

**IN THE UNITED STATES DISTRICT COURT
FOR THE NORTHERN DISTRICT OF ILLINOIS
EASTERN DIVISION**

UNITED STATES OF AMERICA,)	
STATE OF ILLINOIS,)	
)	Case No. 1:11-cv-08859
Plaintiffs,)	
)	Hon. George M. Marovich,
NATURAL RESOURCES DEFENSE)	Judge Presiding
COUNCIL, INC., et al.)	
)	
Plaintiff-Intervenors,)	
)	
v.)	
)	
METROPOLITAN WATER)	
RECLAMATION DISTRICT OF)	
GREATER CHICAGO,)	
)	
Defendant.)	
)	

**ALLIANCE GROUP’S RESPONSE IN OPPOSITION
TO ENTRY OF CONSENT DECREE**

Gabrielle Sigel
Stephen H. Armstrong
Anthony B. Borich
Laura C. Bishop
JENNER & BLOCK LLP
353 North Clark Street
Chicago, Illinois 60654
Telephone: (312) 923-2758
Counsel for Alliance for the Great Lakes

Jessica Dexter
Environmental Law & Policy Center
35 East Wacker Drive, Suite 1600
Chicago, Illinois 60601
Telephone: (312) 795-3747
Counsel for Environmental Law & Policy Center

Lyman C. Welch
Water Quality Program Director
Alliance for the Great Lakes
17 North State Street, Suite 1390
Chicago, Illinois 60602
Telephone: (312) 445-9739
Counsel for Alliance for the Great Lakes

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SUMMARY OF ARGUMENT

Plaintiff-Intervenors, Alliance for the Great Lakes and Environmental Law & Policy Center (collectively, “Alliance Group”), respectively urge this Court to deny entry of the proposed consent decree (“CD”) in this lawsuit brought by United States and State of Illinois (collectively, “the Governments”), which alleges that the Metropolitan Water Reclamation District of Greater Chicago (“MWRD”) has engaged in multiple, decade-long violations of the Clean Water Act, 33 U.S.C. § 1311 (“CWA”), polluting the Chicago River and other area water bodies. The CD is not “fair, reasonable, adequate and in the public interest” because, contrary to the Governments’ statements to this Court, the CD does *not* “...impos[e] compliance measures that will remedy the violations alleged.” (Doc. #61, ID #1567, 1560.)¹ Instead, the CD’s measures are insufficient to end MWRD’s violations of the CWA. Thus, the Governments have not sustained their burden of justifying this Court’s approval of the CD.²

This Court succinctly summarized the practical consequences of the legal standard for entry of the CD by stating that this Court is:

...concerned that what it is that somebody proposes is going to work. I don’t have any reason to believe that the [Governments are] adverse to the aims and goals of the environmental people, but I am concerned that what it is that you are proposing does work.

(Doc. #76-2, ID #2810.) As Alliance Group’s analysis below demonstrates, the CD is *not* going to work. Specifically, MWRD’s history of polluting our area’s greatest natural resources – Lake Michigan and the Chicago Area Waterway System (“the CAWS”) – will not end. MWRD will

¹ In Alliance Group’s Response in Opposition to Entry of Consent Decree, Alliance Group will refer to pages of documents previously filed with the Court by their ECF identifiers as “Doc. #__, ID #__.” Alliance Group will refer to exhibits filed with this Response as “Ex. __, p. __,” with the page number referencing the page number shown on the footer to the document.

² Alliance Group adopts in their entirety the additional reasons for denying entry of the proposed CD provided by the NRDC Group in its Response in Opposition, also filed with the Court on September 5, 2013.

continue to discharge combined sewer overflows (“CSOs”) containing untreated sewage and other pollutants into our precious waters.

As the Governments allege, MWRD’s CSO discharges violate Illinois water quality standards (“WQS”) under the CWA and MWRD’s CWA permits. (Doc. #1, ID #8, 13-17.) However, the Governments do not, and cannot, show that the “remedial program,” encompassed in the CD, will end the violations alleged in this lawsuit. (Doc. #61, ID #1521.) Indeed, the CD’s remedial program will not end the violations for three primary reasons. First, MWRD’s Tunnel and Reservoir Plan (“TARP”) – on which the Governments focus for the “centerpiece” of their remedial program – will not end MWRD’s illegal CSO pollution. (Doc. #61, ID #1521.) Second, contrary to the Governments’ assertions, there is no “enforceable” schedule for completing TARP’s construction; it appears that TARP, even as a deficient, partial solution to CSO pollution, will not be finished as the CD’s schedule purports to require. (*Id.*) Third, the CD fails to compel MWRD to treat the raw sewage and other pollutants in MWRD’s CSOs that will continue after completion of TARP. Thus, the CD should not be entered by the Court because it is not “going to work” – the CD does not contain a remedial program capable of stopping MWRD’s pollution of the CAWS and Lake Michigan.

Indeed, the CD does not require MWRD to do more than it is already doing with respect to CSO pollution. MWRD will continue to build TARP, TARP’s completion will continue to be delayed, and MWRD will continue to discharge CSOs consisting of raw sewage and other pollutants that violate WQS and MWRD’s permits. As MWRD’s spokesperson recently explained, “[t]he consent decree is simply memorializing what we are already doing” and, therefore, this litigation has “not impacted decisions the MWRD makes.” (Ex. 36, p. 2.)

To qualify for entry, a CD must be fair, reasonable, adequate, consistent with applicable law, and in the public interest. See *United States v. Lexington-Fayette Urban Cnty. Gov't*, 591 F.3d 484, 489 (6th Cir. 2010) (addressing CWA consent decree); *United States v. City of Evansville*, No. 3:09-cv-128-WTL-WGH, 2011 WL 2470670, at *4 (S.D. Ind. June 20, 2011) (addressing CWA consent decree); *United States v. Akron*, 794 F. Supp. 2d 782, 790 (N.D. Ohio 2011) (addressing CWA consent decree purporting to remedy illegal CSOs). “[A] proper [consent] decree should provide full, complete, and certain relief to the public.” *Akron*, 794 F. Supp. 2d at 808. When evaluating whether the CD will end the alleged violations of the CWA, the Court should evaluate “whether [the consent decree] is capable of requiring compliance with the [CWA] and is in good faith calculated to do so.” *Friends of Milwaukee’s Rivers v. Milwaukee Metro. Sewerage Dist.*, 382 F.3d 743, 760 (7th Cir. 2004). “Compliance means an *end* to violations, not merely a reduction in the number or size of them.” *Id.* at 764.

In sum, the CD – particularly because of its dependence on TARP – will not end MWRD’s violations of the CWA. If the CD is entered, Lake Michigan and Chicago’s rivers will continue to be harmed by MWRD’s continuing overflows containing raw sewage. Therefore, Alliance Group respectfully urges this Court to deny entry of the proposed CD.

BACKGROUND

I. MWRD’s Untreated CSOs and Their Harm to People and Our Environment.

The City of Chicago and many of its older suburbs are served by MWRD’s combined sewer system (“CSS”). MWRD’s CSS also handles sewage from other communities that have a sanitary sewer system separate from their storm water collection system. (Doc. #3-2, ID #103; Ex. 1, p. 6.) The CSS has overflow structures, which, depending on flow conditions, can either direct combined sewage to MWRD’s treatment plants, or discharge combined sewage, untreated,

directly to the CAWS through CSO outfall pipes. (Ex. 2, pp. 24, 42 fn. e.³) When rain events are high in volume, frequency, or intensity, the CSS and its water reclamation plants (“WRPs”) cannot accommodate the additional flow from the storm water mixed with sewage. Thus, depending upon the water levels and pressures in the CSS, MWRD is forced to release untreated combined sewage to the CAWS through numerous overflow outfalls (“CSO Outfalls”). (Doc. #3-2, ID #103.) As of February 2013, MWRD reported 372 CSO Outfalls within MWRD’s CSS. (Ex. 3.) Although MWRD is the only entity that directly controls whether CSOs are discharged from any one of the 372 outfall pipes, only 37 CSO Outfalls are listed on permits issued to MWRD. (Doc. #1, ID #6-7, 22-23.)⁴

CSO untreated discharges – a mix of raw sewage, commercial and industrial wastewater, and storm water runoff – cause substantial harmful pollution. The U.S. Environmental Protection Agency (“EPA”) has documented that CSOs inflict severe human health and environmental impacts. (See Ex. 17; Ex. 15; Ex. 23.) According to the EPA’s reports on the issues to Congress, discharges from CSOs contain:

- Pathogens, including bacteria, viruses, and parasites;
- Substances that deplete oxygen, such as human excrement, kitchen waste, and industrial waste;
- Suspended solids, including decaying plant and animal matter, industrial wastes, and silt;
- Toxic pollutants, such as metals, hydrocarbons, and synthetic organic chemicals; and

³ Alliance Group has filed excerpts of certain lengthy exhibits; Alliance Group will provide a full version of any excerpted document upon request.

⁴ On its website, MWRD states that it has 35 permitted CSO Outfalls (Ex. 3; Ex. 3A); the Governments’ Complaint lists that MWRD has 37 permitted CSO Outfalls. (Doc. #1, ID #22-23.) As explained by the NRDC Group in its Response in Opposition, the CD is inconsistent and self-contradicting as to which or how many CSO Outfalls are addressed by the obligations in the CD. (See NRDC Resp. Br. § III.)

- “Floatables” and trash, which means “street litter, sewage-related items (condoms, tampons, applicators), medical items (*i.e.*, syringes), resin pellets, and other material from storm drains, ditches, or runoff.”

(Ex. 2; Ex. 17, pp. 10-11; Ex. 15, p. 29; Ex. 23, pp. 20-26.)

In 2004, members of Congress formally voiced their concern regarding the impact of such pollutants on the Great Lakes, and in particular Lake Michigan. (Ex. 2, p. 23.) In response, EPA found that Lake Michigan is highly impacted by such pollution from CSOs. (Ex. 2.) EPA reported to Congress that “[r]iver water affected by [MWRD’s] CSOs is discharged to the lake during...river reversals.” (Ex. 2, pp. 47, 20.) EPA further stated that “[p]ollutant concentrations in CSOs alone may be sufficient to cause a violation of water quality standards in a particular waterbody, precluding the attainment of one or more of the designated uses (*e.g.*, swimming and fishing) for that waterbody.” (Ex. 2, pp. 49, 18.) The United States also found that some Chicago-area beach closings were attributable to MWRD’s untreated CSOs. (*See, e.g.*, Ex. 2, pp. 19, 23; Doc. #61-5, ID #2194.)

CSOs also can harm aquatic life. The human excrement, kitchen waste, and industrial waste contained in CSOs cause dissolved oxygen levels to drop dramatically, often down to zero. (Ex. 4, pp. 5, 7.) Dissolved oxygen in water is crucial to the survival of aquatic organisms.⁵ The impacts of CSOs on dissolved oxygen (“DO”) levels in the CAWS, as documented by MWRD, show that CSOs cause drops in the DO level in the CAWS to well below the applicable WQS.⁶

CSOs harm Lake Michigan too. When water levels in the CAWS become too high from CSO discharges, threatening flooding, MWRD opens the gates and locks on the Chicago River

⁵ USEPA, “5.2 Dissolved Oxygen and Biochemical Oxygen Demand,” Volunteer Stream Monitoring: A Methods Manual, (1997), available at <http://water.epa.gov/type/rsl/monitoring/vms52.cfm>.

⁶ Ex. 4; Doc. #61-2, ID #1783; *see also* MWRD Continuous Dissolved Oxygen Monitoring (CDOM) Program: CDOM Reports, available on MWRD’s website at <http://www.mwrdd.org/irj/portal/anonymous/WQM> (last visited Sept. 4, 2013), *e.g.*, Report No. 10-39.

and/or Calumet River, allowing the rivers, with the combined sewage, to flow directly into Lake Michigan. (See Doc. #3-2, ID #103; Ex. 2, p. 47-48; Ex. 5; Doc. #61-1, ID #1666.) From 2002 through 2011 (the time period alleged in the Governments' Complaint), untreated CSOs to the CAWS have occurred many times throughout each year, and reversals of sewage-containing flow to Lake Michigan have occurred, on average, once each year. (Ex. 5A; see also Doc. #61-1, ID #1666.) Alliance Group alleges that these reversals also have caused violations of WQS specifically for Lake Michigan – both the limits on fecal coliform in the Lake and the prohibition on “offensive conditions,” including floatables, debris, and sludge. (Doc. #48 ¶¶ 79-81, 92, ID #1120-21, 1123.)

