



Date: 2021-11-10

File / dossier : 6.02.04

Edocs pdf : 6679090

**Presentation from the  
Canadian Nuclear Laboratories  
on Port Hope Area Initiative**

**Présentation des Laboratoires  
Nucléaires Canadiens sur  
l'Initiative dans la région de  
Port Hope**

**Regulatory Oversight Report for  
Canadian Nuclear Laboratories  
Sites: 2020**

---

**Rapport de surveillance  
réglementaire des sites des  
Laboratoires Nucléaires  
Canadiens : 2020**

---

Commission Meeting

Réunion de la Commission

November 25, 2021

Le 25 novembre 2021

# Port Hope Area Initiative Update for Commission

CNL Regulatory Oversight Report  
November 25, 2021





# *Land Acknowledgment*



# Port Hope Area Initiative - Indigenous Engagement

## CNL Commitment

- Recognizing Indigenous rights and interests
- Advance reconciliation through meaningful actions
- Continue to build relationships with Indigenous communities with ongoing learning about values/interests
- Move toward increased inclusion and participation
- Future project planning focused on environmental protection and sustainability, in consideration of traditional knowledge systems
- Enhance all communications, plans, reporting to balance language and acknowledge Indigenous rights/perspectives

## First Nations and Indigenous Organizations

- Alderville First Nation
- Curve Lake First Nation
- Hiawatha First Nation
- Mississaugas of Scugog Island First Nation
- Anishinabek Nation
- Chippewas of the Williams Treaties
- Mohawks of the Bay of Quinte
- Métis Nation of Ontario, local Métis Councils

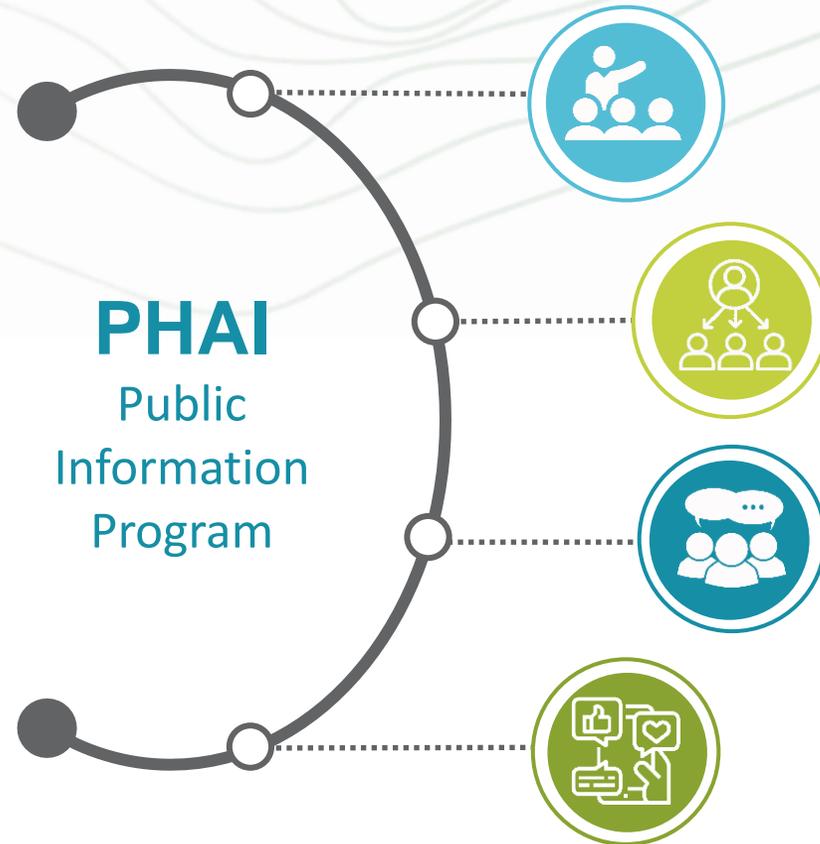
## Engagement

- Williams Treaties First Nations monthly meetings
- Ongoing information sharing/project updates
- Engagement meetings, virtual tours
- Newsletters, bulletins, event invitations, disclosures
- Observation and demonstration opportunities
- Archaeological protocol



