Protecting Our Water Environment

Metropolitan Water Reclamation District of Greater Chicago

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March 30, 2011

Ms. Susanne J. Davis, P.E.
Chief of Planning Branch
Department of the Army,
Chicago District
U.S. Army Corps of Engineers
111 North Canal Street
Chicago, IL 60606-7206

Dear Ms. Davis:

Subject: Metropolitan Water Reclamation District of Greater Chicago's Scoping Comments on the United States Army Corps of Engineers Great Lakes and Mississippi River Interbasin Study

We appreciate the opportunity to comment on the Great Lakes and Mississippi River Interbasin Study (GLMRIS). Please find the enclosed CD containing all of the attachments referenced in this letter.

To begin with, the Metropolitan Water Reclamation District of Greater Chicago (District) wants you to be aware that our Board of Commissioners has approved a policy statement regarding the separation of basins (Attachment 1).

The main tenants of this policy include the following:

1. Illinois public policy and statutory authority to protect the quality of Lake Michigan water should be sustained.

2. The day-to-day discharge of the Calumet and Chicago Rivers to Lake Michigan should not be allowed.

3. The infrequent opportunity to discharge excessive floodwaters to Lake Michigan should not be restricted.

4. The United States Supreme Court Decree allowing Illinois to divert 3,200 cubic feet per second from Lake Michigan should not be challenged.

Subject: Metropolitan Water Reclamation District of Greater Chicago's Scoping Comments on the United States Army Corps of Engineers Great Lakes and Mississippi River Interbasin Study

5. The city of Chicago, suburban municipalities, and the District must be made whole by the federal or state governments for any changes to the Chicago Area Waterway System (CAWS), resulting damages, and attendant costs of compliance with federal, state, and local environmental and legal requirements.

The following information may be helpful in your review of current and future forecast conditions within the CAWS.

Data and Reports

In March of 2008, the District prepared a report entitled "Description of the Chicago Waterway System for the Use Attainability Analysis" (Attachment 2). It includes a physical description, operation plan, and summary of monitoring activities for the system.

A Tunnel and Reservoir Plan (TARP) status report as well as a description of TARP modeling are included as Attachments 3 and 4.

The separation of the two basins will impact existing water quality within the CAWS, Lake Michigan, and downstream waterways. Any of the separation options to prevent or reduce the risk of aquatic nuisance species (ANS) transfer must consider existing water quality and the changes in water quality that will occur. The District conducts routine monitoring at multiple locations within the local waterways. The Ambient Water Quality Monitoring (AWQM) Program looks at water quality conditions in area waterways at 59 stations. Twenty-five of these stations are within the CAWS. Samples are collected for water chemistry on a monthly basis, and biological monitoring, sediment, and habitat data are collected yearly at some sites and once every four years at the others. The District also conducts a Continuous Dissolved Oxygen Monitoring (CDOM) Program in which water quality monitors are placed into the waterways to collect hourly dissolved oxygen (DO), temperature, and specific conductivity data. Attachment 5 includes a table of the GPS coordinates for AWQM and CDOM stations.

The District website has AWQM data from 1970, 1972 - 2008 that can be found in the Water Quality Data Section at the following link:
http://www.mwrd.org/irj/portal/anonymous/WQM.

The District website also summarizes CDOM data from 1998 - 2009 in the CDOM Reports Section at the following link: http://www.mwrd.org/irj/portal/anonymous/WQM.

It should be noted that the water quality standards for Lake Michigan are much more stringent than for the CAWS including requirements for effluent disinfection and phosphorus removal. In particular, there are water quality standards for bioaccumulative chemicals of concern (BCCs) applicable to the Lake Michigan Basin. While the District conducts analysis of some of the listed BCCs on water samples from the CAWS, the current analyses are not to the detection limit required to evaluate compliance with the Lake Michigan standards. GLMRIS should consider the potential for BCCs to impact water quality in Lake Michigan.

