Legislative Analysis

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PROPOSED LARGE QUANTITY WATER WITHDRAWAL

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House Bill 5638 (proposed H-1 substitute)
Sponsor: Rep. Aaron Miller
Committee: Natural Resources
Complete to 5-2-18

SUMMARY:

House Bill 5638 would amend Part 327 (Great Lakes Preservation) of the Natural Resources and Environmental Protection Act (NREPA) to revise provisions 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 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.

The bill would remove these provisions relating to requirements for property owners proposing to develop withdrawal capacities and instead mandate that a request for a site-specific review is *not* required under the following conditions.

If the tool determines that a proposed withdrawal with a capacity of 1 million gallons of water or less per day from the waters of the state to supply a common distribution system is a zone B withdrawal in a cold-transitional river system, or a zone C or D withdrawal, then the property owner *may* submit to the DEQ the data used when entering the required fields of the Online Assessment Tool[1] *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 of the proposed withdrawal by a professional hydrologist or hydrogeologist demonstrating that the proposed withdrawal is not likely to

[1] MCL 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.

cause an adverse resource impact. The analysis would be based on an ***aquifer performance test*** (see below), ***streamflow depletion calculations*** (see below), and geological data consisting of at least one of the following, which would be included with the analysis:

- Evidence that 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 DEQ. The evidence 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.
- A hydrogeological analysis of the water management unit or units that will potentially be affected by the proposed withdrawal, incorporating data from well logs, gamma ray logs, surficial maps of the glacial geology, geological cross-sections, and any other available hydrogeological data.

If a property owner submits the above information for a water withdrawal assessment, then within 10 working days after the actual receipt of the analyses related to the proposed withdrawal, the DEQ would be required to determine whether a proposed withdrawal is a zone A, B, C, or D withdrawal and would have to provide the property owner written notification of its determination. If the DEQ fails to provide written notification to the property owner within 10 working days, the owner may register the withdrawal and proceed with the withdrawal. However, if proper notice is given, then the determination would be subject to the following different standards depending on whether the withdrawal is a zone, A, B, C, or D withdrawal:

- For a zone A or B withdrawal, the owner may register the withdrawal and proceed with the withdrawal.
- For a zone C withdrawal, the owner may register the withdrawal and proceed to make the withdrawal, but only if the owner self-certifies that he or she is implementing applicable environmentally sound and economically feasible water conservation measures that the owner considers to be reasonable and that were either prepared under Section 32708a *or* developed for the water use associated with that specific withdrawal. The owner would have to provide 5 sets of water level recovery measurements, as described in an ***aquifer performance test*** (see below), taken after pumping between June and October within 2 years after the production well is put in service. The DEQ would not require submission of additional information or data from the owner.
- For a zone D withdrawal, the owner cannot register the withdrawal or proceed to make the withdrawal *unless* the owner applies for a water withdrawal permit under Section 32723 *and* the withdrawal is authorized under that section *or unless* it is authorized under this section, below. In addition to the written notification, the DEQ would have to include documentation demonstrating that the proposed withdrawal is likely to cause an adverse resource impact. The documentation would have include one more specific identifications of error, inapplicable methodology, or cumulative streamflow depletion calculations as listed under the bill.

After an owner registers the withdrawal as outlined above, if the conditions of the withdrawal deviate from the specific data that were evaluated, then the owner would be required to notify the DEQ of the corrected data and the DEQ would make a new determination, outlined above. If the corrected data do not change the determination, then withdrawal may continue. However, if the determination does change, then the owner would have to proceed accordingly under this section.

Aquifer performance tests

The bill would define an ***aquifer performance test*** as a controlled field test where all of the following are done:

- At least one monitoring well is installed in the same aquifer and screened at or near the same depth at the production well. The well would be located at a distance of 1 to 5 times the thickness of the aquifer from the proposed production well. A nearby existing well may be used for this test instead if it meets the previous requirements.
- Static water level elevation measurements are taken at 1-minute intervals for 24 hours before the pumping portion of the test to an accuracy of 0.05 feet.
- Pumping is conducted at a 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 pumping portion of the test is conducted for a period of 24 hours in confined aquifers or 72 hours in unconfined aquifers, 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 to an accuracy of 0.05 feet.
- An analysis is conducted to determine the aquifer hydraulic characteristics of transmissivity and storage coefficient employing the methods of specific scholarly articles listed in the bill.

Streamflow depletion calculations

When conducting a ***streamflow depletion calculation*** to determine whether the proposed withdrawal is likely to cause an adverse resource impact, the bill would specify that the DEQ could use applicable methods presented in specific articles, including Hunt, "Unsteady Stream Depletion from Ground Water Pumping" (1999); Hunt, "Unsteady Stream Depletion when Pumping from Semiconfined Aquifer" (2003); Ward and Lough, "Stream Depletion from Pumping a Semiconfined Aquifer in a Two-Layer Leaky Aquifer System" (2011); or a similar peer-reviewed model that assesses potential stream depletion. 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 are available. These data may be used to provide additional evidence as needed to demonstrate whether a proposed withdrawal is likely to cause an adverse resource impact. As used in the bill, ***streamflow depletion calculation*** would mean an evaluation of the potential streamflow depletion in which all factors listed in the bill are met, in addition to the process outlined 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.