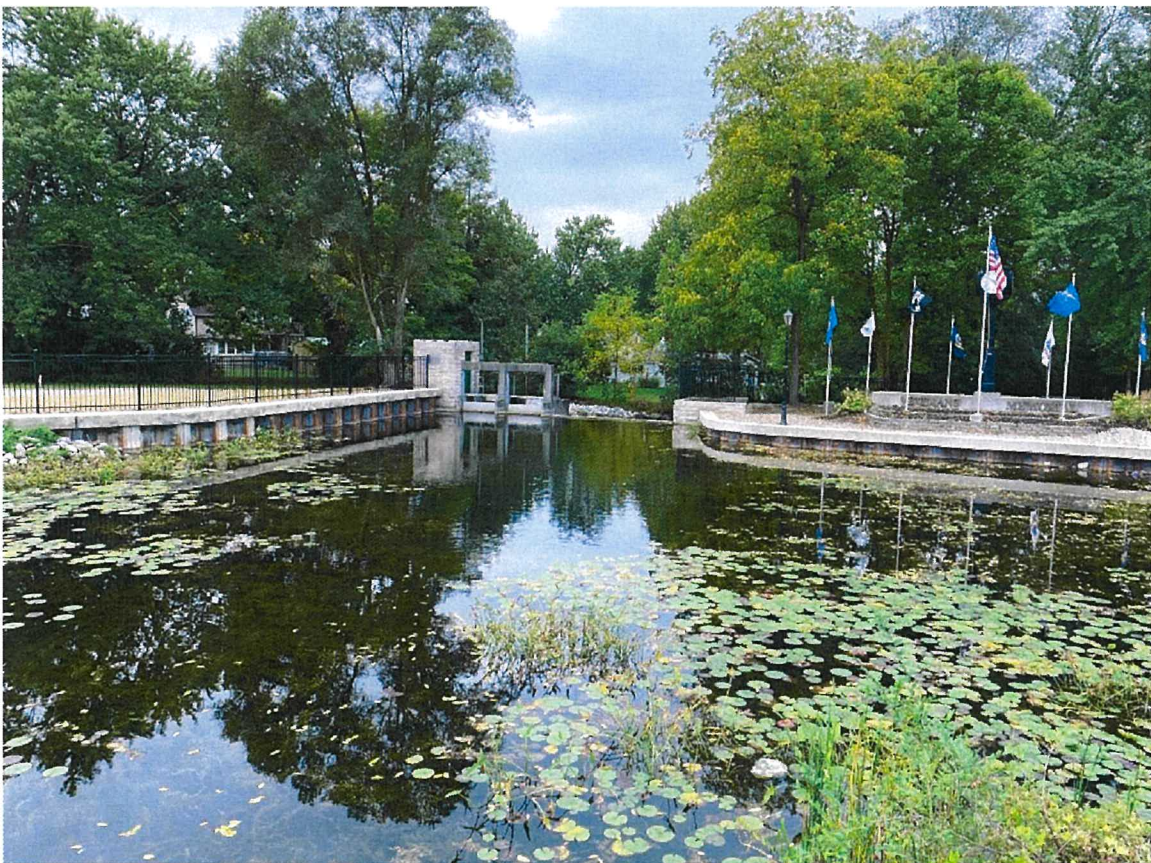


***TURKEY CREEK DAM AND DIKE
CONSERVANCY DISTRICT***

***DISTRICT PLAN
TURKEY CREEK
KOSCIUSKO COUNTY, INDIANA***



MAY 28, 2021

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1.00 INTRODUCTION

The **Turkey Creek Dam and Dike Conservancy District Plan (District Plan)** is a plan for (1) maintenance and potential improvements of the lake level control structure located on Syracuse Lake; (2) maintenance and improvement of the Dike located on the western edge of Lake Wawasee, Kosciusko County, Indiana. The activities outlined in the District Plan will be carried out by the **Turkey Creek Dam and Dike Conservancy District (District)** in accordance with Indiana Code (IC) 14-33-1-1 of the Indiana Conservancy Act.

1.10 Purpose of the **Turkey Creek Dam and Dike Conservancy District Plan**

The purpose of the **District Plan** is to set forth the general, comprehensive plan for the accomplishment of each purpose for which the **District** was established. The activities described in the plan shall be implemented by the **District** through its five (5) member Board of Directors (Board). The Board has adopted this **District Plan** pursuant to IC 14-33-6-1. See **Exhibit 1** of **Appendix A** for the Board resolution adopting the District Plan.

1.20 Authority

The **District** was established by order of the Kosciusko Circuit Court on December 15, 2020. See **Exhibit 2** of **Appendix A** for the Court Order Establishing **Turkey Creek Dam and Dike Conservancy District**. No appeal has been filed to the Order of Establishment. The inaugural members of the **District** Board were appointed by the Kosciusko County Board of Commissioners on December 22, 2020. The requirement for a **District Plan** is defined at IC 14-33-6. The Board has authorized its attorney, David Hollenbeck, Baker-Tilly (CPA), and its engineer, Lawson-Fisher Associates, PC to assist the Board in preparing the District Plan.

1.30 Scope of the **Turkey Creek Dam and Dike Conservancy District Plan**

IC 14-33-6-2 provides the contents of a **District Plan**. This **District Plan** includes descriptions of the physical nature of the **District**, problems confronting the District, works of improvements needed, location of the needed works of improvement, and the benefits derived from the works or improvement. Maps, preliminary drawings, and preliminary cost estimates are included for the first Unit of Work (dike rehabilitation) and ongoing maintenance activities. Approval for the first Unit of Work is being requested along with the **District Plan** for an engineering study and subsequent rehabilitation of the existing dike on the west end of Lake Wawasee.

General organization of this **District Plan** adheres to “Guide to the Preparation of District Plans” provided by the Indiana Department of Natural Resources. Additional guidance was obtained from the Natural Resources Commission Information Bulletin

#36 (Tenth Amendment): Procedural Guidelines for the Interpretations of the Conservancy District Article.

1.40 General data on **Turkey Creek Dam and Dike Conservancy District**

1.41 Establishment of the District

The **Turkey Creek Dam and Dike Conservancy District**, Cause No. 43C01-1912-MI-000249, was established by Order of the Kosciusko Circuit Court on December 15, 2020 (**Exhibit 2, Appendix A**). The Kosciusko County Board of Commissioners appointed the following individuals as the first members of the Board on December 22, 2020.

<u>District</u>	<u>Board Member</u>	<u>Term to Expire</u>
1	John Earnest	2022
2	James Silcox	2023
3	William Pipp	2024
4	David Johnston	2025
5	Carolyn Anderson	2025

At the initial Board meeting held January 28, 2021, in accordance with IC 14-33-5-12, the following officers were elected and remain officers of the **District**:

William Pipp – Chairperson
Carolyn Anderson – Vice Chairperson
John Earnest – Secretary/Treasurer

1.42 Area included in the **District**

The **District** generally covers the parcels of land within Turkey Creek Township, Kosciusko County, Indiana, that have one or more boundaries which abut the waters of Lake Wawasee, Syracuse Lake, or Mudd Lake at the legally established lake levels. Reference Attachment A of the Court Order (**Exhibit 1, Appendix A**) for a complete description of the **District** area.

1.43 Purpose for which the **District** was Established

The **District** was formed for the purpose of providing for the inspection and maintenance of the lake level control structure at Syracuse Lake and the Dike on the western edge of Lake Wawasee.

2.00 GENERAL DESCRIPTION OF DISTRICT

The **District** is located in Turkey Creek Township, Kosciusko County, Indiana. Syracuse Lake and Lake Wawasee compose the majority of the district area, with surface areas of 414 acres and 3,410 acres, respectively. The drainage area contributing to the lakes covers approximately 24,498 acres. The lakes outlet to Turkey Creek, which flows to the northwest and joins with the Elkhart River south of Goshen, Indiana.

2.10 Physical

The **District**, as shown in **Figure 1**, is comprised of the parcels that have one or more boundaries which abut the waters of Lake Wawasee, Syracuse Lake, or Mudd Lake at the legally established lake levels. Lake levels for the **District** are controlled by the lake outlet structure located on the west end of Syracuse Lake. The outlet structure was constructed originally in the 1880's and subsequently purchased by the Syracuse Water Company. The outlet structure was rebuilt in 1964 into its current configuration comprised of a concrete weir with two metal sluice gates on the southern end of the structure. Steel sheet pile walls extend upstream and downstream of the outlet structure. A project to rehabilitate the steel sheet pile walls was completed in 2020. IDNR Certificates of Approval for the rehabilitation project are included along with the as-built plans as **Exhibit 1, Appendix C**.

Figure 2 identifies the existing features of the **District**.

A FEMA Floodplain is in effect for the lakes as well as for Turkey Creek.

2.20 Economic

The **District** is made up of 3,503 parcels abutting the waters of Lake Wawasee, Syracuse Lake, and Mudd Lake. The **District** is located in and around the Town of Syracuse (the "Town") and some unincorporated areas of Turkey Creek Township in Kosciusko County, Indiana. Indiana State Road 13 runs through the **District** and the Town providing 138 miles of north-south highway. The **District** is located one hour northwest of Fort Wayne, Indiana and one hour southeast of South Bend, Indiana. CSX railroad tracks run west and east through the Town. South Bend Regional Airport and Fort Wayne International Airport are located 50 miles from the Town. Goshen Municipal Airport and Nappanee Municipal Airport are less than 10 miles from Syracuse.

The Syracuse area is home to a diverse group of industries including boat manufacturing, rubber product manufacturing, circuit board manufacturing, RV manufacturing, plastic production, metal fabrication, horse trailer manufacturing, printing, engine and control research and development and modular home manufacturing. Major employers in the area include Parker Hannifin Corporation, Nautic Global Group, Dutchman RV, Poly-Wood, Better Way Products, and Patrick Industries. The Town owns 61 acres of land in Benton Township in Elkhart County for the purpose of promoting development and redevelopment within the Town's area of urban influence.

The Town's estimated 2019 population is 2,881. Turkey Creek Township's estimated population is 8,498. The Syracuse/Wawasee area is a destination for visitors due to

Lake Wawasee, the largest natural lake in Indiana, as well as Syracuse Lake which offers over 3,500 acres of water recreation year around. The Town's population fluctuates depending on the season due to the influx of tourists and summer vacationers.

Wawasee Community School Corporation (the "School Corporation") serves the area and is comprised of all of Tippecanoe, Turkey Creek and Van Buren Townships, parts of Jefferson Township, and the Towns of Milford, North Webster and Syracuse. The School Corporation operates one high school, one middle school, and three elementary schools. For school year 2020-2021, the School Corporation served approximately 2,800 students. There are a number of higher education opportunities located within 50 miles of Syracuse including the University of Notre Dame, St. Mary's College, Indiana University-South Bend, Manchester College, Goshen College, Taylor University, and more.

3.00 WATER RESOURCES PROBLEMS AND DAMAGES

The outlet structure at Syracuse Lake was originally constructed in the 1880's, and then rebuilt in 1964. This structure regulates the water surface elevation for both Syracuse Lake and Lake Wawasee. Given the age of the structure and its critical role in maintaining legal lake level, ongoing monitoring and maintenance are very important.

- 3.10 Flooding (Not Applicable)
- 3.20 Drainage (Not Applicable)
- 3.30 Irrigation (Not Applicable)
- 3.40 Water Supply (Not Applicable)
- 3.50 Wastewater (Not Applicable)
- 3.60 Recreation (Not Applicable)
- 3.70 Erosion (Not Applicable)
- 3.80 Flow Augmentation (Not Applicable)
- 3.90 Operations and Maintenance

Current operation and maintenance of the outlet structure has been minimal. The existing outlet works were rebuilt in 1964. The steel sheet pile walls upstream and downstream of the outlet structure have been rehabilitated in 2020. While the outlet structure is in generally good condition, ongoing maintenance is expected given its age.

The existing Dike on the western edge of Lake Wawasee is need of repair. The Dike had a partial failure in January 2008 and was repaired. A rehabilitation of the Dike is necessary to improve the integrity of the structure and reduce the likelihood of a breach in the future.

4.00 CAUSES OF PROBLEMS

A reliable funding mechanism has limited the ability to address ongoing maintenance of the lake outlet structure as well as engineering, design, and construction of a Dike rehabilitation. Formation of the **District** addresses and provides the funding to provide maintenance and Dike improvements as discussed in Section 5 below.

5.00 WORKS OF IMPROVEMENT

5.10 Existing works of improvement

Existing works of improvement consist of the outlet structure at Syracuse Lake and the Dike on the western edge of Lake Wawasee. The IDNR currently inspects the outlet control structure every 3 years. The recently completed 2021 inspection report is included in **Appendix B, Exhibit 1**. Plans showing the rehabilitation project for the outlet control structure channel walls are found in **Appendix C, Exhibit 1**.

Outlet Structure

The existing outlet structure was constructed in the 1880's and rebuilt in 1964. A project in 2020 included the following work items:

- New steel sheet piling walls on both sides of the lake/creek along the upstream and downstream banks
- Concrete cap placed on top of all steel sheet piling
- Patching of concrete spillway and abutment walls
- Removal and replacement of existing fascia brick on the north abutment wall of the spillway
- Tuck-point exterior walls of the Control Structure Building
- Placement of revetment riprap on geotextile to prevent erosion of the banks on both sides of the downstream channel
- Miscellaneous sidewalk replacement

Wawasee Dike

The existing dike located near Koko Road is in need of rehabilitation. In 2008 the dike experienced a partial failure due to heavy rain leading to an overtopping event. A preliminary engineering assessment resulted in a recommendation for the addition of sheet pile wall to stabilize the dike.

5.20 Improvements desired by the people

The **District's** freeholders desire that the outlet control structure continue to be maintained as required to achieve legal lake level for Syracuse Lake and Lake Wawasee. The freeholders also desire to rehabilitate the dike at Lake Wawasee.

5.30 Proposed Program of the **District**

The **District** proposes to establish regular inspection and maintenance intervals for the lake outlet structure. Additionally, the **District** proposes to perform a rehabilitation of the Dike at Lake Wawasee. The **District** will continue to maintain the outlet structure and Dike as described herein.

5.31 Nature of the works

The first unit of work will be the rehabilitation of the Dike at Lake Wawasee. Elements of the unit of work include:

- Topographic survey of existing dike
- Geotechnical investigation of the soils underlying the dike
- Preparation of plans and specifications for the addition of steel sheet piles along the existing dike
- Obtain required State and environmental permits
- Construct rehabilitation according to plans
- Submit as-built drawings to the IDNR upon completion of the project

5.32 Location of works of improvement

The first unit of work, rehabilitation of the Dike at Lake Wawasee, is generally located on the western edge of Lake Wawasee, northwest of S. Koko Drive.

5.33 Scope of the works

The first unit of work involving rehabilitation of the existing Dike described in **Appendix C, Exhibit 2** will begin immediately upon approval of this District Plan.

5.34 Purposes satisfied

The **District** was formed for the following two purposes: (1) maintenance and potential improvements of the lake level control structure located on Syracuse Lake; (2) maintenance and improvement of the Dike located on the western edge of Lake Wawasee.

5.35 Purposes not satisfied (Not Applicable)

5.40 Property to be benefited

The proposed activities will be of benefit to all freeholders of the **District** by ensuring proper maintenance of the structures that maintain legal lake level.

5.50 Property to be taken or damaged

A document granting an easement to the **District** from David and Sherry Elliott for the purpose of maintenance, repair, modification and replacement of the dike structure will be required. To facilitate implementation of the **District Plan**, the Elliott easement will be finalized and executed upon **District Plan** approval by the Kosciusko Circuit Court.

6.00 ESTIMATED BENEFITS FROM PROGRAM

6.10 Benefits to urban properties

The proposed program will be of benefit to all freeholders of the **District**. Without the proposed program, it could likely lead to the failure of the Outlet Structure at Syracuse Lake and the Dike at Lake Wawasee resulting in a significant amount of damage to lake properties and loss of assessed valuation. The total assessed valuation of the **District** is currently estimated at \$1,292,779,400 per the County GIS Director. Based on information an analysis of lake topography by Lawson-Fisher Associates, PC, a failure of the lake level control structure could result in a drop in lake levels ranging from 3 to 5 ft. According to Kay Young of Todd Realty ERA Powered, this level of lake lowering would leave a large portion of homes without access to the lakes. The value of the property could drop by 50% or more. See **Appendix D** for a copy of the letter prepared by Kay Young. Based on the **District's** current estimated assessed value of \$1,292,779,400, this drop could result in a loss of approximately \$646,389,700 in assessed value as well as lost property tax revenue as a result of the reduction.

Intangible benefits to the residents of the **District** cannot be measured in dollars alone. The proposed program will also help increase the quality of life by preserving and sustaining environmental areas, wildlife habitats and recreational opportunities throughout the District.

6.20 Benefits to agricultural properties (Not Applicable)

6.30 Benefits to roads and bridges (Not Applicable)

6.40 Other benefits

Not only can the benefits be defined in terms of dollar impacts on assessed valuation and intangible benefits, but also economic impacts in and around the lake areas. A study prepared by Seth A. Bingham and Nathan S. Bosch of the Center for Lakes & Streams, Grace College titled "Lake impacts on annual business revenues in Kosciusko County" looked at the overall economic benefit the lakes in Kosciusko County have on annual business revenues. The study showed that information collected for 314 businesses throughout the County accounted for \$298,383,000 in revenue that enters the County annually as a direct result of the presence of the local lakes. When combined with additional property taxes generated due to lake presence, the total identified economic impact of Kosciusko County lakes was \$313,383,000 annually. Improvements or failures of the Outlet or Dike would certainly have a

positive or negative economic effect in the **District** as well as Kosciusko County which further supports the merits of the **District's** proposed program.

