

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:

Friday, December 9, 2022

Public Notice Ending Date:

Friday, December 23, 2022

Agency Log No. :C-0195-22

Federal Permit Information: This civil works project is under the jurisdiction of Chicago District, Regulatory Branch U.S. Army Corps of Engineers

Name and Address of Discharger: :Village of Carol Stream, Greg Ulreich - 500 Gary Avenue, Carol Stream, IL 60188

Discharge Location: In Section 30 of Township 40-North and Range 10-East of the East 3rd Principal Meridian in DuPage County. Additional project location information includes the following: Klein Creek along east side of Armstrong Park, north of Illini Drive, Carol Stream, IL 60188

Name of Receiving Water: Klein Creek

Project Name/Description: Klein Creek Streambank Stabilization Segment III: Mitchell Lakes to Illini Drive - The Village of Carol Stream is proposing various improvements to a 1,700-ft reach of Klein Creek just downstream of Mitchell Lakes to upstream of Illini Drive (along Armstrong Park). The improvements include stream segment re-meandering, streambank stabilization with rock toe including gravity block retaining wall, rock substrate installation, wetland and riparian area creation and riparian buffer restoration, and stormwater outfall outlet protection.

Construction Schedule: Undetermined

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-0195-22-12092022-PublicNoticeAndFactSheet.pdf

The Village of Carol Stream (“Applicant”) has applied for a 401 Water Quality Certification for impacts associated with streambank stabilization to Segment III of Klein Creek, in Carol Stream. The project will involve various improvements to a 1700-ft reach of Klein Creek just downstream of Mitchell Lakes to upstream of Illini Drive (along Armstrong Park). The project has received IEPA Section 319 funding and DuPage County Stormwater American Rescue Plan funds. These proposed practices will stabilize the streambank erosion, reduce sediment from entering the creek due to erosion, and improve in-stream habitat. The proposed project site is located in Township 40 North, Range 10 East, Section 30, in DuPage County, Illinois. The main components of the project include:

- Re-meandering 906 linear feet of Klein Creek resulting in an increase of 105 linear feet. The total area of stream re-meandering is 0.42 acre.
- 3,065 linear feet of streambank stabilization with vegetated rock toe. 1,528 linear feet of the 3,065 linear feet (~50%) is within sections that are re-meandered. 361 linear feet (~12%) of the vegetated rock toe will also have a gravity block retaining wall behind it (the area in front of the walls will still be stabilized with vegetated rock toe)
- 2 rock substrate areas (riffles) totaling 2,940 square feet
- 3 rock outlet protection areas at existing storm sewer outfalls with a total area of 339 square feet
- 1.64 acres of wetland creation including construction of a 0.46-acre wetland shelf along the western bank of Mitchell Lakes
- 1.88 acres of riparian and buffer restoration
- Realignment of the existing Mitchell Lake Outfall with new structure

The vegetated rock toe will involve excavation in order to place round to sub-round clean cobble in those areas. The upper bank will be re-graded and stabilized with cover crop, permanent native seeding, and erosion control blanket. Emergent plant plugs will be planted just below the normal water level (NWL) through the rock toe to further naturalize the banks and filter pollutants through the creek. Additional enhancements include removal of non-native invasive species along the banks of the creek and creating both floodplain terraces and wetlands to allow the stream to access these areas more frequently. In some areas the banks will be lowered to just above the normal water elevation to create a floodplain terrace. Hummocks and hollows will be created within these areas to increase the residence time of stormwater runoff and create habitat through interspersed vegetation zones. These areas will be vegetated with native wetland/riparian vegetation as shown on the plans.

Flow diversion and temporary work structures to isolate the work area will be implemented and will include cofferdams at the Mitchell Lakes outfall, the Library Bridge and Illini Drive and a bypass pumping and filtration system designed to bypass normal events.

The stone vegetated rock toe will require 65 Cubic Yards (CY) of fill resulting in 0.04 acres (Ac) of temporary impacts and the retaining wall will require 10 CY of fill resulting in 0.002 Ac of permanent impacts. The rock substrate areas (RSA) will require 109 CY of fill to improve 2 areas (RSA 1 and RSA 2) within the waterway. RSA 1 is approximately 1640 square feet and RSA 2 is approximately 1300 square feet in size. Overall, the proposed project will have a positive effect on Klein Creek as the streambanks will be stabilized and naturalized. No mitigation is proposed for this project as the project itself is compensation for any impacts proposed. Additionally, no wetlands will be impacted by this project.

Information used in this review was obtained from the application documents dated May 3, 2022, November 4, 2022, September 20, 2022, and August 5, 2022.

Identification and Characterization of the Affected Water Body.

