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, December 13, 2024	Thursday, January 2, 2025

Agency Log No.: C-0213-24

Federal Permit Information: Federal permit/license no. LRC-2024-423 is under the jurisdiction of Chicago District, Regulatory Branch U.S. Army Corps of Engineers

Name and Address of Discharger: Village of Vernon Hills, Chris Venatta - 490 Greenleaf Drive, Vernon Hills, IL 60061

Discharge Location: In Section 29 of Township 44-North and Range 11-East of the East 3rd Principal Meridian in Lake County. Additional project location information includes the following: W Greggs Pkwy, Vernon Hills, IL 60061

Name of Receiving Water: Seavey Ditch

Project Name/Description: Seavey Ditch and Lake Charles Streambank and Shoreline Restoration - proposed restoration of 6460 linear feet of streambank and shoreline due to excessive erosion and subsequent sedimentation of Lake Charles

Construction Schedule: Immediate (Planned project duration is approximately 365 days)

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-0213-24-12132024-PublicNoticeAndFactSheet.pdf

The Village of Vernon Hills ("Applicant") has applied for a 401 Water Quality Certification for impacts associated with restoration of 2300 linear feet (LF) of the Seavey Ditch channel due to excessive erosion and sedimentation, and installation of a sediment trap to the north of Lake Charles to capture sediment prior to the channel's discharge to Lake Charles. The proposed project site is located in Township 44 North, Range 11 East, Sections 28 and 29, in Lake County, Illinois.

Seavey Ditch is in areas of sand and gravel in the incised areas and organic/muck soils where there is less stream incision. Both soil types are highly erodible and prone to down cutting and over widening, failure, slumping, and cleaving. Within the scour line of the channel, riprap toe protection will be installed to prevent future bank failure, and over widening. A sediment trap will be created as a deeper rock-lined area within Seavey Ditch which includes 455 cubic yards (CY) of material to be removed. This excavated area will then be lined with rip rap within Seavey Ditch in order to prevent further migration of sediment into Lake Charles. The sediment trap will allow for removal of approximately 300 CY of sediment per year. Within the restoration areas all non-native and invasive trees and shrubs will be removed. Almost 5 acres (Ac) of upland/riparian restoration will occur to restore not only the creek but the associated upland, riparian, and wetland areas.

The project will have permanent and temporary impacts to waters of the United States and wetland. The temporary impacts to the stream are expected to be 1.47 Ac and permanent impacts are expected to be 0.02 Ac. All impacted wetlands will be restored as part of the project. An estimated 40 CY of rip rap aggregate will be placed within the sediment trap as a sediment trap check dam and structural fill to improve channel two highly eroded meanders. Riprap in the amount of 4750 CY will be placed for the riprap toe protection areas. The riprap toe areas are considered temporary stream impacts for this project.

Overall, the proposed project will have a positive effect on Lake Charles and the Seavey Ditch corridor as the shoreline and streambank will be stabilized and as a result, significantly decrease sediment loading in Lake Charles and Seavey Ditch. Additionally, the project will likely result in increased recreational use due to improvements to the lake and stream corridor, decreased sedimentation, and increased native species diversity. No mitigation is proposed for this project as the project itself is compensation for any impacts proposed.

Information used in this review was obtained from the application documents dated April 9, 2024, June 17, 2024, July 9, 2024, October 23, 2024, and November 19, 2024.

Identification and Characterization of the Affected Water Body.

A Wetland and Waters of the U.S. (WOUS) assessment was completed on October 18, 2022, following the field investigation by Christopher B. Burke Engineering, Ltd. (CBBEL) done on September 28, 2022. The study area included 6 wetlands/WOUS in which it was determined that no work was to be done. The wetland/WOUS that will be impacted by the proposed project was identified as Wetland/WOUS 7 (Seavey Drainage Ditch).

<u>Wetland/WOUS 7</u>

Seavey Ditch, a tributary to Indian Creek, has 0 cfs of flow during critical 7Q10 low-flow conditions. Seavey Ditch is classified as General Use Water. Seavey Ditch 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. Seavey Ditch, a tributary to Waterbody Segment IL_GU-02, 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 Seavey Ditch is not subject to enhanced dissolved oxygen standards.