7.00 ESTIMATED COSTS OF PROGRAM

7.10 Estimated cost of improvements

The first phase of work will be the rehabilitation of the Dike at Lake Wawasee which has an estimated cost of \$520,000. It is anticipated that the majority of these costs will be paid for by existing cash on hand of the Wawasee Area Property Owners Association. The second phase of the work will be the replacement of the existing gate at the outlet structure. The estimated costs of this work, including construction, engineering design, permitting and inspection is \$240,000. It is estimated that this work may not be needed for another 10 years. Applying an annual inflation rate of 1.7%, the **District** estimates the future cost of the work to be approximately \$284,000. The **District** plans to pay for this work through future revenues collected from a Cumulative Improvement Fund. The total cost of phase I and II improvements is estimated to be \$804,000.

7.20 Estimated cost of operation, maintenance, and replacement

The **District** proposes to establish regular inspection and maintenance intervals for the lake outlet structure at a cost of \$6,500 every three years. In addition, the **District** estimates annual costs associated with carrying out the administrative functions of the **District** to be \$35,000. Note, this is a preliminary budget estimate and is subject to change based upon the adoption of the actual budget by the Board of Directors and approval by the Department of Local Government Finance (DLGF).

7.30 Estimated cost of mitigation measures (Not Applicable)

8.00 COMPARISON OF BENEFITS AND COSTS

8.10 Average annual benefits

The proposed program will be of benefit to all freeholders of the **District**. Without the proposed program, it could likely lead to failure of the Outlet Structure at Syracuse Lake and the Dike at Lake Wawasee resulting in a significant amount of damage to lake properties and loss of assessed valuation. The total assessed valuation of the **District** is currently estimated at \$1,292,779,400. Based on information provided by Kay Young of Todd Realty ERA Powered, it is estimated that in the event of a failure, lake levels could drop by 3-5 feet which in turn would leave a large portion of homes without access to the lakes. The value of the property could drop by 50% or more. Based on the **District's** current estimated assessed value of

\$1,292,779,400, this drop would result in a loss of approximately \$646,389,700 in assessed value as well as lost property tax revenue as a result of the reduction.

8.20 Average annual costs

The **District** proposes to establish regular inspection and maintenance intervals for the lake outlet structure at a cost of \$6,500 every three years (\$2,167 per year). In addition, the **District** estimates annual costs associated with carrying out the administrative functions of the District to be \$35,000. Note, this is a preliminary budget estimate and is subject to change based upon the adoption of the actual budget by the Board of Directors and approval by the Department of Local Government Finance (DLGF). The total combined annual costs are estimated to be \$37,167.

8.30 Benefit – cost ratio

The benefit-cost ratio for the **District** can be computed to reflect the net savings to the **District** by making the proposed improvements versus doing nothing. Doing nothing could result in the failure of the Outlet and Dike and a potential devaluation of property values of at least \$646,389,700. Implementing the proposed program to realize this benefit will cost an estimated \$804,000 as described above. $\text{Benefit/Cost} = \$646,389,700 / \$804,000 = 803.97$. Put another way, every dollar invested in the implementation of the District Plan could avert up to \$803.97 in potential property value loss to the District freeholders.

9.00 PROPOSED SCHEDULE OF INSTALLATION

Upon approval of the **District Plan**, the design of the first unit of work, Dike at Lake Wawasee, will commence. The Board has approved a contract with Lawson-Fisher Associates, PC for engineering design of the dike rehabilitation. A notice to proceed will be issued after approval of the **District Plan**.

10.00 OPERATION, MAINTENANCE, AND REPLACEMENT

10.10 Operation, maintenance, and replacement

The **Turkey Creek Dam and Dike Conservancy District** will be responsible for the ongoing maintenance and replacement work required for the outlet structure and dike. The Board will either contract or hire employees, contractors, or professional firms to meet the maintenance needs of the **District**.

10.20 Inspection

Inspections of the outlet structure currently occur every three years and are performed by the IDNR. The **District** proposes that the engineer of record shall inspect the outlet structure on a three year frequency staggered by 1.5 years from the date of the IDNR inspection. This will ensure an inspection on a regular frequency of 1.5 years. The initial IDNR inspection is occurring in 2021.

FIGURES

FIGURE 1: District Map

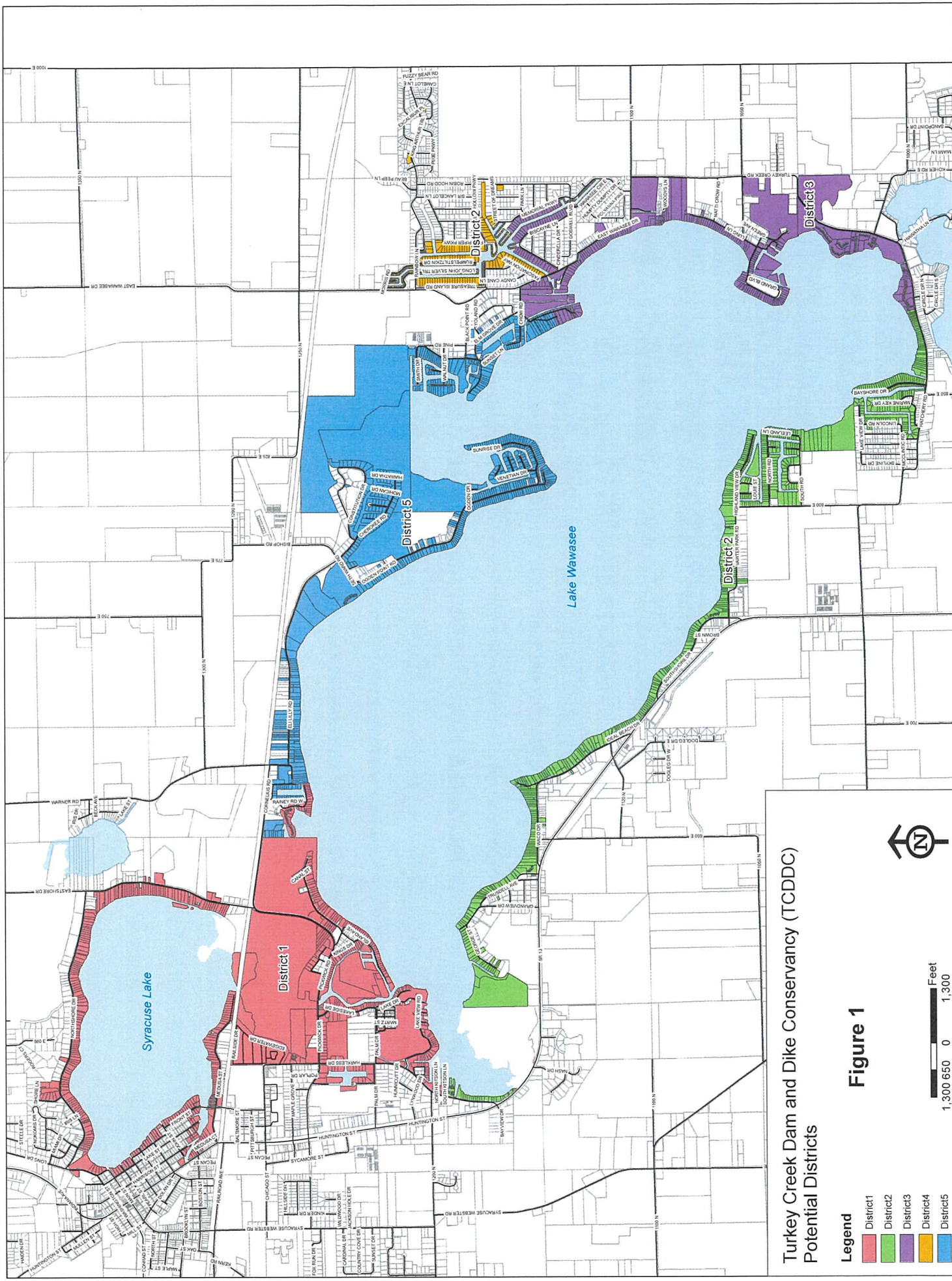


Figure 1
Turkey Creek Dam and Dike Conservancy (TCDDC)
Potential Districts

FIGURE 2: Project Features



Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

FIGURE 2: Project Features

APPENDIX A

APPENDIX A

EXHIBIT 1: Resolution of Board of Directors Adopting the District Plan

Resolution # 2021- 5
A RESOLUTION OF THE TURKEY CREEK DAM AND DIKE
CONSERVANCY DISTRICT APPROVING SUBMITTAL
OF THE DISTRICT PLAN

WHEREAS, the Turkey Creek Dam and Dike Conservancy District was created by order of the Kosciusko Circuit Court on the 15th day of December 2020; and

WHEREAS, the initial members of the Board of Directors of the Turkey Creek Dam and Dike Conservancy District were appointed, in compliance with IC 14-33-5-1, by the Kosciusko Board of County Commissioners on the 22nd day of December, 2020; and,

WHEREAS, immediately upon appointment, the Board of Directors of the Turkey Creek Dam and Dike Conservancy District embarked upon the task of preparing the district plan pursuant to IC 14-33-6-1 and in so doing retain the services of Attorney David L. Hollenbeck as legal counsel, Baker Tilly as Financial Consultants and the engineering firm of Lawson-Fisher Associates P.C.; and,

WHEREAS, the Board of Directors of the Turkey Creek Dam and Dike Conservancy District did on the 13th day of April, 2021 pursuant to the Natural Resources Commission information bulletin #36 (10th amendment) submit to the Director of the Division of Water at the Indiana Department of Natural Resources a request that the one hundred twenty (120) day submission deadline for the district plan be extended for an additional 60 days; and

WHEREAS, the Director of the Division of Water at IDNR granted the request of the Board of Directors and established a deadline for filing of the district plan no later than the 21st day of June, 2021; and

WHEREAS, working with the aforementioned consultants, the Board of Directors of the Turkey Creek Dam and Dike Conservancy District did complete preparation of the district plan on the 13th day of May, 2021 and at a properly called and legally convened meeting of the Board of Directors on the 28th day of May, 2021, did publicly review and immediately thereafter approve (unanimously) the district plan as submitted and authorized its transmittal to the Natural Resource Commission and the Division of Water at the Indiana Department of Natural Resources.

THEREFORE, BE IT RESOLVED that the Turkey Creek Dam and Dike Conservancy District Board of Directors unanimously adopts and approves the district plan and authorizes transmission of the district plan to the Natural Resource Commission and the Division of Water at the Indiana Department of Natural Resources.

ALL OF WHICH HAVING BEEN RESOLVED in compliance with the provisions of the Indiana Conservancy District Act by the Board of Directors of the Turkey Creek Dam and Dike Conservancy District this 28th day of May, 2021.

TURKEY CREEK DAM AND DIKE CONSERVANCY DISTRICT

Wendy Papp
Chairperson

Carolyn Anderson
Vice Chairperson

[Signature]

[Signature]

[Signature]

ATTEST:

[Signature]

APPENDIX A

EXHIBIT 2: Copy of Court Order Establishing the District

STATE OF INDIANA)
) SS:
COUNTY OF KOSCIUSKO)

IN THE KOSCIUSKO CIRCUIT COURT

FILED

December 15, 2020

IN RE: ESTABLISHMENT OF)
THE TURKEY CREEK DAM AND)
DIKE CONSERVANCY DISTRICT)

Kosciusko Circuit Court

CAUSE NO. 43C01-1912-MI-000249

**COURT ORDER ESTABLISHING
TURKEY CREEK DAM AND DIKE CONSERVANCY DISTRICT**

Comes now the Court and pursuant to IC 14-33-2-15(a), conducts its final hearing in connection with the pending petition for the Establishment of the Turkey Creek Dam and Dike Conservancy District. The purpose of this final hearing is to receive the findings and recommendations of the Natural Resources Commission of the Indiana Department of Natural Resources, to and to hear evidence on the propriety of this court's requested establishment of the Turkey Creek Dam and Dike Conservancy District, and for making findings of fact and ruling on the aforementioned petition for the establishment of the Turkey Creek Dam and Dike Conservancy District.

After receipt and review of the aforementioned findings and recommendations of the Natural Resources Commissioners of the Indiana Department of Natural Resources, a copy of which report has been received by the Court and is part of the record and evidence of this proceeding and after receipt and review of the additional evidence presented to this Court at this final hearing and after reviewing the Court record and file in this matter and after being duly advised of the premises, the Court makes the following findings and enters the following order.

THE COURT FINDS that no evidence has been presented to this Court nor has any witness appeared at this final hearing in opposition to the Petition for creation of the Turkey Creek Dam and Dike Conservancy District.

THE COURT FURTHER FINDS that pursuant to IC 14-33-2-25(b), notice by publication was given of the Court's intention to conduct its final hearing in this matter by publication in a sufficient, legal and appropriate notice in the Mail Journal and Warsaw Times-Union Newspapers on November 4 and November 11, 2020 and that proof of publication has been offered and accepted into evidence and has been filed with the Court and is now a part of the record of these proceedings. Such notice being that which is deemed by this Court necessary, proper, legal and appropriate and said notice is further found by this Court to have been done for all purposes and compliance with the prior orders of this Court and in further compliance with IC 14-33-2-25(b).

THE COURT FURTHER FINDS that pursuant to IC 14-33-2-22, an Administrative Law Judge from the Natural Resources Commission of the Indiana Department of Natural Resources conducted a public hearing on July 23, 2020 in the Syracuse Community Center, 1013 N Long Drive, Syracuse, Indiana. Notice of the hearing was published in a timely fashion on July 8, 2020 in the Mail Journal a newspaper of general circulation in Kosciusko County, Indiana. The purpose of the hearing was to receive evidence on the priority of the creation of the proposed Turkey Creek Dam and Dike Conservancy District and to assist the Natural Resources Commission in completing its report to this Court. Such public hearing having occurred pursuant to legal notice and further such aforementioned legal notice having been found by this Court to be that which is deemed necessary, proper, legal and appropriate and in compliance with the previous orders of this Court and the applicable provisions of the Indiana Conservancy Act.

THE COURT FURTHER FINDS that on the 22 day of September 2020, the Natural Resources Commission of the Indiana Department of Natural Resources filed with this Court

pursuant to the provisions of the Indiana Conservancy Act a report with respect to the petition for the Establishment of the Turkey Creek Dam and Dike Conservancy District. That report has been received by this Court and is part of the record of these proceedings and has been reviewed and considered by this Court in furtherance of this Court Order. Said report of the Natural Resources Commission recommended to this Court the creation of the Turkey Creek Dam and Dike Conservancy District with the need for further evidence concerning aspects of the Petitioners proposal and this Court did receive additional evidence from the Petitioners on aspect of the creation of the conservancy district and such additional evidence is part of the record of this proceeding.

THE COURT FURTHER FINDS the additional evidence provided to this Court during the final hearing has provided the Court with ample and sufficient evidence to make its determination as to the establishment of the Conservancy District and the Petitioners have met the statutorily created criteria for approval of the pending petition. In so doing, this Court adopts the findings and recommendations submitted to it by the Natural Resources Commission and in addition thereto finds the evidence presented by the Petitioners at the final hearing to be persuasive and supportive of the establishment of the Turkey Creek Dam and Dike Conservancy District.

THE COURT FURTHER FINDS that the Petitioners have met their burden of establishing to the Court the statutory criteria for creation have been met in that the proposed Turkey Creek Dam and Dike Conservancy District:

1. Appears to be necessary;
2. Holds promise of economic and engineering feasibility;
3. Offers benefits in excess of costs;

4. Proposes to cover and serve a proper area;
5. Can be established and operated in a manner compatible with established conservancy district, flood control projects, reservoirs, lakes, dams and other water management or water supply projects.

THE COURT FURTHER FINDS that the territorial boundaries of the Turkey Creek Dam and Dike Conservancy District should be as requested by the Petitioners and included as an Exhibit to the original petition filed with this Court for establishment of the Turkey Creek Dam and Dike Conservancy District and which has been attached to this Court Order and identified as Attachment A. The Court makes this finding predicated upon the evidence heard at the final hearing in this matter as well as the recommendations contained in the report filed with this Court by the Natural Resources Commission.

THE COURT FURTHER FINDS that a Board of Directors consisting of five (5) directors will best serve as a Governing Body of the Turkey Creek Dam and Dike Conservancy District. Each of the five directorship areas shall be as identified in Attachment B to this Order.

THE COURT FURTHER FINDS that the Kosciusko County of Commissioners has a statutory responsibility for appointing the initial members of the Board of Directors of the Turkey Creek Dam and Dike Conservancy District pursuant to IC 14-33-5-1(a) and that in so doing the Kosciusko County Board of Commissioners shall make such appointments pursuant to the aforementioned statute within twenty (20) days after the order of this Court establishing the Turkey Creek Dam and Dike Conservancy District and shall further do so in such a manner and fashion so as to stagger the initial terms of each such directorship appointment as follows:

1. At the annual meeting of the conservancy district in February 2022, the directorship term for district one shall expire.

2. At the annual meeting of the conservancy district in February 2023, the directorship term for district two shall expire.
3. At the annual meeting of the conservancy district in February 2024, the directorship term for district three shall expire
4. At the annual meeting of the conservancy district in February 2025 the directorship term for district four shall expire
5. At the annual meeting of the conservancy district in February 2025 the directorship term for district five shall expire

As each initially appointed director term expires, there shall be an election pursuant to the provisions of the Indiana Conservancy Act (as ^{amended} ~~xxxxxx~~) and such subsequently elected member of the Board of Directors of the Turkey Creek Dam and Dike Conservancy District shall serve pursuant to the statute a four (4) year term.

THE COURT FURTHER FINDS the annual meeting of the Turkey Creek Dam and Dike Conservancy District shall be held initially on the second Saturday of February in 2022 and pursuant to IC 14-33-2-27(3) shall be held annually on the second Saturday of February of each calendar year.

