

WEST HANTS REGIONAL MUNICIPALITY

Special Council Meeting Agenda

October 7, 2025 - 6:00 p.m.

In-person, Sanford Council Chambers, 76 Morison Dr, Windsor, NS

Virtual via Zoom (also YouTube Livestream)



West Hants
something inspiring awaits

1. Call to Order
2. Attendance
3. Announcements
4. Approval of the Agenda
5. Declaration(s) of Conflict of Interest
6. Emergency Funding Request – Supplement water from Avon River to Mill Lakes Watershed, Operation Make it Rain
7. Next Meeting Date / Adjournment

WEST HANTS REGIONAL MUNICIPALITY REPORT

Information <input type="checkbox"/>	Recommendation <input checked="" type="checkbox"/>	Decision Request <input type="checkbox"/>	Councillor Activity <input type="checkbox"/>
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To: Council

Submitted by: 
Todd Richard, Director of Public Works

Date: October 7, 2025

Subject: Emergency Funding Request – Supplement water from Avon River to Mill Lakes Watershed, Operation Make it Rain

LEGISLATIVE AUTHORITY

Nova Scotia Municipal Government Act, Section 65 authorizes Council to expend funds for municipal purposes.

RECOMMENDATION or DECISION REQUEST

That Council:

- 1. Approve a funding allotment up to \$347,500 before applicable taxes for the implementation of the contingency plan “Operation Make it Rain”, allowing authorization for purchasing of pipe, material, equipment and applicable labour and expenses related to this project.***

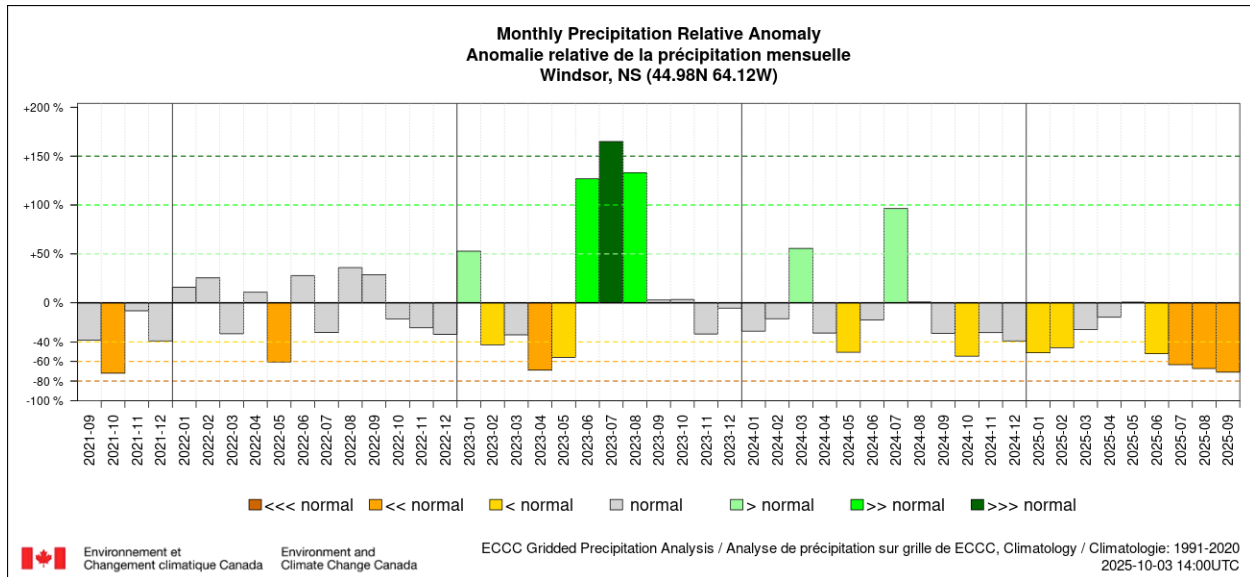
BACKGROUND

Property <input checked="" type="checkbox"/>	Public Opinion <input type="checkbox"/>	Environment <input checked="" type="checkbox"/>	Social <input type="checkbox"/>	Economic <input checked="" type="checkbox"/>	Councillor Activity <input type="checkbox"/>
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Due to unprecedented ongoing drought conditions affecting the West Hants Region, the Mill Lakes Watershed (the primary potable water source for Windsor, Three Mile Plains, Garlands Crossing, and potentially Falmouth) is at risk of reaching critically low levels. To ensure continued water supply and fire protection capacity, staff recommend funding and implementing “Operation Make it Rain”, a contingency initiative to pump freshwater from the Avon River to

Mill Lakes using existing well-established infrastructure at Ski Martock. This proactive measure is critical to safeguarding public health, infrastructure resilience, and environmental integrity during ongoing drought conditions.

The following graphic provided by the Environment and Climate Change Canada shows the monthly precipitation going back to 2021. This helps to display how dry our environment has been compared to historic levels using averages (less than normal < or greater than normal >).



