



RICK SNYDER
GOVERNOR

STATE OF MICHIGAN
DEPARTMENT OF ENVIRONMENTAL QUALITY
LANSING



C. HEIDI GREETHER
DIRECTOR

February 16, 2017

TO: All Interested Citizens, Organizations, and Government Agencies

SUBJECT: FINDING OF NO SIGNIFICANT IMPACT
**Marquette Charter Township, Marquette County
Trowbridge Park Area Water Main Replacement
Drinking Water Revolving Fund Project No. 7419-01**

The purpose of this notice is to seek public input and comment on a preliminary decision by the Michigan Department of Environmental Quality (DEQ) that an Environmental Impact Statement (EIS) is not required to implement recommendations discussed in the attached Environmental Assessment of a water supply project plan submitted by the applicant mentioned above.

HOW WERE ENVIRONMENTAL ISSUES CONSIDERED?

Part 54, Safe Drinking Water Assistance, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended, being Sections 324.5401 to 324.5418 of the Michigan Compiled Laws Annotated, requires the DEQ to evaluate all environmental implications of a proposed water supply project. The DEQ has done this by incorporating a detailed analysis of the environmental impact of the proposed alternatives in its review and approval process. A project plan was prepared by the applicant and reviewed by the State. The DEQ has prepared the attached Environmental Assessment and found that the proposed project does not require the preparation of an EIS.

WHY IS AN EIS NOT REQUIRED?

Our environmental review concluded that no significant environmental impacts would result from the proposed action. Any adverse impacts have either been eliminated by changes in the project plan or will be reduced by the implementation of the mitigative measures discussed in the attached Environmental Assessment.

HOW DO I GET MORE INFORMATION?

A map depicting the location of the proposed project is attached. This information is also available on our website at www.michigan.gov/cleanwaterrevolvingfund under "Related Links." The Environmental Assessment presents additional information on the project, alternatives that were considered, impacts of the proposed action, and the basis for our decision. Further information can be obtained by calling or writing one of the contact people listed below.

HOW DO I SUBMIT COMMENTS?

Any comments supporting or disagreeing with this preliminary decision should be submitted to me at DEQ, Drinking Water and Municipal Assistance, Revolving Loan Section, Constitution Hall, P.O. Box 30241, Lansing, Michigan 48909-7741. We will not take any action on this project plan for 30 calendar days from the date of this notice in order to receive and consider any comments.

WHAT HAPPENS NEXT?

In the absence of substantive comments during this period, our preliminary decision will become final. The applicant will then be eligible to receive loan assistance from this Agency to construct the proposed project.

Any information you feel should be considered by the DEQ should be brought to our attention. If you have any questions, please contact Ms. Valorie White, the project manager, at 517- 284-5420, or you may contact me. Your interest in this process and the environment is appreciated.

Sincerely,



Sonya T. Butler, Section Manager
Revolving Loan Section
Drinking Water and Municipal Assistance
517-284-5433

Attachments

**DRINKING WATER REVOLVING FUND (DWRF)
ENVIRONMENTAL ASSESSMENT
MARQUETTE CHARTER TOWNSHIP – MARQUETTE COUNTY
TROWBRIDGE PARK AREA WATER MAIN REPLACEMENT
FEBRUARY 2017**

I. PROJECT IDENTIFICATION

Applicant: Marquette Charter Township
Authorized Representative: Mr. Kirk Page, Superintendent of Public Works
Address: 1000 Commerce Drive
Marquette, Michigan 48955
DWRF Project No: 7419-01

II. PROJECT SUMMARY

Marquette Charter Township is applying for a low-interest DWRF loan from the Michigan Department of Environmental Quality (DEQ) for improvements to the Trowbridge Park service area. The proposed project includes replacing the existing mains with 8-inch-diameter mains, a new transfer switch and generator at the Cox Booster Station, as well as replacing the outdated service lines, hydrants, and valves in the Trowbridge Park area.

The estimated project cost is \$3,265,000. As a result of this project, typical township users will see an increase of approximately \$9.25 per month.

Project construction is anticipated to begin in June 2017 and be complete by October 2017.

