

Office of the Auditor General
Performance Audit Report

Water Withdrawal Program
Water Resources Division
Department of Environment, Great Lakes, and Energy

May 2024

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The auditor general may make investigations pertinent to the conduct of audits.

Article IV, Section 53 of the Michigan Constitution



OAG

Office of the Auditor General

Report Summary

Performance Audit

Water Withdrawal Program

Water Resources Division

Department of Environment, Great Lakes, and Energy

Report Number:
761-0153-23

Released:
May 2024

The Water Use Assessment Unit (WUAU), within the Water Resources Division (WRD), is responsible for administering the Water Withdrawal Program, including registering large quantity water withdrawals (between 100,000 gallons and 2,000,000 gallons per day), collecting annual water use data, making determinations on the potential impacts to water resources as a result of proposed withdrawals, and processing water withdrawal permits (for withdrawals greater than 2,000,000 gallons per day). Water withdrawn from Michigan's water supplies amounted to 8.2 billion and 7.9 billion gallons per day during calendar years 2021 and 2022 (most recent available), respectively. WUAU's gross appropriations for fiscal years 2022 and 2023 were \$842,900 and \$863,800, respectively.

Audit Objective			Conclusion
Objective 1: To assess the sufficiency of WRD's administration of the Water Withdrawal Program.			Sufficient, with exceptions
Findings Related to This Audit Objective	Material Condition	Reportable Condition	Agency Preliminary Response
WUAU identified stream depletion differences ranging from -2.4 million to 4.7 million gallons per year between the tools used by WUAU for key calculations and decision-making related to registering withdrawals, collecting data, determining environmental impact, and issuing permits (Finding 1).	X		Agrees
WUAU did not timely conduct 160 (54%) site-specific review of water withdrawal requests and did not timely update the Water Withdrawal Assessment Tool (WWAT) for 44 (15%) requests (Finding 2).		X	Agrees

Audit Objective			Conclusion
Objective 2: To assess the sufficiency of WRD's efforts to monitor the Water Withdrawal Program.			Not sufficient
Findings Related to This Audit Objective	Material Condition	Reportable Condition	Agency Preliminary Response
WUAU did not enforce collection of unpaid invoices for water use fees, justify unpaid invoices written off as "uncollectable," monitor withdrawal amounts, or document its process to identify unregistered or noncompliant wells and pumps. We also identified other weaknesses (Finding 3).	X		Agrees
Of 60 compliance reviews we evaluated, WUAU did not notify 12 (20%) property owners of noncompliance with water withdrawal laws, require responses for 5 (17%) of 29 violations related to unregistered wells, and escalate 6 (100%) of 6 violations after the property owner did not respond (Finding 4).	X		Agrees

Audit Objective			Conclusion
Objective 3: To assess the effectiveness of select Department of Environment, Great Lakes, and Energy security and access controls over the WWAT and Water Use Reporting (WUR) database.			Moderately effective
Findings Related to This Audit Objective	Material Condition	Reportable Condition	Agency Preliminary Response
WUAU systems need improved security and user access controls. One (17%) of 6 WWAT and 2 (13%) of 15 WUR active database users departed State employment between 665 and 1,351 days prior to June 30, 2023 (Finding 5).		X	Agrees

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Doug A. Ringler, CPA, CIA
Auditor General

May 16, 2024

Phillip Roos, Director
Department of Environment, Great Lakes, and Energy
Constitution Hall
Lansing, Michigan

Director Roos:

This is our performance audit report on the Water Withdrawal Program, Water Resources Division, Department of Environment, Great Lakes, and Energy.

We organize our findings and observations by audit objective. Your agency provided preliminary responses to the recommendations at the end of our fieldwork. The *Michigan Compiled Laws* and administrative procedures require an audited agency to develop a plan to comply with the recommendations and to submit it to the State Budget Office upon completion of an audit. Within 30 days of receipt, the Office of Internal Audit Services, State Budget Office, is required to review the plan and either accept the plan as final or contact the agency to take additional steps to finalize the plan.

We appreciate the courtesy and cooperation extended to us during this audit.

Sincerely,

Doug Ringler
Auditor General

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AUDIT OBJECTIVES, CONCLUSIONS, FINDINGS, AND OBSERVATIONS

ADMINISTRATION OF THE WATER WITHDRAWAL PROGRAM

BACKGROUND

The Water Use Assessment Unit (WUAU) is responsible for registering large quantity water withdrawals, making determinations on the potential impacts to water resources as a result of proposed withdrawals, and processing water withdrawal permits in the State of Michigan.

