J. Sub. at 8.1-8.3. However, in such a large and complex system, there

may be progress made in one water body or water segment while chloride levels remain high or even backslide in another segment. For example, chloride levels could markedly improve in the North Shore Channel but this improvement could coexist with exceedances in the Cal Sag Channel or harms to aquatic life in the North Branch of the Chicago River above the junction with the North Shore Channel. Monitoring restricted to the endpoint of the system is simply inadequate to determine the health of the system or to determine what and where some practice or process may be failing.

It is not enough to claim, as Petitioners do, that the whole system will improve through imposition of best management practices (BMPs). Post-Hearing Brief of Metropolitan Water Reclamation District of Greater Chicago at 6, Village of Homewood v. IEPA, PCB 2016-014. The CAWS as a whole may improve, but there may still be new loadings or existing pollutant loadings that could be transferred from one discharge point to another with resulting effects on local aquatic life. Measurement at multiple points is necessary to determine progress and to direct future efforts, if Petitioners are to be bound by a variance with an adaptive management approach. Therefore, MWRD has since committed to continuing the monthly chloride monitoring it already conducts throughout the CAWS. *Id.* This commitment, while appreciated, will not on its own suffice to provide the workgroups with adequate data to engage in a true adaptive management approach to reducing chloride levels in the subject waters.

Instead, the River Advocates propose the attached Revised Potential Draft Order Language ("Exhibit A") that details a method by which the workgroups or, if they choose, an independent consultant could build upon work by the DuPage River Salt Creek Work Group on phosphorus monitoring to similarly conduct a trends analysis for chloride to begin to understand the relationship between BMPs implemented and chloride levels in the CAWS and LDPR

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(Exhibit A, Proposed Item 3(b)(26)). Bearing in mind concerns raised by the IEPA at hearing, the proposal suggests creating an equation describing the relationship between conductivity and chlorides, using hourly conductivity monitoring at the red- and blue-circled MWRD Continuous Dissolved Oxygen Monitoring (CDOM) stations in Figure 2, in addition to the monthly chloride data from the accompanying Ambient Water Quality Monitoring (AWQM) stations, including hardness and temperature readings.

The workgroups or their consultants could then model or use existing flow data to create chloride loadings and annual flow-normalized chloride concentrations at each of the circled CDOM locations, allowing them to compare annual flow-normalized chloride concentrations over time to indicate whether the BMPs are in fact reducing chloride concentrations. Using past conductivity and chloride data to establish an initial trends report would allow the workgroups or their consultants an opportunity to interpret those trends, revisited each year, to track trends and exceedances at each monitoring location, providing a more precise snapshot of what is actually occurring throughout the watershed.

Just as the water quality standards were approached stretch by stretch due to the complex nature of the CAWS and LDPR in R2008-009, here, too, the collection of data should occur throughout the watershed to better inform management of BMPs. Without adequate monitoring data and a process for assessing that data, it would be nearly impossible to determine where exceedances are occurring and which BMPs are or are not working, effectively vitiating the "adaptive management element" Petitioners describe as a critical component of the program, J. Sub. at 2.8. Given that a trends analysis for phosphorous has already been accomplished by the Illinois State Water Survey and Fox River Study Group, according to ISWS it would be feasible

to include a parallel study as part of the chlorides adaptive management process. It would be folly to say we should not include this now simply because it has not been done before.

#### III. <u>The TLWQS Should Provide for Public Participation in the Chloride Workgroup.</u>

The River Advocates have also provided proposed language that would allow NGOs an opportunity to participate in the chloride workgroups. While the River Advocates are not dischargers and therefore not Petitioners under the TLWQS, they have participated as interested parties in these proceedings in order to advance the public interest, lend science-based technical expertise and advocate for water quality standards that are fully protective of existing and attainable aquatic life uses. There is no legal basis the River Advocates can find to prevent such a requirement. As USEPA noted in its public comments,

[T]he proposed collaborative watershed approach would represent the highest attainable condition for the affected waterbodies if the variance contains enforceable conditions necessary to be [sure] that each entity is in fact participating in the watershed workgroup and implementing the actions recommended by the workgroup that are necessary to reduce chlorides to the greatest extent feasible.

