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:**
Friday, November 3, 2023	Thursday, November 23, 2023

Agency Log No.: C-0163-22

Federal Permit Information: Federal permit/license no. LRC-2012-468 is under the jurisdiction of Chicago District, Regulatory Branch U.S. Army Corps of Engineers

Name and Address of Discharger: Village of Barrington, Marie Hansen - US Route 14 between Hough Street and Valencia Ave., Barrington, IL 60010

Discharge Location: In Section 36 of Township 43-North and Range 9-East of the East 3rd Principal Meridian in Lake County. Additional project location information includes the following: US Route 14 between Hough Street and Valencia Ave., Barrington, IL 60010

Name of Receiving Water: Unnamed Tributary, tributary to Flint Creek

Project Name/Description: US Route 14 Grade Separation at the Canadian National Railway - Proposed installation of an underpass at the CN railroad crossing of US Route 14 in Barrington and includes relocation of a tributary of Flint Creek to between Elm Road and IL Route 59 (Hough Street) that will consist of approximately 1,670 linear feet of new stream channel with two new crossings at US Route 14 and IL Route 59. The existing bridge at US Route 14 will be removed and the existing stream channel will be filled-in to accommodate the underpass.

Construction Schedule: Beginning Apr 2023 and ending Nov 2024

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.

Name: Darren Gove Email: Darren.Gove@illinois.gov Phone: 217/782-3362

Post Document. No. C-0163-22-11032023-PublicNoticeAndFactSheet.pdf

The City of Barrington has applied for a 401 Water Quality Certification for impacts associated with the installation of an underpass at the Canadian National (CN) railroad crossing of US Route 14 in Section 36, Township 43 North, Range 9 East, Lake County, Illinois. The project site is located on US Route 14, between Hough Street and Valencia Avenue in Barrington, Illinois. The proposed project consists of constructing a grade separation of US Route 14 under the CN Railway by lowering US Route 14 to pass under the railway. A stormwater pump station to drain the underpass will be constructed and the Flint Creek tributary will be relocated to go around the underpass. The profile of Lake Zurich Road will be lowered to meet the lowered profile of U.S. Route 14. Sidewalks and a multi-use path will be provided throughout the length of the project. To complete the grade separation, a temporary waterway channel, railroad shoofly, and road turnaround are also required. A temporary roadway will be constructed to realign US 14 while the underpass is constructed. Once completed, temporary US 14 will be realigned to proposed US 14.

The project will reduce delays caused by trains on the CN Railway that block the US 14 crossing. The Village of Barrington is served by three major roadways: U.S. Route 14, Lake-Cook Road, and IL Route 59. All three of these roadways cross the CN Railway track at the same elevation, so motorists using these roadways must stop when trains are passing through.

Relocation of the Flint Creek tributary will involve installation of triple box culvert cells under US 14 and IL 59, construction of a temporary channel which will be used to redirect the stream from the existing channel, and construction of both north and south streambanks between the proposed US 14 and Elm Road.

Impacts proposed include 0.011 acres (Ac.) of permanent impacts to wetlands and 0.241 Ac. of permanent impacts to surface waters as a result of stream alignment. 1,700 linear feet (LF) of stream channel will be realigned. The realignment has a potential 0.373 Ac. of indirect impact to the stream channel for the portion of the stream that will remain a backwater channel and will continue to provide the functions of water quality, wildlife habitat, and flood control. Impacts are proposed to Site 1 and Site W1 (Flint Creek Tributary), where Site W1 impact acreage will be mitigated through construction of the new 1701 LF stream channel and will provide a functional lift with the addition of cross vanes, riffles and streambank revetment. This mitigation will be subject to a 5-year maintenance and monitoring plan. Mitigation for Site 1 will require a 1.5:1 mitigation ratio, or 0.003 Ac of mitigation.

Information used in this review was obtained from the application documents dated March 2 and 3, 2022, May 3, 2023, May 9, 2023, and June 16, 2023.

Identification and Characterization of the Affected Water Body.

The unnamed tributary to Flint Creek has 0 cfs of flow during critical 7Q10 low-flow conditions. The unnamed tributary to Flint Creek is classified as a General Use Water. The unnamed tributary to Flint Creek 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*, nor is it given an integrity rating, in that document. The unnamed tributary to Flint Creek, tributary to Waterbody Segment IL_DTZS-01, is not listed on the 2020/2022 Illinois Integrated Water Quality Report and Section 303(d) List as it has not been assessed. The unnamed tributary to Flint Creek is not subject to enhanced dissolved oxygen standards.