Seavey Ditch is an eroded ditch prone to downcutting, over widening, cleaving and failure. It is located north of Lake Charles between Greggs Parkway and Hazeltime Drive. This stream has a riparian wet meadow/prairie that is dominated by hybrid cattail *(Typha x glauca),* reed canary grass (*Phalaris arundinacea),* rice cut grass (*Leersia Oryzoides*), riverbank grape (*Vitis riparia)*, and European buckthorn *(Rhamnus cathartica).* The Native Mean C was 2.17 with an FQI of 10.43, which is not indicative of a high-quality aquatic resource.

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

Within the restoration area all non-native and invasive trees and shrubs will be removed. Significant areas of upland/riparian restoration will occur to restore the creek as well as the associated upland, riparian, and wetland areas. The project will result in permanent and temporary impacts to waters of the United States and wetland. A few hundred square feet of stream channel is being modified to eliminate a very sharp eroded bend.

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 fill placement may occur as a result of streambank and shoreline improvement activities. Permanent fill in the form of riprap will be discharged to 0.02 Ac of WOUS (40 CY) as a sediment trap check dam and structural fill to improve channel geometry (to soften two severe highly eroded meanders within the channel). Temporary impacts in the form of riprap placement will occur in 1.47 Ac of WOUS (4,750 CY) as vegetated rock toe. Additionally, 2500 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.

No change in tributary area or drainage patterns is proposed. This project is anticipated to significantly reduce the volume of sediment that enters and deposits with Lake Charles. Work will be completed in dry conditions with no material anticipated to fall back into moving or ponded water.

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.

No compensatory mitigation is proposed for the project as the fill placement in wetlands is temporary, and the project improves the stream and lake overall. The project will ensure that the activities will result in no more than minimal adverse environmental effects. Permanent impacts to the tributary are minimal and will result from fill placement at the shoreline to limit or reduce future erosion of the channel. The sediment trap will be excavated and lined with riprap, while excavated sediment from the creation of the sediment trap, as well as maintenance of, will be disposed of in a landfill offsite.

Low pressure equipment and crane matting will be used to minimize the impact to the vegetation and soils during the shoreline stabilization. All bare soil areas will be seeded and blanketed following construction. The increase in total suspended solids would be local and temporary.

Overall, the proposed project will have a positive effect as the streambanks will be stabilized and naturalized. All native restoration areas will undergo at least 3-years of maintenance and monitoring to ensure the native vegetation is well established. No mitigation is proposed for this project as the project itself is compensation for any impacts proposed.

Purpose and Social & Economic Benefits of the Proposed Activity.

The purpose of the project is anticipated to significantly decrease sediment loading in Seavey ditch and Lake Charles due to the installation of the shoreline protection. The project will restore significant areas of riparian habitats to native dominated plant communities. All forested areas adjacent to the channel and to Lake Charles are dominated by non-native and invasive species such as buckthorn and honeysuckle which will be removed from the site. The native restoration will result in increased species diversity, well vegetated stream and lake banks that are less prone to erosion, and improved terrestrial and aquatic habitats.

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

No Action Alternative: This alternative would result in additional sediment being deposited in the Lake Charles and downstream areas and there would be no improvement to native species without intervention. Accelerated erosion would likely occur due to the continual increased height of cut banks. These cut banks are increasingly prone to erosion due to gravitational forces promoting keeling, cleaving, slumping, and sliding due to the lack of a stable base to resist these forces.

