

PERMIT APPLICATION FOR WATER SUPPLY SYSTEMS
 (CONSTRUCTION - ALTERATION - ADDITION OR IMPROVEMENT) AS DESCRIBED HEREIN
 Required under the Authority of 1976 PA 399, as amended

This application becomes an Act 399 Permit only when signed and issued by authorized Michigan Department of Environmental Quality (DEQ) Staff. See instructions below for completion of this application.

<p>1. Municipality or Organization, Address and WSSN that will own or control the water facilities to be constructed. This permit is to be issued to: KWA Water Supply System G-4610 Beecher Road Flint, MI 48532</p> <p>WSSN: 03563</p>	<p align="center">Permit Stamp Area (DEQ use only)</p> <p align="center">MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY</p> <p align="center">PERMIT NO. W 14 2023 APR 21 '14</p> <p align="center">EXAMINED AND APPROVED FOR COMPLIANCE WITH ACT 399, P.A. 1976</p>	
<p>2. Owner's Contact Person (provide name for questions):</p> <p>Contact: John O'Brien, P.E. Title: Deputy CEO Phone: 810 - 732-7870</p>		
<p>3. Project Name (Provide phase number if project is segmented):</p> <p>Intermediate Pump Station</p>	<p>4. Project Location (City, Village, Township): Lynn Township</p>	<p>5. County (location of project): St. Clair County</p>

ISSUED UNDER THE AUTHORITY OF THE DIRECTOR OF THE DEPARTMENT OF ENVIRONMENT QUALITY

cc: Mr. Mike Prysby, DEQ Lansing

Issued by: *Paul J. Betham*

Reviewed by: *Paul J. Betham*

If this box is marked see attached special conditions.

Instructions: Complete items 1 through 5 above and 6 through 21 on the following pages of this application. Print or type all information except for signatures. Mail completed application, plans and specifications, and any attachments to the DEQ District Office having jurisdiction in the area of the proposed construction.

Please Note:

- This **PERMIT** only authorizes the construction, alteration, addition or improvement of the water system described herein and is issued solely under the authority of 1976 PA 399, as amended.
- The issuance of this **PERMIT** does not authorize violation of any federal, state or local laws or regulations, nor does it obviate the necessity of obtaining such permits, including any other DEQ permits, or approvals from other units of government as may be required by law.
- This **PERMIT** expires two (2) years after the date of issuance in accordance with R 325.11306, 1976 PA 399, administrative rules, unless construction has been initiated prior to expiration.
- Noncompliance with the conditions of this permit and the requirements of the Act constitutes a violation of the Act.
- Applicant must give notice to public utilities in accordance with 1974 PA 53, (MISS DIG), being Section 460.701 to 460.718 of the Michigan Compiled Laws, and comply with each of the requirements of that Act.
- All earth changing activities must be conducted in accordance with the requirements of the Soil Erosion and Sedimentation Control Act, Part 91, 1994 PA 451, as amended.
- All construction activity impacting wetlands must be conducted in accordance with the Wetland Protection Act, Part 303, 1994 PA 451, as amended.
- Intentionally providing false information in this application constitutes fraud which is punishable by fine and/or imprisonment.
- Where applicable for water withdrawals, the issuance of this permit indicates compliance with the requirements of Part 327 of Act 451, Great Lakes Preservation Act.

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6. Facilities Description – In the space below provide a detailed description of the proposed project. Applications without adequate facilities descriptions will be returned. SEE EXAMPLES BELOW. Use additional sheets if needed.

The project consists of an Intermediat Pump Station (IPS) located at the intersection of Martin and Hull Roads in Lynn Twp., St. Clair County, MI. Complementary to the IPS will be the construction of a 7.0 million gallons storage tank that will serve to balance the flow from the Lake Huron Pump Station (LHPS) and the IPS. Flow to the IPS will be via an incoming 66 inch pipeline on the north eastern edge of the property. The flow from the 66-inch pipeline will be conveyed directly to the ground storage tank. However, a 36 inch pressure sustaining valve will be placed prior to the tank to maintain a static head of approximately 38 feet on the incoming line to avoid syphoning effect and the creation of vacuum in the line. The IPS will be equipped with a chemical feed system to provide control of biological activity within the pipeline.