The Department of Environment, Great Lakes, and Energy (EGLE) assesses requests for water withdrawals for both agricultural and non-agricultural users. Users input information about their withdrawals online in the Water Withdrawal Assessment Tool* (WWAT), which then determines if the proposed withdrawal will have an adverse resource impact. An adverse resource impact is defined in the Great Lakes Preservation Act and is dependent on the type of water source (e.g., large stream, warm stream, cool river) and the impact on fish populations.

The WWAT calculates a zone (A through D) for each withdrawal request. If the WWAT calculates zone A or B, the requester can register their water use immediately through the WWAT and begin withdrawing water. Between January 1, 2022 and June 30, 2023, the WWAT automatically registered 477 zone A and B water withdrawal registrants*.

If the WWAT calculates zone C or D, the requester can change the parameters of their request to obtain either an A or B zone designation or can request WUAU to conduct a site-specific review (SSR). SSR is a manual review of the withdrawal application and considers more detailed information specific to the individual water areas impacted by the potential withdrawal. Between January 1, 2022 and June 30, 2023, WUAU completed 284 SSR requests.

Prior to beginning a new or increased withdrawal of more than 2,000,000 gallons per day (or 1,388 gallons per minute) or a transfer of more than 100,000 gallons per day, averaged over any 90-day period, from the watershed of one Great Lake to the watershed of another Great Lake, users must submit a request for a water withdrawal permit. Between January 1, 2022 and June 30, 2023, WUAU received 7 water withdrawal permit requests.

Annually, EGLE is required to report to the Legislature information regarding water withdrawal registrations including the number of SSRs requested, the number of SSRs for which EGLE failed to meet statutory deadlines, and the number of registrations submitted.

* See glossary at end of report for definition.

AUDIT OBJECTIVE

To assess the sufficiency of the Water Resources Division's (WRD's) administration of the Water Withdrawal Program.

CONCLUSION

Sufficient, with exceptions.

**FACTORS
IMPACTING
CONCLUSION**

- WUAU appropriately completed SSR checklists, maintained supporting documentation, documented supervisor approval, updated the WWAT, responded to SSR requestors, and, when applicable, notified other registrants in the requested SSR area for 100% of SSRs we reviewed.
- EGLE maintained documentation to support updated stream flow index data for 98% of updates we reviewed.
- WUAU appropriately calculated and entered new zones in the WWAT for 95% of stream flow updates we reviewed.
- WUAU investigated or forwarded all informal dispute complaints received between January 1, 2022 and June 30, 2023.
- WUAU maintained documentation to support its review of water withdrawal permit applications, provided public notice and comment period, timely reviewed applications, and determined if applicants met all permit conditions for 100% of water withdrawal permit requests we reviewed.
- WUAU submitted the fiscal year 2022 legislative report in a timely manner, and the report contained materially accurate data for the elements we reviewed.
- Material condition* related to improving internal control* over water withdrawal tools (Finding 1).
- Reportable condition* related to improving timeliness of SSRs (Finding 2).

* See glossary at end of report for definition.

FINDING 1

Internal control over water withdrawal tools needs improvement.

WUAU had not determined the reason for differences in stream depletion calculations ranging from -2,447,613 to 4,677,840 gallons per year.

WUAU needs to improve internal control to ensure tools used to analyze and approve water withdrawals are properly protected, monitored, and authenticated to prevent and detect adverse resource impacts.

Section 18.1485 of the *Michigan Compiled Laws* requires EGLE to establish and maintain a system of effective and efficient internal control. The *Michigan Compiled Laws* require a property owner to enter data for a proposed water withdrawal into the WWAT to determine if the proposed withdrawal is likely to cause an adverse resource impact. If so, the property owner may request an SSR and WUAU may calculate streamflow depletion using its alternative batch tool analysis to assess adverse resource impact.

From January 1, 2022 through June 30, 2023, the WWAT automatically registered 477 water withdrawal registrants and WUAU completed 284 SSRs.

Our review noted WUAU:

- a. Identified differences in stream depletion calculations between the WWAT and the batch tools when inputting identical information, which should have resulted in the same stream depletion amount.

For 4 (29%) of 14 registrations we reviewed, differences ranged from -2.4 million to 4.7 million gallons per year. One of the registrations was within a water management area nearing its adverse resource impact depletion amount, therefore the differences could have resulted in a significant environmental issue. WUAU determined these differences began occurring after August 2021; however, it was unable to determine the reason for the differences and continues to use both tools regardless of the discrepancies.

