

NPDES Permit No. IL0035726
Notice No. SMT:24082101.smt

Public Notice Beginning Date: January 15, 2025

Public Notice Ending Date: February 14, 2025

National Pollutant Discharge Elimination System (NPDES)
Permit Program

Draft Reissued NPDES Permit to Discharge into Waters of the State

Public Notice/Fact Sheet Issued By:

Illinois Environmental Protection Agency
Bureau of Water
Division of Water Pollution Control
Permit Section
1021 North Grand Avenue East
Post Office Box 19276
Springfield, Illinois 62794-9276
217/782-0610

Name and Address of Discharger:

W-Z NMA Office Owner VIII, L.L.C.
c/o Zeller Realty Group
401 North Michigan Avenue, Suite 1950
Chicago, Illinois 60611

Name and Address of Facility:

W-Z NMA Office Owner VIII, L.L.C.
c/o Zeller Realty Group
401 North Michigan Avenue, Suite 1950
(Cook County)

The Illinois Environmental Protection Agency (IEPA) has made a tentative determination to issue a NPDES permit to discharge into the waters of the state and has prepared a draft permit and associated fact sheet for the above named discharger. The Public Notice period will begin and end on the dates indicated in the heading of this Public Notice/Fact Sheet. The last day comments will be received will be on the Public Notice period ending date unless a commentor demonstrating the need for additional time requests an extension to this comment period and the request is granted by the IEPA. Interested persons are invited to submit written comments on the draft permit to the IEPA at the above address. Commentors shall provide his or her name and address and the nature of the issues proposed to be raised and the evidence proposed to be presented with regards to those issues. Commentors may include a request for public hearing. Persons submitting comments and/or requests for public hearing shall also send a copy of such comments or requests to the permit applicant. The NPDES permit and notice number(s) must appear on each comment page.

The application, engineer's review notes including load limit calculations, Public Notice/Fact Sheet, draft permit, comments received, and other documents are available for inspection and may be copied at the IEPA between 9:30 a.m. and 3:30 p.m. Monday through Friday when scheduled by the interested person.

If written comments or requests indicate a significant degree of public interest in the draft permit, the permitting authority may, at its discretion, hold a public hearing. Public notice will be given 45 days before any public hearing. Response to comments will be provided when the final permit is issued. For further information, please call Shu-Mei Tsai at 217/782-0610.

The applicant is engaged in the operation of a commercial office building (SIC 6531). The permittee utilizes the water from Chicago River and operation results in an average discharge of 3.43 MGD of non-contact cooling water from outfall 001.

Application is made for existing discharge which is located in Cook County, Illinois. The following information identifies the discharge point, receiving stream and stream classifications:

<u>Outfall</u>	<u>Receiving Stream</u>	<u>Latitude</u>		<u>Longitude</u>		<u>Stream Classification</u>	<u>Biological Stream Characterization</u>
001	Chicago River – Main Channel	41° 53' 21"	North	87° 37' 22"	West	General Use	E

To assist you further in identifying the location of the discharge please see the attached map.

The subject facility discharges to the Chicago River at a point where 0 cfs of flow exists upstream of the outfall during critical 7Q10 low-flow conditions. The Chicago River is not listed as a biologically significant stream in the 2008 Illinois Department of Natural Resources Publication *Integrating Multiple Taxa in a Biological Stream Rating System*, however, it is given an integrity rating of "E" in that document. The Chicago River, Waterbody Segment IL_HCB-01, is listed on the 2020/2022 Illinois Integrated Water Quality Report and Section 303(d) List as impaired.

Aesthetic quality use has not been assessed. The Chicago River is not subject to enhanced dissolved oxygen standards.

The following parameters have been identified as the pollutants causing impairment.

<u>Designated Use</u>	<u>Potential Cause</u>
Aquatic Life Use	Unknown, Flow Alteration-Changes in Depth and Flow Velocity, Flow Regime Modification, Loss of Instream Cover, and Total Phosphorus
Fish Consumption Use	Mercury and Polychlorinated Biphenyls
Primary Contact Use	Fecal Coliform

The discharge from the facility shall be monitored and limited at all times as follows:

Outfall: 001 Non-contact Cooling Water (DAF = 3.43 MGD)

PARAMETER	<u>LOAD LIMITS lbs/day</u>		REGULATION	<u>CONCENTRATION LIMITS mg/L</u>		REGULATION
	<u>30 DAY AVERAGE</u>	<u>DAILY MAXIMUM</u>		<u>30 DAY AVERAGE</u>	<u>DAILY MAXIMUM</u>	
Flow						35 IAC 309.146
Temperature						35 IAC 302.211

Special conditions include the descriptions of flow measurement and reporting, monitoring location, DMR submission, re-opener, no offensive condition requirements, Cooling Water Intake Structure requirement, and the requirement of renewal applications.