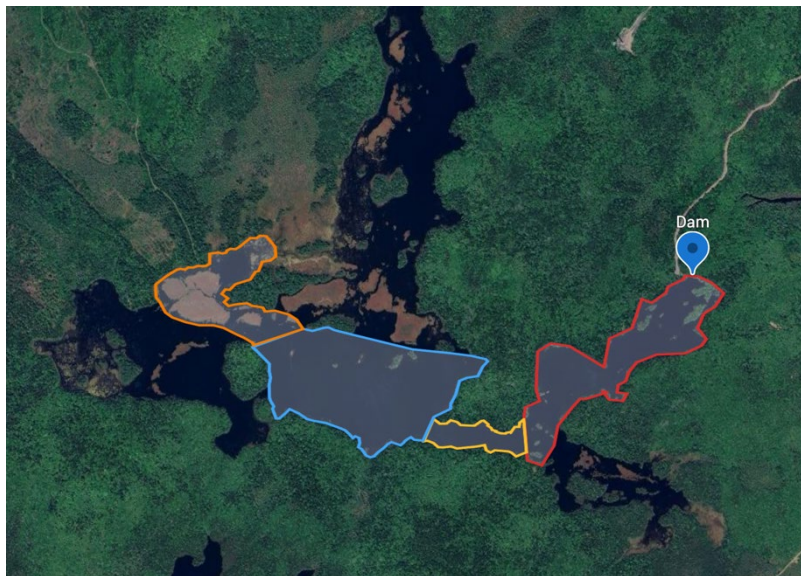
DISCUSSION

The Mill Lakes Water supply serves thousands of residents primarily on the Windsor and Three Mile Plains (TMP) along with many rural residents indirectly that rely on bulk water deliveries for their needs in times of low water table levels and dry wells. This watershed is our largest and has the highest water demand of all our three systems.

Current drought conditions have significantly reduced reservoir levels, and we are no longer able to meet the downstream ecological maintenance flow. The short and long-range forecasts predict continued precipitation deficits. Precipitation deficits are currently trending in the -400mm to -700mm depending on your location when compared to total accumulations in previous years. The water utility has been on a voluntary advisory since the first of August and a mandatory water restriction order since the first of September. During this time there has been ongoing usage of the bulk water stations to serve rural residents as many have been experiencing issues with low water tables and dry wells. The Falmouth bulk water station needed to be closed due to the high demand on the small Falmouth water system, and since then all bulk water needs are being supplied by the Windsor system located in Garlands Crossing. This usage combined with demands from traditional Windsor and TMP customers within the serviced areas and the

lack of precipitation is resulting in an imbalance. More water is being used vs. what is being replenished.

Field work recently performed, as well as data obtained from past studies, display that there remain significant volumes of water within the overall system. Arguably, there is ample supply to continue to support all users of the system for the immediate future as displayed below in the section identified as the “Main Lake”, noted in blue. However, due to the topography of the lake bottom or more shallow sections, noted as the “Narrows” and the “Dam Area” shown below, we are approaching the scenario where water may be stranded or inaccessible.



- Dam Area
- Narrows
- Main Lake
- Floating Bog

Usage Statistics

-Total treated water flows for August 6- 31st were 94,282m³. Bulk water usage equaled 4.91% of our total treated water production.

26 days

$94,282\text{m}^3 / 26 \text{ days} = 3,626\text{m}^3 \text{ per day}$

-Total treated water flows for September 1-30th were 103,289m³. Bulk water usage equaled 4.03% of our total treated water production.

30 days

$103,289\text{m}^3 / 30 \text{ days} = 3,443\text{m}^3 \text{ per day}$

A contingency plan has been developed to utilize Ski Martock’s snowmaking pump system to transfer water from the Avon River to Mill Lakes. An additional temporary water line extending

2.8km from the top of Martock Mountain to the discharge point will need to be installed. This will involve connecting to the existing waterpipe on the ski hill and running a temporary water line to Mill Lakes (see Figure 1 showing map of area). A hydraulic review of the contingency plan has been completed by CBCL Ltd., confirming the viability of the plan and compatibility with Martock's existing pumping system.

Formal approvals have been received from Nova Scotia Environment and Climate Change and the Department of Fisheries and Oceans. Staff have been working through all logistics and trying to source all necessary materials, provisions and arrangements necessary to implement this plan. All required conditions as per the regulatory approvals will be met including fish screening, environmental risks and meeting full water treatment requirements.

Benefits

- Public Health Protection, ensuring continued access to safe drinking water.
- Fire Safety, maintaining reservoir levels for emergency fire response.
- Continued supply to the bulk water systems to allow supply to rural residents in need.
- Environmental Stewardship, including mitigating strategies to prevent ecological harm.
- Cost Efficiency, leveraging existing infrastructure, minimizing capital investment.
- Longer term partnerships and potential for permanent additional water supply for long term needs of water demand for future development, bulk water demand and servicing other service areas of Falmouth and beyond. Having an approved secondary source of fresh water supply will be invaluable for future planning and dealing with future drought and climate change projections.
- Excellent investment for our region and water systems.