THEREFORE, IT IS HEREBY ORDERED, ADJUDGED AND DECREED that the Turkey Creek Dam and Dike Conservancy District should be and the same is hereby created and established within the following geographical boundaries:

See Legal Description attached hereto and made a part of this Order as Attachment A

IT IS FURTHER ORDERED, ADJUDGED AND DECREED that the pending petition for Establishment of the Turkey Creek Dam and Dike Conservancy District should be and is

hereby granted in its entirety as to the purposes for establishment of the district as initially presented to this Court by the Petitioners.

IT IS FURTHER ORDERED, ADJUDGED AND DECREED that the Turkey Creek Dam and Dike Conservancy District shall be governed by a five (5) member Board of Directors serving as identified and delineated in the findings portion of this Order.

IT IS FURTHER ORDERED, ADJUDGED AND DECREED that the individual Board of Directors of the Turkey Creek Dam and Dike Conservancy District shall be initially appointed by the Kosciusko County Board of Commissioners within twenty (20) days after the entry of this Order establishing the Turkey Creek Dam and Dike Conservancy District in that in making said appointments, the Board of Commissioners shall stagger the initial terms of the Board of Directors pursuant to IC 14-33-5-1(a) and consistent with the staggering procedures contained in the findings portion of this Order. As each individually appointed directors term expires, there shall be an election held by the Turkey Creek Dam and Dike Conservancy District pursuant to IC 14-33-2-27(3) and all subsequently elected directors shall serve a four (4) year term pursuant to the aforementioned provisions of the Indiana Conservancy Act.

IT IS FURTHER ORDERED, ADJUDGED AND DECREED that the annual meeting Turkey Creek Dam and Dike Conservancy District shall be held pursuant to IC 14-33-2-27(3) on the second Saturday of each calendar year commencing with the first such annual meeting on the second Saturday of February, 2022.

ALL OF WHICH HAVING BEEN ORDERED, ADJUDGED AND DECREED this 15th day of December, 2020.

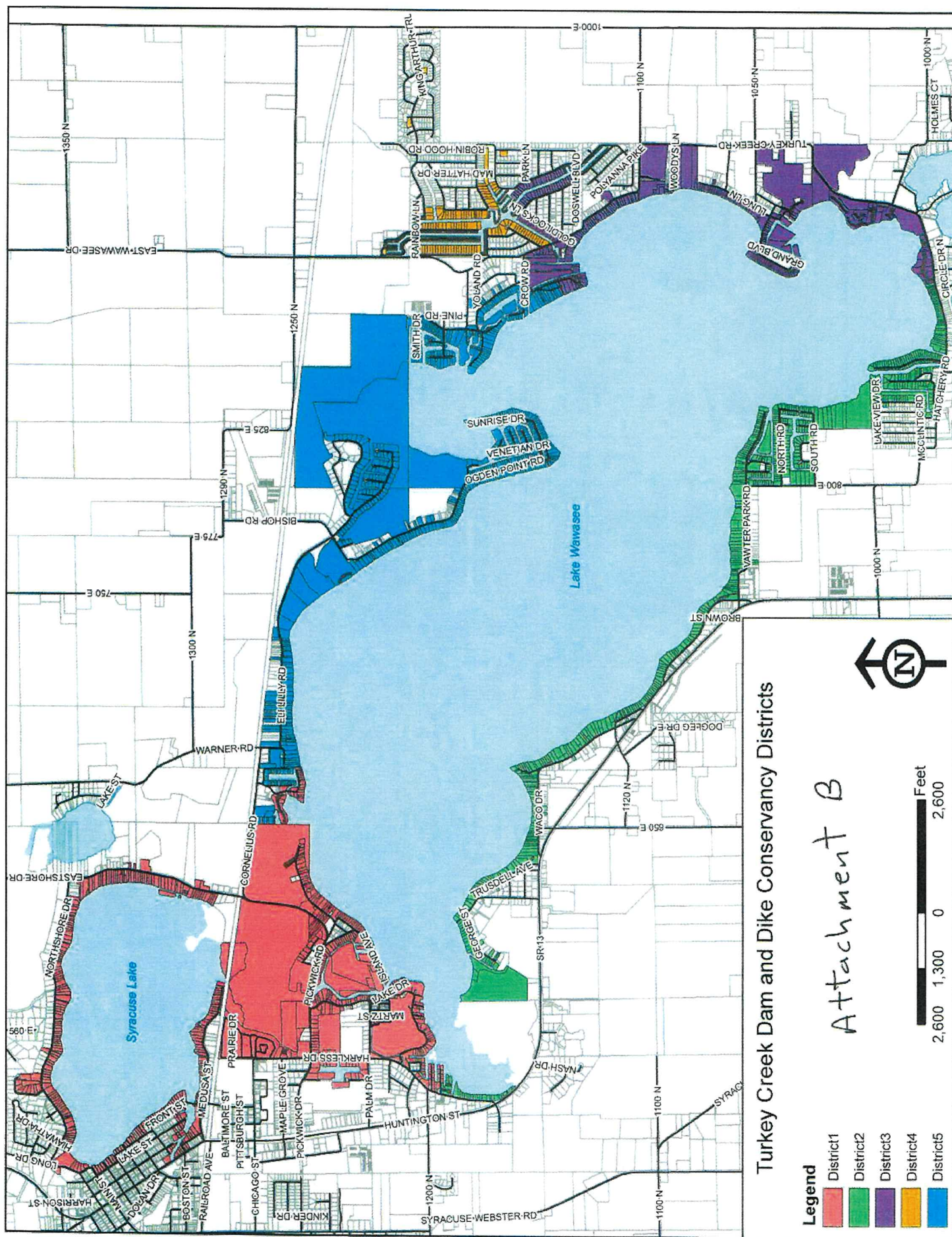


Michael W. Reed
Judge, Kosciusko Circuit Court

ALL PARCELS OF LAND WITHIN THE LIMITS OF THE FOLLOWING DESCRIPTION IN TURKEY CREEK TOWNSHIP, KOSCIUSKO COUNTY, INDIANA, THAT HAVE ONE OR MORE BOUNDARIES WHICH ABUT THE WATERS OF LAKE WAWASEE, SYRACUSE LAKE OR MUDD LAKE AT THE LEGALLY ESTABLISHED LAKE LEVELS:

BEGINNING AT THE INTERSECTION OF THE CENTERLINES OF STATE ROAD #13 AND THE CSX RAILROAD; THENCE NORTHWESTERLY ALONG THE CENTERLINE OF STATE ROAD #13 TO THE INTERSECTION OF THE EASTERLY EXTENSION OF THE CENTERLINE OF BOSTON STREET; THENCE WESTERLY ALONG SAID EXTENSION AND THE CENTERLINE OF BOSTON STREET TO THE INTERSECTION OF THE CENTERLINE OF HICKORY STREET; THENCE NORTHERLY AND NORTHEASTERLY ALONG THE CENTERLINE OF HICKORY STREET AND THE NORTHEASTERLY EXTENSION OF THE CENTERLINE OF HICKORY STREET TO THE INTERSECTION OF THE SOUTHWESTERLY EXTENSION OF THE CENTERLINE OF HENRY STREET; THENCE NORTHEASTERLY ALONG THE SOUTHWESTERLY EXTENSION OF THE CENTERLINE OF HENRY STREET AND THE CENTERLINE OF HENRY STREET TO THE INTERSECTION OF THE CENTERLINE OF LAKE STREET; THENCE NORTHWESTERLY ALONG THE CENTERLINE OF LAKE STREET TO THE INTERSECTION OF THE CENTERLINE OF MAIN STREET; THENCE NORTHEASTERLY ALONG THE CENTERLINE OF MAIN STREET TO THE SOUTHEASTERLY EXTENSION OF THE CENTERLINE OF LONG DRIVE; THENCE NORTHWESTERLY AND NORTHEASTERLY ALONG THE SOUTHEASTERLY EXTENSION OF THE CENTERLINE OF LONG DRIVE, THE CENTERLINE OF LONG DRIVE AND THE NORTHEASTERLY EXTENSION OF THE CENTERLINE OF LONG DRIVE TO THE INTERSECTION OF THE CENTERLINE OF KOSCIUSKO COUNTY ROAD 1400 NORTH; THENCE EASTERLY ALONG THE CENTERLINE OF KOSCIUSKO COUNTY ROAD 1400 NORTH TO THE INTERSECTION OF THE NORTHERLY EXTENSION OF THE CENTERLINE OF EASTSHORE DRIVE; THENCE SOUTHERLY ALONG THE NORTHERLY EXTENSION OF THE CENTERLINE OF EASTSHORE DRIVE AND THE CENTERLINE OF EASTSHORE DRIVE TO THE INTERSECTION OF THE CENTERLINE OF THE CSX RAILROAD; THENCE SOUTHEASTERLY ALONG THE CENTERLINE OF THE CSX RAILROAD TO THE NORTH-SOUTH OPEN LINE OF SECTION 12-TOWNSHIP 34 NORTH-RANGE 7 EAST, 2ND PRINCIPAL MERIDIAN; THENCE SOUTHERLY ALONG THE NORTH-SOUTH OPEN LINES OF SECTIONS 12, 13, AND 24-TOWNSHIP 34 NORTH-RANGE 7 EAST, 2ND PRINCIPAL MERIDIAN TO THE SOUTH LINE OF SAID SECTION 24; THENCE WESTERLY ALONG THE SOUTH LINE OF SAID SECTION 24 TO THE INTERSECTION OF THE CENTERLINE OF TURKEY CREEK ROAD; THENCE SOUTHWESTERLY, WESTERLY AND NORTHERLY ALONG THE CENTERLINE OF TURKEY CREEK ROAD, THE CENTERLINE OF HATCHERY ROAD AND THE NORTHERLY EXTENSION OF THE CENTERLINE OF HATCHERY ROAD TO THE INTERSECTION OF THE CENTERLINE OF MCCLINTIC ROAD; THENCE WESTERLY AND NORTHERLY ALONG THE CENTERLINE OF MCCLINTIC ROAD, THE CENTERLINE OF KOSCIUSKO COUNTY ROAD 800 EAST AND THE NORTHERLY EXTENSION OF THE CENTERLINE OF KOSCIUSKO COUNTY ROAD 800 EAST TO THE INTERSECTION OF THE CENTERLINE OF VAWTER PARK ROAD; THENCE WESTERLY, NORTHWESTERLY AND WESTERLY ALONG THE CENTERLINE OF VAWTER PARK ROAD AND THE WESTERLY EXTENSION OF THE CENTERLINE OF VAWTER PARK ROAD TO THE INTERSECTION OF THE CENTERLINE OF STATE ROAD #13; THENCE NORTHWESTERLY, WESTERLY AND NORTHERLY ALONG THE CENTERLINE OF STATE ROAD #13 TO THE INTERSECTION OF THE CENTERLINE OF PICKWICK ROAD; THENCE EASTERLY ALONG THE CENTERLINE OF PICKWICK ROAD TO THE INTERSECTION OF THE CENTERLINE OF HARKLESS DRIVE; THENCE NORTHERLY ALONG THE CENTERLINE OF HARKLESS DRIVE AND THE NORTHERLY EXTENSION OF THE CENTERLINE OF HARKLESS DRIVE TO THE INTERSECTION OF THE CENTERLINE OF THE CSX RAILROAD; THENCE NORTHWESTERLY ALONG THE CENTERLINE OF THE CSX RAILROAD TO THE POINT OF BEGINNING.

Attachment A



APPENDIX A

EXHIBIT 3: Agreement(s) Between the District and any Other Party(s)

SITE ACCESS AND ACQUISITION PLAN

Implementation of the **Turkey Creek Dam and Dike Conservancy District Plan** will necessitate access to both the dam and dike structures. Discussions with the Town of Syracuse have resulted in agreements to grant the **District** the required access to both structures and acquisition of the dam. Upon approval of the **District Plan** by the Kosciusko Circuit Court, the Town of Syracuse and the Conservancy District will execute the attached transactional documents to facilitate accomplishment of the purposes for which the **District** was established by implementation of the **District Plan**.

The negotiated documents have been attached hereto and made a part hereof so as to inform the Indiana Natural Resources Commission, the Indiana Department of Natural Resources and the Kosciusko Circuit Court of the status of the access and acquisition matters:

- | | |
|------------|--|
| Document 1 | Deed of conveyance of dam structure from Town of Syracuse to Turkey Creek Dam and Dike Conservancy District . |
| Document 2 | Easement from Town of Syracuse granting access to the dam structure through Veteran's Park. |
| Document 3 | Agreement whereby Town of Syracuse remains obligated to maintain and manage lake levels on Syracuse Lake, Mudd Lake and Lake Wawasee pursuant to original agreement between IDNR and Town dated September 15, 1992. |
| Document 4 | A fourth document grants an easement to the District from David and Sherry Elliott for the purpose of maintenance , repair, modification and replacement of the dike structure. To facilitate implementation of the District Plan , the Elliott easement will be finalized and executed upon District Plan approval by the Kosciusko Circuit Court. |

APPENDIX A

EXHIBIT 3

Document 1

QUITCLAIM DEED

THIS INDENTURE WITNESSETH, that **Town of Syracuse, Indiana**, an Indiana political subdivision, ("*Grantor*") QUITCLAIMS to **The Turkey Creek Dam and Dike Conservancy District**, an Indiana political subdivision, ("*Grantee*"), in consideration of One dollar (\$1.00) and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the following described real estate in Kosciusko County, in the State of Indiana:

See Exhibit A attached hereto.

Subject to all real estate taxes, easements, restrictions, rights-of-way and limitations of record.

Grantor herein certifies that there is no Indiana gross income tax due as a result of this transaction.

The undersigned person executing this deed represents and certifies on behalf of the Grantor, that the undersigned is a duly elected official of the Grantor and has been fully empowered by proper resolution to execute and deliver this deed; that the Grantor is an Indiana municipal corporation; that the Grantor has full capacity to convey the real estate described; and that all necessary municipal action for the making of this conveyance has been duly taken.

Dated this ____ day of April, 2021.

TOWN OF SYRACUSE, INDIANA

By: _____
Larry Siegel, Council President

Document 1

STATE OF INDIANA)
) SS:
COUNTY OF KOSCIUSKO)

BEFORE ME, a Notary Public in and for said County and State, personally appeared Larry Siegel, known to me to be the Council President of the Town of Syracuse, Indiana, and for and on behalf of said municipal corporation acknowledged execution of the foregoing instrument and who, having been duly sworn, stated that any representations contained therein are true.

WITNESS my hand and Notarial Seal this ____ day of April, 2021.

My Commission Expires:

_____, Notary Public
Resident of Kosciusko County, Indiana
Commission Number _____

The mailing address to which tax statements should be mailed under IC 6-1.1-22-8.1 is _____
_____.

The mailing address of the grantee is _____.

The property address is: Vacant, Huntington Street, Syracuse, IN 4656

I affirm, under the penalties for perjury, that I have taken reasonable care to redact each Social Security Number in this document, unless required by law. (Stephen R. Snyder)

This instrument prepared by Stephen R. Snyder, Attorney at Law

EXHIBIT A

A parcel of land located in the Southwest Quarter of Section 5 and the Southeast Quarter of Section 6, Township 34 North, Range 7 East, Turkey Creek Township, Kosciusko County, Indiana, and being that 0.91 acre parcel of land shown on the plat of an original boundary survey of said parcel certified by Jeffrey S. Barnes, PS #LS20200084 on October 30, 2019 as Jones Petrie Rafinski project number 2019-0165 (all references to monuments and courses herein are shown on said plat of survey) and being more particularly described as follows: Commencing at the northwest corner of the intersection of Huntington Street (also known as S.R. 13) and Boston Street; thence North 33 degrees 54 minutes 47 seconds West along the west boundary of Huntington Street, said bearing being the basis of bearing of this description, with all other bearings herein relative thereto, 257.17 feet to a bar and cap (Barnes 20200084) at the northern most corner of that parcel of land described in Document No. 2018120188, Kosciusko County Recorder, and being the point of beginning of this description; thence South 56 degrees 27 minutes 39 seconds West 113.66 feet along the north line of said Document No. to a 5/8" rebar; thence South 34 degrees 24 minutes 04 seconds East 71.19 feet along the west line of said Document No. to a bar and cap (Kimpel); thence South 54 degrees 54 minutes 22 seconds West along said west line 7.78 feet to a bar and cap (Kimpel); thence South 35 degrees 57 minutes 57 seconds East along said west line 9.97 feet to a bar and cap (Kimpel); thence South 72 degrees 01 minute 30 seconds East along said west line 2.09 feet to a bar and cap (Kimpel); thence North 54 degrees 48 minutes 42 seconds East along said west line 6.13 feet to a bar and cap (Kimpel); thence South 34 degrees 36 minutes 06 seconds East along said west line 11.72 feet to a bar and cap (Kimpel) on the north line of Lot 57 of the plat of Dolan and Mile's Addition to Syracuse, 1898, recorded in Plat Book 1, page 174, Kosciusko County Recorder; thence North 71 degrees 08 minutes 24 seconds West along the north line of said Addition 156.31 feet to a bar and cap (Barnes 20200084) on the east line of Document No. 2015121259, Kosciusko County Recorder; thence North 01 degree 19 minutes 09 seconds West 92 feet, more or less, along the east line of said Document No., passing through a bar and cap (Barnes 20200084) at a distance of 64.00 feet, to the centerline of Turkey Creek Ditch; thence Northwesterly along the centerline of said Ditch 110 feet, more or less, to the northwest corner of said Document No.; thence South 01 degree 19 minutes 09 seconds East 101 feet, more or less, along the west line of said Document No. to a bar and cap (Barnes 20200084) at the northeast corner of Lot 52 of said Addition, passing thru a bar and cap (Barnes 20200084) that is 63.00 feet northerly of the northeast corner of said Lot 52 of said Addition; thence North 71 degrees 08 minutes 24 seconds West along the north line of said Addition 53.53 feet to a bar and cap (Barnes 20200084) on the east boundary of Hickory Street; thence North 01 degree 19 minutes 09 seconds West along said east boundary 65.40 feet to a bar and cap (Barnes 20200084); thence North 14 degrees 18 minutes 12 seconds East 10.47 feet to a bar and cap (Barnes 20200084); thence North 35 degrees 46 minutes 54 seconds East 39.47 feet to a bar and cap (Barnes 20200084); thence North 66 degrees 35 minutes 01 second East 30.87 feet to a bar and cap (Barnes 20200084); thence South 64 degrees 11 minutes 48 seconds East 95.06 feet to a bar and cap (Barnes 20200084); thence North 87 degrees 11 minutes 20 seconds East 15.63 feet to a bar and cap (Barnes 20200084); thence South 30 degrees 23 minutes 05 seconds East 23.47 feet to a bar and cap (Barnes 20200084) at the north edge of a concrete retaining wall; thence South 58 degrees 25 minutes 46 seconds East along said north edge 8.57 feet; thence North 70 degrees 00 minutes 49 seconds East 21.83 feet to a bar and cap (Barnes 20200084); thence North 59 degrees 21 minutes 47 seconds East 12.87 feet to a bar and cap (Barnes 20200084); thence North 05 degrees 14 minutes 07 seconds East 17.49 feet to a bar and cap (Barnes 20200084); thence North 05 degrees 54 minutes 21 seconds West 15.41 feet to a bar and cap (Barnes 20200084); thence North 34 degrees 45 minutes 28 seconds West 4.12 feet to a bar and cap (Barnes 20200084); thence North 07 degrees 11 minutes 58 seconds West 117.38 feet to a bar and cap (Barnes 20200084); thence North 56 degrees 05 minutes 13 seconds East 24.87 feet to a bar and cap (Barnes 20200084) on the west boundary of Huntington Street; thence South 33 degrees 54 minutes 47 seconds East along said west boundary 236.08 feet to the point of beginning and containing 0.91 acres, more or less.