Comments of USEPA submitted by David Pfeifer, Chief, Watersheds and Wetlands Branch P.C., at Comment 1, Village of Homewood v. IEPA, PCB 2016-014. Allowing representation of the public interest in the process changes no requirement or condition which governs the workgroup. Nor does it impose additional conditions on the workgroup beyond simply extending an invitation to participate. As NGOs have played a vital role in this process from its inception, it is appropriate that public advocates are given an opportunity to participate in the chloride

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workgroups. It would deviate from both the current process initially authorized by the IEPA for developing a petition and report for the chlorides variance, and historic watershed-based approaches throughout the State to pivot and exclude participation by NGOs as ongoing interested parties in the chlorides workgroup.

## IV. Conclusion

The River Advocates believe that the TLWQS for chloride must include requirements for adequate monitoring and an assessment mechanism to track success of BMPs, protect existing aquatic life uses and ultimately avoid degradation of water quality in the CAWS and LDPR. The River Advocates appreciate this opportunity to submit the above comments and recommendations for consideration.

Dated: August 21, 2020

Respectfully Submitted,

**River Advocates** Friends of the Chicago River Openlands Sierra Club, Illinois Chapter

By:

Molly Kordas

Molly Kordas Staff Attorney **Openlands** 25 E. Washington St., Suite 1650 Chicago, Illinois 60602 312-863-6274 mkordas@openlands.org

#### EXHIBIT A

#### **Revised Potential Draft Order Language**

In lieu of the applicable water quality standards for chloride <u>under 35 Ill. Adm. Code</u> <u>302and total dissolved solids</u> for the waterways listed in Table 1 for the dischargers listed in Table 2 and the watershed depicted in Figure 1; the Board grants a Time Limited Water Quality Standard (TLWQS) for chloride subject to the following conditions.

Additional dischargers not listed in Table 2, wishing to be considered eligible under this TLWQS for chloride, must meet the Eligibility Criteria listed below and receive approval from IEPA.

#### 1. Eligibility Criteria

- A discharger must be located in the Chicago Area Waterway System (CAWS) or Lower Des Plaines River (LDPR) watersheds as identified by the Board pursuant to Section 104.565(d)(2)(A)(i).
- b) The discharger must belong to one of the classes identified by the Board pursuant to 35 Ill. Adm Code 104.540.
- c) The discharger, if a new source of chloride, must offset at least their additional loading before receiving coverage under the TLWQS.
- d) The discharger must have joined and will be participating in either the CAWS chlorides workgroup or the LDPR chlorides workgroup.
- e) The discharger is committed to implementing a pollutant minimization program which includes all the Best Management Practices (BMPs) identified by the Board's order granting the TLWQS.
- f) The discharger is committed to implementing any required BMP not currently being implemented within 12 months.
- g) The discharger must commit to participating in the re-evaluation proposal pursuant to 35 Ill. Adm. Code Section 104.580.
- h) The discharger must submit the following information to the Illinois EPA:
  - the location of the discharger's activity and the location of the points of its discharge;
  - 2) identification of discharger's NPDES permits;
  - identification and description of any process, activity, or source that contributes to a violation of the chlorides water quality standard, including the material used in that process or activity;
  - a description and copy of all Pollutant Minimization Plans that are currently being implemented or were implemented in the past; and

#### EXHIBIT A

- identification of any other BMPs being implemented to reduce chloride in the discharge that are not identified by the Board's order granting the TLWQS.
- Within <u>90-120</u> days, IEPA must notify the discharger whether it is approved of IEPA's intention for the discharger to be covered under this TLWQS.

#### 2. <u>Best Management Practices</u>

a) The dischargers covered by this TLWQS must implement the Best Management Practices identified in Table 3 according to the Implementation Schedule in Table 4.

#### 3. Individual Dischargers Covered by this TLWOS

- a) By the deadline listed in Table 4, dischargers must each prepare a Pollutant Minimization Program-Plan for their own operations that identifies the specific BMPs in Table 3 that it will implement along with the applicable monitoring, recordkeeping and reporting procedures, and the relevant schedule for implementation as provided in Table 4.
- b) By the deadlines listed in Table 4, dischargers must submit an Annual Report to IEPA and the appropriate chlorides workgroup on the discharger's prior year's usage of deicing agents and steps taken to minimize chloride use. Dischargers must make the report publicly available and include the following:

#### **BMPs**

- 1) List of the BMPs being used and to what extent description of the extent of the use
- Analysis of BMPs that the discharger has implemented over the term of the TLWQS, including a discussion of the effectiveness and environmental impact of the BMPs based on any studies and data available to the workgroups, and any hinderances or any unexpected achievements or setbacks
- Analysis of any alternative treatments or new technology that could be implemented by the discharger to reduce chloride loadings to the waterways, <u>utilizing data or studies from the</u> workgroups