A wetland survey was conducted for the project area on September 14th and 19th and identified 5 wetlands (Sites 1-5), one waterway (Site W1), and two constructed stormwater features. Only Site 1 and Site W1 are considered jurisdictional and are proposed to receive impacts from the project.

Site 1 is a scrub-shrub wetland directly abutting Flint Creek Tributary, located east and west of Hough Street, and south of US 14. Site 1 receives surface water from adjacent uplands, impervious surfaces, and periodic overbank flooding from the adjacent tributary. All three wetland criteria are present. Based on conditions observed in the field as well as a review of current and historic aerials, Site 1 has a hydrologic connection to Flint Creek Tributary and Flint Creek, a Relatively Permanent Waters (RPW), which flows to the Fox River, a Traditionally Navigable Water (TNW). The function of this wetland is found to be flood control, conveyance, treatment of surface runoff, sediment and nutrient uptake erosion control and wildlife habitat. Dominant vegetation includes Silver maple *(Acer Saccharinum)*, box elder *(Acer negundo)*, elderberry *(Sambucus)*, common buckthorn *(Rhamnus cathartica)*, hackberry *(Celtis occidentalis)*, reed canary grass *(Phalaris Arundinacea)*, Canadian clearweed *(Pilea pumila)*, lady's thumb *(Persicaria maculosa)*, glade mallow *(Napaea dioica)*, riverbank grape *(Vitis riparia)*, and bittersweet nightshade *(Solanum dulcamara)*. The native FQI/mean C is 13.4/2.3 which is not indicative of a high-quality aquatic resource (HQAR). Methodology presented in *Flora of the Chicago Region* (Rericha and Wilhelm, 2017), proposes that an area with a native mean C of 3.5 or less, or a native FQI of 20 or less suggests insufficient floristic quality to be considered a High-Quality Aquatic Resource. This is a non-isolated wetland that has 0.03 Ac within the project limits.

Site W1 is a Flint Creek Tributary, which flows southwest beneath US 14 parallel to the north side of the CN Railway, then west beneath Hough Street to the western terminus of the project. Flint Creek has a hydrologic connection to the Fox River, a TNW. Site W1 receives surface water from adjacent uplands, wetlands, and impervious surfaces. The substrate of Site W1 includes riprap, rocks, cobbles, pebbles, sand, and silt. Riffles and pools were observed within Site W1 within the project limits. Adjacent land cover includes roadway and CN Railway ROW, linear forested areas, a scrub-shrub wetland, and residential land. Function provided includes conveyance and wildlife habitat. Within the project limits the tributary is 20-30 feet wide and 12 inches deep. Dominant bank vegetation includes Silver maple, tree-of-heaven *(Ailanthus altissima)*, hackberry, common buckthorn, box elder, white ash *(Fraxinus americana)*, green ash *(Fraxinus pennsylvanica)*, white mulberry *(Morus alba)*, American elm *(Ulmus americana)*, Norway maple *(Acer platanoides)*, slippery elm *(Ulmus rubra)*, black walnut *(Juglans nigra)*, elderberry, spotted lady's thumb, riverbank grape, and Virginia creeper *(Parthenocissus quinquefolia)*. This perennial flow stream has 0.64 Ac. within the project limits.

Physical habitat assessments were conducted by the Illinois Natural History Survey (INHS) using the IEPA SHAP scale and were found to be "good". Channel sinuosity and immediate land use were found to be "poor", while pool quality, channel alteration, width/depth, and hydrologic diversity were found to be "fair".

The Flint Creek Tributary was surveyed by Illinois Natural History Survey (INHS) for fish and macroinvertebrates in 2014. The fish survey found five species that are widespread and locally abundant in Northern Illinois. None of the species collected were listed as threatened or endangered or candidates for listing at either the federal or state level. The survey found the Flint Creek Tributary to be a highly modified urban stream with homogenous habitat. The macroinvertebrate and water quality monitoring were completed in 2014. The aquatic macroinvertebrate index of biotic integrity (mIBI) score was 26.24, which is considered "fair". No federally or state listed, unique, rare, or exotic aquatic macroinvertebrate species were observed. Thirteen macroinvertebrate taxa were recorded at this site. The composition and richness were found to be similar to the values in other northern Illinois streams draining commercial and industrial areas.

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

While the realignment of Flint Creek Tributary is considered a permanent impact to the stream, the entire length of the abandoned waterway, except for what is enclosed in the US 14 culvert, will remain as a backwater, wetland habitat. A total of 1.18 acres of additional impervious area will be added as a result of the construction of the underpass. Stormwater runoff from US 14 into the Flint Creek Tributary is not expected to increase as a result of the project. The proposed underpass will be drained by a proposed stormwater pump station and an oversized storm sewer upstream of the pump station will serve as detention for US 14. The stormwater discharge from the pump station will flow through a vegetated swale below discharging into the relocated Flint Creek Tributary.