APPENDIX A

EXHIBIT 3

Document 2

GRANT OF EASEMENT

THIS GRANT OF EASEMENT is made this ____ day of _____, 2021, by the Town of Syracuse, Indiana, an Indiana political subdivision, ("Town") to the Turkey Creek Dam and Dike Conservancy District, an Indiana political subdivision, ("District").

SECTION 1. RECITALS

1.1 The following recitals are a material part of this Agreement.

1.2 Town is the owner of the following described real estate located in Kosciusko County, Indiana:

A parcel of land located in the Southwest Quarter of Section 5 and the Southeast Quarter of Section 6, Township 34 North, Range 7 East, Turkey Creek Township, Kosciusko County, Indiana, and being that 0.84 acre parcel of land shown on the plat of an original boundary survey of said parcel certified by Jeffrey S. Barnes, PS, #LS20200084 on October 30, 2019 as Jones Petrie Rafinski project number 2019-0185 (all references to monuments and courses herein are shown on said plat of survey) and being more particularly described as follows: Commencing at the northwest corner of the intersection of Huntington Street (also known as S.R. 13) and Boston Street; thence North 33 degrees 54 minutes 47 seconds West along the west boundary of Huntington Street, said bearing being the basis of bearing of this description, with all other bearings herein relative thereto, 493.25 feet to a bar and cap (Barnes 2020084) and being the point of beginning of this description; thence South 56 degrees 05 minutes 13 seconds West 24.87 feet to a bar and cap (Barnes 2020084); thence South 07 degrees 11 minutes 58 seconds East 117.38 feet to a bar and cap (Barnes 2020084); thence South 34 degrees 45 minutes 28 seconds East 4.12 feet to a bar and cap (Barnes 2020084); thence South 05 degrees 54 minutes 21 seconds East 15.41 feet to a bar and cap (Barnes 2020084); thence South 05 degrees 14 minutes 07 seconds West 17.49 feet to a bar and cap (Barnes 2020084); thence South 59 degrees 21 minutes 47 seconds West 12.87 feet to a bar and cap (Barnes 2020084); thence South 70 degrees 00 minutes 49 seconds West 21.83 feet to the north edge of a concrete retaining wall; thence North 58 degrees 25 minutes 46 seconds West 8.57 feet along the north edge of said wall to a bar and cap (Barnes 2020084); thence North 30 degrees 23 minutes 05 seconds West 23.47 feet to a bar and cap (Barnes 2020084); thence South 87 degrees 11 minutes 20 seconds West 15.63 feet to a bar and cap (Barnes 2020084); thence North 64 degrees 11 minutes 48 seconds West 96.06 feet to a bar and cap (Barnes 2020084); thence South 66 degrees 35 minutes 01 second West 30.87 feet to a bar and cap (Barnes 2020084); thence South 35 degrees 46 minutes 54 seconds West 39.47 feet to a bar and cap (Barnes 2020084); thence South 14 degrees 18 minutes 12 seconds West 10.47 feet to a bar and cap (Barnes 2020084) on the east boundary of Hickory Street; thence North 01 degree 19 minutes 09 seconds West along said boundary 88.09 feet to a bar and cap (Barnes 2020084) to the southeastern boundary of Henry Street; thence North 33 degrees 01 minute 00 seconds East along said southeastern boundary 240.82 feet to a mag nail at the southern intersection of Huntington Street (also known as S.R. 13) and Henry Street; thence South 33 degrees 54 minutes 47 seconds East along the west boundary of Huntington Street 145.63 feet to the point of beginning and containing 0.84 acres, more or less.

("Easement Tract").

1.3 District is the owner of the following described real estate located in Kosciusko County, Indiana, to-wit:

Document 2

A parcel of land located in the Southwest Quarter of Section 5 and the Southeast Quarter of Section 6, Township 34 North, Range 7 East, Turkey Creek Township, Kosciusko County, Indiana, and being that 0.91 acre parcel of land shown on the plat of an original boundary survey of said parcel certified by Jeffrey S. Barnes, PS #LS20200084 on October 30, 2019 as Jones Petrie Rafinski project number 2019-0185 (all references to monuments and courses herein are shown on said plat of survey) and being more particularly described as follows: Commencing at the northwest corner of the intersection of Huntington Street (also known as S.R. 13) and Boston Street; thence North 33 degrees 54 minutes 47 seconds West along the west boundary of Huntington Street, said bearing being the basis of bearing of this description, with all other bearings herein relative thereto, 257.17 feet to a bar and cap (Barnes 2020084) at the northern most corner of that parcel of land described in Document No. 2018120188, Kosciusko County Recorder, and being the point of beginning of this description; thence South 56 degrees 27 minutes 39 seconds West 113.66 feet along the north line of said Document No. to a 5/8" rebar; thence South 34 degrees 24 minutes 04 seconds East 71.19 feet along the west line of said Document No. to a bar and cap (Kimpel); thence South 54 degrees 54 minutes 22 seconds West along said west line 7.78 feet to a bar and cap (Kimpel); thence South 35 degrees 57 minutes 57 seconds East along said west line 9.97 feet to a bar and cap (Kimpel); thence South 72 degrees 01 minute 30 seconds East along said west line 2.09 feet to a bar and cap (Kimpel); thence South 72 degrees 01 minute 30 seconds East along said west line 6.13 feet to a bar and cap (Kimpel); thence North 54 degrees 48 minutes 42 seconds East along said west line 11.72 feet to a bar and cap (Kimpel); thence South 34 degrees 36 minutes 06 seconds East along said west line 11.72 feet to a bar and cap (Kimpel) on the north line of Lot 57 of the plat of Dolan and Mille's Addition to Syracuse, 1898, recorded in Plat Book 1, page 174, Kosciusko County Recorder; thence North 71 degrees 08 minutes 24 seconds West along the north line of said Addition 156.31 feet to a bar and cap (Barnes 20200084) on the east line of Document No. 2015121259, Kosciusko County Recorder; thence North 01 degree 19 minutes 09 seconds West 92 feet, more or less, along the east line of said Document No., passing through a bar and cap (Barnes 20200084) at a distance of 64.00 feet, to the centerline of Turkey Creek Ditch; thence Northwesterly along the centerline of said Ditch 110 feet, more or less, to the northwest corner of said Document No.; thence South 01 degree 19 minutes 09 seconds East 101 feet, more or less, along the west line of said Document No. to a bar and cap (Barnes 20200084) at the northeast corner of Lot 52 of said Addition, passing thru a bar and cap (Barnes 20200084) that is 63.00 feet northerly of the northeast corner of said Lot 52 of said Addition; thence North 71 degrees 08 minutes 24 seconds West along the north line of said Addition 53.53 feet to a bar and cap (Barnes 20200084) on the east boundary of Hickory Street; thence North 01 degree 19 minutes 09 seconds West along said east boundary 65.40 feet to a bar and cap (Barnes 20200084); thence North 14 degrees 18 minutes 12 seconds East 10.47 feet to a bar and cap (Barnes 20200084); thence North 35 degrees 46 minutes 54 seconds East 39.47 feet to a bar and cap (Barnes 20200084); thence North 66 degrees 35 minutes 01 second East 30.87 feet to a bar and cap (Barnes 20200084); thence South 64 degrees 11 minutes 48 seconds East 96.06 feet to a bar and cap (Barnes 20200084); thence North 87 degrees 11 minutes 20 seconds East 15.63 feet to a bar and cap (Barnes 20200084); thence South 30 degrees 23 minutes 05 seconds East 23.47 feet to a bar and cap (Barnes 20200084) at the north edge of a concrete retaining wall; thence South 58 degrees 25 minutes 46 seconds East along said north edge 8.57 feet; thence North 70 degrees 00 minutes 49 seconds East 21.83 feet to a bar and cap (Barnes 20200084); thence North 59 degrees 21 minutes 47 seconds East 12.87 feet to a bar and cap (Barnes 20200084); thence North 05 degrees 14 minutes 07 seconds East 17.49 feet to a bar and cap (Barnes 20200084); thence North 05 degrees 54 minutes 21 seconds West 15.41 feet to a bar and cap (Barnes 20200084); thence North 34 degrees 45 minutes 28 seconds West 4.12 feet to a bar and cap (Barnes 20200084); thence North 07 degrees 11 minutes 58 seconds West 117.38 feet to a bar and cap (Barnes 20200084); thence North 56 degrees 05 minutes 13 seconds East 24.87 feet to a bar and cap (Barnes 20200084) on the west boundary of Huntington Street; thence South 33 degrees 54 minutes 47 seconds East along said west boundary 236.08 feet to the point of beginning and containing 0.91 acres, more or less.

("Dominant Tract").

1.4 District maintains a water control structure ("Dam") on the Dominant Tract, which structure serves and benefits the residents of Town.

1.5 In order to properly maintain the Dam, District requires access to those portions of the Dominant Tract which are adjacent to the Easement Tract.

1.6 District desires to obtain and Town desires to grant to District an easement for access to the Dominant Tract in, over and across the Easement Tract.

SECTION 2. CONSIDERATION

2.1 The consideration for this Agreement is One Dollar (\$1.00) and other valuable consideration.

SECTION 3. GRANT

3.1 Town grants to District an easement in, over and across the Easement Tract for the following purposes:

3.1.1 Access to the Dominant Tract;

3.1.2 The performance of maintenance to the Dominant Tract and any structures, including the Dam, located thereon;

3.1.3 Replacement of the Dam and any ancillary structures located on the Dominant Tract;

3.1.4 Such other activities as may be necessary for the proper operation of the Dam and structures ancillary to the Dam; and,

3.1.5 Such other purposes for which the parties agree.

3.2 The exercise of the rights granted to District by this Easement are subject to the obligation of District to repair any and all damage to the Easement Tract which may be caused by the District, all at District's expense.

3.3 District shall indemnify and hold Town harmless from any claims of any nature arising from the exercise by District of the rights granted herein.

SECTION 4. MISCELLANEOUS

4.1 This Agreement shall be construed in accordance with the laws of the State of Indiana and shall be enforceable with attorney's fees and without relief from valuation or appraisement laws.

4.2 This Agreement shall be recorded in the Office of the Recorder of Kosciusko County, Indiana.

4.3 The easement created hereby is appurtenant to and shall run with the title to the Dominant Tract.

IN WITNESS WHEREOF, the parties have executed this Agreement the date above written.

TOWN OF SYRACUSE, INDIANA

By: _____
Larry Siegel, Council President

TURKEY CREEK DAM AND DIKE
CONSERVANCY DISTRICT

By: _____
William J. Pipp, President

STATE OF INDIANA)
) SS:
COUNTY OF KOSCIUSKO)

BEFORE ME, a Notary Public in and for said County and State, personally appeared Larry Siegel, known to me to be the Council President of the Town of Syracuse, Indiana, and for and on behalf of said corporation acknowledged execution of the foregoing instrument and who, having been duly sworn, stated that any representations contained therein are true.

WITNESS my hand and Notarial Seal this ____ day of _____, 2021.

My Commission Expires:

_____, Notary Public
Resident of Kosciusko County, Indiana
Commission Number _____

STATE OF INDIANA)
) SS:
COUNTY OF KOSCIUSKO)

BEFORE ME, a Notary Public in and for said County and State, personally appeared William J. Pipp, known to me to be the President of Turkey Creek Dam and Dike Conservancy District, and for and on behalf of said corporation acknowledged execution of the foregoing instrument and who, having been duly sworn, stated that any representations contained therein are true.

WITNESS my hand and Notarial Seal this ____ day of _____, 2021.

My Commission Expires:

_____, Notary Public
Resident of Kosciusko County, Indiana
Commission Number _____

This instrument prepared by Stephen R. Snyder, Attorney at Law
I affirm, under the penalties for perjury, that I have taken reasonable care to redact each Social Security Number in this document, unless required by law. (Stephen R. Snyder)

APPENDIX A

EXHIBIT 3

Document 3

AGREEMENT

THIS AGREEMENT is made this ____ day of _____, 2021, between Turkey Creek Dam and Dike Conservancy District ("*District*") and the Town of Syracuse, Indiana, ("*Town*").

SECTION 1. RECITALS

- 1.1 The following recitals are a material part of this Agreement.
- 1.2 District is the owner of the water control structure located within the corporate limits of Town and which regulates the level of Syracuse Lake, Mud Lake and Lake Wawasee ("*Dam*").
- 1.3 District is responsible for all necessary maintenance and repair of Dam.
- 1.4 An agreement between Town and the Indiana Department of Natural Resources dated September 15, 1992, requires Town to maintain as closely as possible, the levels of Syracuse Lake the legal level established by the Kosciusko Circuit Court. A copy of the agreement is attached as Exhibit A ("*DNR Agreement*").
- 1.5 District is willing to assume duties of Town pursuant to the Agreement to provide maintenance and repair of the Dam, however Town shall continue its obligation to perform daily regulation of the lake level and Town is willing to continue that obligation.

SECTION 2. CONSIDERATION

- 2.1 The consideration for this Agreement is One Dollar (\$1.00) and other valuable consideration.

SECTION 3. TERMS

- 3.1 Town shall provide personnel sufficient to observe and adjust Dam in such a fashion as to maintain as nearly as possible the legally established lake level of Syracuse Lake, Mud Lake and Lake Wawasee as required by the Agreement. The personnel provided shall be familiar with operation of the Dam sufficiently to perform that personnel's duties.

Document 3

3.2 District assumes the obligation to perform any type of maintenance, repair or replacement of Dam or any ancillary structures of Dam. District shall indemnify and hold Town harmless from any claims of any nature resulting from District's performance of this Agreement.

**SECTION 4.
MISCELLANEOUS**

4.1 This Agreement shall be construed in accordance with the laws of the State of Indiana.

IN WITNESS WHEREOF, the parties have executed this Agreement the date above written.

TOWN OF SYRACUSE, INDIANA

By: _____
Larry Siegel, Council President

TURKEY CREEK DAM AND DIKE
CONSERVANCY DISTRICT

By: _____
William J. Pipp, President

AGREEMENT
between
TOWN OF SYRACUSE
of
KOSCIUSKO COUNTY
(hereinafter referred to as the TOWN)
and the
DEPARTMENT OF NATURAL RESOURCES
STATE OF INDIANA
(hereinafter referred to as the DEPARTMENT).

WHEREAS, Syracuse Lake is a public freshwater lake having a legally established average normal level, and

WHEREAS, the legally established average normal level is controlled by a gated outlet structure which requires periodic operation of the gate, and

WHEREAS, the Lakes Preservation Act, IC 13-2-11.1, provides that the State of Indiana, acting through the DEPARTMENT, is responsible for the maintenance of the water levels of public freshwater lakes, and

WHEREAS, the DEPARTMENT has responsibility of overseeing the operation of control structures on public freshwater lakes, and

WHEREAS, it is in the best interest of the people living around the lakes to have the level of the lake maintained, as near as possible to its legally established average normal level, now

THEREFORE, it is mutually agreed that:

1. The TOWN, as owner of the control structure, has the sole responsibility for the maintenance and repair of the control structure to maintain, as near as possible, the legally established average normal level of Syracuse Lake.
2. The TOWN shall be responsible for all annual routine maintenance, including but not limited to equipment and grass mowing, in the vicinity of said control structure.
3. The TOWN shall obtain written approval from the DEPARTMENT, pursuant to the provisions of IC 13-2-11.1, before proceeding with any non-routine maintenance on the properties immediately adjacent to the control structure or on the control structure itself.
4. The TOWN has the sole responsibility for maintaining Syracuse Lake as near as possible to its legally established average normal level in compliance with the DEPARTMENT's direction and guidance by:
 - A. Opening and closing the gates according to the immediate conditions to maintain the level of the lake at elevation 858.87 feet, M.S.L., which is 8.87 on the staff gage.
 - B. The TOWN shall keep on file with the DEPARTMENT at all times, a current roster of the names and phone numbers of the designated operator and at least two alternate operators.

