IN THE SUPREME COURT OF THE UNITED STATES

Nos. 1, 2 and 3, Original

STATE OF WISCONSIN, ET AL., PLAINTIFFS

v.

STATE OF ILLINOIS AND METROPOLITAN SANITARY DISTRICT OF GREATER CHICAGO, ET AL.

STATE OF MICHIGAN, PLAINTIFF

v.

STATE OF ILLINOIS AND METROPOLITAN SANITARY DISTRICT OF GREATER CHICAGO, ET AL.

STATE OF NEW YORK, PLAINTIFF

v.

STATE OF ILLINOIS AND METROPOLITAN SANITARY DISTRICT OF GREATER CHICAGO, ET AL.

ON MOTION FOR PRELIMINARY INJUNCTION

MEMORANDUM FOR THE UNITED STATES IN OPPOSITION

The Solicitor General, on behalf of the United States of America, respectfully submits this memorandum in opposition to the motion for preliminary injunction submitted by the State of Michigan.

STATEMENT

1. Overview of the Canal System. This litigation involves the Chicago Area Waterway System, a system of canals and natural

waterways that serves as both a navigation link between Lake Michigan and the Mississippi River system and an outlet for the storm water and effluent of the City of Chicago. The canal system extends between Lake Michigan and the Des Plaines River, a tributary of the Illinois River and ultimately of the Mississippi River. The canal system was originally constructed to permit Chicago to dilute and dispose of its wastewater without allowing it to enter Lake Michigan. Using the canal system, Illinois redirected the Chicago River, which naturally flowed east into Lake Michigan, to flow west, carried by the canal system into the Des Plaines. The Chicago River Controlling Works were constructed at the confluence of the Chicago River and Lake Michigan. The permanent connection between the Lake Michigan and the Mississippi drainage basins was finalized with the completion of the Chicago Sanitary and Ship Canal in 1900. See Missouri v. Illinois, 200 U.S. 496 (1906). Subsequent construction included the dredging and reversal of the Calumet River, the erection of the Thomas J. O'Brien Lock and Dam on that river, and the construction of the Cal-Sag Channel linking the Calumet with the main canal. See Mot. for Prelim. Inj. Attach. 1-2 (maps).

By statute, the U.S. Army Corps of Engineers operates and maintains the Chicago Sanitary and Ship Canal as necessary to sustain navigation from Chicago Harbor on Lake Michigan to Lockport on the Des Plaines River. See, e.g., Energy and Water Development

Appropriation Act, 1982, Pub. L. No. 97-88, § 107, 95 Stat. 1137 (1981); Supplemental Appropriations Act, 1983, Pub. L. No. 98-63, Tit. I, Ch. IV, 97 Stat. 311. Vessels enter and exit the Chicago end of the canal system through the O'Brien Lock and through lock facilities at the Chicago River Controlling Works (the Chicago Lock). Mich. App. 77a. The Corps owns both locks and operates them in accordance with applicable regulations and memoranda of understanding with the Metropolitan Water Reclamation District of Greater Chicago (Water District). See App. 99a.[1]

Both the Chicago River Controlling Works and the O'Brien Lock are used for flood control purposes, pursuant to agreements between the Corps and the Water District. Both facilities include sluice gates connected to the locks, which are used to combat the risk of flooding during significant rainstorms by drawing water from the canal system into Lake Michigan. App. 92a, 96a-97a, 99a-100a. The Corps owns the sluice gates at the O'Brien Lock and operates them under the direction of the Water District. App. 68a, 92a, 96a. The Water District owns and operates the sluice gates at the Chicago River Controlling Works. App. 68a. The Water District also owns and operates the Wilmette Pumping Station on the North Shore Channel, which includes pumps and a sluice gate; the Corps

[1] "App." refers to the appendix submitted with this memorandum.

has no involvement in the operation of the Wilmette Pumping Station. App. 64a; Mich. App. 89a-90a.

In very severe rainstorms, in addition to opening the sluice gates, the Water District requests that the Corps open the Chicago and O'Brien lock gates as well, to permit additional water to be diverted into Lake Michigan. Both locks were last opened for this flood control purpose in September 2008. App. 93a, 96a, 100a.

Most commercial boat traffic between Lake Michigan and the canal system now passes through the O'Brien Lock, including barge traffic recently rerouted from the Chicago Lock. About 7 million tons of cargo pass through the O'Brien Lock each year, as do more than 18,000 recreational boats, many of which are docked on the Calumet River and reach Lake Michigan through the lock. App. 72a, 91a. Additional cargo, ferry, and pleasure boats use the Chicago Lock. App. 72a-74a. The locks are also used by the Coast Guard stations on the Lake Michigan side of the locks in responding to safety emergencies on the canal and in patrolling critical infrastructure facilities in the river system. App. 146a-147a.

The waterway system also includes the Grand Calumet and Little Calumet Rivers, which cross the Illinois-Indiana border. Each of them provides access to Lake Michigan at points in Indiana. App. 89a; Mich. App. 78a-79a.

2. Federal and State Efforts to Combat the Asian Carp. The Corps, other federal agencies, and their Illinois counterparts have

been aware for some time of the possibility that bighead and silver carp (Asian carp), see App. 144a-146a, could travel through the Illinois Waterway (the eastern end of which is the Chicago Area Waterway System) into the Great Lakes. App. 7a, 156a. Congress has given federal agencies a number of tools to combat the threat of carp migration into the area. The electric fish barriers keeping fish from entering the Chicago Sanitary and Ship Canal (see pp. 6-9, infra) were constructed and are being upgraded at Congress's specific direction. And significantly, in Section 126 of this year's appropriations legislation, Congress has granted the Secretary of the Army temporary emergency authority to undertake "such modifications or emergency measures as [he] determines to be appropriate, to prevent aquatic nuisance species from bypassing the [dispersal barrier] and to prevent aquatic nuisance species from dispersing into the Great Lakes." Energy and Water Development and Related Agencies Appropriations Act, 2010, Pub. L. No. 111-85, § 126, 123 Stat. 2853 (2009). The Secretary has delegated that authority to the Assistant Secretary of the Army (Civil Works), who has already taken some steps pursuant to that authority and is in the process of considering others. App. 2a-3a; see p. 16, infra.

The Corps, the United States Fish and Wildlife Service, the United States Environmental Protection Agency (EPA), and the United States Coast Guard, together with state and Water District officials and officials from entities such as the International

Joint Commission and the Great Lakes Commission, have formed an Asian Carp Rapid Response Working Group. App. 23a, 137a-138a, 154a-155a. The group is part of an overall interagency effort to protect the Great Lakes. See Exec. Order No. 13,340, 3 C.F.R. 175 (2005). The group has developed a Rapid Response Plan to address the threat posed by Asian carp expansion toward the Great Lakes, and has established an Executive Committee to help facilitate integration of the efforts of the participating agencies. App. 23a, 155a-156a. The Rapid Response Group and Executive Committee's member agencies have taken and are currently undertaking numerous preventive steps consistent with each member's statutory and regulatory authority.

i. The Three Electric Dispersal Barriers. Congress has recognized the threat posed by invasive aquatic species for many years, leading to its enactment of the Nonindigenous Aquatic Nuisance Prevention and Control Act of 1990 (Aquatic Nuisance Prevention Act), 16 U.S.C. 4701 et seq., and the National Invasive Species Act of 1996, 16 U.S.C. 4713 et seq. Congress gave particular attention to the Chicago Ship and Sanitary Canal as a potential conduit for invasive species. In 1996, it directed the Corps to study preventive measures to keep invasive species out of the canal and authorized construction of the first electric dispersal barrier. 16 U.S.C. 4722(i)(3). Since that time the Corps has constructed an initial demonstration barrier and a

second, even more capable barrier, and is constructing a third on an expedited basis. App. 10a-11a, 13a, 47a-48a, 50a. The barriers are located at the southwestern end of the canal, a short distance above the Lockport Lock. See App. 39a (graphic). The Corps operates these dispersal barriers in consultation with the Coast Guard. App. 49a, 56a, 141a, 149a-151a.

An electric dispersal barrier operates by creating an electrical field in the water of the canal, which either stuns fish or creates sufficient discomfort to deter them from attempting to pass through the area. The field is created by running direct electrical current through steel cables secured to the bottom of the canal. App. 48a, 51a, 105a; Mich. App. 30a. The use of electrical current in the canal creates safety concerns -- including potentially lethal consequences to anyone who falls in the water in the electrified zone. App. 52a-53a, 108a, 141a, 149a-150a. For that reason, changing the parameters at which the dispersal barrier operates has required the Coast Guard to halt all vessel traffic through the canal while it evaluates the necessary safety precautions. App. 141a, 149a-150a.

