

IEPA Log No.: **C-0670-10**
CoE appl. #: **LRC-2010-384**

Public Notice Beginning Date: **May 17, 2011**
Public Notice Ending Date: **June 7, 2011**

Section 401 of the Federal Water Pollution Control Act
Amendments of 1972

Section 401 Water Quality Certification to Discharge into Waters of the State

Public Notice/Fact Sheet Issued By:

Illinois Environmental Protection Agency
Bureau of Water
Permit Section
1021 North Grand Avenue East
Post Office Box 19276
Springfield, Illinois 62794-9276
217/782-3362

Name and Address of Discharger: Forest Preserve District of Dupage County – 35 580 Naperville
Road, Wheaton, IL 60187-8761

Discharge Location: Near Warrenville in Sections 26 and 35 of Township 39N, Range 9E of the 3rd
P.M. in DuPage County.

Name of Receiving Water: West Branch of DuPage River

Project Description: Proposed removal of portions of Warrenville Dam, restore and enhance the west
branch of the DuPage River and modify island adjacent to the dam for recreational use.

The Illinois Environmental Protection Agency (IEPA) has received an application for a Section 401 water quality certification to discharge into the waters of the state associated with a Section 404 permit application received by the U.S. Army Corps of Engineers. The Public Notice period will begin and end on the dates indicated in the heading of this Public Notice. The last day comments will be received will be on the Public Notice period ending date unless a commenter demonstrating the need for additional time requests an extension to this comment period and the request is granted by the IEPA. Interested persons are invited to submit written comments on the project to the IEPA at the above address. Commenters shall provide their names and addresses along with comments on the certification application. Commenters may include a request for public hearing. The certification and notice number(s) must appear on each comment page.

The attached Fact Sheet provides a description of the project and the antidegradation assessment.

The application, Public Notice/Fact Sheet, comments received, and other documents are available for inspection and may be copied at the IEPA at the address shown above between 9:30 a.m. and 3:30 p.m. Monday through Friday when scheduled by the interested person.

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 call James Blessman at 217/782-3362.

JTB:C-0670-10_401 PN and FS_13Sep10.docx

The Forest Preserve District of Dupage County ("Applicant") has applied for Section 401 water quality certification for a project which consists of removing a portion of the Warrenville Grove Dam ("Dam"). Applicant has stated that, "the project consists of removing a portion of the dam to reconnect the river and restore/return it to its natural fluvial state. Construction will occur in two phases; Phase 1 – removal/notching of the existing dam with in-stream restoration immediately upstream and downstream of the dam; and Phase 2 – restoration of the upstream pool area to allow for the re-creation of upstream channel conditions. In-stream restoration will include items such as boulder clusters, root wads, riffles, runs, cascades, and a vortex rock weir in order to facilitate objectives such as; substantial water and debris conveyance through the weir, variable sights and sounds of moving water for visitors at different volume flow states, watercraft passage downstream through the weir, fish passage up-stream through the riffle/run, and various niche habitat for aquatic organisms". Approximately 190 cubic yards of sediment will be mechanically removed and placed on the island as fill. This material will not be placed in waters of the state. The proposed work will be completed in the dry by installing a sheetpile diversion structure and bypassing the river through the millrace (Phase 1) and through the modified dam (Phase 2). The Dam is located within the Warrenville Grove Forest Preserve in Warrenville. The project is located in Sections 26 & 35, Township 39 North, Range 9 East. The existing Dam is a run-of-river structure constructed of reinforced concrete and quarried limestone. The Dam is approximately 100-feet across with a curving spillway face that has a total crest length of about 125 feet. Limestone slabs that constitute the downstream face of the spillway were laid down in a stair step configuration. The impoundment created by the Dam was approximately 4,300 feet in length and surface water area of the impoundment was approximately 12.5 acres, before the Dam was notched during 2010. The area behind the Dam was known to contain thorium, but the material that contained thorium above the approved cleanup objectives was removed by Tronox (formerly Kerr-McGee), prior to removing the Dam. This CERCLA cleanup work was completed on November 9, 2010. The CERCLA cleanup work also required that the Dam be notched for partial dewatering. A 30-foot section of the Dam was notched approximately 24-inches on August 20, 2010. The water surface area behind the Dam has consequently been reduced due to this notch.