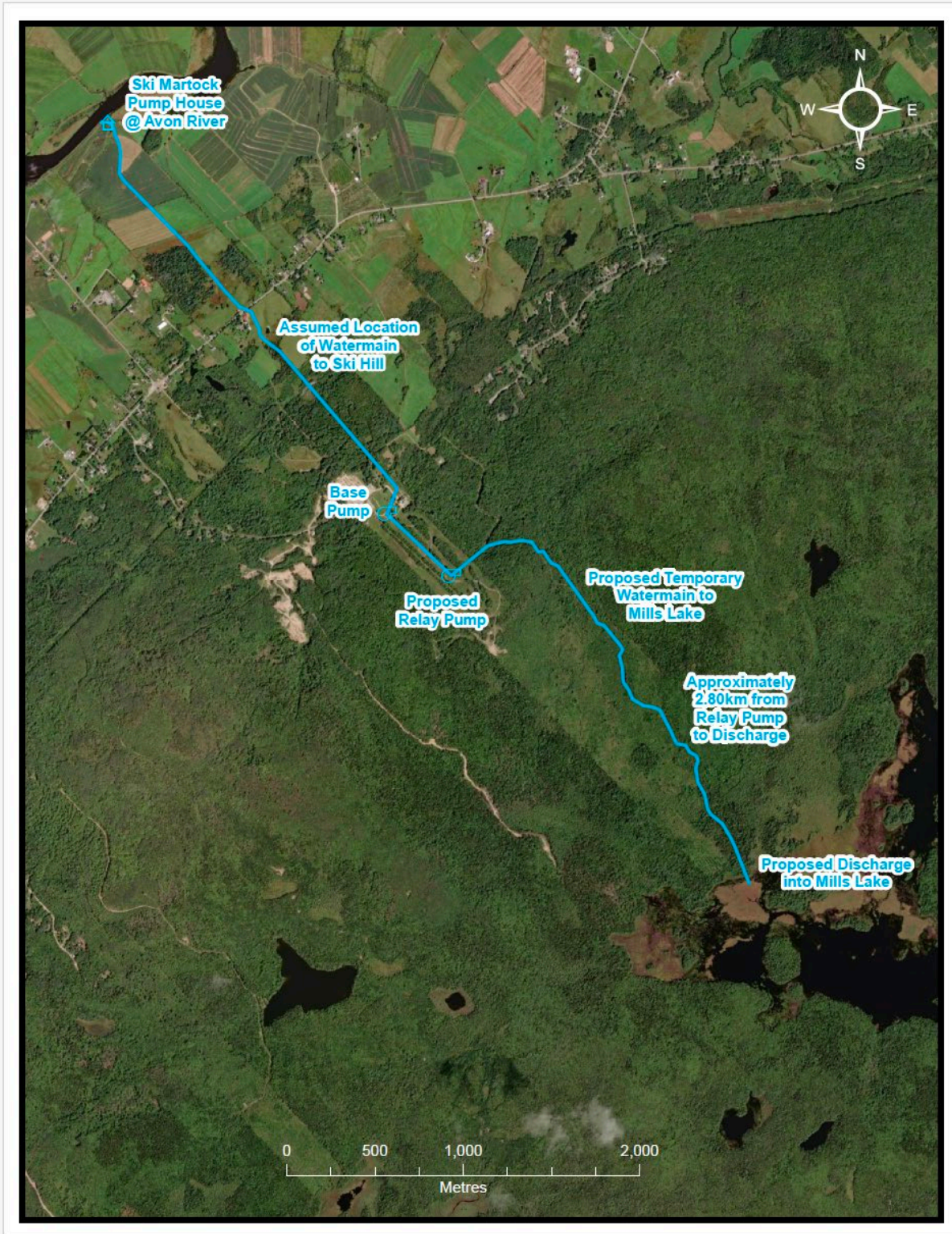


Figure 1. – Map showing overview of water supply to Mill Lakes from Avon River.

Staff have been looking at all available options to source required materials and equipment to implement this project. We currently have only one local company able to supply the amount of

pipe required in a short time frame, other sources are 5-to-8-month ETA. The company with the required amount of material is the lowest cost, project estimate at \$347,500 + HST compared to 5-to-8-month delivery for the second company at an estimated project cost of \$837,500 + HST. Therefore, it is staff recommendation to proceed with the lowest cost option and acquire the available pipe material needed ASAP.

Staff also investigated renting pipe; however, the availability and high cost made this option unfeasible.

Risk Assessment

Risk	Description	Mitigation Strategy
Salinity Intrusion	Potential for saltwater to enter the Avon River intake due to aboiteau gate operations.	Request to DFO to reduce gate openings during incoming tide; continuous water quality monitoring.
Environmental Impact	Possible disruption to fish habitat or aquatic ecosystems.	Compliance with DFO and NSECC approvals; use of screened intake; adherence to environmental best practices.
Infrastructure Reliability	Dependence on Ski Martock's pump system and temporary relay setup.	Technical review with CBCL; backup equipment and contingency planning.
Water Quality Concerns	Risk of introducing untreated or contaminated water into Mill Lakes.	Full chemical and physical analysis prior to transfer; standard water treatment protocols.
Community Perception	Public concern over use of river water for potable supply.	Transparent communication; assurance of regulatory compliance and safety measures.
Funding Constraints	Limited availability of emergency funds.	Prioritization of critical infrastructure needs; phased implementation if necessary.

FINANCIAL IMPLICATIONS

The responsibility of the utility is to ensure it can meet the needs of its consumers. If current conditions continue, the utility will need to prioritize its residential and commercial consumers.

The proposed “Operation Make It Rain” project, will create additional resources so the utility can meet the need of its consumer base, as well as bulk haulers servicing the rural communities.

<u>Estimated Cost for Implementation</u>	
<u>Item</u>	<u>Estimated Cost</u>
HDPE Pipe (purchase)	\$ 145,000.00
Pipe Install & fusion	\$ 20,000.00
Travel & expenses	\$ 3,000.00
Pipe Fittings	\$ 30,000.00
Re-lay Pump Rental	\$ 20,000.00
Power Costs and Outside Labour	\$ 60,000.00
Sub Total	\$ 278,000.00
Contingency 25%	\$ 69,500.00
Total before HST	\$ 347,500.00
Applicable HST (3.86%)	\$ 13,413.50
Total Proposed Costs	\$ 360,913.50

It is proposed that this be funded through Long-term Borrowing and WH Operating Reserve. The total projected cost of this project is \$360,913.50, requiring additional approvals through the Nova Scotia Regulatory and Appeals Board as this project is over \$250,000. The proposed funding model is a combination of municipal funds and water funds, and staff feels it shows the Board, the municipal recognition that this will support the rural resident through the haulers and our desire to ensure current consumers are not impacted further. It will also have future benefits to all consumers as we continue to merge systems and create broader resilience.

To determine the funding breakdown the average total bulk water usage over August and September was divided by the total treated water for the same period. This worked out to be 4.5% of the total treated water.

<u>Estimated Funding for Implementation</u>	
Long-term Borrowing (Water 95.5%)	\$ 344,672.39
WH Operating Reserve (Municipal 4.5%)	\$ 16,241.11
	\$ 360,913.50

This would be debt serviced over 10 years and would add \$41,443.88 to the utility operating budget.