#### **Deicing Agents Used**

 Types of deicing agents used and whether they are used as dry, pre-wetted, or liquid (e.g., sodium chloride rock salt, calcium chloride, magnesium chloride, calcium magnesium acetate,

#### EXHIBIT A

potassium acetate, potassium chloride, abrasives, urea, organics)

- 5) Estimate of the amount of chloride salt usage on in the past year and over the term of the TLWQS
- 6) Estimates of relative amounts applied and relative percent coverage achieved by the following types of deicing agents: dry, wet, liquid
- Application practices used (cleared using pre-wetted salt; cleared using anti-icing)
- Application rates (pounds/lane mile, or gallons/lane mile, <u>lbs/square foot, gallons/square foot</u>) by deicing agent type and storm event (e.g. 1-inch storm event; long duration freezing rain event)
- Description of how application rates varied for different types of weather and how they have changed over the term of the TLWQS.
- Whether the use of liquids was increased, and dry chloride salt application rates were reduced
- 11) Callouts
  - a) Summary of snowfall data
  - b) Number of callouts
  - c) Quantity and type of precipitation during the callout
  - d) Application rate for each type of deicing agent during the callout
  - e) Quantity of chloride salt used for each callout

#### Training

- 12) Annual training that was completed for the entire workforce that applied chloride-based deicing salts
- 13) Identification of additional training that is necessary
- 14) Explanation of why discharger was unable to complete the training identified in the previous annual report

#### **Deicing and Snow Removal Equipment**

15) Types and numbers of snow and/or ice removal equipment used

#### EXHIBIT A

(e.g., snowplows as well as mechanically controlled spreaders and computer-/sensor-controlled spreaders for dry solids, pre-wetted solids, or liquids)

16) Description of equipment washing as well as wash water collection and disposal or reuse for making brine

#### Salt Storage

- 17) Number of chloride salt storage areas
- 18) Number of chloride salt storage areas in fully enclosed structures
- 19) Number of chloride salt storage areas on an impervious pad
- 20) Number of chloride salt storage areas without a fully enclosed storage structure or impervious storage pad
- Information on salt storage methods used to ensure good housekeeping policies are implemented (e.g., cleaned-up salt piles)

#### Purchases

- 22) Identification of necessary capital purchases and expenditures over the next three years to reduce de-icing chloride salt applications, focused on increased use of liquids and reducing chloride salt application rates as well as cleaning up salt piles. (e.g., new storage structures; new or retrofitted salt spreading equipment necessary to allow for pre-wetting and proper rates of application)
- 23) Explanation of why discharger was unable to make all capital purchases and expenditures identified in the previous annual report.

#### **Environmental Monitoring Data**

- 24) Any changes to a facility's NPDES treatment technologies
- 25) NPDES effluent data, if any, for chloride discharges
- 26) Summary of relevant, available instream chloride monitoring data for local waterway (which may reference data gathered by State or Federal agencies or other parties)

a) The workgroups will either conduct a chloride trends analysis or engage an independent third-party organization, which will facilitate a stakeholder group responsible for finding, selecting and coordinating with a consultant to conduct a chloride trends analysis in the CAWS and LDPR.

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<u>b)</u>	The consultant or workgroup will create an equation				
	describing the relationship between conductivity and				
	chlorides (using hourly conductivity monitoring at the red-				
	and blue-circled MWRD Continuous Dissolved Oxygen				
	Monitoring (CDOM) stations in Figure 2, in addition to				
	monthly chloride data from the accompanying Ambient				
	Water Quality Monitoring (AWQM) stations, including				
	hardness and temperature readings) and convert hourly				
	conductivity to chloride according to the equation at each				
	monitoring station. The consultant or workgroup will also				
	determine whether more monitoring points are necessary				
	to capture the effectiveness of BMPs to reduce chlorides in				
	the waterways and where additional points should be				
	located.				