II. MWRD's Current Approaches to Its CSO Pollution.

A. The Tunnel and Reservoir Plan (“TARP”)

MWRD's inability to handle the flow in its combined sewer system has been recognized for decades. In December 1972, just two months after the enactment of the CWA, MWRD announced its proposed solution – a series of underground tunnels and reservoirs that would hold excess combined sewage in reserve until the rain stopped and the sewage could be pumped back to the WRPs for treatment and discharge. (Doc. # 3-2, ID #102-03, 114; see also Doc. #61-1, ID #1578.) In a report to Congress, EPA stated that the “TARP project is designed to capture [CSOs] from 369 sewer overflows, 303 of which could backflow into Lake Michigan during intense storm conditions.” (Ex. 2, p. 20.)

Diversion of sewage to TARP is controlled by “sluice gates,” which are inlet control structures that connect MWRD's sewers to “drop shafts” that descend to the tunnels of TARP. (Doc. #3-2, ID #118.) The sluice gates are controlled by MWRD. (See *id.* ¶ 29(g), ID #57.) When the sluice gates are in the *open* position, excess sewage flowing in MWRD's sewage collection system generally enters the drop shafts and flows into the tunnels and reservoirs.

(Doc. #3-1 ¶ 8(a), ID #39; Ex. 9, Tr. p. 130:20-23.) The excess sewage remains in the tunnels and reservoirs until it can be removed from TARP and treated by one of MWRD's treatment plants. (Doc. #3-2, ID #103.) When the sluice gates are in the *closed* position, excess sewage flowing in MWRD's sewage treatment system is *not* diverted into TARP and instead is discharged in the form of untreated CSOs. (Ex. 39, pp. 8-9; Ex. 19, Tr. pp. 199:9-24, 254:1-8; Ex. 9, Tr. pp. 131:3-132:11, 133:5-24.) Put another way, when TARP's sluice gates are open, TARP is "open" – excess sewage can be diverted to TARP and therefore such sewage is generally not discharged as untreated CSOs. By contrast, when TARP's sluice gates are closed, TARP is "closed" – excess sewage cannot be diverted to TARP and therefore such sewage is generally discharged as untreated CSOs. (Ex. 39, pp. 8-9; Ex. 19, Tr. pp. 199:9-24, 254:1-8; Ex. 9, Tr. pp. 131:3-132:11, 133:5-24.)

Although TARP is a single plan applicable to MWRD's entire CSS, TARP is comprised of three disconnected excess sewage diversion and storage systems – the Mainstream / Lower Des Plaines System ("Mainstream System"); the Calumet System; and the Upper Des Plaines System. (Doc. #3-2, ID #103.) Within those systems, MWRD has constructed four main tunnels. (*Id.*) Each tunnel leads to one of TARP's three planned reservoirs – the McCook Reservoir, the Thornton Reservoir, or the Gloria Alitto Majewski Reservoir.⁷ (Doc. #3-2, ID #104-05, 111.) According to the CD, TARP's total combined sewage storage capacity, once completed, will be 17.45 billion gallons ("BG"). (Doc. #3-2, ID #114; Doc. #61-1, ID #1575.)

Despite an initial completion deadline of 1982, the tunnel portion of TARP for all three systems was not completed until 2006. The Upper Des Plaines reservoir also was in operation by that date. (Doc. #3-2, ID #104.) However, completion of the tunnels and the Upper Des

⁷ The Mainstream System has two distinct tunnel systems for its large service area, both of which connect to the McCook Reservoir. (Doc. #3-2, ID #103.)

Plaines Reservoir has not stopped the pollution problems from occurring. Indeed, some of the largest CSO events in the past decade have occurred since 2006. (*See* Ex. 5; Ex. 6.) Since 2006, more than 113 BG of untreated combined sewage have been discharged into the CAWS. (Ex. 5; Ex. 6; Ex. 6A, p. 5.) The exact amount is unknown because MWRD does not have volume monitors on all of the CSO Outfalls in its CSS. (Ex. 18.) Since 2006, more than 31.72 BG of flow, including untreated sewage, have been reversed into Lake Michigan. (Ex. 5; Ex. 5A; Ex. 28.) The largest reversal – over 11 BG – occurred in 2008. (Ex. 28.) The second largest reversal – over 10 BG – occurred this year. (Ex. 5; Ex. 5A; Ex. 28.)

Since 1972, MWRD has presented TARP as the only solution to preventing CSOs. However, from almost the beginning of the project, MWRD has had to delay its completion. (*See* Doc. #61-2, ID #1874-75.) The more recent delays in completing the McCook Reservoir are largely due to the arrangement MWRD has made for the creation of the rough hole that will form that reservoir. On October 1, 2003, MWRD entered into a contract with Vulcan Construction Materials, LP (“Vulcan”) for the excavation of the McCook Reservoir at the site of MWRD-owned property (known as “LASMA”) adjacent to an existing quarry owned by Vulcan (“the Vulcan contract”). (Doc. #61-7, ID #2566, 2572; Doc. #61-1, ID #1584.)

The Vulcan contract provides that:

Vulcan anticipates excavating an average of seven million (7,000,000) tons per year from the LASMA Site. This excavation rate is subject to availability or [sic] sufficient *quantities of specification-grade marketable stone and sufficient market demand for such stone...* Vulcan will use commercially reasonable efforts to complete [excavation].

(Doc. #61-7, ID #2577 (emphasis added).) The contract also requires Vulcan to pay MWRD 4% of Vulcan’s net sales from the sale of materials excavated from the rough hole as a royalty payment, essentially making the excavated rock more expensive to Vulcan or its customers. (Doc. #61-7, ID #2579-80.) Vulcan commenced excavation in March 2008, but complete

excavation is not expected before 2029. (Ex. 7, pp. 3-4; Ex. 8, pp. 4-5; Doc. #61-1, ID #1585; Doc. #3-1, ID #49.)

As Alliance Group describes below, MWRD's delays will be exacerbated, not cured, by the CD. Yet, even without those delays, the CD would allow MWRD to delay completion of the first stage of mining McCook Reservoir until 2017 and to delay completion of the even larger second stage of mining until the last day of 2028. The reservoir will not be operational for yet another year. (Doc. # 3-1 ¶ 17(f), ID #49.) Consequently, a project developed in 1972, and, in 1995, formally approved by the Governments to be completed in 2017, will not be completed until, at the earliest, 2030 – *fifty-eight (58) years after it was endorsed by MWRD*. (Doc. #61-2, ID #1764-65, 1875.) Moreover, unlike any other CSO consent decree known to Alliance Group, those deadlines can be *extended even further* into the future by the terms of the CD's "Contingency Event," which, as described below, expressly allows the private business decisions of Vulcan – an entity not a party to the CD – and the market demand for its quarried rock to control the completion of this important public works project. (*See* Doc. #3-1 ¶¶ 19-27, ID #49-55.)

B. Floatables Control

Because TARP has not been effective in preventing untreated CSOs from occurring, MWRD has attempted to deal with some of the pollution caused by those CSOs with an after-the-discharge approach. The approach uses boats deployed after a storm ends to remove debris from the 76 miles of navigable waterways within its jurisdiction.⁸ As EPA states, some of the "most noticeable and problematic CSO pollutant[s]" are "floatables" and other solids. (Ex. 11,

⁸ Although MWRD's CSO Operational and Maintenance Plan describes debris removal responsibilities for 76 miles of the CAWS, EPA and Illinois describe the area of the CAWS subject to the CD as 100 miles. (*Compare* Ex. 12, p. 10 *with* Ex. 9 at 234:10-236:18 *and* Ex. 10, p. 1.)

p. 1.) According to MWRD's most recent CSO Operational and Maintenance Plan (a draft 2007 document), floatables currently are addressed by two pontoon boats (PB1 and PB2, 28-foot and 24-foot), which allow two laborers per boat to remove debris using nets attached to poles. (Ex. 12, p. 10.) The boats operate from mid-April to mid-October and service the downtown Chicago area, but can be sent to other areas as needed. (*Id.*, pp. 10-11.) Each pontoon boat averages 9 miles of travel in a week, with each removing 60 cubic feet of debris each week. (*Id.*, p. 11.) (A photograph of an MWRD pontoon boat currently addressing floatables is provided as Ex. 13.)

III. The Violations by MWRD of the CWA Alleged By the Governments and the Proposed "Remedial Program."

As alleged by the Governments, MWRD has consistently violated the CWA because of MWRD's frequent discharges of untreated sewage and other pollutants through CSOs. Those discharges violate the permits issued to MWRD in 2002 (the "2002 Permits") because MWRD's CSOs cause violations of two WQS. In general, the Governments allege that MWRD has failed "at all times to properly collect and treat all combined sanitary sewage and wastewater from [its] sewage collection systems." (Doc. #1 ¶ 1, ID #2.) Specifically, the Governments allege three claims for relief. First, the Governments allege that MWRD violated Special Conditions 10.2 and 10.10 of its 2002 Permits by discharging CSOs containing such pollution that they contributed to violations of the WQS for dissolved oxygen ("DO") in the CAWS. (*Id.* ¶¶ 48-53, ID #13-14.) Second, the Governments allege that MWRD's CSOs violated Special Conditions 5, 10.2, and 10.10 of its Permits because they caused the illegal accumulation of "sludge deposits, floating debris and solids." (*Id.* ¶¶ 54-59, ID #14-15.) Third, the United States alleges that MWRD violated Special Condition 10.1 of the 2002 Permits by failing to "provide the

equivalent of primary treatment and disinfection with adequate retention time, for not less than ten times the average dry weather flow for the design year.” (*Id.* ¶ 61, ID #16.)

In the CD, the Governments’ proposed “remedial program” for these violations of the CWA principally consists of the following actions:

1. The Governments’ proclaimed “centerpiece” of the remedial program – an “enforceable schedule” for completion of TARP; and
2. A Floatables Control Plan, Appendix B to the CD, which consists primarily of using boats to pick up floatables within sections of the CAWS after untreated CSOs occur, to be implemented before and after TARP is completed, and installing one debris containment boom on Addison Creek.⁹

(Doc. #61, ID #1521; Doc. #3-3, ID #123-26.) The Governments’ “remedial program” is essentially identical to the steps that MWRD has been taking for years – actions that led to the violations alleged in the Governments’ Complaint. Moreover, the “remedial program” is neither subject to meaningful enforcement nor will it remedy the problem of continuing CSO discharges of untreated sewage through CSOs. Instead, the “remedial program,” even when implemented, will be inadequate to bring MWRD into compliance with the CWA – that is, the measures in the CD will not stop MWRD from discharging pollutants and floatables that cause violations of WQS and permit violations, nor eliminate Lake Michigan reversals. Thus, the “remedial

⁹ The Governments also tout the CD’s post-construction compliance monitoring following completion of TARP and a “green infrastructure” component as part of its “remedial program.” (Doc. #61, ID #1521.) Alliance Group adopts, and will not repeat here, NRDC Group’s discussion in its Response in Opposition, of the inadequacies of the CD’s post-construction compliance program. (*See* NRDC Resp. Br. § V.) While the green infrastructure project is a welcome addition to the suite of remedies needed to eliminate MWRD’s pollution, given the relatively tiny additional stormwater capture capacity that the proposed green infrastructure program will provide – capturing less than 0.57 inches of rainfall across a single square mile of MWRD’s 8,832 square mile service area – it will not provide a significant additional remedy to MWRD’s CSO problem, either before or after TARP is completed. For a full discussion of the inadequacies of the green infrastructure component of the CD, see NRDC Group’s publicly filed comments at Doc. #61-2, ID #1810-24.

program” falls far short of an adequate and reasonable consent decree that protects the public interest and that is capable of ending MWRD’s violations of the CWA.

ANALYSIS

I. The CD’s Failure to Meet the Legal Standard for Entry.

The Governments urge the Court to enter the CD because, in their words, “the settlement is fair, reasonable, adequate and in the public interest....” (Doc. #61, ID #1567.) Specifically, the Governments represent that the CD is adequate because, in their words, it “comprehensively addresses the claims brought by the Governments, imposing compliance measures that will remedy the violations alleged.” (*Id.*, ID #1560.) Alliance Group agrees that the Court should not enter the CD unless it “will remedy the violations alleged” – a consent decree that does not end the violations alleged cannot be fair, reasonable, adequate and in the public interest.

As the Seventh Circuit has held, when evaluating whether a consent decree resolves alleged violations of the CWA, the Court should evaluate “whether [the consent decree] is capable of requiring compliance with the [CWA] and is in good faith calculated to do so.” *Friends of Milwaukee’s Rivers*, 382 F.3d at 760. Moreover, “[c]ompliance means an *end* to violations, not merely a reduction in the number or size of them.” *Id.* at 764; *see also Akron*, 794 F. Supp. 2d at 808 (“[A] proper [CSO consent] decree should provide full, complete, and certain relief to the public.”); *United States v. Telluride Co.*, 849 F. Supp. 1400, 1402 (D. Colo. 1994) (“whether the decree is reasonable [depends on, among other things] *whether the decree is technically adequate to accomplish the goal of cleaning the environment*” (emphasis added).) Here, however, the CD does not remedy the violations alleged and the public will not receive the full, complete, and certain relief to which they are entitled.