ALTERNATIVES

Many alternatives have been considered with the prioritization of maintaining services to all customers at the forefront. The alternatives listed below have been reviewed by our staff, support from contractors and engineer consultants. The benefits noted above guided the selection of the option presented in the recommendation. The alternatives listed below do not include the addition of new water to the system with the exception of Panuke Lake.

Topography (uphill grades), pumping and accessibility were the main deterrents for that option.

- Not proceeding with the contingency project and implementing further water restrictions.
- Relaying water from the deeper sections of the systems (lakes) through to the outflow area using pipes and pumps.
- Dredging sections to allow free water flow from the deeper sections through to the outflow area.
- Considering alternative water sources such as Panuke Lake.

ATTACHMENTS

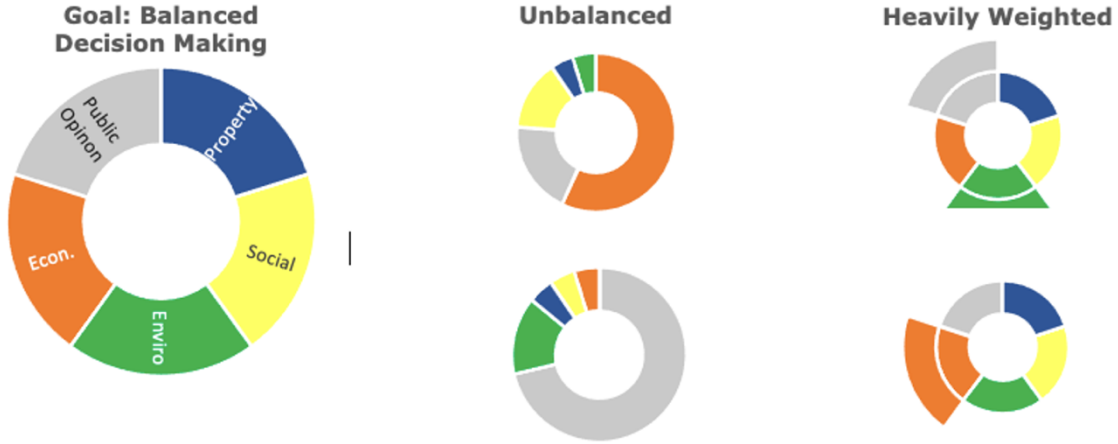
1. Slideshow presentation showing survey of Mill Lakes area and slides of Martock Pumping Systems and Intake structure at Avon River.
2. Environment and Climate Change Letter, September 23, 2025 - Emergency Authorization , Joel J. Corcoran, Regional Director, Western Region
3. Fisheries and Oceans Canada Compliance Letter, September 25, 2025 – Sean Wilson, Senior Biologist, Hydro and Flows

CHIEF ADMINISTRATIVE OFFICER REVIEW

The report and recommendation are a culmination of managing the existing resource, closely monitoring the resource, reviewing historic studies and water resource data, performing field work to inform predictability models and considering multiple alternatives. The recommendation is a proactive measure directed to address the shortage we are currently experiencing; while providing real measurable benefits should we experience similar environmental conditions in the future.

I support the recommendation.

Council has been provided with a reference taken from the Meeting and Committee Procedural Policy , Appendix C "Decision Making by Council and Committee of the Whole" as a reminder of the principles highlighted for good decision making.



Report Prepared by: *T. Richard*
Todd Richard, Director of Public Works

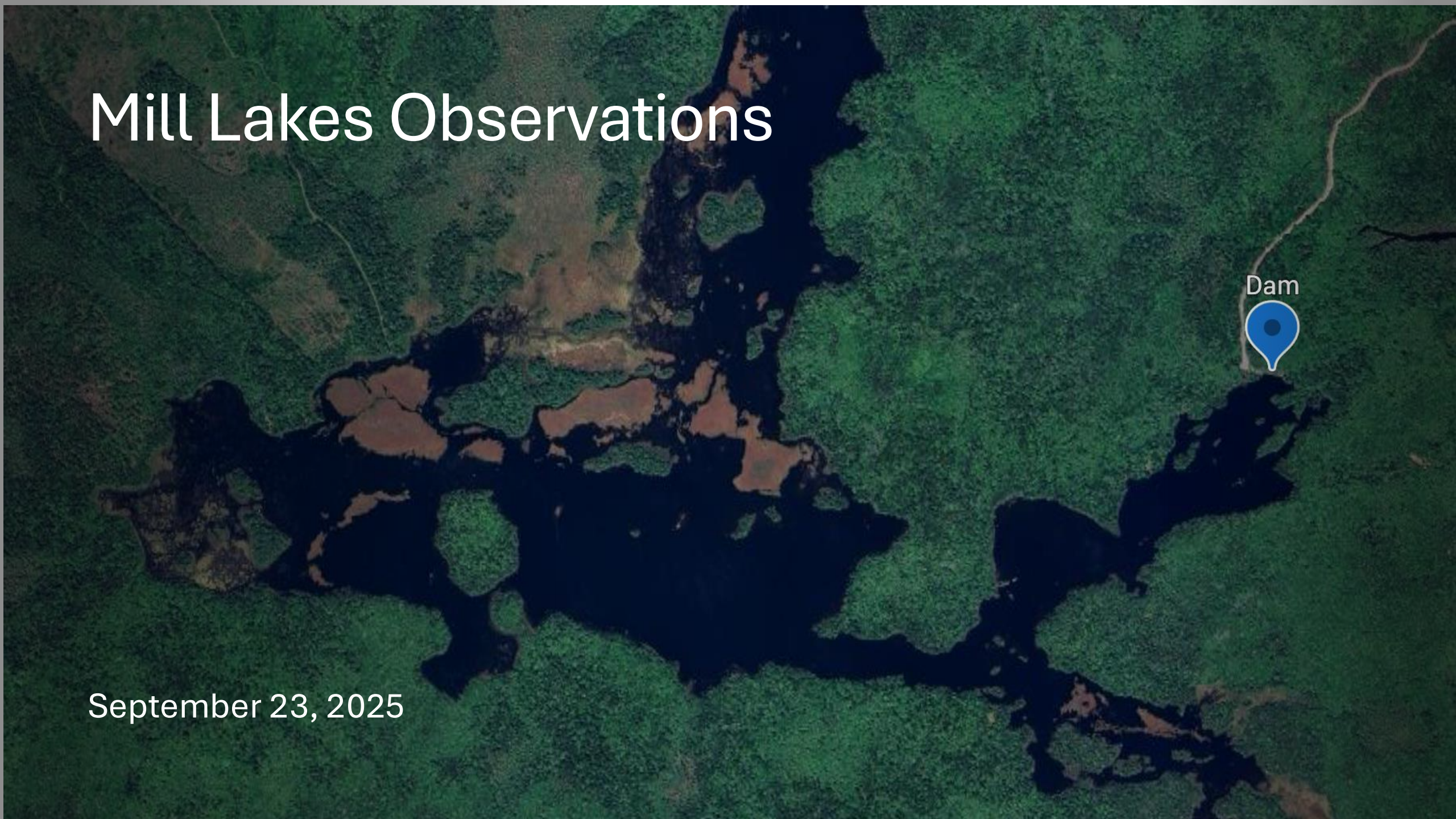
Report Reviewed by: _____
Tim Bouter, Project Engineer

