

DNR

Indiana Department of Natural Resources

Michael R. Pence, Governor
Robert E. Carter, Jr., Director
Division of Water
402 W. Washington Street
Room W264
Indianapolis, IN 46204
Phone (317) 232-4160
Toll-free (877) 928-3755
Fax (317) 233-4579
www.in.gov/dnr/water/

February 13, 2013

Brian W. McKenna, P.E., CFM
Water Resources Engineer
Christopher B. Burke Engineering, LLC
115 West Washington Street, Suite 1368 South
Indianapolis, Indiana 46204

Re: Lake DeTurk Conservancy District

Dear Mr. McKenna:

The Department of Natural Resources, Division of Water, has approved the District Plan for the Lake DeTurk Conservancy District under the powers delegated to the Director of the Division of Water by the Natural Resources Commission [Information Bulletin #36, (Seventh Amendment) posted to the Ind. Reg. as 20110928-IR-31211566NRA (October 1, 2011)]. The enclosed signed document constitutes the approval of the District Plan.

The approval of the District Plan or any of the conditions or limitations, which it contains, may be appealed by applying for administrative review. Such review is governed by the Administrative Orders and Procedures Act, IC 4-21.5, and the Department's rules pertaining to adjudicative proceedings, 312 IAC 3.

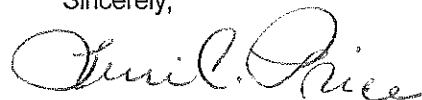
In order to obtain a review, a written petition must be filed with the Division of Hearings within 18 days of the mailing date of this notice. The petition should be addressed to:

Mr. Stephen L. Lucas
Natural Resources Commission
Division of Hearings
100 North Senate Avenue, Room N-501
Indianapolis, Indiana 46204

The petition must contain specific reasons for the appeal and indicate the portion or portions of the approval to which the appeal pertains. If an appeal is filed, the final agency determination will be made by the Natural Resources Commission following a legal proceeding conducted before an Administrative Law Judge. Legal counsel will represent the Department of Natural Resources.

If you have questions concerning the enclosed document or this letter, please call me at 317-234-1081 or toll free at 877-928-3755.

Sincerely,



Terri Curlee Price
Water Resource Planner
Division of Water

cc: Peter R. Foley, Attorney
Dean Roberson, Chairman

Enclosure

**DEPARTMENT OF NATURAL RESOURCES
DIVISION OF WATER
INDIANAPOLIS, INDIANA**

**LAKE DETURK CONSERVANCY DISTRICT
APPROVAL OF THE DISTRICT PLAN
FEBRUARY 12, 2013**

Background

Lake DeTurk is located in Morgan County; more particularly on the Martinsville Quadrangle Map in Sections 27 and 34, Township 12 North, Range 1 East West. In the early 1970's this earthen dam structure was constructed by Grassyfork Fisheries Co., Inc. to supply water for a goldfish hatchery. However by the late 1970's, 20 feet of material was added which increased the total height of the dam to 30 feet. About this same timeframe, the ownership of this commercial fish operation was transferred to Ozark Fisheries, Inc (Ozark).

Shireman Estates is a 322 lot residential development that is now part of the City of Martinsville. This development contains the 35 acre Lake DeTurk, dam and spillway, two (2) beaches, two (2) parks and common areas which were improved and maintained by the original developers of Shireman Estates and came under the ownership of Ozark. In 2000, a group of real estate owners filed a lawsuit against Ozark because they felt they had a right to use and enjoy Lake DeTurk and the other amenities provided by the original developer and that Ozark had a duty to maintain Lake DeTurk and those amenities. A Settlement Agreement between the parties was reached in November 2010. This Agreement stipulated that after the court's approval, the plaintiffs were to file a petition for the formation of a Conservancy District. Additionally the Conservancy District accepted any and all liabilities concerning the real estate conveyed by Ozark, including but not limited to taxes, insurance, maintenance, and water from Lake DeTurk for use in its commercial fish operation.

