

**Great Lakes—St. Lawrence River Water Resources Regional Body
Meeting Summary**

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Roll Call:

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Indiana (designee of Governor Eric Holcomb) k U)) @) V k

Michigan (designee of Governor Gretchen Whitmer) - 7 8 O o o \ 8 O K #) U) - 8 O -

Minnesota (designee of Governor Tim Walz) K k " # U) V k

New York (designee of Governor Kathy Hochul) M o) " ‡ k U) ‡ V " o) - #) - V " o) - #

Ohio (designee of Governor Mike DeWine) " O ‡ @ " h h U U U) \) V k

Ontario (designee of Premier Doug Ford) K M) V k # h " \ U V k 7

Pennsylvania (designee of Governor Josh Shapiro) u " # \ 8 O h) - h

Québec (designee of Premier François Legault): h o)) U - O 7 h

Wisconsin (designee of Governor Tony Evers) " h o ‡) V k

Actions Taken

Review of December 16, 2022 Regional Body meeting minutes

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

² Karen Stainbrook of the New York Department of Environmental Conservation also participated on behalf of Don Zelazny, providing the jurisdictional report incorporated herein and voting on all matters other than on the proposed FY 2024 budget. A proxy form for her is also available upon request.

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

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Lake Michigan Water Use Data Collection

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Water Conservation

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Lake Michigan Water Re-Allocations

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New Allocations and Requests

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Coastal Management Program and Shoreline Resilience

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Indiana

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Today I'll briefly review Water use in the Indiana portion of GL basin for reporting year 2021

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Michigan

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WUAC 2022 Biennial Legislative Report

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WUAC 2020 Biennial Report Recommended Funding

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Michigan Water Withdrawals

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Data Collection, Data Warehouse, and Models

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Water Infrastructure – State Revolving Fund

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ubmitted requests.

MI Healthy Climate Plan

EGLE’s Office of Climate and Energy (OCE) held the first MI Healthy Climate Plan Conference, April 11 and 12, in Detroit, Michigan. This two-day conference brought together more than 600 participants working to create synergies and opportunities to advance the MI Healthy Climate Plan and its goal of carbon neutrality by 2050 for Michigan.

The OCE also received a \$3 million planning grant from the U.S. Environmental Protection Agency (EPA). The grant will help develop innovative strategies to cut climate pollution and expand Michigan’s clean energy economy. The grant opens the door for Michigan to apply for the \$4.6 billion in funding to implement projects and initiatives related to climate change.

Outreach and Education

EGLE organized a variety of outreach events to address Michigan’s education and outreach goals to promote water sustainability and stewardship. EGLE’s Office of the Clean Water Public Advocate hosted [Fix-a-Leak Week](#) in March to raise awareness about water leaks and provide resources to find and address common household leaks.

As part of Earth Day celebrations, Governor Whitmer [proclaimed](#) the Year of Clean Water in honor of the 50th anniversary of the Clean Water Act. The proclamation highlighted 13 ways to learn about and get involved in improving the quality and health of Michigan’s rivers, streams, lakes, wetlands, and watersheds.

EGLE’s Office of the Clean Water Public Advocate also hosted [Drinking Water Week](#) in early May, focusing on public education about the provenance of drinking water, water quality, residential wells and contamination prevention.

From June 3-11, the OGL hosted [Great Lakes and Fresh Water Week](#) to raise awareness and promote stewardship of the Great Lakes and Michigan’s inland lakes, rivers, streams, and groundwater. Among many activities, the OGL hosted a public webinar about water workforce development. EGLE partnered with the Department of Natural Resources and the Southeast Michigan Council of Governments to host events. The OGL will be filling a full-time Great Lakes Stewardship Coordinator position to support statewide efforts to promote water conservation and stewardship.