- b. Stored batch tools on an unsecured shared network drive, allowing all WUAU staff with access to the shared drive to potentially make changes to the batch tool coding and assessment data. Access to change the batch tools should be limited to select individuals based on the principle of least privilege*.
- c. Did not maintain a change log for critical assessment configurations to the batch tools. For example, changes made to the withdrawal parameters were not captured; therefore, we were unable to determine if any, or how many, changes were made to the batch tools during our audit period. This could have contributed to discrepancies identified in part a.

* See glossary at end of report for definition.

For part a., WUAU informed us it believes the differences are caused by a software or technical issue, and after various troubleshooting, it was unable to determine the exact reasons for the differences. For parts b. and c., WUAU had not developed procedures related to storage and change management of the batch tools.

We consider this finding to be a material condition based on differences noted between the WWAT and the batch tools and the significance of the WWAT and batch tool data to the water withdrawal approval and monitoring process.

RECOMMENDATION

We recommend WUAU improve internal control to ensure tools used to analyze and approve water withdrawals are properly protected, monitored, and authenticated.

**AGENCY
PRELIMINARY
RESPONSE**

EGLE provided us with the following response:

EGLE agrees with the recommendation and has taken steps to improve internal controls by restricting access to the batch tools to only necessary staff and creating a master or replicate version of the tools. Future IT system updates will address permissions and logging for configuration changes, inconsistencies with calculations, and the other aspects identified in the audit report.

FINDING 2

SSR timeliness needs improvement.

WUAU should ensure it timely completes SSR requests and updates the WWAT with the results. Timely reviews help mitigate delays for those entities or individuals requesting to withdraw water, and timely updates help ensure the WWAT has information necessary to make water withdrawal determinations.

Section 324.32706(c)(6) of the *Michigan Compiled Laws* requires WUAU to complete SSRs within 10 business days of the request. Section 18.1485 of the *Michigan Compiled Laws* requires EGLE to establish and maintain a system of effective and efficient internal control.

WUAU received 299 requests for an SSR between January 1, 2022 and June 30, 2023. Our review noted:

- a. WUAU did not complete 160 (54%) SSRs within 10 business days, as follows:

<u>Number of Days Late</u>	<u>Number (Percentage) of SSRs</u>
1 day to 10 days	111 (69%)
11 days to 20 days	26 (16%)
21 days to 30 days	7 (4%)
31 days to 317 days	16 (10%)

WUAU tracks the cause of the delay when it completes SSRs late as follows:

<u>Reasons for Late Completion</u>	<u>Number (Percentage) of SSRs</u>
Applicant negotiations	25 (16%)
Late response to request for additional information	33 (21%)
Compliance issues	12 (8%)
Technically complex reviews	18 (12%)
Perennial vs. non-perennial stream review	1 (1%)
Water use program staff workload	58 (38%)
Index flow review	7 (5%)

- b. For 44 (15%) of the 299 SSRs completed, WUAU did not update the WWAT within 10 business days of SSR completion.

WUAU informed us that statutory limitations in Part 327 result in SSR deadlines not being achievable in many reviews. Current statutory requirements do not allow EGLE to toll, or pause, the 10-day deadline if the SSR is incomplete, lacks critical information, requires applicant negotiations, or requires resolving compliance issues in the affected Water Management Areas.

RECOMMENDATION

We recommend WUAU timely complete SSRs and update the WWAT with results.

**AGENCY
PRELIMINARY
RESPONSE**

EGLE provided us with the following response:

EGLE agrees with the recommendation and notes that to meet the 10-day deadline in many cases, statutory amendments are needed to allow tolling of SSRs – a common allowance in many regulatory statutes. To improve SSR timeliness, EGLE is shifting workload for non-Part 327 hydrogeologic permit reviews to another work area, expediting filling remaining vacancies, and exploring opportunities to further increase staffing levels and reduce workloads to improve review timelines.

MONITORING OF THE WATER WITHDRAWAL PROGRAM

BACKGROUND

WUAU is responsible for ensuring compliance with Part 327 of the Natural Resources and Environmental Protection Act (Public Act 451 of 1994, as amended), including ensuring registrants annually report water use and pay the required fee, investigating complaints, and determining if large quantity wells are registered in the WWAT. The Act requires property owners to build wells and pumps in accordance with their approved registration. If the conditions of the withdrawal deviate from the data entered into the WWAT, the property owner must enter the corrected data into the WWAT and notify EGLE.

Non-agricultural registrants are required to annually report their use of water, source of water supply, uses of the water withdrawn, the amount of consumptive water withdrawn, and pay an annual \$200 water use reporting fee. Also, if the registrants' source of water is groundwater, they are required to submit to WUAU the location of the well. Agricultural registrants are required to annually report their water use, the type and acreage of crop irrigated, the source of the water supply, the uses of the water withdrawn (if not used for irrigation), the water level of the aquifer when water is withdrawn from groundwater, and applicable water conservation practices and an implementation plan for those practices to the Michigan Department of Agriculture and Rural Development. All non-agricultural and agricultural registrants withdrawing less than 1.5 million gallons of water are not required to pay the \$200 reporting fee.