The first electric dispersal barrier (Barrier I) was authorized by Congress in 1996 and became operational in 2002. App. 47a-48a; Aquatic Nuisance Prevention Act § 1202(i)(3)(C), 16 U.S.C. 4722(i)(3)(C). Testing using tagged common carp showed that the barrier was effective in deterring fish from crossing the barrier

in the upstream direction (i.e., toward Lake Michigan). The one tagged common carp that crossed the barrier toward Lake Michigan appears not to have survived the passage through the electrical field. App. 61a.

Deterring some smaller or juvenile fish, however, may require voltages above Barrier I's capability. App. 54a, 106a; see App. 48a. Accordingly, the Corps and Congress authorized a second barrier (Barrier IIA), which has greater capabilities. The Corps initially approved the Barrier IIA project in 2003 under its continuing authorities program, and Congress then specifically authorized the project. App. 50a; District of Columbia Appropriations Act, 2005 (2005 Act), Pub. L. No. 108-335, § 345, 118 Stat. 1352; see Water Resources Development Act of 1986, Pub. L. No. 99-662, § 1135, 100 Stat. 4251; Mich. App. 30a. Barrier IIA was operational by March 2006, and after trials and extensive safety testing to address potential risks to human life and to vessels in navigation, has been in full-time operation since April 2009. App. 51a-53a. After monitoring showed that Asian carp might have advanced up the waterway toward the barrier farther than previously expected, in August 2009 the Corps increased the voltage and modified the other operating parameters of Barrier IIA. App. 12a, 53a-54a, 107a.

Further evaluation (which is ongoing) has shown the current settings of Barrier IIA to be effective in stunning or deterring

silver or bighead carp that approached the electrical field. App. 53a-54a, 107a. Barrier IIA's operating parameters can be varied in three different respects -- voltage, frequency, and pulse rate -- and preliminary testing indicates that simply maximizing the voltage is not as effective a use of the barrier as a coordinated calibration of all three settings. App. 12a, 40a, 53a-54a, 105a-108a.

A third barrier (Barrier IIB) is under construction and will be completed later this year, as a further component of the Barrier II project that Congress authorized in 2004. App. 55-56. The Corps sought and received urgent funding to expedite and complete the construction of Barrier IIB. App. 13a, 55a. Barrier IIB is designed to be at least as capable as Barrier IIA. Having both barriers in operation will permit one to continue operating when the other needs to be shut down for periodic maintenance. App. 10a-11a, 56a, 109a. Barrier IIA was shut down for maintenance in December 2009, see pp. 10-11, infra; at present, the Corps anticipates completing Barrier IIB before Barrier IIA will need to be shut down for maintenance again. App. 57a.

After Barrier IIA entered service, Barrier I underwent a major rehabilitation in fall 2009 and returned to service alongside Barrier IIA. App. 49a. Congress has also directed that Barrier I be upgraded and made permanent, so that it can complement the operation of the other two barriers. Water Resources Development

Act of 2007 (2007 Act), Pub. L. No. 110-114, § 3061(b)(1)(A), 121 Stat. 1121. That process will occur after Barrier IIB is completed and operational, subject to availability of funds. App. 49a.

ii. Ballast and Bilge Water Restrictions. When vessels take on ballast or bilge water in one location and discharge it in another, they can sometimes transmit invasive species. (Ballast water is intentionally taken on for stability or other navigational purposes; bilge water is water that accumulates in void spaces at the bottom of vessels.) In September 2009, at the Coast Guard's request and to prevent Asian carp from crossing the dispersal barrier in barges' ballast, the barge industry agreed to cease ballasting operations on either side of the barrier. In December 2009, the Coast Guard adopted a regulation (to be published in the Federal Register on January 6, 2010[2]) barring ships from discharging in the canal on one side of the barrier any ballast or bilge water that was taken on in the canal on the other side of the barrier. App. 155a, 157a-158; see also App. 18a.

iii. Rotenone Poisoning. Barrier IIA was taken offline for necessary maintenance in early December 2009, while Barrier I remained in operation. Barrier I then underwent brief maintenance after Barrier IIA resumed operation. App. 57a, 109a-110a. To combat the threat that Asian carp would cross through the barrier

[2] See Temporary Interim Rule, Docket No. USCG-2009-1080 <http://www.federalregister.gov/OFRUpload/OFRData/2009-31350_PI.pdf>

location while one of the barriers was offline, the Fish and Wildlife Service and other participating agencies -- including the Michigan Department of Natural Resources -- executed a "Rapid Response" containment operation, applying the fish poison rotenone to a 5.7-mile stretch of the canal downstream of the fish barriers, between the barriers and the Lockport Lock. App. 57a, 140a; Pet. for Supplemental Decree 20. Caged carp were used to verify that the poisoning was effective to kill fish at various depths throughout the treated stretch of the canal. App. 141a. Biologists collected between 30,000 and 40,000 dead or surfaced fish during this operation. App. 57a; see also App. 142a. The only Asian carp was a single dead bighead carp found 5 miles downstream of the barriers. App. 57a, 141a; see also App. 142a.

iv. eDNA Testing, Other Monitoring Efforts, and Short-Term Responses. Federal agencies have for some time used telemetry, electrofishing (a technique that uses electrodes to attract and stun fish for easy capture), and commercial netting to monitor the Illinois Waterway for the advancement of Asian carp. App. 58a-59a, 139a. Those technologies are limited in their ability to detect fish present in very small numbers, and the Corps accordingly decided to canvass the scientific community for any additional, more sensitive detection technologies. In August 2009, the Corps entered into a cooperative agreement with Dr. David Lodge of the University of Notre Dame to use an experimental technique known as

environmental DNA (eDNA) testing. App. 14a-15a, 61a-62a. Fish shed DNA into the environment in various microscopic bits of tissue, such as intestinal cells shed during defecation. Dr. Lodge's "novel" technique (App. 113a, 118a) is to collect water samples, filter them for solids, extract all DNA from the solids, and then analyze the DNA for genetic markers unique to the bighead and silver carp species. App. 117a-118a.

Dr. Lodge has conducted several eDNA sampling operations in the Chicago Area Waterway System. App. 121a-124a. He sampled the Lockport Pool where the electric barriers are located. His initial samplings discovered Asian carp eDNA downstream of the barriers, but not upstream, consistent with the barriers' expected effectiveness in repelling the fish. App. 124a.

Dr. Lodge then proceeded to take samples farther upstream along the canal system, from the Calumet River, Chicago River, Cal-Sag Channel, and North Shore Channel. Analysis of these samples is still underway. Thus far, most results from upstream of the barriers have been negative. App. 124a-126a. Four samples from the Cal-Sag Channel, however, revealed eDNA from Asian carp (bighead carp alone or in some instances both bighead and silver carp). Some of those samples were from locations where subsequent tests have been negative, although the technology may be less able to detect the presence of fish eDNA as the temperature drops. App. 124a-125a. One of the four spots, near the O'Brien Lock, tested

positive for silver and bighead carp once, and a second time for bighead only. App. 38a, 125a. The repeated result in that spot has caused Dr. Lodge to conclude that at least one live bighead carp was at that location. App. 127a.

Following Dr. Lodge's preliminary result that was consistent with a bighead carp near the O'Brien Lock, and in response to concerns expressed from several quarters, the Rapid Response Working Group considered recommending that immediate action be taken to poison the canal in that area or to close one or both locks. App. 142a-143a. In light of the novel nature of the science, the possible alternative explanations for the presence of eDNA upstream of the barrier, and the concerns about the efficacy of a poisoning operation under winter conditions, the group decided instead to target the area in the Cal-Sag Channel identified by Dr. Lodge's eDNA results for intensive sampling. Ibid. The Illinois Department of Natural Resources led the effort with input from the Fish and Wildlife Service. The sampling involved trammel netting deployed by commercial fishermen with experience fishing for Asian carp. The Coast Guard stopped ship traffic for part of the sampling period to permit sampling in the main channel as well as in other likely locations. More than a thousand fish were captured; no Asian carp were found. App. 143a.

