

Great Lakes—St. Lawrence River Water Resources Regional Body

Meeting Summary

December 7, 2023

3:00 p.m. EST

Michigan Union, Room 2210 ABC

530 S State Street

Ann Arbor, Michigan 48109

Remote participation was available to individuals registering at:

<https://attendee.gotowebinar.com/register/5013129143794431063>

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Notice:

Notice of the meeting was provided to the public through the Great Lakes Information Network's distribution list on November 7, 2023. Notice was also posted to the Great Lakes-St. Lawrence River Water Resources Regional Body (Regional Body) website at www.glsrregionalbody.org. The notice included an announcement that the meeting agenda, draft resolutions and materials to be discussed during the meeting were available on the Regional Body's website. Call-in information was also posted to the front page of the Regional Body website.

Call of Meeting:

3:00 p.m. EST— The meeting was called to order by Adam Freihoefer, Water Use Section Manager, Wisconsin Department of Natural Resources.

Roll Call:

The following Regional Body members, constituting a quorum, were present:

Illinois (designee of Governor J.B. Pritzker): Loren Wobig, Director, Office of Water Resources, Illinois Department of Natural Resources.

Indiana (designee of Governor Eric Holcomb): Ryan Mueller, Deputy Director, Indiana Department of Natural Resources.

Michigan (designee of Governor Gretchen Whitmer): James Clift, Deputy Director, Michigan Department of Environment, Great Lakes & Energy.

Minnesota (designee of Governor Tim Walz): Jess Richards, Assistant Commissioner, Minnesota Department of Natural Resources.

New York (designee of Governor Kathy Hochul): Karen Stainbrook¹, Director, Bureau of Water Resource Management, Division of Water New York State Department of

¹ Signed proxy forms for individuals participating on behalf of official member designees are available upon request.

Environmental Conservation on behalf of Don Zelazny, New York State Department of Environmental Conservation (ret).

Ohio (designee of Governor Mike DeWine): Dena Barnhouse¹, Chief, Division of Water Resources, on behalf of Mary Mertz, Director, Ohio Department of Natural Resources.

Ontario (designee of Premier Doug Ford): Darlene Dove¹, Manager, Water Resources Section, on behalf of Jennifer Keyes, Director, Natural Resources Conservation Policy Branch, Ontario Ministry of Natural Resources and Forestry.

Pennsylvania (designee of Governor Josh Shapiro): Tim Bruno, Chief, Office of the Great Lakes, Pennsylvania Department of Environmental Protection.

Québec (designee of Premier François Legault): Peter Stevenson, Directeur général Direction générale des opérations et de l'accompagnement des partenaires et des clientèles, Ministère de l'Environnement, de la Lutte contre les changements climatiques, de la Faune et des Parcs

Wisconsin (designee of Governor Tony Evers): Adam Freihoefer, Water Use Section Manager, on behalf of Steven Little, Acting Secretary, Wisconsin Department of Natural Resources

Welcome to University of Michigan

Professor Drew Gronewold of the University of Michigan welcomed the members of the Regional Body and Compact Council to the University. Adam Freihoefer in turn thanked the University of Michigan for hosting this meeting as well as the dinner and symposium celebrating the 15th anniversary of the Compact.

Actions Taken

Review of June 15, 2023 Regional Body meeting minutes

Mr. Freihoefer noted that the June 15, 2023 minutes of the Regional Body were previously posted as draft to the Regional Body website. He invited a motion and a second to approve the minutes. A motion was made by Mr. Wobig to formally approve the minutes of the June 15, 2023 Regional Body meeting. Mr. Richards seconded the motion. The motion to adopt the June 15, 2023, meeting minutes was approved without objection.

Reports

State and Provincial updates on implementation of the Great Lakes—St. Lawrence River Basin Sustainable Water Resources Agreement (Agreement).

Without objection, all jurisdictions were granted permission to submit their reports in writing and have them incorporated into this Meeting Summary.

Wisconsin

Adam Feihoefer submitted the following report:

City of Waukesha Diversion

The City of Waukesha Diversion completed their transition to Lake Michigan water in October with no reported issues. The Wisconsin DNR is meeting with the City of Waukesha regularly to ensure compliance with the state and regional diversion approvals. The Wisconsin DNR will provide the first diversion report to the Regional Body and Compact Council in August 2024. Information on permits and approvals is available on the Wisconsin DNR website, [City of Waukesha diversion page](#) and Wisconsin DNR representatives are happy to discuss any aspects of City of Waukesha's diversion approval and implementation further with interested parties.

Water Use

Wisconsin DNR submitted its water use data to the Great Lakes Commission for the annual Great Lakes water use report. Wisconsin withdrew approximately 3.8 billion gallons of water per day from the Great Lakes basin in 2022. Wisconsin's Great Lakes water use has remained relatively consistent over the past 5 years. More details on Wisconsin's Great Lakes basin water use are part of the Great Lakes Commission annual water use report. The Wisconsin DNR also released a 2022 Water Use report available on the Wisconsin DNR [water use webpage](#). Wisconsin experienced a severe drought this past summer and in response developed additional [webpages](#) to provide information to the public on drought status and management options.

Administrative Rules

Wisconsin DNR is continuing the process of promulgating rules related to Water Supply Service Area Plans and Diversion applications. These rules do not change any of the Compact standards as the standards are codified in Wisconsin's Compact implementing statutes, but rather describe the application requirements and DNR review process for plans and diversion applications. The scope statement for the rules were approved by the DNR Board in June 2022 and the Wisconsin DNR has drafted the rules. Draft rules were provided to the public for comment this fall and the final proposed rules will be presented to the Wisconsin DNR Natural Resources Board in January 2024. More information can be found at <https://dnr.wisconsin.gov/topic/WaterUse/ImplementationRules>

Illinois

Mr. Wobig submitted the following report:

Lake Michigan Diversion

The Illinois Lake Michigan Water Allocation Program has hired an Administrative Assistant to aid Lake Michigan water communities with water system improvement plans and reporting. IDNR Lake Michigan program has also put out a job notice for a Water Allocation Engineer to help streamline and continue to manage Illinois' diversion of water from Lake Michigan in accordance with the 1967 Supreme Court Decree amended in 1980 limiting Illinois' diversion to 3,200 cubic feet per second (cfs) based on a 40-year running average.

Lake Michigan continues to service over half of Illinois population of 12.5 million people. Last year's 2022 water use included 1299 mgd with the largest portion (784 mgd) being utilized for public water supply. Illinois water Illinois' Diversion Accounting is overseen by the U.S. Army Corps of Engineers (USACE) Chicago District. The USACE's most recent certified diversion for water year (WY) 2019 (October 1, 2018, through September 30, 2019) is **3198 cfs with a 40-year running average of 3039 cfs**. As the higher 40-year old water use numbers drop out the back end of running average, the running average continues to generally decline reflecting much improved water conservation in Illinois. This year the Chicago District also convened the 9th Technical Review Committee for its Lake Michigan Diversion Accounting program. The first workshop (including a full day field tour) was held August 23-25 in Chicago and included discussions on diversion accounting procedures as well presentations from the USGS, Lake County, and the Office of Water Resources. The second workshop of the Committee was conducted at the USGS offices in Urbana, Illinois October 18-20 and included a presentation by Dr. Marcelo Garcia with the University of Illinois on the results of an University of Illinois study concerning periods of significant flow into the CAWS, via Indiana Harbor and the Grand Calumet during higher stages of the lake, contributing to diversion accounted flow at the Lemont gage. The Technical Review committee is assessing this information.

Lake Michigan Water Use Data Collection

The Department continues to collect potable water supply, consumption, and water loss information from each of its 218 Lake Michigan Water Allocation Program permittees on an annual basis as required by their allocation permits. All permittees submitted data to the Department for WY2017.

All 19 direct diverters, including the Metropolitan Water Reclamation District of Greater Chicago continue to submit monthly pumpage reports detailing Lake Michigan water used for Direct Diversion. Direct Diversion also includes releases at the Lake Michigan control structures including lockage, leakage, navigational make up, and discretionary

flow. All data collected continues to be submitted to the USACE to be used for diversion accounting.