The pollutant load increases that would occur from this project include some possible increases in total suspended solids. These increases, a normal and unavoidable result of the excavation and filling to realign the Flint Creek tributary, may occur in the proposed project area. Permanent impacts are expected in 0.011 Ac. of wetland and 0.241 Ac. of waterway as a result of placement of the roadway embankment and pavement for the grade separation project.

Fate and Effect of Parameters Proposed for Increased Loading.

The increase in total suspended solids would be local and temporary. Although the existing benthic habitat would be permanently filled by the construction activities, it is anticipated to recover and improve over time due to the relocation/replacement of approximately 1700 LF of creek within the project area.

Proposed mitigation for permanent impacts involves the realigning of the Flint Creek tributary. This will result in 1 LF of additional surface water as well as functional lift of the creek. The new channel will be designed to contain natural "bankfull" conditions, will have pool/riffle sequences, will be constructed with a sand and cobble bottom for water quality and habitat purposes, and will be planted with native vegetation. A minimum 30-foot buffer along the creek will be planted with native vegetation. The creek will continue to provide the functions of wildlife habitat, flood storage, and water quality. Site W1 (Flint Creek tributary) impact acreage will be mitigated as a result of the stream relocation work itself, and mitigation for the Site 1 impacts will occur at a mitigation bank within the watershed. Wetland mitigation will require a 1.5:1 mitigation ratio, or 0.003 Ac of mitigation.

To minimize the surface water impacts during construction of the bypass, appropriate erosion and sediment control Best Management Practices (BMPs) will be implemented in accordance with local, state, and federal regulations. With proper implementation of BMPs, short-term construction related water quality impacts will be avoided or minimized. Both temporary and permanent erosion control measures will be implemented as part of this project to minimize pollutants from entering adjacent wetlands during construction and to maintain a high quality of stormwater runoff. The following typical temporary erosion control measures and general stabilization methods will be utilized:

- General stabilization within 7 days of completion of work
- Perimeter erosion barrier/silt fencing around wetlands and waterways, as well as along the perimeter of soil stockpiles and temporarily disturbed soil. These will be removed once final grading and seeding has been completed.
- Use of filter bags to remove sediment before being discharged back into the waterway will be used when dewatering is necessary.
- Inlet filters will be utilized in drainage structures located in pavement to prevent sediment from entering storm sewers.
- Temporary ditch filters will be used in areas requiring water quality treatment.

- Erosion control blankets paired with permanent seeding will be utilized to temporarily stabilize disturbed soil.

Excess materials will be removed from the project area once they are no longer needed.

Approximately 350 linear feet of existing abandoned channel will remain in place and will be hydraulically connected to the realigned creek via the existing bridge under IL 59 south of US 14. The existing channel will provide positive drainage for 84 acres of tributary area and will continue to function as waterway. It will provide an additional 6 acre-feet of flood storage for the area.

The benefits of the realignment of the Flint Creek Tributary include the following:

- 1,701 LF of stream will be added.
- Functional lift of approximately 700 LF of stream, an improvement from the channelized section of the stream within the railroad ROW, will be provided.
- In-stream structures will be placed to provide functional aquatic habitat, including varying sized rock, cross vanes, riffles and pools, streambank revetments, and the installation of native vegetation.
- A minimum 30-foot stream buffer/riparian habitat will be improved by planting of native vegetation.
- A minimum 5-year management of invasive and weedy species will be utilized
- 6 acre-feet of flood storage will be added with the existing channel that will remain.
- Connectivity between different species populations will be facilitated with the inclusion of patches of habitat within the realigned stream.
- Sinuosity will be added to the stream design, where possible, based on land constraints.
- The addition of rock provides refugia and habitat for a variety of invertebrates.

The Corps has not verified the adequacy of this mitigation proposal at this time and will make the final determination on whether the proposed mitigation is appropriate and practicable in accordance with 33 CFR Part 332.

Purpose and Social & Economic Benefits of the Proposed Activity.

The purpose of the proposed grade crossing is to reduce delays to motorists, bicyclists, pedestrians, emergency responders, and any other travelers who use US 14 caused by trains on the CN Railway that block the US 14 crossing.