After extensive consultation with the Executive Committee concerning Dr. Lodge's results and the results of the intensive

sampling, and with the agreement of EPA, Major General John Peabody, who is the Commander and Division Engineer of the Corps' Great Lakes and Ohio River Division, decided not to recommend to the Assistant Secretary that she order an immediate closure of the locks. App. 4a, 29a, 34a-35a, 170a. The Corps shares the view of the various Rapid Response Working Group members that preventing Asian carp from establishing a presence in the Great Lakes is an "urgent and compelling priority." App. 7a-8a. General Peabody noted, however, that eDNA is an emerging technology that has never before been put to this use; that Dr. Lodge's early results were not borne out by subsequent targeted, intensive search operations; and that other explanations for the presence of carp eDNA could not yet be ruled out. App. 18a-22a. As a result, General Peabody concluded that the presence of Asian carp upstream of the barrier had not yet been proved with the requisite reliability. App. 34a-35a. General Peabody also considered potential countervailing impacts of a temporary lock closure on flood control, the future operability of the locks, shipping, navigation, and the local economy and environment. App. 29a-34a; see App. 93a-95a, 101a-103a. All of those considerations led him to conclude that the current eDNA results do not at this time justify recommending to the Assistant Secretary that she use her emergency authority to close the locks immediately. App. 35a-36a.

The Corps has not reached a final determination concerning the eDNA findings of the presence of Asian carp or the measures to take in response to those findings. App. 4a. Dr. Lodge's eDNA analysis continues -- indeed, Dr. Lodge has not yet processed approximately one-quarter of the water samples he has already taken, App. 121a -- and the Rapid Response Working Group will be continuously evaluating appropriate measures in response to his results. App. 22a, 64a-65a, 170a-172a. The EPA is also dedicating funding to validate the eDNA science from the Great Lakes Restoration Initiative, a $475 million interagency program to rehabilitate the Lakes' ecosystem. App. 166a, 171a.

In particular, the Corps continues to monitor closely some further tentative findings by Dr. Lodge. On December 31, 2009, the Corps learned that the University of Notre Dame laboratory has initial indications of two positive eDNA results for silver carp in an area near the Wilmette Pumping Station. The laboratory has not yet had time to undertake the additional procedures -- repeated analysis of the samples, equipment controls, and cooler blanks -- necessary to reach a final conclusion with respect to the area near the Wilmette Pumping Station. The laboratory expects to provide the results by Thursday, January 7, 2010. Additionally, the laboratory has collected but not yet processed approximately seven samples from locations near where those preliminary positives have occurred. App. 63a-64a.

v. Studies of Lock Closures and Other Solutions. Since January 2009, the Corps has had underway a set of efficacy studies evaluating the immediate threat that Asian carp may bypass the dispersal barriers and examining additional concrete steps that might be taken. One such measure, barriers to prevent carp from escaping the Des Plaines River and Illinois & Michigan Canal and entering the adjacent portions of the canal system (see App. 41a) during a flood, has been recommended to the Assistant Secretary, and a decision is expected in the imminent future. App. 3a, 25a-26a, 65a-66a. Following approval, construction could be complete by October 2010. App. 66a. The efficacy study has several other components as well. The final report of the overall efficacy study is due by September 2010 and is expected to address potential operational changes, which could include temporarily closing the locks or making other structural changes to the waterway. App. 26a-27a, 66a-67a.

EPA has dedicated more than $13 million from the Great Lakes Restoration Initiative to assist the Corps with short-term measures for preventing carp migration through the Chicago Sanitary and Ship Canal. The Rapid Response Working Group is also evaluating a number of additional options, including possible implementation of secondary fish deterrent barriers to deter Asian carp downstream of the electric barriers and preparation for additional rotenone eradication efforts. The group's efforts also include a number of

steps to evaluate the efficacy of existing measures, such as improved and intensified detection efforts and validation testing using tagged fish. App. 170a-171a. And through the Great Lakes Restoration Initiative, EPA hopes to dedicate additional funding to promote research on additional means to deter or even eradicate the fish. App. 171a; U.S. EPA Great Lakes Restoration Initiative, Request for Proposals 9-11 (Nov. 23, 2009) <http://epa.gov/greatlakes/fund/2010rfp01/2010rfp01.pdf>.

vi. Study of Longer-Term Solutions. The Corps has also embarked on a much larger study of how to prevent transfers of aquatic invasive species between the Mississippi River basin and the Great Lakes basin, in either direction, "through [both] the Chicago Sanitary and Ship Canal and other aquatic pathways." 2007 Act, § 3061(d), 121 Stat. 1121. Although the study has a timeframe of several years, the Corps intends to conduct the study in a way that allows decisions on particular recommended steps to be made as soon as the relevant portion of the study is complete, rather than awaiting completion of the entire project. App. 27a-29a, 67a-68a. The initial focus of this comprehensive effort will be the issue of Asian carp migration in the Chicago Area Waterway System. App. 28a

3. Background on Previous Water-Diversion Litigation in This Court. The Chicago Sanitary and Ship Canal has previously been the subject of protracted litigation in this Court on subjects unrelated to invasive species. On several occasions, this Court

has considered how much water from the Lake Michigan watershed may be pumped or diverted into the canal system and thus allowed to flow into the Mississippi River system. The decree that Michigan now seeks to reopen was one chapter in that water-diversion litigation.

Chicago has been allowed to divert water from Lake Michigan into the Chicago River since Chicago first obtained a permit from the Secretary of War in 1925. Wisconsin v. Illinois, 278 U.S. 367, 405-407 (1929).[3] Several Great Lakes States brought suit in this Court against Illinois and the Water District, alleging that the diversion was unlawfully excessive because it was causing the water level of Lake Michigan and the other Great Lakes to decrease. See id. at 409-410. This Court agreed that the diversion was far in excess of what was needed to sustain navigation, and that the excess was unlawful. See id. at 420. The Court concluded that Illinois must take steps to decrease its need for direct diversions of water into the canal, and decrease its diversions to a much smaller amount within a specified time. Wisconsin v. Illinois, 281 U.S. 179, 198 (1930). The Court concluded, however, that Illinois could take additional water from Lake Michigan for its own domestic use, which could then be treated, pumped into the canal, and

[3] That permit followed various short-term permits issued by the Corps and suits by the United States, see Sanitary Dist. v. United States, 266 U.S. 405 (1925), to prevent excessive diversions from Lake Michigan. See Wisconsin v. Illinois, 278 U.S. at 399-400, 404-406.

allowed to flow west into the Mississippi system. See id. at 199-200. Congress subsequently ratified the decision, providing that the water permitted to be diverted under this Court's decree was authorized to be sent down the canal for navigation to make the channel a "commercially useful waterway." Act of July 3, 1930, ch. 847, 46 Stat. 929.[4]

Decades later, other Great Lakes States petitioned to reopen the decree, alleging that Illinois was taking too much water from Lake Michigan for its own domestic use (as opposed to use for navigation in the canal) and that Illinois should be compelled either to return all of its domestic pumpage to Lake Michigan or stop diverting water from Lake Michigan altogether. The United States intervened in that litigation. After lengthy evidentiary proceedings, a Special Master recommended amending the decree to cap (at the then-existing level) all of Illinois's direct and indirect diversions from the Lake Michigan watershed into the canal system -- not just direct diversions from the Lake, but also treated effluent and stormwater runoff diverted into the canal that would otherwise have returned to Lake Michigan. Report of the Special Master at 11-13, 434-436, Wisconsin v. Illinois (Nos. 1, 2, 3 and 11, Original). The decree recommended by the Master,

[4] At various times Illinois sought and was granted temporary increases in its permitted diversion. Wisconsin v. Illinois, 311 U.S. 107 (1940); Wisconsin v. Illinois, 352 U.S. 945, 352 U.S. 983 (1956).

stipulated to by the parties, and entered by the Court thus set out a formula for determining how much water Illinois is diverting from the Lake Michigan watershed and how to determine whether Illinois is diverting too much in a given accounting period. Wisconsin v. Illinois, 388 U.S. 426, 427-429 (1967). Precisely how to divert and use its allocated share of lake water was left up to Illinois. See id. at 427-428.

The decree provided that the Court would retain jurisdiction to enter any modification or supplemental decree "which it may deem at any time to be proper in relation to the subject matter in controversy." 388 U.S. at 430. This Court has entered one such modification since 1967: in 1980, on recommendation of the Special Master and by agreement of the parties, the Court modified the procedure for determining whether Illinois is diverting, on average, more than its allotted share of water. See Wisconsin v. Illinois, 449 U.S. 48 (1980). "The goal of [the amendment was] to maintain the long-term average annual diversion of water from Lake Michigan at or below" the level set in the 1967 decree. Id. at 53.