Report Approved by: *M. Phillips*
Mark Phillips, Chief Administrative Officer

Mill Lakes Observations

September 23, 2025

Dam

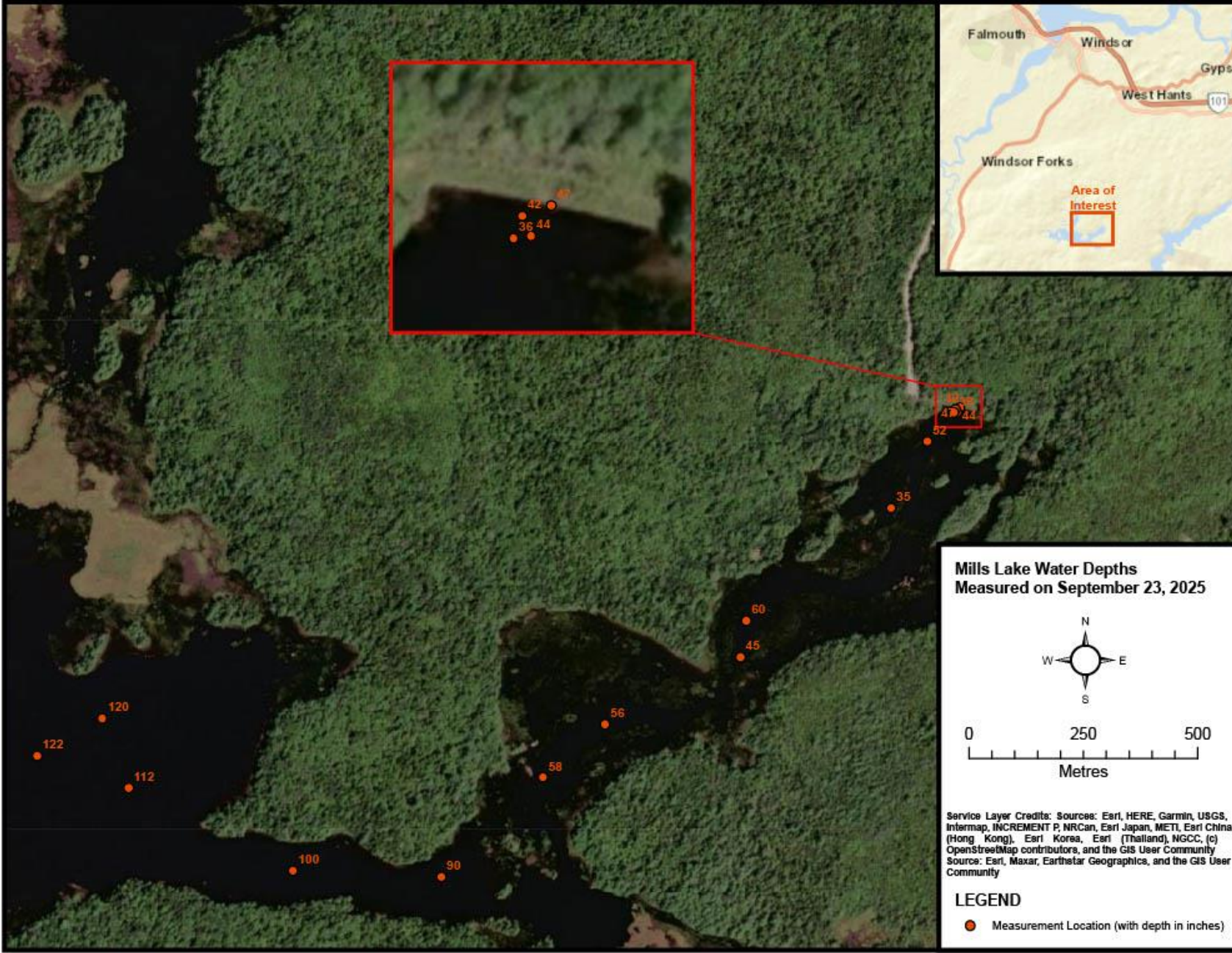




Areas Explored

- Dam Area
- Narrows
- Main Lake
- Floating Bog

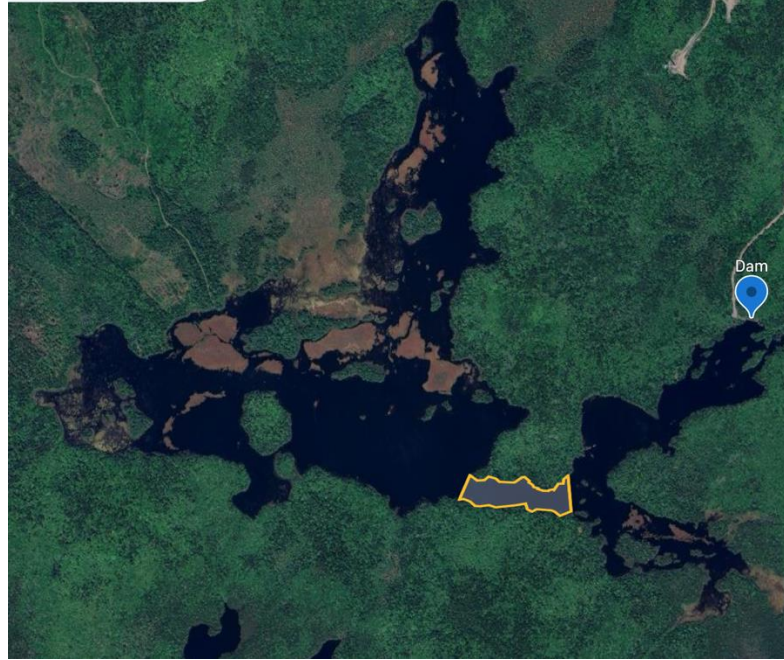
Measured Depths in Inches



Dam Area

- Measurements around the dam varied from 36-47 inches
- Further out measurements varied from 45-60 inches





Narrows

Depths measured were 90-100 inches

Main Lake Area

- Largest area of lake Approx 300,000m²
- Largest volume of water however much is not accessible due to the change in elevation in the Dam area
- Depths measured were 112-122 inches





Floating Bog