NPDES IL0035602 – 401 North Michigan Avenue Cooling Water Intake Structure 316(b) Supplemental Information

Pursuant to the cooling water intake structure rules established under Section 316(b) of the Clean Water Act (CWA), the subject facility ("Applicant") is required to submit information consistent with that specified in 40 CFR 122.21(r)(2)-(8). Given that the cooling water intake structure for 401 N Michigan Avenue (or 401 N Michigan) is part of an existing facility with a design intake flow of greater than 2 MGD and an actual intake flow of less than 125 MGD, the Applicant is required to submit the information specified within 40 CFR 122.21(r)(2)-(8). Of this information, the Water Quality Standards section has been tasked with reviewing the source water baseline biological characterization data submitted in fulfillment of the (r)(4) requirement and existing entrainment performance studies required by (r)(7) to be used in making a site-specific determination on the best treatment available (BTA) for entrainment. A review of the (r)(2), (3), (4), (5), (6), (7), and (8) information provided by the Applicant follows.

40 CFR 122.21(r)(2) Source water physical data

(i) Description of Source Water Body

401 N Michigan Avenue (the permittee) is located in the Main Stem of the Chicago River, approximately 5,000 feet downstream of Lake Michigan. The Chicago River is a system of rivers and canals with a combined length of 156 miles, with both natural and man-made origins. The Chicago River is divided into three distinct branches: the North Branch, the South Branch, and the Main Stem.

401 N Michigan Avenue is located on the north side of the Main Stem, between Michigan Avenue and Columbus Drive.

(ii) Characterization of Source Water Body

Originally, the Chicago River was part of the Great Lakes drainage basin, with the North and South branches joining and flowing east into Lake Michigan. The Chicago River is within the Mississippi River basin, flow west away from Lake Michigan, the joins flow from the North Branch of the river and enters the South Branch. The flow in the Chicago River is controlled by three lock systems, the Lockport Powerhouse and Controlling Works near Joliet, Illinois and the Chicago River Controlling Works and the Chicago Lock at the head of the river.

40 CFR 122.21(r)(3) Cooling Water Intake Structure Data

(i) Description of CWIS Configuration

401 N Michigan Ave has one 24-inch intake line used to draw water from the Chicago River. The intake line has a steel cage intake screen surrounding the end of the pipe. The intake screens are designed with an estimated through-screen velocity of 0.11 fps at a maximum design flow of 4.28 MGD with 3/8-inch diameter perforations providing 58% percent open area.

The Main Building system consists of three (3) pumps. Pump No. 1 is rated at 1,000 gallons per minute (gpm) and is used with a 50-ton chiller for minimal cooling needs. When the demand for cooling increases, the system switches over to one of two 1,500-ton chillers. Pumps No. 2 and No. 3 are each rated at 4,500 gpm and are used with the 1,500-ton chillers. Note that only one 1,500-ton chiller can be run at a time, therefore, only Pump No. 2 or No. 3 can be run at a time, not simultaneously. A variable speed drive is used to regulate the 4,500 gpm pump rates as needed. In addition, the variable speed drives are not operated greater than 88% for maximum design efficiency. This results in a design maximum flow rate of 3,870 gpm for Pumps No. 2 or No. 3. It should be noted that only on rare occasions (ambient temperatures exceed 100 F) would both the 450-ton chiller and one of the 1,500-ton chillers be run simultaneously.

Tenant Condenser System consists of two (2) pumps. Pump No. 1 and No. 2 are rated at 1,000 gallons per minute (gpm) and are used with one of four heat exchangers for cooling needs. The design of the system limits the use of only one pump at a time. Furthermore, the flow through the heat exchanger limits the pumping rate to approximately 500 gpm, for maximum design efficiency. A variable speed drive is used to regulate the pump rates as needed.

(ii) Latitude and Longitude of CWIS

The latitude and longitude (in degrees, minutes and seconds) of 401 N Michigan Avenue's cooling water intake structure are:
Latitude: 41° 53' 21"; Longitude: - 87° 37' 22".

(iii) Description of CWIS Operation

Main Building: in summer months (typically April through November), 10 hours/day operation Monday through Friday, 5 hours/day on Saturdays, with the exception of down time due to maintenance.

Tenant Condenser System and Apple Building: operated year-round 24 hours per day.

The total design intake flow is 4.28 MGD during summer months.

(iv) Description of Flow Distributions

The system is designed to use 100% of the intake water in a closed, once through process, and then the water is returned to the Chicago River.

40 CFR 122.21(r)(3)(i)-(xii) – Source Water Baseline Biological Characterization Data

(i) A list of unavailable biological data: The data needed to fulfill 40 CFR 122.21(r)(4)(ii) through (vi) are fully available.