Minnesota

Mr. Richards submitted the following report

OVERVIEW OF WATER USE IN MINNESOTA’S LAKE SUPERIOR BASIN

- There are currently 151 active water appropriation permits in the Minnesota Lake Superior Basin (one more than in December 2022. There are 32 new permits so far this year and nine with expiration dates in 2023.
- A city in the Basin has requested to increase their appropriation and pumping rate and change their use type to industrial, but there are questions on whether the intended use is consumptive or non-consumptive, and whether the change might engage the GLC requirements.
- Most of Minnesota’s water use in the Basin is for industrial uses, power generation and public water supply.
- Minnesota is still processing 2022 water use data, and we will provide more information in December.

PROMOTING EFFICIENT USE AND NATURAL RESOURCE CONSERVATION

- The Minnesota Dept. of Health, is currently working through its Drinking Water Revolving Fund project priority list after the Minnesota Legislature passed a bonding bill and also provided the necessary state match to access Federal Infrastructure Investment and Jobs Act funds. At this time, 17 projects in the Minnesota Lake Superior Basin are set to receive approximately \$43.5M, but that list may grow.
- Minnesota approved the St. Louis River Comprehensive Watershed Management Plan (The St. Louis One Watershed, One Plan), in March. The plan area covers over 3000 square miles and includes over 500 lakes and 2000 miles of streams in the Lake Superior watershed. The result is a comprehensive watershed management plan that targets projects that protect and restore the watershed's most valuable resources.
- Much of Minnesota is again moving into a Drought Watch phase, including the Lake Superior Watershed. We will soon be sending notices out to municipalities across the state to encourage the implementation of additional water conservation measures.

St. Louis River Area of Concern

- US EPA has determined that the targets were met and approved the removal of the degraded fish and wildlife populations beneficial use impairment in SLRAOC
- As of March 2023, out of 80 management actions in the remedial action plan:
 - 7 need no further action,
 - 44 are completed,
 - 10 remediation projects are in progress,
 - 8 restoration projects are in progress,
 - 11 other actions like studies, tracking, etc. are in progress
- Examples of projects underway include:
 - Perch Lake: which will restore connection between Perch Lake and the St. Louis River Estuary in August 2023 to improve circulation and water quality in a lake designated as a resource of outstanding biological significance.
 - Spirit Lake: Remediating an area After last year's completion of dredging contaminated soils and capping necessary areas, habitat restoration plantings and pedestrian trail construction will happen this summer.
- SLRAOC projects have involved several partners including the MN DNR, MPCA, City of Duluth, Fond du Lac Band of Chippewa, USEPA , USACE and others.

EDUCATION PROGRAMS

- The We Are Water program partnership with the Minnesota Humanities Center continues sharing its traveling exhibit to increase community engagement with water sustainability in places across Minnesota. This year's cohort includes another 5 organizations from rural areas to the metro. Planning for next year's cohort is ongoing and will likely include a site in Duluth.

New York

Ms. Stainbrook submitted the following report:

- Good morning, 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 serving as proxy for Don Zelazny.
- 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. Components of these plans must include, at a minimum, 1) customer and source metering, 2) water auditing, 3) leak detection and repair and 4) outdoor water use management for public water suppliers. All registered or permitted facilities are required to submit an annual water withdrawal report to NYSDEC. This includes over 700 actively reporting facilities 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.
- New York's 2022 Annual Water Withdrawal Reports have been received. As in previous years, our water withdrawal data will be shared with the Commission and reported to this group in December. 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 go into effect this month and require lower flow rates for showerheads, urinals, and bathroom and kitchen faucets sold or installed in NYS.
- We look forward to continuing to work with the other jurisdictions on common concerns and issues.

With that, I conclude my report.

Ohio

Mr. Lodge submitted the following report:

The Ohio Department of Natural Resources (ODNR) Division of Water Resources (Division) continues to collect CY2022 water withdrawal data from its 2,129 active registered facilities. To date, 95% of the facilities within the Lake Erie Basin have reported, and the Division is diligently working to collect the remaining delinquent data. In January 2023, ODNR introduced its first online application for current registered facilities to report their annual water use via the ODNR website. 1,500 of the 2,129

registered active facilities obtained the required login credentials and reported online. New water users may also use the portal to register a new facility.