The CWA generally provides that “the discharge of any pollutant by any person shall be unlawful” except as authorized by a permit. 33 U.S.C. §§ 1311(a), 1342(k). Thus, MWRD’s duties under the CWA are defined by the terms and conditions set forth in MWRD’s permits.

MWRD’s permits prohibit discharges by MWRD that “cause or *contribute* to the violation of water quality standards in the receiving waters.” (Doc. #1, ID #7 (emphasis added).) The Governments allege that MWRD’s discharges violate two WQS. The first WQS provides for “the prevention of accumulations of sludge deposits, floating debris and solids.” (*Id.*, ID #16.) The second WQS prohibits “the depression of dissolved oxygen.” (*Id.*) As discussed above, CSOs contain a mix of raw sewage, commercial and industrial wastewater, and stormwater runoff. MWRD’s CSOs include floatables, such as condoms and feminine hygiene products, as well as substances that deplete oxygen, including human excrement, kitchen waste, and industrial waste. (Ex. 2; Ex. 17, pp. 10-11; Ex. 33.) The Governments also allege that MWRD’s discharges violate Special Condition 10.1. (*Id.*, ID #16.) Special Condition 10.1 generally prohibits any discharge from MWRD’s CSOs unless MWRD treats a certain volume of flow in MWRD’s treatment system. (*Id.*) MWRD’s discharge of untreated sewage through CSOs violates the WQS provisions of MWRD’s permits, and, therefore, the CWA.

As shown below, MWRD’s violations of those permit conditions, and of the CWA, will continue because TARP will not stop MWRD’s CSOs. There are two principal reasons TARP will fail to end MWRD’s CSOs: (1) when completed, TARP’s reservoirs will be too small to store the excess sewage needed to avoid CSOs; and (2) even after TARP’s reservoirs are completed, TARP’s tunnels will be unable to convey the excess sewage needed to avoid CSOs. Despite the Governments’ emphasis on TARP’s absolute size and long history, the Governments failed to flag for the Court what they admit in discovery – the Governments anticipate, and the

CD allows, CSOs to continue before and after TARP is completed. (Ex. 50, pp. 2-3; Ex. 51, p. 2; *see also* Ex. 58, p. 19.) Due to TARP's inadequate capacity and conveyance problems, those CSOs will continue to violate WQS and MWRD permit conditions. Therefore, even once TARP is completed (albeit on a delayed, open-ended schedule), when our community experiences significant weather events, floatables and untreated sewage will continue to be spewed into our waters. The CD is further inadequate because MWRD is not required to develop and implement effective measures to address such illegal CSO discharges that will occur before and after TARP is completed. Each of these inadequacies of the CD is discussed below.

In sum, because the CD does not impose a remedial program that will stop CSO discharges that violate the law, the CD is not adequate, reasonable, consistent with the law, and protective of the public interest. Therefore, Alliance Group respectfully urges this Court not to enter the proposed CD.

II. The CD Does Not Meet the Legal Requirements for Entry Because TARP Will Not Work to Stop the CSO Discharges that Violate the CWA.

The Governments rely almost exclusively on TARP to address the violations of WQS and other environmental problems that led to this lawsuit. For reasons discussed below, however, the Governments and MWRD unjustifiably rely on TARP and minimize the reality that CSO discharges will still occur. Thus, TARP will not provide the promised remedy, MWRD's violations of WQS will continue, and our waterways will suffer as a result.

A. TARP's Capacity Is Too Small to Store Sewage Needed to Avoid CSOs.

As discussed above and throughout the Governments' filings, TARP's tunnels and reservoirs have a limited capacity. (Doc. #61-1, ID #1575.) After the storage capacity of the tunnels and reservoirs is reached, no additional excess sewage can be diverted into TARP. (*Id.*) To stop continued flow into TARP, MWRD closes the sluice gates that control whether excess

sewage is diverted into TARP. (Doc. #61-1, ID #1631; Doc. #3-1 ¶¶ 28(e), 29(e), ID #57, 59.) When the sluice gates are closed, any excess sewage flowing in MWRD’s sewage treatment system is generally discharged in the form of CSOs into the CAWS, which can also backflow into Lake Michigan. (Doc. #61-1, ID #1631, 1666.)

1. TARP’s reservoirs, as required in the CD, are smaller than originally planned, which themselves were too small to prevent CSOs.

TARP’s storage capacity has shrunk dramatically since it was originally planned, but as studies produced in discovery show, even the originally planned capacity would have been too small to end MWRD’s CSOs. For example, in 1975, the U.S. Army Corps of Engineers (“Corps”) published a report regarding the then-current plans for TARP and its expected effect on flooding and pollution control in the Chicago area (“1975 TARP Study”). (Ex. 14., pp. 1, 11-32.) The 1975 TARP Study evaluated TARP’s expected performance based on the then-planned reservoirs, which were planned to hold much more storage capacity than those to be built pursuant to the CD now before the Court. (*Id.*, pp. 18-32.) The capacities of the reservoirs planned in 1975 and as required by the CD are compared below:

TARP System	1975 Planned Reservoir Storage (BG)¹⁰	Consent Decree Reservoir Storage (BG)
Upper Des Plaines	1.157	0.350
Mainstream	26.720	10
Calumet	12.708 ¹¹	4.8 ¹²

¹⁰ In the 1975 TARP Study, the reservoirs were measured in acre feet. Alliance Group has converted the measurement of acre feet to gallons to facilitate a comparison with the CD. One acre foot equals 325,850 gallons.

¹¹ “The Thornton Composite Reservoir is unique from the other two TARP reservoirs because it will receive floodwater from Thorn Creek in addition to the combined sewer flow. All water captured in the Thornton Composite Reservoir will be pumped to the Calumet WRP and receive full treatment prior to being discharged to the Little Calumet River.” (Doc. #3-2, ID #112.) Thus, the Calumet WRP’s capacity to dewater Thornton Reservoir will be further taxed by treating Thorn Creek’s floodwaters.

(Ex. 14, pp. 18-21; Doc. #3-1 ¶ 8(q), ID #35, 41.)

According to the Corps, even the reservoirs planned in 1975 – although *much* larger than the reservoirs now required by the CD – would not have been large enough to prevent all CSOs. (Ex. 14, p. 24.) Although the Corps’ 1975 TARP Study was based on much larger capacity, the Corps predicted CSOs would not end upon TARP’s completion “in the North Shore and Main Chicago areas...if the most severe storms of record were to recur.” (*Id.* at p. 18.) Similarly, the Corps predicted that “[r]unoff still will be discharged to the receiving watercourses....” (*Id.* at p. 24.) Later Corps reports similarly show that TARP, as previously conceived, did not have large enough reservoirs to capture CSOs and prevent reversals to Lake Michigan. For example, in 1986, when analyzing the performance of a Corps-recommended 11.4 BG McCook Reservoir – still larger than the 10 BG McCook Reservoir in the CD – the Corps stated that reversals would take place “every 8 to 9 years at the Wilmette controlling works and about once every 12 to 13 years at the Chicago and O’Brien locks.” (Doc. #61-5, ID #2084; Doc. #3-1 ¶ 8q, ID. #41.)

2. EPA’s analytical models show that TARP’s capacity will be too small to prevent CSOs.

In 2009, EPA conducted a study to analyze whether TARP – with the same tunnel and reservoir capacity as described in the CD – would have contained enough storage to handle the precipitation events occurring in 2006 (“2006 Precipitation Study”). (Ex. 16.) EPA found that TARP storage would have been sufficiently large enough to store the excess sewage generated by precipitation events that occurred in 2006. (Ex. 16, pp. 2-3, 5.) However, the United States admits that the 2006 Precipitation Study only shows that TARP would be large enough for that year’s precipitation events. (Ex. 19, Tr. pp. 123:15-124:8.) The United States also admits that

¹² A portion of the storage in the planned Thornton Reservoir is reserved for surface floodwater. (Doc. #3-2, ID #114.)

this study does not show that TARP, when completed, will prevent all CSOs in any years other than 2006. (*Id.* at 125:24-126:5.) Thus, the 2006 Precipitation Study cannot be relied upon to show that TARP's capacity is sufficient to capture all CSOs and the Governments admit as much. (Ex. 50, pp. 2-3; 51, p. 2.)

The 2006 Precipitation Study is particularly unreliable as a predictor of TARP's performance because the precipitation events that occurred in that year were uncharacteristically moderate in intensity and the events were spread out over time.¹³ (Ex. 16, p. 2.) On average, Chicago annually experiences an intense precipitation event exceeding 2.45 inches in one day as well as a two-day precipitation event of greater than 2.82 inches. (Ex. 16, pp. 21, 19.) Therefore, the 2006 Precipitation Study is not predictive of whether TARP's capacity is adequate to handle relatively intense precipitation events or more moderate precipitation events that last multiple days.¹⁴

The 2006 Precipitation Study was flawed in other respects. For example, the 2006 Precipitation Study projected that the *entire* volume of the reservoirs required by the CD could be utilized to store excess sewage. (Ex. 16, p. 2-3; Doc. #3-2, ID #114.) But, as the CD itself recognizes, the McCook Reservoir of the Mainstream System is considered "full" when 95% of the storage capacity of the reservoir is used. (Doc. #3-1 ¶ 8(q), ID #41.) Similarly, the Thornton

¹³ Compare Ex. 16, p. 22 (showing that, in 2006, Chicago experienced no single day of precipitation exceeding 2.25 inches and no consecutive days of precipitation exceeding 1.5 inches) with Ex. 16, p. 20 (showing that, in 2010, Chicago experienced two consecutive days of precipitation exceeding 2.5 inches).

¹⁴ EPA's decision to use just 2006 precipitation events to analyze TARP's capacity, instead of studying several years' data, more intense storms, or rapidly recurring storms, is inconsistent with EPA's *National Water Program 2012 Strategy: Response to Climate Change*, 77 Fed. Reg. 76,034 (Dec. 26, 2012), in which EPA adopts as a strategic action promoting the consideration of climate change impacts within its CWA NPDES permitting program. See EPA, *National Water Program 2012 Strategy*, available at http://water.epa.gov/scitech/climatechange/upload/epa_2012_climate_water_strategy_exec_sum_final.pdf

Reservoir of the Calumet System is considered “full” when 90% of the storage capacity of the reservoir is used. (*Id.*)

In addition, the 2006 Precipitation Study improperly assumed, without basis, that the Thornton Reservoir in the Calumet TARP System would be “dewatered” at a high rate. As MWRD has explained, “[a]fter a storm event, deep tunnel pumping stations dewater the [TARP] system as [MWRD treatment] capacity becomes available, making the tunnel and reservoir capacity available for the next storm event.” (Doc. #3-2, ID #103.) In other words, “dewatering” – the removal and treatment of excess sewage stored in the tunnels and reservoirs of TARP – is necessary to ensure that TARP’s storage remains available to store excess sewage generated by successive storms. (Doc. #61-7, ID #1747.) If the tunnels and reservoirs are not dewatered quickly enough, and there is not enough remaining storage, the TARP system cannot hold the excess sewage, resulting in CSO discharges or flooding. (Ex. 53, p. 57.)

In 2009, the University of Illinois completed a study to determine how the Calumet TARP System would perform if the Thornton Reservoir had been completed in 2006, the same year modeled in the 2006 Precipitation Study. (Ex. 53, p. 56.) Unlike EPA’s 2006 Precipitation Study, the University of Illinois assumed a lower rate of dewatering. (*Id.* at 57.) The University of Illinois study found, in contrast to EPA’s 2006 Precipitation Study, that the Calumet TARP System would overflow if it had been completed in 2006 unless MWRD dewatered Thornton Reservoir at an elevated rate. (*Id.*) Alliance Group is not aware of anything in the record that demonstrates that MWRD can achieve, on a long term basis, the relatively high dewatering average rates that EPA assumed in the 2006 Precipitation Study. Thus, the University of Illinois study demonstrates that EPA’s 2006 Precipitation Analysis cannot be used to conclude that the

reservoirs required by the CD, if completed in 2006, would have been large enough to store all of MWRD's excess sewage in that year.

3. Storage capacity for TARP's Mainstream System is relatively more restricted than for the other two systems.

The storage planned for the Mainstream System is particularly deficient. The Mainstream System is the largest of the TARP systems, but the Mainstream System's planned storage is, relative to the demands on that system, the system with the most restricted capacity to handle excess sewage. Thus, for the system serving the largest part of Chicago's population, TARP has the least per capita capacity.