Water Conservation

The Department’s regulatory threshold for non-revenue water is 10%. Currently about 40% of Illinois permittees are not in compliance with the Department’s threshold requirement, primarily due to aging infrastructure. The Department has expanded the allocation program staffing to focus on water loss in the region and to evaluate the types of planning assistance that could be provided to permittees help reduce non-revenue water, particularly for economically marginalized and disadvantaged communities.

Lake Michigan Water Re-Allocations

Approximately every decade, the Department reviews and adjusts each domestic water permittee’s Lake Michigan water allocation. The water demand projections are developed based upon both historical use and future projections. Earlier this year, the Department completed the reallocation of Lake Michigan water to 218 communities in Northeastern Illinois generally reducing community allocations from 2008 values thanks to diligent water use reporting of actual water use over the last decade and implementing stricter water loss provisions as provided by law.

New Allocations and Requests

Between September 2021 and June 2023, the Department received nine applications for Lake Michigan water allocations from:

- Village of Lemont, IL
- Village of Romeoville, IL
- City of Crest Hill, IL
- Village of Oswego, IL
- Village of Channahon, IL
- Village of Minooka, IL
- Village of Montgomery, IL
- United City of Yorkville, IL
- Pekara System – Lake County, IL

Extensive allocation petition reviews, pre-hearings, and the hearings finished for these communities in 2023 with orders recently issued to Channahon, Minooka, Yorkville,

Oswego, and Lemont, and orders being finalized for the remainder bringing the total Lake Michigan Allocation orders in Illinois to 227.

As part of a Lake Michigan water allocation enforcement action resolution, a one-time 90-day, 0.07 MGD emergency Lake Michigan water allocation was issued to DuPage County by the Department on July 24th this year for the limited purposes of making critical repairs to its North Regional elevated tower and well facilities. This enforcement emergency Lake Michigan water allocation was conditioned to require DuPage County to make provisions to prevent the need for any future emergency Lake Michigan Water allocation. A public hearing was held on this emergency allocation within the allotted 60 days of issuance.

Brandon Road

In collaboration with the US Army Corps of Engineers and with significant support from the state of Michigan, design of the Brandon Road Interbasin Project continues. The current plan involves a layered system of structural and non-structural control measures, to be constructed in increments, including technologies such as a flushing lock, an engineered channel with electric barrier, underwater acoustic deterrent, and air bubble curtain and other improvements. Design efforts for a focused “Increment 1A” standalone leading-edge sound and bubble deterrent system are nearly complete and designs for Increment 1B have begun. Design team leadership continue to collaborate to address key project challenges including project costs, private land rights, potentially hazardous waste remediation, Project Partnership Agreement terms, and project regulatory matters. The state of Illinois continues to “do our homework” related to analyzing challenges and potential solutions faced by the state as potential project non-federal sponsor prior to consideration of Project Partnership Agreement (PPA) terms necessary absent any full federal funding decisions. Illinois is grateful to the state of Michigan for advancing an additional \$500,000 of non-federal “Accelerated Funds” via Illinois to the Corps that is intended to keep the project design team advancing project Increments 1A, 1B, and 2 designs through the end of the year. As part of the 2023 GSGP Governors and Premiers Summit held in Cleveland, Ohio in October this year, a letter signed by all 8 Great Lakes states governors was provided to Congressional Senate and House Committee leadership requesting full federal funding for the Brandon Road Project be included in pending Water Resources Development Act (WRDA) 2024.

Earlier this week, the Brandon Road Project Design team held an “Industry Day” (for consultants and contractors) and an “Project Open House” (for the public / neighbors) in Joliet near the Brandon Road Project site. The open house was intended to seek feedback and reactions from the public, tribes, and interested stakeholders prior to a formal public notice period that will be required as part of the state permit process. The open house offered bi-lingual services in consideration of the local target audience.

Coastal Management Program and Shoreline Resilience

The Department continues to work to increase coastal resiliency and improve coastal habitats via projects like the recent reconnection of Powder Horn Lake to Wolf Lake and continued biological and hydrodynamic monitoring at the Illinois Beach State Park (IBSP) “rubble ridge” shoreline protection project. The Department is currently constructing a large-scale shoreline break water protection project at IBSP that will protect nearly 2.2 miles of Illinois Beach State Park shoreline via creatively shaped and formulated islands and submerged reef structures, positioned to reduce the erosive force of incoming waves, redirect nearshore currents, and provide a new home to shoreline aquatic and avian species. The Coastal Management Program in Illinois is excited to soon announce new Coastal Management Program leadership beginning the first of the year. Many thanks to former leader Ania Bayers who has returned under contract to ensure a smooth transition of leadership in the program and Ethan Kimbrel who is also providing interim leadership.

Respectfully submitted on behalf of the Honorable JB Pritzker, Governor of Illinois,

Loren A. Wobig, P.E., CFM

Indiana

Mr. Mueller provided the following report:

Thank you Mr. Chairman and, once again, good afternoon everyone. I’m Ryan Mueller, Deputy Director for the Indiana Department of Natural Resources, representing Governor Eric Holcomb.

Today I’ll briefly review Water use in the Indiana portion of GL basin for reporting year 2022

- Currently there are 1067 Significant Water Withdrawal Facilities (SWWF) registered in the Basin.
- SWWF has the capacity to withdrawal 100,000 gallons a day.
- Have added about 15 new facilities in last two years, mostly irrigation
- Water use in the Basin for 2022 totaled approximately ~543 billion gallons

- Of the 1067 SWWF:
 - o 1610 wells (a facility can have multiple wells / intakes) – Accounting for 35 BG
 - o 242 surface intakes – Accounting for 508 BG

- There has been a decrease of about 250 billion gallons over the last 5 years, mainly driven by Energy Production/ Industrial use that have implemented conservation measures or that have ceased operations.

Staff have begun collecting water use data for the 2023 reporting year. Thank you and this concludes my report.

Michigan

Mr. Clift submitted the following report:

Michigan would like to take this opportunity to thank Wisconsin Governor Tony Evers and his staff for their leadership of the Conference of Great Lakes and St. Lawrence Governors and Premiers over the past few years. We look forward to continuing fostering greater economic cooperation and bolster our conservation efforts to protect our precious Great Lakes and St. Lawrence River.

Michigan submitted its annual Water Conservation and Efficiency Annual Assessment to the Compact Council Secretariat on November 20, 2023, and continues to fulfill its obligations under the Compact. Today's report provides highlights of yearly activities in Michigan.

Michigan's Water Use Program (Program) continues to work with the Water Use Advisory Council (WUAC) to advance and improve Michigan's Program. The WUAC continues to play a key role in water management and water conservation and efficiency in Michigan.

Staffing Update

The Office of the Great Lakes welcomed new Great Lakes Stewardship Coordinator Katie Mika. Katie will work with partners to advance Great Lakes stewardship, water conservation, and sustainability.

WUAC 2020 Biennial Report Funding

Michigan Legislature approved approximately \$10 million to fund the WUAC's 2020 Biennial Legislative Report recommendations. This includes support for two recommendations put forward by the council's Water Conservation and Efficiency Committee. Michigan State University Extension is working to hire additional educators focused on increasing educational programming on water conservation and efficiency for the agricultural sector and expanding programming to include animal industries. EGLE's Office of the Great Lakes awarded a grant, contingent on an agreement being signed, for a project to identify innovations and technological advancements in water conservation best practices that can benefit Michigan's water sectors with a focus on business and industry sectors. This project will be co-funded by the WUAC's funding and the Michigan Great Lakes Protection Fund.

Michigan Water Withdrawals

Michigan’s Water Use Program staff submitted 2022 water use data to the Great Lakes Commission to populate its part of the Annual Report of the Great Lakes-St. Lawrence River Regional Water Use Database. In 2022, reported water withdrawals from the Great Lakes basin for Michigan decreased by 3 percent from the previous year. The majority of this decrease stems from a 74% reduction in withdrawals for thermoelectric power production (recirculated cooling), primarily due to the closure of a nuclear power plant in 2022. 117 new irrigation withdrawals were added to the existing total in Michigan in 2022. The amount of water withdrawn for irrigation increased by 12% over 2021 as more facilities reached the reporting threshold due to different weather patterns in 2022.

