IEPA Log No.: **C-0703-10**
CoE appl. #: **LRC-2010-396**

Public Notice Beginning Date: **June 10, 2013**
Public Notice Ending Date: **July 10, 2013**

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: Wonder Lake Master Property Owners Association (MPOA) – 7602 Hancock Dr., Wonder Lake, IL 60097

Discharge Location: Near Wonder Lake in Sections 12, 13 and 24 of Township 45N, R7E and Sections 6, 7, 18, and 19 of Township 45N, Range 8E of the 3rd P.M. in McHenry County.

Name of Receiving Water: Galt Creek tributary to Wonder Lake

Project Description: Proposed return water discharge from lake dredging and associated discharge structure with scour protection within Galt Creek.

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 Darren Gove at 217/782-3362.

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Fact Sheet for Antidegradation Assessment
For Wonder Lake Master Property Owners Association (MPOA)
IEPA Log No. C-0703-10
COE Log No. LRC-2010-396
Contact: Darren Gove; 217/782-3362
Public Notice Start Date: June 10, 2013

The Wonder Lake Master Property Owners Association ("Applicant" or "Wonder Lake MPOA") has applied for 401 water quality certification for the removal and placement of hydraulically dredged material from Wonder Lake ("Lake") in Sections 6, 7, 12, 13, 18, 19, and 24, Township 45 North, and Ranges 7 and 8 East, near the Village of Wonder Lake. The project involves the removal of approximately 532,330 cubic yards of accumulated sediment from the Lake. Dredging below the historical lakebed level in West bay will not be performed. If funding allows the Applicant plans additional future dredging that would increase the total dredging quantity to approximately 963,000 cubic yards. The sediment will be hydraulically dredged and pumped via a pipeline into a sediment dewatering facility ("SDF"). The SDF site is currently designated as an upland agricultural area. The SDF will be located approximately one mile northwest of West Bay and immediately south of the Galt Airport. The returning water from the constructed SDF will drain into Galt Creek which flows into the West Bay of the Lake.

Identification and Characterization of the Affected Water Body.

Wonder Lake is a General Use Waterbody. Wonder Lake Waterbody Segment IL_RTZC is listed in the Illinois Integrated Water Quality Report and Section 303(d) List-2012 as impaired for Aesthetic Quality with the potential causes being Phosphorus (Total). The drainage area of the Lake is about 97 square miles. The Lake was built in 1929 by the creation of a 22' high dam across Nippersink Creek. The maximum water depth is 13' with a mean depth of 6.4'. The Lake has a surface area of approximately 830 acres.

Nippersink Creek (segment IL_DTK-06) has a zero 7Q10 flow and is classified as General Use water. The Creek is listed in the Illinois Integrated Water Quality Report and Section 303(d) List-2012 as impaired for Aquatic Life, Fish Consumption, and Primary Contact Recreation. The potential causes of impairment to Aquatic Life use include Aldrin, Nickel and Unknown Causes. The potential causes of impairment for Fish Consumption are Mercury and PCBs. The potential causes of impairment for Primary Contact Recreation are Fecal Coliform. The creek 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 creek is not listed as a biologically significant stream but it has received an integrity rating of "B". The creek watershed has a drainage area of approximately 85.4 square miles at the project site.

Galt Creek has a zero 7Q10 flow and are General Use Waters. Galt Creek has not been evaluated by the Illinois EPA Surface Water Monitoring Unit in the draft 2012 Illinois Water Quality Report. The Creek 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 Creek is not listed as a biologically significant stream nor has it received an integrity rating within the project area. The Creek watershed has a drainage area of approximately 0.71 acres at the project site.

Identification of Proposed Pollutant Load Increases or Potential Impacts on Uses.
No pollutant load increases would occur from this project other than some increases in suspended solids near the location of hydraulic dredging equipment. The benthic habitat to be dredged will be disturbed but should revert to its previous condition of aquatic life support soon after dredging. Discharge from the SDF will require a permit from this Agency and meet the effluent standards of 35 Ill. Adm. Code. Part 304. For the protection of groundwater resources, the applicant has proposed construction of a 2 foot thick compacted soil liner that will meet a hydraulic conductivity requirement of $1x10^{-6}$ cm/sec. Additionally, the applicant has proposed groundwater monitoring as outlined in the final Soils Investigation and Groundwater Protection Plan dated June 6, 2013 in order to verify that the SDF will not cause violations of groundwater quality standards.

Fate and Effect of Parameters Proposed for Increased Loading.
The increase in suspended solids will be local and temporary. The proposed dredging operation is for an operation which would include two phases of 6-8 months of dredging operations, which is followed by approximately 1 year of no dredging after each phase. Dredging operations are proposed for 12 hours/day for 5 days/week during the two dredging phases.