Studies and Testimony for the Chicago Area Waterway System Use Attainability Analysis

In 2000, the Illinois Environmental Protection Agency (IEPA) undertook the Use Attainability Analysis (UAA) process for the CAWS. On October 26, 2007, the IEPA submitted Water Quality Standards and Effluent Limitations for the CAWS and the Lower Des Plaines River: Proposed Amendments to 35 Ill. Adm. Code 301, 302, 303, and 304 to the Illinois Pollution Control Board (IPCB), resulting in rulemaking case R2008-009 (R08-9). The proposal would alter the use designation classifications for the CAWS, which are currently primarily considered Secondary Contact and Indigenous Aquatic Life. In response to proposed changes set forth in the UAA, the District initiated several studies to evaluate future management alternatives. The following includes a summary of some of these studies.

In January 2010, the District released a report documenting a study of aquatic habitat performed in the CAWS. The report is titled "Chicago Area Waterway Habitat Evaluation and Improvement Study: Habitat Evaluation Report" (Attachment 6). The objectives of the study, which was conducted by LimnoTech Inc., were to determine physical habitat characteristics for all reaches of the CAWS, use a multi-metric habitat index to evaluate the physical habitat conditions and assess the relative importance of physical habitat to fish, and to determine a system of categorizing the reaches within the CAWS. The LimnoTech Study determined that further water quality improvements are not likely to improve fish communities in the CAWS due to the severe and irreversible physical habitat limitations.

A second report from LimnoTech on the study of aquatic habitat in the CAWS was also released in January 2010. This repot is titled "Chicago Area Waterway Habitat Evaluation and Improvement Study: Habitat Improvement Report" (Attachment 7). The objectives were to determine what habitat improvements, if any, could feasibly be implemented in the CAWS, determine what the potential benefit to fish would be, and estimate the potential cost of habitat improvement.

The IEPA asked the District to evaluate end-of-pipe treatment as an option to eliminate combined sewer overflows (CSOs). AECOM/CTE was hired to evaluate treatment technologies

and conduct a cost estimate, and a link to this report can be found below. The study area was limited to the North Shore Channel, North Branch Chicago River, Chicago River, and South Branch Chicago River (Attachment 8).

A study was conducted to look at supplemental aeration for the North Branch and South Branch of the Chicago River. This feasibility study was done to determine the technology options and costs to improve DO in these reaches (Attachment 9).

Another study was conducted to look at flow augmentation of the North Shore Channel. This feasibility study was done to determine the technology options and costs to improve DO in the North Shore Channel by adding flow from the North Side WRP (Attachment 10).

Similarly, supplemental aeration and flow augmentation was evaluated on the South Fork of the South Branch Chicago River (Bubbly Creek). This feasibility study was done to determine the technology options and costs to improve DO in Bubbly Creek by adding flow from the South Branch Chicago River and adding supplemental aeration (Attachment 11).

Cost estimates (in June 2010 dollars) for effluent disinfection via ultraviolet irradiation at the three major plants on the CAWS have been prepared for the District and are as follows:

Capital Costs: $538.1 million
Annual Operation and Maintenance Costs: $23.5 million
Total Present Worth: $994.5 million (Present worth cost is based on 20 years, three percent interest, and three percent inflation.)

The costs for various potential degrees of nutrient removal from these three plants are described in Attachment 12.

As part of the UAA hearings conducted by the IPCB, the District provided testimony on CSOs in the CAWS. This included a description of CSOs, CSO location map, and frequency of CSO events. Any proposed plan to separate the basins must address wet weather events and the resulting CSOs. The link to the document on the IPCB website is: http://www.ipcb.state.il.us/documents/dsweb/Get/Document-61998.

The District also provided testimony on contaminated sediments in the CAWS for the UAA hearings. This includes a description of existing sediment quality and benthic invertebrate data. Any proposed plan to separate the basins must address the impacts of contaminated legacy sediments and their potential water quality impacts. A link to this testimony dated August 4, 2008, can be accessed at: http://www.ipcb.state.il.us/documents/dsweb/Get/Document-62009.