To date, in 2023, there have been 388 new large quantity withdrawals (LQW) registered or permitted. Program staff members conducted 161 reviews of these withdrawal requests or permit applications, and 227 were self-registered via the Water Withdrawal Assessment Tool.

Data Collection, Data Warehouse, and Models

Work continues to develop an agency-wide groundwater data warehouse. This will provide a common location and format for environmental data submitted by EGLE staff and external parties. The data warehouse system will be expanded in the future to include other types of environmental data (e.g., geologic, surface water, sediment, soils, soil gas). The state’s competitive Information Technology Investment Fund, overseen by an investment board that ranks and recommends projects for funding, awarded the new system \$7.1 million in Fiscal Year 2024 to prepare for launch using existing data, with direct entry of new data to follow.

Water Infrastructure – State Revolving Funds

Investing in water infrastructure remains a priority for Michigan. Through the Clean Water State Revolving Fund (CWSRF) and the Drinking Water State Revolving Fund (DWSRF), EGLE approved more than \$932 million in loans in Fiscal Year 2023 for 71 wastewaters, stormwater, and drinking water infrastructure projects – compared to \$352 million and 29 projects just two years ago.

MI Healthy Climate Plan

Michigan continued to implement the MI Healthy Climate Plan and its goal of carbon neutrality by 2050. The Office of Climate and Energy (OCE) is hosting in person and virtual public input sessions online throughout the state in preparation for EPA’s competitive Climate Pollution Reduction Grant program, a \$4.6 billion program. EGLE

offices are working with the OCE to reinforce the intersection of energy efficiency and water conservation as co-benefits of decarbonization.

Outreach and Education

EGLE organized a variety of outreach events to address Michigan’s education and outreach goals to promote water sustainability and stewardship. In addition to Fix-a-Leak Week, Drinking Water Week, and Great Lakes and Fresh Water Week, EGLE hosted a webinar about in-home water conservation in August 2023. The webinar featured presentations about the USEPA’s Water Sense program, indoor water fixtures, home irrigation and water-efficient landscaping, especially in the context of climate change. EGLE continues to pursue opportunities to promote freshwater literacy and Great Lakes stewardship.

Minnesota

Mr. Richards submitted the following report

Overview of Water Use in Minnesota’s Lake Superior Basin

- There are active water appropriations in Minnesota’s Western Lake Superior Basin, an increase of 9 from this summer’s report).
- Water use reporting compliance for water year 2022 was 100%.
- Total water withdrawals from the Basin excluding in-stream hydroelectric water use were 1,939 MGD, or 50% higher than in 2021.
 - 1,643 MGD were used for off-stream hydroelectric power production.
 - The increase here returns the use to expected levels after drought-like conditions in 2021 required decreased use.
 - 110 MGD were used for once-through cooling.
 - The increase here is due to normal energy production fluctuations at two plants.
 - 150 MGD were used for self-supply industrial activities.
- Consumptive use was 20 MGD.
- Total interbasin diversions were 13 MGD and used almost exclusively for self-supply industrial
- The Western Lake Superior Basin went into “drought watch” on June 15 and “drought warning” on September 7
 - Water suppliers serving over 1,000 people were required to implement water use restrictions they had identified in their 10-year water supply plans

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- All water suppliers were required to implement water use reduction actions to contain water use to 50% over January levels
 - We will have information on how suppliers performed next year after water use reporting is due
- 11 surface water appropriation permits were suspended or restricted on August 28 and reinstated October 5.
 - 6 golf course irrigation
 - 2 wood products processing
 - 1 mine processing
 - 1 other non-crop irrigation
 - 1 dust control/other special categories

Natural Resources and Conservation

- Minnesota DNR continues to make progress toward delisting the St. Louis River as a Great Lakes Area of Concern (AOC) by completing large-scale habitat restoration projects and coordinating the AOC program with our partners at the Minnesota Pollution Control Agency, Fond du Lac Band of Lake Superior Chippewa, and Wisconsin Department of Natural Resources. During 2023, we removed the degraded Fish and Wildlife Populations Beneficial Use Impairment. This is the fourth of nine impairments to be removed and moves us closer to our 2030 delisting target.
 - We also continue to work closely with state, Tribal, and Canadian partners through the Binational Program to restore and protect the Lake Superior Basin. In 2023, Minnesota DNR and local partners worked together to identify, prioritize, and fund multiple habitat projects through the Great Lakes Restoration Initiative that will advance the goals of the Lake Superior Lakewide Action and Management Plan.
- Through 2023, Minnesota DNR participated in the Great Lakes Restoration Initiative Action Plan 4 by reviewing and commenting on draft documents and attending two State Forums held by USEPA’s Great Lakes National Program Office in Chicago.

Education Programs

- The Minnesota DNR, Minnesota Department of Health, Minnesota Rural Water Association, and EPA Region 5 partnered to deliver a two-day drought preparedness and water loss workshop in June for water utilities. Presentations included information on water audits, leak detection, and loss management as well as case studies on cities doing effective water conservation work.

New York

Ms. Stainbrook submitted the following report:

Good afternoon, I am Karen Stainbrook. I am the Director of the Water Resource Management Bureau in the Division of Water in the NYS Department of Environmental Conservation. And I am here on behalf of Governor Hochul and DEC Commissioner Basil Seggos.

I will be providing a summary of NY's water withdrawal program and water conservation activities.

NYS's Water Withdrawal Management Program complies with the Compact & Regional Agreement. The state's Department of Environmental Conservation's Division of Water currently regulates by permit or registration all water withdrawal systems with the capacity to withdraw 100,000 gallons per day or more from either surface or groundwater sources within the Basin. For agricultural facilities, the threshold is the use of a 100,000 gallon per day average over a 30-day period. For all types of water withdrawal facilities, each permit has required the submittal of a water conservation plan. The main objective of the plan is to promote implementation of the most environmentally sound and economically feasible water conservation measures. All registered or permitted facilities are required to submit an annual water withdrawal report to NYSDEC. This will be the third year in a row of 100% reporting compliance from all water use sectors. This includes over 700 actively reporting facilities within the Great Lakes Basin.

In 2023, NYSDEC issued 94 water withdrawal permits statewide, with 32 of those permits located within the Great Lakes basin.

In the past 2 years NYS has made the water withdrawal spatial information and individual water well information available on an online mapper called DECinfo Locator on the NYS Department of Environmental Conservation website. The data is also available in various formats on NYS Open data platform.

New York's 2022 Annual Water Withdrawal Reports have been received. All 2022 reporting data has been provided to the Great Lakes Commission for inclusion in the 2022 Annual Report. We continue to update our database and QA/QC the annual reporting data as necessary.

Also, the New York State Energy Research and Development's (NYSERDA) improved efficiency standards went into effect earlier this year, requiring lower flow rates for showerheads, urinals, and bathroom and kitchen faucets sold or installed in NYS.

In July 2023, DEC released an updated [New York's Great Lakes Action Agenda](#) (GLAA), a strategic action plan to advance New York's priorities for clean water, healthy ecosystems, and sustainable, resilient communities. Goal 6 of the GLAA includes a focused implementation strategy and supporting actions to inform sustainable water resource management and promote conservation. NYSDEC facilitates implementation of the GLAA through regular engagement with local, state, and federal partners and by convening biannual work group meetings in each of the watershed's four major sub-basins.

DEC provides annual funding to support small research grants, consistent with the GLAA, through a partnership with Cornell's Water Resources Institute. The last round (2022) of grant awards included two projects related to water quantity management in New York's Great Lakes watershed, including a grant to enhance and expand drought impact reporting and to increase drought literacy through co-production of outreach and educational materials, and a grant to conduct an analysis of historical NY water well completion records to better understand the vulnerability of residential wells to drought conditions.

