

DEEP LAKE WATER COOLING EXPANSION

CONSTRUCTION UPDATE

JUNE 2021



CITY OF TORONTO – LAND ACKNOWLEDGEMENT

We acknowledge the land we are meeting on is the traditional territory of many nations including the Mississaugas of the Credit, the Anishnabeg, the Chippewa, the Haudenosaunee and the Wendat peoples and is now home to many diverse First Nations, Inuit and Métis peoples.

We also acknowledge that Toronto is covered by Treaty 13 with the Mississaugas of the Credit.





This meeting is being recorded

CODE OF CONDUCT

- **Be patient:** Virtual meetings don't always run as smoothly as planned.
- **Be brief:** Limit yourself to one question or comment when called on to speak.
- **Be respectful:** The City of Toronto is an inclusive public organization. Discriminatory, prejudicial or hateful comments and questions will not be tolerated and you will be removed from the meeting.

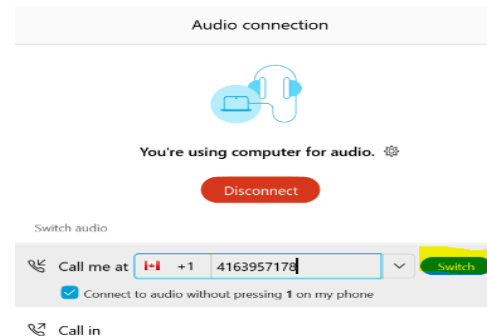
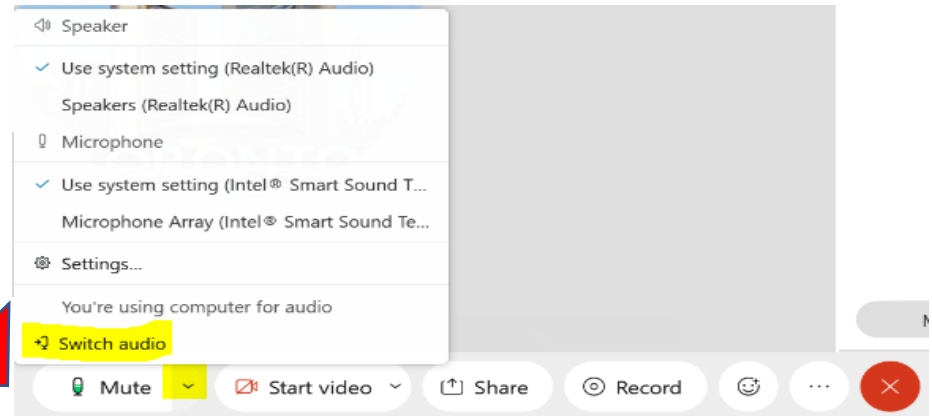


We want to hear from you – all questions are good questions!

WEBEX AUDIO TROUBLE?

Webex can call you!

1. Click **the arrow** beside your mute button
2. Click **“Switch audio”**
3. Use **“Call me”** function
 - Enter your phone #
 - Webex will call your phone
 - No long distance charges



AUDIO STILL NOT WORKING?