The Lake DeTurk Conservancy District was ordered established by the Morgan Circuit Court (Cause No. 55C01-1106-MI-1254) on February 6, 2012. Purposes for which this District was established are: 1) developing forests, wildlife areas, parks, and recreational facilities if feasible in connection with beneficial water management, 2) operation, maintenance and improvement of a work of improvement for water based recreational purposes. The Board of Directors for the District was appointed by the Morgan County Commissions on February 20, 2012.

As stated in the Indiana Conservancy District Act (IC 14-33-6-3) the Board shall present the District Plan to the Natural Resources Commission (NRC) within one hundred twenty (120) days after the date of the appointment of the members of the Board, unless the Board requests and receives additional time from the NRC or as delegated by Information Bulletin #36. The District's attorney requested an extension of time for the submittal of the District Plan which was approved by the Division of Water on April 12, 2012. Additional time was requested by the consulting engineer in order for the Board of Directors to review the Preliminary Engineering Report and evaluate the presented alternatives. This request was approved on September 24, 2012. The Board of Directors for the Lake DeTurk Conservancy District submitted its District Plan on December 12, 2012 for approval by the Indiana Department of Natural Resources

(IDNR), Division of Water. Requests for modifications to the submittal were coordinated with the District's consulting engineer Christopher B. Burke Engineering LLC (CBBEL). Email dated January 24, 2013 indicates that the Board reviewed and approved the changes to the District Plan.

Authority

According to the Indiana Conservancy Act (IC 14-33-6-2), the district plan consists of an engineering report that sets forth the general, comprehensive plan for the accomplishment of each purpose for which the District was established. A district plan must contain the following:

- (1) Descriptions of the following:
 - (A) The physical nature of the district.
 - (B) The works of improvement needed.
 - (C) The location of the works of improvement.
 - (D) The benefits to be derived from the improvements.
- (2) Maps, preliminary drawings, and estimates of costs based upon preliminary engineering surveys, and studies.
- (3) Copies of agreements or other arrangements with other persons or governmental agencies with respect to the financing, construction, maintenance, and operation of any of the works of improvement proposed in the plan.

According to the nonrule policy document developed by the Natural Resources Commission [Information Bulletin #36, (Seventh Amendment) posted to the Ind. Reg. as 20110928-IR-31211566NRA (October 1, 2011)], the authority to approve or disapprove a district plan has been delegated from the Natural Resources Commission to the Director of the Division of Water. Pursuant to the nonrule policy document, the following guidelines are established for the Division of Water review:

1. The Division will assist the Board in identifying licenses likely to be required to implement the district plan.
2. The Division will review and give due consideration to comments and alternative proposals, which may be submitted by other interested parties.

Under the Indiana Conservancy Act (IC 14-33-6-4) the Division shall approve a plan if the following conditions are met:

1. Any other state agency having administrative jurisdiction over certain purposes of the district has approved that part of the plan.
2. The Division finds the plan will accomplish in an economical manner the purpose or purposes for which the district is established.

Findings

Shireman Estates is a 322 lot residential development that includes Lake DeTurk which is approximately 36 acres in size and created by an earthen embankment across Grassy Fork Creek.

Evidence suggests that this structure was not intended to provide flood control. Some residential areas downstream will be subject to large infrequent flooding events with or without the dam. Additionally these areas might also be subject to more frequent small flooding events, if the dam didn't exist.

Because of a Settlement Agreement the President of Ozark Fisheries, Inc. conveyed the ownership of Lake DeTurk, the dam and spillway along with several lots within Shireman Estates to the Lake DeTurk Conservancy District in 2012.

One of the problems confronting the residents of Shireman Estates is that the lack of maintenance caused the lake and dam to fall into a state of disrepair. Several areas near the dam show signs of erosion and there are wave action scars near the waterline on the northern two-thirds of the embankment.