Klein Creek has 0 cfs of flow during critical 7Q10 low-flow conditions. Klein Creek is classified as General Use Water. Klein 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. Klein Creek, Waterbody Segment IL_GBKC-01, is listed on the 2018 Illinois Integrated Water Quality Report and Section 303(d) List as impaired for aquatic life use with potential causes given as alteration in stream-side or littoral vegetative covers, flow alteration-changes in depth and flow velocity, and flow regime modification. This segment of Klein Creek is not subject to enhanced dissolved oxygen standards.

The stream substrate consists of sand and gravel with little cobble. The banks are eroded and are typically 1-2' high and have overhanging roots. Undercutting and scour are prevalent on banks not associated with fringe wetlands

A wetland and stream delineation were conducted on July 21, 2021, and updated on August 5, 2022 for the survey area within the Klein Creek watershed. The site consists of Klein Creek in two separate sections, the south section reaching from Kuhn Road east to Thunderbird Trail, and the north section reaching from Illini Drive north to Mitchell Lakes. The south site is bound by a combination of open space land and residential properties to the north, open space and a water treatment plant to the south, Kuhn Road to the west, and residential single-family to the east. This section was identified by the National Wetland Inventory (NWI) as a freshwater riverine habitat in addition to wooded and emergent wetlands intermittently. The north site is bound by Armstrong Park, a public library, and a neighborhood with single-family and multi-family homes. This section was identified by the NWI as riverine. The DuPage County Wetland Map identifies the north and south reach of Klein Creek as open water in addition to intermittent fringe wetlands along the banks.

The study area consists of the stretch of Klein Creek between Illini Drive and Mitchell Lake. Waters of the U.S. (WOUS) with intermittent fringe wetlands are identified within the study area. Mitchell Lake's shoreline was determined not to be wetlands due to steep erosion and the existence of a direct hydrological connection to Klein Creek. Fringe wetlands were identified on the DuPage County wetland map but were not observed in the study area. Hydrology in the study area is provided by Klein Creek, precipitation, surface runoff and storm sewer from surrounding neighborhoods, and possibly groundwater. Hydrophytic vegetation was dominant and consisted of Big Bluestem (*Andropogon gerardii*), Kentucky Bluegrass (*Poa pratensis*), and Lance-leaf Frogfruit (*Phyla lanceolata*). Persistent hydrology was present as well as the presence of hydric soil. All three criteria for wetland determination were met for the area. The Native Mean C and FQI were 3.4, and 18.62 respectively, and were characterized as providing moderate level functions.

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

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 dredging and placement of fill in Klein Creek may occur as a result of streambank improvement activities. Permanent fill will be discharged to 0.002 Ac of WOUS (10 CY) as a retaining wall and backfill. Temporary impacts will occur in 0.04 Ac of WOUS (65 CY) as vegetated rock toe. Additionally, 109 CY of material will be placed in-stream to improve the degraded streambed quality. Sediment impacts to downstream water resources during construction are expected to be temporary.

Construction runoff may temporarily increase sediment loading to streams in the proposed action area. However, most of the suspended solids would settle out a short distance downstream of construction areas, especially in pools where stream velocity is reduced. It is expected that impacts to aquatic organisms will only be detectable in areas of in-stream activities and for short sections downstream. The increased suspended solids, sedimentation and water chemistry alterations will be short term and recolonization of affected stream reach by benthic invertebrates and fish will be relatively rapid as long as measures to minimized sedimentation are followed.

Fate and Effect of Parameters Proposed for Increased Loading.

The increase in total suspended solids would be local and temporary and existing riverbed habitat would be temporarily disturbed by construction activities. To construct the proposed improvements, the creek and lake will be dewatered and bypassed, and construction will occur in the dry creek bed. This will eliminate sediment from entering the creek. A series of coffer dams and phasing of the stabilization is proposed to achieve this. Stabilization will be completed in short segments to avoid having an area destabilized for extended periods of time. Segments are excavated, stone placed and graded, and stabilization with seed blanket will follow. If any additional dewatering is necessary within the active construction limits, water will be pumped into sediment containment devices before being directed back into the stream or storm sewer.

Permanent impacts from the retaining wall and backfill are expected during this project. The work area will be isolated by means of non-erodible coffer dams at the Mitchell Lakes outfall, the Library Bridge and Illini Drive. Materials will be temporarily stored in staging on site. All disturbed areas will be planted with native deep-rooted vegetation and stabilized with erosion control blanket following completion of soil disturbing activity in that area. Any excess excavation materials are proposed to be used for construction of a sledding hill offsite in Armstrong park.