Subject: Metropolitan Water Reclamation District of Greater Chicago's Scoping Comments on the United States Army Corps of Engineers Great Lakes and Mississippi River Interbasin Study

Modeling on the Chicago Area Waterway System

The District has collaborated with Dr. Charles Melching of Marquette University to develop a one-dimensional unsteady flow water quality model for the CAWS since 2000. The platform of the model is the Duflow Modeling Studio software developed in the Netherlands. The software has both hydraulic and water quality components. The Duflow model for the CAWS includes all the tributaries to the CAWS with the upstream boundaries at the United States Geological Survey gauge stations near the Wilmette Pumping Station, Chicago River Controlling Works (CRCW) and O'Brien Lock and Dam, and the Racine Avenue Pumping Station (RAPS) at the south end of Bubbly Creek. The model also includes 24 CSO locations representing over 240 gravity CSO outfalls on the CAWS. The model has the hydraulic components of flow, water depth and surface elevation and velocity, and water quality components of DO, carbonaceous biochemical oxygen demand, suspended solids, nitrogen species, phosphorus species, and algae.

The Duflow model was extensively used in the UAA study for the CAWS to evaluate various technologies and alternatives for improving water quality in the CAWS. This model was also used to investigate the possible effects of a change in navigational water level requirements and the navigation make-up diversion of water from Lake Michigan during storm events. In 2008, the Duflow model was updated to: (1) expand the modeling periods to water years of 2001 and 2003; (2) increase CSO locations from four to 19 on the North Shore Channel to improve the resolution for evaluating the CSO impact; and (3) re-calibrate the sediment oxygen demand in the model with the 2001 field measurements. The downstream boundary of the updated model was moved to Lockport from Romeoville on the Chicago Sanitary and Ship Canal (CSSC). The updated Duflow model has been used for an engineering study on developing an integrated strategy to meet the IEPA proposed DO standards for the CAWS. Attachment 13 is the report updating the Duflow model and using the model for the integrated strategy study.

The District has also collaborated with Dr. Marcelo Garcia of University of Illinois at Urbana to develop a three-dimensional (3-D) hydrodynamics and water quality model for the CAWS. The focus of this modeling work includes the impact of sediment re-suspension, slips along the CAWS, and density currents on water quality. The 3-D model is developed based on the Environmental Fluid Dynamics Code. The first phase of the 3-D model, which has been completed, includes portions of the North Branch of the Chicago River (NBCR), Chicago River, South Branch of the Chicago River and portions of the CSSC, with the upstream boundaries at Grand Avenue on the NBCR, CRCW on the Chicago River and RAPS on Bubbly Creek and downstream boundary at Cicero Avenue on the CSSC. The framework of water quality simulation by the 3-D model was published in a paper titled "Modeling Framework for Organic Sediment Resuspension and Oxygen Demand: Case of Bubbly Creek in Chicago" (*Journal of Environmental Engineering*, Volume 136, Issue 9, Page 952, 2010). As a key component of this 3-D model study, field experiments coupling sediment resuspension with DO demand in stream were

conducted on Bubbly Creek in 2009. The report detailing the methodology and results of the field experiments and the application of the experimental work is Attachment 14.

Metropolitan Water Reclamation District of Greater Chicago Modeling

Hydrologic (HEC-HMS) and hydraulic (HEC-RAS) models were developed for the North Branch of the Chicago River, Little Calumet River, the Calumet-Sag Channel, and Lower Des Plaines River watersheds as part of Detailed Watershed Plan (DWP) development, which began in 2007 and is ongoing. Further details on model development for these watersheds are presented below:

North Branch of the Chicago River. As part of DWP development, new models were created for the NBCR north of the dam at Albany Park. The CAWS model developed by the United States Army Corps of Engineers for their "Chicago Downtown Flooding Study" was provided for our use to determine hydraulic effects on the NBCR south of the dam. The CAWS hydraulic model is also in HEC-RAS. The only change to the CAWS model made under our DWP effort involved modifying the flow input values over the dam in order to create downstream model results for our use in the DWP.