IN WITNESS, the following signatures this 15TH day of September, 19 92.

TOWN:

The Town of Syracuse

by Matthew J. Vignault
TOWN MANAGER

DEPARTMENT:

John N. Simpson
John N. Simpson, P.E.
Director
Division of Water.



APPENDIX A

EXHIBIT 3

Document 4

EASEMENT

THIS GRANT OF EASEMENT is made this ____ day of _____, 2021, between David H. Elliott and Sherry Elliott, husband and wife and each over the age of eighteen (18), ("*Elliott*") and Turkey Creek Dam and Dike Conservancy District ("*District*").

SECTION 1. RECITALS

- 1.1 The following recitals are a material part of this Agreement.
- 1.2 Elliott is the owner of the following described real estate located in Kosciusko County, Indiana, to-wit:

Part of the West one-half (1/2) of Section 8, Township 34 North, Range 7 East, more particularly described as follows:

Beginning at the Northwest corner of Lot Twenty (20) in the Plat of Hawaiian Village; thence South on and along the most Westerly line of said Lot Twenty (20), 25 feet more or less to the North right-of-way line of South Koko Drive; thence Westerly on and along the North right-of-way line of South Koko Drive to the Northwest corner of South Koko Drive; thence Southerly on and along the West right-of-way line of South Koko Drive, 50 feet; thence South 89 degrees 48 minutes East, 25 feet on and along the South edge of the right-of-way of South Koko Drive; thence South 0 degrees 10 minutes East, 40 feet on and along the right-of-way of South Koko Drive; thence North 89 degrees 48 minutes West, 125 feet to a point; thence North 0 degrees 10 minutes West, 90 feet to a point; thence North 6 degrees 32 minutes 55 seconds West, 303.59 feet to a point; thence South 89 degrees 48 minutes East, 133.68 feet to a point on the West right-of-way line of North Koko Drive; thence Southerly on and along the West right-of-way line of North Koko Drive, 50 feet to the water's edge of a channel; thence continuing South 0 degrees 10 minutes East, 236.5 feet to the Northwest corner of Lot 20 in Hawaiian Village Addition and the place of beginning.

("Easement Tract").

- 1.3 District is established for the purpose of flood control within its jurisdictional territory including, but not limited to maintenance, repair and replacement of a manmade dike located on the Easement Tract.
- 1.4 District desires to obtain from Elliott and Elliott desires to grant to District an easement for the purpose of maintenance, repair, modification and replacement of the dike located on the Easement Tract.

**SECTION 2.
CONSIDERATION**

2.1 The consideration for this Agreement is One Dollar (\$1.00) and other valuable consideration.

**SECTION 3.
TERMS**

3.1 Elliott grants to District an easement in, over and across the Easement Tract for the following purposes:

3.1.1 Repair, modification, maintenance and replacement of the manmade dike on the Easement Tract including the placement of a sheet steel wall on the water side of the dike for the purpose of reinforcing the ability of the dike to hold back the waters of Lake Wawasee;

3.1.2 Access to the area needed for repair, maintenance, modification or replacement of the dike, including access by such construction equipment as may be necessary to perform required services;

3.1.3 Removal of vegetation which, in the opinion of District, serves to weaken, undermine or otherwise deteriorate the existing dike or the sheet steel wall constructed by District.

3.1.4 District shall limit its activities, to the extent possible, on the cross-hatched area of the Easement Tract as shown by Exhibit A.

3.2 At the completion of any permitted activity by District, District shall restore the Easement Tract as nearly as possible to the condition existing prior to such activity, all at District's expense.

3.3 District shall indemnify and hold Elliott harmless from any claims of damages of any type resulting from the activities of District performed pursuant to this Agreement, any damages resulting from a breach of the Dike (unless such breach is a direct result of activities of Elliott) and any breach of District's obligation to provide maintenance and repair of the dike.

3.4 Elliott may utilize the Easement Tract for recreational purposes but shall not place any permanent structure within the Easement Tract, undertake any excavation of any type within the Easement Tract and shall not maintain any vegetation on the Easement Tract other than normal residential grass.

**SECTION 4.
MISCELLANEOUS**

4.1 This Agreement shall be construed in accordance of the State of Indiana and shall be enforceable with attorney's fees and without relief from valuation or appraisal laws.

4.2 This easement is in gross and pursuant I.C. 32-23-2-2 may be alienated or assigned in whole or in part by District.

IN WITNESS WHEREOF, the parties have executed this Agreement the day above written.

_____ David H. Elliott	TURKEY CREEK DAM AND DIKE CONSERVANCY DISTRICT
---------------------------	---

_____ Sherry Elliott	By: _____ William J. Pipp, President
-------------------------	---

This instrument prepared by Stephen R. Snyder, Attorney at Law
I affirm, under the penalties for perjury, that I have taken reasonable care to redact each Social Security Number in this document, unless required by law. (Stephen R. Snyder)



APPENDIX B

APPENDIX B

EXHIBIT 1: Technical Reports



Eric J. Holcomb, Governor
Dan Bortner, 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/

May 4, 2021

Town of Syracuse
Parks and Recreation
Attn: Chad Jonsson
1013 North Long Drive
Syracuse, IN 46567

Re: Syracuse Lake Outlet Structure
C.S. ID # 43-29
Kosciusko County

Dear Mr. Jonsson:

The Indiana DNR, Division of Water conducts visual assessments of outlet structures on Indiana's public freshwater lakes.

In a typical inspection, DNR staff conducts a site assessment and an outlet structure assessment. The site assessment looks at erosion, vegetation/overgrowth, and animal destruction, such as burrowing. The structure assessment looks at the condition of structure and foundation, the movement of water through the structure, erosion, and seepage.

The 2021 Visual Inspection Report for the Syracuse Lake Outlet Works is attached. The overall condition rating was **FAIR**; a significant improvement since the previous inspection in 2017.

The attached inspection report also identifies apparent deficiencies that may compromise the integrity and proper functioning of the outlet structure now and in the future. Please be aware that permits may be needed for certain repairs or modifications.

If you have any questions regarding the report, please contact Mr. George Barth, Engineering Assistant, by phone (317-767-5340) or by email (GBarth@dnr.IN.gov).

Sincerely,

A handwritten signature in black ink, appearing to read "David P. Nance".

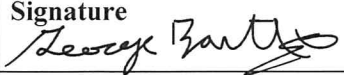
David P. Nance, PG., Section Manager
Project Development
Division of Water

xc: William Pipp Turkey Creek Dam and Dike CD
Enclosure: Inspection Report

OUTLET STRUCTURE VISUAL INSPECTION REPORT

Indiana Department of Natural Resources
Division of Water
402 West Washington Street, Room W264
Indianapolis, Indiana 46204
Telephone: (317) 232-4162

Outlet Structure Name SYRACUSE LAKE			Quad. LAKE WAWASEE		Date of Inspection 04/30/2021	
C.S. ID 43-29	County KOSCIUSKO	Quarter Sections SW,SW,SW	Section 5	Township 34N	Range 7E	UTMs 4586350N 604475E
Owner's Name and Address CITY OF SYRACUSE PARKS AND RECREATION DEPT 1013 NORTH LONG DRIVE SYRACUSE, IN 46567 <i>Ownership may change for 2024 inspection</i>			Operator/Contact Name and Address SAME			
Owner's Telephone No. (574) 457-3440 <i>NEEDS UPDATE AFTER 2021</i>			Contact's Telephone No. (574) 457-3440 <i>NEEDS UPDATE AFTER 2021</i>			
Classification/Type of Structure LOW HAZARD CONCRETE OGEE WEIR W/ TWO SLIDE GATES			Date of Previous Inspection/Inspector 12/14/17 Corey Fennig		Next Inspection Date 2024	
Complete Outlet Structure Description The lake outlet structure is composed of two sections. A concrete ogee weir is right aligned, with a weir length of approximately 20 ft wide and 8 ft high. The left alignment of the outlet works includes two metal slide gates that are approximately 6 ft wide and 5 ft high each. Combined total weir length is 35 ft. Steel sheet piling (2020) form walls that extend downstream 25 ft on the right bank and 30 ft on the left bank. The steel sheet piling lines the walls of the channel approach upstream as well. The downstream channel left bank is largely protected from erosion. The DNR Division of Water does not have as-built plans for this structure on file. These plans are needed.						
Field Conditions for Current Inspection Ground Conditions: Dry <u>x</u> , Wet __, Snow __, Other __ Water Level Above or Below the Outlet Structure: Below				Legal Lake Level: 858.87ft., NGVD 29., 8.87gage Gage Reading on inspection date: __. No Gage found		
Remarks/ Inspection Comments: <p>The structure appears to be in fair condition. The ogee weir was not active at the time of this inspection and there was no leakage or major cracks observed in the weir. There is a chemical attack on the right-side wall above the weir, causing the concrete to extrude a white precipitate. This attack is propagating through the concrete and can be seen on the opposite side of the wall, viewable from the park. There is a point of exposure to rebar along the center gate sidewall, but there appear to be no major cracks threatening the integrity of the concrete components.</p> <p>The deteriorating sheet piling previously found both upstream and downstream of the structure and on both left and right side have all been reinforced with heavier sheet piling (2020 repair). There is also a new concrete cap on top of the sheet piling (2020 project).</p> <p>Additional riprap has been placed along the downstream left bank to reduce erosion at this spot (2020 project).</p> <p>The gearboxes on the two slide gates are different sizes, and it is unknown if they operate with the same crank.</p> <p>At the time of this inspection, there appeared to be an object beneath the right(center) gate. It could not be identified as rock or organic material and it is recommended that it be dislodged before attempting to fully close the gate.</p> <p>It was noticed in the 2017 inspection (not previously noted) that the Hickory Street bridge is immediately downstream. It measures only 9'x4'. Debris will become lodged at the bridge very quickly during a rain event. A hydrologic study needs to be completed to see if this structure could meet the state minimum design flow for the area.</p>						

Based on this inspection and recent file review, the overall condition is determined to be: Satisfactory: _____, Fair: <u> X </u> , Poor: _____, Unsatisfactory: _____.	
Inspector's Name George Barth	Title Engineer Assistant III
Signature 	Date of this inspection 04/30/2021
Processed By:	Date Processed
Parties Notified of Findings: IDNR/ Water	Date of Notification May 4, 2021 letter and email to current owner and Turkey Creek Dam and Dike Conservancy Board.
Structure and Appurtenant Works: The structure appears to be functioning as designed	
Are there any obvious discrepancies in dimensions, configuration, or description between the documented and the existing structure: We do have as-built plans for 2020 project and repairs on this structure. We do not have copies on file of the original as-built plans for this structure.	
Condition: Outlet structures will be concrete, steel, earth, rock, wood or a combination of these materials. A significant part of the inspection will be the evaluation of the condition of the materials. For example, concrete deterioration may include spalling, cracking, pitting, etc.: With the upstream and downstream steel sheeting being upgraded, there is minimal deterioration to the metal components, but there is risk of exposed rebar along on of the gates' sidewalls. The concrete appears to be free of major cracks but one sidewall does exhibit cracking with chemical attack above the waterline.	
Area around the Outlet Structure: Upstream and downstream of the outlet structure have been reinforced and are clear of debris	
Is there another structure (culvert, or natural feature) immediately downstream that will influence the hydraulic or the mechanical characteristics of the Outlet structure? Yes, there is a 9'x4' spanning arch CMP bridge/embankment immediately downstream.	

APPENDIX C

APPENDIX C

EXHIBIT 1: Design Data for Structure #1 (Syracuse Outlet Structure)



State of Indiana
Department of Natural Resources



CERTIFICATE OF APPROVAL

Application #: FW-30104-0

This Certificate of Approval is a Permit for Construction under the authority of the Indiana Flood Control Act, IC 14-28-1 with 312 IAC 10 as administered by the Department of Natural Resources.

Approval Issued To: Town of Syracuse, Mike Noe, 310 North Huntington Street, Syracuse, IN 46567

Approval Issued By:

Mail Date: 1/6/2020

James J. Hebenstreit, PE, Division of Water

Permit Effective Date: 01/24/2020

Permit Expiration Date: 01/06/2022

Pursuant to 312 IAC 2-5-1, this Permit becomes Effective eighteen (18) days from the Mail Date to provide a stay period for a Petition for Administrative Review with the Indiana Natural Resources Commission, Division of Hearings. Initiating construction authorized in this Permit prior to the Permit Effective Date constitutes a violation. This Permit is only valid until the Permit Expiration Date.

This Permit may be renewed one (1) time if a written request is received at the DNR, Division of Water, prior to the Permit Expiration Date.

PROJECT INFORMATION:

Waterbody: Turkey Creek

County: Kosciusko

Project Description Narrative: In an effort to improve the existing control structure at Syracuse Lake, approximately 27' of corrugated steel sheet piling will be placed in front of the existing sheet piling along both banks of Turkey Creek. Grout fill will be placed between the two walls and a concrete cap will be placed on top of both walls. Approximately 61.5' of riprap will be placed downstream of the steel sheet piling along the south bank, in front of the existing large stones to prevent further erosion. Approximately 23.1' of riprap will be placed downstream of the steel sheet piling along the north bank, and 11' of turf reinforcement mat will be placed from the top of the riprap to the top of the bank to provide slope protection.

Project Location: Downstream of the Syracuse Lake control structure at Syracuse

PERMIT CONDITIONS:

This Certificate of Approval is valid only if the construction project is in compliance with all Conditions in this Permit.

DNR PROJECT SPECIFIC PERMIT CONDITIONS

- 1) Revegetate all bare and disturbed areas with a mixture of grasses (excluding all varieties of tall fescue) and legumes as soon as possible upon completion; low endophyte tall fescue may be used in the ditch bottom and side slopes only.
- 2) Do not work in the waterway from April 1 through June 30 without the prior written approval of the Division of Fish and Wildlife.
- 3) All excavated material must be properly spread or completely removed from the project site such that erosion and off-site sedimentation of the material is prevented.
- 4) Minimize the movement of resuspended bottom sediment from the immediate project area.
- 5) Appropriately designed measures for controlling erosion and sediment must be implemented to prevent sediment from entering the stream or leaving the construction site; maintain these measures until construction is complete and all disturbed areas are stabilized.
- 6) To prevent the spread of aquatic invasive species, any equipment used for the project shall be cleaned of any plants, mud, and debris prior to project initiation and after completion of the work.
- 7) Do not construct any temporary runarounds, access bridges, causeways, cofferdams, diversions, or pumparounds.
- 8) Submit as-built plans, signed and stamped by a professional engineer, certifying that the dam and control structure were repaired in accordance with the approved plans and specifications to the Division of Water, IDNR within 6 months of project completion.
- 9) Except for the material used as backfill as shown on the plans submitted for the permit application, place all excavated material landward of the floodway*.
- 10) All work must conform with the existing bank at the upstream and downstream limits of the project site.
- 11) Do not leave felled trees, brush, or other debris in the floodway*.
- 12) Upon completion of the project, remove all construction debris from the floodway*.
- 13) * Note: For regulatory purposes, the floodway is defined on the attached Floodway Map.
- 14) Do not alter the legal level of Syracuse Lake; if the legal water level of the lake is altered, it will be the responsibility of the Town of Syracuse to take corrective actions to restore the legal water level of the lake and to mitigate for any damages incurred.

DNR PROJECT GENERAL PERMIT CONDITIONS

- 1) Any modifications or additional construction beyond what was shown on plans received at the Division of Water shall require an additional review and approval from the Department of Natural Resources.
- 2) This Permit must be posted and maintained at the project site until the project is completed
- 3) This Permit shall not be assigned or transferred without the prior written approval of the Department of Natural Resources.
- 4) If any prehistoric or historic archaeological artifacts or human remains are uncovered during construction, demolition, or earthmoving activities, state law (Indiana Code 14-21-1-27 and 29) requires that the discovery must be reported to the Department of Natural Resources within two (2) business days.
- 5) This Permit may be revoked by the Department of Natural Resources for violation of any condition or applicable statute or rule.
- 6) The Department of Natural Resources shall have the right to enter upon the site of the permitted activity for the purpose of inspecting the work authorized under this Permit.

RIGHT TO ADMINISTRATIVE REVIEW:

A party may appeal this Department of Natural Resources Action through the administrative review procedures found in the Administrative Orders and Procedures Act, IC 4-21.5, and the rules promulgated thereunder 312 IAC 3-1. 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. The Department of Natural Resources will be represented by legal counsel at all stages of administrative review.

