



Ajax Water Supply Plant Expansion and Harwood Avenue Pumping Station Upgrades

Works Committee Meeting – February 5, 2025



Agenda

1. Introductions
2. Presentation Goals
3. Overview of South Durham Water Supply Systems
4. Ajax Water Supply Plant (WSP) Expansion Project Overview
5. Harwood Avenue Pumping Station (PS) Upgrades Project Overview
6. Questions

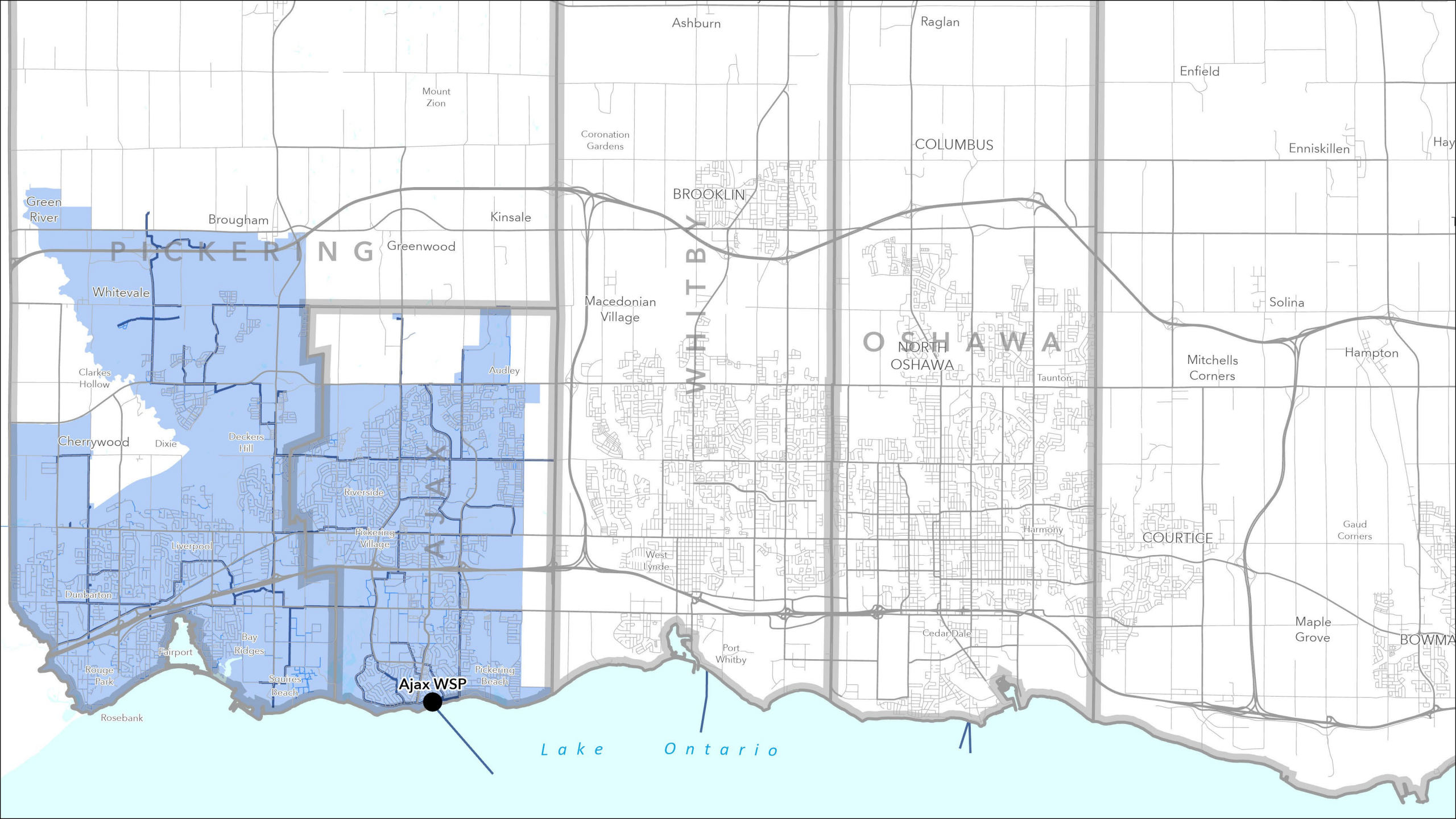
Introductions/Presentation Goals

Introductions

- Region of Durham staff

Goals of the Presentation

- To provide an overview of the Pickering/Ajax/Whitby/Oshawa/Courtice Water Supply System
- To provide an overview of the Ajax WSP Expansion project
- To provide an overview of the Harwood Avenue PS Upgrades project



