Illinois Environmental Protection Agency
Bureau of Water, Permit Section
(IEPA)

1021 North Grand Avenue East, Post Office Box 19276, Springfield, Illinois 62794-9276, 217/782-3362

The IEPA has issued a Public Notice of a request for a Clean Water Act Section 401 water quality certification that would allow the issuance of a federal permit for the discharge of pollutants to waters of the State.

Public Notice Beginning Date:	**Public Notice Ending Date:**
Tuesday, October 8, 2024	Monday, October 28, 2024

Agency Log No.: C-0126-24

Federal Permit Information: Coast Guard bridge Permit

Name and Address of Discharger: Chicago Department of Transportation, Soliman Khudeira - 2 N LaSalle St, Suite 820, Chicago, IL 60602

Discharge Location: In Section 4 of Township 39-North and Range 14-East of the East 3rd Principal Meridian in Cook County. Additional project location information includes the following: Chicago Ave over N Branch Chicago River, Chicago, IL 60610

Name of Receiving Water: Chicago River

Project Name/Description: Chicago Ave Bridge Replacement over N Branch Chicago River - proposed removal of existing two lane temporary bridge and replacement with new four lane tied arch bridge which can be lifted

Construction Schedule: Beginning Jul 2024 and ending Dec 2025

The Public Notice period will begin and end on the dates indicated in the heading of this Public Notice. Interested persons are invited to submit written comments on the project to the IEPA at the above address. Commenters must provide their name and address along with comments on the certification request. The IEPA Log number must appear on each comment page. Commenters may include a request for public hearing. Only hearing requests and comments that pertain to Clean Water Act Section 401 authority will be considered. This authority provides consideration of whether the permit or license would be consistent with Sections 301, 302, 303, 306, or 307 of the CWA, as well as "any other appropriate requirement of State [or tribal] law". Requests for additional comment period must provide a demonstration of need. The final day of comment acceptance will be on the Public Notice Ending date shown above, unless the IEPA grants an extended notice period. The attached Fact Sheet provides a detailed description of the project and the findings of the IEPA's antidegradation assessment.

If written comments or requests indicate a significant degree of public interest in the certification application, the IEPA may, at its discretion, hold a public hearing. Public notice will be given 30 days before any public hearing. If a Section 401 water quality certification is issued, response to relevant comments will be provided at the time of the certification. For further information, please see the contact information below.

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Post Document. No. C-0126-24-10082024-PublicNoticeAndFactSheet.pdf

The Chicago Department of Transportation (CDOT) has applied for a 401 Water Quality Certification for impacts associated replacement of the interim temporary bridge structure (016-6008) that was constructed in 2018, with a proposed tied arch span bridge (016-6208) which can be lifted if necessary. The interim bridge replaced a deteriorating bascule bridge that was functionally obsolete. The proposed structure will be constructed over the North Branch of the Chicago River at mile 2.41 from the Chicago Lock in Township 39 North, Range 14 East, Sections 4 and 9, Cook County, Chicago, Illinois.

CDOT is proposing a bridge replacement to the existing Chicago Avenue Bridge to alleviate traffic flow issues. The existing bridge currently accommodates two lanes of traffic transitioning from four lanes at the bridge approaches. The proposed bridge will alleviate the bottleneck created from the four lane to two lane transition. The existing pier of the original and interim bridges will be removed, and new piers will be built back of the existing river piers to support the proposed tier arch. Foundations will be placed on drilled shafts located outside of the existing channel width. A proposed Riverwalk will be located in front of the bridge abutments along the east and west banks of the river. The construction will be completed through a combination of work from the ground and work from a barge on the river. There are no permanent impacts to the existing clear channel proposed, but fill will be enclosed by the sheet pile walls as required to connect the Riverwalk with the existing embankments. The fill will consist of 112 cubic yards (CY) concrete for the Riverwalk slab and 2212 CY controlled low strength material to fill behind the new sheet piling. Because of this, there will be no impacts to the existing clear channel. A total of 0.054 acres (Ac) of impacts will occur in the area behind the proposed sheet piling and with the removal of the five existing dolphins and installation of eight new ones, a total of 0.001 Ac will be permanently impacted. The net permanent impact will be 0.055 Ac. Because the impacts are less than 0.1 Ac, no mitigation is proposed for this project.