ARGUMENT

The motion for a preliminary injunction should be denied. The possibility that Asian carp will move into the Great Lakes is a matter of great concern to the United States, and federal agencies are undertaking concerted, collaborative efforts to combat that risk, as Congress has directed. Michigan now asks this Court to

hold that the existing measures are unlawfully inadequate, and to impose new and drastic measures forthwith. But Michigan cannot make the extraordinarily high showing necessary to obtain a preliminary injunction from this Court. This case is altogether unlike the decades-old interstate dispute about water rights that Michigan purportedly seeks to reopen. Instead, this case is an attempt to obtain judicial review of the ongoing actions of a federal agency, the Corps -- but to do so under a novel theory of federal common law, without respecting the well-established principles governing judicial review of agency action. If the Corps makes a final decision to reject the steps Michigan wants -- and it has not yet done so -- Michigan can ask a federal district court to decide whether the Corps has acted contrary to its broad grant of authority from Congress, or in an arbitrary and capricious manner. But in this Court, at this time, Michigan has not shown likely irreparable harm; cannot prevail on the merits of its federal common law theory; cannot justify the mandatory relief it demands; and cannot obtain an injunction.

1. The Extraordinarily High Standard for Obtaining a Mandatory Preliminary Injunction in an Original Action. A preliminary injunction is always an "extraordinary remedy," Winter v. NRDC, 129 S. Ct. 365, 376 (2008), and it is even more extraordi-

nary in an action within this Court's original jurisdiction.[5] This Court has repeatedly emphasized that it imposes a higher burden -- "clear and convincing evidence" -- for seeking even a permanent injunction in an original action brought by one State against another than in a dispute between private parties. New York v. New Jersey, 256 U.S. 296, 309 (1921); see, e.g., Missouri v. Illinois, 200 U.S. 496, 521 (1906); see also Ohio v. Wyandotte Chems. Corp., 401 U.S. 493, 501 & n.4 (1971). A fortiori, a higher burden must be satisfied where a State seeks an injunction -- and especially a preliminary injunction -- against the United States in an original action.

Meeting that burden here requires Michigan to make a compelling showing that this Court is likely to take up its case and to rule in its favor on the ultimate merits; "that irreparable injury is likely" -- not just possible -- "in the absence of an injunction"; that the balance of equities "tips in [its] favor"; and "that an injunction is in the public interest." Winter, 129 S. Ct. at 374, 375. As we explain, Michigan has not made the requisite showing on any of these factors. Moreover, a heightened showing is

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[5] We are aware of only two instances in the last century in which the Court has granted such extraordinary relief. See California v. Texas, 459 U.S. 1067, 459 U.S. 1083 (1982) (after accepting jurisdiction over an interpleader action to determine the late Howard Hughes's domicile at death, enjoining the parties from prosecuting any action elsewhere to adjudicate the same question); see Pennsylvania v. West Virginia, 262 U.S. 553, 590 (1923) (preliminarily enjoining state statute alleged to violate the Commerce Clause shortly after the state statute took effect).

further necessary to justify a mandatory injunction -- which alters rather than preserves the status quo, by requiring the enjoined party to act rather than forbearing. E.g., Heckler v. Lopez, 463 U.S. 1328, 1333-1334 (Rehnquist, J., in chambers) (citing Morrison v. Work, 266 U.S. 481, 490 (1925)), application to vacate stay denied, 464 U.S. 879 (1983). The mandatory nature of Michigan's requested injunction -- including the closing, at least temporarily, of a hundred-year-old navigation channel -- and the significant possibility that the actions Michigan demands would themselves be harmful are further reasons why Michigan's motion should be denied.

2. Likelihood of Success. Michigan cannot establish that this Court will likely grant leave to proceed with this case and ultimately rule in Michigan's favor, for several reasons. First, Michigan has brought before the Court an entirely new dispute about keeping invasive species from entering Lake Michigan, in the guise of a motion to reopen a decades-old decree about how much water may be removed from Lake Michigan. The motion to reopen therefore does not properly lie, and Michigan must seek this Court's leave to commence a new original action. This case does not meet the standards for invoking this Court's sparingly exercised original jurisdiction. A federal district court is the proper forum to consider Michigan's claims for relief.

Second, whether Michigan seeks relief in this Court or elsewhere, Michigan improperly seeks to circumvent the ordinary channels for judicial review of agency action. Michigan's claim against the United States is properly understood as one against the Corps under the Administrative Procedure Act (APA), 5 U.S.C. 551 et seq., governed by standards set out by Congress and giving due deference to the responsible agency, and under those deferential standards Michigan cannot prevail, especially in seeking the extraordinary remedy of a mandatory preliminary injunction. The evidence shows that the United States is actively and reasonably using its best efforts, its best expertise, its best judgment, and the best available information to combat the spread of Asian carp toward the Great Lakes; the government has not rejected any option required by the law or compelled by the facts. Michigan's demand that this Court impose new, drastic, and immediate measures, outside the framework of the APA, is not supported by the law or borne out by the evidence.

a. This Case Is Not Appropriate for This Court's Original Jurisdiction. To persuade this Court to grant extraordinary interim relief before even deciding whether to take up a case, Michigan must first show that this Court is likely to exercise its original jurisdiction. Cf., e.g., Indiana State Police Pension Trust v. Chrysler LLC, 129 S. Ct. 2275, 2276 (2009) (per curiam) (in case on certiorari or appeal, likelihood of success includes

whether the Court is likely to grant review or note probable jurisdiction); Board of Educ. v. Superior Court, 448 U.S. 1343, 1345-1346 (1980) (Rehnquist, J., in chambers) (examining whether this Court would have jurisdiction in considering application for stay); Munaf v. Geren, 128 S. Ct. 2207, 2219 (2008) (in a preliminary-injunction case, a threshold question of jurisdiction makes it "more unlikely" that plaintiff will succeed on the merits) (emphasis omitted). Michigan has not made a proper showing either to reopen the long-since-resolved water-diversion case or to commence a new original action in this Court.

i. This Case Is Unrelated to the Water-Diversion Litigation. Michigan suggests that this case is properly brought as a follow-on to the water-diversion litigation in this Court. But litigants may not evade the stringent requirements for invoking this Court's original jurisdiction, and seeking an injunction against another sovereign, simply by pleading a request to "supplement" an old decree instead of filing a new action seeking a new decree. Cf. Nebraska v. Wyoming, 515 U.S. 1, 8 (1995) (leave to commence an action in this Court requires permission, and parties may not circumvent that "important gatekeeping function" by introducing new issues into existing litigation). Even when an existing decree contains a "reopener" provision, like the one on which Michigan relies here (see Wisconsin v. Illinois, 388 U.S. at 430), that provision in no way relaxes the requirements for bringing a new

claim unless that new claim "fall[s] within [the reopener's] purview." Nebraska v. Wyoming, 507 U.S. 584, 593 (1993). A reopener provision in a water-apportionment decree does not encompass the parties' every future dispute about water; rather, it preserves the Court's "latitude to correct inequitable allocations" of water, in response to new or changed issues. Arizona v. California, 460 U.S. 605, 625 (1983). And even when a reopener clause does apply, "the interests in certainty and stability" still require "considerable justification" to reopen an existing decree resolving an interstate dispute over sovereign matters, such as the apportionment of water rights. Nebraska v. Wyoming, 507 U.S. at 593.

Michigan's own allegations make clear that this new case is not "proper in relation to the subject matter in controversy" in the water-diversion litigation, as would be required to invoke the 1967 decree's reopener provision. 388 U.S. at 430. The "subject matter in controversy" in 1967 and 1980 was the total amount of water from the Lake Michigan watershed (including stormwater runoff that never actually enters the Lake) that Illinois may divert to various uses that culminate in diversion into the canal system. How Illinois apportioned that water between domestic use, sanitation, and navigation was left to Illinois (subject to federal regulation). Id. at 427-428. Here, Michigan expressly disclaims any challenge to the amount Illinois may divert, or to the

permissible purposes of diversion. See Pet. for Supplemental Decree 2 ("The Petition does not seek to alter the quantity of water being diverted from Lake Michigan under the existing Decree, as most recently amended. Instead, the Petition seeks modification of the means created and maintained by Defendants and the Corps to accomplish the diversion."). But neither the 1967 decree nor the 1980 modification specified where or how Illinois could divert the water; those are matters that this Court has consistently treated as intrastate concerns, to be settled separately from the inter-state allocation of water. See, e.g., United States v. Nevada, 412 U.S. 534, 538 (1973). Nor did the decree impose any environmental regulation of the connections between Lake Michigan and the canal system except for the focused restriction on how much water could be diverted out of the Lake.