The 401 N. Michigan facility withdraws water from the Main Branch of the Chicago River, which is part of the Chicago Area Waterway System (CAWS). The facility is located on the north side of the main stem between Michigan Avenue and Columbus Drive. No impingement and entrainment studies exist for the 401 N. Michigan intake. Site-specific data on the abundance and all life stages that may be directly impacted by the intake are, thus, unavailable. Nevertheless, the Applicant has utilized fish surveys in the CAWS conducted by the Illinois Department of Natural Resources as the main point of reference.

(ii) A list of species (or relevant taxa) for all life stages and their relative abundance in the vicinity of the cooling water intake structure:

The Applicant has identified species that could be present near the facility intake based on a review of available data, based on IDNR fish 2017 and 2022 Sensitive Intensive Monitoring (SIM) events in the CAWS. IDNR conducted electrofishing surveys and gill/trammel net sampling at their Chicago River sampling station, which starts approximately at the confluence of the South Branch, North Branch, and main branch of Chicago River and extends to Des Plaines River (2017 SIM event) or Lake Michigan (2022 SIM event). IDNR conducted the 2017 SIM event in the weeks of June 12, 19, and September 18 and 25. A total of 36 individuals belonging to four (4) species (Gizzard Shad, Common Carp, Bluegill, and Emerald Shiner) were encountered via electrofishing in the main branch of Chicago River. Gizzard Shad and Common Carp were the most and second most encountered, accounting for 25 and 8 individuals, respectively. A total of 30 individuals belonging to two (2) species were encountered during gill/trammel sampling, with Common Carp being the most encountered (29 individuals). Emerald Shiner, Freshwater Drum, and Bluegill were encountered, but in very low numbers (one or two individuals) in the Chicago River. While the CWIS is in the main branch of Chicago River, species encountered in the S. Branch during the 2017 SIM event are noteworthy due to the open waterway. A total of 32 species and two hybrids were found, including those encountered in the main branch of the river in the 2022 sampling. Tables 4-1 and 4-2 of the Applicant's submittal report, respectively, provide a full list of species encountered in 2017 and their relative abundance. Gizzard Shad was the most abundant (54.14%), followed by Common Carp with both species together constituting 72% of the catch. Only Common Carp, six (6) individuals total, were encountered in the main stem of Chicago River during IDNR 2022 sampling via electrofishing and gill/trammel sampling.

Additionally, 401 N. Wabash, a nearby facility about 0.2 miles away from 401 N. Michigan, has reported a list of fish species in the main branch of Chicago River to Illinois EPA, based on data from the Metropolitan Water Reclamation District (MWRD) and IDNR. Gizzard Shad, Common Carp, Largemouth Bass, Bluegill were among the 10 most abundant species encountered and reported in historic and recent studies (1996–2006 and 2010–2018, respectively). Gizzard Shad and Common Carp together made up over 86% of the species reported from recent studies, compared with over 45% from historical studies. Regardless, those two species are reported to have dominated the fish community over historic and recent periods, representing 62% of the total individuals collected between 1996 and 2018 (7,527 fish representing 45 species, including 3 hybrids). The other five species constituting the 10 most abundant species in historic or recent studies were exclusive to each period. They include Bluntnose Minnow, carp x goldfish hybrids, goldfish, Green Sunfish, and Yellow Perch in historical studies, and Spotfin Shiner, Pumpkinseed, Golden Shiner, Brook Silverside, and Emerald Shiner in recent studies. Regarding freshwater mussels in Chicago River, Quagga mussels, Pea Clams, and Fingernail Clams were the most encountered near 401 N. Wabash.

(iii) Identification of the species and life stages that would be most susceptible to impingement and entrainment.

Species evaluated should include the forage base as well as those most important in terms of significance to commercial and recreational fisheries: No impingement or entrainment studies have been conducted at 401 N. Michigan. However, the facility has examined the factors that influence susceptibility, to include sampling density along the Chicago River station, preferred habitat at varying life stages, feeding behavior, and reproduction preferences. Based on these factors, the Applicant indicates that, of the 32 species encountered in both IDNR studies, only Freshwater Drum, Gizzard Shad, and Emerald Shiner are susceptible to impingement. Furthermore, the facility utilizes intake screens with a design through-screen velocity of less than 0.5 fps that meets the impingement mortality reduction standard through Compliance Alternative 2 (§125.94(c)(2)).

According to the Applicant, none of the species encountered in the IDNR studies are susceptible to entrainment (see Table 4.5 of the Applicant's submittal report). The nearby 401 N. Wabash facility, however, conducted a 9-month entrainment study to characterize and estimate entrainment at its location and provide more insight on the potential susceptibility of these species. Forty-one fish (41) larvae and 65 fish eggs were collected during that entrainment study period (February to October 2019). A total of eight fish taxa were encountered, including Common Carp, Freshwater Drum, Gizzard Shad, Sunfish, Alewife, Clupeidae, Crappie, and *Morone* sp. Ichthyoplankton accounted for 100% of the individuals collected, with eggs constituting 63.2% of the total composition. Eggs from only two fish taxa—shads (Clupeidae) and temperate bass (*Morone* sp.)—were collected. Of the entrained eggs, shads made up 89.4% of the total, while *Morone* sp. accounted for 10.6%. No threatened or endangered species were collected in the entrainment study.