Many of the recreational facilities have reached the end of their design life and need to be repaired or replaced. The boat ramp is in shambles and the beach is littered; neither area is currently functional.

Sedimentation in the coves discourages swimming and boating. This sediment often increases the concentration of fertilizers which can result in higher algae growth and lower oxygen levels. This lower level of oxygen negatively affects the aquatic life and can increase the growth of invasive plants.

Establishment of the Lake DeTurk Conservancy District and the accomplishment of its purposes appear to satisfy the desires of the freeholders. It is anticipated that the proposed Works of Improvement will restore and upgrade Lake DeTurk, the dam, and recreational amenities for enjoyment of the freeholders and the preservation of property values.

The District Plan outlines the Works of Improvement that will need to be accomplished and divides them into three (3) categories which are:

Work I - Dam and Spillway Improvements

There are several deficiencies noted in the dam embankment and spillway system that need to be addressed in order for the dam to be in compliance with dam safety requirements. Should the hazard classification change, the capacity of the spillway system may need to increase.

Work II – Lake Improvements

These activities are related to dredging of the lake shoreline and implementing measures to trap sediment in order to decrease future sediment problems.

Work III – Recreational Area Improvements

The District plans to rehabilitate several recreational facilities and institute tree and wildlife management plans.

The District Plan includes the estimated costs for each of the Works of Improvement. The estimated cost for Work I – Dam and Spillway Improvements is \$270,100. The cost estimate for Work II – Lake Improvements is \$2,570,600 and Work III – Recreational Area Improvements is \$202,800. These costs do not reflect upgrades that would be necessary in the event the dam's hazard classification is changed.

The estimated costs associated with establishing the Conservancy District and other preliminary expenses are \$84,000. These costs included items such as: general administration, legal, insurance, and engineering services but not the preparation of the District Plan.

Annual Operation and Maintenance costs are estimated at \$20,000. These estimated costs will cover control of nuisance geese, maintenance of the dam, and mowing.

The District will inspect the improvements. After construction is complete, a registered Professional Engineer will be hired by the District to continue the inspections.

The Morgan County Auditor provided information that the assessed value of the Lake DeTurk Conservancy District as of March 2012 is \$43,489,000. Should the dam breach resulting in the loss of Lake DeTurk, the District's assessed value would decrease approximately \$5.5 million.

If the District proceeds with the Works of Improvement, the total estimated cost will be approximately \$3.0 million. The total benefit-cost ratio is estimated at \$5.5 million / \$3.0 million or 1.8.

Should the District finance the costs for the Works of Improvement, estimated at \$3.0 million, over a 20 year period at an interest rate of 3.5% the annual cost would be \$214,144. Adding the \$20,000 for average annual costs for operation and maintenance, the District would realize a total average annual cost of \$234,144.

Freeholds benefited by improvements to the dam, spillway, lake and recreational areas along with maintenance of those Works of Improvement will finance the projects. The District will utilize special and exceptional assessments for the necessary financing.

With all of the improvements to the recreational facilities within the District, it is not anticipated that any user fees will be necessary. However, the Board does reserve the right to institute user fees in the future to those freeholders who would utilize any of the Works of Improvement.

The District Plan submitted by the Lake DeTurk Conservancy District contains a Preliminary Engineering Report prepared by CBBEL. This report discusses the potential of a change in hazard classification and includes a hydrologic analysis, dam safety inspection along with recommendations. Additionally CBBEL prepared four (4) alternatives and cost estimates for each alternative in order to address the inadequate spillway capacity assuming that the hazard classification is changed to high hazard. These cost estimates range from \$1.4 million to \$2.4 million and include the \$270,100 for dam and spillway integrity improvements. These upgrades to the phase Work I – Dam and Spillway Improvements will bring the overall benefit-cost ratio closer to 1 but does not appear to go below, according to the estimates.

