

**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:**

Wednesday, January 22, 2025

**Public Notice Ending Date:**

Tuesday, February 4, 2025

**Agency Log No.: C-0173-24**

**Federal Permit Information:** Federal permit/license no. LRC-2024-287 is under the jurisdiction of Chicago District, Regulatory Branch U.S. Army Corps of Engineers

**Name and Address of Discharger:** George Ruppert, P.E. - 148 W Illinois Ave, Palatine, IL 60067

**Discharge Location:** In Section 13 of Township 42-North and Range 10-East of the East 3rd Principal Meridian in Cook County. Additional project location information includes the following: from North Clark Drive to North Williams Drive, Palatine, IL 60067

**Name of Receiving Water:** Salt Creek Arlington Heights Branch

**Project Name/Description:** Salt Creek Streambank Stabilization - proposed construction activities to grade and reshape the banks, removal/replacement/reconstruction of existing storm sewer outfall structures, and installation of temporary sediment and erosion control measures for the duration of the construction

**Construction Schedule:** Beginning Sep 2024 and ending May 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.

Name: Oyetunde Tinuoye

Email: Oyetunde.Tinuoye@illinois.gov

Phone: 217/782-3362

Post Document. No. C-0173-24-01222025-PublicNoticeAndFactSheet.pdf

The Village of Palatine (“Applicant”) has applied for a 401 Water Quality Certification for impacts associated with streambank stabilization to both banks of Salt Creek, in Palatine. The project will involve various improvements to 2200 linear feet (LF) of Salt Creek between North Clark Drive and North Williams Drive. These proposed improvements will stabilize the streambank erosion, protect adjacent property owner land from erosion, improve water quality by reducing erosion, increase ecological health, and reduce flooding downstream. The proposed project site is located in Township 42 North, Range 10 East, Section 13, in Cook County, Illinois. The proposed project will provide streambank stabilization along up to 2200 LF along both banks of Salt Creek. The project includes invasive tree/shrub removal, grading and bank reshaping, stone toe protection, cross vane riffles, gabion basket bank protection, native vegetation reseeding, and removal and replacement of storm sewer outfalls. Improvements include reshaping eroded banks from 1:1 slopes to more stable 2:1 slopes in order to prevent further erosion.

**Bank stabilization includes:**

- 1610 LF of stone toe paired with native vegetation to resist anticipated forces of the channel flow and protect from further erosion.
- 1734 LF of extended stone toe paired with native vegetation to resist anticipated forces of the channel flow and protect from further erosion.
- 371 LF of stone toe with floodplain bench paired with native vegetation to protect from further erosion and allow for additional floodplain storage and channel stability.
- 256 LF of bank shaping/grading paired with native vegetation to prevent further erosion and reduce water surface elevations while increasing the amount of conveyance available.
- 184 LF of gabion baskets at erosion areas to stabilize the undermined bank and provide a greater roughness element with respect to flow.
- 273 LF does not require stabilization due to bridge crossings

Tree removal will occur where required to install the stabilization features with tree replacement and native vegetation plantings where possible. The project will involve permanent fill material discharge to 0.239 acres (Ac) of Waters of the U.S. (WOUS) and 0.074 Ac of streambed, both with minimal adverse environmental effects. It is expected that mitigation will be provided by the improvements to water quality and aquatic habitat as a result of the proposed project. This project will not permanently impact any wetlands.

Information used in this review was obtained from the application documents dated June 1, 2022, February 27, 2024, June 7, 2024, November 21, 2024, and December 5, 2024.

**Identification and Characterization of the Affected Water Body.**

Arlington Heights Branch (locally known as Salt Creek) has 0 cfs of flow during critical 7Q10 low-flow conditions. Arlington Heights Branch Salt Creek is classified as General Use Water. Arlington Heights Branch Salt 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. Arlington Heights Branch Salt Creek, Waterbody Segment IL\_GLC, is not listed on the 2024 Illinois Integrated Water Quality Report and Section 303(d) List as it has not been assessed. This segment of Arlington Heights Branch Salt Creek is not subject to enhanced dissolved oxygen standards.

Arlington Heights Branch Salt Creek is a constructed drainage channel of which 1.7 Ac of the channel exists throughout the entire length of the proposed project area. The stream is channelized with dimensions that are highly trapezoidal with 1:1 sloped banks that result in “flashy” conditions following rain events whereby the water rises quickly and causes erosive forces. Topography maps show that drainage occurs from the northwest to the

southeast towards Twin Lakes Golf Course and Lake Irene. The creek is moderately to severely eroded with steep bank drop offs. The National Wetland Inventory (NWI) map identified the creek as Riverine, having a NWI code of R4SBC. The creek is an intermittent stream and has surface water present for extended periods during the growing season but is typically gone by the end of the growing season. Slopes are degraded by invasive trees and shrubs resulting in heavy shade and very little soil stabilizing ground cover. There is very little instream habitat for fish and aquatic invertebrates.

A wetland and stream delineation was conducted by Baxter and Woodman Natural Resources, LLC on November 20, 2023, for the survey area. The 4 areas sampled were determined to be upland areas with dominant vegetation consisting of Eastern Cottonwood (*Populus deltoides*), Ash -Leaf Maple (*Acer negundo*), White mulberry (*Morus alba*), Green Ash (*Fraxinus pennsylvanica*), European Buckthorn (*Rhamnus cathartica*), Eastern Red Cedar (*Juniperus virginiana*), Eastern Prickly Gooseberry (*Ribes cynosbati*), and Common Reed (*Phragmites australis*). No wetlands were identified in the project area.