(iv) Identification and evaluation of the primary period of reproduction, larval recruitment, and period of peak abundance for relevant taxa:

The stimulus to spawn for each species is water temperature. Different species use different spawning strategies to increase the chances of success. Peak larval recruitment changes year to year based on fluctuations in temperatures. Peak recruitment occurs between April and July for most fish. Young of year (YOY) may come in the vicinity of water intakes as they move toward adult habitat. This life stage is more susceptible to entrainment due to its smaller size and inadequate muscle mass needed to swim away from intake currents. Peak abundance for fish tends to be about nearly the same period as peak recruitment. The former would vary based on each species spawning habits but typically occurs between May and August. The lowest abundance of fish should occur right before spawning in each season, as there would have been no recruitment since the last spawning period. The three species considered mostly likely to be impinged are further discussed based on the review of the literature.

Freshwater Drum spawn in April through June in open water, typically over sand and gravel, at water temperatures ranging from 18 to 25 °C. Eggs and newly hatched juveniles float until they can swim away from the surface film. A female can lay between 34,000 and 850,000 eggs. Eggs are approximately 1 mm in diameter and hatch within a day and a half. The species' young feed on benthic insects and crustaceans, while adults feed on mollusks, crayfish, and other fish. Both adults and juveniles form schools. Adults prefer to feed and stay in benthic habitat, although they swim to shallower areas to feed occasionally. Freshwater Drum feed primarily

by touch, allowing them to tolerate more turbid waters than many other species.

Gizzard Shad spawn from April to June in Illinois. Spawning typically occurs when water temperatures are 10 to 21 °C, at night in large groups, and in 0.3 to 1.5 m in slow-moving water, including ditches, and streams. The species lay eggs in the water column that then settle on various substrates, and current and gravity dictate. Gizzard Shad are demersal and adhesive with diameters of 0.9 to 1.1 mm. The species can produce many eggs, with age II females tending to lay the highest number averaging about 390,000 per fish. Gizzard Shad juveniles eat zooplankton until they reach approximately 25 mm in length; they are likely elevated in the water column during that period and subsequently are typically food foraging in deeper water. The species prefers slow-moving water, including lakes, ponds, large rivers, and slow-moving backwaters. Although some populations extend into Wisconsin, northeastern Illinois is close to the northern limit of the Gizzard Shad's natural range due to low water temperatures. During cold winters, Gizzard Shad may experience large-die offs due to low water temperatures. Smaller Gizzard Shad are important food sources for many predatory fish.

Emerald Shiner spawn from April to August in the Great Lakes region when water temperatures reach 22 °C. Spawning typically occurs in nearshore areas of large lakes in approximately 3 m of water, over detritus-free hard sand and mud. Eggs are demersal and non-adhesive, typically 3.0 to 3.3 mm in diameter, and hatch after 2 to 3 days. Fry gather in large schools in lakes. Emerald Shiner characteristically inhabits open water and feed on insects near the surface at night. During the day, they migrate to lower depths above the thermocline. In many areas during spring, the fish tend to prefer streams and move to larger water bodies as the year progresses. Emerald Shiner in Lake Michigan do not frequently migrate to smaller water bodies, as fluctuating water levels do not always allow access to the latter.

(v) Data representative of the seasonal and daily activities (e.g., feeding and water column migration) of biological organisms in the vicinity of the cooling water intake structure:

The discussions on seasonal and daily activities of organisms in the vicinity of 401 N. Michigan CWIS are mostly addressed under (r)(4)(iv). To supplement and with respect to temporal variation, the highest rate of entrainment in the 401 N. Wabash 9-month entrainment study occurred in June, accounting for 64.3% of the total entrainment, followed by July (30.3%), May (3.9%), and August (1.6%). Only eggs and larvae were respectively entrained in May and August. No ichthyoplankton was encountered in February, March, April, September, or October. Concerning diel variation, 70% of the ichthyoplankton was collected at night, and 30% during the day. All life stages were entrained during each diel period.

(vi) Identification of all threatened, endangered, and other protected species that might be susceptible to impingement and entrainment at your cooling water intake structures:

Based on an October 24, 2023, query of the United States Fish and Wildlife Service (USFWS) Section 7 consultation, seven (7) federally listed species and a pending species are listed in the potential vicinity of the project location. No fish species are listed and only the Hine's Emerald Dragonfly has an aquatic stage during its lifespan. The Hine's Dragonfly larval stage would not be supported in the altered state of the Mainstem of the Chicago River, as the larvae typically occur in wetland communities, usually rivulets. In addition, the Applicant submitted an IDNR EcoCAT for consultation; Mottled Sculpin (*Cottus bairdii*) was the only listed species in the vicinity of 401 N. Michigan. It is not expected that the CWIS operation will affect Mottled Sculpin due to its design (through-screen velocity and screen size). The 2017 and 2022 SIM samplings did not indicate any encounters with the species near the facility intake. According to IDNR's January 22, 2024, letter to the applicant, adverse effects on the species are also unlikely, making termination of the consultation apropos (see Appendix C of the submittal report).