A recent pilot program was initiated by the NYS Department of Agriculture and Markets to fund high efficiency irrigation system conversions for existing farms. Ag and Markets worked with local soil and water conservation districts to provide in depth training on the development of water conservation plans for farmers. Over 250 acres of farmland within the Great Lakes watershed are now implementing micro irrigation as a result of this pilot.

And finally, NYSDEC has initiated the rulemaking process for our Part 601 (water withdrawal) and Part 602 (Long Island well) program regulations. The rulemaking seeks to clarify current permitting requirements, definitions, and permitting exemptions. The rulemaking will likely be posted for public notice in early 2024 and can be shared with the Regional Body and Compact Council members.

In addition, New York voters approved the \$4.2 billion [Clean Water, Clean Air and Green Jobs Environmental Bond Act](#) in November 2022, the largest environmental bond in state history, which will provide important investments in water quality protection and ecosystem resilience in the face of climate change, in addition to investments in these priorities through the state's Environmental Protection Fund.

We look forward to continuing to work with the other jurisdictions on common concerns and issues. With that, I conclude my report.

Ohio

Ms. Barnhouse submitted the following report:

The Ohio Department of Natural Resources (“ODNR”) collected and compiled data on Ohio’s 2022 Lake Erie Basin water withdrawals, consumptive uses, and diversions. ODNR staff submitted this report to the Great Lakes Commission for the Great Lakes Water Use Database. 100 percent of registered Water Withdrawal Facilities within the basin completed and returned their annual water use reports.

Registrations and permitting for 2023:

- Three new Water Withdrawal Registrations were approved within the Lake Erie Basin.
 - One dewatering, two snowmaking/recreation.
- No new Diversion or High-Capacity Withdrawal Permits were applied for or issued within the Lake Erie Basin.
- In January 2023, ODNR introduced its first online application for current registered facilities to report their annual water use electronically. This first year, 1,700 of the 2,100 registered active facilities obtained the required login credentials and reported online. New water users may also use the portal to register a new facility or make edits to their existing registration.

ODNR staff is currently working on a new web application that will allow all interested parties to access Ohio’s Water Withdrawal Facility locations and their accompanying historical water withdrawal data. The application will be available for public use on the Division of Water Resources’ webpage early 2024.

ODNR continued ex-officio membership with the Concentrated Animal Feeding Facility Advisory Committee. This Committee advises the Ohio Department of Agriculture (ODA) on problems the state faces with large-scale livestock farms. The current focus is on fertilizer contaminants and algae blooms in Northwest Ohio. ODNR is also working with ODA to raise awareness about Ohio’s water use rules and regulations. Strengthening the tie between ODNR and ODA’s Permitting Programs is beneficial to both Department’s missions and helps reach a broader audience. The goal of this Program Visibility Outreach Initiative is to inform water users in the agriculture/livestock water use sector that are not in compliance with Ohio Revised Code. This type of outreach will continue in 2024 with all water use sectors and will increase the accuracy of water use data collected by ODNR.

The Ohio EPA and ODNR are currently designing a comprehensive Central Ohio Water Study to assess current water infrastructure availability in the region, and project how both population and economic growth will impact the region’s water resources. This 15-county study will inventory the current water supply infrastructure and analyze where improvements can be made to the distribution and discharge of water. The two agencies hope to have an agreed upon scope of work by mid-December with bids for

researchers, consultants, and support agencies going out by the end of the year. The Study will begin with Licking and Franklin Counties to immediately address the urgency for a water use plan with the current economic development. The full report is expected to be completed by the end of 2024. Upon the completion of the Central Ohio Study, the agencies plan to expand the study region by region to provide a complete report for the State of Ohio.

Water conservation and efficiency continues to be a high priority for ODNR. This year, our conservation webpages were updated with current conservation material. ODNR continues to accept and post submissions on our Water Conservation Education webpages through the available online portal. To aid in Conservation efforts, ODNR recently became a member of the Alliance for Water Efficiency. The Alliance provides comprehensive information and tools about water-efficient products, practices, and programs. The tools provided will support us in educating water users, and train staff in current best management practices.

In 2024, ODNR will begin acknowledging and honoring those who dedicate themselves and their collective missions to the conservation and wise use of Ohio's water resources. The State of Ohio Water Conservation Awards for Excellence will provide competition and incentives for any constituent, organization, or industry that transcends conventional notions of water conservation and sets an example to water users statewide.

Ohio's 2023 Annual Water Conservation & Efficiency Program Review document was compiled and submitted to the Regional Body and Compact Council.

Over the summer, ODNR announced its new citizen science program titled EnGauge Ohio that would enlist state park visitors to use their phones to record surface water data on high quality and sensitive streams throughout the state. What started out as a pilot program to be done in-house at ODNR, quickly gained interest from various programs and agencies. We are now partnered with the Division of Parks and Watercraft, The Nature Conservancy, Cleveland Metroparks, the City of Akron, the City of Dayton, and the national Crowd Hydrology Program out of the University of Buffalo. With an overabundance of potential sites and interest, expanding the project out of the pilot phase will begin in the spring.

In 2019, ODNR shared Governor DeWine's new H2Ohio initiative, which is a water quality initiative to ensure safe and clean water for all Ohioans. The Governor, along with the Ohio Department of Agriculture, Ohio Department of Natural Resources, Ohio Environmental Protection Agency, Lake Erie Commission, and many partners, including the Ohio Agriculture Conservation Initiative (OACI) have worked together to invest in projects across Ohio that will reduce nutrients and provide other long-term economic and water quality benefits to communities statewide. This program is a comprehensive, data-driven approach to improving water quality and is focused on

reducing phosphorus, creating wetlands, addressing failing septic systems, and preventing lead contamination. Progress from each participating agency to date includes the following:

Ohio Department of Natural Resources (ODNR)

- Total investments rose to \$144 million with over 78 nonprofit conservation partners engaged- and rising.
- Total projects rose to 171 with over 100 of them located within the Lake Erie Watershed. 72 total projects have been completed to date.
- Private landowners are eligible for additional funding through ODNR’s Water Quality Incentive Program. This program provides a one-time payment of \$2,000 per acre for new enrollment in the federal Lake Erie Conservation Reserve Enhancement Program (CREP) for wetland restoration and forested riparian buffers that help improve water quality in the Lake Erie watershed. This program currently supports over 200 projects on private lands projects, representing approximately 1,900 acres of wetlands restored, 1,800 acres of wetland restoration in progress and 60 acres of forested riparian buffers in the Western Lake Erie Basin.
- The H2Ohio’s Program’s initial success in the Lake Erie Watershed prompted statewide expansion. This growth has resulted in two rounds of Ohio River Basin H2Ohio Wetland Grant Program funding, followed by a third, competitive request for proposals on a statewide basis. Thirty million dollars has been allocated to the wetland restoration portion of ODNR’s H2Ohio Program in each of state fiscal years 2024 and 2025.

Department of Agriculture (ODA)

- ODA’s H2Ohio efforts now extend into all ten Western Lake Erie Basin counties, including:
 - 1.4 million acres enrolled in Voluntary Nutrient Management Plans
 - An additional 1.2 million acres enrolled in other proven cost-effective best management practices.
 - Over 2400 total agreements have been signed by producers covering nearly 35 percent of cropland in the Western Lake Erie Basin.
- In 2023, ODA awarded \$4.3 million in grants for 12 two-stage ditch projects. Recipients will receive up to 100 percent of the requested funding for these projects. More than 18,000 acres of watershed will benefit from the 8.4 miles of two-state ditch projects. Construction of these projects will begin this summer, and all projects must be completed by Fall of 2024.