Periodically, WUAU reviews the Wellogic system to determine the number of large quantity wells added since the previous review. Wellogic is a web-based system allowing water well drilling and pump installation contractors to submit water well records. WUAU will match the Wellogic records with current registrations in the WWAT to ensure all wells capable of making large quantity withdrawals are registered. If WUAU identifies a well not registered in the WWAT or identifies a well not built according to the WWAT registration, it will forward the record for a compliance review.

WUAU completes a compliance review when it becomes aware of potential noncompliance by periodic Wellogic reviews, SSRs, and other noncompliance discovered from a complaint. Compliance reviews can include on-site inspections; evaluations of records such as Wellogic data; examinations of maps, photos, videos, and digital images; and reviews of registration information included in WWAT data. During the audit period, WUAU started 320 compliance reviews. Examples of violations noted in the compliance reviews include unregistered wells, wells installed or operated differently than registered, and well records missing installed pump information.

WUAU is also responsible for investigating complaints related to water withdrawals submitted by the public. From January 1, 2022

through June 30, 2023, WUAU received and investigated five complaints related to low water levels in streams, ponds, and lakes.

AUDIT OBJECTIVE

To assess the sufficiency of WRD's efforts to monitor the Water Withdrawal Program.

CONCLUSION

Not sufficient.

**FACTORS
IMPACTING
CONCLUSION**

- Material condition related to improving the water withdrawal process (Finding 3).
- Material condition related to strengthening the compliance review process (Finding 4).
- WUAU correctly identified and forwarded for compliance review all large quantity wells registered in Wellogic when the corresponding large quantity water withdrawal was not registered in the WWAT data.

FINDING 3

Improvements needed in the water withdrawal assessment process.

WUAU did not enforce collection of \$78,600 in unpaid invoices.

WUAU did not sufficiently document, track, or monitor the water withdrawal assessment process to ensure assessments are accurate and water users are in compliance with the *Michigan Compiled Laws*.

The Great Lakes Preservation Act (Public Act 451 of 1994, as amended) prescribes the requirements for water withdrawal approval, reporting, fee payment, and enforcement actions.

Our review of the withdrawal records noted WUAU did not:

- a. Take enforcement action on registrants who did not submit water use reports and associated fees. We identified:

- (1) 241 registrants with 393 unpaid annual invoices from 2016 to 2023 totaling \$78,600 as of June 30, 2023, and 65 (27%) registrants had two or more unpaid invoices as noted in the table below:

Number of Unpaid Invoices	Number of Registrants	Percent of Total Registrants With Unpaid Invoices
2	29	12%
3	15	6%
4	5	2%
5	4	2%
6 or more	12	5%
Total	65	27%

- (2) 466 and 542 registrants who did not submit water use reports in fiscal years 2022 and 2023, respectively. Also, 232 (23%) did not submit a water use report for both years.

- b. Monitor water use reported to the approved withdrawal amounts to ensure users did not exceed the approved withdrawal limits. We reviewed the Water Use Reporting (WUR) database and determined the database did not include any information that would allow EGLE to identify and compare the user's registration with the associated water use reported.

- c. Establish policies or procedures to:

- (1) Respond to complaints submitted by the public. WUAU received 5 complaints from January 1, 2022 through June 30, 2023 related to low water levels in nearby streams, ponds, and lakes. WUAU did not sufficiently document its review and respond to the complainant for 3 (75%) of 4 closed complaints.

WUAU wrote off \$47,600 unpaid water use reporting fees.

(2) Write off unpaid water use reporting fees determined to be uncollectible. During our audit period, WUAU wrote off 238 unpaid invoices totaling \$47,600 associated with 93 registrants, of whom 69 (74%) were golf and country clubs. WUAU did not document its process to determine how or why the invoices were uncollectible and subsequently written off. We reviewed 10 registrants with unpaid, written-off invoices and noted 9 (90%) were active businesses.

(3) Identify unregistered or noncompliant wells and pumps. One WUAU employee had developed an informal, unwritten process to identify unregistered or noncompliant wells and pumps; however, because the process is undocumented, we were unable to determine how many unregistered wells and pumps and compliance violations were identified. A formal written process would help to ensure reviews are regularly completed and sufficiently documented.

d. Document instructions for completing site-specific reviews. Our review of 40 SSR checklists disclosed the checklist was not always self-explanatory, which led to inconsistencies in documentation, such as information related to prior stream flow adjustments.