Little Calumet River. Models were developed for the Little Calumet River from the Illinois-Indiana border downstream to the confluence with the Calumet-Sag Channel. Additionally, the District modeled major tributaries of the Little Calumet River including Midlothian Creek, Calumet Union Drainage Ditch, Butterfield Creek, Thorn Creek, Deer Creek, North Creek, and Plum Creek within Cook County.

Calumet-Sag Channel. Models were developed for all major tributaries to the Calumet-Sag Channel, but the channel itself was not modeled. Available monitoring data was used to determine boundary conditions at the channel's confluence with its major tributaries. Some of the modeled tributaries to the channel include: Mill Creek, Stony Creek, and Tinley Creek. A hydrologic model was developed for the Illinois and Michigan (I&M) canal; both hydrologic and hydraulic models were created for I&M tributaries A, B, C, D, I&M 1 and I&M 2.

Lower Des Plaines River. The Mainstem Lower Des Plaines River (MLDPR) was modeled within Cook County north of the CSSC to the Lake County border, excluding Upper Salt Creek. Potential invasive species entry points have been identified at two levees on the MLDPR, one on the east bank of the river north of 47th Street and another on the west bank south of 47th

Street. Subwatersheds were modeled within Cook County and included 67th Street Ditch, Addison Creek, Buffalo Creek, CSSC, Crystal Creek, Des Plaines River Tributary A, East Avenue Ditch, Farmers-Prairie Creek, Feehanville Ditch, Flagg Creek, Golf Course Tributary, McDonald Creek, Lower Salt Creek, Silver Creek, Weller Creek, and Willow Creek.

All DWPs have been finalized and are available for download on the District's website. Please contact John Murray at (312) 751-7918 if you need copies of the models.

Statutory and Legal Responsibilities Relative to the Effected Waterways

The Metropolitan Water Reclamation District of Greater Chicago. The District was originally organized as the Sanitary District of Chicago in 1889 under an act of the Illinois General Assembly, which has been modified from time to time to expand the District's authority and jurisdiction. The Enabling Act in 1889 was in direct response to a long standing problem with contamination of the water supply and nuisance conditions in the river system. The District's statutory authority is set forth in 70 ILCS 2605/1, et seq. The District's mission is to protect the health and safety of the public in its service area, protect the quality of the water supply source (Lake Michigan), improve the quality of watercourses in its service area, protect businesses and homes from flood damages, and manage water as a vital resource for its service area.

The District accomplishes its statutory charge, generally, through three main functions, namely: treatment of sewage at one of its seven WRPs and discharge to the waterways; diversion of water from Lake Michigan for purposes of maintaining water quality and ensuring appropriate water levels for navigation; and Stormwater Management.

The Chicago Area Waterway System. The CAWS is within the District's service area and consists of 76.3 miles of canals that traverse Chicago and 31 other communities. The CAWS currently provides a pathway for commercial and recreational navigation and drains urban stormwater run-off and treated municipal wastewater effluent from the District's four wastewater treatment plants that discharge to the CAWS and away from Lake Michigan. The majority of the CAWS was artificially created in the early 1900s to reverse the flow of the Chicago River away from Lake Michigan in an effort to keep pollution out of the lake.