The Mainstream System is designed to store the most sewage, but it also serves the largest physical area, including Chicago's densely populated central area. In addition, the Mainstream System serves the most people. (Doc. #3-2, ID #106, 117.) As shown in Ex. 62, relative to the vast service area handled by the Mainstream System, the maximum excess sewage that Mainstream System can store is comparatively small. (See Ex. 62.) Indeed, the Mainstream System's storage per square mile served is the smallest of the three systems. (See *id.* at p. 2.) Indeed, for the population, area, and density handled by the Mainstream System, the Mainstream System's storage is relatively smaller than the other two TARP systems. (See *id.* at pp. 3-4.) Moreover, the Mainstream System serves the central area of Chicago, which is more densely developed than elsewhere in the Chicagoland area. Densely developed areas have more impervious surfaces due to a higher density of parking lots, buildings, and streets, and therefore have greater run-off. (Ex. 52, p. 2.) In sum, the Mainstream System, which is designed to limit CSOs to the Chicago River and North Shore Channel that ultimately backflow into Lake Michigan, appears to be relatively less capable than the other TARP systems to store the volume of excess sewage required to avoid CSOs.

4. TARP's storage capacity problem is exacerbated because excessive flow into TARP is not limited.

The CSOs that will be caused by TARP's inadequate storage capacity are worsened because the CD does not require MWRD to limit excessive inflow. "Inflow," in this context, describes water that enters the sewer system through stormwater surface runoff, street wash waters, downspouts connected to the sewer, manholes, and other sources. (Ex. 60, p. 1; Ex. 61, p. 6.) Although inflow from these sources does not necessarily need to be captured for treatment (Ex. 61, p. 6.), excessive inflow adds to the volume of wastewater flow that MWRD must treat or store in TARP, thereby exacerbating CSOs.

The Governments acknowledge that excessive inflow impacts MWRD's ability to treat the volume of flow required to avoid CSOs. In 1985, the United States asserted that limiting excess inflow from MWRD's service communities would "minimize the quantity of overflows from the combined portion of the system during wet weather." (Ex. 27, p. 7.) EPA has stated excessive inflow to the sewer system is "evident," and that it "interferes with...reduction of CSOs." (Ex. 30, p. 3.) EPA explicitly found that "[f]urther reduction of [inflow] needs to be actively pursued by MWRD." (*Id.*) And Illinois's 30(b)(6) designee testified that limiting the quantity of inflow that enters TARP would reduce the number of CSOs that occur. (Ex. 9, Tr. p. 190:11-18.) Thus, not only does the CD inadequately address the excess sewage at the reservoir end of the pipe, the CD does not address the problem at the intake end of the pipe. The Governments' failure to address their concern for inflow as a known contributor to CSOs caused by TARP's inadequate storage capacity is another reason that the remedial program in the CD is not going to work – it is not a comprehensive remedy for the violations alleged in the Complaint.

5. *The Governments failed to adequately analyze and address TARP's limited capacity.*

Though TARP will not end CSOs unless TARP's reservoirs are large enough to store MWRD's sewage, the studies undertaken by the Governments and produced in this litigation do not adequately analyze whether the reservoirs required by the CD will be large enough to end CSOs. As discussed above, the early studies were of TARP's capacity *before* MWRD decided to substantially shrink the storage capacities of the tunnels and reservoirs of TARP. The studies since then are neither comprehensive nor representative. Indeed, government studies predict that CSOs will be quite prevalent after TARP, even those studies that ignore other problems in TARP's design and operation, such as the Transient Events discussed below.

Instead of identifying studies that adequately assess the extent to which TARP's currently planned storage capacity will result in CSOs, the Governments admit that TARP will not end MWRD's CSOs and that they simply do not know how severely TARP will underperform from that objective. (Ex. 50, pp. 2-3; Ex. 51, p. 2; Ex. 19, Tr. pp. 109:17-110:10, 125:13-126:5.) Since TARP is the focus of the CD's "remedial program," the Governments' admissions that TARP will not accomplish its primary goal of preventing untreated CSOs, with their floatables, solids, and other pollution, demonstrates that the CD is fundamentally flawed and should not be entered by this Court.

B. TARP's Tunnels Will Not Adequately Convey MWRD's Sewage To TARP's Reservoirs.

1. *Background on TARP's tunnels and the need for adequate conveyance to avoid CSOs.*

TARP's tunnels store MWRD's excess sewage and convey that sewage to TARP's reservoirs for later treatment by MWRD's sewage treatment plants. As discussed below, the tunnels must reliably and quickly convey sewage – if the tunnels cannot convey sewage to the

reservoirs, the quantity of sewage that can be diverted to and stored by TARP is effectively limited. Thus, if TARP's tunnels are, by design too constricted or too flat, or they malfunction, TARP cannot receive, convey, and store the sewage necessary to avoid CSOs. Two of these conveyance problems with TARP's tunnels are described below. *First*, the excess sewage to be handled by TARP drops into the TARP tunnels through the drop shafts with explosive force, resulting in dangerous, destructive hydraulic phenomena within the tunnels. As a result, excess sewage to TARP's reservoirs cannot occur because the drop shafts must be closed to prevent the hydraulic force from causing damage. *Second*, the Mainstream tunnel in the Mainstream TARP System is too narrow and too flat to adequately convey the volume of sewage needed to avoid CSOs. These hydraulic phenomena are well-recognized dangers, and are referred to in the CD as "Transient Events." (Doc. #3-1 ¶ 8(jj), ID #44.) The problem, however, is that to avoid the dangers of Transient Events, the excess sewage is *not* conveyed to the TARP reservoirs, but can flow to the CAWS as CSOs. As explained below, the CD recognizes that these CSOs will occur and does not require MWRD to take effective steps to stop the illegal pollution that occurs as a result.

The explosive hydraulic phenomena that occur in TARP's tunnels are well-documented in MWRD's own studies. TARP's tunnels are located between 150 and 300 feet below ground. (Ex. 53, pp. 12-21.) MWRD's sewers are near the surface. (Ex. 54, p. 14.) Thus, the drop shafts that connect MWRD's sewers to the tunnels below the ground descend up to 300 feet. When excess sewage is diverted from MWRD's sewers and into the drop shafts, the excess sewage falls down the length of the drop shafts with such force, creating further explosive hydraulic forces within the tunnels. (Ex. 55, pp. 7-8, 19; Doc. #3-2, ID #118.) Those explosive hydraulic forces can cause, and have caused, "geysering," "shock waves," and other hydraulic pressure

malfunctions in TARP's tunnels and on the surface above MWRD's sewers. (Ex. 42, pp. 1-3; 54, p. 3; Ex. 55, pp. 7-8, 19; Ex. 56, p. 9; Ex. 57, p. 6.)

"Geysering," and other destructive hydraulic events were first recognized in TARP's tunnels decades ago. For instance, EPA acknowledged in 1988 that "geysering problems were caused by TARP filling up too quickly." (Ex. 41, p. 4.) In 2008, MWRD acknowledged that air trapped in the sewage flowing through TARP's tunnels also causes geysering. (Ex. 39, p. 9.) As discussed below, MWRD's primary answer to those problems to date has been to limit the flow of excess sewage into TARP. Alliance Group is not aware of any documents showing that MWRD has implemented any systemic answer to avoid hydraulic events, other than flow control, though flow control generally means excess flow will be discharged as CSOs. In 2008, MWRD's consultants reviewed MWRD's prior studies about the hydraulic problems in TARP's tunnels and affirmed the continued necessity of flow control. At that time, the consultants warned MWRD that TARP ". . . should be carefully observed during future storm conditions because of potential for 'geysering' or general overflow" (Ex. 39 at p. 10.)

Geysering is not the only problem created by the explosive energy of the sewage entering TARP's tunnels. On June 12, 1999, the Chicago Tribune reported that a "shock wave" induced by sewage "explode[ed]" in the Mainstream tunnel and knocked the tunnel out of service. (Ex. 42, pp. 1-3.) In light of the catastrophic damage that TARP itself can incur, MWRD's operating manual states that a "main objective[]" of MWRD's TARP operating procedures is to "protect District facilities." (Ex. 43, p. 4.)

While MWRD's flow control approach helpfully controls TARP's hydraulic problems, flow control creates another problem. MWRD's excess sewage has to go somewhere if TARP is not an option, so to minimize sewage backups into homes or streets, the excess sewage is discharged

as a CSO. (Doc. #61-5, ID #2034; Doc. #3-2, ID #103.) As discussed below, the CD recognizes MWRD's hydraulic problems by expressly allowing MWRD to close off TARP's tunnels to excess sewage. (Doc. #3-1 ¶¶ 8(jj), 28(g), 29(g), ID #44, 57, 59.) At the same time, however, the CD does not require MWRD to prevent the CSO pollution that results when TARP's tunnels are closed off. Thus, the CSO pollution that occurs due to MWRD's efforts to avoid "Transient Events" is a problem for which the CD offers no effective remedy.

In addition to hydraulic problems caused by explosive torrents of sewage entering TARP's tunnels generally, the Mainstream TARP System's tunnel suffers from an additional problem. The Mainstream tunnel is effectively too small and too flat to adequately convey the volume of sewage needed to avoid CSOs. MWRD's consultant, Dr. Song, a University of Minnesota hydrologist, found that the primary problem with the Mainstream tunnel is that "the tunnel [isn't] big enough to carry the water." (Ex. 42, p. 2; *see also* Ex. 45, p. 11.) Not only is the tunnel too small, the slope of the tunnel is not steep enough. MWRD acknowledges that "steeper slopes" in tunnels "provide greater hydraulic conveyance capacity." (Ex. 39, p. 5.) Yet the Mainstream System's tunnel has a slope that is "many times" less than the slope of TARP's other tunnels. (*Id.* at p. 14.) Indeed, because the Mainstream tunnel is flatter than the other TARP tunnels, the Mainstream tunnel has greater problems "with surge and geysering." (*Id.* at pp. 5, 14.)

The Mainstream tunnel's conveyance limitations are documented in MWRD's 1994 University of Minnesota study ("1994 Study"), conducted by Dr. Song. MWRD's 1994 Study found that "overflow" will occur "due to limited conveyance." (Ex. 45, p. 11.) The 1994 Study's conclusions were based on a model of a particular storm that occurred on October 18, 1985. The 1994 Study found that the Mainstream tunnel's conveyance limitations would prevent

the Mainstream TARP System from capturing 66% of the storm's inflow – a huge volume. (*See id.* at p. 13.)

To “remedy the problem” of explosive pressures from excess sewage traveling within TARP and to address the Mainstream's tunnel's too small and too flat design, Dr. Song identified a straightforward solution that MWRD continues to use today: “slow the rate at which water flows into the tunnel.” (Ex. 42, p. 2; *see also* Ex. 39, p. 17.) Stated differently, Dr. Song found that “transient problems can be controlled with proper inflow control.” (Ex. 39, p. 17; *see also* Ex. 44, p. 2) (“excessive surging” can be reduced if MWRD “throttle[s] the inflow to the tunnels”).) The manner in which MWRD limits flow into the tunnels is by closing the sluice gates where MWRD's surface sewers connect to the TARP tunnels deep below the surface. When a sluice gate is closed, the flow of excess sewage through the corresponding drop shaft and into TARP's tunnels is stopped and that excess sewage will be diverted to a CSO Outfall to avoid sewer backups and street flooding. (Ex. 39, pp. 8-9; Ex. 9, Tr. pp. 131:3-132:11.)

MWRD's operating manual makes clear that control of flow through closure of sluice gates is a routine aspect of MWRD's operating procedures. According to MWRD, a “main objective[]” of TARP's operating procedure is to “mitigate potentially damaging geysering.” (Ex. 43, p. 4.) Indeed, MWRD's procedure for the Mainstream TARP System, in particular, substantially limits inflow. For a “typical rain event,” the “gates...at Racine Pump Station” should be “closed” if the Mainstream tunnel is more than 50% full at the beginning of the storm. (Ex. 43, p. 2.) In an “extreme precipitation event,” those gates must be closed even if the Mainstream tunnel is empty at the beginning of the storm. (*Id.*) Similar gate closure policies are in effect for the Calumet TARP System tunnels and the Upper Des Plaines TARP tunnels. (*Id.* at

pp. 1, 19, 35-37.) Accordingly, gate closure to avoid geysering is a routine part of MWRD's operation for all three TARP systems.

Unfortunately, when MWRD closes sluice gates to minimize pressure differential problems, excess sewage flowing in MWRD's sewage collection and treatment system *cannot* be captured by TARP. Instead, such excess sewage is discharged in the form of untreated sewage through CSOs into Chicago's rivers and, sometimes, backflows into Lake Michigan. (Ex. 39, pp. 8-9; Ex. 19, Tr. pp. 199:9-24, 254:1-8; Ex. 9, Tr. pp. 131:2-132:11, 133:4-24.)