The bridge construction project has been authorized by the U.S. Army Corps of Engineers (USACE) using an individual permit to satisfy federal CWA § 404 permitting requirements. The U.S. Coast Guard (USCG) also regulates this activity under its own authority; therefore, a state water quality certification under CWA § 401 may be required for the USCG permit process. Until recent changes to the 401 certification rules pursuant to 40 CFR 121, USCG would satisfy its permitting criteria by using an existing water quality certification issued for a USACE permit, provided the project's permitted activities are identical. Given these procedural changes, it is necessary for the proponent to seek a separate CWA § 401 water quality certification for the pending USCG permit even though this Agency has already evaluated and made a final determination that the activity would meet all applicable water quality requirements.

Information used in this review was obtained from the application documents dated February 8, 2023, May 2, 2023, June 5, 2024, June 20, 2024, and August 21, 2024.

Identification and Characterization of the Affected Water Body.

The North Branch Chicago River has 279 cfs of flow during critical 7Q10 low-flow conditions. The North Branch Chicago River is classified as Chicago Area Waterway System Aquatic Life Use A Waters. The North Branch 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, is it given an integrity rating of "D" in that document. The North Branch Chicago River, Waterbody Segment IL_HCC-08, is listed on the 2020/2022 Illinois Integrated Water Quality Report and Section 303(d) List as impaired for fish consumption use with potential causes given as mercury and polychlorinated biphenyls (PCBs), primary contact use with a potential cause given as fecal

coliform, and indigenous aquatic life use with potential causes given as dissolved oxygen, flow regime modification, iron, total phosphorus, and total dissolved solids (TDS). This segment of the North Branch Chicago River is not subject to enhanced dissolved oxygen standards.

Soils in the area are considered urban and the stream, consisting of a sheet piling sea wall, has been channelized. Additionally, biological data at the nearest point for the Metropolitan Water Reclamation District of Greater Chicago (MWRD) along the North Branch of the Chicago River shows that the IBI was determined to be 30 in 2009, 28 in 2010, 32 in 2011, and 26 in 2012. An IBI between 20 and 41 indicates moderate impairment and a fair resource quality. According to the USACE Illinois Stream Mitigation Method, the receiving stream at the location of the proposed project is ranked as a tertiary, functionally impaired waterway due to channelization, lack of riparian buffer, and substandard water quality for mercury and PCBs.

A wetland impact evaluation found no wetlands in the vicinity of the project location. Impacts to the river are as shown in the table below:

Feature	Fill Amount (CY)	Impact Size (Ac)	Impact Type	Activity Type
Riverwalk Extension	2324	0.054	Permanent	Fill Behind New Sheet Piling/Impact from Riverwalk
Net Riverwalk Fill/Impact	**2324**	**0.054**		

New Dolphins	237	0.0067	Permanent	Dolphin Replacement
Dolphin Removal	202	0.0057	Temporary	Dolphin Removal
Net Dolphin Fill/Impact	**35**	**0.001**		
Total Fill/Impact	**2359**	**0.055**		

Identification of Proposed Pollutant Load Increases or Potential Impacts on Uses.

The proposed project is not expected to cause an increase in pollutant loadings over what is currently being experienced. An increase in pollutant loads may occur due to erosion during construction and removal of the existing substructure. Total suspended solids will also increase temporarily with the removal and replacement of the dolphins. Additional sheet piling will be placed in the river with non-erodible fill between the existing and new sheet piling to create the Riverwalk extension. A total of 2324 CY of fill placed behind sheet wall piling for the Riverwalk extension and a total of 35 CY of fill for the net impact of the dolphin removal and replacement is proposed for the project.

Benthic organisms present within the project area may be impacted by increases in sediment loads; fish may be impacted by increased turbidity. Dolphins and sheet piling will be installed within the river, which may displace benthic organisms in the immediate vicinity. Existing benthic habitat beneath the sheet piling and dolphins would be permanently removed; however, removal of the existing dolphins would replace this lost habitat. Impacted fish and benthic organisms are expected to return once construction is complete.