Ohio Environmental Protection Agency (OEPA)

- Additional H2Ohio funding was announced for lead-focused work including service line replacement in Cleveland and Cincinnati. The next area of focus will be to help communities that need assistance with lead service line inventory and mapping. In 2023, \$21 million was spent to address thirty-nine critical water and sewer projects, including:

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- \$3.2 million on lead service line replacement in eight communities
- \$4.5 million on lead service line mapping in 106 communities
- \$4.2 million was distributed to 23 local health districts to replace household sewage treatment systems.
- More than 100 communities across Ohio were awarded a total of \$1 million in grants to help pay for equipment needed to maintain their public drinking water infrastructure. Public water systems were eligible to apply for up to \$10,000 through H2Ohio. These grant opportunities aim to strengthen the ability of public water systems to reduce leaks, purchase critical equipment, evaluate rates, and successfully operate into the future.

Ohio Lake Erie Commission (OLEC)

- Through House Bill 110, the Commission received a total of \$125,000, which is being used for the H2Ohio watershed model project. The Commission awarded the funds to The Ohio State University and University of Toledo to implement the model project. These dollars leveraged an additional \$300,000 of funding for two years from the Ohio Department of Higher Education’s Harmful Algal Blooms Research Initiative (HABRI).

H2Ohio’s New Rivers Initiative

- During the 2023 State of the State Address, Governor DeWine introduced a budget proposal for the creation of the H2Ohio Rivers Initiative to improve the quality and the health of Ohio’s rivers. This initiative will address the issue of rising salinity in Ohio’s rivers and streams, implement a river restoration program, remove specific dams on rivers and major tributaries, enhance Ohio’s litter clean up, and remediate waters impacted by acid-mine drainage.

Ontario

Ms. Dove submitted the following report:

Hello everyone, and good afternoon. I am Darlene Dove, Manager for the Water Resources Section of the Ontario Ministry of Natural Resources Policy Division. I’m filling in as a proxy for my Director, Jennifer Keyes, who is the official designee of Premier Ford for this group. On behalf of Ontario, I’m happy to deliver the following report.

Ontario remains committed to protecting the shared waters of the Great Lakes and St. Lawrence River basins, with our commitments to the Great Lakes – St. Lawrence River Basin Sustainable Water Resources Agreement just one of the actions for achieving our shared goals.

Ontario submitted our 2022 Water Use Report to the Great Lakes Regional Water Use Database earlier this year. Ontario’s water use data is primarily sourced through our province-wide Permit to Take Water program. Ontario’s reported water withdrawals

from the Great Lakes basin decreased by 7 percent in 2022 when compared to the previous year. The majority of Ontario's water use was for self-supply thermoelectric power production, while the next largest withdrawals were for industrial use and public water supply. 94% of Great Lakes water withdrawals in Ontario were located within the Lake Ontario and Lake Huron watersheds. There were no net water diversions out of the basin for Ontario, while water diverted into the Lake Superior basin through the Long Lac and Ogoki diversions increased by 20% from the previous year.

Ontario is undertaking significant work that contributes to delivering on the Regional Body's Science Strategy as part of its work with Canada to implement the 2021 Canada-Ontario Agreement on Great Lakes Water Quality and Ecosystem Health (COA). This includes:

Researching the application of novel hydrologic modelling approaches to simulate historic, current, and future streamflow and watershed conditions across the province;

Supporting the development of surface water-groundwater conceptual and numerical models at Great Lakes, basin, watershed, and aquifer scales;

Maintaining provincial integrated groundwater-surface water-climate change monitoring;

And reviewing its groundwater and stream water monitoring programs to identify possible options for expanding its integrated water and climate monitoring to improve water management.

Through the Provincial Groundwater Monitoring Network, Ontario continues to monitor and publicly report on groundwater levels at 490 wells across Ontario.

The Wetlands Conservation Partner Program is a \$30M investment in capital funding over 5 years (\$6M/year – ending March 31, 2025) for wetland restoration and enhancement projects starting in 2020-21. Since 2021, the Program has implemented about 180 wetland restoration and enhancement projects covering approximately 4,200 hectares of wetlands in the Great Lakes watershed and connecting waterways.

A new climate resource centre to help Great Lakes communities and Ontario users adapt to climate change launched in September 2023. The Ontario Resource Centre for Climate Adaptation (ORCCA) is a pilot initiative led by International Council for Local Environmental Initiatives (ICLEI) Canada and supported by Ontario and Canada. The Centre provides support services to Great Lakes communities and other Ontario users looking for assistance in their efforts to adapt to climate change and build local resilience.

In partnership with the federal government, under the Flood Hazard Identification and Mapping Program, Ontario is providing approximately \$6.0M to municipalities and conservation authorities for eligible flood mapping activities through 2022-2024. An additional \$1.2M is being spent by the province on acquiring elevation data to support

local mapping activities. In total 35 local organizations have, or will be, receiving funding in support of 55 locally identified, high priority flood mapping projects.

Natural Resources Canada has announced an extension to the current Flood Hazard Identification and Mapping Program through March 2028. We are working with our federal partners to secure additional investments for flood mapping in Ontario and to extend the program for another four years.

Updated mapping will better prepare the people of Ontario for future flooding and reduce long term disaster assistance costs. In further support of flood mapping efforts, Ontario released updated technical guidance for data survey and mapping standards for flood hazard mapping on December 4th. This technical guidance is to be used by practitioners when delineating the flooding hazard through mapping new, or updating existing, maps.

At the Great Lakes St. Lawrence Governors and Premiers Leadership Summit in October of this year, the province of Ontario announced their new Marine Transportation Strategy, which outlines the provinces blueprint for growing the marine transportation network in the province over the next 10 years.

And that concludes the report from Ontario. Thank you for this opportunity.

Pennsylvania

Mr. Bruno submitted the following report:

Pennsylvania congratulates the Great Lakes -St. Lawrence River states and provinces on this 15th anniversary of comprehensive water use management within the basin. Pennsylvania continues to support both in practice and spirit the requirements of the Compact and Agreement through facilitating programs on water use within our jurisdiction. The Pennsylvania Department of Environmental Protection (DEP) prepared the Great Lakes water withdrawal and consumptive use statistics for Water Year 2022 for compilation into the Annual Report of the Great Lakes Regional Water Use Database.

Pennsylvania currently has no diversions within our jurisdiction. Additionally, DEP is in the final administrative review stages prior to submitting the 2023 Conservation and Efficiency Program Review to the Compact Secretariat.

During the 2022 Water Year, Pennsylvania withdrew 30.4 million gallons per day (mgd), an increase in overall water use of 3.6 percent above the 29.3 mgd reported for the 2021 Water Year. The change from the previous year was due to a 1.9 percent increase in water use for Public Water Supply and a 19.7 percent increase for Self-Supplied Livestock, both associated with normal fluctuations. Most of the total withdrawal amount for 2022 (27.1 mgd or 89.1 percent) was used for Public Water

Supply Purposes. The next largest sector was Self-Supplied Livestock with a total withdrawal amount of 2.9 mgd, followed by Self-Supplied Irrigation use of 0.4 mgd. The estimated total consumptive use was 3.2 mgd, mostly accounted for by Public Water Supply at 84.6 percent of the total.

DEP maintains the Great Lakes Program webpages which include information about the Great Lakes and St. Lawrence River Basin Sustainable Water Resources Compact and Agreement. Resources available on the site include Pennsylvania Great Lakes Water Resources Inventory and Reporting document. Interested individuals can view registered water users within the Pennsylvania Great Lakes Basin and view their annual water use from the 2005 Water Year forward. This document and other information regarding the DEP Great Lakes Program can be found at the DEP webpage dep.pa.gov and searching “Great Lakes Program”.

Finally, Pennsylvania previously reported that DEP assembled a team of policy, legal, and permitting staff to examine current regulatory methods of implementing the Compact in Pennsylvania. As DEP again transitions to new executive leadership, the regulatory development team anticipates continuing with a potential rulemaking process once that is in place.

Québec

Mr. Stevenson submitted the following report:

1. Publication of water withdrawal data

The data on water permits granted since 2014 for water withdrawals are public and available in the Water Atlas as well as on the Données Québec website (which is the Québec government data hub), and this has been the case since 2022. Additionally, data on the volumes of water withdrawn and annually reported since 2011 will soon be added to those websites.