In sum, TARP's tunnels suffer from hydraulic challenges which MWRD attempts to control by limiting the use of TARP. In addition, the Mainstream tunnel in particular is simply too small and too flat to adequately convey the necessary volume of sewage. MWRD's solution to address those conveyance problems is to control, *i.e.*, stop, flow into a TARP tunnel, but that causes MWRD's excess sewage to be discharged as untreated CSOs. The CD is fundamentally flawed because it allows MWRD to have these sewage discharges into the CAWS, but it does not require that MWRD simultaneously implement steps to prevent the WQS violations that will occur.

2. The Conveyance problems in TARP's tunnels will not be fixed by TARP's reservoirs.

The conveyance problems within TARP's tunnels described above will not be fixed by the completion of the McCook and Thornton Reservoirs. *First*, completion of the planned reservoirs connecting to TARP's tunnels is not going to adequately dissipate the explosive energy of the sewage entering TARP. For example, MWRD continues to limit flow into the Upper Des Plaines TARP System in order to avoid geysering even though the Gloria Alitto Majewski Reservoir is *already* completed. (Ex. 43, p. 1.) In addition, while MWRD's 1994 Study indicated that completion of a reservoir at McCook would reduce *some* hydraulic problems in the

Mainstream TARP System, the study found that the geysering problem would *not* be fully solved by the addition of a reservoir. Specifically, the report concluded that a reservoir at the downstream end of the Mainstream tunnel – that is, at McCook – cannot eliminate geysering in the upstream half of the Mainstream tunnel. (Ex. 45, pp. 10-12, 20.) And, in a March 2008 report concerning the Calumet TARP System, MWRD admitted that “‘geysering’ overflows due to inherent uncertainties in the modeling [and] actual operating conditions” may occur in the Calumet TARP System even *after* completion of the Thornton Reservoir. (Ex. 39, p. 9.) Thus, hydraulic malfunctions in the TARP tunnels, such as geysering and shock waves, will not disappear simply as a result of the completion of the McCook and Thornton Reservoirs.

Second, the additional conveyance limitations in the Mainstream tunnel – specifically, that the Mainstream tunnel is too narrow and too flat to adequately convey the volume of sewage needed to avoid CSOs – will not be solved by construction of the McCook Reservoir. Importantly, MWRD’s 1994 Study evaluated whether the completion of a reservoir at McCook, or even of a much larger reservoir, would solve the tunnel’s conveyance problem. MWRD’s 1994 Study found that, even with the completion of a reservoir at McCook *larger* than the one currently planned, “overflow” will occur “in all upper sections of the system...due to limited conveyance to the reservoir.” (Ex. 45, p. 11.) The same study also found that an even larger reservoir than that first considered in the 1994 Study would not eliminate the Mainstream tunnel’s conveyance problem: a “larger reservoir at the downstream end does not help to reduce the surge and geyser problems at the upper section of the system.” (*Id.*) The 1994 Study therefore concluded that, “even with a large reservoir at the downstream end, a large amount of water of the storm cannot be captured by the system....” (*Id.*, p. 13.) Thus, TARP’s problems are not only storage size problems, but conveyance problems. As further discussed below,

TARP's Transient Event conveyance problems are excused by the CD and no effective measures are required to prevent them or to deal with the resulting untreated CSOs.

3. The CD does not require MWRD to take action to remedy the conveyance flaws in TARP

Despite the significance of Transient Events – including their impacts on the operation of TARP and the resulting CSOs – United States' 30(b)(6) designee did not know how often Transient Events will occur upon TARP's completion, and was aware of no studies predicting their frequency. (Ex. 19, Tr. pp. 262:17-264:9.)

MWRD, however, has been studying the Transient Event problem for decades. Over that time, several structural modifications to TARP have been suggested to reduce or eliminate the problems. One modification, the construction of a Mainstream Relief Tunnel, was under consideration at the time of the 1994 Study. The then-planned Mainstream Relief Tunnel would have added storage capacity and a relief valve for the energy of the excess sewage to be handled by the Mainstream Tunnel. (Ex. 45, pp. 13, 20.) The 1994 Study found that the Mainstream Relief Tunnel also would have provided additional conveyance capacity, if properly planned. (Ex. 45, p. 21.) The Mainstream Relief Tunnel was not built.

Other MWRD studies identified additional structural modifications that could reduce or eliminate hydraulic problems by dissipating the energy in MWRD's sewage. In a 1992 MWRD study, MWRD's consultants recommended increasing the diameter of the Mainstream tunnel's branches and the diameter of the drop shafts connecting MWRD's sewers to the tunnel. (Ex. 46, p. 19.) That approach essentially would create more area to dissipate the energy of MWRD's sewage. In addition, MWRD's consultants suggested the construction of an underground storage reservoir at the opposite end of the Mainstream tunnel from the McCook Reservoir. (Ex. 46, p. 26.) Similarly, in a 2009 study, MWRD's consultants identified a wide variety of potential

measures to dissipate the explosive energy of MWRD's sewage, such as "placing a back-flow gate," enlarging a construction shaft, constructing a new tunnel, and constructing "vertical vent shaft." (Ex. 47, pp. 11-15.) Many of those structural modifications were proposed by MWRD itself. (*Id.*) None, apparently, have been implemented, nor does the CD require the implementation of or even study of any structural modifications to TARP.

The CD instead explicitly recognizes that Transient Events will occur and gives MWRD permission to close TARP's sluice gates in order to manage them. (Doc. #3-1 ¶¶ 8(jj), 28(g), 29(g), ID #44, 57, 59.) Specifically, the CD defines a "Transient Event" as "a pressure differential in a TARP tunnel that necessitates closure or partial closure of one or more sluice gates prior to TARP reaching full capacity, in order to prevent harm to people, property, or MWRD facilities." (Doc. #3-1 ¶ 8(jj), ID #44.) The CD authorizes MWRD to close TARP's sluice gates whenever a "Transient Event" occurs or even if MWRD believes a Transient Event *will* occur but it has not yet happened:

If a Transient Event occurs, or would occur..., MWRD may close the minimum number of sluice gates necessary in the exercise of reasonable judgment by a trained operator in possession of the information available to the MWRD operator at the time to avoid or minimize Transient Events. If MWRD's closure of sluice gates results in discharge of combined sewage from any CSO Outfall from the Mainstream/Lower Des Plaines TARP System, then MWRD shall submit a report....

(Doc. #3-1 ¶ 29(g), ID #59.) As set forth above, excess sewage flowing in MWRD's system is discharged as untreated CSOs when MWRD's sluice gates are closed.

The only action that the CD requires MWRD to take upon the occurrence of a Transient Event is to submit a report to EPA. (Doc. #3-1 ¶¶ 28(g), 29(g), ID #57, 59.) The report requires MWRD to evaluate *operational* modifications, but not structural modifications, that might mitigate future hydraulic problems in TARP's tunnels. (Doc. #3-1 ¶44(b)(i), ID #69.) As described above, MWRD has already identified the *operational* solution to Transient Events –

close TARP's sluice gates and let the CSO discharges occur. Thus, the CD does not include in its "remedial program" any effective action to prevent the CSO pollution that does and will continue to occur because of these fundamental problems in TARP's design and structure.

C. TARP's Completion Will Not Remedy MWRD's CWA Violations.

As set forth above, even after TARP is completed, MWRD's CSOs are going to continue to occur. The storage capacity of TARP's reservoirs will not be enough to store all the flow necessary to avoid CSOs and the hydraulic problems in TARP's tunnels will continue to require MWRD to close TARP's sluice gates in order to avoid geysering and other Transient Events. When TARP's sluice gates are closed, CSOs result in order to avoid other problems, such as sewer backups or street flooding. Under the CD, if MWRD's excess sewage cannot go to TARP, MWRD can discharge through a CSO and suffer no greater consequence than having to write a report. A report is not an effective consequence or a remedy for pollution of the CAWS and Lake Michigan. Because TARP will not end MWRD's CSOs and the CD essentially excuses them, the Governments have failed to meet their burden to show that TARP will bring MWRD into compliance with the CWA.

The record shows instead that MWRD's post-TARP CSOs will continue to violate the CWA and MWRD's permits. MWRD's permits prohibit discharges by MWRD that "cause or contribute to" violations of WQS. MWRD itself admits that the pollution caused by MWRD's CSOs will not be remedied by the completion of TARP. (Ex. 58, p. 19.) At the same time that this CWA enforcement lawsuit is pending before this Court, MWRD and the Governments are involved in a separate action before the Illinois Pollution Control Board ("the Board"), through which the Board is evaluating whether to issue more protective WQS for the CAWS. In response, less than one week ago, MWRD argued that the Board should not tighten WQS for the CAWS precisely because TARP will be insufficient to end the pollution caused by MWRD's

post-TARP CSOs. (*Id.*) Specifically, MWRD asserted that “...CSOs into the CAWS [cannot] be remedied solely by the completion of TARP....” (*Id.*, pp. 19-20.) For that reason, MWRD admitted that, “after the completion of TARP, the sources of pollution that prevent attainment of the CWA aquatic life goal in the CAWS may still remain.” (*Id.*, p. 20.) Put another way, MWRD admitted that, because TARP will not be able to stop CSOs, MWRD’s CSO pollution will continue to harm the CAWS. MWRD’s concerns are well founded – EPA analyses of pollutants in CSO flow generally show that, even if MWRD captures *some* additional CSO flow as a result of TARP, the remaining CSO flow will still contain high levels of CSO pollutants. (Ex. 67, pp. 8, 10.) Thus, contrary to the Government’s claim that TARP “will remedy the violations alleged” (Doc. #61, ID #1560), MWRD’s violations of WQS will continue after TARP is completed through continuing discharges of floatables, excrement, and other offensive materials.

Not only will MWRD’s post-TARP CSOs continue to violate WQS, those CSOs will also continue to violate Special Condition 10.1. Special Condition 10.1 requires that MWRD treat a specified volume of flow – at least “ten times the average dry weather flow for the design year” – before discharging from MWRD’s CSOs. (Doc. #1, ID #16.) Illinois’ 30(b)(6) designee testified that “ten times the average dry weather flow for the design year” means “ten times the design average flow for the [applicable wastewater] treatment plant.” (Ex. 9, Tr. p. 6; see Doc. #1, ID #16.)¹⁵ Thus, based on the applicable design average flow for Stickney and North Side treatment plants, the volume of flow that MWRD must treat in the Mainstream TARP System

¹⁵ To the extent “average dry weather flow for the design year” refers to actual flow treated at the applicable wastewater treatment plant, rather than the design average flow at the plant, the total volume and flow that must be treated with the equivalent of primary treatment and disinfection is still a large portion of the TARP system’s capacity. For instance, in 2007, Stickney treated a mean flow of 0.777 BGD. (Ex. 59.) Ten times that flow would be more than 7.7 BGD.

before discharging through MWRD's CSOs is huge – 15.33 billion gallons per day. (Ex. 24, p. 2; Ex. 26, p. 2.) Alliance Group is not aware of any study that shows that, upon completion of TARP, and taking into account TARP's capacity and conveyance limitations, MWRD will be able to treat the volume of flow required by Special Condition 10.1 before discharging through MWRD's CSOs. To the contrary, MWRD will not be able to treat the volume of flow required by Special Condition 10.1 – for example, with respect to the Mainstream TARP System, the amount that Special Condition 10.1 requires MWRD to treat before discharging through MWRD's CSOs exceeds the Mainstream TARP System's entire storage capacity.

In sum, continued storage-related CSOs, as well as conveyance-related CSOs resulting from the management of Transient Events, are inevitable due to TARP's inadequate storage and how TARP must operate in order to avoid the damage that could occur if Transient Events are not minimized. Alliance Group acknowledges that it is appropriate that MWRD take action to avoid the damage that can be caused by Transient Events. The CD fails, however, because it does not require any effective action to address the *pollution* that inevitably will occur as a result of inadequate storage and Transient Events, both before and after TARP's reservoirs are completed, in violation of the CWA. The CD's failure to effectively remedy the pollution resulting from TARP's well-documented storage and conveyance problems is a fundamental flaw in the CD and reason enough for the Court to deny entry of the CD.

III. The CD Does Not Meet Legal Standards for Entry Because the CD's Remedial Program Is Inadequate.

The Governments' Complaint alleges violations of three permit conditions, including violations of two WQS. As discussed above, those permit and WQS violations will continue before and after the completion of TARP because TARP will not prevent CSOs that will continue to violate those WQS and permit conditions. The Governments and MWRD admit that

TARP, even when completed, will not end CSOs. The Governments nonetheless assert that the CD's remedy is "comprehensive" and that the CD will remedy MWRD's failures to comply with the CWA the CD's remedy primarily consists of: (1) an "enforceable" schedule for the completion of TARP; and (2) two boats and a boom to address raw sewage in billions of gallons of discharge from CSOs spread over 76 miles of rivers and Lake Michigan. (Doc. #60, ID #1509; Doc. #3-1, ID #47-49; Doc. #3-3, ID #123-26.) Because TARP will not end MWRD's CSOs, the Governments' remedy in the CD is inadequate because: (a) the enforceability of the CD's schedule for the completion of TARP is wholly illusory; (b) the Floatables Control Plan is inadequate to address the violation of the "offensive conditions" WQS, including for floatables; and (c) the CD does not require MWRD to implement additional effective measures, beyond TARP as the Floatables Control Plan, that are needed to fully stop MWRD's continuing violations of the CWA.