There are no water supply or sewage utilities in the vicinity of the IPS site. Therefore, the design of the IPS also includes a septic system. Also included is a potable water supply system consisting of a water well, a hydropneumatic tanks and an ultraviolet disinfection system to maintain a reliable potable supply with adequate pressure. The well water will also be used as a non-potable supply.

A 36-inch by-pass line with a connection to the suction line from the tank will be installed so that, in case of emergency, limited flow can either be by-passed around the IPS, directly to the Genesee County WTP or allow the IPS to be used as an inline booster station.

Power to the IPS will be provided via a substation with a generator as standby power to shut down the pumps and to provide low voltage power supply for the IPS maintenance and security.

The IPS is designed for an initial average day demand of 25.0 mgd with a maximum day demand of 50.0 mgd. It will be equipped with four pumps of equal capacity, each capable of delivering 25 mgd with a TDH of 205 feet. Maximum day demand will be met with three pumps in operation delivering 16.67 mgd each with a TDH of 286 feet. A fourth pump is provided as bak-up in case of failure of any of the pumps.

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Water Mains	500 feet of 8-inch water main in First Street from Main Street north to State Street. OR 250 feet of 12-inch water main in Clark Road from an existing 8-inch main in Third Avenue north to a hydrant.
Booster Stations	A booster station located at the southwest corner of Third Avenue and Main Street, and equipped with two, 15 Hp pumps each rated 150 gpm @ 200 feet TDH. Station includes backup power and all other equipment as required for proper operation.
Elevated Storage Tank	A 300,000 gallon elevated storage tank located in City Park. The proposed tank shall be spherical, all welded construction and supported on a single pedestal. The tank shall be 150 feet in height, 40 feet in diameter with a normal operating range of 130 – 145 feet. The interior coating system shall be ANSI/NSF Standard 61 approved or equivalent. The tank will be equipped with a cathodic protection system, and includes a tank level control system with telemetry.
Chemical Feed	A positive displacement chemical feed pump, rated at 24 gpd @ 110 psi to apply a chlorine solution for Well No. 1. Chlorine is 12.5% NaOCL, ANSI/NSF Standard 60 approved and will be applied at a rate of 1.0 mg/l of actual chlorine.
Water Supply Well	Well No. 3, a 200 foot deep well with 170 feet of 8-inch casing and 30 feet of 8-inch, 10 slot screen. The well will be equipped with a 20 Hp submersible pump and motor rated 200 gpm @ 225 feet TDH, set at 160 feet below land surface.
Treatment Facilities	A 5 million gpd water treatment plant located at the north end of Second Avenue. The facility will include 6 low service pumps, 2 rapid mix basins, 4 flocculation/sedimentation basins, 8 dual media filters, 3 million gallon water storage reservoir and 6 high service pumps. Also included are chemical feed pumps and related appurtenances for the addition of alum, fluoride, phosphate and chlorine.