This Court's previous consideration of how much water could enter the Illinois Waterway does not oblige the Court to serve as a tribunal of first instance over every allegation of harm arising not from the amount (or even the fact) of the water diversion, but from the waterway's mere existence. Michigan asserts that "but for" the waterway, it would not face the threat of Asian carp. Mich. Br. in Supp. of Mot. To Reopen and for a Supplemental Decree 7, 21 (Mich. Br. in Supp.). But the existence of the waterway was not the subject of the prior litigation or decree in this Court. Rather, the decree enjoined Illinois's use of Great Lakes water for

the waterway, a use that Michigan says its injunction would allow to continue unchanged. If the scope of reopening truly were as broad as Michigan contends, any Great Lakes State could demand that the prior litigation be broadened to include innumerable disputes over flooding, shipping, navigation, pollution, conservation, or recreation -- each of which, like Michigan's claim here, bears no relation to the prior litigation except that it pertains to the same bodies of water.

Even substantial overlap with the original dispute often is not enough to justify reopening a closed case to inject a new and distinct dispute. For instance, in New Jersey v. Delaware, No. 11, Original, this Court recently denied leave to reopen a decree to settle a new dispute that bore a far closer relationship to the original dispute than does Michigan's new claim here. This Court previously had resolved a title dispute over the bed of the Delaware River by holding that within a specified twelve-mile circle, Delaware held title all the way up to the low-water mark on the New Jersey shore. New Jersey v. Delaware, 291 U.S. 361, 385 (1934). The Court's decree retained jurisdiction to enter future modifications. New Jersey v. Delaware, 295 U.S. 694, 698 (1935). Delaware subsequently refused permission to build a structure from the New Jersey riverbank out onto the Delaware riverbed. New Jersey asked this Court to reopen the case and to specify that the decree had left undisturbed New Jersey's right, under a pre-

existing interstate compact, to exercise riparian jurisdiction within the twelve-mile circle, even over wharves extending out into Delaware's riverbed. N.J. Br. in Supp. of Mot. to Reopen and for a Supplemental Decree at 18, New Jersey v. Delaware (No. 11, Original). Delaware opposed the motion to reopen on the ground that the dispute over whether riparian rights extended across the boundary was not sufficiently related to the original dispute over the boundary itself. Del. Br. in Opp. (No. 11, Original). This Court denied the motion to reopen. 546 U.S. 1028 (2005). It should do the same here: the mere fact that this Court has previously entertained litigation over the Illinois Waterway, including how much water may be diverted into the waterway from Lake Michigan, does not furnish a basis for this Court to reopen Nos. 1, 2, and 3, Original, whenever a party wishes to raise any new dispute that happens to involve both the waterway and the lake.

In the New Jersey v. Delaware litigation, the Court instead granted permission to file a new action, 546 U.S. at 1028; see New Jersey v. Delaware, 128 S. Ct. 1410 (2008), and Michigan seeks, in the alternative, permission to do the same here. Pet. for Supplemental Decree 30; Br. in Supp. 9-10, 31-36. As we now discuss, leave should be denied for that alternative course as well.

ii. This Court Is Not the Proper Forum for This Dispute. This dispute is properly one between Michigan and the entities that

can grant the relief Michigan seeks, which are the Corps and the Water District. Both of those entities are subject to suit in federal district court in Illinois, and this suit involves the sort of issues -- implicating the policymaking expertise of numerous different agencies on immensely complex, important, and technical environmental issues -- that this Court has said district courts are better suited to manage and to review in the first instance. Wyandotte Chems. Corp., 401 U.S. at 500-505. Michigan's claims against those entities should be remitted to that fully adequate forum.

Even in disputes between States, over which this Court has exclusive original jurisdiction, 28 U.S.C. 1251(a), this Court exercises that jurisdiction only "sparingly." Mississippi v. Louisiana, 506 U.S. 73, 76 (1992) (citations omitted); see id. at 77. Disputes between a State and the United States, over which this Court's original jurisdiction is concurrent rather than exclusive, 28 U.S.C. 1251(b)(2), are even less likely to be heard on the merits in this Court. Nebraska v. Wyoming, 515 U.S. at 27 n.2 (Thomas, J., concurring in part and dissenting in part) (since United States v. Nevada, supra, "[this Court] ha[s], in the majority of actions by States against the United States or its officers, summarily denied the motion for leave to file a bill of complaint").

In deciding whether to exercise its jurisdiction, this Court gives great weight to whether "the issue tendered" may be resolved in an alternative forum. Mississippi v. Louisiana, 506 U.S. at 77.[6] If it may be, then this Court is "particularly reluctant to take jurisdiction." United States v. Nevada, 412 U.S. at 538. And that is so even if the viable alternative is a proceeding against fewer than all defendants that might be made parties in the original action. For instance, this Court denied the United States leave to file an original action against California and Nevada because an action in district court against Nevada alone would suffice, even though California could refuse to be joined in such a suit. See ibid. Similarly, this Court denied one State leave to sue another when the same issue was being litigated against the defendant State by the plaintiff State's citizens. Arizona v. New Mexico, 425 U.S. 794, 797-798 (1976) (per curiam).[7]

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[6] This Court also considers "the seriousness and dignity of the claim" by the plaintiff. E.g., Mississippi v. Louisiana, 506 U.S. at 77 (citation omitted). We agree that that factor is met here, because the protection of the Great Lakes from invasive aquatic species is an issue of great importance. See Mich. Br. in Supp. 33.

[7] Even if the availability of an alternative forum is questionable, this Court generally requires that the plaintiff explore the possibility: for instance, when it appeared that district courts might be able to hear an interpleader dispute between States, this Court denied leave to file such an action in this Court (and denied an accompanying motion for preliminary injunction), later granting leave to file in this Court only after full exploration of the issue made clear that the district court lacked jurisdiction). See California v. Texas, 457 U.S. 164, 164-165 (1982) (per curiam); California v. Texas, 437 U.S. 601 (1978);

Once this dispute is properly understood as a new action rather than a reopening, Michigan's sole basis for asserting that it should be brought in this Court is that it has named Illinois as a defendant. But it appears to have named Illinois as a defendant only because Illinois was a defendant in the previous action that Michigan improperly seeks to reopen. Examining Michigan's prayer for relief in this action makes clear that the only parties necessary to accord Michigan full relief on the issues it raises are the Corps and the Water District.

Six of the seven specific forms of relief that Michigan identifies (Mot. for Prelim. Inj. 28-29) are within the control of federal agencies, chiefly the Corps. Michigan seeks (1) closure of the O'Brien and Chicago Locks, which are operated by the Corps in accordance with agreements with the Water District; (2) installation of interim barriers in the Grand and Little Calumet Rivers before the access points into Lake Michigan -- points that are not in Illinois at all, but in Indiana, see Mich. App. 78a-79a, 85a fig.1 -- which has already been accomplished on the Little Calumet (at least absent flood conditions) through the construction of a temporary structure for another environmental purpose, see App. 76a; (3) construction of land barriers to prevent flooding of the Des Plaines River from sweeping Asian carp into the Chicago

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California v. Texas, 434 U.S. 993 (1977). As discussed below, in this case the alternative forum plainly has jurisdiction over proper defendants.

Sanitary and Ship Canal, which the Corps has studied and recommended executing, a recommendation that is pending before the Assistant Secretary, see App. 3a; (4) increasing the voltage at the Electrical Dispersal Barrier to full operating power and expediting completion of Barrier IIB, matters within the control of the Corps (in consultation with the Coast Guard); (5) monitoring the Chicago Sanitary and Ship Canal and all connected waterways for Asian carp, which the Corps and other federal agencies are already doing; and (6) eradicating any Asian carp found in those waters, which has already been done through the Rapid Response Working Group, see, e.g., App. 141a. Although Illinois agencies certainly participate in some of the monitoring and eradication efforts, the gravamen of Michigan's complaint is not about a failure to hunt for carp or kill them once they are found; it is about preventing their spread.