- Most of this area was dried or had limited access due to low water levels
- Typically, lower levels are found in this bog area, so considering the current drought conditions this was somewhat expected but startling to see



West Lake End of Mill Lakes

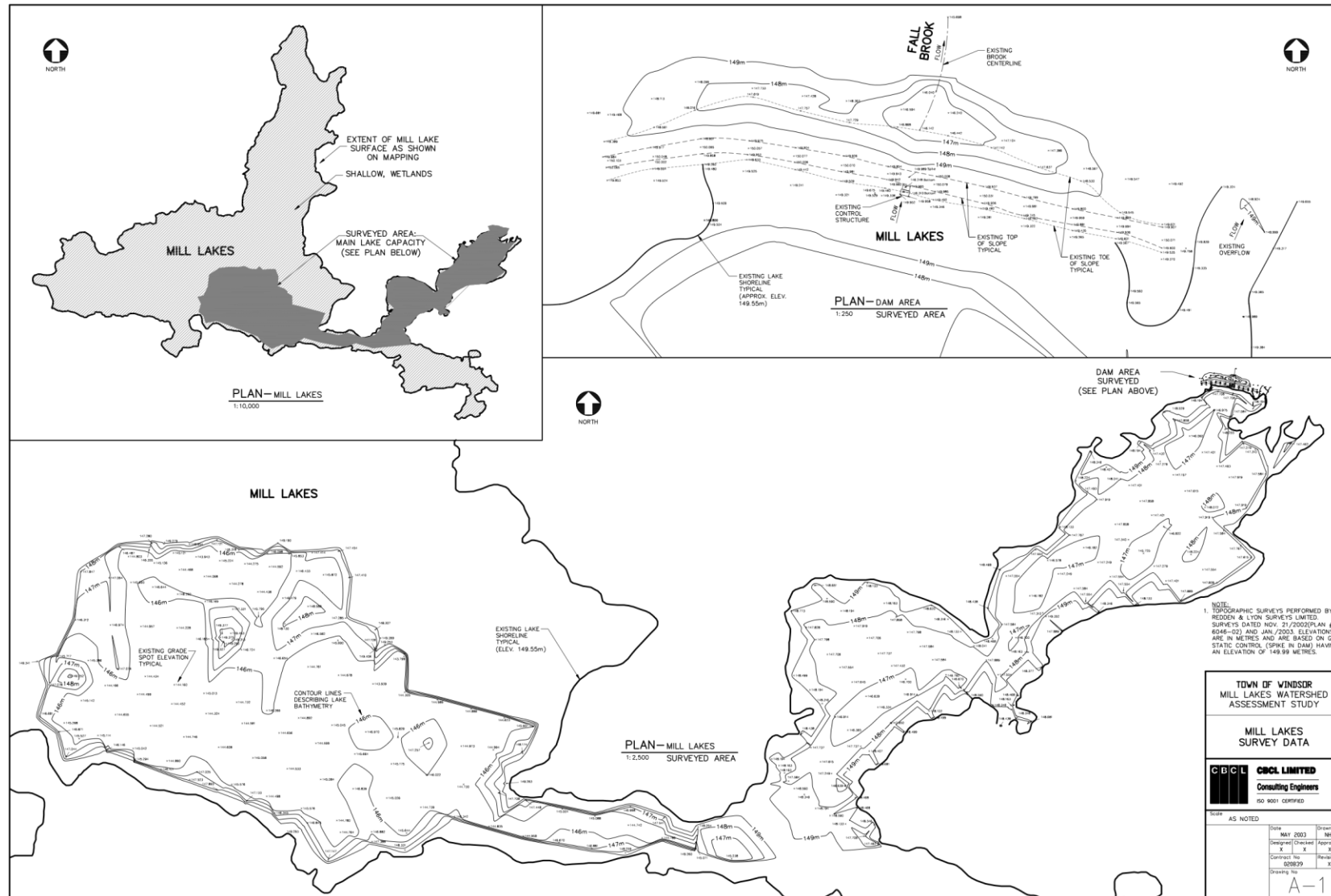


Summary of Survey

- Dammed area has an average of 47.5 inches based on measurements taken in deeper areas
- Lowest point at the Dam itself measured 47 inches
- The 0 mark on the staff guage (measured in cm) would mean approximately 40 inches (90cm) of water remains in the Dam area of the lake
- Main Lake area has a substantial amount area and volume however due to the change in elevation, a large portion of the lake is not accessible to the Dam area