The vegetated rock toe construction consists of excavation to receive round to sub-round clean cobble. The upper bank will be re-graded and stabilized with cover crop, permanent native seeding, and erosion control blanket. Additionally, emergent plant plugs will be planted just below the NWL through the rock toe to further naturalize the banks and filter pollutants within the creek. Overall, the proposed project will have a positive effect on Klein Creek as the streambanks will be stabilized and naturalized.

A license agreement between DuPage County Stormwater Management (DPCSM) and the Village allows for the Contractor to bypass flow in Klein Creek utilizing DPCSM's Armstrong Park Flood Control Reservoir. As shown on the construction plans, the Contractor will construct cofferdams, manually operate a flap gate, provide and operate plugs, pumps, hoses, and appurtenances to pump water from Lake George to the Reservoir's upper basin. The Contractor will only operate the bypass pumps during working hours. Outside working hours, the Contractor will utilize the existing storage in Lake George and Mitchell Lakes to temporarily store the flow when the bypass pumps are not operating.

The storm sewer that connects Lake George with the Reservoir's lower basin will have a plug which is intended to isolate the Reservoir's lower basin. This practice is to avoid exposing the vegetation to prolonged periods of elevated water levels. The plug will be designed so that it can be removed and reinstalled when submerged under low head conditions. In cooperation with the Village and DPCSM, the plug may be removed to maintain proper water levels in the Reservoir's lower basin for the existing vegetation. It may also be removed during and/or after significant storm events in order to drawdown the water levels in Lake George and Mitchell Lakes. The DPCSM will continue to operate the outflow gates in the Reservoir's upper basin per their normal operational procedures.

Planned Vegetation Removal and restoration includes removal of non-native invasive species along the banks of the creek and creating both floodplain terraces and wetlands to allow the stream to access these areas more frequently. In some areas the banks will be lowered to create a floodplain terrace. Hummocks and hollows will be created within these areas to increase the residence time of stormwater runoff and create habitat through interspersed vegetation zones. Additionally, these areas will be vegetated with native wetland/riparian vegetation.

The stream banks will be stabilized with cobble to reduce the erosion currently occurring along the banks. This will reduce total suspended solids from entering the stream and improve water quality downstream. The two rock substrate areas will be constructed consisting of coarse gravel and cobble placed in the bed of the stream within constricted cross sections. The target is to accelerate water column velocity over these substrates to improve aeration and thus increase dissolved oxygen. In addition, these rock substrate areas will encourage deposition of new sands and small gravel to the design medium of gravel, cobble and boulders and create new stream habitat currently absent within the site. This new habitat shall serve to attract and sustain certain benthic macroinvertebrates, fish, and mussel species also scarce or absent within the reach.

Habitat wood will be placed within backwater habitat areas. These wood structures will further improve dissolved oxygen and noticeably increase the niche food network of bacteria, zooplankton and phytoplankton associated with such “wood debris”. The submerged woody material is designed to increase the habitat complexity within the stream reach.

Overall, the proposed project will have a positive effect on Klein Creek as the streambanks will be stabilized and naturalized. The overall length of Klein Creek will be increased by 105 LF, 1.88 Ac of riparian and buffer restoration will occur, and 1.64 Ac of wetland creation will include construction of a 0.46 Ac wetland shelf. No mitigation is proposed for this project as the project itself is compensation for any impacts proposed. Additionally, no wetlands will be impacted by this project.

Purpose and Social & Economic Benefits of the Proposed Activity.

The proposed restoration plan involves improvements along 1,700 feet of Klein Creek between Mitchell Lakes and Illini Drive and includes both banks through the entire reach. This project will reduce channelization through re-meandering portions of Klein Creek to increase sinuosity. The project intends to improve aquatic habitat and stream functions through developing and enhancing habitat that will benefit benthic macroinvertebrates, fish and mussels that will move aquatic assemblage IBIs towards meeting the aquatic life designated use while decreasing pollutant loading through bank stabilization and restoration with native deep-rooted vegetation.

The project will enhance access to the Public Library through improvements to the trail system surrounding Mitchell Lakes. Currently there is a sidewalk on private property that the public uses to access the library from the north. This sidewalk ends at the library property and then turns into a gravel path which is not ADA compliant. The project will improve the safety of the path over the Mitchell Lakes outfall and connect the area north of the library to the path within Armstrong Park on Public Property. The public will then be able to access the library from the existing bridge over Klein Creek to the front of the library. Additionally, the public will have safer access to the water for recreational fishing through an outcropping along the Mitchell Lake shoreline. Finally, an overlook will be created near the library where the Village and Library will coordinate on the installation of educational signage.

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

The proposed project will reduce pollutant loading within Klein Creek. The material being placed consists of clean cobble, sand, and gravel for the purpose of restoring the creek to a more natural system and stabilizing the banks reducing sediment from entering the creek. Alternate project locations and a no action alternative are not possible as this type of restoration must occur within the stream.