Streambank Stabilization: The entire stream corridor within the project area was evaluated. The stream is located in an excavated ditch that was constructed to allow farming of areas that were previously wetland. The ditch was excavated across large wetlands and uplands to effectively drain the areas for row crops. The ditch cut through areas of deep organic soils and into underlying sands and gravels. Organic soils become highly erodible due to the lack of cohesion once they are drained. Beneath the organic soils are sands and gravels which are also highly erodible due to the lack of cohesion to hold the soils together. Based on the design evaluation, it was determined that the entire reach of channel required use of hard armoring to greatly minimize the risk of lateral movement by the channel into the underlying sands and gravels which would result in toe failure, leading to excessive erosion of the overlying organic sediments.
Partial protection of the channel would likely lead to a domino effect of bank failure due to failures that would replicate downstream.

Lake Bank Stabilization: Shoreline stabilization along Lake Charles was considered as Lake Charles was originally mined for sands and gravels, some of the hill sides around the lake are very steep and prone to erosion due to the steepness of the banks and the type of substrate in the embankments. Like the stream corridor, non-cohesive highly erodible sediments which require protection are present. Portions of the lake shoreline with the most critical erosion areas were selected for restoration. The project was redesigned to no longer consist of this option as part of the project.

Lake Dredging: Dredging at the north end of the lake was considered as the lake is getting shallower and less desirable. The intent of the proposed dredging was to remove the large sediment plume in the lake and create a sediment trap at the north end of the lake. The goal was to extend the life of the lake in terms of recreational use. Numerous studies of the lake have been completed to evaluate various dredging scenarios and an alternative that was the smallest project to provide lake benefits was considered. Whole lake projects were considered but rejected due to cost and logistics and ultimately, all lake dredging plans were abandoned due to cost.

The proposed project includes stream bank stabilization/sediment trap construction and was determined to be the least damaging alternative.

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 April 9, 2024 (Project #2412870) to the Illinois Department of Natural Resources. The consultation indicated that according to the Illinois Natural Heritage Database, the following protected resources may be in the vicinity of the project location:

State Listed
Black-crowned Night Heron *(Nycticorax nycticorax)*
Northern Long-eared Bat *(Myotis septentrionalis)*

"Due to the project scope and proximity to protected resources the Department recommends the following actions be taken to avoid adversely impacting listed species in the vicinity of the project:

Black-crowned Night Heron

• No work occurs on the project from March 1st to August 31st to avoid the prime nesting season for the Black-crowned Night Heron.

• If the date restriction cannot be accommodated, the Department recommends a bird survey and habitat assessment be performed by a qualified biologist in the proposed development area. Results should be forwarded to the Department for a final determination on impacts to the Black-crowned Night Heron and other migratory bird species.

Northern Long-eared Bat

• No tree clearing between the dates of April 1st and October 31st

o If these dates cannot be accommodated, a bat habitat assessment should be conducted in the project area by a qualified biologist to determine if habitat trees are present.

 If suitable habitat trees are found within the project area, these trees should be clearly flagged and/or marked and not be cut between April 1st and October 31st. All non-suitable trees may be cut at any time.

Given the above recommendations are adopted the Department has determined that impacts to these protected resources are unlikely. The Department has determined impacts to other protected resources in the vicinity of the project location are also unlikely."

The Department also suggested that if erosion control blanket is to be used, then wildlife-friendly plastic-free blanket should be used around wetlands and adjacent to natural areas, if not feasible to implement project wide, to prevent the entanglement of native wildlife.

A Section 7 Consultation was initiated on October 12, 2022, that identified 7 species that may be present in Lake County. The Northern Long-eared Bat, piping plover, Rufa red Knot, Karner blue butterfly, rusty patched bumble bee, Eastern prairie fringed orchid, and Pitcher's thistle. However, no critical habitat for the listed species exists within the project area. Because of this, the proposed project was determined to have "no effect" on listed species, their habitats, or proposed or designated critical habitat.

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 creating a sediment trap, and restoring severely eroded shorelines of Seavey Ditch in order to minimize sediment impacts in the Seavey Ditch channel. As a result, discharges of sediment to Lake Charles and downstream areas will also be minimized. Native restoration will result in increased species diversity, well-vegetated streambanks that are less prone to erosion, and improved terrestrial and aquatic habitats. Comments received during the 401 Water Quality Certification public notice period will be evaluated before a final decision is made by the Agency.