WUAU informed us that limited staffing resources impacted its ability to fully document, track, and monitor the water withdrawal assessment process.

We consider this finding to be a material condition based on the significance of the exception rates identified, the number of processes with exceptions, and WUAU's inability to ensure water withdrawals do not exceed approved withdrawal limits.

RECOMMENDATION

We recommend WUAU sufficiently document, track, and monitor the water withdrawal assessment process.

AGENCY PRELIMINARY RESPONSE

EGLE provided us with the following response:

EGLE agrees with the recommendation. EGLE will be initiating a Lean Process Improvement exercise to comprehensively review existing policies and procedures; and document or update procedures for complaints, compliance review, processing SSRs, water use reporting, and processing water use reporting invoice fees. In addition to the improved rigor in documenting, tracking, and monitoring the water withdrawal process, EGLE's actions to refocus resources, increase capacity, and reduce workloads will result in improved execution of WUAU's core programmatic goals.

FINDING 4

Compliance review process needs strengthening.

WUAU did not require responses for 5 (17%) of 29 violations and did not send a second violation notice for 10 (63%) of 16 violations.

WUAU needs to improve its compliance review process to ensure consistency with policy and that violations are communicated and corrected.

EGLE policy requires WUAU to communicate compliance review violations to property owners within 30 days of identification through a documented verbal warning, compliance communication, or violation notice. Compliance communications and violation notices should include the action needed and the deadline for acting, which shall not exceed 90 days from the date of issuance. If a property owner fails to comply with a violation notice, WUAU can either immediately issue a second violation notice or elevate the violation for escalated enforcement within EGLE.

Our review of 60 compliance reviews conducted between January 1, 2022 and July 5, 2023 disclosed 35 (58%) reviews did not comply with EGLE's policy. Specifically, WUAU did not:

- a. Notify property owners of violations through a documented verbal warning, compliance communication, or violation notice for 12 (20%) compliance reviews.
- b. Timely communicate violations to property owners within 30 days for 5 (10%) of 48 compliance reviews with violations. These violations were issued 11 to 280 days late.
- c. Require responses for 5 (17%) of 29 violations related to unregistered wells. WUAU did not require the well owner to provide the actual pumping schedules for these 5 unregistered wells. Instead, WUAU registered the water withdrawals through the WWAT using an average pumping schedule. As a result, the amount of actual water used by the 5 wells is not known, and the WWAT could contain inaccurate information which may impact future water withdrawals.
- d. Send a second violation notice for 10 (63%) of 16 compliance reviews in which the property owner failed to comply with the initial compliance communication or violation notice. Also, WUAU issued 6 (100%) of the 6 second violation notices between 44 and 402 days late.
- e. Escalate enforcement for 6 (100%) of 6 violations after the property owner did not respond to the second violation notice.

WUAU informed us WRD's enforcement team prioritized enforcement action across WRD, resulting in not every unresolved violation leading to escalated enforcement.

We consider this finding to be a material condition based on the significance of the exception rates identified and for the potential impacts of not holding violators accountable for noncompliance.

RECOMMENDATION

We recommend WUAU improve its compliance review process.

**AGENCY
PRELIMINARY
RESPONSE**

EGLE provided us with the following response:

EGLE agrees with the recommendation. EGLE will be initiating a Lean Process Improvement exercise to comprehensively review, document, and update compliance and enforcement policies and procedures. The resulting procedures will formalize the Part 327 enforcement process, consistent with EGLE's department-wide Compliance and Enforcement Policy. In addition, monitoring of compliance actions will be incorporated into EGLE's MiEnviro system to improve internal oversight and transparency.

SECURITY AND ACCESS CONTROLS

BACKGROUND

Security controls are the management, operational, and technical controls designed to protect the availability, confidentiality, and integrity of a system and its information.

Access controls* limit or detect inappropriate access to computer resources, thereby protecting the resources from unauthorized modification, loss, and disclosure. For access controls to be effective, they should be properly authorized, implemented, and maintained.

The WWAT is an information system that determines the potential impact to nearby water resources for new or increased large quantity water withdrawals. The WWAT database contains the underlying data used by the WWAT. The WUR database contains annual water use information reported by registrants.

AUDIT OBJECTIVE

To assess the effectiveness* of select EGLE security and access controls over the WWAT and the WUR database.

CONCLUSION

Moderately effective.

FACTORS IMPACTING CONCLUSION

- All 13 WWAT users were active State employees as of June 30, 2023.
- Reportable condition related to the need for improved access controls (Finding 5).

* See glossary at end of report for definition.