Michigan's seventh demand for relief (Mot. for Prelim. Inj. 28) is that the sluice gates at the Chicago and O'Brien Locks and the Wilmette Pumping Station be operated in a way that will not allow fish to pass through. The sluice gates are operated by the Water District and the Corps, not by the State of Illinois, and the Corps, under Section 126 (see p. 5, supra), presumably could direct the Water District to take necessary action to prevent Asian carp from becoming established in Lake Michigan. Accordingly, an injunction against the Water District or the Corps could afford Michigan complete relief on this aspect of its prayer as well.

In short, the State of Illinois is not a necessary party to this action at all. See Illinois v. City of Milwaukee, 406 U.S. 91, 97 (1972) (in nuisance action against six Wisconsin subdivisions, Wisconsin was not a necessary party, although it could be a proper defendant if named).[8] And Michigan cannot overcome that point by insisting that it is the master of its complaint and can name whomever it wishes. That principle has little or no application in a case within this Court's original jurisdiction; this Court has often concluded that the presence of one or more named defendants is not necessary to afford relief, and dismissed those defendants. See, e.g., Kentucky v. Indiana, 281 U.S. 163, 173-175 (1930); cf. New York v. New Jersey, 256 U.S. 296, 306-307 (1921) (original action against New Jersey not necessary, because State was bound by stipulation signed by Passaic Valley Sewerage Commissioners, and relief afforded by the stipulation eliminated need for injunctive action against the State).

[8] A previous decision of this Court involving Illinois and the Water District (in an earlier incarnation) is not to the contrary: the question there, on motion to dismiss, was whether Illinois was a proper defendant in a case in this Court involving the allegedly tortious use of the Illinois Waterway to remove sewage. This Court did not explore whether complete relief could be afforded in an action in some other court by Missouri against the Water District alone. See Missouri v. Illinois, 180 U.S. 208, 242 (1901); see also id. at 249 (Fuller, C.J., dissenting). That is because this Court was not considering whether to grant leave to file the bill of complaint, having not yet adopted that practice in its present form, see Mississippi v. Louisiana, 506 U.S. at 77.

The question whether there is an alternative forum, therefore, depends entirely on whether the Corps and the Water District are subject to suit in district court. Plainly they are. See, e.g., Village of Thornton v. United States Army Corps of Eng'rs, 31 F. Supp. 2d 1060 (N.D. Ill. 1998) (federal environmental claim against Corps, supplemental nuisance claim against Water District). And the claims that Michigan brings are likely cognizable in a district court at the appropriate time -- although, as we explain below, many are premature at present and others are without merit.

As this Court explained in Wyandotte Chemicals Corp., an interstate dispute over nuisance law, implicating a problem that many responsible regulatory agencies "are actively grappling with on a more practical basis," should be addressed to an ordinary trial court if it can be. 401 U.S. at 503. The alternative would be to embroil this Court in the review of a "formidable" factual record in the first instance, which "even with the assistance of a most competent Special Master" would be a serious and unwarranted drain on this Court's time and resources. Id. at 503, 504. That conclusion in no way diminishes the importance of the issues raised in this case, see id. at 505; it merely explains why this case may appropriately be handled by the usual orderly process for judicial review of administrative action, however important. Cf. Massachusetts v. EPA, 549 U.S. 497 (2007).

b. Michigan's Showing Is Not Likely to Succeed in This Court Or Any Other Court. Under well-established principles of administrative law, neither this Court nor any other federal court is likely to order the United States or the Corps to provide the drastic relief demanded based on Michigan's arguments to date. The Corps, in coordination with numerous other agencies, is using all of its authorities, including the emergency authority granted by Section 126 of the 2009 appropriations act (see p. 5, supra), in a multi-pronged effort to deal with the Asian carp problem. Some of those steps have been completed; some are well underway; and some are under active consideration. But the responsible decisionmaker (the Assistant Secretary of the Army) has not made any final decision about several of the measures that Michigan demands be instituted immediately, such as lock closures. App. 3. Nor has the Assistant Secretary wrongfully withheld action on any proposal to take such specific steps. Indeed, Michigan did not even make a request of the Corps for those specific measures before proceeding to this Court, asking instead that the Corps make, "if necessary, changes in lock and water control operations." App. 77a-78a, 84a. Because the Corps is proceeding toward several decisions concerning appropriate exercises of its emergency and other authority in this area, Michigan is not likely to succeed on its premature request for judicial intervention.

i. No Final Agency Action. Michigan's claim against the United States is properly understood as one under the APA. Michigan acknowledges that if the Court does not reopen the 1967 decree, Michigan seeks to proceed under the APA, Pet. for Supplemental Decree 26-29, and indeed, even if this Court were to reopen the water-diversion litigation, the APA would be the only basis for Michigan to bring this new claim against the United States.[9] But Michigan does not identify any "final agency action," 5 U.S.C. 704, by the Corps that it could challenge in this action as arbitrary, capricious, or otherwise "not in accordance with law." 5 U.S.C. 706(2)(A). Indeed, the Corps has undertaken and is undertaking several actions to implement measures that Michigan demands. See, e.g., App. 3a, 17a-18a, 24a-25a, 64a-68a.

Even when an agency has gone so far as to make a recommendation to the person with authority to act, so long as that recommendation is not binding on the decisionmaker and no legal consequences flow from the recommendation itself, that interlocutory action is not yet reviewable under the APA. See Dalton v. Specter,

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[9] The APA is the only possible basis on which to conclude that the sovereign immunity of the United States has been waived, in this Court or any other. The Tucker Act does not waive sovereign immunity for cases sounding in tort (such as nuisance), 28 U.S.C. 1491(a)(1), and the Federal Tort Claims Act does not waive sovereign immunity for tort claims seeking equitable relief, see 28 U.S.C. 1346(b)(1). And Michigan does not contend that the United States, or Illinois, has violated the prior decree. See Br. in Supp. 18 (acknowledging that Michigan seeks to modify rather than enforce the prior decree).

511 U.S. 462, 469-470 (1994); Franklin v. Massachusetts, 505 U.S. 788, 798-800 (1992). Under Section 126, the delegated authority to take emergency action to prevent the Asian carp from bypassing the electric barrier or entering Lake Michigan rests with the Assistant Secretary of the Army. See 123 Stat. 2853; App. 2a.

Thus, for instance, the Corps' recommendation to construct concrete dispersal barriers to prevent Asian carp from spreading from the Des Plaines River to the canal system through flooding -- just as Michigan wants this Court to order, see Mot. for Prelim. Inj. 29 (Paragraph (d) of prayer for relief) -- has been presented to the Assistant Secretary and is scheduled for her imminent consideration. App. 3a. There thus is no final agency action with respect to that proposal that could be subject to judicial review, precisely because the responsible decisionmaker is in the final stages of deciding whether to do exactly what Michigan asks this Court to order. Similarly, no definitive determination has been made with regard to other measures, such as lock closures; that and other possible steps remain under active consideration, as the Corps and partner agencies continue to gather and evaluate all of the relevant information. See App. 4a, 26a-27a, 36a. Thus, Michigan is simply incorrect in its suggestion (Pet. for Supplemental Decree 27) that the Corps has reached some sort of final determination to rest on Dispersal Barrier IIA for the defense of the Great Lakes to the exclusion of all other measures. The record

amply refutes that assertion. The Corps has taken a number of other actions demonstrating its commitment to additional active measures. See App. 13a, 55a-56a (expedited construction of Barrier IIB), 3a (exercise of emergency authority to undertake rotenone poisoning); see also App. 157a-158a (restrictions on ballast and bilge water discharge).

ii. No Violation of Law. Even if the Corps had made final decisions not to stop operating the locks, or not to increase voltage at the electric diversion barrier, Michigan could not show that such a decision would be contrary to law. Congress has directed in Section 126 that the Secretary (and through him the Assistant Secretary) proceed with implementing measures recommended by the efficacy studies and that he undertake "such modifications or emergency measures as [he] determines to be appropriate, to prevent aquatic nuisance species from bypassing the [dispersal barrier] and to prevent aquatic nuisance species from dispersing into the Great Lakes." 123 Stat. 2853 (emphasis added). The Assistant Secretary, operating under that substantial grant of discretion, was not required by law to reach the conclusion that the locks must be closed, on the basis of the information currently available to her.