(vii) Documentation of any public participation or consultation with Federal or State agencies undertaken in development of the plan:

The Applicant has not indicated any public participation. No additional consultations were reported other than those previously discussed with USFWS and IDNR. See Appendix C of the Applicant's submittal report for relevant documentation.

(viii) Description of methods and quality assurance procedures for sampling and data analysis:

401 N. Michigan has utilized IDNR's data from the 2017 and 2022 SIM events in the CAWS to provide biological baseline data. IDNR follows the Illinois Natural Survey Long-term Electrofishing methods. Each run consists of 15 minutes of shocking, after which fisheries biologists identify and count the number of each fish species. The commercial fishing sampling uses 200 yards of gill net per set with 100 yards of 3.5-inch mesh and 100 yards of 4-inch mesh to ensure that only the correct size of fish is captured in the mesh. When the gill nets are pulled, fisheries biologists identify and count the number of fish species. Other information that fulfills this requirement as pertained to IDNR's 2017 and 2022 SIM events is documented in Appendix D of Applicant's submittal report.

(ix) Definition of the source water baseline biological characterization data:

The Applicant's report provides the information required under 122.21(r)(4)(i-xii).

(x) Identification of protective measures and stabilization activities that have been implemented:

No protective measures are in place apart from the Applicant's use of a through-screen velocity of less than 0.5 fps and CWIS design to reduce impingement rates.

(xi) A list of fragile species, as defined at 40 CFR 125.92(m), at the facility:

The Applicant has identified Gizzard Shad as the only fragile species expected near the 401 N. Michigan intake.

(xii) Information submitted in order to obtain incidental take exemption or authorization:

401 N Michigan has not obtained an incidental take exemption or authorization for the intake structures from the USFWS.

40 CFR 122.21(r)(5) Cooling Water System Data

The 401 N Michigan Avenue facility's cooling system uses chiller units to exchange heat from the buildings using non-contact cooling water. The system intakes water (cool) from the Chicago River through a 24-inch diameter pipe, splits off to the three individual systems, flows through various strainers, passes the water through various chiller/heat exchanger units, then discharges the water (warm) back to the Chicago River via a 24-inch discharge pipe.

(i) Description of Cooling Water System Operation

Estimated Percentage of Daily 401 N. Michigan Avenue's Withdrawal Relative to Monthly Average Flows of the Main Stem of the Chicago River

Month	*Month Average River Flow (MGD)	401 N Michigan Ave Design Average Withdrawal (MGD)	401 N Michigan Avenue Actual Withdrawal (MGD)	**Percent Withdrawal of River Relative to Daily 401 N Michigan Ave Withdrawal (MGD)
January	41	1.30	1.30	3.2%
February	34	1.30	1.30	3.8%
March	8	1.30	1.30	16.3%
April	15	4.28	1.62	10.8%
May	52	4.28	1.69	3.6%
June	265	4.28	2.00	0.8%
July	380	4.28	2.90	0.8%
August	362	4.28	3.43	0.9%
September	306	4.28	2.59	0.8%
October	84	4.28	1.42	1.7%
November	24	4.28	1.36	5.7%
December	22	1.30	1.30	5.9%
Average	132.8	3.29	1.87	4.5%

(ii) Design and Engineering Calculations

Calculation Methodology

$$V = \frac{Q}{A \times POA} \quad [\text{Eq. 1}]$$

Where V = Average through-screen velocity
 Q = Maximum Design pump capacity (6.64 ft³/s)
 A = Surface area of intake screen with perforated openings
 POA = Percent open area (58% provided by Lakes & Rivers Contracting, Inc.)

Using [Eq. 1] and the Engineering Drawings

A = Front + 2 x Side + Bottom
 Front = 6 ft x 6.35 ft = 38.1 ft²

$$\text{Side} = 3.61 \text{ ft} \times 6 \text{ ft} = 21.7 \text{ ft}^2$$

$$\text{Bottom} = (3.61 \text{ ft} \times 6.35 \text{ ft}) + \left(\frac{1.5 \text{ ft} + 4 \text{ ft}}{2} \times 1.5 \text{ ft}\right) = 27.05 \text{ ft}^2$$

$$A = 38.1 \text{ ft}^2 + (2 \times 21.7 \text{ ft}^2) + 27.05 \text{ ft}^2 = 108.55 \text{ ft}^2$$

By submitting A into [Eq. 1],

$$Q = 6.64 \frac{\text{ft}^3}{\text{s}}$$

$$V = \frac{6.64 \frac{\text{ft}^3}{\text{s}}}{108.55 \text{ ft}^2 \times 0.58} = 0.11 \text{ ft/s}$$

Therefore, the calculated maximum design through-screen velocity across the screen surface is $0.11 \frac{\text{ft}}{\text{s}}$

(iii) Description of Existing Impingement and Entrainment Reduction Measures

The primary reduction in both impingement and entrainment at 401 N Michigan Avenue is achieved by:

The design through-screen velocity is 0.11 fps which meets the impingement mortality reduction standard through Compliance Alternative 2 (§125.94(c)(2)) based on the assumption that at velocities below this threshold most impingeable sized fishes will be able to swim freely and avoid impingement.