Call Into the Meeting

Dial: 416-915-6530

**When prompted for a meeting number
enter:**

177 350 6547

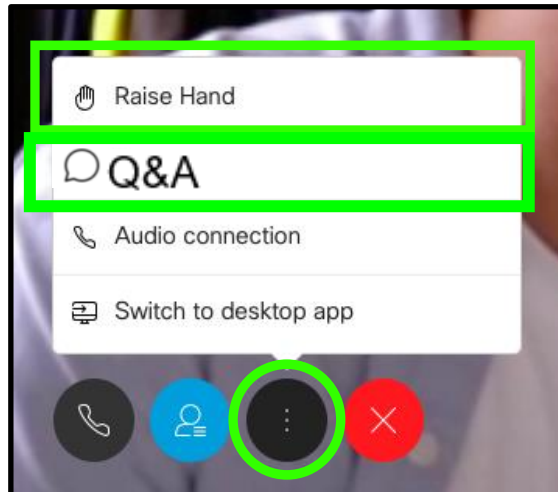
PARTICIPATING BY COMPUTER

Raise your
hand or
type your
question



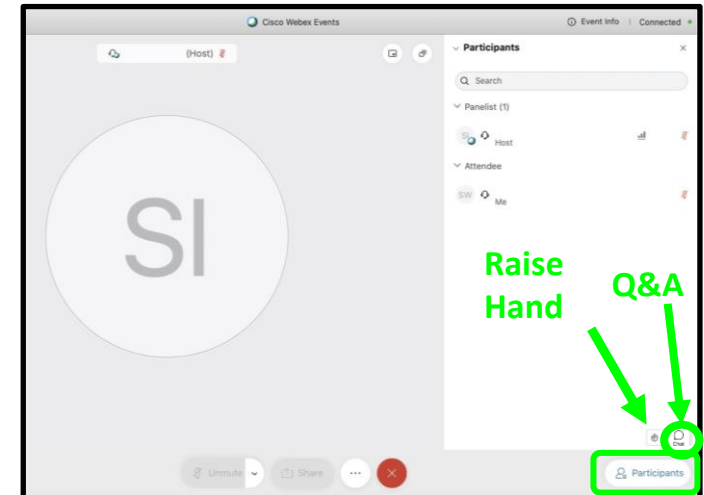
Via the internet browser

Click the “...” button at the bottom of the video window and select “Raise Hand” or “Q&A”.



Via the Webex App

Click the Participants button at the bottom of the video (the Participants panel will open to the right). Then click the “Raise Hand” or “Q&A” button at the bottom right.



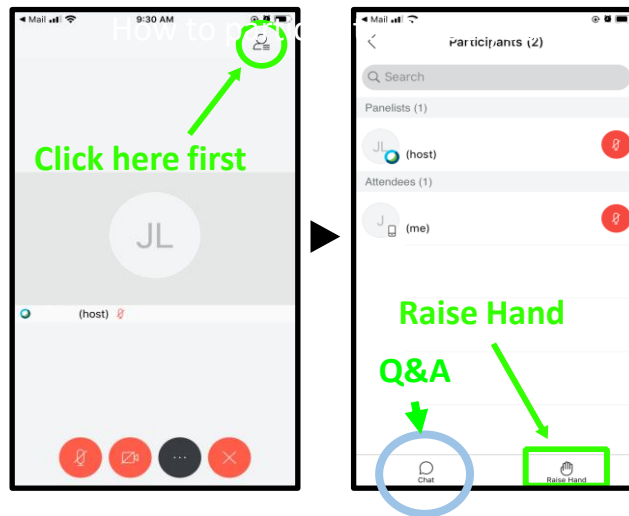
PARTICIPATING BY SMARTPHONE OR TABLET

Raise your
hand or
type your
question



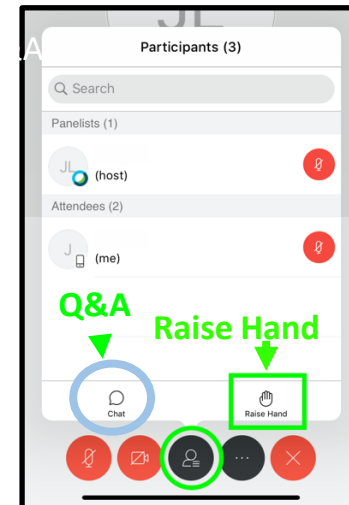
For smartphones

Click the Participants panel button at the top right corner of the screen. Then click “Raise Hand” or “Q&A” at the bottom right of the screen.



For tablets

Click the Participants panel button at the bottom of the screen. Then click the “Raise Hand” or “Q&A” button at the bottom right.



RAISING YOUR HAND BY PHONE



- To raise your hand virtually, key in *3.
- The Host will see a hand up beside the last four digits of your phone number
- During the Q&A period, the Host will unmute you and let you know that you can speak