The Dam and Levee Safety Section of the Division of Water conducted a cursory review of the proposed District Plan. This review noted the consulting engineer's assessment that the hazard classification for Lake DeTurk Dam may need to be changed. The IDNR concurs with the evaluation and believes the high hazard classification to be appropriate because of the existence of several downstream residential structures.

It is anticipated that if the Lake DeTurk Dam is considered high hazard, the Board will proceed with the Alternative #1 which consists of a new drop inlet with a box culvert emergency spillway at a cost of \$1,444,400.

Appropriate maintenance is an integral part of responsible dam ownership. The order in which the Board undertakes the proposed Works of Improvement may need to be altered since the hazard classification assessment performed by CBEL indicates that the Lake DeTurk Dam is most likely high hazard. The needed upgrades to the dam will also increase the cost to each freeholder.

The District Plan should not be considered a static document. As the Board of Directors for the Lake DeTurk Conservancy District move forward, experience will be gained in the construction and operation of the Works of Improvement. As a result modifications may need to be reflected in the Plan.

According to Chapter 6, Section 4 of the Indiana Conservancy District Act (IC 14-33-6), the Commission is directed to review the district plan. The Commission shall approve the plan provided that any other State agency having authority regarding the purposes of the district has approved such part or parts of the plan, and that the Commission finds the plan will accomplish in an economical manner the purpose or purposes for which the district is established.

The purposes for which the District was established and the proposed Works of Improvement are primarily associated with dam safety issues and recreation. No other State agency appears to have administrative jurisdiction over the proposed works of the Lake DeTurk Conservancy District.

Lake DeTurk Conservancy District will establish a Cumulative Maintenance Fund as set forth in IC 14-33-14.

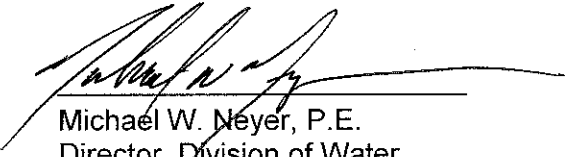
The proposed District Plan appears to accomplish the purposes for which the District was established. The benefits should exceed the costs associated with reconstructing and maintaining a safe dam which will restore the recreational and aesthetic opportunities to the freeholders. However if the hazard classification is changed, additional construction will need to take place on the dam which will affect the cost-benefit ratio. Specifically the total cost of the Works of Improvement for a low hazard dam is expected to be \$3 million. Should the dam classification be changed to high hazard the cost range for the Works of Improvement would be \$4.2 million to \$5.1 million depending on the alternative chosen.

Approval of the District Plan for the Lake DeTurk Conservancy District is granted on February 12, 2013 with the following findings:

1. The District Plan meets the requirements of IC 14-33-6-2 of the Indiana Conservancy Act.
2. The Department of Natural Resources, Division of Water, including the Dam and Levee Safety Section, has reviewed the District Plan.
3. The District Plan accomplishes the purposes for which the District was established.
4. The District obtained the services of a professional engineer to prepare conceptual improvements. At the time the District Plan was submitted to the IDNR for approval, the refined plans for the needed repairs and improvements to the dam and spillway had not been prepared. Additionally CBEL noted the assessment of the hazard classification for Lake DeTurk Dam may be changed from low to high hazard requiring additional

upgrades to safely pass 100% of the Probable Maximum Precipitation (PMP). At such time the Board of Directors for the District plan to move forward with construction, detailed plans, specifications, and current cost estimates for the work will need to be submitted to IDNR for review and approval as a Unit of Work.

5. This approval is only granted under IC 14-33, the Indiana Conservancy Act, and as such does not relieve the Conservancy District of the responsibility of obtaining additional permits, approvals, easements, etc. as required by other federal, state, or local regulatory agencies.

 2/13/13
Michael W. Neyer, P.E.
Director, Division of Water

MWN/TCP