Water Quality and Navigation Through Diversion

With respect to diversion, pursuant to the provisions of the United States Supreme Court decree in Wisconsin v. Illinois, 388 U.S. 426 (1967) as modified by the Court in 449 U.S. 48 (1980), the State of Illinois is authorized to withdraw up to 3200 cubic feet per second (cfs) from Lake Michigan. The District is authorized annually to take up to a total of 305 cfs of Lake Michigan water, of which 270 cfs is for discretionary diversion purposes and 35 cfs for navigational make-up purposes. The discretionary diversion waters are primarily used to maintain water quality in the CAWS and certain otherwise stagnant reaches. By order of the Illinois Department of Natural Resources (IDNR), which oversees Lake Michigan diversion allocations for the State of Illinois, the District's diversion allocation is scheduled to be reduced to a total of 136 cfs (101 cfs for discretionary diversion and 35 cfs for navigational makeup) in the year 2015. That allocation will remain in effect until the year 2030 unless the District petitions IDNR for a change should circumstances warrant such a request.

If flows are reduced or restricted in the waterways, there is the potential to induce low DO sags and odors in areas of low or no flow, creating a nuisance. Any plan must include a method for maintaining flow in the waterways and maintaining minimum DO levels.

Any plan to separate the waterways must include a provision to maintain water depths in the waterways to support navigation. The levels in the waterways are governed by 33 CFR 207.420 and 33 CFR 207.425. Any change to the operating levels would require changing the legislation governing the waterways or a plan to maintain the waterways.

Wastewater Treatment

Acceptance of wastewater, treatment of the wastewater, and discharge of that treated effluent at the District's seven WRPs must comply with the provisions of the Clean Water Act, 33 U.S.C. §1251 et seq. (CWA). In compliance with the CWA, the District's WRPs are authorized to discharge to the waterways pursuant to permits issued by the IEPA. These permits, known as National Pollutant Discharge Elimination System (NPDES) permits, contain the terms and conditions with which the District's discharges must comply. The NPDES permits for the North Side and Calumet WRPs contain conditions requiring that the District operate its facilities in such a manner as to achieve compliance with numerous water quality standards, and also require that the effluents meet certain minimum DO concentrations. These requirements are in addition to water quality standards adopted by the IPCB for DO at 35 Ill. Admin. Code Parts 301, 302, 303, and 304, as well as a general prohibition against causing or contributing to water quality violations.

The District uses the CAWS to convey its plant effluent away from Lake Michigan. A change in the waterways must incorporate this use and provide any funding needed to change operations at the District. Additionally, the District uses the flow from the waterways to produce electricity at the Lockport Powerhouse. Currently, the Lockport Powerhouse produces over 40 million KWH every year. A change or reduction in flow will impact the District's ability to produce electricity at the facility.

Stormwater Management

With respect to stormwater management, effective November 17, 2004, the Illinois General Assembly authorized the District to plan, manage, implement, and finance activities related to stormwater management in Cook County. As part of the implementation of a county-wide stormwater management plan, the District is in the process of administering a Stormwater Management Ordinance, which will set forth reasonable rules and regulations for floodplain and stormwater management and for governing the location, width, course, and release rate of stormwater runoff channels, streams, and basins in Cook County. The adopted rules and regulations shall, at a minimum, meet the standards for floodplain management established by the Office of Water Resources of the Department of Natural Resources and the requirements of the Federal Emergency Management Agency for participation in the National Flood Insurance Program.

It is against this extensive statutory, regulatory and legal back-drop that the stakeholders must analyze the impact of ANS controls on the operations of the CAWS, and more specifically, the District's operations and its ability to operate under, and remain in compliance with, a variety of federal, state and local laws. The impact of ANS controls on the District's operations and on the CAWS will depend on the extent of ANS controls and their location. For example, the current ANS control of the electric dispersal barrier system has had minimal impact on the District's operations and on the CAWS, other than to aid in preventing the transfer of ANS upstream and downstream of the barrier. Additionally, the District has put screens in front of those sluice gates that it uses to divert water from Lake Michigan. While the screens aid in the prevention of passage of fish from the CAWS to Lake Michigan during lake water diversion season, this has been accomplished, in its current form, with minimum difficulty. However, reversal of water from the CAWS to Lake Michigan during storm events is much more problematic due to the likelihood that the screens will clog and blind. The use of screens on sluice gates for lake water diversion has also been factored into the structural rehabilitation project at the Wilmette Pump Station (WPS). Once operational at the WPS, the District plans to divert lake water through pumping or through tunnels with screens.