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General Project Information – Complete all boxes below.	
<p>7. Design engineer's name, engineering firm, address, phone number, and email address:</p> <p>Steven Wordelman, P.E.</p> <p>Jones & Henry Engineers, Ltd. 3103 Executive Parkway Toledo, OHIO 43606</p>	<p>8. Indicate who will provide project construction inspection:</p> <p><input type="checkbox"/> Organization listed in Box 1.</p> <p><input checked="" type="checkbox"/> Engineering firm listed in Box 7.</p> <p><input type="checkbox"/> Other - name, address, and phone number listed below.</p>
<p>9. Is a basis of design attached?</p> <p><input checked="" type="checkbox"/> YES <input type="checkbox"/> NO</p> <p>If no, briefly explain why a basis of design is not needed.</p>	
<p>10. Are sealed and signed engineering plans attached?</p> <p><input checked="" type="checkbox"/> YES <input type="checkbox"/> NO</p> <p>If no, briefly explain why engineering plans are not needed.</p>	
<p>11. Are sealed and signed construction specifications attached?</p> <p><input checked="" type="checkbox"/> YES <input type="checkbox"/> NO</p> <p>If specifications are not attached, they need to be on file at DEQ.</p>	
<p>12. Were Recommended Standards for Water Works, Suggested Practice for Water Works, AWWA guidelines, and the requirements of Act 399 and its administrative rules followed?</p> <p><input checked="" type="checkbox"/> YES <input type="checkbox"/> NO</p> <p>If no, explain which deviations were made and why.</p>	
<p>13. Are all coatings, chemical additives and construction materials ANSI/NSF or other adequate 3rd party approved?</p> <p><input checked="" type="checkbox"/> YES <input type="checkbox"/> NO</p> <p>If no, describe what coatings, additives or materials did not meet the applicable standard and why.</p>	
<p>14. Are all water system facilities being installed in the public right-of-way or a dedicated utility easement? (For projects not located in the public right-of-way, utility easements must be shown on the plans.)</p> <p><input checked="" type="checkbox"/> YES <input type="checkbox"/> NO</p> <p>If no, explain how access will be obtained.</p>	
<p>15. Is the project construction activity within a wetland (as defined by Section 324.30301(d)) of Part 303, 1994 PA 451?</p> <p><input type="checkbox"/> YES <input checked="" type="checkbox"/> NO</p> <p>If yes, a wetland permit must be obtained.</p>	
<p>16. Is the project construction activity within a 100-year floodplain (as defined by R 323.1311(e)) of Part 31, 1994 PA 451, administrative rules?</p> <p><input type="checkbox"/> YES <input checked="" type="checkbox"/> NO</p> <p>If yes, a flood plain permit must be obtained.</p>	
<p>17. Is the project construction activity within 500 feet of a lake, reservoir, or stream?</p> <p><input checked="" type="checkbox"/> YES <input type="checkbox"/> NO</p> <p>If yes, a Soil and Erosion Control Permit must be obtained <u>or</u> indicate if the owner listed in box 2 of this application is an Authorized Public Agency (Section 10 of Part 91, 1994 PA 451) <input type="checkbox"/> Owner is APA.</p>	

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18. Will the proposed construction activity be part of a project involving the disturbance of five (5) or more acres of land?
 YES NO
If yes, is this activity regulated by the National Pollutant Discharge Elimination System storm water regulations?
 YES: NPDES Authorization to discharge storm water from construction activities must be obtained.
 NO: Describe why activity is not regulated:
Please call 517-241-8993 with questions regarding the applicability of the storm water regulations.

19. Is the project in or adjacent to a site of suspected or known soil or groundwater contamination?
 YES NO
If yes, attach a copy of a plan acceptable to the DEQ for handling contaminated soils and/or groundwater disturbed during construction. Contact the local DEQ district office for listings of Michigan sites of environmental contamination.

20. IF YOU ARE A CUSTOMER/WHOLESALE/BULK PURCHASER, COMPLETE THE FOLLOWING

1) Name and WSSN of source water supply system (seller) _____

2) Does the water service contract require water producer/seller to review and approve customer/wholesale/bulk purchaser water system construction plans?
 YES NO

If yes to #2, the producer/seller approval letter must be attached when submitted to DEQ.

21. **Owner's Certification** The owner of the proposed facilities or the owner's authorized representative shall complete the owner's certification. It is anticipated that the owner will either be a governmental agency (city, village, township, county, etc.) or a private owner (individual, company, association, etc.) of a Type I public water supply.

OWNER'S CERTIFICATION

I, John F O'Brien (name), acting as the Deputy CEO (title/position) for
(print) (print)

Karegnardi Water Authority (entity owning proposed facilities) certify that this project has
(print)

been reviewed and approved as detailed by the Plans and Specifications submitted under this application, and is in compliance with the requirements of 1976 PA 399, as amended, and its administrative rules.

[Signature] 2/19/14 810 732 7870
Signature* Date Phone

*Original signature only, no photocopies will be accepted.