In order to obtain an administrative review, a written petition must be filed with the Division of Hearings within 18 days of the Mail Date of the Action. The petition must contain specific reasons for the appeal and indicate the portion or portions of the project to which the appeal pertains. The petition must be addressed to the Division of Hearings, Indiana Government Center North, Room N103, 100 North Senate Avenue, Indianapolis, Indiana 46204

SERVICE LIST:**Applicant(s):**

Town of Syracuse, Mike Noe, 310 North Huntington Street, Syracuse, IN 46567

Agent(s):

Lawson-Fisher Associates PC, Christopher J Jeter, 525 West Washington Avenue, South Bend, IN 46601

Adjacent Landowners and Interested Parties:

Habitat for Humanity, PO Box 1913, Warsaw, IN 46581
Town of Syracuse, 310 North Huntington Street, Syracuse, IN 46567
304 North Huntington LLC, 304 North Huntington Street, Suite 1, Syracuse, IN 46567
BWF LLC, 4670 South State Road 5, Topeka, IN 46571
Sharma Spicher, 200 West Boston Street, Syracuse, IN 46567
Ryan N Wert, 204 West Boston Street, Syracuse, IN 46567
Deborah J Miller, 206 West Boston Street, Syracuse, IN 46567
Gary L Ringler, 6967 Mulligan Court, Syracuse, IN 46567
Michele R Moles, 300 West Boston Street, Syracuse, IN 46567
Susan Mayberry, 402 West Henry Street, Syracuse, IN 46567
Nicholas M Wagoner, 202 West Boston Street, Syracuse, IN 46567
Stanwich Mortgage Loan Trust, 1600 South Douglass Road, Suite 200-A, Anaheim, CA 92806
Richard and Kimberly Walters, 300 West Henry Street, Syracuse, IN 46567
Gurnimit LLC, 405 North Huntington Street, Syracuse, IN 46567
Gary Allen Stuckman, 9488 North Koher Road East, Syracuse, IN 46567

Courtesy Notification:

US Army Corps of Engineers, Detroit District, Michiana Branch 2422 Viridian Drive, Suite 200, South Bend, IN 46628
Kosciusko County SWCD, 217 East Bell Drive, Warsaw, IN 46582
Matthew Sandy, Court House, 3rd Floor 100 West Center Street, Warsaw, IN 46580
Kosciusko County Drainage Board, County Surveyor, Courthouse, Room 103 100 West Center Street, Warsaw, IN 46580
Indiana Department of Natural Resources, Division of Law Enforcement District 1 Headquarters 9822 North Turkey Creek Road, Syracuse, IN 46567

ADDITIONAL PERMITTING AGENCIES:

This is not a waiver of any local ordinance or other state or federal law or relieve the permittee of any liability for the effects which the project may have upon the safety of the life or property of others.

This does not relieve the permittee of the responsibility of obtaining permits, approvals, easements, etc. under other regulatory programs administered by, but not limited to, the U.S. Army Corps of Engineers, County Drainage Board, Indiana Department of Environmental Management and local, city, or county floodplain management, planning or zoning commission.



State of Indiana
Department of Natural Resources



CERTIFICATE OF APPROVAL

Application #: PL-23854-0

This Certificate of Approval is a Permit for Construction under the authority of the Indiana Public Freshwaters Lake Act, IC 14-26-2 with 312 IAC 11 as administered by the Department of Natural Resources.

Approval Issued To: Town of Syracuse, Mike Noe, 310 North Huntington Street, Syracuse, IN 46567

Approval Issued By:

Mail Date: 1/6/2020

James J. Hebenstreit, PE, Division of Water

Permit Effective Date: 01/24/2020

Permit Expiration Date: 01/06/2022

Pursuant to 312 IAC 2-5-1, this Permit becomes Effective eighteen (18) days from the Mail Date to provide a stay period for a Petition for Administrative Review with the Indiana Natural Resources Commission, Division of Hearings. Initiating construction authorized in this Permit prior to the Permit Effective Date constitutes a violation. This Permit is only valid until the Permit Expiration Date.

PROJECT INFORMATION:

Waterbody: Syracuse Lake

County: Kosciusko

Project Description Narrative: In an effort to improve the existing control structure at Syracuse Lake, two (2), existing steel sheet piling seawalls will be refaced with steel sheet piling. The reface along the north bank will be approximately 154' long, and the reface along the south bank will be approximately 140' long. Additionally, glacial stone will be placed along 9' of the northern bank to provide further bank stabilization. Deteriorated concrete and fascia stone on the control structure's weir, slide gate frames, and north abutment will be replaced.

Project Location: Upstream of the Syracuse Lake control structure near Syracuse

PERMIT CONDITIONS:

This Certificate of Approval is valid only if the construction project is in compliance with all Conditions in this Permit.

DNR PROJECT SPECIFIC PERMIT CONDITIONS

- 1) Minimize the movement of resuspended bottom sediment from the immediate project area.
- 2) Appropriately designed measures for controlling erosion and sediment must be implemented to prevent sediment from entering the lake or leaving the construction site; maintain these measures until construction is complete and all disturbed areas are stabilized.
- 3) Revegetate all bare and disturbed areas landward of the shoreline with a mixture of grasses (excluding all varieties of tall fescue) and legumes as soon as possible upon completion.

- 4) All excavated material must be properly spread landward of the shoreline on the property described on page 1 under "DESCRIPTION" or completely removed from the project site such that erosion and off-site sedimentation of the material is prevented.
- 5) To prevent the spread of aquatic invasive species, any equipment used for the project shall be cleaned of any plants, mud, and debris prior to project initiation and after completion of the work.
- 6) Place riprap or glacial field stone in the lake along 1/2 of the toe of the steel sheet piling and 1 to 3 feet in width to provide aquatic habitat.
- 7) Maintain the legal lake level of Syracuse Lake (858.87 ft, MSL) to the greatest extent possible during construction: if the legal water level of the lake is altered, it will be the responsibility of the Town of Syracuse to take corrective actions to restore the legal water level of the lake and to mitigate for any damages incurred. Significant deviations from this level shall be reported to the Lakes Permitting Biologist (Nate Thomas, 260-244-6805, ext. 238, NThomas@dnr.in.gov) as soon as possible.
- 8) Submit as-built plans, signed and stamped by a professional engineer, certifying that the dam and control structure were repaired in accordance with the approved plans and specifications to the Division of Water, IDNR within 6 months of project completion.
- 9) Limit the maximum thickness of the reface concrete layer to 6 inches.
- 10) Any walk or structural tie constructed on top of the wall shall be placed landward of the wall's lakeward face.

DNR PROJECT GENERAL PERMIT CONDITIONS

- 1) Any modifications or additional construction beyond what was shown on plans received at the Division of Water shall require an additional review and approval from the Department of Natural Resources.
- 2) This Permit must be posted and maintained at the project site until the project is completed
- 3) This Permit shall not be assigned or transferred without the prior written approval of the Department of Natural Resources.
- 4) If any prehistoric or historic archaeological artifacts or human remains are uncovered during construction, demolition, or earthmoving activities, state law (Indiana Code 14-21-1-27 and 29) requires that the discovery must be reported to the Department of Natural Resources within two (2) business days.
- 5) This Permit may be revoked by the Department of Natural Resources for violation of any condition or applicable statute or rule.
- 6) The Department of Natural Resources shall have the right to enter upon the site of the permitted activity for the purpose of inspecting the work authorized under this Permit.

RIGHT TO ADMINISTRATIVE REVIEW:

A party may appeal this Department of Natural Resources Action through the administrative review procedures found in the Administrative Orders and Procedures Act, IC 4-21.5, and the rules promulgated thereunder 312 IAC 3-1. 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. The Department of Natural Resources will be represented by legal counsel at all stages of administrative review.

In order to obtain an administrative review, a written petition must be filed with the Division of Hearings within 18 days of the Mail Date of the Action. The petition must contain specific reasons for the appeal and indicate the portion or portions of the project to which the appeal pertains. The petition must be addressed to the Division of Hearings, Indiana Government Center North, Room N103, 100 North Senate Avenue, Indianapolis, Indiana 46204

SERVICE LIST:

Applicant(s):

Town of Syracuse, Mike Noe, 310 North Huntington Street, Syracuse, IN 46567

Agent(s):

Lawson-Fisher Associates PC, Christopher J Jeter, 525 West Washington Avenue, South Bend, IN 46601

Adjacent Landowners and Interested Parties:

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Ryan N Wert, 204 West Boston Street, Syracuse, IN 46567
Deborah J Miller, 206 West Boston Street, Syracuse, IN 46567
Gary L Ringler, 6967 Mulligan Court, Syracuse, IN 46567
Michele R Moles, 300 West Boston Street, Syracuse, IN 46567
Susan Mayberry, 402 West Henry Street, Syracuse, IN 46567
Nicholas M Wagoner, 202 West Boston Street, Syracuse, IN 46567
Stanwich Mortgage Loan Trust, 1600 South Douglass Road, Suite 200-A, Anaheim, CA 92806
Richard and Kimberly Walters, 300 West Henry Street, Syracuse, IN 46567
Gurnimit LLC, 405 North Huntington Street, Syracuse, IN 46567
Gary Allen Stuckman, 9488 North Koher Road East, Syracuse, IN 46567

Courtesy Notification:

US Army Corps of Engineers, Detroit District, 2422 Virdian Drive, Suite 200, South Bend, IN 46628
Kosciusko County SWCD, Darci Zolman, 217 East Bell Drive, Warsaw, IN 46582
Kosciusko County Area Plan Commission, Matthew M Sandy, Court House, 3rd floor 100 West Center Street, Warsaw, IN 46580
DNR Law Enforcement District 1, 9822 North Turkey Road, Syracuse, IN 46567

ADDITIONAL PERMITTING AGENCIES:

This is not a waiver of any local ordinance or other state or federal law or relieve the permittee of any liability for the effects which the project may have upon the safety of the life or property of others.

This does not relieve the permittee of the responsibility of obtaining permits, approvals, easements, etc. under other regulatory programs administered by, but not limited to, the U.S. Army Corps of Engineers, County Drainage Board, Indiana Department of Environmental Management and local, city, or county floodplain management, planning or zoning commission.

TOWN OF SYRACUSE SYRACUSE LAKE CONTROL STRUCTURE IMPROVEMENTS KOSCIUSKO COUNTY, INDIANA

JANUARY 2020

SHEET NO.	DESCRIPTION
1	TITLE SHEET AND DRAWING INDEX
2	SYRACUSE LAKE CONTROL STRUCTURE IMPROVEMENTS
3	NORTH BANK UPSTREAM PLAN AND ELEVATION
4	SOUTH BANK UPSTREAM PLAN AND ELEVATION
5	NORTH & SOUTH BANK DOWNSTREAM PLAN AND ELEVATION
6	STEEL SHEET PILING DETAILS
7	DAM REPAIR DETAIL

TOWN MANAGER

Mike Noe

TOWN COUNCIL

Larry Siegel

Paul Stooling

Tom Hoover

Larry Martindale

William Musser

Ward 1

Ward 2

Ward 3

Ward 4

Ward 5



LFA
LAWSON-FISHER ASSOCIATES P.C.
525 W. WASHINGTON AVENUE
SOUTH BEND, INDIANA 46601
PH: (574) 234-5187



SIGNATURE: *P. A. Siegel*
DATE: 1/27/20



TOWN OF SYRACUSE, INDIANA
SYRACUSE LAKE CONTROL STRUCTURE
IMPROVEMENTS
TITLE SHEET AND DRAWING INDEX

REVISIONS
DRAWN: JAJ
CHECKED: DAZ

HORIZONTAL SCALE
VERTICAL SCALE
SHEET BOOK
DATE: JANUARY, 2020

PROJECT NUMBER
201845.00
SHEETS
1 OF 7

OCTOBER 2020
AS-BUILTS

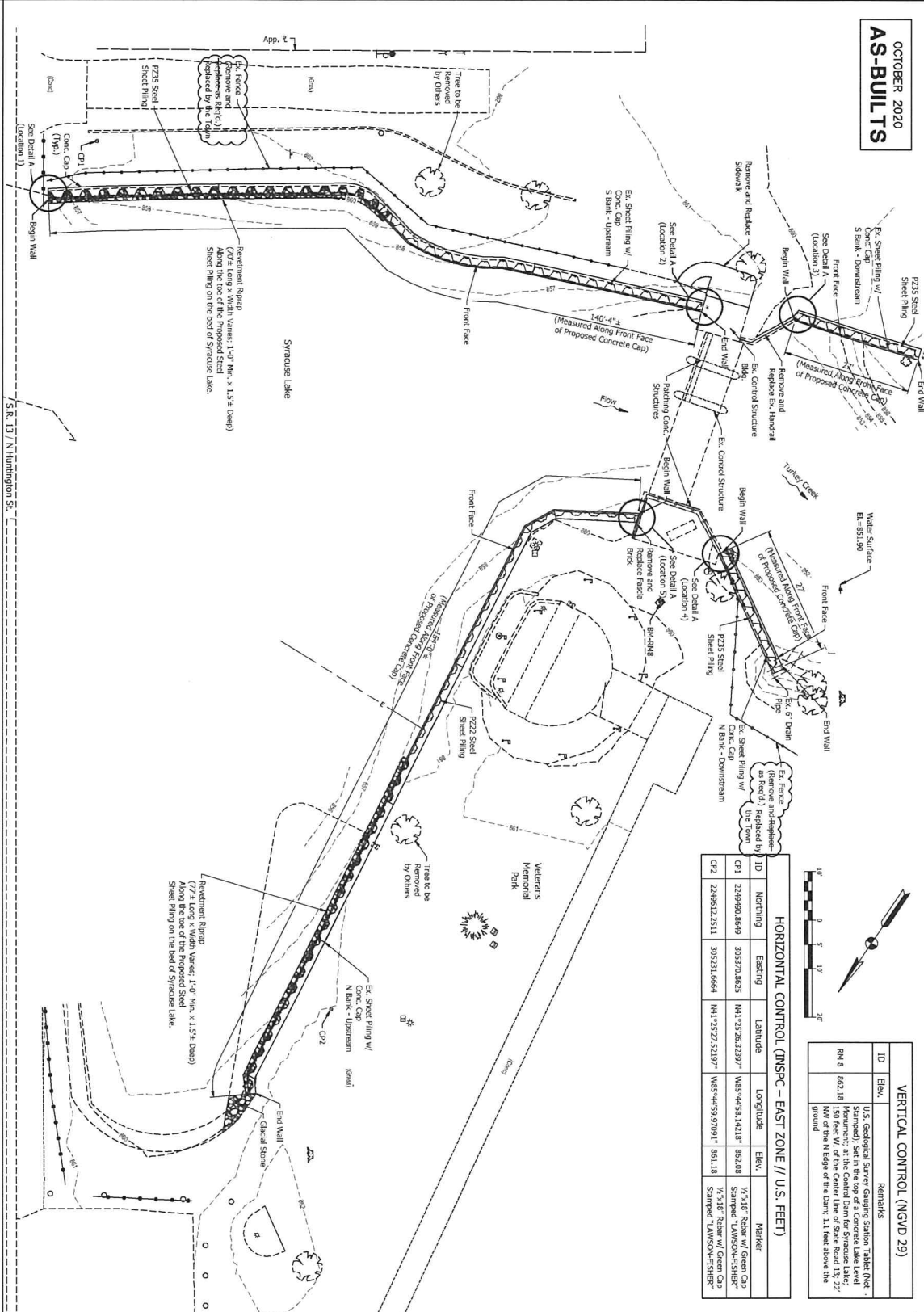
LFPA
LAWSON-FISHER ASSOCIATES P.C.
525 W. WASHINGTON AVENUE
SOUTH BEND, INDIANA 46601
PH: (574) 234-3167

C. M. Fisher
DATE: 1/27/20

THE PROFESSIONAL SEAL
OF THE ENGINEER
STATE OF INDIANA
No. 193903
DATE: 1/27/20

TOWN OF SYRACUSE, INDIANA
SYRACUSE LAKE CONTROL STRUCTURE
IMPROVEMENTS
PROPOSED SITE PLAN

ENVISIONS
AS NOTED
VERTICAL SCALE
201845.00
DRAWN: JAL
CHECKED: MW
DATE: JANUARY, 2020
SHEET: 2 OF 7



LEGEND (EXISTING FEATURES):

- Temporary Patch Mark
- Control Point
- Post
- Deciduous Tree
- Bush
- Slump
- Sign
- Flag Pole
- Flag Anchor
- Brace Pole
- Electric Pedestal
- Electric Junction Box
- Light Pole
- Ground Light
- Irrigation Control Valve
- Electric Line

DESIGN STRESSES

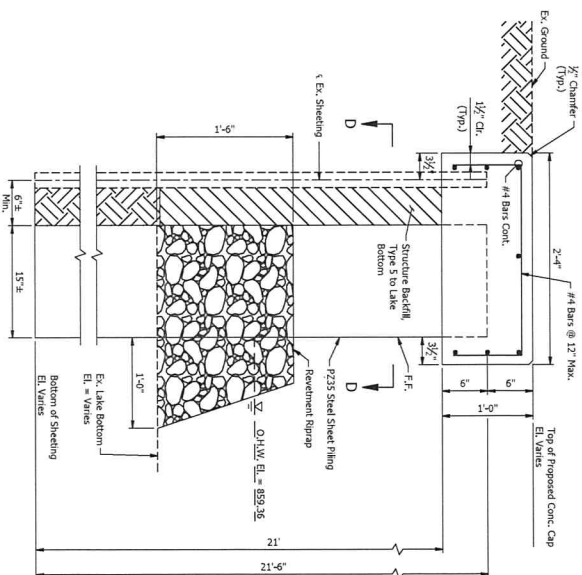
$f_c = 4,000$ psi (Concrete Cap)
 $f_s = 60,000$ psi (Reinforcement)
 $F_y = 50,000$ psi (ASTM A572 Grade 50, Structural Steel)
 $F_u = 50,000$ psi (ASTM A572 Grade 50, Sheeting)
 $F_{u, min} = 32,000$ psi (ASTM A572 Grade 50, Sheeting)

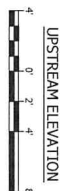
NOTE:
 * Tuck-point exterior walls of control structure building.
 ** Place revetment riprap behind existing large stones to prevent further erosion. See sheet 5.

NOTE:
 A Trimble R10 Global Navigation Satellite System (GNSS) receiver was utilized to establish the location of Control Point CP1 and CP2. The GNSS observation class was Real Time Kinematic (RTK) and utilized the Indiana Department of Transportation's Continuously Operating Reference Station (CORS) network. Four separate GNSS (RTK) observations were made at each location. The horizontal coordinates were then averaged to establish the horizontal locations CP1 and CP2. Occupation times were a minimum of 300 seconds each.

NOTE:
 Plan dimensions and details relative to existing plans are subject to normal construction variations. The Contractor shall verify existing dimensions and details affecting new construction and make necessary approved adjustments prior to construction or installation of any structure or equipment. The Contractor shall be responsible for obtaining all necessary permits and approvals for the work. The Contractor shall be responsible for obtaining all necessary permits and approvals for the work. The Contractor shall be responsible for obtaining all necessary permits and approvals for the work.