Division staff began compiling Ohio's 2022 Lake Erie Basin water withdrawals, consumptive uses, and diversions pursuant to the protocols established by the Compact. On September 29, 2022, the Chief of the ODNR Division of Water Resources issued an Order approving a New Water Withdrawal and Consumptive Use Permit within the Lake Erie Basin. The Permit approved a new ground water withdrawal of up to 5.25 million gallons per day (MGD) for use at a proposed aquaculture farm in Williams County, Ohio. All water will be returned to the Basin less a consumptive use of .065 MGD.

-On March 27, 2023, the Permittee submitted a proposed Ground Water Monitoring Plan to the Chief of the Division for review as required by the Chief's Order. The plan is currently under review.

-The Permit is expressly conditioned upon the Permittee obtaining a National Pollutant Discharge Elimination System (NPDES) Permit from the Ohio Environmental Protection Agency for its return of water back to the Lake Erie watershed as described in its Application.

In 2021, ODNR was pleased to report the roll out of the State of Ohio Water Withdrawal Atlas. The Atlas concisely summarizes the data collected from the Water Withdrawal Facility Registration Program to assist in answering commonly asked questions regarding water use and to promote conservation focused initiatives. The Atlas continues to evolve with the addition of the mapping components now differentiating between water use sectors. The most recent water use data is now available with previous years archived within the Atlas [webpage](#).

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 in educating water users, and train staff on current best management [practices](#). ODNR is excited to announce a new citizen science pilot program that will begin in August. The Division of Water Resources will be partnering with the Division of Parks and Watercraft to bolster surface water data on high quality and sensitive streams throughout the state. Using cell phones, *EnGauge Ohio* will prompt State Park visitors to capture streamflow measurements which will be electronically sent to a database. Additional streamflow data assists in creating a higher resolution picture of water availability

and trends in the state. Data received from each site will be compiled and made publicly available on the Division of Water's website.

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, the Ohio Department of Agriculture, the Ohio Department of Natural Resources, the Ohio Environmental Protection Agency, the 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.

Multi-agency H2Ohio Updates Include:

Ohio Department of Natural Resources (ODNR)

The ODNR Division of Wildlife is collaborating with the Nature Conservancy on two coastal wetland restoration projects near Sandusky at Pickerel Creek Wildlife Area. The work will improve water quality and recreational opportunities by reducing algal blooms while aiding in the preservation of the wildlife habitat. The project will also restore shoreline wetlands, promote the establishment of submergent and emergent aquatic vegetation, and improve the water quality in Maumee Bay.

The Ohio Department of Agriculture (ODA)

The ODA is awarding \$4.2 million in grants for 12 two-stage ditch projects. Six county engineers and six Soil and Water Conservation Districts will receive funds for the project. More than 18,000 acres of watershed will benefit from the 8.4 miles of two-stage ditch projects. Construction of these projects will begin this summer, and all projects must be completed by fall 2024.

The Ohio Environmental Protection Agency (OEPA)

The OEPA invested \$1 million in mini grants for drinking water system equipment needs in communities across the state. These grant opportunities aim to strengthen the ability of public water systems to reduce leaks, purchase critical equipment, evaluate rates, and successfully operate for years to come.

[H2Ohio | An Ohio Partnership for better water statewide](#)

Ontario

Ms. Keyes submitted 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.

- The second progress report of Ontario's Great Lakes Strategy was released on May 24, 2023. The report is a collaborative effort of Ontario's 16 Great Lakes ministries, and outlines accomplishments of Ontario and Great Lakes community partners under the strategy's six goals since the release of the first progress report in 2016.
- 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:
 - 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.
- Ontario is taking action to accommodate population growth and housing development in York Region by enacting new legislation that will help ensure the expansion and continued delivery of crucial wastewater treatment services.
- The Supporting Growth and Housing in York and Durham Regions Act, 2022 was informed by advice provided by the York Region Wastewater Advisory Panel on the best approach to manage regional growth and aging wastewater infrastructure.
- Following nearly a year of consultation, the panel recommended an approach that leverages existing wastewater infrastructure to Lake Ontario and would save over \$800 million for York and Durham Regions and their rate payers compared to other options analysed, including the Lake Simcoe solution. This

approach will meet the timing needs for projected growth and maintain strong environmental protections.