INTRODUCTIONS



The City of Toronto

- Toronto Water
- Parks, Recreation and Forestry



Enwave Energy Corporation

Bty



C&M McNally



R.V. Anderson Associates Limited

PROJECT PROPONENTS



The City of Toronto

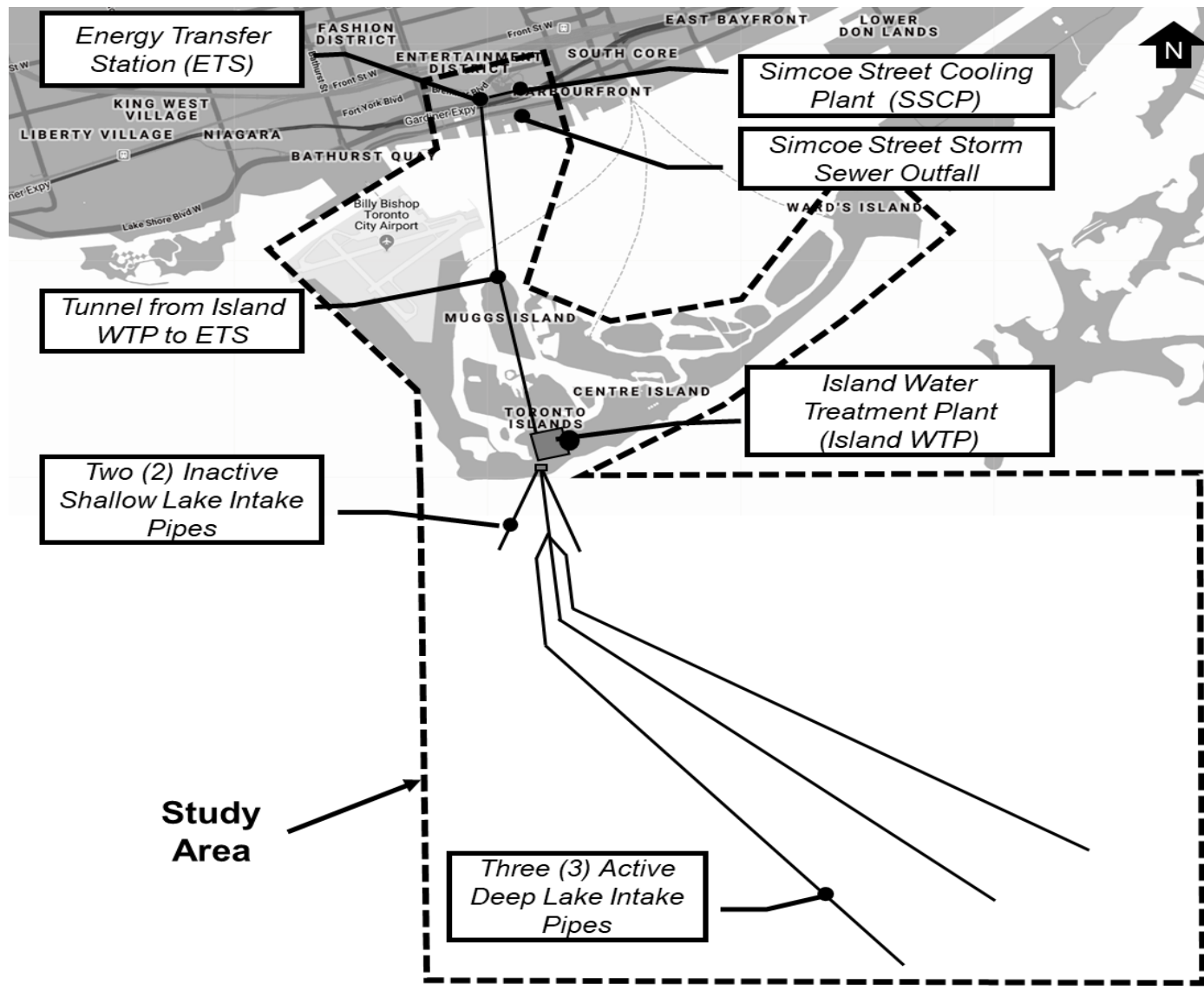
- The City's Island Water Treatment Plant operates year-round to produce over 100 billion litres of water annually, approximately 24% of Toronto's drinking water each year
- The City's three (3) active existing intake pipes in Lake Ontario supply raw water to the Island WTP, which is a key part of the existing Deep Lake Water Cooling Supply



Enwave Energy Corporation

- Enwave provides cooling to over 80 buildings in downtown Toronto through its District Energy System.
- Under an agreement with the City, Enwave contributed to the construction of City infrastructure, including the three (3) existing intake pipes in Lake Ontario
- Lake-cooled water from the Island WTP intakes, as part of the Deep Lake Water Cooling supply, chills water in the District Energy System, providing cooling to buildings downtown