FINDING 5

Access controls over the WWAT, WWAT database, and WUR database need improvement.

EGLE needs to improve access controls over the WWAT, WWAT database, and WUR database to help prevent and detect inappropriate access and protect water withdrawal data from unauthorized use, modification, or destruction.

State of Michigan Technical Standards 1340.00.020.01 and 1340.00.020.03 require user access to be formally approved, based on the principle of least privilege, periodically reviewed, and removed within 72 hours of an employee's departure. Also, State of Michigan Technical Standard 1340.00.040.01 requires information systems to generate audit records containing information of the type of event that occurred and the identity of any individuals or subjects associated with the event.

We identified 13 active WWAT user accounts, 6 active WWAT database user accounts, and 17 active WUR database user accounts with access to water withdrawal, registration, and water use reporting data as of June 30, 2023 and noted EGLE did not:

- a. Document approval of user access for 13 (100%) WWAT, 6 (100%) WWAT database, and 16 (94%) WUR database users. We noted WUAU did not utilize a formal document to approve user access.
- b. Conduct periodic recertifications of user accounts, including when a user's access was granted, disabled, or modified. User access rights should be periodically recertified to ensure privileges granted to each user are still appropriate for the user's job responsibilities. EGLE informed us the WWAT, WWAT database, and WUR database do not store the dates when user privileges are modified or revoked.
- c. Remove access for 1 (17%) WWAT database and 2 (12%) WUR database user accounts after employee departure. The former employees departed employment between 665 and 1,351 days before the end of our audit period. Also, one of the WUR database users had active administrative access.
- d. Ensure WWAT automatically identified which users made system data modifications such as adding, modifying, or removing water withdrawals or modifying stream flow measurements. Users noted changes by manually adding initials to transaction notes.
- e. Ensure the security configuration was appropriate. Because of the confidentiality of this configuration, we summarized our testing results for presentation in this finding and provided the underlying details to EGLE management.

EGLE did not have a comprehensive process to periodically review the appropriateness of WWAT, WWAT database, and WUR database user accounts.

RECOMMENDATION

We recommend EGLE improve access controls over the WWAT, WWAT database, and WUR database.

**AGENCY
PRELIMINARY
RESPONSE**

EGLE provided us with the following response:

EGLE agrees with the recommendation and has completed a certification of current users and roles, following the principle of least privilege. In addition, EGLE will document an access control procedure that provides structure to adding, removing, and changing user access or permissions.

SUPPLEMENTAL INFORMATION

UNAUDITED

WATER WITHDRAWAL PROGRAM
Water Resources Division
Department of Environment, Great Lakes, and Energy

Comparison of Registration and Reporting Requirements for Participating
States in the Great Lakes Compact

State	Registration to Withdraw Water Required?	Registration Fee Required?	Registration Fee Amount	Water Use Fee Required?	Water Use Fee Amount	Required to Use a Water Measuring Device?
Michigan	Yes	Yes	• \$2,000 only for withdrawals that require a water withdrawal permit	Yes	• \$200 for non-agricultural withdrawals over 1,500,000 gallons annually	No
Illinois	Yes	No	N/A	No	N/A	No
Indiana	Yes	No	N/A	No	N/A	No
Minnesota	Yes	Yes	• \$150	Yes	<ul style="list-style-type: none"> • \$140 minimum up to \$8 per 1,000,000 gallons for withdrawals exceeding 500,000,000 gallons • \$200 to \$420 per 1,000,000 gallons for once-through cooling systems up to \$750 for agricultural irrigation to \$10,000 for municipal electric and cogenerative steam up to \$5,000 for hydroelectric or hydromechanical power 	Yes
New York	Yes	No	N/A	No	N/A	Yes
Ohio	Yes	Yes	<ul style="list-style-type: none"> • \$1,000 only for withdrawal of 2,000,000 gallons per day • \$1,000 only for withdrawal of 100,000 gallons per day from Ohio river watershed 	No	N/A	No
Pennsylvania	Yes	No	N/A	No	N/A	Yes
Wisconsin	Yes	Yes	• \$500	Yes	• \$125 to \$9,625	No

N/A = Not applicable.

Source: The OAG prepared the chart using participating states' publicly available information.

PROGRAM DESCRIPTION

Michigan and the other Great Lakes states and provinces have enacted laws to regulate water uses within the Great Lakes Basin in accordance with the Great Lakes - St. Lawrence River Basin Water Resources Compact. WUAU, within WRD, is responsible for administering the Water Withdrawal Program, including registering large quantity water withdrawals (between 100,000 gallons and 2,000,000 gallons per day), collecting annual water use data, making determinations on the potential impacts to water resources as a result of proposed withdrawals, and processing water withdrawal permits (for withdrawals greater than 2,000,000 gallons per day). Water withdrawn from Michigan's water supplies amounted to 8.2 billion and 7.9 billion gallons per day during calendar years 2021 and 2022 (most recent available), respectively.