- Ontario is making progress towards enabling carbon storage in underground geological formations, most of which are found in the Lake Erie and Lake Huron watersheds of South-Western Ontario. Amendments have been made to Ontario's Oil, Gas and Salt Resources Act and further regulatory proposals are being developed that would enable projects to begin demonstration and pilot projects. This initiative is expected to support sector innovation and advance Ontario's Low-Carbon Hydrogen Strategy, which would create local jobs and attract investors while reducing greenhouse gas emissions.
- In partnership with the federal government, under the Flood Hazard Identification and Mapping Program, Ontario is providing over \$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. Updated mapping will better prepare the people of Ontario for future flooding and reduce long term disaster assistance costs.
- The Ontario MNR continues to implement the Ontario Invasive Species Strategic Plan and Invasive Species Act to prevent, detect and manage high-risk invasive species in the shared waters of the Great Lakes-St. Lawrence River Basin.
- In 2023, Ontario increased funding to the Invasive Species Centre and Nature Conservancy Canada to help combat the impacts of invasive species in the province. The funding enables continuation of efforts to implement a comprehensive plan to fight phragmites in Ontario, as well as support management of invasive species by municipalities, conservation authorities and other partners through an Invasive Species Action Fund grant program.
- The Ontario Biodiversity Council – of which the Ontario government is a member - recently renewed Ontario's Biodiversity Strategy. The Strategy is a landmark product of the Council, which establishes a guiding framework for a whole-of-society approach to biodiversity management, helping to coordinate and drive biodiversity conservation and management efforts from all sectors to benefit biodiversity, address climate change, improve human health, make Ontario's communities stronger and safer, and support the economy.

Pennsylvania

Mr. Bruno submitted the following report:

Pennsylvania continues to implement the requirements of the Compact and Agreement through facilitating state and local programs on water use. Pennsylvania Department of Environmental Protection (DEP) is preparing to assemble the Great Lakes water withdrawal, 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. It is expected that Pennsylvania's Great Lakes general trend of annual water use will continue into the 2022 Water Year, representing just a mere fraction of overall Great Lakes water use.

DEP continues to maintain 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 DEP Great Lakes Program can be found at the DEP webpage dep.pa.gov and searching "Great Lakes Program".

On January 27, 2023, DEP completed the Pennsylvania State Water Plan in accordance with the Water Resources Planning Act (Act 220 of 2002, P.L. 1776, No. 220, 27 Pa.C.S. §§ 3101 et. seq.). The Plan addresses regional and state-wide priorities and examines emerging water issues. The Great Lakes Water Resources Committee, consisting of members from government, non-governmental organizations, and private industry, provided updates to the Great Lakes Basin sections of the plan that include both Lake Erie and Lake Ontario-Genesee River Basins. These updates specifically identify the Compact and Agreement and Pennsylvania's coordination with other Great Lakes states and provinces as one of best ways to protect water quantity. The plan dictates that Pennsylvania not only continue current participation in Great Lakes interstate and international governance venues, but play a larger role in state and federal legislation and other policy measures that may impact Lake Erie and Lake Ontario. More information about the Pennsylvania State Water Plan can be found at the DEP webpage dep.pa.gov and searching "State Water Plan".

Also, 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 continues the transition to new executive leadership, including the Pennsylvania Senate confirmation of new Acting Secretary Rich Negrin, the regulatory development team looks to continue with a potential rulemaking process.

Québec

Mr. Stevenson submitted the following report:

1. Act to establish the Blue Fund (Bill 20)

On June 8, the National Assembly of Québec adopted Bill 20, aimed at establishing the Blue Fund. The Fund is specifically dedicated to water and is financed, in part, by an increase in charges payable for the use of water. With a historic initial budget of C\$500

million over five years, it will provide adequate, predictable and sufficient funding for any measure the Minister may carry out to ensure the protection, restoration, development and management of water resources. In particular, the measures will allow for:

- The sustainable, equitable and efficient use of water resources;
- Better flood control and prevention;
- Better conservation of aquatic ecosystems;
- Better water governance that complies with the governance scheme established by the Water Act.