OCTOBER 2020
AS-BUILTS





BILL OF MATERIALS CONTROL STRUCTURE DAM		
Concrete Repair	5.5	CYS
Remove and Replace Ex. Sidewalk	12.0	SF5
Routing, Wall Mounted	13.0	LF
Remove and Replace Ex. Concrete (1" x 7")	26.0	SFT
Remove and Replace Ex. Facia Block	100.0	SFT
Two-Part Exterior Walls of Cantile Structure Building	400.0	SFT

1. Loose and deteriorated concrete is to be removed in sound concrete with the use of light (65# W) hand operated concrete hammers. The extent of all removal will be verified by the Engineer. Sound concrete will be defined as being reached when the exposed large aggregates become cracked while partially embedded.
2. All debris from the repairs shall be disposed of at an off-site location provided by the Contractor.
3. The repair area shall be filled with self-consolidating concrete.
4. $f_c = 4000$ PSI, air content of 6% (1%W). Aggregate shall be limestone.

UPSTREAM PLAN

PROJECT NUMBER		
201845.00		
SHEETS		
7	OF	7

APPENDIX C

EXHIBIT 2: Proposed Works of Improvement at Dike

Engineers Pre-Design Estimate March 2021

Turkey Creek Dam and Dike Conservancy District

Koko Drive Dike Improvements

Item No.	Description	Est. Qty.	Unit	Unit Price	Extension
1	Mobilization and Demobilization	1	LS	\$25,000.00	\$25,000.00
2	Construction Engineering	1	LS	\$3,000.00	\$3,000.00
3	Material Testing/Quality Control	1	LS	\$2,000.00	\$2,000.00
4	Clearing and Grubbing	1	LS	\$25,000.00	\$25,000.00
5	Temporary Access Road	1	LS	\$10,000.00	\$10,000.00
6	Installation of New Steel Sheet Piling	8000	SF	\$30.00	\$240,000.00
7	Earthwork	1	LS	\$14,900.00	\$14,900.00
8	Site Restoration	1	LS	\$12,000.00	\$12,000.00
				Subtotal =	\$331,900.00
	Contingency @ 20%				\$63,000.00
	Estimated Construction Cost				\$394,900.00
	Engineering, Geotech, Survey, Permitting				\$90,200.00
	Construction Inspection				\$34,900.00
	Estimated Total Project Cost				\$520,000.00



February 19, 2021

202104.10

Figure 1

LFA
 LAWSON-FISHER ASSOCIATES P.C.
 525 W WASHINGTON AVENUE
 SOUTH BEND, INDIANA 46601
 PH. (574) 234-3167



Turkey Creek Dam and Dike
 Conservancy District

Wawasee - Syracuse Dike
 Anticipated Construction and
 Access Limits

APPENDIX D

EXHIBIT 1: Benefits Analysis

Kay Young

REALTOR, Broker Associate
Residential Sales Manager

TODD REALTY ERA Powered
P. O. Box 307
Syracuse, IN 46567
kayyoung@toddrealty.com
574-457-4417
574-528-1400

Experience

Received real estate license in 1988 and joined TODD REALTY as a sales associate. Promoted to Residential Sales Manager in mid-1988 and received Brokers license in 1989. Have worked continually at TODD REALTY since. I have been the Top Salesperson 24 times in the last 32 years, always being a multi-million-dollar producer.

Currently serving as President of the Wawasee Property Owners Association. A past Director of and past President of the Kosciusko Board of Realtors as well as the Kosciusko Board of Realtors/MLS. Kosciusko County Board of Realtors. Kosciusko county REALTOR of the year in 2005. Past Director of the Kosciusko County Habitat for Humanity board. Current Chairperson of the Syracuse /Wawasee Trails committee. 2010 recipient of the Wawasee Area Conservancy Foundation's CATTAIL award for outstanding environmental service. 2013 Wawasee Flotilla Commodore. Currently serving on the board of the Kosciusko County Community Foundation.

Before entering the field of real estate worked at Lake City Bank, Syracuse and the Goshen News, Goshen, Indiana.

Grew up on and currently live on Lake Wawasee with husband James Young.

VALUE OF LAKE WAWASEE AND SYRACUSE LAKE PROPERTY IN THE EVENT OF A DAM/DIKE BREACH

In the case of a breach of either the dam located in Syracuse or the dike located in area of the Hawaiian Village of Syracuse the level of the lakes would be impacted as would the property values of the waterfront properties that surround the lakes.

A breach in either of these structures could potentially drop the lake levels by 3 to 5 feet which would in turn leave a large portion of the homes without access to the lakes.

Wawasee is not a "deep" lake with the average depth of 8' and a significant drop in the water level would leave all of the properties unable to reach useable waters. With a drop of this much most areas of the lake would be dry with only pockets of deeper areas.

Without the use of the lake waters the values of the homes would plummet drastically. The value of a property could easily drop by 50% or more. A recent sale of a 3.5-million-dollar home would make that home virtually worthless to the new owners. They would not be able to use the one thing that draws people to our area The waters of our lakes. A study done several years ago showed that the properties around the lakes can be broken down into 3 categories. 1/3 here year-round, 1/3 it is the primary home but they may also have a second home...in the winter, and 1/3 are here for the summer only. We could easily see at the very least 1/3 of the homeowners not coming to the area at all.

With the drop of values would come a drastic drop of tax revenue to the area as well as the tax base of these areas is a major portion of the revenue for the town of Syracuse as well as Kosciusko County.

During the recession of 2008/2009, the values of lake properties dropped by at least 30% and the market for homes dried up. During this time the number of sales also dropped considerably and many of following years saw some owners selling for less than they had paid for their properties in the years before. It took almost 10 years for the values to come back to a level seen before then. A breach in the water control structures would certainly be at the very least as catastrophic if not more so as no one would be able to use the waters of the lakes and there really would be no reason for anyone to buy a home here

As well as property values the other area that would be affected would be the tourist trade here. Every business in the area relies on the influx of tourists year around but especially in the summer months. Without this income there would be businesses that would certainly close, again impacting the bottom line of the town and county revenues. With a breach in the dike many of the businesses in the "village" area would be flooded as well with significant damage to not only the business itself but to the buildings as well.

In conclusion the breach of either of the structures that will be managed by the Conservancy would have a devastating effect on the value of not only the homes on the lakes but the businesses in town and most importantly the economy of the town and the county.

Lilly Center Economic Impact Study

Lilly Center for Lakes & Streams at Grace College
completed this study in 2016.

Full report available at lakes.grace.edu



LILLY CENTER FOR
**LAKES
& STREAMS™**

GRACE
COLLEGE



Lilly Center Economic Impact Study

- Business and property tax revenue specifically attributed to lakes
- Business revenue data collected from 314 local businesses
 - Survey had 65% response rate
 - Public data sources used to fill in missing data
 - Data not available for some businesses so study results are considered conservative
- Property tax revenue data collected from Assessor and Auditor offices
 - Only permanent single-family homes included in analysis
 - Only specific lake influence portion of property tax revenues were included

Lake impacts on annual business revenues in Kosciusko County

Seth A. Bingham, Nathan S. Bosch

Center for Lakes & Streams, Grace College, Winona Lake, IN 46590, USA

Phone: (574) 372-5100, Ext. 6445; Fax: (574) 372-5124

Email: lakes@grace.edu; Website: www.lakes.grace.edu

Abstract

With more than 100 lakes in Kosciusko County, local water resources are a huge economic driver for the cities of Syracuse, North Webster, Warsaw, and many small, neighboring communities. Many area businesses would not have the customer base or the proper location to make a profit without the presence of local lakes. The lakes provide direct business opportunities for lake-specific businesses such as boat marinas and manufacturers, as well as a summer influx of customers for lake-related businesses such as restaurants and grocery stores. This study identifies lake impact on lake-specific and lake-related businesses within Kosciusko County as specific indicators of economic impact. Information was collected for 314 businesses throughout the county and accounted for \$298,383,000 in revenue that enters Kosciusko County annually as a direct result of the presence of local lakes. When combined with additional property taxes generated due to lake presence, the total identified economic impact of Kosciusko County lakes was \$313,383,000 annually. A positive or negative shift in the water quality of these lakes could enhance or severely harm the businesses that are located around these lakes. Major industries that would suffer dramatic revenue losses as a result of water quality degradation include boat retailers, marinas, restaurants, and construction companies. Many business owners, executives, and managers who contributed to the study stated that they would do much less business or would need to close or relocate their businesses if there were no lakes or poor quality lakes in Kosciusko County. Therefore, the efforts of the Center for Lakes & Streams are vital in the county for future economic development, funding of public services, and personal wealth considerations.

Keywords: lake economic impact, Kosciusko County, lake quality, business, tourism

Introduction

Water is an important component in the global economy. Water shortages are estimated to cost the global economy nearly \$500 billion per year (Global Water Partnership, 2015). The United States experiences a part of this impact annually, especially in western states that experience droughts and water usage limitations. However, in the Midwest, water is more plentiful. Kosciusko County, Indiana is home to over 100 lakes, many of them kettle lakes formed by glaciers that carved large pockets into the earth which later filled with water. Because of these abundant natural resources, the local focus is more on water quality rather than water quantity.

These lakes bring in thousands of tourists and seasonal visitors each year. In addition, many residents locate their homes and businesses in Kosciusko County in order to serve the large amount of summer visitors. While city planners and community members across the nation are starting to recognize the value of economic impact studies, very little work has been done to fully understand how the lakes in Kosciusko County affect the county's economy, especially during peak season summer months when lake traffic is high.

In this study, the Center for Lakes & Streams seeks to show the economic impact, and thus overall financial value, of the lakes in Kosciusko County; this includes both direct and indirect economic influence due to the presence of local lakes. To accomplish this, we focus on businesses that serve customers based solely on lake-specific services or products, as well as businesses that serve more customers during summer months based on annual population increase of seasonal visitors. In addition, we summarize the importance of maintaining lake quality and the dangerous effects degrading lake quality would have on area businesses and the county economy as a whole.

Methods

Business Selection

All businesses that sold lake-related services or products were selected to be part of the study as well as businesses located on or near the lakes.

Businesses selected were divided into the following categories so industry-based revenue amounts could be collected and used to compare different business sectors of the economy:

Lake-specific Services and Products

- **Bait and Tackle**
Bait and tackle shops throughout Kosciusko County.
- **Boat Sales**
Boat retail businesses throughout Kosciusko County.

- **Boat Manufacturers**
Includes boat manufacturing plants based in Kosciusko County.
- **Boat Repair**
Includes both boat-specific repair shops as well as auto shops that also repair boats. Does not include marinas that also offer boat repair— these businesses are included in Marina industry category.
- **Recreation Equipment**
Retailers that primarily sell or rent lake-related recreation equipment such as water skis, wakeboards, rental boats, etc.
- **Marinas**
Includes marinas located on different lakes throughout Kosciusko County.
- **Pier Installation**
Companies that specialize in pier installation primarily in Kosciusko County.
- **Other Business**
Includes guides, tours, clubs, and other lake-centered recreation and entertainment businesses.

Lake-related Services and Products

- **Auto and Gas**
Combined auto and gasoline sales for Kosciusko County.
- **Construction**
Companies that specialize primarily in construction or excavation.
- **Food and Dining**
Combined grocery and restaurant revenue for Kosciusko County.
- **Health and Medical**
Includes medical revenue at various doctor offices and other health facilities in Kosciusko County.
- **Home Care**
Home maintenance companies such as hardware stores, pest control, and landscaping companies.
- **Lodging**
Includes hotel revenue for Kosciusko County, as well as private rental homes and campgrounds.
- **Professional Services**
Law firms, accounting, and insurance companies.
- **Entertainment**
Includes art galleries, concert and theater venues, and performers.
- **Real Estate**
Real estate companies throughout Kosciusko County.
- **Youth and Retreats**
Includes youth centers, camps, community centers, education, and retreat centers.
- **Specialty Business**
Includes other businesses specializing in communication, manufacturing, retail, and specialty products.

Data Collection Methods

Researchers identified 451 businesses in Kosciusko County that could have lake-specific or lake-related revenue. Data was collected for 314 of these businesses. Data collection included business surveys, public data sources, and corporate estimates. Of the other 137 businesses not included in the study, a majority chose not to respond and revenue information could not be found in public data sources, while a few could not be contacted due to a lack of contact information available. Therefore, the total county business revenue accounted for in the present study can be considered a conservative measure due to lack of data availability in some cases.

Survey Data Collection

Businesses were contacted in one or more of several forms of communication and on several dates throughout the course of the study to collect survey data. First, an online economic impact study survey was drafted and sent directly to selected area businesses through email. Additionally, the survey link was included in the Syracuse-Wawasee Chamber of Commerce newsletter, the Kosciusko Chamber of Commerce newsletter, and the Kosciusko County Convention and Visitors Bureau and Visitor Center newsletter. This additional effort was undertaken to give any businesses that were not contacted initially the opportunity to respond if they wished to be part of the study. Emails were sent throughout the months of May, June, and July with a cover letter and a link to the online survey.

Economic Impact Survey Questions

- **Name of Business:**
- **How would your business be different if the lakes were not here?**
- **Without our local lakes, what percentage of your annual sales would be lost?**
- **About how much revenue does your business generate annually?**

Businesses surveyed were given the option to include an exact annual revenue dollar amount or choose from a list of bracketed options for annual revenue (i.e. \$500,000-1,000,000; \$1,000,000-2,000,000; etc.). For businesses that selected the latter, the midpoint of the bracketed amount was used as a typical year for the purpose of the present study. This was done to reflect the average fluctuation in annual revenue from year to year and allowed a more accurate picture of a business's annual revenue to be included.

Many business owners did not have email accounts or check their accounts regularly, and, as a result, needed to be contacted through a different media of communication. During the months of July and August, a hardcopy form of the economic impact study survey was hand-delivered to many area businesses to offer the chance to provide the data in a face-to-face, hardcopy form. Data received was immediately entered into the same spreadsheet as online survey responses.

During the months of July and August, businesses for which annual revenue information had been found through public data sources were contacted via telephone and asked to estimate what percentage of their sales would be lost if Kosciusko County contained no lakes. Percentage amounts were recorded and applied to total revenue amounts to produce a lake-related revenue value. Public data sources utilized included the Dun & Bradstreet Business Directory and the Manta Business Directory (see further explanation below). Of the 451 businesses initially identified, information was collected for 128 businesses throughout Kosciusko County through these surveying methods. The survey had a 65% response rate among businesses.

Public Data Collection

In order to maintain the quality, precision, and scope of the study, an accurate representation of each business's revenue needed to be obtained. Business owners who did not respond to multiple attempts to contact them with the economic impact study survey were researched using the Dun & Bradstreet Business Directory or the Manta Business Directory in an attempt to find an annual revenue amount. The Dun & Bradstreet Business Directory annual revenue amount was given preference over the Manta Business Directory annual revenue amount because the dollar amount was found to be more precise. The Manta directory was used as a backup database to fill in values not provided by the Dun & Bradstreet business directory.

Some businesses that did not respond to the survey but sell lake-specific services or products were marked as 100% affected by the lakes and the full revenue amount of the business was recorded as being directly related to the presence of local lakes. This included businesses such as marinas, boat sales, bait and tackle shops, etc.

There were a few additional key businesses which were unresponsive to attempts to include them in the surveying process or chose not to disclose their annual revenue, and were also not listed in public data sources. Because these were key businesses in this research, it was necessary to estimate annual revenue based on other factors. This was done by looking at one or more businesses of similar size and location, and applying an approximate revenue for the business. The estimation process allowed reasonable values to be included in order to make the study as accurate as possible. It is also important to note that this revenue approximation was only employed as a last resort if businesses were unresponsive, would not disclose annual revenue, or could not be found in public data sources. This method was only used for nine businesses in the study.

Large Business and Corporation Estimation

Many large businesses and corporations were not able to disclose annual revenue information based on corporate policies. However, in order to include these businesses and better understand how they affect the economy of Kosciusko County, it was important that the information be estimated.

Of the 314 total businesses for which data was collected, 71 were included in the innkeeper tax estimation method, 44 were included in the gas estimation, and 62 were included in the restaurant estimation. The remaining number responded to survey requests or were estimated as described above (with duplicates thrown out if they fell into estimation categories).

Annual revenue estimations for county gas stations, grocery stores, and chain restaurants were calculated by subtracting the off-season population for the Town of Syracuse and Tippecanoe Township (contains North Webster) from the peak season population in order to find the number of summer visitors. This number was applied to the average amount that Americans spend on gas (Huffington Post, 2012) and food (Mendes, 2012) in a typical week. The amount was multiplied by thirteen to account for the thirteen weeks of summer between the beginning of June and the end of August.

Hotel annual revenue was estimated by considering the total innkeeper tax collection totals for each month. In order to establish an off season baseline, the tax amounts for the months of January, February, March, and April were averaged. Then the amounts for June, July, and August were averaged to establish an amount for peak lake season and the baseline tax amount was subtracted from this amount to determine change due to increased lake traffic. Because the innkeeper tax rate is 5%, the amount was multiplied by twenty to find the total amount of sales due to increased lake traffic during the summer months.

Results

The lake-specific industry total was found to be \$150,722,000 (Table 1) and the lake-related industry total was found to be \$147,661,000 (Table 2). Including \$15,000,000 of additional property taxes generated due to lake presence (Bosch et al., 2013) produces a grand total of \$313,383,000. Boat sales, boat manufacturing, and marinas had the largest total revenues of the lake-specific industry categories. These industries account for more than 90% of total dollars entering the economy through lake-specific businesses.