From January 1, 2022 through June 30, 2023, WUAU collected \$535,136 in revenue and expended \$1,499,967. In fiscal years 2022 and 2023, WUAU was appropriated \$842,900 and \$863,800, respectively. As of June 30, 2023, WUAU had 10 employees.

AUDIT SCOPE, METHODOLOGY, AND OTHER INFORMATION

AUDIT SCOPE

To examine the records and processes of the Water Withdrawal Program. We conducted this performance audit* in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

As part of the audit, we considered the five components of internal control (control environment, risk assessment, control activities, information and communication, and monitoring activities) relative to the audit objectives and determined all components were significant.

PERIOD

Our audit procedures, which included a preliminary survey, audit fieldwork, report preparation, analysis of agency responses, and quality assurance, generally covered January 1, 2022 through June 30, 2023.

METHODOLOGY

We conducted a preliminary survey to gain an understanding of the Water Withdrawal Program's processes. During our preliminary survey, we:

- Interviewed WRD management and staff to gain an understanding of their organizational structure, responsibilities, and procedures.
- Examined the Great Lakes - St. Lawrence River Basin Water Resources Compact and applicable State laws.
- Analyzed WRD revenue and expenditure data from January 1, 2022 through June 30, 2023.
- Obtained an understanding of and assessed internal control applicable to WRD.

OBJECTIVE 1

To assess the sufficiency of WRD's administration of the Water Withdrawal Program.

To accomplish this objective, we:

- Randomly selected 40 of 284 SSRs requested and completed from January 1, 2022 through June 30, 2023 to determine whether WUAU appropriately completed

* See glossary at end of report for definition.

SSR checklists and maintained supporting documentation, documented supervisor approval, updated the WWAT with SSR determinations, responded to SSR requestors, and, when applicable, notified other registrants in the requested SSR area.

- Analyzed 299 SSRs EGLE received between January 1, 2022 and June 30, 2023 to determine if they were completed in a timely manner.
- Randomly selected 43 of 757 changes to stream flow data in the WWAT as of June 30, 2023 to determine if EGLE maintained documentation to support updated stream flow index data and WUAU appropriately recalculated and entered new stream flow zones in the WWAT.
- Interviewed WUAU staff to obtain an understanding of the batch tools used in SSR analysis and WUAU's process to protect, monitor, and authenticate the batch equations.
- Reviewed 2 informal dispute complaints received by WUAU between January 1, 2022 and June 30, 2023 to determine if WUAU appropriately investigated or forwarded the complaint.
- Randomly selected 3 of 7 water withdrawal permit applications received by WUAU between January 1, 2022 and June 30, 2023 to determine if WUAU maintained documentation of the permit application, provided appropriate public notice and comment period, and timely approved applications meeting all the requirements.
- Verified the submission and accuracy of selected items in the fiscal year 2022 legislative report.

Our random samples were selected to eliminate bias and enable us to project the results to the respective populations.

OBJECTIVE 2

To assess the sufficiency of WRD's efforts to monitor the Water Withdrawal Program.

To accomplish this objective, we:

- Interviewed WUAU staff to gain an understanding of the processes for monitoring the Water Withdrawal Program.
- Reviewed all 5 complaints submitted to WUAU between January 1, 2022 and June 30, 2023 regarding water withdrawals to determine if the complaints were documented and investigated.

- Analyzed 2,122 invoices written off by WUAU from January 1, 2022 through June 30, 2023 to determine if data supported the write-off reason. We randomly selected 10 of 94 entities with invoices written off as uncollectible to determine if the entities were open as of June 30, 2023.
- Randomly selected 60 of 320 compliance reviews conducted by WUAU from January 1, 2022 through July 5, 2023 to determine whether WUAU timely notified property owners of violations, documented responses to violation notices, and, when necessary, issued second violation notices or escalated enforcement action.
- Analyzed water use reporting data submitted in 2022 and 2023 to determine if any registrants did not submit water use data as required.
- Randomly selected 43 of 310 large quantity wells registered in Wellogic between January 1, 2022 and June 30, 2023 to determine if the large quantity withdrawal was registered in the WWAT or, if not, WUAU forwarded the well information for a compliance review.

Our random samples were selected to eliminate bias and enable us to project the results to the respective populations.

OBJECTIVE 3

To assess the effectiveness of select EGLE security and access controls over the WWAT and the WUR database.