III. EXISTING SYSTEM/PROJECT NEED

Marquette Charter Township is located in Marquette County, adjacent to the city of Marquette in the Upper Peninsula (Figure 1). All work will occur in the Trowbridge Park service area of the Cox Pressure District of the Marquette Charter Township Water System. Existing land use in the study area consists of residential and commercial properties. Currently, the township has a population of approximately 4,275. Over the next 20 years, the population is predicted to increase at a rate of roughly 30 percent.

A. Existing System

The township's water distribution system was initially installed in the mid 1970s and utilized a 20-year contract to purchase and dispense drinking water from the city of Marquette. In 2005, the township decided to construct the Grove Well Field in order to provide its own source of drinking water. However, due to various issues, this well field was not able to provide enough capacity to serve the entire township. Currently, the Cox Pressure District is the only part of the township still served by water purchased from the city.

The township's water system is divided into four districts; Cox, Northwoods Gravity, Chapel Ridge Gravity, and Grove Low Service. The system contains ductile iron water mains ranging in size from 6-inch to 12-inch and encompassing roughly 195,145 feet of

mains. All mains have been installed after 1970, with the water mains in the Cox Pressure District being the oldest. The system utilizes two booster stations and three storage tanks.

B. Project Need

Forty-plus years old, the Cox Pressure District is the oldest section of Marquette Township's water system (Figure 2). The mains are undersized and experiencing problems with tuberculation. This has resulted in hydraulic pressure issues, water stagnation, taste and odor complaints, and has the possibility to impact the township's ability to meet the more stringent requirements of the Stage 2 Disinfectants and Disinfection Byproducts Rule. Stagnate water and sediment accumulation can contribute to disinfection byproducts, bacterial growth, and aesthetic problems, resulting in water quality violations.

Additionally, water loss due to leakage in the Cox Pressure District is 18.8 percent, the largest loss ratio in the township. Due to the freeze-thaw cycle in the project area, service connection lines often fail at the connection point, contributing to the water loss. Also at issue are the failing valves throughout the Trowbridge Park area and the existing hydrants, which are no longer produced.

Concurrent to the water main project, Marquette Township will be upgrading its existing road infrastructure within the Trowbridge Park area. It is the township's plan to coordinate the two projects in order to maximize township funds and minimize the impact on area residents.

IV. PROPOSED PROJECT

No action, optimization, and regionalization alternatives were considered; however, it was determined that these options were either not feasible, or would not address the problems and deficiencies in the system.

A. Alternatives Considered

Four alternatives were considered to address the old undersized mains in the Trowbridge Park service area, all of which deal with replacing the current 6-inch water main with new 8-inch mains. All alternatives also include the addition of the Cox Booster District Station transfer switch and generator to provide consistent operation. Alternative No. 1 involves open-cut ductile iron main replacement throughout the service area. Ductile iron is considered the preferred pipe material due to its durability, operator familiarity, and the ability for operators to locate the main easily. Furthermore, the use of ductile iron allows the township the option of thawing by electrical current in the event the pipe ever freezes during the harsh winter months. This option is expected to utilize savings from the concurrent road resurfacing project and is expected to cost \$3,265,000.

Alternative No. 2 also utilizes the ductile iron water mains; however, installation would be accomplished with directional drilling. Directional drilling is generally used to limit surface disturbance, often in environmentally sensitive areas, or where conventional methods would significantly impact traffic flow. Since all the main replacement occurs within the road right-of-way, directional drilling is not necessary. Furthermore, this option would disregard all the cost savings available with the road resurfacing project occurring simultaneously. The estimated cost for this alternative is \$3,677,000. Due to the

additional cost and the failure to incorporate the benefits of the simultaneous projects, this option was not considered further.

Alternative No. 3 involves open cut installation of High Density Polyethylene (HDPE) water main. This option would allow for the cost savings of the road work project, and would replace the current iron pipes with plastic piping. HDPE is an acceptable pipe product, and it does well in the northern climate, but emergency repairs are a problem, as the operator needs specialized training and tools. Also, HDPE pipe has a recommended depth of 1 ½ feet deeper than ductile iron, which could require additional blasting of bed rock, and will require adjustments to align with the rest of the distribution system. Furthermore, if the pipe freezes, the township would not be able to easily thaw it. This alternative has a cost of \$3,386,000. Since the rest of the system is ductile iron, and HDPE pipe includes several special considerations and requirements, this alternative was removed from consideration.

Alternative No. 4 involves the installation of HDPE water main through directional drilling at a cost of \$3,460,000. All the issues related to both direction drilling and HDPE pipe listed above still apply to this alternative. Due to those reasons, this alternative was removed from consideration.