# Public Engagement 2021 Jan - Oct

Successful Shift From In-Person to Virtual Outreach & Events



18 Presentations

33 Stakeholder Engagements

4,046 Public Interactions

1,871 Phone calls    202 Meetings  
1,718 Emails        357 Property visits

Online Engagement

594 Social media posts  
6,353 Website visits



# Port Granby Storage Mound Complete – September 2021



# Port Granby Milestone Event – October 22, 2021

- Celebrating cap/closure of storage mound
- CNL/AECL executives, Municipality of Clarington Councillor offered congratulations



*CNL President & CEO Joe McBrearty (left), Municipality of Clarington Councillor Margaret Zwart, AECL President & CEO Fred Demarkar, CNL Historic Waste Program General Manager Mark Hughey*

# Port Granby Waste Removal Complete – November 2020

Remediation of ~1.3 million tonnes low-level radioactive waste



# Former Waste Management Site



May 2019

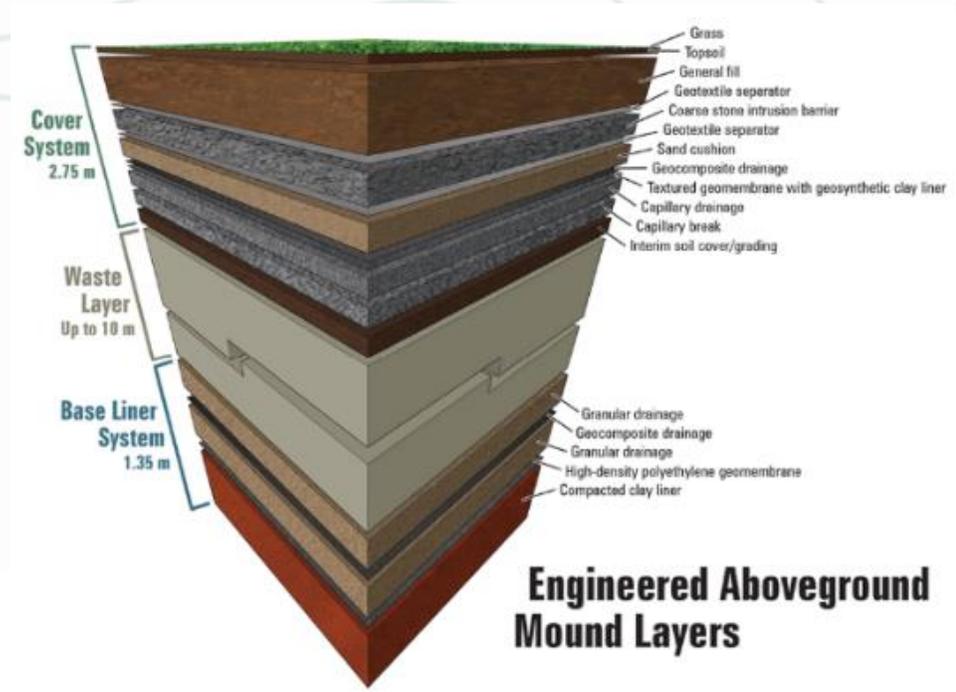


September 2021

# Port Granby Project Long-Term Waste Management Facility



# Port Granby Mound – Cap & Close



# Port Granby Water Management

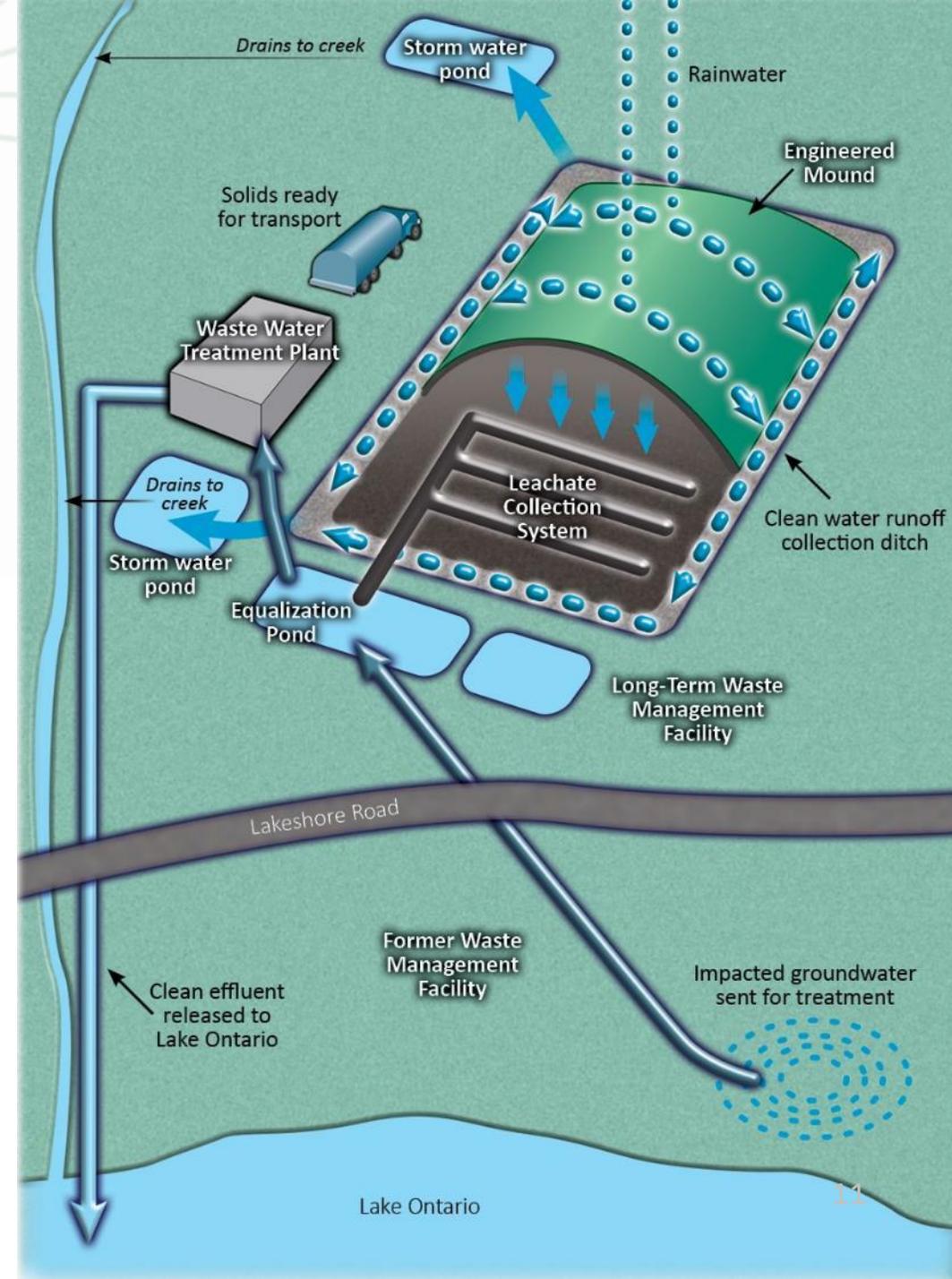
- Port Granby Project Waste Water Treatment Plant treated surface water during construction/remediation
- Storage mound diverts clean water (rain/snow) to perimeter ditches, into storm water ponds before discharge off site
- Continues to treat mound leachate, impacted groundwater from former site

## CNSC Licence Amendment 2019

- Reflects release limits of treated water set for new plant
- Confirms removal of broad list of nuclear/hazardous substances, meeting requirements for discharge to Lake Ontario - enhanced protection of Great Lakes Basin ecosystem

## Processing to Date

- ~ **768,000 m<sup>3</sup>** clean water released to Lake Ontario
- ~ **2,855 tonnes** solids to safe, long-term storage



# Port Granby Water Management

## Onsite Water Storage

- Eight large tanks effective in addressing water challenges – one remains

## Transporting Waste Water

- Small volumes of Port Granby Waste Water Treatment Plant residual waste (liquid brine/solids)
- Safely transported to Port Hope Project Waste Water Treatment Plant
- Compliant with all regulatory requirements

## East Gorge Groundwater Treatment



- Long-term collection system at former site treats migrating, contaminated groundwater
- Continue operation, regular monitoring until groundwater flow reaches background levels (likely several decades)
- Pumps water to plant for treatment, testing before release to Lake Ontario



# Removal of Site Infrastructure

- Lakeshore Road realignment
- Removal of infrastructure, internal roads
- Removal of Lakeshore underpass
- Contractor demobilization



