



RICK SNYDER
GOVERNOR

STATE OF MICHIGAN
DEPARTMENT OF ENVIRONMENTAL QUALITY
LANSING DISTRICT OFFICE



C. HEIDI GREETHER
DIRECTOR

August 8, 2017

Mr. Glenn Chinaware, Utility Director
City of Owosso
301 West Main Street
Owosso, Michigan, 48867

Dear Mr. Chinaware:

SUBJECT: City of Owosso (City) – Test Well Authorization - WSSN: 05120
Hintz Road Replacement Wells

This letter is in response to an inquiry from the City about replacing its Type I well located at 1265 North Hintz Road (Hintz Well), which is losing capacity and has been shut off. The City is seeking to replace its Hintz Well and add an additional well at that same location because the water quality at the Hintz Well is better than the other existing wells. The City would like to have a second well at the Hintz Road property, with both wells capable of producing up at least 1,000 gallons per minute (gpm). The installation of a second well at the Hintz Road property will allow the City to abandon and plug other wells of poorer water quality.

A preliminary Adverse Resource Impact (ARI) model was run based on two 1,000 gpm wells at the Hintz Road site. The results were in Zone A, which indicates no adverse impact for two proposed 1,000 gpm wells.

Based on our July 25, 2017, test well site inspection, the site drawing provided by you, review of our records, and the preliminary ARI, we are approving the proposed site for construction of two **test wells** at this time. The test wells may be converted into a production wells at a later date, if constructed according to Type I standard, acceptable pump test results and acceptable water quality test results are obtained. An official ARI will need to be conducted if the proposed production wells exceed either 1,000 gpm each, or if the total city well capacity exceeds the approved baseline capacity of 5,050 gpm.

The Michigan Safe Drinking Water Act, 1976 PA 399, as amended (Act 399), and the rules promulgated pursuant to Act 399, provide specific direction on the information that needs to be submitted to this office for our review and approval before a production well construction permit is issued. The following is a list of conditions and items that need to be met and submitted to this office for our review and approval for construction of a new production well or conversion of a test well into a production well.

This letter authorizes the construction of two test wells with the following conditions:

1. A final site plan showing the exact location of the proposed production wells relative to all major and potential sources of contamination, property boundaries, easements, and etc. (sewers, septic tanks, fuel tanks, etc.). This must be submitted to this office with the well construction permit application.
2. An aquifer test must be completed to determine the safe yield of the aquifer and assessment of the well locations. The aquifer test must be completed in accordance with the Department of Environmental Quality (DEQ) Aquifer Test Requirements for Public Water Supply Wells policy (enclosed). Two copies of a hydrogeological study must be provided to this office for review. DEQ staff will provide comment to the owner and you after a review of the hydrogeological report.
3. The standard isolation area (SIA) for a Type 1 public water supply well is 200 feet (ft) measured in all directions from the well. The proposal specifies three potential locations, each of which have a SIA of 100 ft. Modification to the SIA is not approved until a review of the hydrogeological study has been completed. A variance request to reduce the SIA from 200 ft to 100 ft will need to be provided with the hydrogeological study. You proceed at your own risk with the proposal that has been submitted.
4. The SIA must be controlled by the owner of the wells to prevent contamination from occurring. It is preferred the SIA be owned. However, control of the SIA can be accomplished through a long-term lease or easement. The SIA must be located outside of the road right-of-way or an existing easement.
5. The test wells must be constructed according to the current Type 1 well construction standards and Act 399. Well grouting, using neat cement, is required. The entire length of the well casings must be sealed with neat cement grout. The well drilling contractor should be advised of this requirement prior to undertaking well construction. Also, any observation wells that are located within the well isolation area must also be grouted with neat cement. The entire length of well casing for the test wells and observation wells shall be grouted with neat cement. Enclosed is a copy of the DEQ policy Grouting of Community Water Supply Wells. Please provide a copy of the well logs for the test wells and observation wells with the hydrogeological study.
6. Chemical analysis of the water from the test wells must be performed. The analyses will have to be performed through a certified drinking water laboratory. The chemical analysis shall include partial chemistry, cyanide, volatile organic compounds, carbamates, herbicides, pesticides, metals, and radiological (gross alpha, radium 226, radium 228). We recommend the metals analysis include iron and manganese. The analytical results of the water samples shall be included with the hydrogeological study and submitted to this office.

7. Detailed specifications of the final proposed production wells, based on information gathered from the test well evaluations (depth, diameter, pump and motor characteristics, pump settings, etc.) must be provided with the permit application.
8. Final well logs including casing materials and screen capacity must also be submitted with the permit application.
9. A drawing showing the connection of the new production wells to the existing water system must be submitted to this office with the permit application.

This letter does not approve a test well (or test wells) for use as a production well (or wells) or connection to a community water supply system. The owner is required to obtain a construction permit from the DEQ prior to converting the test wells to production wells and for construction of the water distribution system. A Permit Application for Water Supply Systems can be downloaded from this website at www.michigan.gov/drinkingwater by opening the following link: Community Water Supply. Under Manuals, Forms, and Brochures you will find a link to the construction permit application.

If you should have any questions in regards to this correspondence, please contact me at the telephone number below; via e-mail at swendsenk@michigan.gov; or Department of Environmental Quality, P.O. Box 30242, Lansing, Michigan 48909.

Sincerely,



Kurt Swendsen, District Engineer
Drinking Water and
Municipal Assistance Division
Field Operations Section
Lansing District Office
517-525-1487

Enclosure(s)

cc: Mr. David Haut, Operator-in-Charge, City of Owosso
Mr. Larry Johnson, Shiawassee County Health Department