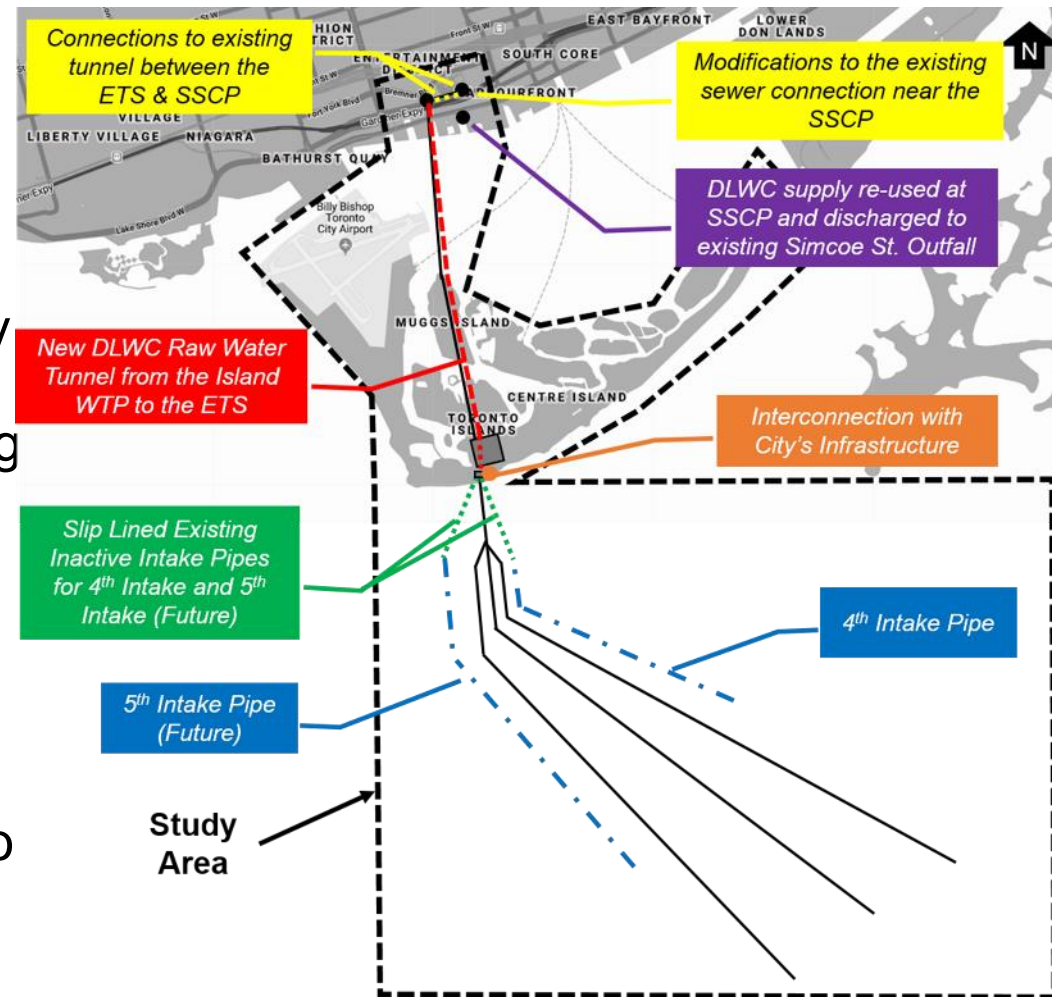
DLWC Expansion will increase the capacity of Enwave's low carbon deep lake water cooling system to meet increasing demand. The 4th intake will provide 18,000 tons of additional cooling while future proofing a further 5th intake.



SCOPE OF WORK

DLWC EXPANSION OVERVIEW

- New 4th and 5th Intake, interconnected with City's raw water supply
- Raw water bypass Island WTP
- New tunnel to Enwave's Energy Transfer Station (ETS), separate from the City's drinking water supply
- Heat exchangers at the ETS, continues to Simcoe Street Cooling Plant (SSCP) via an existing tunnel
- Raw water discharged back into Lake Ontario via an existing connection to the City's stormwater system



PUBLIC ENGAGEMENT

Points of Contact	Date
Notice of Commencement and Project Introduction Newsletter	February 6, 2020
Follow up with potential stakeholders	Ongoing throughout study
Notice of Public Consultation Event and Website Posted	May 7, 2020
Councillor Cressy Newsletter	May 15, 2020
Public Consultation Event	May 21, 2020
Publication of Notice of Study Completion and Study Report Public Review	September 11, 2020
Study Completion	October, 2020