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

An EcoCAT endangered species consultation was submitted on September 19, 2022 (Project #2304593) to the Illinois Department of Natural Resources. The consultation indicated that according to the Illinois Natural Heritage Database, the Yellow-headed Blackbird (*Xanthocephalus xanthocephalus*) may be in the vicinity of the project location. The Illinois Wetlands Inventory also showed wetlands within 250 feet of the project location. On September 20, 2022, the Department evaluated this information and concluded that adverse effects are unlikely. The consultation under 17 Ill. Adm. Code Part 1075 and 1090 was terminated.

A Section 7 consultation was conducted on July 22, 2021, in order to determine whether any federal or state listed species or habitat are likely to be adversely impacted by the project. It was determined that the following federally listed species may occur within the boundary of the proposed project: Eastern prairie fringed orchid, Leafy-prairie clover, Mead's milkweed, Prairie bush clover, Northern Long-eared Bat, Hine's emerald dragonfly, and the Rusty patched bumble bee. A review of T & E species potentially present in the project area review, USFWS coordination, and the field survey is as follows:

- Eastern prairie fringed orchid (*Platanthera leucophaea*) - The Eastern prairie fringed orchid is a federally threatened species. Habitat for this species is moderate to high quality wetlands, sage meadow, marsh, and mesic to wet prairie. The wetland community was not determined to be high quality with a native FQI greater than 20 and a native mean C greater than 3.5. The Eastern Prairie Fringed Orchid is not likely to be present within the action area and evidence of the Orchid was not found at the time of the field visit. As such, the proposed action is anticipated to have *no effect* on this species.
- Leafy-prairie clover (*Dalea foliosa*) - The leafy-prairie clover is a federally endangered species. Habitat for this species is prairie remnants on thin soil over limestone. This location is unsuitable for growth of leafy-prairie clover and as such, the proposed action is anticipated to have no effect on this species.
- Mead's milkweed (*Asclepias meadii*) – Mead's milkweed is a federally threatened species. Habitat for this species is late successional tallgrass prairie, and tallgrass prairie converted to hay meadow. This location is unsuitable for growth of Mead's milkweed and as such, the proposed action is anticipated to have no effect on this species.
- Prairie bush clover (*Lespedeza leptostachya*) – The Prairie bush clover is a federally threatened species. Habitat for this species is dry to mesic prairies with gravelly soil. This location is unsuitable for growth of the Prairie bush clover and as such, the proposed action is anticipated to have no effect on this species.
- Northern Long-eared Bat (*Myotis septentrionalis*) - The Northern Long-eared bat is a federally threatened species. Habitat for this species include caves and mines during hibernation, surrounding wooded areas in autumn during swarming, and roosts and forages in upland forests and woods. The proposed activity will not remove known occupied roost trees or remove trees within 150 feet of known occupied roost trees from June 1 through July 31 or remove trees within 0.25

miles of a hibernaculum at any time of the year. Incidental take from tree removal activities is not prohibited unless it results from removing a known occupied maternity roost tree or from tree removal activities within 150 feet of a known occupied maternity roost tree from June 1 through July 31 or results from tree removal activities within 0.25 mile of a hibernaculum at any time. Based on these conclusions, the proposed action may affect, but is not likely to adversely affect, this species.

- Hine's emerald dragonfly (*Somatochlora hineana*) - The Hine's emerald dragonfly is a federally endangered species with designated critical habitat. Habitat for this species is spring-fed wetlands, wet meadows, and marshes. Critical Habitat Designated for the Hines Emerald Dragonfly is not located near the project and as such, the proposed action is anticipated to have no effect on this species.
- Rusty patched bumble bee (*Bombus affinis*) – The Rusty patched bumble bee is a federally endangered species. Habitat for this species includes grasslands with flowering plants from April through October, underground and abandoned rodent cavities or clumps of grasses above-ground as nesting sites, and undisturbed soil for hibernating queens to overwinter. Based on the USFWS Rusty Patched Bumble Bee interactive range map, the project area appears to be located within a high potential zone. All areas surrounding the project have previously been developed, and soils have a history of disturbance leaving them unsuitable for hibernating queens to overwinter. Based on these conclusions, the proposed action may affect, but is not likely to adversely affect, this species.

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 developing and enhancing habitat in and around Klein Creek as well as providing improvements aimed towards meeting the aquatic life designated use while decreasing pollutant loading and improving dissolved oxygen. The project will also enhance access to the Public Library through improvements to the trail system surrounding Mitchell Lakes and provide access to the water for recreational fishing. Comments received during the 401 Water Quality Certification public notice period will be evaluated before a final decision is made by the Agency.