40 CFR 122.21(r)(6) Chosen Method(s) of Compliance with Impingement Mortality Standard

401 N Michigan Avenue utilizes intake screens with a low intake velocity which substantially reduces or eliminates impingement. The intake screens are custom designed to cover the intake area with an estimated through-screen velocity of 0.11 fps at a maximum design flow of 4.28 MGD (6.64 cfs) per intake screen. The design through-screen velocity at 401 N Michigan Avenue of less than 0.5 fps meets the impingement mortality reduction standard through Compliance Alternative 2 (§125.94(c)(2)).

40 CFR 122.21(r)(7) Entrainment Performance Studies (r)(7)

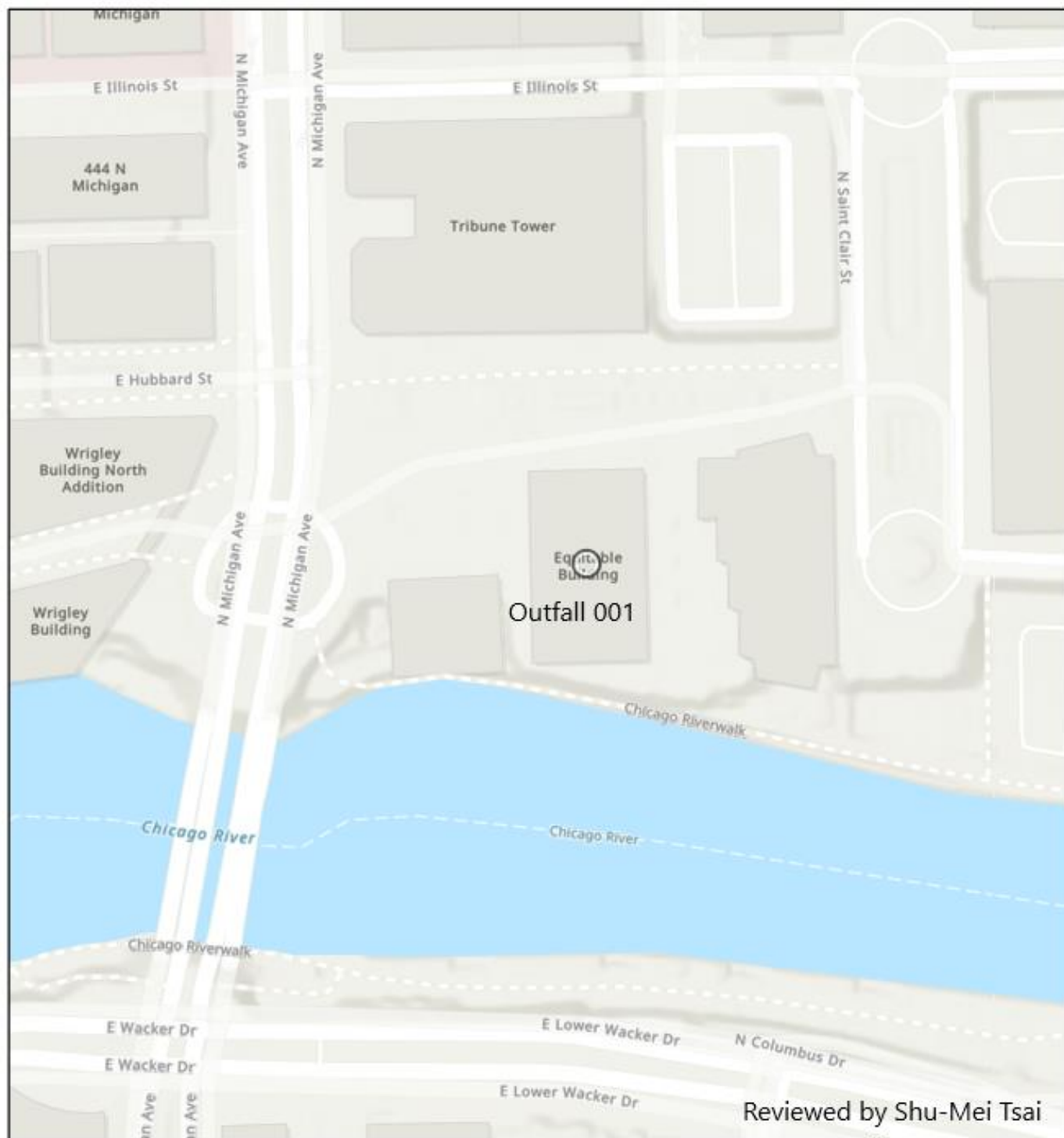
The Applicant has not conducted entrainment performance studies at the facility intake and reports no known entrainment performance studies on Chicago River near 401 N. Michigan. The Agency is, however, aware that 401 N. Wabash, a facility proximal to 401 N. Michigan, has performed a 9-month entrainment study to characterize and estimate entrainment at its location. A description of that study is provided under (r)(4)(iii) of this evaluation.