Stormwater runoff associated contaminants include oils and grease, heavy metals, dust, rubber, antifreeze, and road salt. The project is not anticipated to result in an increase of these pollutant loads over what is currently being experienced. Runoff from the project area will route through gutters and drains prior to release to the river. Additionally, the least amount of de-icing salt possible will be used. Increases over what is currently occurring are not anticipated.

Fate and Effect of Parameters Proposed for Increased Loading.

Impacts due to erosion will be minimized through the use of erosion and sediment control methods. Impacts due to the release of sediment during fill will be minimized through the use of sediment control devices. Protective shields will be used around the bridge demolition and construction area to prevent debris from entering the waterway. Because of the use of these best management practices (BMPs), any increase in turbidity due to suspended solids from erosion or the incidental release of fill will be local and temporary. Existing benthic habitat beneath the sheet piling and dolphins would be permanently removed; however, removal of the existing dolphins is expected to replace the lost habitat. In addition to the erosion and sediment controls, the use of coffer dams and turbidity curtains will minimize any possible impacts. Any increases will be localized and temporary. Because the impacts to the streambed are less than 0.1 Ac, no mitigation is proposed for the project.

A Memorandum of Agreement (MOA) was executed on September 28, 2018, by FHWA, SHPO, IDOT, and CDOT with mitigation measures to mitigate the adverse effects to the Chicago Avenue bridge.

Purpose and Social & Economic Benefits of the Proposed Activity.

The existing bridge is designed to carry two lanes of traffic. The east and west approaches to the bridge carry four lanes of traffic which taper abruptly at the bridge. The transitions between the approach roadways and the bridge create a bottleneck which disrupts the flow of traffic and causes an unsafe merge zone resulting in a high concentration of crashes. The physical and structural deficiencies and narrowness of the existing bridge makes rehabilitation economically impractical. The proposed bridge will allow four lanes of traffic on the bridge and in turn eliminate the bottleneck to traffic due to the existing bridge.

Assessments of Alternatives for Less Increase in Loading or Minimal Environmental Degradation.

A study was done comparing rehabilitation of the existing bridge versus replacement. It was based on the in-depth inspection performed, roadway geometry, maritime requirements, and long-term maintenance concerns.

<u>No-Build Alternative:</u>
The no-build alternative would involve not providing improvements to the existing structure. Routine maintenance and repairs would be done, but this would not correct problems such as corrosion, section loss in critical web and flange locations, and bridge deterioration. Maintenance would not address safety and structural strength issues. Other issues such as the number of traffic lanes, the sudden taper on the bridge approaches, non-ADA compliant sidewalks, and potential for future damage from vessel collisions. Because of these reasons, this alternative was considered not to be a feasible option as it does not address safety or transportation concerns.

<u>Rehabilitation without Affecting the Historical Integrity of the Bridge</u>
This full rehabilitation option would restore the structural integrity of the existing bridge. Work would include full replacement of the bridge deck, sidewalks, floor beams, lateral and sway bracing, and sidewalk support brackets. Deteriorated portions of the trusses, girders and columns would be repaired to restore structural integrity, and mechanical and electrical systems would be upgraded. Bridge houses

would also be repaired to bring up to current building standards. These repairs would address load capability and address non-ADA compliant sidewalks, however due to the location of structural elements above the deck, accommodations for additional traffic lanes cannot be made. Options to redirect traffic to reduce volume are not practical due to access and distance concerns.

Roadway on New Location without using the Existing Bridge
Construction of a bridge at a new location on an alternate alignment was considered. However, this was found not to be practical as it would require complete realignment of Chicago Avenue. This would impact larger property areas on either side of the bridge including Montgomery Ward and Company Complex, a National Historic Landmark. Therefore, rerouting around the existing structure was not considered to be a feasible alternative.

Relocate the Existing Bridge
Relocation of the existing structure was considered but found to be impossible due to the fact that the lower portions of the bridge houses are connected with the bridge foundations making them unable to be relocated. The upper portions could be dismantled but because of their deteriorated stated, it may not be possible to do so without causing further damage. Even if the bridge could be relocated and preserved in a different location, a new structure would still be needed in order to address the purpose and need of the project.