To accomplish this objective, we:

- Interviewed WUAU and Department of Technology, Management, and Budget staff to gain an understanding of a user's access roles and privileges within the WWAT and the WWAT and WUR databases.
- Reviewed all 13 WWAT, 6 WWAT database, and 17 WUR database user accounts active as of June 30, 2023 to determine whether:
 - Approval of user access privileges was established and properly documented.
 - Access was appropriate for users' job responsibilities.
- Compared the 13 WWAT, 6 WWAT database, and 17 WUR database users who had active accounts with the Human Resources Management Network* (HRMN) employment records to determine whether all active users were current State employees.

* See glossary at end of report for definition.

CONCLUSIONS

We base our conclusions on our audit efforts and any resulting material conditions or reportable conditions.

When selecting activities or programs for audit, we direct our efforts based on risk and opportunities to improve State government operations. Consequently, we prepare our performance audit reports on an exception basis.

CONFIDENTIAL AND SENSITIVE INFORMATION

Because of the confidentiality of security configurations, we summarized our testing results for presentation in the report and provided the underlying details to EGLE management.

AGENCY RESPONSES

Our audit report contains 5 findings and 5 corresponding recommendations. EGLE's preliminary response indicates it agrees with the recommendations.

The agency preliminary response following each recommendation in our report was taken from the agency's written comments and oral discussion at the end of our fieldwork. Section 18.1462 of the *Michigan Compiled Laws* and the State of Michigan Financial Management Guide (Part VII, Chapter 4, Section 100) require an audited agency to develop a plan to comply with the recommendations and to submit it to the State Budget Office upon completion of an audit. Within 30 days of receipt, the Office of Internal Audit Services, State Budget Office, is required to review the plan and either accept the plan as final or contact the agency to take additional steps to finalize the plan.

SUPPLEMENTAL INFORMATION

Our audit report includes a comparison of registration and reporting requirements for participating states in the Great Lakes Compact, presented as supplemental information. Our audit was not directed toward expressing a conclusion on this information.

GLOSSARY OF ABBREVIATIONS AND TERMS

access controls	Controls that protect data from unauthorized modification, loss, or disclosure by restricting access and detecting inappropriate access attempts.
auditor's comments to agency preliminary response	Comments the OAG includes in an audit report to comply with <i>Government Auditing Standards</i> . Auditors are required to evaluate the validity of the audited entity's response when it is inconsistent or in conflict with the findings, conclusions, or recommendations. If the auditors disagree with the response, they should explain in the report their reasons for disagreement.
effectiveness	Success in achieving mission and goals.
EGLE	Department of Environment, Great Lakes, and Energy.
Human Resources Management Network (HRMN)	The State's integrated human resources system that processes personnel, payroll, and employee benefits data.
internal control	The plan, policies, methods, and procedures adopted by management to meet its mission, strategic plan, goals, and objectives. Internal control includes the processes for planning, organizing, directing, and controlling program operations. It also includes the systems for measuring, reporting, and monitoring program performance. Internal control serves as a defense in safeguarding assets and in preventing and detecting errors; fraud; violations of laws, regulations, and provisions of contracts and grant agreements; or abuse.
IT	information technology.
material condition	A matter that, in the auditor's judgment, is more severe than a reportable condition and could impair the ability of management to operate a program in an effective and efficient manner and/or could adversely affect the judgment of an interested person concerning the effectiveness and efficiency of the program. Our assessment of materiality is in relation to the respective audit objective.
performance audit	An audit that provides findings or conclusions based on an evaluation of sufficient, appropriate evidence against criteria. Performance audits provide objective analysis to assist management and those charged with governance and oversight in using the information to improve program performance and operations, reduce costs, facilitate decision-making by parties with

responsibility to oversee or initiate corrective action, and contribute to public accountability.

principle of least privilege The practice of limiting access to the minimal level to allow normal functioning. Applied to employees, the principle of least privilege translates to giving people the lowest level of user access rights they can have and still do their jobs. The principle is also applied to things other than people, including programs and processes.

registrant A person who has registered a water withdrawal in the WWAT.

reportable condition A matter that, in the auditor's judgment, is less severe than a material condition and falls within any of the following categories: a deficiency in internal control; noncompliance with provisions of laws, regulations, contracts, or grant agreements; opportunities to improve programs and operations; or fraud.

SSR site-specific review.

Water Withdrawal Assessment Tool (WWAT) An information system that determines the potential impact to nearby water resources for new or increased large quantity water withdrawals.

WRD Water Resources Division.

WUAU Water Use Assessment Unit.

WUR Water Use Reporting.



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