# Port Granby Phase 3 - Long-Term Monitoring



## Waste Water Treatment

- East Gorge groundwater collection
- Waste Water Treatment Plant: storage mound leachate, East Gorge groundwater collection
- Plant output safely transported - licensed, offsite storage



## Environmental Monitoring

- Air, water, groundwater, soil, plants, wildlife monitoring continues



## Long-Term Waste Management Facility Monitoring

- Site remains fenced
- Mound surface, internal sensors
- Grounds monitored, maintained



## Continued Safety Oversight

- Plans in place to ensure any event is properly managed
- Minimize risk to people and environment

# Port Granby Project - Video

Media Playback Audio Video Subtitle Tools View Help

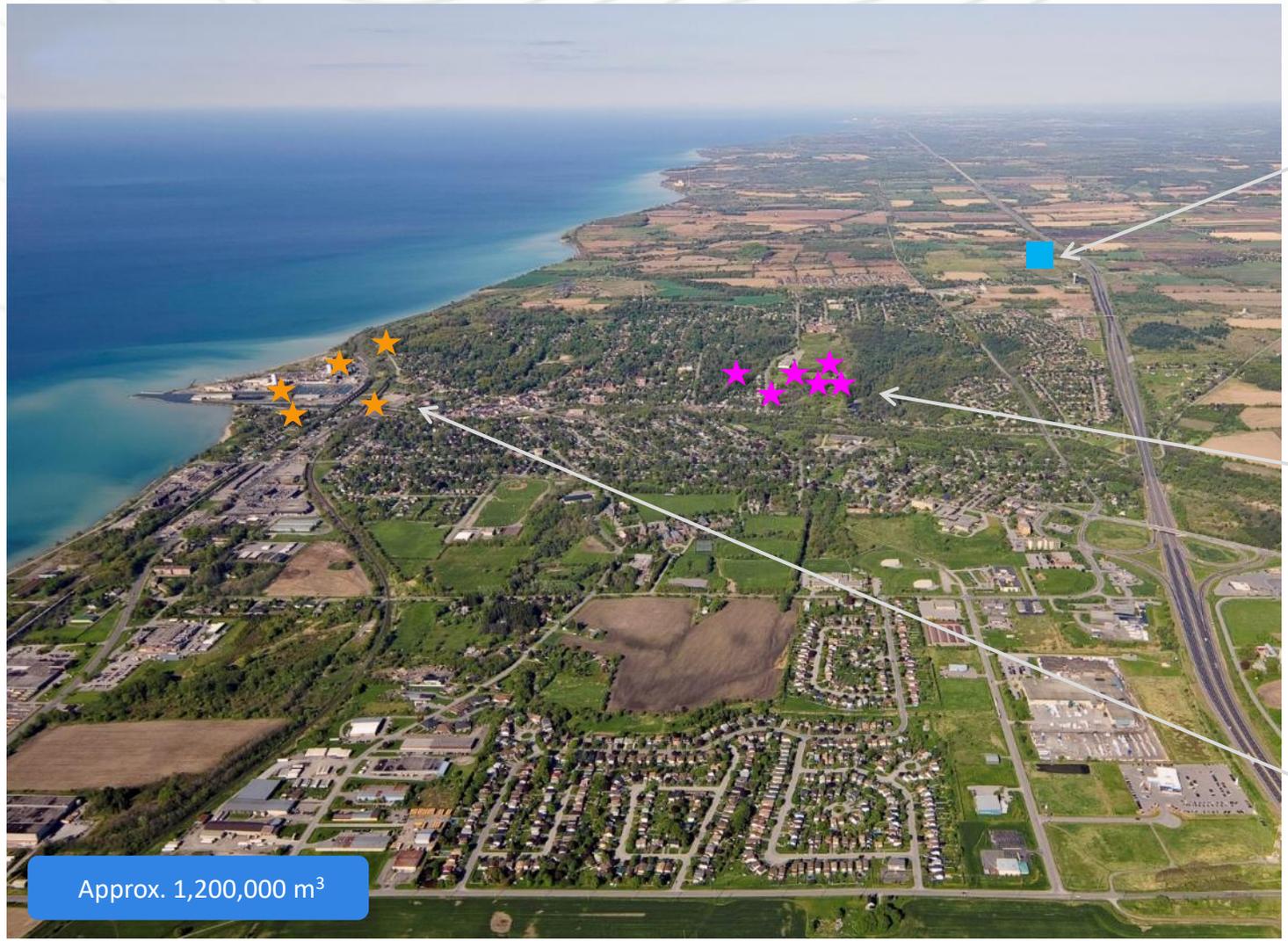
 **PORT HOPE AREA INITIATIVE**

# Port Granby Project

 Canadian Nuclear Laboratories | Laboratoires Nucléaires Canadiens

00:03 01:22 85%

# Port Hope Project



# Port Hope Waterfront Sites



-  Remediation complete
-  Waste removed
-  Remediation underway

# Port Hope Harbour and Centre Pier

- Construction of dewatering area for mechanically dredged sediments
- Dredging underway, sediment collected, transferred to dewatering cell for solidification
- Contaminated soils and water transported to Port Hope Long-Term Waste Management Facility
- Site preparation for installation of upgraded water treatment system
- Ongoing coordination with Cameco to support works in outer harbour area