Impact Type	Permanent Impact? (Y/N)	Impact Location	Area of Impact (Ac.)
Stone Toe	Y	WOUS	0.231
Gabion Baskets	Y	WOUS	0.008
Cross Vein Structure	Y	Stream Bed	0.074
Grading/Seeding	N	WOUS	0.047
<b>Total Permanent Impacts to WOUS</b>			<b>0.239</b>
<b>Total Permanent Impacts to Stream Bed</b>			<b>0.074</b>

In order to stabilize the severely eroded creek banks, there will be 10,461 sq ft of stone of stone and gabion streambank stabilization treatments added causing 0.239 acres of permanently impacted WOTUS. There will be 2,060 sq ft of grading and natively seeding the banks causing 0.047 acres of temporary impact.

**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 placement of fill in Arlington Heights Branch Salt Creek may occur as a result of streambank improvement activities. Discharge will consist of clean construction materials. Sediment impacts to downstream water resources during construction are expected to be temporary. The proposed action of streambank stabilization will not result in new pollutant discharge and will improve existing impairments such as bank destabilization.

**Fate and Effect of Parameters Proposed for Increased Loading.**

The increase in total suspended solids would be local and temporary. The work area will employ various best management practices (BMPs) and erosion control measures. Some of those methods include the use of erosion control blankets, seeding, silt fences, and use of check dams with sump pits. Invasive tree/shrub removal will occur in the beginning stages of the project. Erosion and sediment control plans to be used during construction are included in the engineering plans. No other impacts to wetlands or Waters of the United States will occur as a result of the project. Once completed, the bank stabilization will result in improved downstream water quality due to decreasing sediment loads. Overall, the proposed project will have a positive effect on Arlington Heights Branch Salt Creek as the streambanks will be stabilized. No mitigation is proposed for this project as the project itself is compensation for any impacts proposed and impacts to the waterway will not be permanent.

### **Purpose and Social & Economic Benefits of the Proposed Activity.**

The purpose of the proposed project is to stabilize eroded streambanks, improve riparian corridor/floodplain function, and improve ecological conditions. The project is needed to protect adjacent property owner land from erosion, stabilize existing erosion to prevent it from becoming worse in the future, improve water quality by reducing erosion, increase ecological health, and reduce flooding downstream.

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

No Action: A No Action alternative would result in no discharge of dredged/fill material into WOUS but would not address any of the erosion concerns. The banks would remain eroded and continue to do so. Side slopes would remain as they are which provides little to no fish and aquatic invertebrate habitat. The 1:1 sloped banks would continue to promote “flashy” hydrology conditions, and erosion areas would continue and eventually cause undermining and land loss. Additionally, nutrients and sediment would continue to enter the creek every year. This No Action alternative was not chosen as it does not meet the project purpose and need.

Alternative 1 (Preferred Alternative) - Bioengineering Combined with Hard Armoring Stabilization: The proposed project will include invasive tree/shrub removal, and grading and reshaping of streambanks from 1:1 to 2:1. Stone toe stabilization will include placement of Class A riprap sized to resist the forces of the channel flow. Nine cross vane riffles arranged in a V-shaped pattern will serve as grade control and direct stream flow toward the center of the channel and will oxygenate the water to improve fish and aquatic invertebrate habitat. Gabion baskets will be placed at erosion areas to stabilize the undermined bank. Above the stone toe areas, native vegetation will be used for stabilization and will provide pollinator and wildlife habitat as well as provide long term soil stabilization. Removal and replacement of damaged storm sewer outfalls will also occur. This was chosen as the preferred alternative as it meets practicability factors including cost, existing technology, logistics and availability. The preferred alternative addresses the primary purpose to stabilize eroded stream banks, improve riparian corridor/floodplain function and improve ecological conditions. Adjacent property owners’ land would be protected from erosion, existing erosion would be stabilized, water quality would improve, and downstream flooding would be reduced.

Alternative 2 - Bioengineering Streambank Stabilization: A completely bioengineering streambank stabilization alternative would not include discharge of dredged/fill material into WOUS in areas not considered to exhibit erosion. In this alternative, the majority of streambanks would be regraded from 1:1 to 2:1 slopes, seeded with native vegetation, then stabilized with biodegradable erosion control blanket. However, this would not address the severe toe erosion that is occurring along most of the stream reach. It was determined that this alternative would not hold up below the bankfull elevation over time due to the modeled flow velocities that would lead to continued erosion and need for repairs in the future. This alternative was not considered further due to the likely failure of the bioengineering method. Additionally, though it meets logistics and availability practicability factors, it does not meet the cost and existing technology practicability factors.

### **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 February 27, 2024 (Project #2411090) to the Illinois Department of Natural Resources. An auto-termination result was returned indicating 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. The consultation was terminated.

A Section 7 consultation was conducted on February 27, 2024, 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 are listed within the boundary of the proposed project: Whooping Crane (*Grus americana*),

Rufa Red Knot (*Calidris canutus rufa*), Eastern Massasauga (*Sistrurus catenatus*), Hine's emerald dragonfly (*Somatochlora hineana*), Monarch butterfly-candidate (*Danaus plexippus*), Eastern prairie fringed orchid (*Platanthera leucophaea*), and Leafy-prairie clover (*Dalea foliosa*). A review of T & E species potentially present in the project area, USFWS coordination, and the field survey found that the project would have “no effect” on the listed 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 protecting adjacent residential properties from loss of property due to severe erosion and to improve drainage by stabilizing eroded streambanks and restore floodplain function thereby improving water quality and reducing flooding downstream. 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 Regional Office – Surface Water Manager