Legislative Analysis

PROPOSED LARGE QUANTITY WATER WITHDRAWAL

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House Bill 5638 as enacted
Public Act 209 of 2018
Sponsor: Rep. Aaron Miller
House Committee: Natural Resources
Senate Committee: Natural Resources
Complete to 9-17-18

BRIEF 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.

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 Department of Environmental Quality (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.

THE APPARENT PROBLEM:

In order to make a large quantity water withdrawal in Michigan, the proposed withdrawal must go through the water withdrawal assessment process. According to Michigan State University Extension, the process is an assessment of the ecological impacts of a proposed large quantity water withdrawal on nearby streams and rivers.[1] The process is regulated under Part 327 of NREPA and includes using the online Water Withdrawal Assessment Tool (also known as WWAT). According to the DEQ, the tool determines the potential impact of new or increased large quantity water withdrawals on nearby water resources. All water withdrawals are prohibited from causing an adverse resource impact on Michigan waters, so the tool is required prior to any new or increased large quantity water withdrawal.[2]

If the tool determines that the withdrawal is not likely to cause an adverse impact, then the user may register their withdrawal through the tool and proceed with the withdrawal without any additional contact with the DEQ. However, if the proposed withdrawal is in a sensitive stream or the tool evaluation indicates that there is an increased likelihood of an adverse impact, then the user is referred to the DEQ for a site-specific review.[3]

[1] http://msue.anr.msu.edu/resources/considering_aquatic_ecosystems_the_basis_for_michigans_new_water_wq60
[2] https://www.michigan.gov/deq/0,4561,7-135-3313_3684_45331-201102--,00.html; assessment tool found here: http://www.deq.state.mi.us/wwat/Default.aspx
[3] http://www.michigandnr.com/PUBLICATIONS/PDFS/ifr/ifrlibra/Special/Reports/sr55/SR55.pdf

According to the sponsor of the bill, the time it takes the DEQ to review the data collected from a site-specific review is too long. The DEQ currently goes over its statutorily allowed time frame, taking an average of 35 days to review the data instead of the required 10 days.[4] Some constituents have even been in the review process for over a year. This response time is too long, especially for farmers who need water for their crops and livestock. Lack of water for farmers for an extended period of time could have serious personal and social economic impacts.

This bill seeks to make changes to the online water assessment tool and process to ensure that the best scientific data are used and to shorten the DEQ's response time for site-specific reviews.

THE CONTENT OF THE BILL:

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 a request for a site-specific review to the DEQ.

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[5] *and either* of the following:

- An analysis of the proposed withdrawal by a ***professional hydrologist or hydrogeologist*** calculating the streamflow depletion of the proposed withdrawal. (***Professional hydrologist or hydrogeologist*** would mean an individual holding a license or registration from any state as a professional hydrogeologist, hydrologist, or geologist, or a current certification as a

[4] MCL 324.32706c(3): The department shall complete its site-specific review within 10 working days of submittal of a request for a site-specific review.

[5] 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.

professional geologist by the American Institute of Professional Geology.) 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.

OR

- An analysis by a ***professional hydrologist or hydrogeologist*** (see above) of a proposed withdrawal from an aquifer separated from streams by bedrock, calculating streamflow depletion of the proposed withdrawal by providing hydrogeologic data demonstrating the bedrock transmissivity for the formation or relying on published estimates of transmissivity for the bedrock formation.

Within 20 working days after the actual receipt of the analysis and evidence 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. However, if upon a preliminary review the DEQ determines that the proposed withdrawal will cause a rejection only because the withdrawal will be a zone D withdrawal with an estimated cumulative streamflow depletion that is likely to cause an adverse resource impact, the DEQ may, within the first 20 working days after actual receipt of the analysis and evidence, provide written notice to the property owner that up to 5 additional working days are needed for confirmation. If the DEQ does not provide written notification stating a need for up to 5 additional working days, or if the DEQ cites any other reason for rejection of a zone D withdrawal, it must make its determination within 20 working days after actual receipt of the analysis and supporting evidence and data related to the proposed withdrawal.

If the DEQ fails to provide written notification to the property owner within the applicable time period as described above, 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.

Freedom of Information Act

The bill stipulates that nothing in it would alter any requirement to disclose information, nor would it alter any exemption from disclosure, under the Freedom of Information Act. However, any exemption listed in sections 32707(6) and 32708(4) of NREPA would stand.

MCL 324.32706c

BACKGROUND INFORMATION:

The H-3 substitute reported from the House Natural Resources Committee consisted of the H-1 substitute and amendments to that substitute adopted by the committee. An H-5 substitute to the bill was adopted by the House on May 16, 2018.

ARGUMENTS:

For:

Supporters of the bill argued that the DEQ's current response time to property owners after the tool is utilized takes too long. Currently, the statute states that the DEQ has 10 days to complete a site-specific review, but the DEQ regularly goes over this time limit. The bill would extend the time period to 20 days, with the opportunity for the DEQ to extend the review time. This new time frame should give the DEQ ample time to review the data produced from the site-specific reviews.

Additionally, supporters argued that the current online tool doesn't represent certain areas of the state very well. As a result, many proposed wells have been preliminarily deemed to produce an adverse resource impact, even though subsequent studies show that the well actually would not cause an adverse resource impact. Because this scenario requires a subsequent site-specific review, it produces more work for the DEQ, which contributes to the DEQ's slow response time. The bill would update the studies used for the technology

of the online tool. These supporters said that the updates would better represent Michigan's landscape, which would then result in fewer site-specific reviews, which would ultimately relieve the DEQ from being overworked and enable the department to respond to property owners faster.

Against:

Critics of the bill argued that, in addition to updating the studies used for the technology of the online tool, another solution to help overworked DEQ staff respond to site-specific reviews on time would be to increase their funding to enable them to hire additional staff. The automatic approval of a withdrawal if the DEQ is unable to respond in time, and only 5 days of extended time to review the data, could result in severely harmful and adverse environmental impacts to aquifers and trout streams. The DEQ's goal of preventing all adverse resource impacts would be greatly hindered through this automatic approval process. The troves of data that can accompany certain withdrawals takes time to thoroughly review. However, if there were more people to review the data, then the process would move faster.

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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.