Contact List Included		
Municipal, Provincial and Federal Agencies	Artscape / Gibraltar Point Centre for the Arts	Toronto Islands Residential Community Trust Corporation
Indigenous Groups	Island Yacht Club	Toronto Island Community Association
Lake Ontario Waterkeeper	Toronto Island Sailing Club	Toronto Island History Project
Swim Drink Fish	Toronto Island Marina	Waterfront Toronto
Great Lakes Fishery Commission	Island Public/Natural Science School	Great Lakes Waterfront Trail



CONSTRUCTION

CONSTRUCTION PLANS

Construction generally will involve:

1. Construction of a new deep shaft and raw water intake chamber – south of Lakeshore
2. Installation of a new 1600mm HDPE intake pipe stretching out into Lake Ontario
3. Upgrades inside the Water Treatment Plant including a small building addition inside the facility grounds
4. Miscellaneous ducting/conduits linking the new construction structures to the Water Treatment Plan

Construction anticipated to strictly stay within the fenced areas for the majority of the works.

Minor impacts will be noticed to flag construction vehicles in/out of the site compounds.

ISLAND ACCESS

- Equipment and materials via barge to Island WTP dock and through the Airport Ferry
 - Deliveries are coordinated with IWTP and City of Toronto staff
- Personnel via pontoon boat and public ferry



SHAFT 3 PRELIMINARY STAGING PLAN



North Laydown Compound for materials, equipment, office trailers and washroom facilities. Tree removals where required and protected where possible

South Working Compound where the majority of the Works occur

Dune area to remain

New Chamber

Deep Shaft

SHAFT 3 – PRELIMINARY FINAL SITE LAYOUT

- North Laydown Compound
 - Will be restored to original condition with topsoil/sod
 - New trees will be planted
- South Working Compound
 - Concrete structure will project out of the ground and is needed for operation & maintenance of the water system
 - Access area will be asphalted to allow maintenance personnel access and laydown of equipment
 - Area will be fenced/gated
 - Security cameras installed
 - Dune areas will be restored with minor impact where the new raw water chamber will be situated

SCHEDULE

TASK	TIMING	NOTES
Set up Compound South Working and North Laydown areas	April - May 2021	Secure Fencing, Advance Warning Signage to Pedestrians/Motorists
New Raw Water Chamber Ground Support HDPE Pipe Installation in the Lake Setup Shaft equipment and hole drilling program	Spring – Fall 2021	By DEAN CONSTRUCTION South Compound
Water Treatment Plant Works	Spring – Fall 2021 Spring – Fall 2022	Work in the WTP facility grounds
Shaft Excavation	Spring – Fall 2022	South Compound
In Water – Preparation Work In Water – Trenching In Water – Pipe Installation	Summer 2022	By DEAN CONSTRUCTION in the Lake
New Raw Water Chamber - Pipe and Concrete Work	Summer 2022	South Compound
Mechanical / Electrical Works – WTP and Shaft / Raw Water Chamber	2023	WSP & South Compound
Restoration of affected area	Spring 2024	Approved plans by City of Toronto



RESTORATION

OVERVIEW

- North Staging Area
 - Tree replanting
 - Lawn restoration
- South Working Area
 - Plant rescue
 - Naturalized area restoration
 - Boardwalk reconstruction
 - Sediment control
- Other Considerations
 - Beach remains open
 - Road damage restoration
 - Additional Projects



NORTH LAYDOWN AREA

- Some large trees will be protected.
- Compensation for injuries and removals has been provided.
- A replanting plan is being developed.
- The lawn area will be restored by the contractor.
- A letter of credit has been secured in the unlikely event the City needs to do any lawn restoration.



SOUTH WORKING AREA

- Plant rescue of significant species was undertaken in Fall 2020 for replanting.
- Area based compensation has been provided for the restoration post-construction.
- Parks, Forestry & Recreation will be doing the restoration of the naturalized area.
- Compensation has been provided for the boardwalk reconstruction and a post and paddle fence, but the location may change.
- Sedimentation control fencing shall be in place throughout construction.



OTHER CONSIDERATIONS

- Beach
 - Most of Gibraltar Beach will remain open.
- Lakeshore Avenue
 - Any damage to road will be restored by the contractors.
 - A letter of credit has been secured in the unlikely event the City needs to do any road restoration.
- Additional Projects
 - City Council has directed the study of the use of easement revenue for additional Toronto Islands Projects.
 - Will be evaluated through the Toronto Islands Master Plan.

QUESTIONS & ANSWER PERIOD

How to Participate

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Project Team

The City of Toronto

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