# 95 Mill Street South – Remediation Complete

- Removed ~ 16,700 m<sup>3</sup> low-level radioactive waste
- Original estimate ~12,000 m<sup>3</sup>
- Waste safely transported to Port Hope Project Long-Term Waste Management Facility



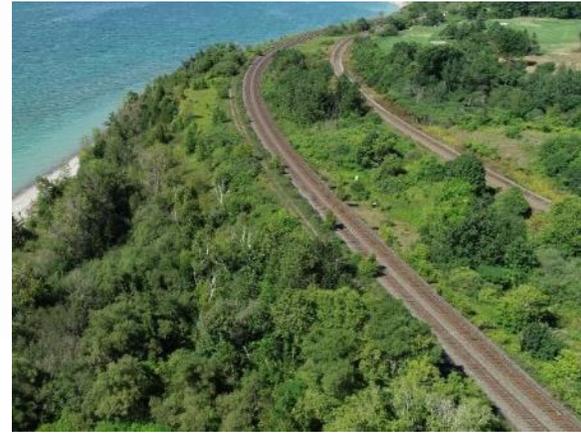
# Additional Major Sites



Strachan Street Ravine  
Remediation underway



CN/CP Viaducts  
Remediation underway  
Design - safe set-backs from  
railroad infrastructure



Alexander Street Ravine  
Design package underway  
Targeted areas of remediation



Waterworks West  
Design package underway

# Industrial Sites & Sculthorpe Marsh



- Chemetron Lagoon
- Sculthorpe Marsh



Centre Pier

ESA\* Phase 1 & 2 complete –  
under MECP\*\* review  
Remediation of industrial  
waste part of harbour  
project work – 2024



Former  
Coal Gasification Plant

ESA Phase 1 & 2 complete –  
under MECP review  
Remediation 2022/23



Lion's Recreation  
Centre Park

ESA Phase 1 & 2 complete –  
under MECP review  
Remediation 2022/23

\* Environmental Site Assessment  
\*\* Ministry of Environment, Conservation & Parks (Ontario)

# Highland Drive Area Sites



-  Waste removed
-  Remediation underway

# Highland Drive Landfill & Area



## Pine Street North Extension Temporary Storage Sites

Waste removed 2019

Using as laydown area for  
Pine Street North Extension  
Consolidation Site remediation