B. Selected Alternative

Alternative No. 1 was selected as the best option to meet the township's needs and make use of available funding. By combining the road resurfacing project and the water main replacement project, this alternative provides the most cost-effective use of township funds. This project will include open cut installation of 8-inch ductile iron water main along six streets in the Trowbridge Park service area (Figure 3). Water main replacement will occur on the following streets: Huron, Norwood, Center, Summit, Fair, and Granite. This project includes approximately 20,148 linear feet of water main, customer service lines, valves, and fire hydrants. A new generator and transfer switch will be installed at the Cox Booster Station, providing permanent standby power in the event of a power outage.

C. Project Costs

The project costs are estimated at \$3,265,000. This includes design, construction, contingencies, financial, administrative, legal, and engineering services. Construction cost estimates for each component are:

Project Cost Estimate	
Description	Amount
Water Main Replacement	\$3,215,000
Cox Booster Station – transfer switch and generator	\$50,000
Total Project Cost Estimate	\$3,265,000

It is anticipated that the project will be funded by a low-interest loan through the DWRP program administered by the DEQ and the Michigan Finance Authority. The repayment period is 20 years with a 2.5-percent interest rate. Due to this project, typical township users will see an increase of approximately \$9.25 per month.

D. Construction Schedule

Construction is expected to begin in June 2017 with completion anticipated in October 2017.

V. ENVIRONMENTAL IMPACTS

A. Primary Impacts

Impacts of construction activities associated with the project are considered short-term disruptions that, for the most part, will not extend beyond the period of construction. Short-term adverse impacts associated with construction include noise, dust, exhaust fumes, displacement of flora and fauna, removal of groundcover, and increased erosion potential.

Construction will occur along six streets of the Trowbridge Park area. Impacts from construction will be mitigated through adherence to local noise ordinances, specific start-up and shut-down times for construction activities, and accommodating local traffic to the best of their ability. The contractor will be required to use dust-controlling agents to reduce the amount of airborne dust. Construction contract provisions will be enforced for compliance with the Soil Erosion and Sedimentation Control Act to prevent damage to the surrounding areas from soil erosion, dust, and sedimentation.

Reviews were conducted by the MDEQ Land and Water Management Division to determine the need for permits under the Natural Resources and Environmental Protection Act, PA 451, as amended: the Inland Lakes and Streams Act, (Part 301), the Wetlands Protection Act (Part 303), and the Floodplain Regulatory Authority (Part 31). All construction will occur within the road right of way; however, if an impact is determined to occur, the township will be required to obtain a permit prior to the start of construction.

The Michigan Department of Natural Resources-Wildlife Division and the United States Fish and Wildlife Service have reviewed the proposed project for impacts on endangered/threatened species. Since neither species nor high quality habitat occurs within the study area, it has been determined that there will be no impact to state/federal endangered/threatened species.

The State Historic Preservation Officer (SHPO) has reviewed the proposed project for impacts on historical and archeological resources. SHPO has determined that there will be no impact on historical/archeological resources from the construction of the project.

The Tribal Historic Preservation Officers have reviewed the proposed project for impacts on religious or culturally significant lands. It has been determined that there will be no impact on religious/cultural resources from the construction of the project.

B. Secondary Impacts

No significant secondary impacts are anticipated for this project. The project was designed to address deficiencies in the drinking water system and accommodate the expected 20-year needs. This project will not expand the service area. The improvements to the system are associated with the need to address deficiencies and increase the reliability of the distribution processes.

VI. PUBLIC PARTICIPATION

A formal public hearing for the proposed project was held on May 10, 2016, after a 30-day notice was given in *The Mining Journal* newspaper. Presentations were made on the project plan, including alternatives considered, project impacts, and estimated costs. There were no official comments. A resolution unanimously approving the project plan and agreeing to implement the selected alternative was adopted during the regular city council meeting on May 17, 2016.

VII. REASONS FOR CONCLUDING NO SIGNIFICANT IMPACTS

The improved drinking water quality and health benefits and system reliability anticipated from the project are expected to outweigh the short-term adverse impacts. No long-term significant impacts are associated with the project.