Identification and Characterization of the Affected Water Body.

The West Branch of DuPage River ("River") is a General Use Water with a 7Q10 flow of 22.2 cfs at this project location. Waterbody segment II_GBK-05, is listed in the Illinois Integrated Water Quality Report and Section 303(d) List-2010 as impaired for aquatic life and primary contact recreation. The potential causes of impairment are phosphorus, Sedimentation/Siltation and TSS for aquatic life and fecal coliform for primary contact recreation. This section of the River also has a TMDL for chloride. The West Branch of DuPage River is not an enhanced waterbody pursuant to the dissolved oxygen water quality standard. Using the 2008 Illinois Department of Natural Resources Publication *Integrating Multiple Taxa in a Biological Stream Rating System*, the River at this location is not listed as a biologically significant stream nor has it received an integrity rating. The West Branch of DuPage River has a drainage area of approximately 90 square miles at the project site. The project will cause temporary impact to 0.525 acres of the River and will cause permanent impact to 0.365 acres of the River. Applicant has stated that, "the permanent impacts will be due to the filing of a portion of the island to the west of the Dam to create a canoe launch and public recreational and educational access to this area after the dam is modified and the water level drops. Also, the construction of the rock lined channel upstream of the millrace is considered permanent impact. The rock channel is needed as part of the IHPA requirements of the Dam modification. The loss of waters due to the permanent impacts will be replaced by creation of high quality in-stream habitat, wetland fringe, and buffer. The temporary waters impacts will be due to in-stream grading work below the normal water level, sheet pile installation and removal, and construction access roads". There will be 7.64 acres of wetland created for the 0.365 acres of permanent impact; this is greater than a 20:1 ratio of mitigation. In addition, there will be 3.81 acres which will be enhanced by this project. See table below for details:

Existing Community- West Branch Dupage River	Proposed Community	Enhancement-Acres	Wetland Creation-Acres
	Sedge Meadow	-	1.57
	Marsh Meadow	-	0.94
	Emergent Wetland	-	5.13
	Floodplain Forest	2.33	-
	Sand and Gravel	0.26	-
	Bank Loading	0.43	-
	Upland Buffer	0.79	-
	TOTAL:	3.81	7.64

According to the IDNR WIRT System the Kirtland's Snake, Heart-leaved Plantain and the Black-Crowned Night Heron were identified as threatened or endangered species residing in the project area.

Applicant has stated, "For the past four years, a monitoring probe has been in place upstream of project within the impoundment that collects DO, Temp, Conductivity, and Ph. This data will continue to be monitored and will be available for reference and comparison before, during, and after dam removal. A monitoring probe will be deployed in the future to collect DO, Temp, Conductivity, and Ph in a free flowing segment of the river." In addition to this monitoring the Applicant plans to conduct the following studies:

- Monitoring fish and macro-invertebrate species which will be completed to determine relative acceptance of the water surface elevation change as habitat for desired species.
- Macroinvertebrate sampling which will follow the newly developed Illinois Environmental Protection Agency (IEPA 2005) multi-habitat method in the larger wadable streams and tributaries.
- Mussel sampling which will follow the 'Protocol for Surveying Freshwater Mussels in Wadable Streams and Wadable Portions of Large Rivers, developed by Robert Szafoni, IDNR-2002.
- Stream Barrier Monitoring Design Quantitative Assessment looking at eight critical monitoring parameters. These parameters provide fundamental pre-and post project data for analyses to characterize the physical, chemical, and biological changes at removal sites.
- A Vegetation monitoring criteria which will be under the responsibility of the DuPage County Stormwater Management Division.