Total Replacement (Preferred Alternative)
Complete removal of the existing bridge, bridge houses and fixed span abutments, and replacement with a new fixed bridge would address the issues at the existing bridge. A wider structure could accommodate four traffic lanes, a shared bicycle lane, and a sidewalk, and a more slender superstructure can be implemented by utilization of multiple steel girders. The 19.1 (and occasional 40 inches) of clearance required by USACE can be accommodated with a fixed bridge which can be jacked. This alternative also provides 17.44’ of clearance at the seawall as opposed to the current 8.05’. This would reduce damage from impact of river traffic. High long-term maintenance costs would not be required for the fixed bridge compared to a moveable bridge. With complete replacement, the road profile, and sidewalk elevation and grades can be adjusted. The proposed bridge has a lower profile than the existing bridge and would increase visibility of the two historically significant Montgomery Ward buildings. This alternative would also accommodate the existing riverwalk connection from the Montgomery Ward Catalog House and Administration Building and allow it to be shifted to run between the river and proposed bridge foundation elements. Cofferdams would provide access from the existing riverwalk sections to the sifted sections. Total replacement was chosen as the Preferred Alternative because it is the only option that can address the inadequate roadway width and accommodate the four required travel lanes.

Summary Comments of the Illinois Department of Natural Resources, Regional Planning Commissions, Zoning Boards or Other Entities.

On May 2, 2023, and auto termination was returned for an Illinois Department of Natural Resources (IDNR) EcoCAT consultation (Project # 2314425). The Department states that the Illinois Natural Heritage Database contains no record of State-listed threatened or endangered species, Illinois Natural Area Inventory sites, dedicated Illinois Nature Preserves, or registered Land and Water Reserves in the vicinity of the project location.

A consistency letter for the project under the revised February 5, 2018, FHWA, FRA, FTA Programmatic Biological Opinion for Transportation Projects within the Range of the Indiana Bat and Northern Long-

eared Bat dated February 9, 2023, from US Fish and Wildlife Service (USFWS) states that the proposed project will have no effect on the endangered Indiana bat (*Myotis sodalis*) or the threatened Northern long-eared bat (*Myotis septentrionalis*). USFWS goes on to state that if the Proposed Action is not modified, no consultation is required for these two species.

The letter also states that the following species may occur in the project area and are not covered by the determination:

- Eastern Massasauga (=rattlesnake) (*Sistrurus catenatus)* - Threatened
- Eastern Prairie Fringed Orchid (*Platanthera leucophaea)* - Threatened
- Hine's Emerald Dragonfly (*Somatochlora hineana)* - Endangered
- Leafy Prairie-clover (*Dalea foliosa)* - Endangered
- Monarch Butterfly (*Danaus plexippus)* - Candidate
- Piping Plover (*Charadrius melodus)* - Endangered
- Red Knot (*Calidris canutus rufa)* - Threatened

A Programmatic Agreement regarding preservation of movable bridges in Chicago states the following:

"Whereas the West Division Street bridge and the Chicago Avenue bridge adverse effects were resolved in a Memorandum of Agreement (MOA) on May 9, 2014, and September 27, 2018, respectively, both of which stipulated that the Chicago Department of Transportation (CDOT) will complete a preservation plan for movable bridges in the City of Chicago, and this Programmatic Agreement implements those commitments; therefore, the FHWA and IDOT in coordination with the CDOT have developed the 'Chicago's Movable Bridges Preservation Plan'."

The Chicago's Movable Bridges Preservation Plan is included as part of the application documents.

Agency Conclusion.

This preliminary assessment was conducted pursuant to the Illinois Pollution Control Board regulation for Antidegradation found at 35 Ill. Adm. Code 302.105 (antidegradation standard) and was based on the information available to the Agency at the time this assessment was written. We tentatively find that the proposed activity would result in the attainment of water quality standards; that all technically and economically reasonable measures to avoid or minimize the extent of the proposed increase in pollutant loading have been incorporated into the proposed activity; and that this activity would benefit the area by replacing a structurally deficient and functionally obsolete existing bridge to address roadway deficiencies and traffic safety, as well as maintain a riverwalk connection that would contribute to the area's economic development. Comments received during the 401 Water Quality Certification public notice period will be evaluated before a final decision is made by the Agency.