These measures will be subject to more transparent annual reporting. Additionally, the bill provides for amendments to foster better access to information concerning water withdrawals.

The Act also provides for new enabling powers regarding the use of water coming from a waterworks system, including bottled water. These powers will, by regulation, make it possible to guarantee the availability of water for priority uses, including public uses, by limiting or prohibiting certain uses, and to reduce the use of single-use containers.

Furthermore, it includes a mechanism for periodic evaluation every five years of the regulatory provisions for modernizing practices related to water charges based on the latest scientific and technical knowledge, changes in the status of water resources, both in quantity and quality, the evolution of Québec's socioeconomic context and approaches adopted elsewhere in the world.

2. Draft regulations amending the *Regulation respecting the charges payable for the use of water* and the *Regulation respecting the declaration of water withdrawals*

The *Regulation respecting the charges payable for the use of water* and the *Regulation respecting the declaration of water withdrawals*, applied under the *Environment Quality Act*, have not been updated since 2010 and 2011 respectively. Consequently, the knowledge base and the approximately C\$3 million generated annually by the charges paid by the water users concerned are not sufficient for providing adequate measures that Québec must implement over the next few years, especially when it comes to addressing the issue of water availability.

The draft regulations therefore aim to ensure sustainable, equitable and efficient water management by contributing to the financing of appropriate measures for this purpose. They also aim to improve knowledge about the pressures exerted on water resources by the pursuit of certain human activities and enhance the transparency of water resources use.

The rates are scheduled to increase as of January 1, 2024, and then to increase by 3% annually for companies subject to the charge. As a result, the base rate of \$2.50 per million litres (\$/MI) (1 MI = approx. 265,000 US gal.) will increase to \$35/MI and the high rate applied for companies that incorporate water into products will increase from \$70/MI to \$150/MI. Water bottlers will also have to pay a surcharge of \$350/MI, for a total rate of \$500/MI. These new rates will ensure recurring funding of approximately \$30 million for the newly created Blue Fund.

The annual reporting threshold for water withdrawals, which is currently 75,000 litres per day (L/d) (1 US gal. = 4.54 L), will be lowered to 50,000 L/d as of January 1, 2025. Companies subject to the water charge will also be required to report the volumes of water discharged. This additional knowledge will make it possible to better monitor water availability in Québec.

3. Flood zone mapping

Through the Land Protection Plan against Flooding (Plan de protection du territoire face aux inondations - PPTFI), launched in 2020, several flood zone mapping initiatives are underway in Québec. Firstly, the MELCCFP is currently completing a methodological guide for delineating flood zone maps for regulatory application. The tool will be available to stakeholders working in the field and will suggest approaches that can be taken, hypotheses to consider, and elements to target so that flood zones can be mapped according to a better defined process.

In addition, in order to support the future permanent regulation, a large part of Québec's territory will be covered by up-to-date flood zone mapping. The INFO-Crue project is intended to be a flagship undertaking for this initiative, with two main objectives:

1. Produce “regulatory” mapping of flood zones and mobility zones, taking into account such variables as flooding frequency, water depth reached, watercourse movement over time and climate change. The mapping will be used for land-use planning of these zones.
2. Create forecast mapping that will display the zones likely to be flooded in the next 48 hours. This information will be used to plan civil security and environmental interventions needed to reduce flood damage.

Fifty watersheds were selected by INFO-Crue based on criteria such as past flooding occurrences and the vulnerability of riverside communities. 25,000 km of rivers have been analyzed and between 15,000 and 18,000 km should ultimately be mapped on the territory of several hundred Québec municipalities.

Administrative Reports.

Secretary Payne introduced the Cumulative Impact Assessment that will be released today. As in the past, the comprehensive Cumulative Impact Assessment being released today covers a five year period—from 2016 through 2020—and examines the impacts of withdrawals, diversions and consumptive uses on the Great Lakes St. Lawrence River Basin Water Budget. However, unlike past years, he noted that the Regional Body and Compact Council also looked at the impact of Climate, both in the past and looking to the future, on the overall water budget.