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 suspended solids during the construction of the project. Erosion control measures will be utilized to minimize any increase in suspended solids. Aquatic life uses in the portion of the West Branch DuPage River that will be disturbed during construction may be negatively impacted, but in time, they will recover and support an improved more diverse community structure than what is now found in the existing channel.

Fate and Effect of Parameters Proposed for Increased Loading.

The increase in suspended solids will be local and temporary. Erosion control measures will be utilized to minimize any increase in suspended solids and prevent further impact to the stream. Construction for the proposed project will occur during a period of low flow to further minimize any impact.

Purpose and Social & Economic Benefits of the Proposed Activity.

The Applicant has stated, "the purpose of the Warrenville Grove Dam Modification is to restore the ecological health of an impounded segment of the West Branch DuPage River...The natural function of the stream is degraded with the impoundment upstream, no mussel or fish colonization occurs in the dam area, water quality is poor, plant and animal species diversity is low, and there is a large amount of

sediment buildup... By removing a portion of the existing dam and allowing for re-creation of upstream channel conditions, this project will:

- Restore the natural ecological functions and processes of a free-flowing river segment,
- Eliminate the impoundment upstream of the dam that supports high algal biomass, higher water temperatures, and intermittent substandard dissolved oxygen levels, considered a non-pollutant impairment...
- Remove barriers to fish migration and mussel dispersion,
- Decrease maintenance needs and costs of the dam,
- Improve the safety of the dam,
- Provide improved educational and recreational opportunities for the community,
- Improve the Qualitative Habitat Evaluation Index scores (Yoder and Rankin, 1998 methodology) and functional aquatic habitat,
- Improve water quality and habitat of the river,
- Improve sediment transport within the river section, and
- Eliminates unwanted sediment accumulation.”

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

The construction of the proposed project will follow conditions set forth by the Agency and USACE. Erosion control measures will need to be implemented to prevent additional impacts to the stream. Applicant has stated concerning Soil Erosion and Sediment Control that, “activities will begin with the installation of appropriate erosion control measures such as silt fence, in-stream barrier filter, and stabilized construction entrance. After the installation of the erosion control measures modification of the dam can begin. Erosion controls will remain in place and will be maintained per the requirements provided in the approved plan set until the disturbed areas have been stabilized, at which time they will be removed.” The Applicant will follow Best Management Practices during the project; including, disturbed areas within the project site will be restored with native seeding immediately following construction activities followed with additional planting activities in the spring.

The Applicant looked at four alternatives to this proposed project;

- *No action Alternative* would leave the present conditions. The dam and impoundment would remain and the river would continue to be fragmented and water quality would continue to decrease.
- The alternative of installing a *single notch in the dam to millrace elevation* would not increase stormwater storage, aquatic/wildlife and habitat diversity, or water quality. Extensive scour would also develop below the Dam.
- The alternative of installing a *single notch in the dam to channel elevation* would only provide a limited increase in stormwater storage, aquatic/wildlife and habitat diversity, or water quality. Sediment would continue accumulate upstream of the structure. Mussels and fish would be able to pass downstream but would be prevented from moving upstream.
- The *dam modification/removal alternative* which was selected would consist of a series of stepped notches across the entire width of the existing dam and essentially removing the dam to reconnect the river and restore/return it to its natural fluvial state.

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

In a letter from Rick Pietruszka dated February 24, 2009 the IDNR indicated that an initial report generated through their EcoCAT website indicated the presence of protected resources in the vicinity of the project location. Further review by the IDNR staff concludes that adverse impacts to the protected resources are unlikely. IDNR conducted a re-review of this February 24, 2009 letter on February 3, 2011 and stated that their previous review letter was still valid; therefore, consultation with IDNR was 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 antidegradation review summary was written. We tentatively find that the proposed activity will result in the attainment of water quality standards; that all existing uses of the receiving waters will be maintained; 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 removing the Dam will benefit the community at large as indicated above. Comments received during the 401 Water Quality Certification public notice period will be evaluated before a final decision is made by the Agency.