Indeed, in the spring of 2023, the *Act establishing the Blue Fund and amending other provisions* amended Quebec’s *Environment Quality Act* to add a new provision making public information on reported volumes of water via the ministère de l’Environnement, de la Lutte contre les changements climatiques, de la Faune et des Parcs website. Therefore, the monthly and annual volumes of water withdrawals, the names of those who withdraw, and the location of withdrawals will be disclosed. This information can no longer be considered as an industrial or commercial secret.

This amendment will come into effect on January 1st, 2024, and the Ministry plans to rapidly publish this information on the *Regulation respecting the declaration of water withdrawals* website in the form of an Excel spreadsheet. The data will then be published as quickly as possible on the Données Québec web page, in formats easily supported by GIS software, and then in the Water Atlas to make their consultation more user-friendly.

In Quebec, water users are required to report water use data under the *Regulation respecting the declaration of water withdrawals* when the withdrawal reaches the threshold of 75,000 liters per day or approximately 19,812 US gallons per day (L/day) (1 US gal. = 3,79 L) but as of January 1, 2025, the threshold will be lowered to 50,000 L/d or 13,200 US gallons per day. Finally, the agricultural and aquaculture sectors are required to declare withdrawals only when located within the territory covered by the Great Lakes Agreement, while other water users are subject to the regulation across the whole of the province of Quebec.

2. Fee increase

On November 22, 2023, the Quebec government approved the Regulation amending the *Regulation respecting the charges payable for the use of water*, which stipulates a significant increase in the fee for large water users starting from January 1st, 2024.

The increase in charges payable for the use of water will be used to partially finance the Blue Fund. With a historic initial budget of C\$500 million over five years, it will provide adequate, predictable, and sufficient funding to implement the Water Plan that the government is currently developing in close collaboration with the Water Action Forum. The increase in the fee is therefore set with the goal of providing Quebec with the means to better protect water resources.

The update to the Fee Regulation primarily affects large water users such as pulp and paper mills, mining companies, the food processing sector, and bottlers.

More specifically here are the changes made:

- The rates are scheduled to increase as of January 1st, 2024, and then to increase by 3% annually for companies subject to the charge. As a result, the base rate of C\$2.50 per million liters (\$/MI) (1 MI = approx. 265,000 US gal.) will increase to C\$35/MI and the high rate applied for companies that incorporate water into products will increase from C\$70/MI to C\$150/MI;
- Water bottlers will also have to pay a surcharge of C\$350/MI, for a total rate of C\$500/MI.
- Companies subject to the water charge will also be required to report the volumes of water discharged. This additional information will make it possible to better monitor water availability in Québec.

3. Program for the development of drinking water source protection plans

To enhance the protection of sources intended for drinking water supply in Quebec, the government enacted, in 2014, the Water Withdrawal and Protection Regulation (CQLR, chapter Q-2, r. 35.2). This regulation requires local municipalities responsible for water withdrawals, specifically those whose withdrawals are made to serve a municipal waterworks system supplying more than 500 people, to submit to the minister a report presenting an analysis of the vulnerability of their sources of drinking water supply. In

2018, the Quebec government launched the Program for Increased Protection of Drinking Water Sources, endowed with a budget of C\$30 million for five years. Part one of the program aimed, among other things, to support local municipalities responsible for water withdrawals, subject to the obligations of the Water Withdrawal and Protection Regulation, in the completion of the initial vulnerability analysis report.

To continue the protection of sources of drinking water, the Quebec government announced on March 10, 2020, the ongoing strengthening of the protection of drinking water sources, endowed with a budget of C\$25 million for five years. To achieve this, the Quebec government has implemented the Program for the development of drinking water source protection plans. The program will enable local municipalities responsible for water withdrawals to define protective measures, including the planning of their implementation, aimed at minimizing, or eliminating threats that could affect the waters they exploit. The program has been active since June 2021 and concludes on March 31, 2025. Although it is not regulated, more than 182 municipalities participate in the program, thereby enhancing water quality in Quebec.

Moreover, the Program has facilitated consultations among watershed-based organizations throughout the province to prioritize upstream threats, thereby enhancing the quality of the Saint Lawrence River.

Français

1. Diffusion des données relatives aux prélèvements d'eau

Les données sur les autorisations délivrées depuis 2014 pour des prélèvements d'eau sont publiques et disponibles dans l'Atlas de l'eau ainsi que sur la page Web de Données Québec, et ce depuis 2022. Il s'ajoutera prochainement à cette diffusion, les données sur les volumes d'eau prélevés et déclarés annuellement depuis 2011.

En effet, au printemps 2023, la *Loi instituant le Fonds bleu et modifiant d'autres dispositions* a modifié la *Loi sur la qualité de l'environnement* pour y ajouter une nouvelle disposition attribuant un caractère public aux renseignements relatifs aux volumes d'eau déclarés et pour rendre obligatoire leur publication sur le site Web du ministère de l'Environnement, de la Lutte contre les changements climatiques, de la Faune et des Parcs. Ainsi, les volumes mensuels et annuels d'eau prélevés, les noms de ceux qui prélèvent et les emplacements des sites de prélèvement seront diffusés et ces informations ne pourront en aucun cas être considérées comme secret industriel ou commercial.

Cette modification entre en vigueur le 1er janvier 2024 et le Ministère prévoit diffuser rapidement ces données sur la page Web du *Règlement sur la déclaration des prélèvements d'eau* sous forme de fichier Excel. Ensuite, les données seront diffusées dans les meilleurs délais sur la page Web de Données Québec, dans des formats facilement pris en charge par des logiciels géomatiques, puis dans l'Atlas de l'eau afin de rendre leur consultation plus conviviale.

Au Québec, les préleveurs doivent déclarer les volumes d'eau prélevés en vertu du *Règlement sur la déclaration des prélèvements d'eau* lorsque le prélèvement atteint le seuil de 75 000 litres par jour (L/j) (1 US gal. = 3,79 L). Dès le 1^{er} janvier 2025, ce seuil sera abaissé à 50 000 L/j. Le secteur agricole et aquacole doit déclarer ses prélèvements uniquement lorsqu'ils sont situés sur le territoire de l'Entente, mais les autres préleveurs sont assujettis au règlement sur l'ensemble du territoire québécois.

2. Augmentation de la redevance

Le 22 novembre 2023, le gouvernement du Québec a approuvé le *Règlement modifiant le Règlement sur la redevance exigible pour l'utilisation de l'eau* (Règlement sur la redevance), qui prévoit une hausse significative de la redevance pour les grands préleveurs d'eau à partir du 1^{er} janvier 2024.

La redevance sur l'eau sert à financer en partie le Fonds bleu. Ce dernier est doté d'un premier budget historique de 500 M\$ sur cinq ans et sert à mettre en œuvre le Plan Eau que le gouvernement élabore actuellement en étroite collaboration avec le Forum d'action sur l'eau. La hausse de la redevance est donc fixée dans le but de doter le Québec de moyens pour mieux protéger l'eau.

La mise à jour du Règlement sur la redevance touche principalement les grands préleveurs d'eau comme les usines de pâtes et papiers, les compagnies minières, le secteur de la transformation alimentaire et les embouteilleurs.

Voici, plus précisément, les modifications apportées :

- Les taux de la redevance seront augmentés dès le 1^{er} janvier 2024, puis une augmentation annuelle de 3 % sera appliquée sur ces taux. Ainsi, le taux de base de 2,50 \$ par million de litres (\$/MI) (1 MI = env. 265 000 US gal.) passera à 35 \$/MI et le taux élevé appliqué pour les entreprises qui incorporent de l'eau aux produits passera de 70 \$/MI à 150 \$/MI;
- Une redevance additionnelle de 350 \$/MI applicable aux activités d'embouteillage de l'eau sera ajoutée au taux élevé (150 \$/MI) à partir du 1^{er} janvier 2024;
- Le seuil d'assujettissement à la redevance sur l'eau, actuellement de 75 000 litres par jour (L/j) (1 US gal. = 3,79 L), passera à 50 000 litres par jour à compter du 1^{er} janvier 2026.
- Les entreprises assujetties à la redevance sur l'eau devront aussi déclarer les volumes d'eau rejetés. Ces connaissances additionnelles permettront de faire un meilleur suivi de la disponibilité en eau au Québec.