Purpose and Social & Economic Benefits of the Proposed Activity.
This project will increase the overall depth of multiple lake areas impacted with silt accumulation. Lake dredging will benefit the community by providing safer navigation and allow restored and improved recreational access. Fish populations will also benefit from the dredging as the result of expanded overwintering habitat, improved lake eutrophication levels, and increased dissolved oxygen levels.

Assessments of Alternatives for Less Increase in Loading or Minimal Environmental Degradation.
The dredging of Wonder Lake will follow guidelines set forth by the Agency and USACE. The Applicant will follow an approved Soil Erosion and Sediment Control Plan, a Storm Water Pollution Prevention Plan, and a Groundwater Monitoring and Protection Plan

In order to avoid wetlands areas the Applicant has stated that there will be a 20 foot no-dredge area out in the main body of the Lake and a 10 foot no-dredge cut area within the creek and small inlets. To further avoid wetlands in the South Bay area the Applicant stated the following:

"Based upon a July 2010 boat tour of the lake conducted with representatives of the U.S. Army Corps of Engineers, it was decided to increase the 'no-dredge' zone in this area to 200 feet as an extra measure of protection. No emergent wetland vegetation will be impacted by the proposed dredging…"

The Applicant considered six different sites to build the SDF and has decided to build the SDF on a 120 acre Greenwood Road location.
"After a long careful analysis of the site evaluation criteria for alternative SDF site locations, the Greenwood Road alternative was chosen as the preferred alternative due to the immediate long term availability, minimal impacts to natural habitat, location relative to the lake, ability to hold

the sediment required for completion of the priority dredging, ease of operation, and the ability to leave the dredged sediment in place after dredging has been completed."
The Applicant has stated that they will provide a 50' buffer around the identified wetlands on the SDF site, which will result in no wetland impact at the SDF site.

The Applicant looked at three alternatives to dredging the Lake "open the sluice gates" draw down the lake" and the use of "Geotextile Tubes", which are described in more detail below:

- Open the Sluice Gates: "An alternative to 'open the sluice gates' and discharge or bypass sediment downstream was never considered in the dredging feasibility study, as it is totally infeasible and environmentally unacceptable. The in-lake sediment targeted for dredging is not located within close proximity to the spillway and sluice gates to be potentially discharged downstream…Even if the targeted sediment could somehow be induced to move towards the sluice gate, this approach would significantly impact aquatic habitat and would violate numerous environmental regulations."
- Draw down the Lake: "An alternative to 'draw down the lake' to allow dry mechanical sediment excavation to be completed was also quickly determined to be infeasible, given the presence of an upstream 90 square mile watershed contributing flows to the lake, and numerous in-lake springs. The probability of drawing Wonder Lake down and then maintaining dry enough lakebed conditions for a long enough period of time to allow mechanical dredging and associated hauling to proceed on a cost-effective basis was determined to be highly unlikely. This alternative would also result in the loss of a heavily used recreational lake for one or more years, and would require more than 25,000 truckloads (assuming 18-20 cubic yards per truckload) on residential side streets, many of which are already in substandard conditions."
- Geotextile Tube: "A 'Geotextile Tube' alternative was also quickly determined to be infeasible, due to cost, the loss of recreational boating areas, and the wetland mitigation requirements that would be triggered by converting the lakebed areas occupied by the Geotextile Tube storage area to a non-wetland condition."

The least intrusive alternative would be to not dredge the Lake. This is not an acceptable alternative given that this is a useful project and will improve the quality of the Lake. The Applicant has stated the following:
"The dredging of Wonder Lake and the stabilization of eroding Wonder Lake shorelines were specifically identified as recommended Best Management Practices in the 2008 Nippersink Creek Watershed-Basin Plan ('NCWBP')."

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

In an email from Karen Miller dated May 16, 2013 the IDNR indicated that consultation raised concerns about the potential presence of Blanding's Turtle, a state-listed endangered species, in vicinity of the project. The email also reflected the concerns of the Illinois Nature Preserves Commission (INPC) regarding Barber Fen Nature Preserve located to the south along Nippersink Creek.

IDNR noted that the applicant has addressed the concerns about the Blanding's Turtle by developing a Blanding's Turtle Protection Plan and has addressed INPC's concerns about Barber's Fen by agreeing to monitor groundwater for quantity and quality for the duration of the project and by following these two stipulations: 1) "There should be no impact to Barber Fen Nature Preserve, including no changes to hydrology", and 2) "There should be no impact to State-listed threatened or endangered species".

IDNR recommends the IEPA require the Turtle Protection Plan to be followed and adopt the INPC's stipulations. Consultation with IDNR was terminated on May 16, 2013.

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 the assessment 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 stream 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 that this activity will benefit the community at large by providing improve recreation and Lake habitat. Comments received during the 401 Water Quality Certification public notice period will be evaluated before a final decision is made by the Agency.