A. The CD Does Not Impose an Enforceable Expeditious Schedule for Completion of TARP.

Although TARP will not prevent all CSOs, the completion of the two reservoirs required in the CD is a crucial component of TARP that will help reduce, although not eliminate, MWRD's CSOs. That is particularly true of the McCook Reservoir, which will provide 57% of TARP's storage capacity. (Doc. #3-2, ID #114.) However, the CD fails to require MWRD to complete TARP on an enforceable schedule that is as expeditious as possible. The CD states that McCook, the final TARP reservoir, shall be operational by 2029 (Doc. 3-1, ID #35), but the Governments will not be able to require MWRD to meet that deadline. Instead, the CD allows a private mining company, Vulcan, to control the TARP completion date, based on Vulcan's unaccountable business determinations and the market for rock, with minimal consequences for

MWRD if the deadline is extended.¹⁶ Moreover, TARP's past delays and Vulcan's past excavation rates suggest that MWRD will *not* be able to meet the current 2029 deadline for McCook's completion. Therefore, the Governments fail to justify why the CD does not require a faster pace of construction for such an important public works project. (*See* Doc. #61, ID #1566)

1. Completion of McCook Reservoir depends upon business interest of third party who is not subject to enforcement.

The Governments contend that the CD's deadline for completion of TARP's reservoirs is "enforceable," but that is wrong – there is no certainty in the deadline or in the Governments' ability to ensure that any such deadline is met. Rather, the plan created by MWRD and approved by the Governments for the excavation schedule puts the pace of construction subject to Vulcan's whims and the vagaries of the market for rock. Further, the CD allows the current deadline to be extended without reasonable limits, and without regard to the public interest.

a. The Vulcan Contract

On October 1, 2003, MWRD entered into a contract with Vulcan for excavation of the rough hole for McCook Reservoir on MWRD-owned property adjacent to one of Vulcan's existing quarries ("the Vulcan contract"). (Doc. 61-7, ID #2566, 2572-73; Doc. #61-1, ID #1584.) Under the CD, McCook will be completed "pursuant to" the Vulcan contract. (Doc. #3-1 ¶ 17, ID #48-9.) Although the contract states that Vulcan "anticipates" removing an average of seven million tons of rock per year, Vulcan must use only "commercially reasonable efforts" to complete excavation of the reservoir that this rate – a term that the contract does not quantify or otherwise define. (Doc. 361-7, ID #2574, 2577.) The contract further notes that Vulcan's removal rate "is subject to availability of sufficient quantities" of marketable stone and "sufficient market

¹⁶ Doc. #3-1, ID #49-55. For each approved Contingency Event related to Stage 2 of the McCook Reservoir, MWRD must implement green infrastructure that can retain 250,000 gallons of stormwater. (Doc. #61, ID #1557; Doc. #3-6, ID #137.) But that is an insignificant remedy that cannot compensate for delaying operation of a reservoir capable of holding 10 billion gallons of untreated sewage.

demand” for that stone. (*Id.* at ID #2577.) The contract also requires Vulcan to pay a 4% annual royalty to MWRD. (*Id.* at ID #2579-80.) Finally, the contract explicitly states that Vulcan is *not* required to remove or stockpile any rock if Vulcan is unable to sell the rock at a profit. (*Id.* at ID #2577.)

b. Contingency Event Provision Renders CD’s Completion Deadline Illusory.

Instead of requiring MWRD to have the reservoir built by a certain deadline, the CD incorporates MWRD’s arrangement with Vulcan – including the terms of the Vulcan agreement that make removal of rock subject to Vulcan’s profitability and the market for rock. Therefore, the CD allows the completion of the McCook Reservoir to be extended for an indeterminate length of time. If the completion of TARP’s reservoirs is delayed beyond the schedule specified in the CD, such a delay is called a “Contingency Event.” (Doc. 3-1 ¶ 20, ID #50.) If such Contingency Event meets certain criteria specified in the CD, MWRD is excused from complying with the reservoir completion deadlines set forth in the CD. (*Id.*) However, the criteria that MWRD is required to meet are so broadly defined and triggered so easily that the Contingency Event becomes a contingency that swallows the deadline.

To meet the definition of Contingency Event, any delay must be “caused entirely by an event or events beyond the control of MWRD.” (*Id.*, ¶ 20(e), ID #51.) However, the CD explicitly states that a “delay resulting solely from market conditions that precludes [Vulcan’s] sale in the ordinary course of commerce”...“of a quantity of mined rock sufficient to satisfy the schedule set forth in [the CD]” is an event beyond the control of MWRD. (*Id.*) Accordingly, like the Vulcan contract itself, the CD allows Vulcan’s business determinations about vague “market conditions” to determine when MWRD will ever complete TARP.

If a Contingency Event has occurred, any revised deadline for reservoir completion must provide for completion as “expeditious as possible.” (*Id.* ¶ 22(e), ID #52, ¶ 24, ID #53.)

However, the CD does not quantify any limits on the frequency or duration of such Contingency Events. Moreover, because the CD allows Vulcan, not MWRD, to control the rate of quarry excavation, the “expeditious as possible” language has no real force.

Although the Governments say that MWRD must meet “stringent requirements” to declare a Contingency Event (Doc. #61, ID #1556), under the terms of the CD, a Contingency Event can occur whenever Vulcan judges that “market conditions” are not adequate to allow Vulcan to sell the rock required to complete the McCook Reservoir, and there is no certain limit on how long Vulcan’s judgments about “market conditions” may delay completion. As the Governments have acknowledged, Vulcan is “a sophisticated mining operator with every incentive to maximize profits.” (*Id.*) Thus, by memorializing MWRD’s pre-existing Vulcan contract *in toto*, the CD makes Vulcan, a third party whose profit interests are not equivalent to the public’s interests, “integral” to completing 57% of TARP’s storage capacity. (*Id.* ID #1549.) In sum, the CD’s purported 2029 deadline is illusory, not certain, and unenforceable.

2. MWRD is unlikely to meet the CD’s 2029 deadline for completion of the McCook Reservoir.

Vulcan’s past performance and information about the market for rock in which Vulcan competes suggest that MWRD is unlikely to be able to complete excavation of McCook Reservoir by December 31, 2028 as provided in the CD. Vulcan began excavating the McCook Reservoir site in March 2008. (*Id.* ID #1530.) Through April 2012, it had removed approximately 19 million tons of rock. (Ex. 66, p. 1.) That equates to 380,000 tons per month on average during the same period (19 million tons divided by 50 months). According to an EPA estimate, approximately 116 million tons of rock will be required to be removed in total from the McCook Reservoir site. (*Id.*) Thus, as of April 2012, 97 million tons (116 million tons minus 19 million tons) remained to be excavated. If Vulcan continues to excavate rock at a rate

of 380,000 tons per month, excavation will take an additional 255 months (97 million tons divided by 380,000 tons per month) after April 2012. At this rate, Vulcan will not complete excavation of the McCook Reservoir until July 2033 (255 months after April 2012), or five years and 7 months after the CD's excavation completion deadline of December 2028.

The Governments' own admissions and other evidence about the market for rock also indicate that MWRD will be unable to meet the CD's deadline for completion of the McCook Reservoir. The Governments' consultant Dr. Subhash Bhagwat admitted that the "market of the past several years" is "depressed." (Doc. #61-2, ID #1710.) And Dr. Bhagwat testified that "demand for Aggregates is low due to the downturn in the construction industry." (*Id.*) At the same time, the Governments admit that "the speed of excavation [of McCook Reservoir is] governed by the general principals of the aggregates market" and that the overall market "demand for crushed stone is dictated by the needs of prospective buyers." (Doc. #61, ID #1554, 1555.) Because the Governments are correct that the pace of excavation depends entirely on the market, while at the same time, the Governments admit the market has been "depressed," the Governments' admissions alone are strong evidence that it is unlikely that the McCook Reservoir will be completed as the CD's schedule requires.

The history of TARP's past delays also shows that the current deadlines in the CD are unlikely to be met. TARP was originally scheduled to be completed in 1982. In a 1999 letter to the Illinois Environmental Protection Agency ("IEPA"), MWRD promised that Thornton Reservoir would be completed in 2013 and both stages of McCook would be completed by 2017. (Ex. 63, p. 3.) Since then, MWRD has pushed back the deadline for completion of McCook Reservoir five times. (Doc. #61-2, ID #1875.) Given that history of continued delays, this Court has no basis to presume that the 2029 deadline promoted by the Governments will be met.

3. *The public interest mandates consideration of alternative measures to speed up reservoir excavation.*

According to MWRD's 2011 TARP status report, completion of the McCook Reservoir "will provide \$90 million per year in benefits to 3.1 million people in 37 communities." (Ex. 8, p. 4.) Similarly, a 1999 report by the U.S. Army Corps of Engineers calculated that TARP would reduce annual costs incurred by the public as a result of MWRD's CSOs of \$188 million. (Ex. 64, pp. 5, 30.) That includes \$166 million in annual flood damages, \$20.9 million in annual ancillary damages, and \$1 million in annual costs incurred due to the closure of Lake Michigan beaches. (*Id.*) Despite the compelling need to complete TARP as expeditiously as possible, the Governments failed to analyze or implement local alternatives in the limestone market that could speed the rate of excavation of the McCook Reservoir, leading to faster completion – perhaps as fast or even faster than the deadline for completion set forth in the CD.

The Governments insist that there is no feasible way to increase the pace of Vulcan's removal of rock because, as discussed above, demand is driven only by end users and not producers. As Dr. Bhagwat testified, it is difficult to "impact" the "overall demand for Aggregates in the market." (Doc. #61-2, ID #1710.) But, as Dr. Bhagwat also admitted, "lowering the price...could possibly have an effect on the competitive advantage/disadvantage between Vulcan and any competitor in the market...." (*Id.*) Dr. Bhagwat is right – a reduction in the total price paid by customers purchasing rock in the market for rock from the McCook Reservoir would *increase* Vulcan's share of that market, and therefore would increase Vulcan's rate of removal of rock. Indeed, a 1997 study by the Economic Analysis Branch of the U.S. Army Corps of Engineers found that Vulcan is only one of many players in the market. Specifically, the 1997 study determined that Vulcan competes for market share in a regional market including 26 other quarries. (Ex. 65, p. 3.) In addition, the United States did not deny

that “[a] reduction in the price of McCook Material would increase Vulcan’s share of the market in which Vulcan competes to sell McCook Material” – instead, among other things, the United States stated that it “does not have sufficient knowledge” to know whether Vulcan’s share would increase if the price of Vulcan’s rock were lowered. (Ex. 50, pp. 4-6.)

There are numerous potential means by which MWRD could reduce the total price paid by purchasers of McCook Reservoir rock, such as subsidizing transportation costs or eliminating royalty payments. There may also be additional ways that Vulcan can increase the rate of excavation of the McCook Reservoir.

There is no indication in the record that the Governments evaluated the feasibility, costs, and benefits of measures to reduce the total price paid by local purchasers of limestone who would just as soon buy it from Vulcan, if the price were lower, than from any of the other local quarries. The Governments’ failure to evaluate approaches to reducing the price paid by purchasers of McCook Reservoir rock in order to increase Vulcan’s share of the local market in which Vulcan competes is inexcusable in light of the on-going harm to the area’s waterways and the \$90 million annual flood damages that the citizens of Chicago suffer as a consequence of MWRD’s delays.

B. The CD’s Measure for Addressing CSOs That Occur Before and After TARP’s Completion – the Floatables Control Plan – is Inadequate.

The CD contains only one measure to address the pollution caused by CSOs occurring both before and after TARP is completed. (Doc. #3-1 ¶ 18, ID #49.) That one measure is the “Floatables Control Plan” at Appendix B to the CD (“App. B”). (Doc. #3-3, ID #123-26.) However, for the many reasons discussed below, App. B is inadequate to remedy the violations alleged in the Complaint.