2003 Survey





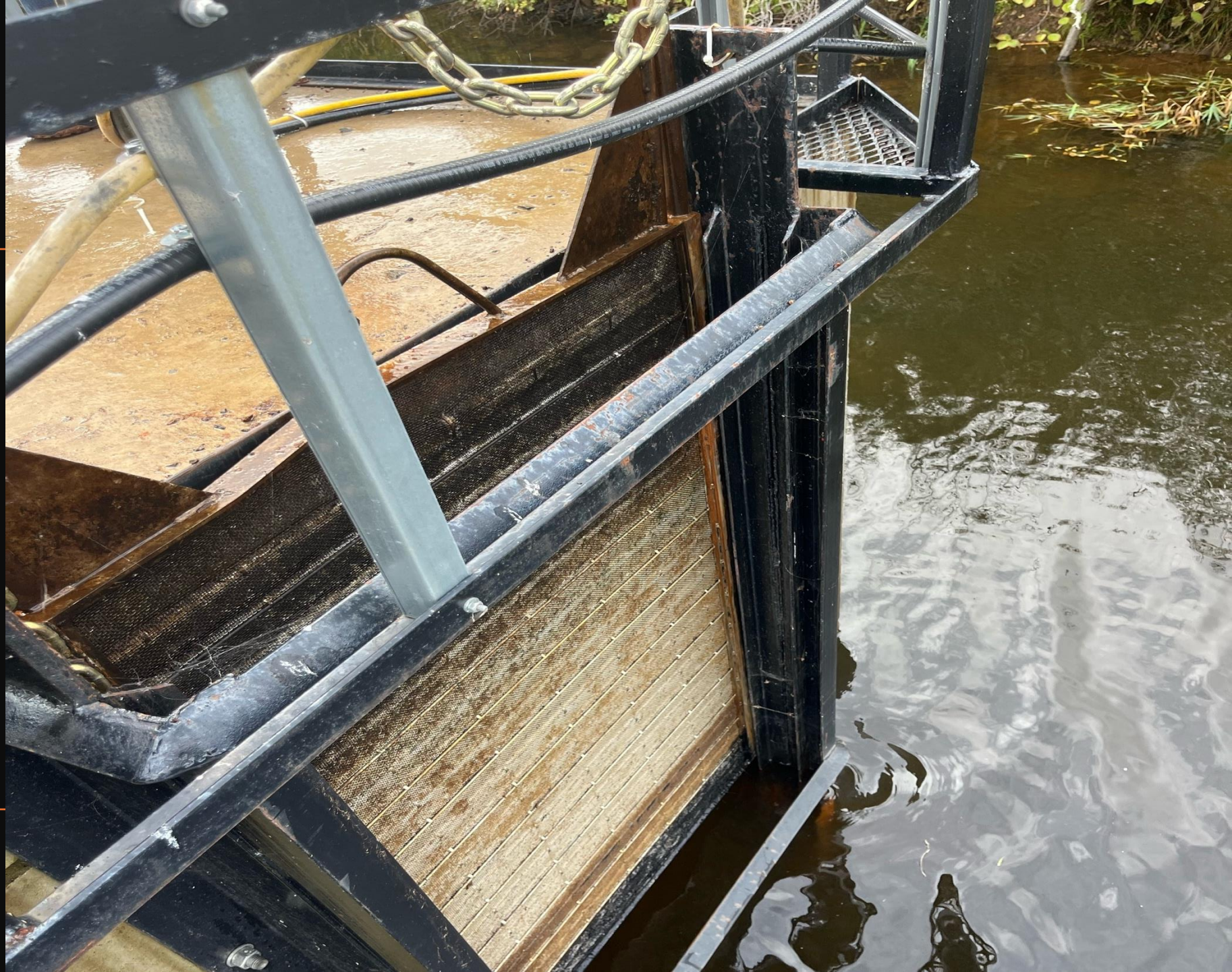
Ski Martock – Snow Making Pump System

September 26, 2025



- Intake Structure at Avon River

- Fish Screening



Pump System at Avon



Base Pump System





Connection
Point to
Martock's
Water Line

September 23, 2025

Todd Richards
West Hants Regional Municipality
PO Box 3000
100 King Street
Windsor, NS
B0N 2T0

Dear Todd Richards:

Re: Emergency Authorization for Mill Lakes Watershed Water Supply via Avon River

This letter serves as formal authorization for the West Hants Regional Municipality to utilize water from the Avon River as a supplementary source to support the existing water supply at Mill Lakes.

This authorization is granted under the following conditions:

1. **DFO Consultation and Approval**

Prior to any water withdrawal, the West Hants Regional Municipality must consult with the Department of Fisheries and Oceans (DFO). This is to ensure that all activities comply with federal regulations and do not adversely impact aquatic ecosystems or fish habitat.

2. **Withdrawal Recordkeeping**

The Municipality must maintain accurate and up-to-date records of all water withdrawals from the Avon River. These records must be made available upon request of the Department.

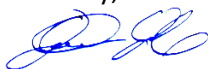
3. **Water Treatment Standards**

The Municipality must continue to adhere to all existing terms and conditions, including the water treatment standards, as outlined in its current *Approval # 2008-061216-06*. Any changes to treatment processes must be reviewed and approved by the Department. All exceedances must be reported to the Department.

This authorization expires December 1st, 2025.

If you have questions about this authorization, please contact me at joel.corcoran@novascotia.ca.