## Highland Drive Landfill

Submitted Environmental  
Compliance Approval  
Amendment

Remediation 2023



## Highland Drive South Ravine

Environmental risk  
assessment underway

Remediation 2023



## Highland Drive Roadbed

Remediation part of  
Small-Scale Sites road works

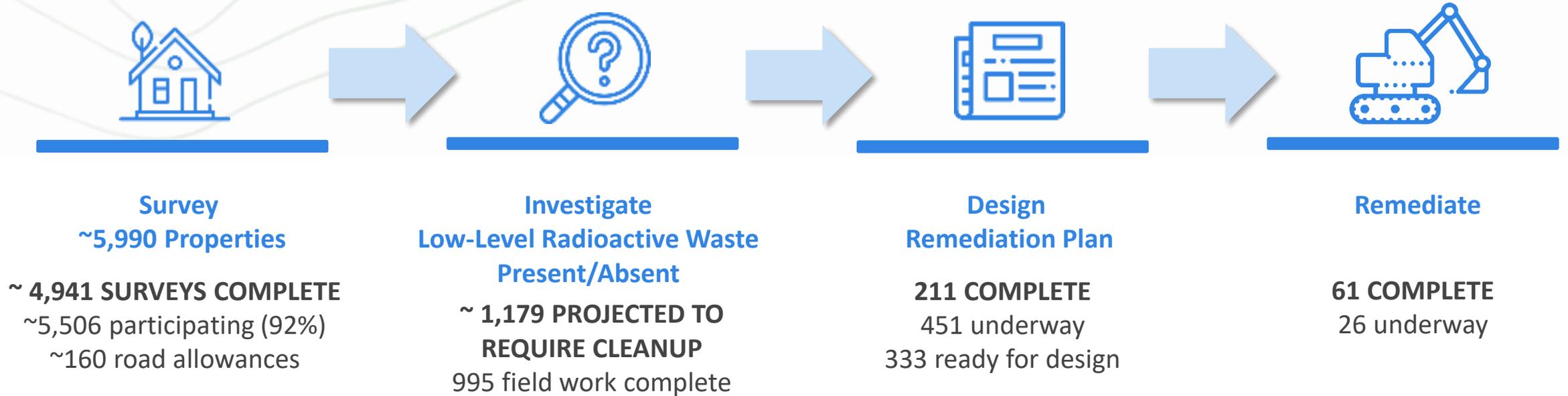
Remediation in conjunction  
with landfill and Pine Street  
North Extension roadbed

# Pine Street North Extension Consolidation Site

- Remediation began May 2021 - progressing safely
- ~ 60,500 m<sup>3</sup> low-level radioactive waste excavated
- > 70% of total anticipated volume removed
- Excavation/remediation continues to year end
- Verification, seeding, demobilization - early 2022



# Small-Scale Sites: Radiological Survey



# Small-Scale Sites Remediation



# Small-Scale Sites – Remediation & Restoration

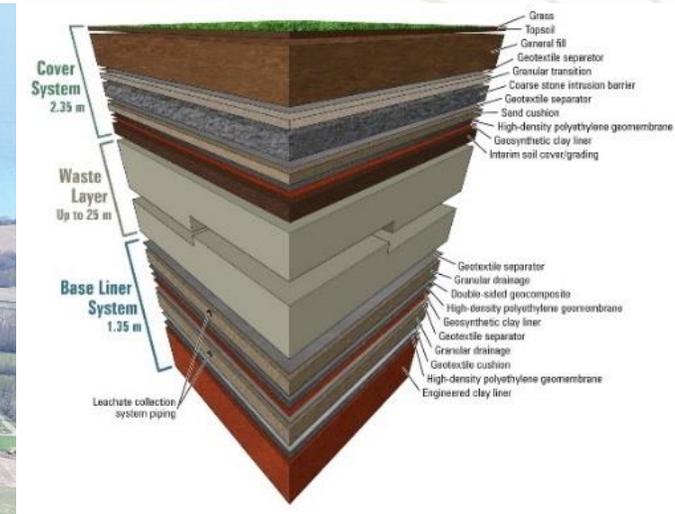


September 2019



August 2021

# Port Hope Long-Term Waste Management Facility



# Port Hope Project Long-Term Waste Management Facility

~1.2 million tonnes low-level radioactive waste safely placed



September 2021

# Port Hope Project Water Management

- ~ **670,000 m<sup>3</sup>** clean water released to Lake Ontario
- ~ **2,160 tonnes** solids to safe, long-term storage

## Proposed CNSC Licence Amendment 2022

- Combine licences for Port Granby Project, Port Hope Project
- Incorporate approved, lower water release limits



# Application to Change Port Hope Area Initiative Cleanup Criteria

- Extensive project experience, ongoing feedback and concern expressed by Port Hope property owners, broader community
- March 2020 application to CNSC to change cleanup criteria for arsenic and uranium
- September 2020 – launched targeted engagement program: share information/encourage feedback
- January 2021 – submitted *Stakeholder & Indigenous Engagement Report* to CNSC
- Ongoing – providing updated information, gathering additional feedback
- Updated engagement stakeholder and Indigenous engagement reports to be submitted to CNSC in coming months



Thank You

**HISTORIC WASTE PROGRAM MANAGEMENT OFFICE**

25 Henderson Street  
Port Hope, ON L1A 0C6  
Tel: 905.885.0291  
[info@phai.ca](mailto:info@phai.ca)  
PHAI.ca