Questions regarding this Environmental Assessment should be directed to:

Ms. Sonya T. Butler, Section Manager
Revolving Loan Section
Drinking Water and Municipal Assistance Division
Michigan Department of Environmental Quality
P.O. Box 30241
Lansing, Michigan 48909-7741
Telephone: 517-284-5433
E-Mail: butlers2@michigan.gov

Figure 1: Marquette Township

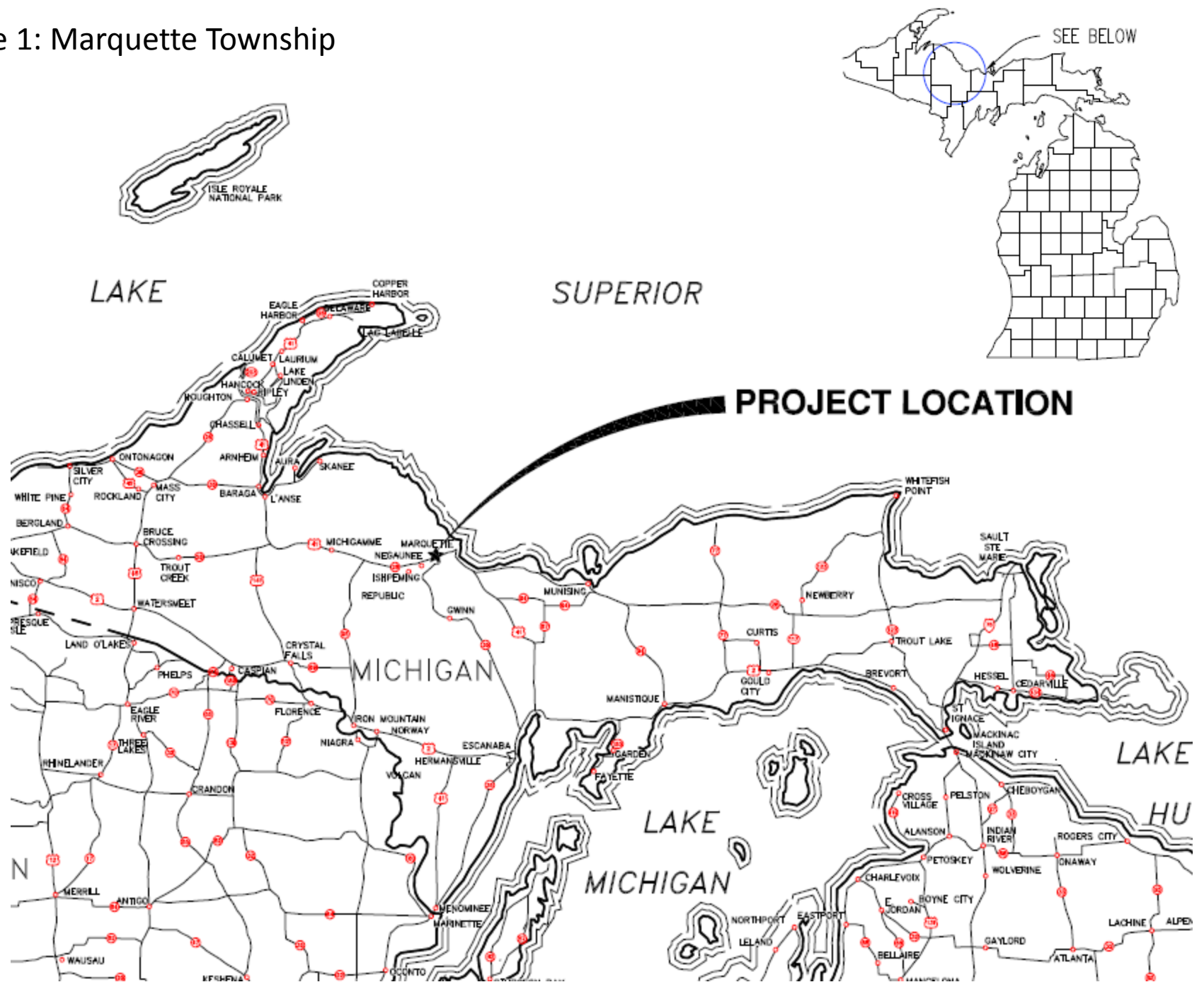
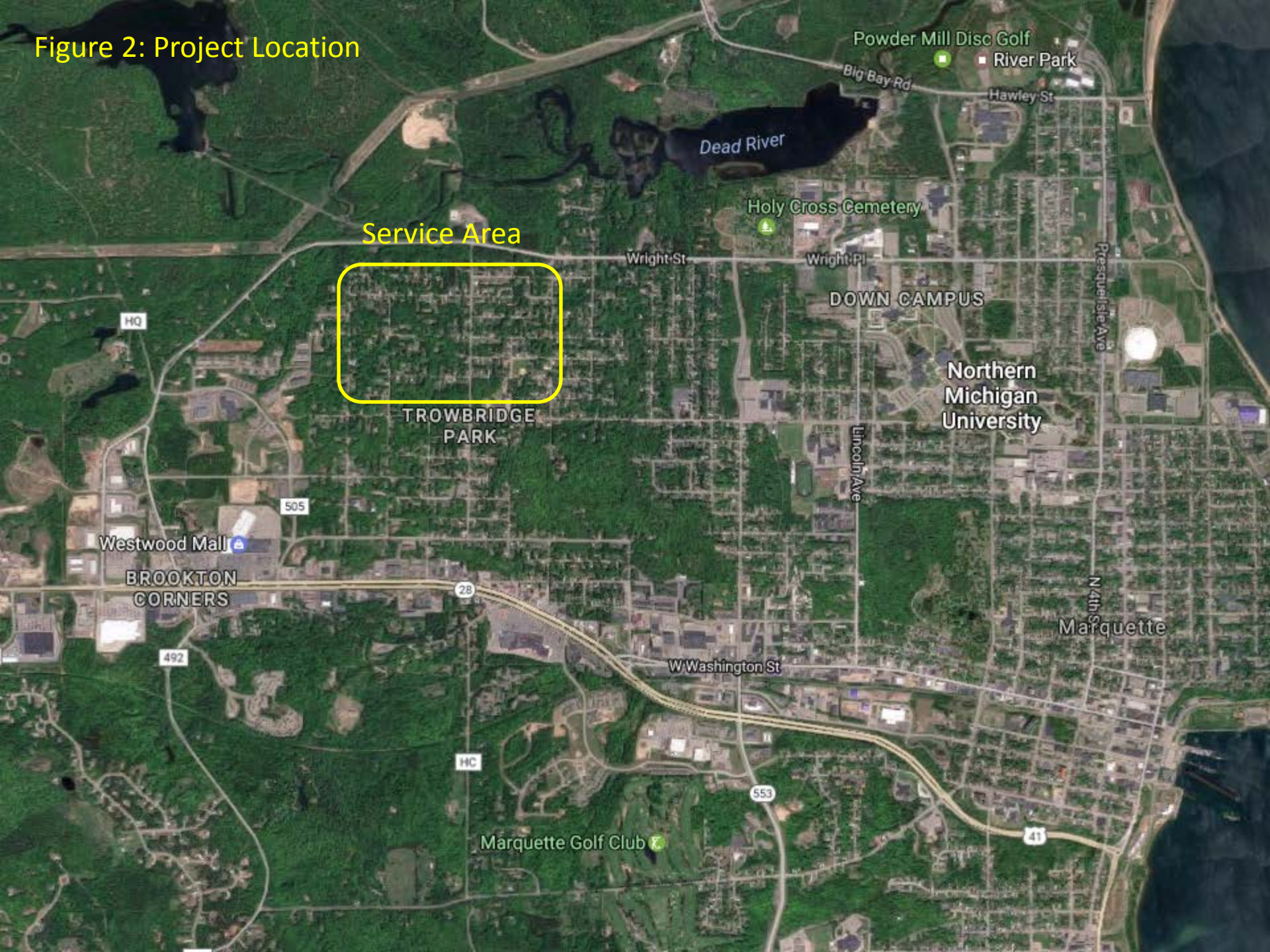


Figure 2: Project Location



Service Area



TROWBRIDGE PARK

Powder Mill Disc Golf

River Park

Big Bay Rd

Hawley St

Dead River

Holy Cross Cemetery

Wright St

Wright Pl

DOWN CAMPUS

Northern Michigan University

Presque Isle Ave

Lincoln Ave

N 4th St
Marquette

HQ

505

Westwood Mall

BROOKTON CORNERS

28

492

W Washington St

HC

553

Marquette Golf Club

41



Figure 3: Trowbridge Park Area watermain replacement