The Applicant has fully followed the requirements of 40 CFR 122.21(r)(4) and (r)(7). No further characterization of the biological community in the vicinity of the cooling water intake structure is required currently.

40 CFR 122.21(r)(8) Operational Status

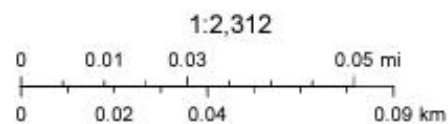
This sub-section is not applicable and no new units planned within the next 5 years for 401 N Michigan Avenue.

IL0035726 W-Z NMA Office Owner VIII, LLC - 401 N Michigan Avenue



8/22/2024

Sources: Esri, Airbus DS, USGS, NGA, NASA, CGIAR, N Robinson, NCEAS, NLS, OS, NMA, Geodatastyrelsen, Rijkswaterstaat, GSA, Geoland, FEMA, Intermap and the GIS user community, Esri Community Maps Contributors, City of Chicago, © OpenStreetMap, Microsoft, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US



NPDES Permit No. IL0035726

Illinois Environmental Protection Agency

Division of Water Pollution Control

1021 North Grand Avenue East

Post Office Box 19276

Springfield, Illinois 62794-9276

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM

Reissued (NPDES) Permit

Expiration Date:

Issue Date:

Effective Date:

Name and Address of Permittee:

Facility Name and Address:

W-Z NMA Office Owner VIII, L.L.C.
c/o Zeller Realty Group
401 North Michigan Avenue, Suite 1950
Chicago, Illinois 60611

W-Z NMA Office Owner VIII, L.L.C.
c/o Zeller Realty Group
401 North Michigan Avenue, Suite 1950
(Cook County)

Discharge Number and Name:

Receiving Waters:

001 Non-Contact Cooling Water

Chicago River – Main Channel

In compliance with the provisions of the Illinois Environmental Protection Act, Title 35 of Ill. Adm. Code, Subtitle C and/or Subtitle D, Chapter 1, and the Clean Water Act (CWA), the above-named permittee is hereby authorized to discharge at the above location to the above-named receiving stream in accordance with the standard conditions and attachments herein.

Permittee is not authorized to discharge after the above expiration date. In order to receive authorization to discharge beyond the expiration date, the permittee shall submit the proper application as required by the Illinois Environmental Protection Agency (IEPA) not later than 180 days prior to the expiration date.

Darin E. LeCrone, P.E.
Manager, Permit Section
Division of Water Pollution Control

DEL:SMT:24082101.smt

NPDES Permit No. IL0035726

Effluent Limitations and Monitoring

From the effective date of this permit until the expiration date, the effluent of the following discharge shall be monitored and limited at all times as follows:

Outfall: 001 Non-Contact Cooling Water (DAF = 3.43 MGD)

PARAMETER	LOAD LIMITS lbs/day <u>DAF (DMF)</u>		CONCENTRATION <u>LIMITS mg/L</u>		SAMPLE FREQUENCY	SAMPLE TYPE
	30 DAY AVERAGE	DAILY MAXIMUM	30 DAY AVERAGE	DAILY MAXIMUM		
Flow (MGD)	See Special Condition 1.				1/Month	Measure
Temperature	See Special Condition 2.				1/Month	Single-Reading

Special Conditions

SPECIAL CONDITION 1. Flow shall be measured in units of Million Gallons per Day (MGD) and reported as a monthly average and a daily maximum value on the monthly Discharge Monitoring Report. The monthly average shall consist of the summation of the daily flows divided by the number of days the facility discharged during that month.

SPECIAL CONDITION 2. This facility is not allowed any mixing with the receiving stream in order to meet applicable water quality thermal limitations. Therefore, discharge of wastewater from this facility must meet the following thermal limitations prior to discharge into the receiving stream.

- A. The discharge must not exceed the maximum limits in the following table during more than one percent of the hours (87.6 hours) in the 12 month period ending with any month. Moreover, at no time shall the water temperature of the discharge exceed the maximum limits in the following table by more than 1.7 °C (3 °F).