- c) The consultant or workgroup will model or use existing flow data or another comparable metric to create chloride loadings and annual flow-normalized chloride concentrations at each circled CDOM station in Figure 2.
- d) The consultant or workgroup will compare annual flownormalized chloride concentrations over time to indicate whether BMPs are in fact reducing chloride concentrations over a 10-year period.
- e) The consultant or workgroup will study past conductivity and chloride data to establish an initial trends report that will be updated each year for 10 years, including the number of hours and four-day periods per year when acute and chronic chloride targets are exceeded, expressed in absolute terms and flow-normalized terms. The consultant or workgroup will also present data needed to interpret these trends and exceedances at each monitoring location, including hardness and temperature readings, where available, from the CDOM or AWQM stations.

#### <del>26)</del>

#### Projections

- 27) Proposed steps for the coming year
- 28) Description of how the dischargers will implement an adaptive, iterative management approach based on reviewing annual reports, monitoring data and trends analyses-to adjust salt application practices to achieve further chloride reductions in the coming year

#### 4. Chloride Workgroups

a) The dischargers covered by this TLWQS must participate in a chloride workgroup whose main goals are working toward the reduction of chloride in the receiving stream and gathering information for the reevaluation. Formatted: Font: 12 pt

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- b) The dischargers must participate and must offer interested nongovernment organizations an opportunity to participate in the workgroup(s) associated with the watershed in which the discharge is located.
- c) Workgroups must convene at least semi-annually and continue meeting throughout the term of the TLWQS.
- d) By the deadlines listed in Table 4, the workgroup must submit a Status Report to IEPA and make the report publicly available. The Status Report must compile and analyze the individual discharger Annual Reports into a watershed-wide report and include the following:
  - 1) Chlorides monitoring data and any related analyses or studies
  - Workgroup's outreach strategy, including efforts to include other dischargers under the TLWQS, and outreach and training for nonpoint sources
  - 3) New BMPs and treatment technologies to reduce chloride loading to the environment
  - 4) Impediments faced by dischargers under the TLWQS that prevent them from completing the training and making all capital purchases necessary to implement the required BMPs
  - 5) Possible solutions to impediments listed in (4)(d)(4)
  - 6) Identification and description of any financial, technical, or other assistance the workgroup may be able to provide individual dischargers to overcome the impediments described in (4)(d)(4)
  - 7) Results of criteria measurement and compliance demonstration with the highest attainable condition under Item 5
- e) Workgroups must prepare outreach and educational materials to create awareness about the environmental impacts of chlorides. Workgroups must share these materials with other users of road salt in their local area, including residents, road salt applicators, elected officials, and businesses. Outreach and education materials may include various forms of social media, incentives for chloride reduction, support for community-based training of commercial road salt spreaders, training for residents and other entities that apply road salt, and funding or other support to implement chloride BMPs in communities where new equipment is not affordable.
- f) Workgroups must coordinate with IEPA to identify communities located

#### EXHIBIT A

in the TLWQS watersheds who have Municipal Separate Storm Sewer System (MS4) permits. Workgroups must reach out to the MS4 communities to remind them of the general permit special condition requiring participation in a watershed chloride workgroup and provide information on participating in their workgroup. Additionally, workgroups must provide MS4 communities with their education materials.

- g) Workgroups must coordinate with IEPA to identify different nonpoint source categories beginning in year seven of the TLWQS term.
  Workgroups must work with IEPA to prioritize and implement education outreach efforts for nonpoint sources based on their road salting practices and proximity to surface waters.
- (h) Workgroups must identify all sampling points and sampling frequency in a sampling plan to demonstrate compliance with the highest attainable condition as delineated in Item 5.

#### 5. <u>Criteria Measurement and Compliance Demonstration</u>

- a) The interim summer criterion for the months of May through November is 500 mg/L.
- b) The interim winter criterion for the months of December through April is 280 mg/L. Compliance is to be assessed as an average of the measurements during the months of December through April at the end of the first five-year term, using a 4-year seasonal average for the first reevaluation period, and then every <u>five years</u> thereafter.
- be) Measurements for the interim summer and winter criterion for CAWS must be based on instream water quality sampling at Lockport Forebay on the CSSC (RM 290.9) upstream of the confluence with the Des Plaines River.
- ed) Measurements for the interim summer and winter criteriona for LDPR must be based on instream water quality <u>monitoringsampling</u> at the USGS gage 05539670 at the Des Plaines River at Oil Tanking (Site-LPRCW\_03) at River Mile 275.8 in Channahon, IL.
- Measurements for the interim summer and winter criteria for General Use Waters must be based on instream water quality sampling or modeling at the edge of the permitted mixing zone.
- f) Measurements for the interim summer and winter criteria for CSSC must be based on instream water quality sampling in the CSSC near the confluence of the CSSC with LDPR.