3. Programme pour l'élaboration des plans de protection des sources d'eau potable

Pour renforcer la protection des sources destinées à l'alimentation en eau potable au Québec, le gouvernement a édicté, en 2014, le Règlement sur le prélèvement des eaux et leur protection (RLRQ, chapitre Q-2, r. 35.2). Ce règlement oblige les municipalités locales responsables d'un prélèvement d'eau, à savoir celles dont les prélèvements sont

effectués pour desservir un système d’aqueduc municipal alimentant plus de 500 personnes, à transmettre au ministre un rapport présentant une analyse de vulnérabilité de leurs sources d’approvisionnement en eau potable. En 2018, le gouvernement du Québec a lancé le Programme pour une protection accrue des sources d’eau potable, doté d’un budget de 30 M\$ pour cinq ans. Le volet 1 du programme visait entre autres à soutenir les municipalités locales responsables d’un prélèvement d’eau, visées par les obligations du RPEP, dans la réalisation du premier rapport d’analyse de vulnérabilité. Afin de poursuivre le cycle de protection des sources d’eau potable, le gouvernement du Québec a annoncé le 10 mars 2020 la poursuite du renforcement de la protection des sources d’eau potable, dotée d’un budget de 25 M\$ pour cinq ans. À cette fin, le gouvernement du Québec a mis en œuvre le Programme pour l’élaboration des plans de protection des sources d’eau potable. Le Programme permettra aux municipalités locales responsables d’un prélèvement d’eau de définir les mesures de protection, y compris la planification de leur mise en œuvre, visant à minimiser, voire à éliminer les menaces pouvant affecter les eaux qu’elles exploitent. Le Programme est actif depuis juin 2021 et prend fin le 31 mars 2025. Bien qu’elle ne soit pas réglementée, plus de 182 municipalités participent au Programme améliorant ainsi la qualité d’eau au Québec. D’ailleurs, le Programme a permis des concertations d’organismes à bassins versants à travers le territoire afin de prioriser les menaces en amont pour améliorer ainsi la qualité des affluents et du Fleuve Saint-Laurent.

Administrative Reports.

Mr. Freihoefer invited Peter Johnson on behalf of the Regional Body’s Secretariat, to give an administrative report. Mr. Johnson reported the following:

- Mr. Johnson noted that the Regional Body/Compact Council is in the process of updating the Science Strategy. A drafting committee is in the process of creating detailed language to include in the strategy, which will be shared with the broader Science Team and then with Tribes, First Nations and our Advisory Committee. Working to get revisions done by next summer.
- As follow up to the June meeting of the Science Team, we’ve also begun regular quarterly meetings with USGS to get updates on their work and provide updates on ours.
- He noted that the next full Science Team meeting will be a virtual meeting on January 24, and will be open to States, Provinces, Tribes, First Nations and Métis Communities as well as our Advisory Committee.
- He also reported that the Regional Body/Compact Council also has a session at the 2024 IAGLR conference in Windsor focusing on anticipated precipitation extremes and how policy may be shaped to address these extremes, and encouraged individuals to submit a proposal for the session.

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- Mr. Johnson noted that most of the State and Provincial annual water conservation and efficiency assessments have been submitted and are available online. A couple are going through reviews and we hope to have them posted shortly.
- The next in-person meeting is scheduled for June 13, 2024 in Buffalo, New York, with the Science Team meetings taking place June 11-12, the Advisory Committee meeting taking place on the 12th, and the public meeting the morning of the 13th. He asked audience members to please mark your calendar.
- Finally, he noted that the Great Lakes St. Lawrence Governors & Premiers do have a LinkedIn page that is updated quite regularly, and include information for meetings like this and the symposium tomorrow. He encouraged audience members to follow that page to keep apprised of the Regional Body/Compact Council work.

Mr. Freihoefer then noted that the 2022 Water Use report had been released earlier that day by the Great Lakes Commission. He then recognized Mr. James Polidori of the Great Lakes Commission who submitted the following report:

Since 1988, the Great Lakes Commission has maintained a database of water use information in support of the Water Resources Compact and Sustainable Water Resources Agreement.

On behalf of the Commission, I'm happy to present the 2022 annual report of the Great Lakes-St. Lawrence water use database.

This report represents an ongoing collaboration between the Great Lakes Commission, the Great Lakes-St. Lawrence Governors and Premiers, and the state and provincial water managers in each jurisdiction who submitted detailed reports on 2022 water use to the Commission staff in August.

Commission staff reviewed the jurisdiction reports and held follow up phone calls with each water use manager during September to identify and correct any potential errors in the data. These calls also helped clarify changes in water use from prior years. These changes are noted in the annual report.

Drafts of the report were reviewed by the water use managers and a draft of the full report was circulated to members of the Compact Council and Regional Body for review. We received comments in early November and delivered the final report to the Compact Council and Regional Body via email on November 15.

I'm pleased to share that compliance rates in reporting among water users continue to improve, which supports the quality of the report. I'd like to acknowledge the work done by the states and provinces to achieve this.

A few highlights from this year's report include:

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- In 2022, the states and provinces withdrew about 40.8 billion gallons/day (154 billion liters/day) from the Basin. This represents about a 3% decrease from total 2021 withdrawals.
 - The primary water use sectors in 2022 were self-supply thermoelectric power production (once-through cooling), public water supply, and self-supply industrial, which cumulatively represented 90% of total water withdrawals from the Basin.
 - The total reported diversion of water from the Basin in 2022 was 1.1 bgd (or 4.2 bld). About 88 percent of this amount (totaling 965 mgd, or 3.65 bld) was associated with the Illinois diversion, which diverts water from Lake Michigan into the Mississippi River watershed.
 - The reported amount associated with the Illinois diversion decreased by less than 1 percent from the 2021 reported diversion of 974 mgd (3.69 bld).
 - The largest reported diversions into the Basin were the Long Lac and Ogoki diversions, which divert water from the Hudson Bay watershed into northern Lake Superior. These diversions contributed about 3.8 bgd (14.5 bld) to the Basin in 2022.
 - The reported amount associated with the Long Lac and Ogoki diversions increased by about 20 percent from the 2021 diversion of 3.2 bgd (12 bld)
 - Overall, the net diversion, (or outgoing diversions plus incoming diversions and returns) represented a gain of 2.7 bgd (10.4 bld), meaning more water was diverted into than out of the Basin in 2022.
 - The total reported consumptive use in 2022 was 1.9 bgd (7.1 bld) – an 8 percent decrease from the total 2021 consumptive use of 2 bgd (7.7 bld). The public water supply and self-supply industrial sectors had the greatest consumptive use, cumulatively accounting for 59% of the total consumptive use. However, the self-supply thermoelectric power production (recirculated cooling) sector accounted for most of the decrease from 2021 consumptive use, decreasing by 62 percent.
-

Considering both consumptive use and diversions, the Basin gained a total of 869 mgd (3.3 bld) in 2022. By comparison, the basin gained a total of 59 mgd (224 mld) in 2021.

The report and supporting data have been posted on the database website at: www.waterusedata.glc.org

I would like to thank the water use managers for their help throughout the process; this work would not have been possible without their coordination and expertise.

Lastly, I would like to share an update regarding the database and its public-facing website. The Commission has identified a need to create a new website to replace the legacy PHP application at <https://waterusedata.glc.org>. This site is meant to

support the states and provinces in meeting their regulatory requirements under the Compact and Agreement, as well as to provide the public with regional water use information.

The existing website has been maintained as-is for several years and needs a number of updates to meet modern web standards and to resolve potential security issues and vulnerabilities. The Commission is now contracting with the Digital Industry Group (DIG) to develop a new site featuring a modern design that will be more secure, facilitate easier maintenance by staff, and will better serve the states and provinces and the public by making it easier to upload and access water use data. While this partnership has just begun, we aim to have the new website and database functional before the 2023 water use data reporting process starts.