First, App. B is inadequate because, like MWRD's current approach to floatables in the CAWS, it only requires MWRD to use two boats in an attempt to pick up MWRD's pollution after it is already discharged. MWRD's current floatables control is obviously inadequate as shown by the Governments' Complaint, which alleges that MWRD's CSOs violate the WQS that prohibit floating debris, solids, sludge, and other offensive conditions. (Doc. #1, ¶¶ 54-59, ID #14-15.) Like MWRD's current program, App. B requires MWRD to use two boats (when they are not out of commission for maintenance),¹⁷ unless it is "unsafe or infeasible" to pick up floatables from the waterways. (Doc. #3-3, ID #123.) Although the two boats are to be deployed year round, and not just from mid-April to mid-October as currently occurs, App. B excuses the boats from operation when there is fog, ice, potential for equipment icing, wind, or limited visibility. (*Id.*) Given that MWRD's existing boat operation is inadequate to address the violations of the CWA caused by CSO discharges today, the CD is clearly flawed when it essentially legitimizes this undersized approach.

Second, the boat patrol's work area is inadequate in its scope. App. B requires that, in "response to rain events that result in CSO events," MWRD is to engage in "Special Operations" that deploy its boats to "hot spots" within "five work zones." (Doc. #3-3, ID #123-24.) The five work zones listed in App. B are a markedly more limited expanse than the 23 segments of the CAWS that MWRD lists on its website as locations to which CSOs may be discharged. (*See* Ex. 32.) For example, the five zones in App. B do not include the Des Plaines River, the Grand Calumet River, Addison Creek, or Salt Creek. (Doc. #3-3, ID #123-24.) App. B also does not

¹⁷ A study relied upon by EPA of various floatables controls notes that although Washington D.C.'s deployment in 1998 of two skimmer boats for approximately ten miles of shoreline had been very successful, the vessels had "required a great deal of mechanical maintenance." (Ex. 31, pp. 6-7.) It also is noteworthy that in 1998, Washington used two boats for its ten-mile shoreline (*id.*), which is 13% the length of MWRD's 76 miles of waterways.

explain how MWRD's two boats are to handle a CSO event when there are discharges to more than two zones. For example, MWRD reported CSO discharges occurring over a three day period June 26-28, 2013, in 12 of the 23 segments of the CAWS. (Ex. 32.) Those discharges occurred within at least 4 of the work zones described in App. B. (See Ex. 32; Doc. #3-3, ID #123-24.) In 2013 alone there have been approximately 23 CSO days where discharges occurred in more than two work zones.¹⁸ Thus, there is no assurance that App. B, in fact, requires that MWRD employ an effective response to the debris caused by CSO discharges occurring throughout the CAWS. Moreover, none of the five zones include Lake Michigan, which MWRD will not be required to address at all, regardless of the quantity of raw sewage which the Lake must absorb after a gate or lock reversal.

The overall inadequacy of App. B is further demonstrated by the Governments' only purported "study" of how to address the CSO floatables problem. That study, produced by the Governments in discovery in this matter, consists of photographs and observations of floatables on a relatively small segment of the CAWS between September 2008 and September 2009. (Ex. 33.) The Governments' photographs graphically demonstrate the foul mess that MWRD discharges into our waterways. However, the Governments' analysis of what is necessary to address the problem is less than thorough, and includes faulty assumption about the hours needed for a skimmer boat to patrol the CAWS to pick up floatables. For example, the analysis assumes that a skimmer boat can pick up all floatable debris after a storm after making only two passes on an expanse of the CAWS, which is questionable given the width of the Chicago River. In addition, the plan does not allow for any time for the boats to unload debris, clean nets, or

¹⁸ See MWRD's CSO Event Synopsis Reports for 2013, available at <http://www.mwrld.org/irj/portal/anonymous?NavigationTarget=navurl://a5611bcef89c3cc2abca008c0ea969df>. (last visited Sept. 5, 2013.)

undergo the maintenance that will be required. Even based on those flawed premises, the Governments concluded that MWRD “needs at least *THREE* trash collection skimmer vessels to fully address an overflow event.” (Ex. 33, p. 12.) Yet App. B requires that MWRD only use *two* skimmer boats, not three, which even EPA states is the minimum required.¹⁹

Third, App. B is vague and unenforceable in many respects. For example, it is not clear whether MWRD is being required to deploy additional or new boats. App. B states at one point that “MWRD may substitute skimmer boat for pontoon boats.” (Doc. #3-3, ID #123.) Elsewhere, App. B provides that MWRD “shall” operate its current debris boat (which only removes large objects, not CSO floatables)²⁰, two new “skimmer boats,” and one pontoon boat, but then states that MWRD can continue “using its existing pontoon boats until they are replaced by [2 skimmer boats].” (*Id.* at ID #125-126.) Further on, App. B says that “MWRD shall procure” two skimmer boats within 12 months of the effective date of the CD. (*Id.*, ID #126.) Thus, it is entirely unclear whether MWRD is required to deploy two, three, five or some other number of boats in response to CSO events.

Fourth, App. B fails to have enforceable performance criteria. Even if MWRD is required to purchase two new boats, there are insufficient performance criteria for the new boats’ specifications or operation. In App. B, the skimmer boats are generally described, without any criteria for: (1) their size; (2) their capacity to remove debris by volume or weight; (3) their

¹⁹ In the Governments’ Memorandum, they state that MWRD’s boats will be supplemented by the City of Chicago’s skimmer boat (Doc. #61, ID #1541), but nothing in the CD refers to the City’s boat or any required operation of that boat. If the City’s boat is to be counted as the Governments’ third boat, then App. B is further confusing because it requires that MWRD’s two boats immediately deploy to “hot zones” that overlap the City’s jurisdiction. Thus, MWRD’s boats would duplicate the City’s work, not expand it.

²⁰ MWRD’s CSO Operational and Maintenance Plan states that its 33-foot “pusher boat” (“DB1”) removes large debris such as trees, logs, portions of seawalls, and dock sections from the CAWS. (Ex. 12, p. 11.) “This vessel is not used for small-type debris cleanup, due to its lack of maneuverability.” (*Id.*)

speed of travel, either during debris pickup or when traveling to an area for debris pick-up; (4) how often the boat needs to stop operations in order to off-load collected debris; (5) the width of the area the boat must cover on any one pass through a waterway; or (6) any other technical specification measuring its effectiveness in responding to CSO debris. (*See id.* at ID #123-26.) App. B also does not specify any performance targets for debris removal, either by speed of debris recovery, percentage of debris recovery, volume of debris recovery, or any other performance metric. (*See id.*) Thus, there is no requirement that MWRD's debris removal be any more effective than its current operations, which according to the Governments' Complaint, fail to remedy ongoing violations of the "offensive conditions" WQS. (Doc. #1 ¶¶ 54-59, ID #14-15.)

As part of its Floatables Control Plan, the Governments also require that MWRD install a "containment boom downstream of Outfall #150 (Westchester Pump Station)" in order to "further control floatables along Addison Creek." (Doc. #3-3, ID #126; Doc. #61, ID #1533.)²¹ Containment booms that prevent CSO debris from floating further into the water are a common floatables control, but they must be cleaned after storm events, particularly because they "potentially create unsightly conditions near the outfalls" and storms may dislodge them. (Ex. 31, p. 4.) While an additional measure to address floatables is a positive step, this aspect of App. B too is vague, unenforceable, and potentially illusory. App. B does not provide any date by which MWRD must install the containment boom, or specify where it will be installed, how it will operate, or other design specifications. Moreover, MWRD's requirement to install the boom is subject to MWRD's ability to obtain permission from unnamed "regulatory authorities" and

²¹ Westchester Pumping Station historically has been among the smallest sources of CSO discharges from pumping stations. Since MWRD began reporting statistics, Westchester has discharged less than 0.1% of all reported pumping station CSO discharges. (*See Ex. 6A, p 4.*)

“local agencies.” (Doc. #3-3, ID #126.) There is no date by which MWRD is required to begin the process of applying for such permissions or any back-up plan if such permissions are not obtained. Given the 4-1/2 year CD negotiation process, there is no explanation as to whether there has been any outreach to the unnamed “regulatory authorities” and “local agencies,” including attempts to address any of those entities’ concerns. Notably, Addison Creek is not within any of the five zones to which MWRD’s boats are to be deployed, so if the containment boom cannot be installed, no alternative floatables control is required. (*Id.* at pp. 124-25.)

Finally, even if boats with more capacity were required to be effectively deployed throughout the CAWS and Lake Michigan – which the CD currently does not require – only a portion of the pollution caused by CSO discharges would be addressed – namely “floatables.” However, the violations in the Complaint involve pollution of a much broader scope than just offensive items that float. CSO discharges contain, and the water quality standards at issue prohibit, solids that sink – feces, sludges, oils and other oxygen-depriving materials – offensive materials that boats skimming the surface simply cannot address. (Ex. 15, p. 29; Doc. #1 ¶ 46, ID #12.) Thus, App. B will not remedy many violations of the “offensive conditions” WQS which the Complaint alleges. (Doc. #1 ¶¶ 54-59, ID #14-15.) Moreover, because boats are a reactive, after-the-discharge measure, rather than a measure that prevents the pollution from entering the waterways at all, CSO discharges, violations can still occur for short period of times even if all floatables might eventually be removed.

The Governments proclaim that their floatables control plan “exemplifies the [CD’s] substantive fairness.” (Doc. #61, ID #1541.) However, as shown above, the plan is vague, unenforceable, internally contradictory, and wholly inadequate. Moreover, because App. B is the only CD compliance requirement to address the pollution caused by the CSO discharges that

will be occurring before and after TARP's completion (Doc. #3 ¶ 18, ID #49), App. B instead exemplifies yet another reason why the CD is legally inadequate and will not result in compliance with the CWA.

C. The CD is Inadequate Because It Fails to Include Effective Measures to Control CSO Pollution.

Given that: (1) MWRD's CSO discharges will continue before TARP is completed; (2) TARP itself will not be completed for at least 16 years and likely longer due to the Vulcan "Contingency Event" exception; and (3) MWRD's CSO discharges will continue to occur *after* TARP is completed, the CD can only meet legal standards for entry if it ends the violations caused by MWRD's CSO pollution that will be occurring before and after TARP is completed. Because the CD fails to do so, the Court should reject the CD.

Indeed, solutions to control MWRD's CSO pollution exist and are known to the Governments and MWRD. For instance, MWRD could treat some CSO flow at the "end-of-pipe" – that is, treatment at a CSO discharge outfall pipe itself – so that solids and floatables are removed *before* flow is released into the environment. As discussed above, MWRD's own studies have described additional effective measures to limit CSOs – specifically, MWRD identified ways that TARP's infrastructure could be improved to limit the occurrence of Transient Events. (*See* Section II.B.3, above.) Other potential measures could limit inflow into MWRD's sewer system, and therefore TARP, in the first place, a problem long-recognized by the Governments. (*See* Section II.A.4, above.)

Instead of including such proven remedies in the CD on even a pilot study basis, the CD, as well as the Governments' Motion to Enter, ignore the measures entirely or fail to adequately address their feasibility, costs, and benefits.

The Governments' declarant, Valdis Aistars, an Environmental Engineer in EPA's CWA Compliance Assurance and Enforcement Branch, described additional measures, including booms and nets, for preventing floatables and solids from entering the waterways. (Doc. #61-2 ¶ 16, ID #1750.) Mr. Aistars also described but rejected other end-of-pipe technologies, through which CSOs can be treated to a significant extent before they are discharged. (*Id.*) Mr. Aistars rejected all of those methods, however, saying that they are long-term approaches, not short-term fixes. (*Id.*) And Mr. Aistars stated that there is a "lack of a centralized point of collection of the various [MWRD] CSO flows considerably reduces the cost-effectiveness and feasibility" of end-of-pipe technologies. (*Id.*)

The Governments' position regarding the feasibility of end-of-pipe controls is not supported by reasoned analysis. Given that CSO discharges will continue before and after TARP is completed, the fact that an effective technology is considered a long-term fix is not a basis for rejecting it. Instead, that is *precisely* the reason to start deploying the technology now. Furthermore, Mr. Aistars does not cite to any studies or analyses supporting his conclusions dismissing the cost-effectiveness and feasibility of treating any of MWRD's CSOs on an end-of-pipe basis. Mr. Valdis apparently is concluding that, because all of MWRD's CSOs do not come out of one or two central outfalls, *no* efforts should be made to address even a subset of MWRD's 372 CSO outfalls. However, given the size of MWRD's system, targeting even a small number of very large MWRD outfalls for end-of-pipe treatment could provide cost-effective and feasible "centralized points." The Governments also do not explain why they did not require MWRD to install one of those proven methods on even one of MWRD's CSO outfalls, even on a pilot basis. The CD instead promotes an inadequate, reactive approach,

involving two boats chasing debris *after* a storm, rather than requiring MWRD to develop and install technologies to remove pollution from CSO discharges before it hits our waterways.