#### EXHIBIT A

#### 6. <u>Re-evaluation</u>

- a) By the deadlines listed in Table 4, dischargers under this TLWQS or the chloride workgroups must submit a proposed re-evaluation under 35 III. Adm. Code 104.580, which assesses the highest attainable condition using all existing and readily available information, including the trends analysis in Item 3(b)(26).
- b) To ensure that there is enough data collected to perform the re-evaluation, the chloride workgroups must conduct sufficient data collection in the receiving streamthat was used in the support of this chloride TLWQS must continue.
- c) Chloride workgroups must evaluate if the chloride sampling plan and data collection needs to be expanded or otherwise modified.
- d) At each re-evaluation, dischargers covered under this TLWQS or the chloride workgroups must shall evaluate each required BMP, analyze its effectiveness, and provide a recommendation about whether it should be continued as is, modified to improve its effectiveness, or eliminated. The dischargers covered under this TLWQS or the chloride workgroups mustshall consider any new or innovative technology that could improve water quality if implemented and identify all such technologies.

#### 7. <u>Time-Limited Water Quality Standard Term</u>

- a) The term of the TLWQS expires 15 years after USEPA approval.
- b) During the 15-year term, a re-evaluation of the Highest Attainable Condition must be submitted to the Board and subsequently to USEPA six months before the end of each five-year TLWQS period. The dischargers in Table 2 must participate in the workgroup that conducts and submits this re- evaluation.
- c) If the 280 mg/L interim criterion-chloride water quality standard is not attained at the end of the first five years, then the dischargers covered by this TLWQS must evaluate the feasibility of implementing additional measures beyond those identified in Tables 3 and 4 to reduce ambient chloride levels in the Watershed.

The Agency is directed to modify or issue NPDES Permits for each discharger covered by this TLWQS that incorporate the conditions of this TLWQS, the Best Management Practices in Table 3, and the implementation schedule in Table 4.

#### EXHIBIT A

Figure 2.



# **BEFORE THE ILLINOIS POLLUTION CONTROL BOARD**

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PCB 16-14 (Homewood) PCB 16-15 (Orland Park) PCB 16-16 (Midlothian) PCB 16-17 (Tinley Park) PCB 16-18 (ExxonMobil) PCB 16-20 (Wilmette) PCB 16-21 (Country Club Hills) PCB 16-22 (Noramco-Chicago) PCB 16-23 (INEOS) PCB 16-25 (Evanston) PCB 16-26 (Skokie) PCB 16-27 (IDOT) PCB 16-29 (MWRDGC) PCB 16-30 (Richton Park) PCB 16-31 (Lincolnwood) PCB 16-33 (Oak Forest) PCB 19-7 (Village of Lynwood) PCB 19-8 (Citgo Holdings) PCB 19-9 (New Lenox) PCB 19-10 (Lockport) PCB 19-11 (Caterpillar) PCB 19-12 (Crest Hill) PCB 19-13 (Joliet) PCB 19-14 (Morton Salt) PCB 19-15 (Palos Heights) PCB 19-16 (Romeoville) PCB 19-17 (IMTT Illinois) PCB 19-18 (Stepan) PCB 19-19 (Park Forest) PCB 19-20 (Ozinga Ready Mix) PCB 19-21 (Ozinga Materials) PCB 19-22 (Midwest Marine) PCB 19-23 (Mokena) PCB 19-24 (Oak Lawn) PCB 19-25 (Dolton) PCB 19-26 (Glenwood) PCB 19-27 (Morton Grove)

)	PCB 19-28 (Lansing)
)	PCB 19-29 (Frankfort)
)	PCB 19-30 (Winnetka)
)	PCB 19-31 (La Grange)
)	PCB 19-32 (Ingredion)
)	PCB 19-33 (Channahon)
)	PCB 19-34 (CCDTH)
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)	PCB 19-36 (Skyway)
)	PCB 19-37 (Elwood)
)	PCB 19-38 (Chicago)
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# **CERTIFICATE OF SERVICE**

I, the undersigned, certify that on August 21, 2020, I served the attached via electronic mail, RIVER ADVOCATES' REPLY BRIEF, to the participants listed on the attached Service List.

Respectfully Submitted,

## **River Advocates**

Friends of the Chicago River Openlands Sierra Club, Illinois Chapter

By:

Molly Kordas

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