Other lake-specific industries included bait and tackle shops, businesses that offered boat repair, and businesses that sold or rented lake-specific recreation equipment (Figure 1). The pier installation category was found to have a relatively large total revenue despite the fact that only a few pier installation businesses operate in Kosciusko County.

The auto and gas, food and dining, and construction categories accounted for a large portion of the lake-related industry category (Figure 2). Other lake-related industries expected to have high totals included home care, lodging, and real estate. Many of the businesses in these categories do a large amount of business with summer visitors or during summer when lake traffic is high. However, these industries were relatively low compared to the auto and gas, food and dining, and construction categories. While many of these businesses were found to

take advantage of the inflow of summer customers, many also participated in some degree of year-round business that lake-specific and other lake-related businesses do not.

The professional services, health and medical, and entertainment industries were found to have very low totals compared to other industries. Owners of these businesses explained through their survey answers that they rely on year-round, local customers to provide business rather than a large influx of summer visitors.

Improving Lake Quality

According to a home value study completed by the Ohio Sea Grant College Program at Ohio State University, an improvement in water clarity of two meters can lead to a 5% increase in the average property value (Banicki, 2006). Assuming that an increase in the average home value would also reflect a similar increase in the local economy, we can apply a 5% increase to the current total of \$313,383,000. A 5% increase (Figure 3) would increase the local economic impact of lakes by over \$10 million to a new total of \$323,902,000. Boat manufacturer revenues were held constant for this estimated increase since their current scope of sales exceeds Kosciusko County.

It may be beneficial to think of this increase in terms of a period of years. For instance, over a three-year period, an excess of over \$30,000,000 would be entering the economy due to improved water quality in area lakes. In ten years, the increased economic impact would be over \$1 billion.

Degrading Lake Quality

Grand Lake St. Marys, the largest inland lake in Ohio, has been decimated by blue-green algae over the past several years. Around the lake, home values and the local economy have suffered greatly. A 30-50% decrease in the local economy has been reported and businesses have closed down, adding to the number of jobs lost as a result of the degraded water quality (Arenschield, 2015). Applying an average of 40% to the current total economic impact for Kosciusko County's lakes (Figure 3), the county could anticipate a loss of \$84,153,000 under similar conditions, producing a new grand total of \$229,230,000. Boat manufacturer revenues were held constant for this estimated change as well.

Over a period of three years, the economy would bypass \$252,459,000 of potential revenue generated by the presence of lakes in Kosciusko County. Over a ten-year period, these lost revenues would amount to \$841,530,000 not collected because of degraded lake quality.

Anecdotal Evidence

While most data can be easily quantified by looking at annual business revenues and percentage of business lost, there is no quantitative method to measure answers to survey question one: "How would your business be different if the lakes were not here?"

Answers received from survey responses included:

- “May not be headquartered here.”
Large manufacturing company
- “From our annual sales, 80% is between Memorial Day and Labor Day.”
Lakeside Restaurant
- “We would not be here. I am sure the site was chosen because of access to water.”
Lakeside Retreat Center
- “Not enough business to sustain. Would have to close doors.”
Lake-related professional services business
- “We would not exist. The lakes fuel 100% of our company goals and missions.”
Lake-specific recreation equipment business

While the businesses that gave these responses and others like them can share annual revenue amounts and percentage of business lost, perhaps a more striking result is seeing how much these businesses rely on the lakes for more than just sales and what effect degrading lake quality would have on these local businesses.

Discussion

As expected, the presence of lakes and the seasonal visitors these lakes draw has a large impact on the economy of Kosciusko County and local businesses. More than half of the dollars found to be entering the economy from lakes are as a result of lake-specific businesses like boat manufacturing companies, boat retailers, and marinas. However, it is also significant to understand that some boat manufacturers may have located in Kosciusko County because of the presence of local lakes. Historically, the area was a successful market for boat dealers and may have drawn in manufacturers who primarily sold to private citizens on nearby lakes before expanding their businesses to sell outside to other cities and states.

Visitors to Kosciusko County also spend a large portion of their money on groceries, dining out, buying and maintaining vehicles, and purchasing gas. Lodging, including hotels and campsites, was initially expected to be lower than reported totals in present study results since many visitors stay at private cottages.

The construction category was also relatively large compared to other lake-related industries. Many residents are tearing down small cottages or adding on to existing homes to make better use of their lakefront properties. These new homes and additions account for the large number in this category and would also account for the large total in the Home Care category which included painting, landscaping, and hardware businesses.

Intangible Economic Impact

Many businesses that were included in the study expressed through their answers to survey question number one that they would not be in business or would do significantly less business

if there were no lakes or poor quality lakes in Kosciusko County. Some business owners stated that they would need to relocate or would never have started their companies without the presence of local lakes and the seasonal traffic they attract. Some business owners also stated that they knew of businesses that were opened in Kosciusko County simply because the owners vacationed at one or more of the area lakes regularly and wanted to become members of the community. Throughout the course of this study, stories of intangible economic impact were shared by business owners who stated that they would not have considered settling their businesses in Kosciusko County if there were no lakes in the area.

Study Limitations

This study was primarily limited by whether business owners chose to communicate with researchers. While the Center for Lakes & Streams was able to collect data from enough businesses to gain an understanding of lake economic impact, a few businesses could not be contacted or chose not to respond and were not listed in public data sources. Because these businesses were not able to be included, the numbers in this report can be considered conservative estimates of the economic impact of lakes in the county. When owners were unresponsive or would not share information, values were taken from public data sources in order to fill in annual revenue amounts for local businesses. When these results were not available in public data sources, estimations based on other businesses of similar size were taken when possible. It is important to note that estimations of this kind were only taken for nine businesses of the 314 for which results were collected. While the Dun & Bradstreet Business Directory and the Manta Business Directory are both well-known and respected sources, annual revenue amounts taken directly from business owners may be more accurate.

While marina and boat repair revenues stay primarily in Kosciusko County, revenue from boat manufacturers may be spent outside the county as well as inside. Employees that live outside Kosciusko County or suppliers located outside the county receive dollars from these manufacturers that would most likely be spent in other county economies. These businesses were included in this study since the local lakes are the reason they are located here, but we did not include these businesses for future projections of improved or degraded water quality because of this uncertainty.

An important industry that was not accounted for in the study was the banking industry in Kosciusko County. Many banks do business in the county, especially during summer months when there is a higher concentration of personal wealth in the area. Multiple methods were tested in order to gain an understanding of how much total bank revenue is due to seasonal visitors entering the county and lake-related residents conducting personal and business banking. However, no method tested was successful in determining what amount of lake-related revenue enters the county through the banking industry and its interaction with seasonal visitors. Because this industry was not included, the total amount of lake economic impact dollars found to be entering the economy can be once again considered a conservative estimate.

Future Implications

Year-round schooling was identified as a potential threat to businesses that market their products and services to seasonal lake visitors. As more schools switch to a year-round school academic calendar, summers become shorter and consequently limit available sales for local businesses selling primarily to seasonal visitors. Some businesses could lose up to a month of selling to visiting families who move back to primary residences before the start of the school year.

A downward turn in the national and state economies could also negatively affect businesses who primarily rely on visiting customers. Many homes located on local lakes in Kosciusko County are second homes for business executives from Chicago, Indianapolis, and Fort Wayne. A shrinking economy may cause some visitors to consider selling their lake cottages or may cause others to re-enter the workforce. An increase in the portion of visitors who must regularly work would decrease the average population of summer visitors and may only allow them to visit on weekends or during a few weeks of summer. This would shrink the number of available customers for local businesses in a time of economic downturn.

A positive or negative shift in the quality of local lakes would certainly affect the economy of Kosciusko County. A positive shift in water quality may raise home values, bring in more seasonal visitors, grow both lake-specific and lake-related business annual revenues, and expand the county economy. A negative shift in water quality could lower home values, as seen near Grand Lake St. Marys, as well as bring in fewer seasonal visitors and lower annual revenues for local businesses.

Conclusion

The total amount of revenue generated by the presence of lakes in Kosciusko County is conservatively estimated to be \$313,383,000. Boat retailers, marinas, restaurants, and construction companies make up a large percentage of this total, as do auto and gasoline sales, grocery store revenues, and annual property taxes. This total value would be subject to change based on water quality improvement or degradation. In addition, poor water quality would not only affect business profits, especially for lake-specific businesses, but would also affect where these businesses might locate. Should water quality degrade, many business owners may be forced to relocate or close their businesses based on a lack of available seasonal customers. Therefore, the efforts of the Center for Lakes & Streams to make our lakes clean, healthy, safe, and beautiful are vital in the county for future economic development, funding of public services, and personal wealth considerations.

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Tables

Table 1: Total annual lake-generated business revenues for lake-specific industries in Kosciusko County.

Industry	Industry Total
Bait & Tackle	1,401,000
Boat Sales	15,650,000
Boat Manufacturing	103,000,000
Boat Repair	2,555,000
Recreation Equipment	2,157,000
Marinas	18,194,000
Pier Installation	7,197,000
Other Business	568,000
Total	\$150,722,000

Table 2: Total annual lake-generated business revenues for lake-related industries in Kosciusko County.

Industry	Industry Total
Auto & Gas	64,548,000
Construction	17,039,000
Food & Dining	44,142,000
Home Care	4,088,000
Lodging	4,356,000
Professional Services	1,600,000
Health & Medical	285,000
Entertainment	1,656,000
Real Estate	3,601,000
Youth & Retreats	2,172,000
Specialty Business	4,174,000
Total	\$147,661,000

Figures

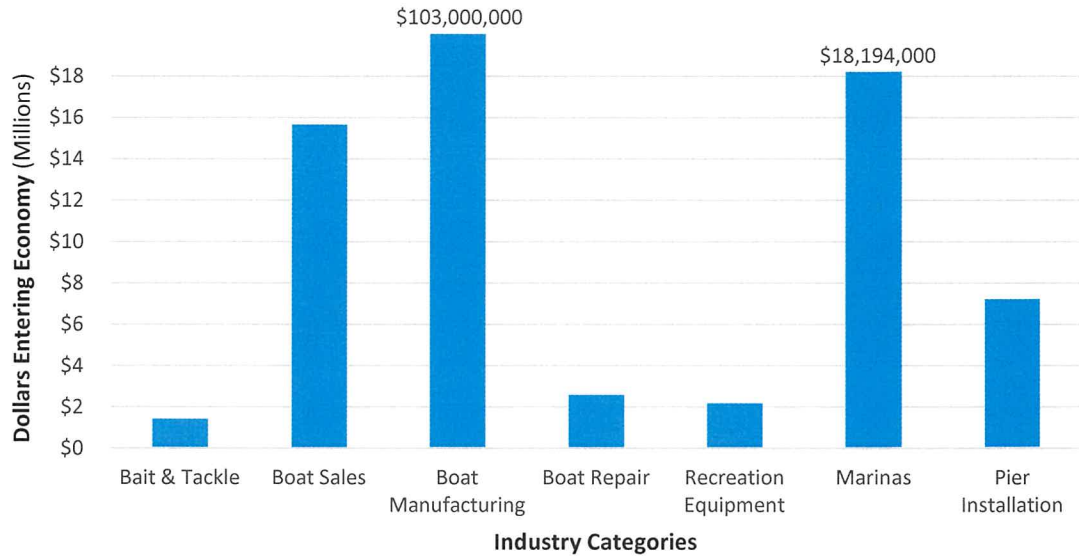


Figure 1: Total annual lake-generated business revenues (in millions of dollars) for lake-specific industries in relation to other lake-specific industries in Kosciusko County.

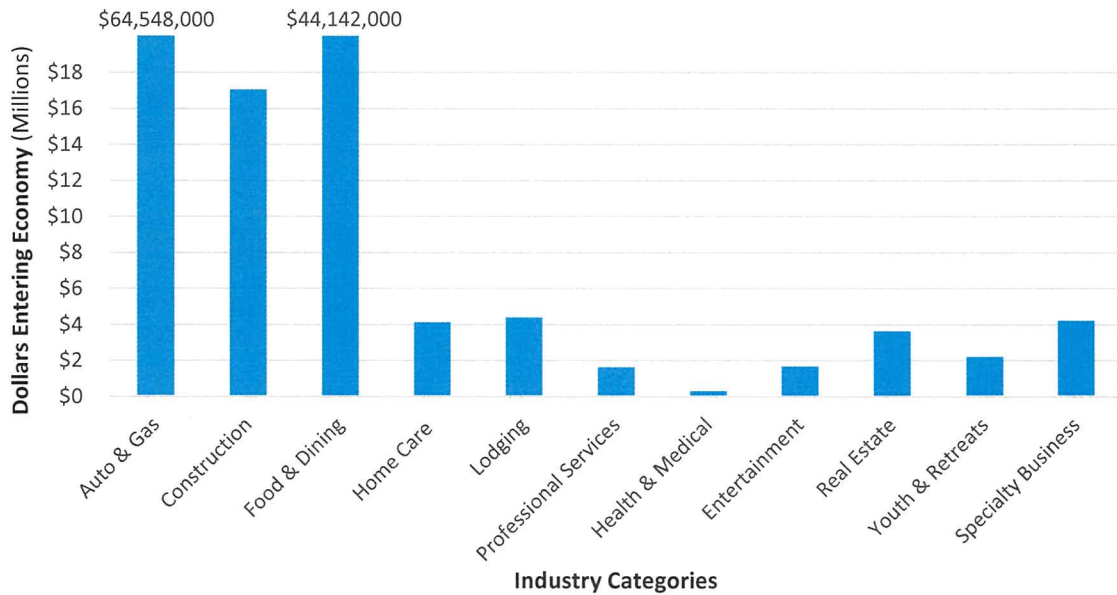


Figure 2: Total annual business revenues (in millions of dollars) for lake-related industries in relation to other lake-related industries in Kosciusko County.

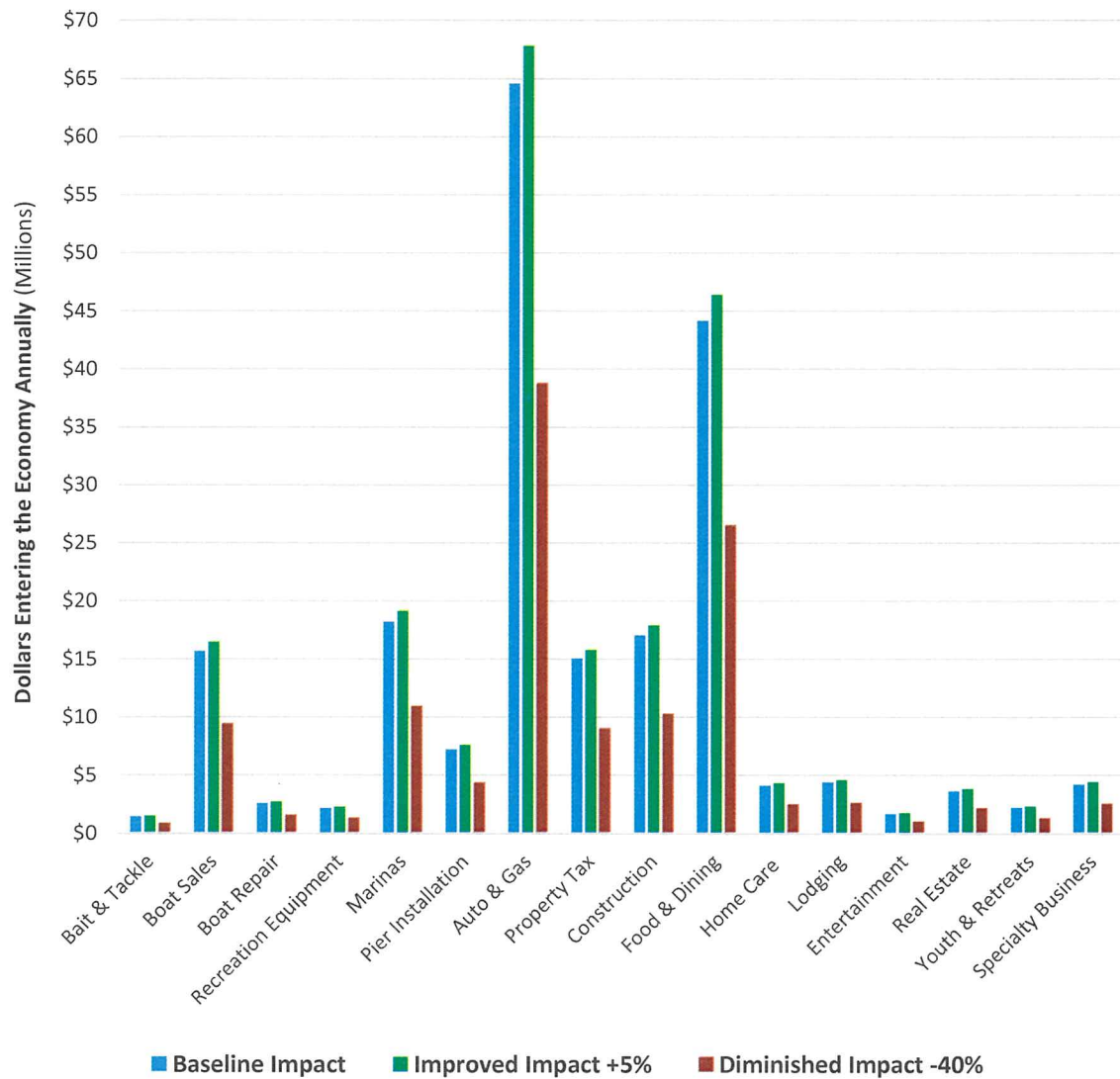


Figure 3: Annual revenue impact (in millions of dollars) of improving or degrading lake quality on specific industries. Baseline impact, improved impact (+5%), and diminished impact (-40%) are included. *The boat manufacturing industry and other industry categories which were too small to be seen on the graph were omitted.*