Moreover, the additional guidance Congress has given the Assistant Secretary in other statutes supports giving weight to the impact that a closure or other measure would have on the Corps'

ability to continue to operate the waterway. Congress has specified (inter alia) that to the extent the agency finds feasible, efforts to combat aquatic nuisance species are to be "incorporated" into the "ongoing operations" of the canal, 16 U.S.C. 4722(i)(3)(A) and (B)(ii), which are intended for navigation purposes. See Act of Dec. 4, 1981, § 107, 95 Stat. 1137 (Chicago Sanitary and Ship Canal to be operated "in the interest of navigation"); Act of July 30, 1983, Tit. I, Ch. IV, 97 Stat. 311 (same, for Chicago Control Structure and Lock). The Assistant Secretary properly weighs these considerations in her decisionmaking under Section 126. See App. 2a-3a. Michigan does not argue in its brief that the manner in which she weighs these considerations is arbitrary and capricious with respect to any particular measure Michigan urges (or even that any failure to agree with Michigan's requested outcome would necessarily be arbitrary and capricious), and therefore unlawful under the APA. The record establishes the sound justifications for (at present) keeping the locks open and operating the electrical diversion barrier at current levels. See, e.g., pp. 47-53, infra (impacts of closing the locks); App. 12a, 40a, 106a-108a (results of testing showing effectiveness of current Barrier IIA settings).

Michigan submits that the "common law" of "public nuisance" compels the Corps to take its desired action.[10] But the Assistant Secretary's broad discretionary authority is set by the grant from Congress, not by federal common law. Federal courts do not apply even already-recognized principles of federal common law once Congress legislates in the area. "When Congress has spoken its decision controls [over federal common law], even in the context of interstate disputes." City of Milwaukee v. Illinois, 451 U.S. 304, 315 n.8 (1981). Here, both "the scope of the legislation" enacted by Congress and the fact that it directly "addresses the problem," i.e., aquatic nuisance species, confirm that Congress has spoken to the issue and foreclose Michigan's attempt to subject the Assistant Secretary's decisionmaking authority to a new, judge-made standard. Ibid.

Indeed, even in areas where Congress affirmatively expected the courts to formulate federal common law rules, which may include interstate disputes, "the scope of permissible judicial innovation is narrower in areas where other federal actors are engaged."

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[10] Michigan also contends briefly (Pet. for Supplemental Decree 24 & n.25, 28 & n.30) that the government's actions violate the Lacey Act. That point is not well taken: Michigan makes no allegation that the government has allowed anyone to engage in "transportation" of silver carp without complying with the Lacey Act. See 50 C.F.R. 16.13(a)(2)(v) (unlawful to transport silver carp without a permit), 16.32 (exception for federal agencies). Indeed, bighead carp are under consideration for designation as an injurious wildlife species, see 68 Fed. Reg. 54,409 (2003), but have not yet been so designated.

Black & Decker Disability Plan v. Nord, 538 U.S. 822, 831 (2003). The record in this case amply demonstrates the breadth of that engagement -- by the Corps, the Fish and Wildlife Service, the Environmental Protection Agency, and the Coast Guard. Michigan simply cannot establish that that reasoned agency decisionmaking process has resulted in an outcome that is "not in accordance with law."

iii. No Cognizable Failure To Act. Michigan also cannot claim that the absence of final agency action with respect to certain measures Michigan seeks is itself cause for a federal court to step in now. In particular, Michigan's conclusory assertion (Pet. for Supplemental Decree 28) that "[t]he Corps has failed to develop and implement effective, environmentally sound efforts to minimize the risk of introducing bighead and silver carp to Lake Michigan through the Canal and connected waterways" is simply a recitation of the statutory mandate assigned to the Aquatic Nuisance Species Task Force by the Aquatic Nuisance Prevention Act, 16 U.S.C. 4722(c)(2). As this Court has unanimously held, the APA does not authorize federal courts to "enter general orders compelling compliance with broad statutory mandates" like the one on which Michigan relies. Norton v. Southern Utah Wilderness Alliance, 542 U.S. 55, 66 (2004) (SUWA); see id. at 64-65, 66-67. Under the APA, a federal court can only remedy a "failure to act" that amounts to withholding an action that is both "discrete" and

"legally required." Id. at 63. As established above, the Assistant Secretary's broad authority and discretion in this area does not require her to take the action Michigan demands on the basis of currently available information.[11]

3. Likelihood of Irreparable Harm. Michigan has failed to establish that the extraordinary, mandatory injunctive relief it demands is necessary to prevent irreparable harm that will likely occur without the injunction. Michigan's argument that Asian carp are likely to establish a reproducing population in Lake Michigan -- absent the injunctive relief it demands -- is premised entirely on Michigan's assumption that "eDNA testing has determined the presence of Asian carp in the Calumet-Sag Channel." Mot. for Prelim. Inj. 16. Although the United States agrees that allowing a reproducing population of Asian carp to establish itself in Lake Michigan likely would be an irreparable injury, see, e.g., App. 7a-8a, 146a-148a, the single set of findings on which Michigan relies does not show that that result is likely to occur imminently without an injunction.

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[11] Michigan does not contend that the Corps has "unreasonably delayed" any requested decision, and any such contention would fail for the same reason. See SUWA, 542 U.S. at 63 n.1 ("[A] delay cannot be unreasonable with respect to action that is not required."). Nor is a few weeks' sustained and intensive consideration of the results of eDNA testing and the implications of a decision to close the locks, see App. 18a-22a, beyond the bounds of reasonable deliberation.

a. Several aspects of Michigan's requested relief are already underway without judicial compulsion. First, the "[c]omprehensive[] monitoring" that Michigan seeks, Mot. for Prelim. Inj. 29, is already well under way, using Dr. Lodge's research in tandem with more conventional techniques. App. 58a-59a, 64a-65a, 143a, 171a. Significantly, other than the identification of Asian carp eDNA discussed by Dr. Lodge, none of these monitoring techniques has identified an Asian carp above the barrier. App. 63a, 142a-143a, 170a. Second, the Assistant Secretary is on the verge of a decision concerning the use of emergency authority to construct interim barriers that would prevent carp from entering the canal system during flooding of the Des Plaines River. See App. 3a, 65a-66a. Third, the operation and expedited completion of the electrical barriers require no injunction. See pp. 6-10, supra; App. 12a-13a, 54a-58a, 109a-110a. Indeed, Michigan's demand that Barrier IIA be run at "full operating power," Mot. for Prelim. Inj. 29, would not help to prevent any irreparable injury to the Great Lakes; to the contrary, the Corps' evidence to date demonstrates that the barrier is most effective not at its maximum voltage, but at a particular combination of voltage, frequency, and pulse length. The Corps is continuing to conduct research on the most effective combination of settings and will re-adjust the barriers as appropriate. App. 12a-13a, 108a-110a, 163a-164a. Fourth, no injunction is necessary to

direct the Rapid Response Working Group to "[e]radicate * * * any bighead or silver carp discovered in these waters." Should any carp be discovered, the group stands ready. See, e.g., App. 141a (rotenone poisoning operation).

b. Michigan's far more dramatic requests for relief -- the closure of the locks and sluices and the construction of temporary barriers in the Little Calumet River[12] -- are not warranted to stop an imminent threat of irreparable injury. Michigan's averments depend entirely on Dr. Lodge's eDNA results to date. But contrary to Michigan's arguments, the current eDNA results alone do not establish the requisite likelihood that a reproducing population of carp is on the verge of establishing itself in the Great Lakes.

First, as the Corps Division Commander concluded following consultation with EPA and other agencies, Dr. Lodge's results to date do not yet permit the agencies to conclude with the requisite confidence that live Asian carp are in the canal system in numbers that present an imminent threat, particularly in light of the sustained netting effort that took place in the spot Dr. Lodge's testing pinpointed. App. 22a, 34a. Environmental DNA is new science that has not previously been used for this purpose. App. 113a, 118a. Depending on the circumstances, the presence of eDNA may correspond to a live fish, a dead fish, or simply the presence

[12] Contrary to Michigan's averments, the Grand Calumet already has a temporary set of barriers in place that, absent flood conditions, prevent Asian carp from passing. See App. 76a-77a.

of fish mucus, feces, urine, or other cells. App. 116a; see App. 127a-130a.

Second, even if (as Dr. Lodge concludes, App. 127a-128a) one or more carp are probably present in the canal system above the barrier, that certainly does not prove Michigan's assertion that the barrier is ineffective. For instance, new restrictions on ballasting, see p. 10, supra, have removed one possible way for Asian carp (or their eDNA) to enter the canal system. (These restrictions were voluntarily adopted after some of Dr. Lodge's samples but before others, and have since been formalized in a regulation. See App. 121a, 157a-158a.) As Dr. Lodge notes, App. 132a, an isolated, unlawful release by humans is an additional possibility. Moreover, even if an Asian carp did manage to pass through Barrier I before April 2009, the new and improved Barrier IIA is now online. Preliminary research thus far shows it to be highly effective at its current settings, though testing is continuing. App. 106a-108a. And Barriers I and IIA will soon be joined by a third barrier that will be at least as effective as Barrier IIA.