I am happy to answer any questions. Thank you.

Mr. Freihoefer next asked Shaili Pfeiffer, Co-Chair of the Regional Body/Compact Council Science Team to provide an update. Ms. Pfeiffer submitted the following report:

Report on Activities of the Science Strategy Team

I. Introduction

The Great Lakes - St. Lawrence Regional Body and Compact Council designated a Science Strategy team in 2019 to revise and update the Great Lakes – St. Lawrence Sustainable Water Resources Agreement and Great Lakes – St. Lawrence Water Resource Compact Science Strategy. With ten years of Agreement and Compact implementation in place, the Agreement and Compact Parties were ready to revise the Science Strategy to include a clear context for a Regional Body and Compact Council Science Strategy, a more comprehensive statement of the needs and challenges related to water quantity in the Great Lakes – St. Lawrence basin and a list of priority actions to focus on for the period from 2020 through 2022.

The Regional Body and Compact Council recognized the importance of having a firm foundation in science to support the ongoing implementation of the Agreement and Compact. A comprehensive scientific strategy for the Agreement and Compact provides an opportunity for the Regional Body and Compact Council to think ahead on challenges related to water quantity in the Great Lakes – St. Lawrence basin, work systematically and proactively— rather than reactively— and continue to build a scientific foundation for the information needs for decision-making under the context of the Agreement and Compact.

Developing relationships and networks between Parties and organizations in the Great Lakes – St. Lawrence basin is essential to building this scientific foundation. At the direction of the Regional Body and Compact Council, the Science Strategy team

is revising the 2019 Science Strategy focused on revisiting and updating the 2024-2029 priorities. Part of this process, in alignment with the Science Strategy reporting priority, is providing a summary of activities of the Science Strategy team from 2020-2023 to the Regional Body and Compact Council.

II. Draft Science Strategy

The 2019 Science Strategy is framed based on the charge in the Agreement and the Compact to develop the scientific basis for sound water management decisions in the Great Lakes – St. Lawrence basin, the focus on improving the cumulative impacts assessment over time and other purposes identified in Agreement Article 302 and Compact Section 1.4. The needs and challenges section articulates the needs and challenges related to Great Lakes water quantity management considering surface water, groundwater, ecosystems, consumptive use, water conservation and efficiency, outreach, and Indigenous engagement and traditional ecological knowledge. In parallel, the 2019 Science Strategy identifies priority actions in these topic areas.

III. Priority Actions

Embed Science Team in Regional Body/Compact Council Work

- Included Party representatives on the Science Strategy Team.
- Met semi-annually between 2020 – 2023 with in person meetings resuming December 2022.
- The Regional Body and Compact Council sponsored a session at the International Association of Great Lakes Research annually with the following session topics:
 - *2020 A science strategy for water management in the Great Lakes*
 - *2021 Improved measuring of Great Lakes-St. Lawrence River Basin Water Quantity*
 - *2022 Improving and Implementing Water Conservation and Water Use Efficiency across the Great Lakes-St. Lawrence Basin to protect water and water dependent natural resources*
 - *2023 The Impacts of Climate Change on the Great Lakes-St. Lawrence Basin and Potential Policy Responses*
- USGS and the International Joint Commission presented and/or participated in Science Strategy meetings on various topics of interest, including the IJC science strategy.
- The Great Lakes Indian Fish and Wildlife Commission participated in the Science Strategy team meetings and presented on their Consumptive Use and Diversion GIS project.

Consumptive Use, Water Quantity, and Water Conservation and Efficiency Webinars

- Series of presentations from 2020-2022 related to consumptive use, water quantity, and water conservation and efficiency topics. These webinars were

recorded and are available on the Regional Body and Compact Council websites (see webinar tab).

Cumulative Impact Assessment (CIA)

- The Regional Body/Compact Council contracted with Dr. Andrew Gronewold laboratory at the University of Michigan to use a new model for estimating the water budget components of the CIA with reduced uncertainty and to evaluate the impacts of climate change on the Great Lakes water budget. The final report and a summary of these findings is included in the 2016-2020 cumulative impacts assessment.

Forum for exchange of ideas between Parties

- At each Science Strategy Team meeting, there has been an opportunity to share relevant projects and research at the jurisdictional level. Presentations included, overviews of state water conservation and efficiency programs, state-led research projects, water quantity related data clearinghouse efforts, new evaluation tools developed by Parties and an overview of specific water quantity related project proposals.

The Science Strategy team has had a productive three years even with the challenges of the Covid-19 disruptions. Many of the priorities identified in the first strategy are still relevant and present opportunities to further implement and build on the success since the adoption of the 2019 Science Strategy. To that end, the Science Strategy team will revise the Science Strategy to update and adapt the priorities for the next five-year period to continue the momentum that started with the adoption of the 2019 Science Strategy.

Opportunity for public comments.

Members of the public were given an opportunity to ask questions or provide comments.

Marc Smith, National Wildlife Federation. Mr. Smith thanked everyone for coming to the University of Michigan. He stated that celebrating 15 years of the Compact is an amazing thing. He said that is an amazing accomplishment that I think we really need to pat ourselves on the back. He noted that the negotiation was intense, but it really shows the collaboration of our region. He said that when we can work together, we can really accomplish big things because the Great Lakes Compact is today a beacon to the world on how we can manage freshwater resources. He noted that all of the individuals on the Regional Body and the Compact Council are proof of that.

He stated that the Compact and Agreement are working, and he challenged the newer members of this Council, to learn from the legacy of these icons who created the agreements who helped us get us where we are today.

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He stated that he is a stakeholder and is still participating and monitoring and birdwatching all the actions of water withdrawals and diversion. Among other actions, Mr. Smith noted that he followed the Waukesha review process closely and that it actually worked well.

He also challenged the members to prepare for the next 15 years, including addressing climate change and carefully manage water resources in a way that not only protects the fishery and protects our drinking water, but also provides an economic base for our industries and our businesses. He closed by thanking the members for all their work.

Silvia Newell, Director of Michigan Sea Grant. Ms. Newell began by indicating that she wanted to thank the members for all the work that the members have been doing. She noted that Sea Grant’s mission is to help protect and preserve and prepare communities along coastlines in Michigan as well as the other Sea Grant programs from the other states.

Speaking as a scientist, she also wished to ask a question of Ohio, which is related to the New Rivers Initiative for H2Ohio. She noted The Heidelberg University National Center for Water Quality Research is probably the best water monitoring program in the country. She also stated that it’s really incredibly expensive but it’s a valuable treasure.

But the most sailing river in the state of Ohio is Cold Water Creek, and this year, the State of Ohio claims to continue funding it.

And I simply want to point out that if that continues to be the case, it will look like Ohio, magically, all of a sudden, got way better salinity in rivers by not including this one station, so she indicated that she hopes that Ohio will reconsider funding it.

New business.

Consideration of Resolution #36—Adoption of Fiscal Year 2025 Budget. The Chair noted that the proposed budget and the resolution granting approval of the budget were previously distributed to the members and were posted on the regional body website. Upon asking for a motion to grant approval of the resolution and a second, Mr. Richards moved that the resolution be adopted, with Mr. Mueller seconding the motion.

Because the vote must be unanimous, a roll call vote of all members was initiated:

Illinois—Yes

Indiana—Yes

Michigan—Yes

Minnesota—Yes

New York—Yes

Ohio—Yes

Ontario—Yes

Pennsylvania—Yes

Québec—Yes

Wisconsin—Yes

The resolution was adopted by unanimous vote.

Other business.

Ms. Freihoefer closed the meeting by noting that pursuant to rotation the Governor of New York would be the next Regional Body Chair and that the Governor of Illinois would be the next Vice Chair.

Adjourn.

A motion was made by Mr. Richards to adjourn. Ms. Stainbrook seconded the motion. All members voted in the affirmative, the motion was approved, and the meeting was adjourned at approximately 4:25 p.m. EST. The next meeting of the Regional Body will be set and noticed at a future date.

The full text of the materials discussed at the meeting is available online at www.gslregionalbody.org.