Although the Governments apparently have not conducted any studies of end-of-pipe technologies for MWRD's system, MWRD has conducted limited studies of alternative treatment technologies to prevent CSO pollution in some segments of the CAWS. Each of those studies includes questionable assumptions and conclusions. Nonetheless, each study also recognizes that end-of-pipe controls or other technologies in addition to MWRD's two boats should be considered. For two of the studies, one completed in 2008 and one in 2009, MWRD's consultants recommended implementation of additional technologies but Alliance Group is not aware of any record showing why the recommendations were not pursued, even in pilot projects. (Ex. 48, pp. 1-7; Ex. 49, pp. 1-5.) A third study, completed in 2006 by CTE, an MWRD consultant, studied end-of-pipe technologies for an area in Chicago encompassing 170 CSO outfalls into the Chicago River and the North Shore Channel. (Ex. 35, pp. 6-7.) For reasons that are not explained, MWRD directed CTE *not* to include in its study the CSO outfalls from the area's two pump stations, which discharge 93% of the volume discharged from all of the MWRD pump stations. (Ex. 35, p. 19; Ex. 6A, p. 4.) CTE recommended five different treatment technologies and determined that out of the 170 CSO outfall sites, 105 locations had available land to locate treatment plants. (Ex. 35, p. 42.) Although CTE concluded that end-of-pipe treatments *alone* at all 105 locations would not be sufficient to bring MWRD into compliance with CWA presumptive thresholds for all 170 locations, CTE did *not* evaluate if end-of-pipe treatment, when combined with completion of TARP's reservoirs, could bring MWRD into compliance with the CWA. (*Id.*, pp. 48-49.)

MWRD sent its 2006 CTE study to IEPA and informed the State that because the “CSO treatment would be costly, require land rights at each outfall, and be time consuming for design and construction” and because the treatment “would not provide any significant water quality benefit prior to the McCook and Thornton Reservoirs coming on line,” MWRD would not pursue this alternative technology further. (*Id.*, p. 65.) MWRD’s conclusion is faulty because, like CTE, MWRD dismisses end-of-pipe controls by saying that since all outfalls cannot be addressed by end-of-pipe technologies alone, none should be addressed. Moreover, MWRD’s unsupported conclusion about the lack of significant water quality benefit from end-of-pipe treatment is contradicted by CTE’s evaluation that all of the technologies recommended are effective at treating CSO discharges. (*Id.*, pp. 19-20.)

In 2006, MWRD rejected end-of-pipe technology but at the same time also stated that it expected TARP’s completion by 2012. (Ex. 35, p. 67.) Even then, in the same document, MWRD admitted: “*It is likely that even with the reservoirs online, there will be occasional CSOs.* The degree to which this occurs cannot be estimated until [MWRD] completes the development of TARP modeling currently underway by the University of Illinois....” (*Id.*, p. 67 (emphasis added).) If MWRD had started in 2006 implementing the effective CSO treatment then identified by its consultant, many of its CSO outfalls could be receiving treatment today. Now, it is seven years later, the University of Illinois studies are still ongoing, and CSOs have continued, including the two largest single Lake reversals since MWRD began reporting, which occurred in 2008 and 2013. (Ex. 5; Ex. 28.) Compliance with the CWA can no longer be delayed – particularly under the protection of this Court’s order. MWRD’s past rejection of CSO treatment cannot be accepted by the Governments or by this Court.

The Governments' failure to require treatment now for CSO discharges that all parties admit will continue post-TARP is inconsistent with the Congressionally-mandated CSO Control Policy. That Policy requires that an LTCP "ultimately result in compliance with the requirements of the CWA." (Ex. 20, II.C., p. 5); 33 U.S.C. § 1342(q). That principle is reiterated in EPA guidance, which states that "the ultimate goal of the LTCP is '*compliance with the requirements of the CWA.*'" (Ex. 22, p. 5 (*citing CSO Control Policy.*) The CSO policy makes clear that a LTCP is not meant to be a shield that cannot be amended or improved upon, especially if it is apparent that an LTCP is insufficient to achieve the "ultimate goal" of compliance with WQS. To the contrary, the CSO Control Policy expressly provides that when an LTCP referenced in a permit, like MWRD's TARP, is determined not to meet WQS, the "permittee should be required to develop, submit and implement, as soon as practicable, a revised CSO control plan which contains additional controls to meet WQS...." (Ex. 20, IV.B.2.g., p. 10.)

The CSO Policy therefore requires MWRD to take action *now* that is capable of bringing MWRD into compliance with the CWA. The CD proposed here falls far short. Moreover, not only will the remedial program specified in the CD be insufficient to end MWRD's violations, there is nothing in the CD that requires MWRD stop those violations once TARP is complete. The CD only requires that MWRD to start monitoring for violations that will undoubtedly occur following construction of TARP. (*See NRDC Resp. Br. § V.B.*) Even if continued violations are *proven* after TARP's construction, the CD *still* does not require MWRD to do anything to stop the violations. (*Id.*) Rather, MWRD only has to publish yet a "plan" to address MWRD's violations – but the CD contains no requirement that MWRD do anything to implement that plan. (*Id.*)

Alliance Group is not suggesting that it or this Court can engineer a remedy for MWRD's violations of the CWA. However, it is appropriate that this Court, like Judge Adams in *Akron*, reject a decree that does not include remedies that will achieve compliance with the CWA. As the Court in *Akron* found, the CD presented to this Court will not achieve compliance with the law – it merely allows the CSO discharges to continue, without effective remedies. 974 F. Supp. 2d at 808. And as in *Akron*, this Court should not “rubber stamp” a CD that cannot “provide full, complete, and certain relief to the public.” *Id.*

CONCLUSION

In sum, the CD's inadequacy is due to one overriding problem – the CD will not stop MWRD's CSO discharges that cause or contribute to illegal pollution. That problem is due to three fundamental inadequacies: (1) TARP, as currently designed and constructed, will not operate without continuing CSO discharges occurring; (2) even though it is a partial remedy, TARP will not be completed within an adequate timeframe; and (3) given the CSO discharges that will continue to occur before and after TARP is completed, the CD fails to require adequate measures to control MWRD's CSO pollution so that MWRD's CWA violations stop.

Unfortunately, the Governments have asked this Court to put its name on a judicial decree that will guarantee that the CAWS and Lake Michigan will continue to be a raw sewage dump for MWRD's discharges for decades to come. The CD is not “going to work” to solve the CWA violations. Therefore, because the CD is not reasonable, adequate, consistent with the law, and protective of the public interest, Alliance Group respectfully urges the Court to deny the Governments' motion for entry of the CD.

Dated: September 5, 2013

Respectfully submitted,

ALLIANCE FOR THE GREAT LAKES

By: /s/ Gabrielle Sigel
One of its attorneys

Gabrielle Sigel, Ill. Bar No. 6186108
Stephen H. Armstrong, Ill. Bar No. 6181941
Anthony B. Borich, Ill. Bar No. 6299137
JENNER & BLOCK LLP
353 North Clark Street
Chicago, Illinois 60654
Telephone: (312) 923-2758

Lyman C. Welch, Ill. Bar No. 6217339
Water Quality Program Director
Alliance for the Great Lakes
17 North State Street, Suite 1390
Chicago, Illinois 60602
Telephone: (312) 445-9739

ENVIRONMENTAL LAW AND POLICY CENTER

By: /s/ Jessica Dexter
One of its attorneys

Jessica Dexter, Ill. Bar No. 6298340
Environmental Law & Policy Center
35 East Wacker Drive, Suite 1600
Chicago, Illinois 60601
Telephone: (312) 795-3747

CERTIFICATE OF SERVICE

I, Gabrielle Sigel, an attorney, hereby certify that on September 5, 2013, a copy of **ALLIANCE GROUP'S RESPONSE IN OPPOSITION TO ENTRY OF CONSENT DECREE** was served upon the parties on the attached Service List, by the Court's CM/ECF system, in accordance with the Administrative Procedures for the Case Management/Electronic Case Filing System for the Northern District of Illinois, and/or by other service as indicated.

ALLIANCE FOR THE GREAT LAKES

By: /s/ Gabrielle Sigel

SERVICE LIST

FOR THE UNITED STATES:

CATHERINE BANERJEE ROJKO
Senior Attorney
U.S. Department of Justice
Environmental & Natural Resources Division
Environmental Enforcement Section
P.O. Box 7611
Washington, D.C. 20044
Tel: (202) 514-5315
Email: cathy.rojko@usdoj.gov
Electronic Service Via ECF

SUMONA N. MAJUMDAR
Trial Attorney
U.S. Department of Justice
Environmental & Natural Resources Division
Environmental Enforcement Section
301 Howard Street, Ste 1050
San Francisco, CA 94105
Tel: (415) 744-6473
Email: sumona.majumdar@usdoj.gov
Electronic Service Via ECF

STEVEN D. ELLIS
United States Department of Justice
601 D. Street, N.W.
Washington, D.C. 20004
Tel: (202) 514-3163
Email: steven.ellis@usdoj.gov
Electronic Service Via ECF

KURT N. LINDLAND
Assistant United States Attorney
United States Attorney's Office (NDIL)
219 S. Dearborn St., Ste 500
Chicago, IL 60604
Tel: (312) 353-5300
Email: kurt.lindland@usdoj.gov
Electronic Service Via ECF

DEBORAH A. CARLSON
Office of Regional Counsel
U.S. Environmental Protection Agency
Region 5 (C-14J)
77 W. Jackson Blvd.
Chicago, IL 60604
Email: Carlson.deboraha@epa.gov
Electronic Service Via Email

SUSHILA NANDA
Senior Attorney Advisor
U.S. Environmental Protection Agency
OECA-OCE-WED
Ariel Rios Building, Room 4111C
12th Street and Pennsylvania Avenue, N.W.
Mail Code 2243A
Washington, D.C. 20004
Email: nanda.sushila@epa.gov
Electronic Service Via Email

FOR THE STATE OF ILLINOIS:

PEOPLE OF THE STATE OF ILLINOIS,
ex rel. LISA MADIGAN, Attorney General of the State of Illinois

THOMAS HUGHLIN SHEPHERD
Environmental Bureau
Illinois Attorney General's Office
69 W. Washington St., Ste 1800
Chicago, IL 60602
Tel: (312) 814-0660
Email: tshepherd@atg.state.il.us
Electronic Service Via ECF

ELIZABETH WALLACE
Environmental Bureau
Illinois Attorney General's Office
69 W. Washington St., Ste 1800
Chicago, IL 60602
Tel: (312) 814-5396
Email: ewallace@atg.state.il.us
Electronic Service Via ECF

FOR THE METROPOLITAN WATER RECLAMATION DISTRICT OF GREATER CHICAGO:

BENJAMIN F. WILSON
Beveridge & Diamond Pc
1350 I Street, NW Suite 700
Washington, DC 20005
Tel: (202) 789-6023
Email: bwilson@bdlaw.com
Electronic Service Via ECF

RONALD MICHAEL HILL
Metropolitan Water Reclamation District of
Greater Chicago
100 E. Erie, Ste 301
Chicago, IL 60611
Tel: (312) 751-6583
Email: ronald.hill@mwrdr.org
Electronic Service Via ECF

BRENDAN GEORGE O'CONNOR
Metropolitan Water Reclamation District of
Greater Chicago
100 E. Erie, Ste 301
Chicago, IL 60611
Tel: (312) 751-6581
Email: brendan.oconnor@mwrdr.org
Electronic Service Via ECF

RICHARD S. DAVIS
Beveridge & Diamond Pc
1350 I Street, Nw Suite 700
Washington, DC 20005
Tel: (202) 789-6025
Email: rdavis@bdlaw.com
Electronic Service Via ECF

FOR THE NATURAL RESOURCES DEFENSE COUNCIL:

MICHAEL COLIN McCUTCHEON
Baker & McKenzie LLP (Chicago)
300 E. Randolph St., Ste 5000
Chicago, IL 60601-6342
Tel: (312) 861-8000
Email: michael.mccutcheon@bakermckenzie.com
Electronic Service Via ECF

DOUGLAS BENNETT SANDERS
Baker & McKenzie LLP (Chicago)
300 E. Randolph St., Ste 5000
Chicago, IL 60601-6342
Tel: (312) 861-8000
Email: douglas.sanders@bakermckenzie.com
Electronic Service Via ECF

DAVID P. HACKETT
Baker & McKenzie LLP
130 E. Randolph St., Ste 3500
Chicago, IL 60601
Tel: (312) 861-6640
Email: david.hackett@bakermckenzie.com
Electronic Service Via Email

ANN ALEXANDER
Senior Attorney, Midwest Program
Natural Resource Defense Council
20 North Wacker Drive, Ste 1600
Chicago, IL 60606
Tel: (312) 651-7905
Email: Aalexander@nrdc.org
Electronic Service Via ECF

FOR THE PRAIRIE RIVERS NETWORK AND SIERRA CLUB:

ALBERT ETTINGER
53 W. Jackson, Ste 1664
Chicago, IL 60604
Tel: (773) 818-4825
Email: ettinger.albert@gmail.com
Electronic Service Via ECF