The waterways provide a vital role in managing the stormwater for the area and protecting the health of Lake Michigan. Prior to storms, the waterways are lowered to provide additional capacity and a hydraulic gradient to move water away from Lake Michigan. The waterway levels are allowed to rise above normal operating conditions to prevent water from discharging to Lake Michigan. Normally, lowering the waterways and allowing them to rise gradually is adequate to manage a typical storm. On rare occasions, less than once a year on average, the waterways cannot convey the flow and the water must be allowed to discharge to Lake Michigan to prevent flooding. When reversals occur, they can be significant. For example, during the September 2008 floods, the District discharged over 11 billion gallons of water to Lake Michigan. In July 2010, the District discharged another 6 billion gallons to Lake Michigan during the severe storms that devastated the area.

The flow can vary greatly from dry weather to wet weather. Average flow in the CSSC at Lemont is approximately 2,200 cfs. The flow during storms can be significantly greater, up to 20,000 cfs at Lemont. Attachment 15 is a United States Geological Survey graph for the Chicago River at Grand Avenue showing a storm flow over 9,500 cfs from the North Branch of the Chicago River alone, where the mean is approximately 600 cfs. The flow at Grand Avenue does not include flow from the RAPS (6,050 cfs), the Stickney WRP (2,215 cfs), 125th Pump Station (1,140 cfs), or the Calumet WRP (661 cfs) and all of the outfalls downstream of Grand Avenue. The flow in the system can vary greatly from dry weather conditions to wet weather conditions. The flow can change with each storm, depending on where the rain is hitting and the intensity of the rain. The flow will vary based on the capacity of TARP, the capacity at the treatment plants, the capacity in tributary streams, the capacity of the sewer system, ground conditions (frozen, saturated, dry) and the capacity of CAWS.

Not only does the quantity of water vary based on numerous factors, the direction of flow can change. During high flow, water can flow upstream in certain areas due to the limited capacity of the receiving waterway. During dry weather, there can be bi-directional flow due to density currents. The system is very complex and will need to be modeled for all types of conditions.

Any plans, including separating the waterways, must account for efficiently and safely conveying large and highly variable quantities of water. Failing to adequately handle storm flow could lead to increased flooding and unnecessary pollution of Lake Michigan.

Considerations for Hydrologic Separation

Should something as far reaching as hydrologic separation be considered, there would need to be an environmental impact study to factor in all potential variables. One would first

have to define what is meant by hydrologic separation and where it, geographically, would take place.

In November 2008, the Great Lakes Fishery Commission published a report entitled "Preliminary Feasibility of Ecological Separation of the Mississippi River and the Great Lakes to Prevent the Transfer of Aquatic Invasive Species" (available on their website at: http://www.glfc.org/carp/waterwayseparation.pdf).

This report concluded that ecological separation is necessary to prevent aquatic species movement between the Great Lakes and Mississippi River Basins and outlined various preliminary scenarios for basin separation. The District submitted comments that are pertinent to GLMRIS to the authors of the 2008 report. These comments included the following:

- On page 88, it considers the barrier at Halsted Street but makes the point that it would eliminate our ability to use the RAPS. It is unclear why this would be the case, since RAPS should be able to continue to operate with flow going downstream to Lockport. This option would also necessitate that "North Side treatment plant effluent would either need to be raised to drinking water standards or rerouted so it did not impact Lake Michigan water quality." No further analysis is provided on options for rerouting or for upgrading treatment facilities to include benefit-cost analysis or overall environmental effects.

- The report lacks a benefit-cost analysis, and does not quantify or even qualify the cost of doing nothing. For example, with a complete or partial separation, the hydraulic nature of the system will change and may increase flood inundation areas, thus increasing anticipated damage to structures from flood events. The report fails to properly address the costs associated with producing effluent to potable water standards at the North Side Water Reclamation Plant (WRP) and the Calumet WRP (capital and operations and maintenance costs).