Sincerely,



Joel J. Corcoran
Regional Director, Western Region
Inspection, Compliance and Enforcement, Environment and Climate Change



Fisheries and Oceans Pêches et Océans
Canada Canada

P.O. Box 1006, Station P500
Dartmouth, Nova Scotia
B2Y 4A2

September 25, 2025

Our file Notre référence

25-HMAR-00774

West Hants Regional Municipality
Attn: Todd Richard
PO Box 3000, 100 King St.
Windsor, NS
B0N 2T0

**Subject: Supplemental Water Supply to Mill Lakes via Avon River –
Implementation of Measures to Avoid and Mitigate the Potential for
Prohibited Effects to Fish and Fish Habitat**

Dear Todd Richard:

The Fish and Fish Habitat Protection Program (the Program) of Fisheries and Oceans Canada (DFO) received your proposal on September 25, 2025. We understand that you propose to:

- Implement a contingency plan for maintaining the existing water supply at Mill Lakes.
- The contingency plan will consist of supplementing the water supply from the Avon River to the Mill Lakes Watershed. Should the watershed receive inadequate rainfall to stabilize the water supply, the Regional Municipality of West Hants will implement the contingency plan which consists of the following:
 - The municipality will connect to Ski Martock's water intake system, located on the Avon River and relay water to Mill Lakes (approximately 2.5 km). The relay will consist of the installation of above-ground temporary piping which will use existing access roads between Ski Martock and Mill Lakes.
 - The flow rate needed to supply water to Mill Lakes is estimated to be between 140 to 160 m³/hour (1.4 to 1.6 cfs).

- The objective of the plan is to maintain water levels in Mill Lakes to prevent critical low levels, which could result in an interruption in water and fire protection supply.

We understand the following aquatic species listed under the *Species at Risk Act* may use the area in the vicinity of where your proposal is to be located:

- Atlantic Salmon (Nova Scotia Inner Bay of Fundy (iBoF) Population) (*Salmo Salar*) designated as Endangered.

We understand the following aquatic species currently under consideration for listing under the *Species at Risk Act* may use the area in the vicinity of where the proposal is to be located:

- American Eel (*Anguilla rostrata*) designated as Threatened by the Committee on the Status of Endangered Wildlife in Canada (COSEWIC).

In addition, the following aquatic species are subject to the *Aquatic Invasive Species Regulations* and may be found in the vicinity of your proposed work, undertaking, or activity:

- Smallmouth Bass (*Micropterus dolomieu*); and
- Chain Pickerel (*Esox niger*).

Our review considered the following information:

- E-mail correspondence between Todd Richard and The Program, received September 25, 2025.

Your proposal has been reviewed to determine whether it is likely to result in:

- the death of fish by means other than fishing and the harmful alteration, disruption or destruction of fish habitat which are prohibited under subsections 34.4(1) and 35(1) of the *Fisheries Act*;
- effects to listed aquatic species at risk, any part of their critical habitat or the residences of their individuals in a manner which is prohibited under sections 32, 33 and subsection 58(1) of the *Species at Risk Act*; and
- The introduction of aquatic species into regions or bodies of water frequented by fish where they are not indigenous, which is prohibited under section 10 of the *Aquatic Invasive Species Regulations*.

The aforementioned outcomes are prohibited unless authorized under their respective legislation and regulations.

To avoid and mitigate the potential for prohibited effects to fish and fish habitat (as listed above), we recommend implementing the measures listed below:

- Follow DFO's Measures to Protect Fish and Fish Habitat (<https://www.dfo-mpo.gc.ca/pnw-ppe/measures-mesures-eng.html>); and

- Use interim code of practice: End-of-pipe fish protection screens for small water intakes in freshwater ([Interim code of practice: End-of-pipe fish protection screens for small water intakes in freshwater](#)).

Provided that you incorporate these measures into your plans, the Program is of the view that your proposal is not likely to result in the contravention of the above mentioned prohibitions and requirements.

Should your plans change or if you have omitted some information in your proposal, further review by the Program may be required. Consult our website (<http://www.dfo-mpo.gc.ca/pnw-ppe/index-eng.html>) or consult with a qualified environmental consultant to determine if further review may be necessary. It remains your responsibility to remain in compliance with the *Fisheries Act*, the *Species at Risk Act* and the *Aquatic Invasive Species Regulations*.

It is also your *Duty to Notify* DFO if you have caused, or are about to cause, the death of fish by means other than fishing and/or the harmful alteration, disruption or destruction of fish habitat. Such notifications should be directed to the National Environmental Emergency Center (NEEC) at 1-800-565-1633 and to OccurrencesMaritimes.XMAR@dfo-mpo.gc.ca.

We recommend that you notify this office at least 10 days before starting your project and that a copy of this letter be kept on site while the work is in progress. It remains your responsibility to meet all other federal, territorial, provincial and municipal requirements that apply to your proposal.

Please note that the advice provided in this letter will remain valid for a period of 1 year from the date of issuance. If you plan to execute your proposal after the expiry of this letter, we recommend that you contact the Program to ensure that the advice remains up-to-date and accurate. Furthermore, the validity of the advice is also subject to there being no change in the relevant aquatic environment, including any legal protection orders or designations, during the 1 year period.

If you have any questions with the content of this letter, please contact Sean Wilson at our Dartmouth office at (902) 499-6397, or by email at Sean.Wilson@dfo-mpo.gc.ca. Please refer to the file number referenced above when corresponding with the Program.

Yours sincerely,

Sean Wilson
A/Senior Biologist, Hydro and Flows
Ecosystems Management – Regulatory Reviews
Fisheries and Oceans Canada, Maritimes Region

25-HMAR-00774

- 4 -

CC:

DFO Conservation and Protection, Maritimes Region
Martin Croney – West Hants Regional Municipality
Mark Phillips – West Hants Regional Municipality