The Secretary then stated that leading this effort was Professor Drew Gronewold (Grunewold), Associate Professor with the School for Environment and Sustainability (SEAS) at the University of Michigan. I would now like to ask Professor Gronewold to report on

the work he did this year on the Cumulative Impact Assessment we are releasing later today.

Professor Gronewold began by thanking a few others, including Jim Nicholas, formerly with the United States Geological Survey, as he was instrumental to some of this work; as well as several students on this work, including Hannah Paulson, Megan Mueller, Yifan Luo and Justin Huber.

He then noted that one of the unique things about the cumulative impact assessment report this year was how it addresses some needs that were highlighted in earlier reports, specifically one to reduce uncertainty in the historical water balance, and also takes a look at whether or not we can quantify the impacts of climate change, both in the historical record and also understand what the future impacts of climate change might be.

Professor Gronewold noted that the importance of reducing uncertainty in the historical water balance is pretty critical. He noted that Jim Nicholas had done some legacy work on this decades ago to quantify uncertainty bounds in each of the major water balance components and what we aim to do was use. He then stated that new science and new computer technology has been developed to reduce that uncertainty and in a nutshell, what his team did is run a computer simulation model that dramatically reduced uncertainty and historical water balance components. He noted that the takeaways for this group are that not only that the results of that work lead to a basically a brand new Great Lakes water balance record that includes multi decadal records of evaporation, precipitation and runoff, all of which have significantly reduced uncertainty; and, that we developed are able to reduce uncertainty has now been adopted by the federal agencies across the Great Lakes, including Environment and Climate Change Canada, the National Oceanic and Atmospheric Administration, as well as the U.S. Army Corps of Engineers.

The second point Professor Gronewold made is that we were able to use this new historical record of the Great Lakes water balance with these reduced uncertainties to tease out historical impacts of climate change and take a lens at what might be happening into the future. The take away from this part of the assessment is that over long time periods precipitation across the Great Lakes on average has been going up and that evaporation is becoming more variable. He noted that this is a very important message, because what it means for the long term is that the Great Lakes water balance is actually quite stable. In other words, water levels are not expected to change much over 20, 50 or 80 year periods. From a climate change perspective, the Great Lakes are expected to be relatively abundant for the next several decades, but on shorter time periods, the research found that both precipitation and evaporation can change dramatically, leading to wide swings in water levels. He noted that a great example of this is in 2013 and 2014 when Lake Michigan, Lake Huron and Lake Superior had just hit

record low water levels, followed by a surge in precipitation over the next several years, resulting in water levels soaring to record or near record highs.

He noted that one of the things recommended in the report is that while long term water levels on average may not change much from the past, there will be concerns about short term variability and perceptions among the public. With the new data set with reduced uncertainty, and the region will be able to make some pretty important statements about historical and potential future impacts of climate.

Mr. Bruno stated that we've been in conversation with Professor Gronewold many times and had a lot of back and forth with them. Accordingly, Mr. Bruno thanked Jim Nicholas for doing an incredible job putting together all the data on the general cumulative impact assessment, and Professor Gronewold and his team for doing the groundbreaking work included in the Cumulative Impact Assessment.

Secretary Payne then noted that in 2016 the Regional Body and Compact Council reviewed an application from the City of Waukesha to divert Lake Michigan water under the Community in a Straddling County exception to the general prohibition against diversions. After extensive review by the Regional Body and Compact Council, the Compact Council approved the proposal with conditions, allowing the State of Wisconsin to continue its review of the proposal and initiate any additional State specific review and permitting requirements. He also stated that Wisconsin continues to appreciate all the time and energy that all of the jurisdictions put into the review of the City of Waukesha's diversion application.

