

## PROPOSED LARGE QUANTITY WATER WITHDRAWAL

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**House Bill 5638 as introduced**  
**Sponsor: Rep. Aaron Miller**  
**Committee: Natural Resources**  
**Complete to 2-27-18**

Analysis available at  
<http://www.legislature.mi.gov>

### SUMMARY:

House Bill 5638 would amend Part 327 (Great Lakes Preservation) of the Natural Resources and Environmental Protection Act (NREPA) to provide an additional avenue for submitting a water withdrawal assessment, to regulate the calculations for determining streamflow depletion, and to exempt agricultural withdrawals from Freedom of Information Act requests.

#### **Submitting a water withdrawal assessment**

Currently under the law, proposed large quantity withdrawals from anywhere in Michigan that could affect the Great Lakes Basin are started with an Online Assessment Tool. This avenue requires the property owner to first submit information under Section 32706b of NREPA, which determines the category (or zone) the withdrawal would fall under. If the tool determines that a proposed withdrawal is a zone B withdrawal in a cold-transitional river system, or a zone C or D withdrawal, then the property owner must submit to the Department of Environmental Quality (DEQ) a request for a site-specific review.

Under the bill, a request for a site-specific review would *not* be required if the property owner submits to the DEQ the data used when entering the required fields of the Online Assessment Tool<sup>1</sup> *and either* of the following:

- Registration for a proposed withdrawal that will draw water from aquifers separated from glacial aquifers by bedrock.  
*OR*
- An analysis by a professional hydrologist or hydrogeologist of the proposed withdrawal demonstrating the proposed withdrawal is unlikely to cause an adverse resource impact. The analysis would be based on *hydrogeological streamflow data* (defined below) and would include at least 1 of the following:
  - Evidence the proposed withdrawal is in the water management unit or units that were part of a regional or watershed-based study of water use impacts accepted by the department. The evidence submitted to the department would include an affidavit by the property owner that the proposed withdrawal is located in a river system and aquifer included in the study and records of applicable data collected in the study.

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<sup>1</sup> 324.32706a(3): The assessment tool shall allow the user to enter into fields the following data related to a proposed withdrawal: (a) The capacity of the equipment used for making the withdrawal. (b) The location of the withdrawal. (c) The withdrawal source, whether surface water or groundwater. (d) If the source of the withdrawal is groundwater, whether the source of the withdrawal is a glacial stratum or bedrock. (e) The depth of the withdrawal if from groundwater. (f) The amount and rate of water to be withdrawn. (g) Whether the withdrawal will be intermittent.

- Surficial mapping of glacial geology and data accumulation in three-dimensional format that includes the water management unit or units for the proposed withdrawal, completed by or in accordance with the standards of the United States Geological Survey or the Michigan Geological Survey.
- A geologic cross-section and an analysis of the water management unit or units in which the proposed withdrawal will be made, incorporating data from well logs, gamma ray logs, or other data available to construct the cross-section.

This new avenue for submitting a water withdrawal assessment would create a rebuttable presumption that the proposed withdrawal would not create an adverse resource impact, which means that although the proposed withdrawal would be presumed to be safe and not be harmful to the surrounding resources in the area, evidence could be submitted to prove that the proposed withdrawal would actually be harmful.

If a property owner submits the above information for a water withdrawal assessment, the DEQ would have to provide the owner with an acknowledgment of receipt within 10 days after the actual receipt of data and analyses related to the proposed withdrawal. The acknowledgment of receipt would serve as final approval of the proposed withdrawal, unless the DEQ provides a written demonstration to the owner that the approval of withdrawal under this section must be granted on a provisional basis within 10 days of its acknowledgment of receipt. (The bill does not specify whether it is 10 business days or calendar days, or if the time limit starts to run upon sending the acknowledgment or when the owner receives the acknowledgment.) If the DEQ provisionally approves a proposed withdrawal, it could require in writing that the landowner provide 5 sets of water level recovery measurements, taken after pumping between June and October within 2 years after the production well is put in service. If an adverse resource impact is not observed, the department would then issue final approval of the withdrawal and would not require submission of additional information or data from the landowner.

#### **Calculations for determining streamflow depletion**

When calculating streamflow depletion to determine whether the proposed withdrawal is likely to cause an adverse resource impact, the bill would specify that the DEQ could use certain references, which include Hunt, 2003 (“Unsteady Stream Depletion When Pumping From Semiconfined Aquifer”); Ward and Lough, 2011 (“Stream Depletion From Pumping A Semiconfined Aquifer In A Two-Layer Leaky Aquifer System”); or a peer-reviewed functional equivalent as determined by the professional judgment of the DEQ. The calculation of streamflow depletion may also be conducted on existing withdrawals in the same water management unit or units as the proposed withdrawal if applicable data is available. This data may be used to provide additional evidence as needed to demonstrate whether a proposed withdrawal is likely to cause an adverse resource impact.

#### **Exemption from FOIA**

For agricultural withdrawals, the data and analyses submitted to the DEQ would be exempt from the Freedom of Information Act (FOIA) and could not be disclosed by the DEQ, the Department of Agriculture and Rural Development, or the Department of Natural Resources. The only time the information could be disclosed is if the DEQ determines that withdrawal would cause an adverse resource impact.

## **Definitions**

In an analysis by a professional hydrologist or hydrogeologist of the proposed withdrawal demonstrating that the proposed withdrawal is unlikely to cause an adverse resource impact, *hydrogeological streamflow data* would include all of the following:

- Records of the installation of a minimum of 1 monitoring well. A nearby existing monitoring well may be used for the test instead, if it is in sufficiently close proximity and if there are sufficiently similar geologic conditions that in the professional judgment of the hydrologist or hydrogeologist the existing well will collect data accurate enough for the analysis of streamflow depletion. The monitoring well would be installed in the same aquifer and screened at or near the same depth as the production well and would be located at a distance of 1 to 5 times the thickness of the aquifer from the proposed production well.
- Measurements of static water level elevations at 1-minute intervals for a minimum of 24 hours before the pumping portion of the test.
- Records from an *aquifer performance test* from the proposed production well. A nearby existing production well may be used for the test instead, if it is in sufficiently close proximity and there are sufficiently similar geologic conditions that in the professional judgment of the hydrologist or hydrogeologist the existing well will collect data accurate enough for the analysis of streamflow depletion.

*Aquifer performance test* would mean a controlled field test where all of the following are done:

- Pumping is conducted at a constant rate at or above the desired production rate for the duration of the test and metered or periodically measured to ensure consistency of rate.
- The test is conducted for a period of 24 hours, during which drawdown measurements are taken at 1-minute intervals to an accuracy of 0.05 feet.
- After completion of pumping, measurements of water level recovery are taken at 1-minute intervals for 24 hours. The analysis should calculate streamflow depletion using the process outlined in the bill, as described above.

MCL 324.32706c

## **FISCAL IMPACT:**

It is unclear whether the changes to the water withdrawal permitting process included in House Bill 5638 would affect costs or revenues for the DEQ. The bill would not change the existence of the current water use reporting requirement and corresponding annual fee of \$200; it is difficult to determine whether these changes in process would have an effect on the number of applicants. The water use reporting fee generates approximately \$160,000 in annual revenue for the DEQ and primarily supports the water withdrawal assessment program.

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■ This analysis was prepared by nonpartisan House Fiscal Agency staff for use by House members in their deliberations, and does not constitute an official statement of legislative intent.