- Raising the quality of the effluent from the North Side WRP and the Calumet WRP would not necessarily prevent pollution of Lake Michigan, if the waterways to which these plants discharge their effluent were to flow into Lake Michigan, due to legacy contaminants in the sediment of the waterways, contaminants in stormwater runoff, and CSOs that would still occur even after completion of the TARP.

- The option discussed on page 89 to construct a hydrologic barrier between the Main Branch and Lake Michigan is the most feasible and closest to the current

system. However, as stated by Mr. Lanyon, the District must maintain the option to discharge to Lake Michigan, and this limits the 100 percent ecological separation goal. The completion of the TARP will not necessarily prevent all CSOs and discharges to Lake Michigan.

- In the Calumet area, if the hydrologic barrier is proposed west of the Calumet WRP, treatment standards would have to be upgraded or the discharge point moved at significant cost. Shipping would be affected in this region by a barrier anywhere along the Little Calumet River or Cal-Sag Channel.

- The report identifies that the location of the original drainage divide was nearly undetectable and the area was a large slough and a swampy area. If a structural separation was to be pursued, those areas, now urbanized, will need massive infrastructure improvements to facilitate drainage and to prevent the area from reverting back to is natural swampy state.

- The report lacks a complete analysis of current water rights. For example, if a complete separation was performed, there would be an issue of whether areas that drain to hydraulically separated watersheds outside of the CAWS and Lake Michigan would still be allowed to use Lake Michigan for potable water.

- The report fails to balance properly the major factors associated with separation (aquatic invasive species, navigation, water treatment, and stormwater management). The report primarily focuses its analysis on aquatic invasive species and gives little analysis to the effects on the other three factors involved with the CAWS.

- The study does not recognize that if a physical disconnection and permanent river reversals were to be performed, there may be severe flooding impacts due to the reversed flow and constraints in natural storage that have been developed and implemented over the past 100 years. For example, channel widths and location of storage reservoirs may not be effective.

- Based on the aforementioned statement, many low lying areas were developed with the current hydrologic and hydraulic behavior. If the hydraulic properties are altered, some of these low lying communities may be at risk for increased flooding and drainage problems.

Subject: Metropolitan Water Reclamation District of Greater Chicago's Scoping Comments on the United States Army Corps of Engineers Great Lakes and Mississippi River Interbasin Study

Additionally, relative to the District's operations, the impacts of potential lack of diversion from Lake Michigan, along with reversals to Lake Michigan, flood control, and stormwater management, would need to be studied as to how each specific proposal for hydrologic separation would impact these essential operations. It is unknown how hydrologic separation will impact the District's ability to divert water.

Industrial Users

There are industries and buildings that use the flow from the CAWS for cooling water or for their operations. A change to the water flow may impact their operations and must be addressed in plans to prevent invasive species from traveling between the Great Lakes Basin and the Mississippi River Basin. For example, power generating facilities use the waterways for cooling water and the impact on power generation has the potential to impact the entire area. If the flow is reduced or eliminated, it could cause the water near the generating plants to be warmer and inhibit power generation when demand is highest during the summer months. Also, if industrial users are impacted, it could impact the local economy that relies on these businesses.

Conclusion

The aforementioned information and attached materials are intended to assist your organization with GLMRIS. The District is committed to informing this very important study and playing an integral role in the analysis of potential controls to reduce the risk of aquatic nuisance species transfer via the CAWS. If you should have any questions or require additional information from the District, please do not hesitate to contact me at (312) 751-7900.

Very truly yours,

Kevin J. Fitzpatrick
Acting Executive Director

KJF:JW:cm/dm
Attachments

The attachments referenced in this comment are posted at the following link:

http://www.mwrd.org/irj/portal/anonymous/GLMRIS