The water quality concerns in the City of Waukesha have been ongoing for decades and he acknowledged that the State of Wisconsin is looking forward to a permanent resolution to these water quality problems with the switch to a Lake Michigan water source at the end of the summer. He noted that after the work of the Regional Body and Compact Council in 2016 the Wisconsin DNR has continued the work with the City of Waukesha on the needed permits to implement the diversion and to ensure that the transition to Lake Michigan water is smooth and protective of public health.

Secretary Payne then invited Dan Duchniak, General Manager of the Waukesha Water Utility, to provide an update on the status of the City's plans to use Lake Michigan water. Mr. Duchniak provided an overview of the issue regarding the City of Waukesha's water, the process that was used, and plans to change over from tainted groundwater to Lake Michigan water planned for the end of the summer.

Following the presentation, Mr. Bruno asked if the cost for the project was around what was originally expected. Mr. Duchniak responded by noting that they had originally estimated the project was going to be around 286 million dollars, noting that's a lot of money for their 72,000 residents. He also noted that this is a huge issue for the city of Waukesha and having a sustainable water supply is a huge undertaking for the entire

city. They anticipate that they will be a bit under budget, which they are pretty happy about. Mr. Duchniak also noted that they have been working with the federal government on funding, and they have been able to secure grants and low interest federal loans, with 30 year loans at about 1.1%. He closed by noting that from the standpoint of running all of their projections that were started with back in 2016 when the approval was issued by the Compact Council that the City of Waukesha has been able to meet or exceed all of those projections

Mr. Bruno responded by noting that this project was well done by everyone in the room and should be used as a model should any similar proposals be made in the future.

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

- In the days immediately preceding today's meeting, we held a two day conference of the Regional Body and Compact Council's Science Team.
 - It was open to members of the Tribes, First Nations and Métis Communities in Canada, as well as all of our Advisory Committee, Resource Group and Observers. I want to thank those who were able to join us.
 - We heard presentations on USGS water studies as well as an update on the International Joint Commission's Science Strategy development. Esteban Chiriboga of the Great Lakes Indian Fish & Wildlife Commission provided an update on the study they have undertaken to look at cumulative impacts of water usage at smaller scales. We also heard from several of our States about their water conservation and efficiency programs and how they are implemented.
 - As a reminder, the current Regional Body/Compact Council Science Strategy was adopted in December of 2019. The Science Team is initiating a process to update the Science Strategy, and we look forward to continuing this important work together.
 - As reported at the December 2022 meeting, every five years, pursuant to the Compact and Agreement a comprehensive cumulative impact assessment needs to be created. These assessments focus on the water budget of the Great Lakes St. Lawrence Basin, and the impacts of humans on the budget.
 - As we've heard, the next Cumulative Impact Assessment has been completed and will be released today. Thank you to Dr. Gronewold and his team of students for the fantastic work they did, as well as Jim Nicholas for again doing a great job of pulling together all the data from across the region into the report that is being released today.

- I am also pleased to report that the Regional Body and Compact Council again hosted a session at the International Association for Great Lakes Research on May 12 in Toronto. Thanks to James Polidori of the Great Lakes Commission as well as Aaron Pruitt of the Wisconsin Department of Natural Resources for presenting at that meeting, and Isaac Noyes of the Ontario Ministry of Natural Resources and Forestry for speaking as well.
- During our meeting with Advisory Committee members we learned about the Community Advisory Committee model being used on the clean up of the Milwaukee Area of Concern. This new approach is an innovative model that can be used to reach out to communities that haven't always been properly engaged, and the members appreciated learning more about this approach.
- Earlier this year, we traveled to the Red Cliff Band of Lake Superior Chippewa Ottawa reservation in Northern Wisconsin to provide an overview of the work we do and to discuss opportunities to better collaborate with each other.
- We are looking forward to getting back together again in June of 2024 in New York, and hope people will be able to join us in person for that meeting.

Opportunity for public comments.

Members of the public were given an opportunity to ask questions or provide comments. No comments were provided.

Adjourn.

A motion was made by Mr. Mueller to adjourn. Mr. Bruno seconded the motion. All members voted in the affirmative, the motion was approved, and the meeting was adjourned at approximately 10:05 a.m. EST. The next meeting of the Compact Council 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.