	<u>Jan.</u>	<u>Feb.</u>	<u>Mar.</u>	<u>April</u>	<u>May</u>	<u>June</u>	<u>July</u>	<u>Aug.</u>	<u>Sept.</u>	<u>Oct.</u>	<u>Nov.</u>	<u>Dec.</u>
°F	60	60	60	90	90	90	90	90	90	90	90	60
°C	16	16	16	32	32	32	32	32	32	32	32	16

- B. In addition, the discharge shall not cause abnormal temperature changes that may adversely affect aquatic life unless caused by natural conditions.
- C. The discharge shall not cause the maximum temperature rise above natural temperatures to exceed 2.8 °C (5 °F).
- D. The monthly maximum value shall be reported on the DMR form.

SPECIAL CONDITION 3. Samples taken in compliance with the effluent monitoring requirements shall be taken at a point representative of the discharge, but prior to entry into the receiving stream.

SPECIAL CONDITION 4. The Permittee shall record monitoring results on Discharge Monitoring Report (DMR) electronic forms using one such form for each outfall each month.

In the event that an outfall does not discharge during a monthly reporting period, the DMR Form shall be submitted with no discharge indicated.

The Permittee is required to submit electronic DMRs (NetDMRs) instead of mailing paper DMRs to the IEPA unless a waiver has been granted by the Agency. More information, including registration information for the NetDMR program, can be obtained on the IEPA website, <https://epa.illinois.gov/topics/water-quality/surface-water/netdmr.html>.

The completed Discharge Monitoring Report forms shall be submitted to IEPA no later than the 25th day of the following month, unless otherwise specified by the permitting authority.

Permittees that have been granted a waiver shall mail Discharge Monitoring Reports with an original signature to the IEPA at the following address:

Illinois Environmental Protection Agency
 Division of Water Pollution Control
 Attention: Compliance Assurance Section, Mail Code # 19
 1021 North Grand Avenue East
 Post Office Box 19276
 Springfield, Illinois 62794-9276

SPECIAL CONDITION 5. If an applicable effluent standard or limitation is promulgated under Sections 301(b)(2)(C) and (D), 304(b)(2), and 307(a)(2) of the Clean Water Act and that effluent standard or limitation is more stringent than any effluent limitation in the permit or controls a pollutant not limited in the NPDES Permit, the Agency shall revise or modify the permit in accordance with the more stringent standard or prohibition and shall so notify the permittee.

SPECIAL CONDITION 6. For the purpose of this permit, this discharge is limited to non-contact cooling water, free from process and other wastewater discharges. In the event that the permittee shall require the use of water treatment additives, the permittee must request a change in this permit in accordance with the Standard Conditions – Attachment H.

SPECIAL CONDITION 7. 401 N Michigan Avenue (or 401 N Michigan) is part of an existing facility with a design intake flow of greater than 2 MGD and an actual intake flow of less than 125 MGD, the Applicant is required to submit the information specified within 40 CFR

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Special Conditions

122.21(r)(2)-(8).

The facility utilizes intake screens with a design through-screen velocity of less than 0.5 fps that meets the impingement mortality reduction standard to meet the impingement and entrainment compliance standards under Section 316(b) of the Clean Water Act. The permittee shall retain all records supporting the Agency's determination of BTA for entrainment until such time as the Agency revises the Determination of BTA for Entrainment in the permit.

In subsequent permit reissuance applications, the permittee shall provide all the information required in 40 CFR 122.21(r). Pursuant to 40 CFR 125.95(c), the permittee may request to reduce the cooling water intake structure information required for subsequent permit applications to the Agency if conditions at the facility and in the waterbody remain substantially unchanged since the previous application so long as the relevant previously submitted information remains representative of current source water, intake structure, cooling water system, and operating conditions. Any habitat designated as critical or species listed as threatened or endangered after issuance of the current permit whose range of habitat or designated critical habit includes waters where a facility intake is located constitutes potential for a substantial change that must be addressed by the owner/operator in subsequent permit applications, unless the facility received an exemption pursuant to 16 U.S.C. 1536(o) or a permit pursuant to 16 U.S.C. 1539(a) or there is no reasonable expectation of take. This request shall be submitted at least two years and six months prior to the expiration of the NPDES permit. The request must identify each element in 40 CFR 122.21(r) that it determines has not substantially changed since the previous permit application and the basis for the determination. The Agency has the discretion to accept or reject any part of the request.

Nothing in this permit authorizes take for the purposes of a facility's compliance with the Endangered Species Act pursuant to 40 CFR 125.98(b)(1).

SPECIAL CONDITION 8. To receive the renewal authorization to discharge under this permit, the applicant must complete and submit Application Forms 1, a Form 2C for all existing discharge, a Form 2E for nonprocess discharge, a Form 2D for any new discharge, and a Form 2F for stormwater discharge. Pursuant to 40 CFR 122.21(c)(1), permittees must submit a renewal application at least 180 days prior to expiration of the current permit.