Third, as Dr. Lodge notes, findings of a single Asian carp in the Cal-Sag Canal do not amount to evidence of a reproducing threat to the Great Lakes. App. 133a-134a. Indeed, single bighead carp have been caught in Lake Erie itself on multiple occasions (probably released individually by humans), and there is no

indication that the species has established itself, or begun to do so. Ibid. With the Corps and other Rapid Response Working Group members continuing to take active precautions, see App. 24a-25a, 138a, 170a-172a, particularly during the winter months when Asian carp are less physically active, see App. 127a, any threat from a small and isolated presence of Asian carp may still be mitigated.

4. Balance of Equities and Public Interest. As discussed above, we agree that the forecasted harm to the Great Lakes from the establishment of a population of Asian carp -- if it were to occur -- would be both grave and irreparable. But at present the likelihood that that harm will come to pass imminently, absent an immediate injunction, is speculative. By contrast, closing the locks and sluices and hastily constructing a new structure in the Little Calumet would have significant immediate consequences, as well as possible effects on flood control, public safety, and other important considerations that are sufficiently grave to counsel against taking such a step in the absence of appropriate study.

a. Flood Control. The ability to move water from the canals into Lake Michigan is an essential flood-control tool. Guarding against flooding regularly requires the use of the pumps and sluices that Michigan would enjoin, and as recently as September 2008 it required the Corps to open both the Chicago and O'Brien Locks. App. 93a, 100a. Without the ability to mitigate flood conditions in the canals, the Corps and Water District would face

a real possibility of both dangerous flooding and hazardous sewage backups into the City of Chicago. App. 100a-102a. If the canals flood, there would be a substantial risk that many Chicagoans would find sewage in their basements. App. 100a-101a.

Flood conditions threaten the Chicago area with considerable regularity. Indeed, just last year, the Water District was forced to reverse flow to Lake Michigan in February -- precisely the time of year Michigan's injunction would be in effect. See Mich. App. 107a (February reversals in 2009 and 1997).

Michigan purports to leave open the possibility of continuing to use the pumps and sluices for flood control purposes. Mot. for Prelim. Inj. 28. But in substantial flood conditions effective flood control requires that the locks be opened as well as the sluices and pumps, because of the volume of water that must be moved to Lake Michigan as quickly as possible. Both locks had to be opened for that purpose less than two years ago. App. 93a, 100a. Michigan's injunction would make no flood-control exception for using the locks, and as discussed below, the design and operation of the locks make it impossible to mandate that the locks be opened only for flood control purposes. See p. 49, infra. If the locks are shut down, they will be unavailable to abate flooding.

Similarly, the Little Calumet River poses a significant flooding risk, one that the Corps is already working to mitigate

through flood control projects. The construction of a new structure to block the passage of Asian carp -- and water -- would significantly increase the Little Calumet's susceptibility to flooding, and would significantly decrease the effectiveness of the Corps' flood control projects. App. 102a-103a.

b. Permanent Impairment of the Locks. The O'Brien and Chicago Locks cannot simply be switched off and remain in working order. Especially in cold weather, they require frequent -- sometimes constant -- cycling in order to remain operational. App. 69a, 93a-94a. And many of their aging components are not easily repaired and replaced. App. 94a. Michigan apparently wishes to enjoin all cycling of the locks, because of the risk that fish would pass through. But such an injunction, even a temporary one, would risk degrading the locks to the point that the shutdown will necessarily become a permanent one, with the attendant consequences for flood control, navigation, and public safety.

Moreover, the locks were not designed to be fish barriers; they are not perfectly watertight, and small fish or eggs conceivably could penetrate even a permanently closed lock. The Corps does not have readily available bulkheads to make the O'Brien Lock watertight, and although bulkheads are available at the Chicago Lock, they may not be perfectly watertight either. App. 69a-70a, 94a-95a.

c. Risks to Public Safety. The Coast Guard depends on the locks to respond in short order to boating emergencies on the Illinois Waterway, where numerous recreational craft operate. The Coast Guard station at Calumet Harbor and its Chicago substation are on the Lake Michigan side of the locks. App. 159a. In the last fiscal year, nearly half of all distress calls to those Coast Guard stations came from the waterway and required the responding Coast Guard vessel to pass through the locks. App. 160a. Short of opening a new Coast Guard facility on the waterway, the only alternative would be to truck a boat across land from the Coast Guard station and launch it from a boat ramp, increasing response times -- potentially dangerously so. App. 160a-161a.

The Coast Guard also responds to environmental crises on the waterway, such as oil spills. Most heavy industry, including refineries and coal operations, is on the waterway rather than the lakefront. Many of the Coast Guard vessels that respond to these crises, such as oil retrieval vessels, can respond only through the locks; they are not designed to be transported over land by trailer. App. 162a.

Michigan's request that the Barrier IIA be operated at maximum power would also raise significant public-safety concerns and require at least the temporary closure of the canal until those concerns could be resolved. The Coast Guard has cautioned that the operation of the electric barrier can be extremely hazardous to any

human falling into the water in the electrified zone, and can also be a fire hazard to transiting vessels. App. 154a, 162a-163a. The Coast Guard has evaluated extensive safety testing by it and the Corps to determine adequate precautions (with particular regard to a vessel's hull type), and has ordered the canal closed during these rounds of testing. App. 154a, 162-164a. As a result, it has prohibited transit by small (recreational) vessels and required that specific precautions be observed by larger vessels as a condition for transiting the barrier. App. 162a-163a. Ordering Barrier IIA to maximum power without the level of safety testing accorded at previous stages of implementation would heighten these risks. App. 163a-164a. Moreover, current evidence indicates that such an order would in fact be of no benefit: more voltage does not necessarily equal more fish deterrence, and the current settings of Barrier IIA have proved effective, with fewer safety and maintenance considerations than a higher-voltage setting. See p. 9, supra.

d. Economic and Transportation Impacts. All waterborne traffic between the Great Lakes and Mississippi must pass through the Illinois Waterway (or else circumnavigate the eastern United States) and transit the locks. Severing that link by closing the locks would require many tons of commodities, including coal used in power generation, to be shipped by other, significantly more expensive means -- or not at all. App. 33a-34a, 72a-73a, 91a.

Nearly 6.9 million tons of cargo, valued at approximately $1.7 billion, moved through the O'Brien Lock in 2008. App. 72a, 91a. Corps studies indicate that shipping that cargo through the O'Brien Lock rather than over land saved the shippers approximately $190 million, meaning that switching to the least expensive land transportation would cost the shippers nearly 10% of the total value of their cargo. App. 72a-73a. And in some instances, land-based freight transportation may not be practicable at all.

The Chicago Lock, too, plays an important role in making transit possible. Nearly 700,000 passengers, such as ferry riders, passed through the Chicago Lock in 2008. App. 72a.

Even if the locks remained open to Chicago-area traffic, Michigan's requested relief could nonetheless temporarily cut off traffic between the Great Lakes region and the Mississippi system, including traffic entirely within the Illinois Waterway. That is because Michigan's demand that the electric dispersal barrier be operated at maximum voltage would likely result in a closure of the canal system to shipping while the Coast Guard evaluates safety considerations -- a potentially lengthy process. See App. 162a-164a; see also App. 51a-53a (describing the lengthy process of securing safety approval of Barrier IIA).

* * * * *

Michigan states in its petition for a supplemental decree (at 29-30) that its ultimate goal is a permanent injunction separating

the Great Lakes from the Mississippi River system, undoing a connection that for well over 100 years has served the important purposes of flood control, navigation, commerce, and sanitation. A host of responsible actors -- federal, state, and even international -- are deeply and intensely engaged in studying all the considerations involved in preventing the transmission of invasive species through that connection. For this Court to pretermit that process and to decree that the answer is to sever the connection, based on a purported federal common law rule, would be altogether inappropriate.

In a host of ways, the federal government has demonstrated its commitment to protecting the Great Lakes from the expansion of Asian carp. Nothing in federal law warrants second-guessing its expert judgment that the best information available today does not yet justify the dramatic steps Michigan demands.

CONCLUSION

The motion for a preliminary injunction should be denied.

Respectfully submitted.

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