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

Various alternatives were analyzed, including a No-Action alternative, a roadway overpass shifted to the north, and a roadway underpass shifted to the north. During the NEPA process, additional alternatives were assessed but eliminated, including a railroad overpass, railroad underpass, partial railroad overpass with a partial road underpass, and a partial railroad underpass and partial roadway overpass. All alternatives were evaluated for cost, design constraints, and property displacements early in the NEPA process. The dismissed alternatives were not considered further due to design constraints and extremely high construction costs, as well as more displacements and impacts to adjacent properties. Alternatives for Lake Zurich Road that would be compatible with any grade separation option were also considered.

The three alternatives that were carried forward were evaluated for several types of impacts including wetland and waterway, visual/community character, floodplain, potential threatened and endangered species, park and open space, displacements, and ROW acquisition. The three alternatives are as follows:

No Action - This alternative does not impact any wetland acreage or rerouting of the waterway however, it does not meet the project's purpose and need. Aquatic/terrestrial habitat, and qualitative water quality impacts would be non-functional. Because of these, this option was not considered further.

Highway Overpass Shifted North - At a public meeting held in 2013, 416 comments were received. Of these comments, 147 stated intense opposition to the overpass while only 30 indicated support.. The primary concern with the overpass is the visual impact on the neighborhoods and community in general. Thirty-foot high retaining walls would be required for the overpass, which would make the overpass the tallest feature in Barrington other than church spires. This alternative meets the project's purpose and need, however due to negative visual impacts it was not considered further.

Highway Underpass Shifted North (Preferred Alternative) – At the 2013 public meeting, the underpass option received strong community support with 290 comments stated support. The underpass was viewed by the community as a benefit beyond the traffic improvements as lowering the road shields the neighborhood from view of US 14. Based upon resulting impacts as well as stakeholder input, the highway underpass shifted to the north with the realignment of Lake Zurich Road was selected as the preferred alternative. The Underpass Alternative will result in increased impacts to Flint Creek tributary initially due to the realignment of the creek. However, the realignment of this degraded section of Flint Creek tributary provides an opportunity for functional lift of the stream, especially the section that is channelized and parallel to the railroad tracks. The elimination of the US 14 and CN Railway crossing will eliminate delays to motorists, bicyclists, pedestrians, and emergency vehicles who use US 14 that are caused by the trains on the CN Railway.

Although the Underpass Alternative results in the largest impact to Flint Creek tributary, most of the existing channel will remain in place, functioning as a backwater, wetland habitat. This section of the tributary will still receive water from a pump station as well as runoff from adjacent uplands.

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

The proposed project has an Environmental Assessment (EA), which was completed during Phase I of the project. The Finding of No Significant Impact (FONSI) and EA Errata were dated March 6, 2014. IDOT determined on October 31, 2022 that the FONSI for the project remains valid.

IDOT's professional cultural resources staff made the determination of "No Historic Properties Affected." A Phase I Archeological Survey was completed during Phase I of the design process. No archeological sites were identified. No architectural resources that are eligible for National Register consideration were identified. The Illinois State Historic Preservation Office concurred with these findings on 11/14/2013.

IDOT completed a Natural Resources Review on February 28, 2022. There will be no tree removal between April 1 and October 31 to protect the Northern Long-eared Bat. Inspections of structures for bats will occur prior to construction. The Natural Resource Review (NRR) is included in the application documents. In addition, the IDNR was a Cooperating Agency during the NEPA process.

An EcoCAT endangered species consultation (Project # 2315804) was submitted on May 30, 2023 to the Illinois Department of Natural Resources. The natural resource review provided by EcoCAT identified protected resources that may be in the vicinity of the proposed action. The Illinois Natural Heritage Database contains a record of State-listed tamarack *(Larix laricina)*, Blanding's turtle *(Emydoidea blandingii)*, Northern long-eared bat *(Myotis septentrionalis)*, Black-crowned night heron *(Nycticorax nycticorax)*, Least bittern *(Ixobrychus exilis)*, Yellow-headed blackbird *(Xanthocephalus*

xanthocephalus), and common gallinule *(Gallinula galeata)* in the vicinity of the project. The Cuba Marsh Land and Water Reserve and INAI site is near the project as well. The Department has evaluated this information and concluded that adverse effects are unlikely. Therefore, consultation under 17 Ill. Adm. Code Part 1075 is terminated.

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 community by reducing delays to motorists, bicyclists, pedestrians, emergency responders, and any other travelers who use US 14 caused by trains on the CN Railway that block the US 14 crossing. Comments received during the 401 Water Quality Certification public notice period will be evaluated before a final decision is made by the Agency**.**

cc: Des Plaines Surface Water Manager