Ashburn

Raglan

Enfield

Mount Zion

Coronation Gardens

COLUMBUS

Enniskillen

Hay

Green River

Brougham

Kinsale

BROOKLIN

PICKERING

Greenwood

Whitevale

Macedonian Village

OSHAWA
NORTH OSHAWA

Solina

Clarks Hollow

Audley

Mitchells Corners

Hampton

Cherrywood

Dixie

Deekers Hill

Riverside

West Lynde

Harmony

COURTICE

Gaud Corners

Dunbarton

Liverpool

Pickering Village

Port Whitby

Cedar Dale

Maple Grove

BOWMAN

Rouge Park

Fairport

Bay Ridges

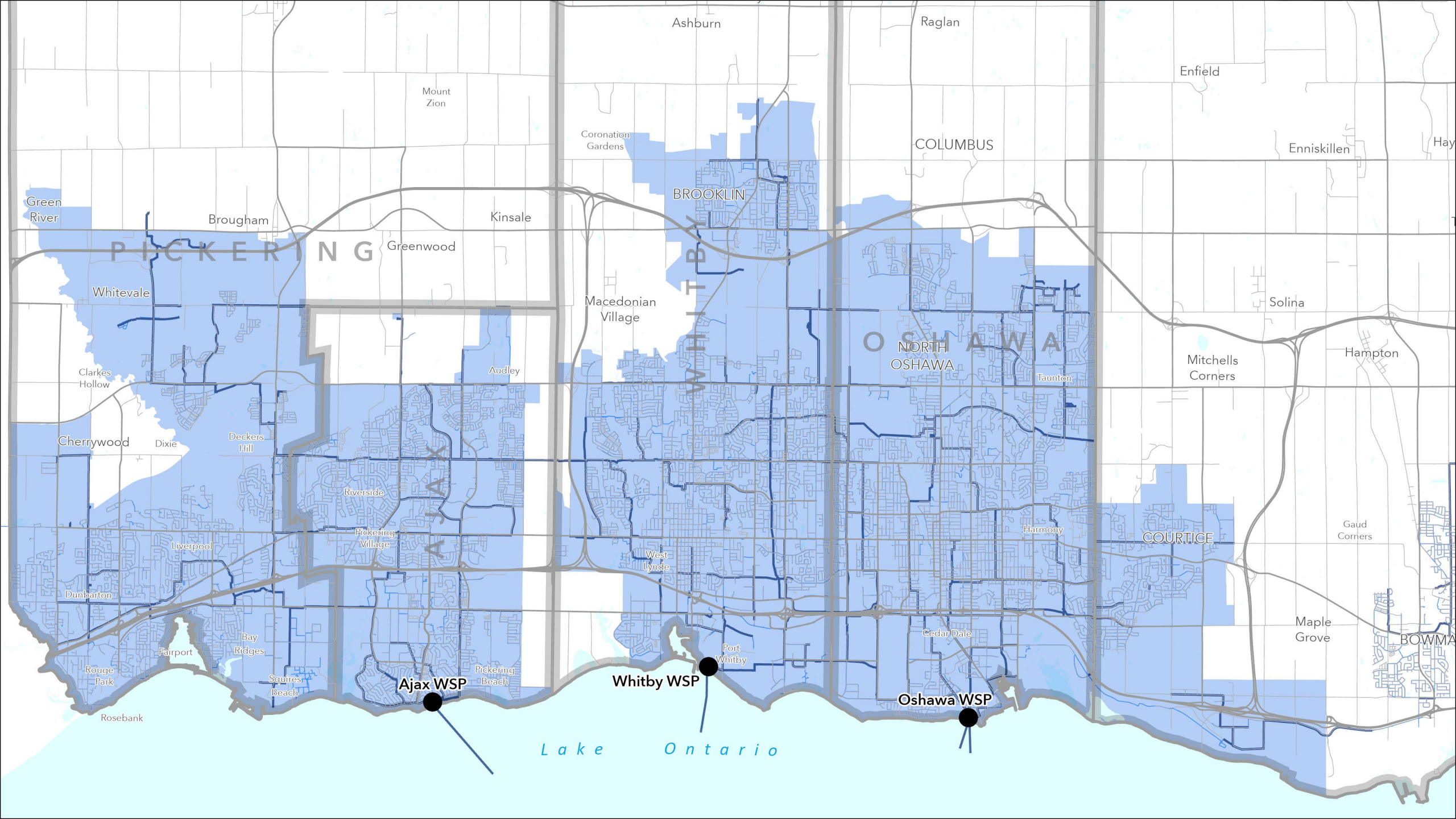
Squires Beach

Ajax WSP

Pickering Beach

Rosebank

Lake Ontario



Ashburn

Raglan

Enfield

Enniskillen

Hay

COLUMBUS

BROOKLIN

Brougham

Kinsale

Greenwood

PICKERING

Green River

Whitevale

Coronation Gardens

Macedonian Village

Audley

WHITBY

OSHAWA

Solina

Mitchells Corners

Hampton

Clarks Hollow

Cherrywood

Dixie

Deckers Hill

Riverside

Pickering Village

West Lynde

Harmony

COURTYCE

Gaud Corners

Dunbarton

Liverpool

Fairport

Bay Ridges

Squires Beach

Ajax WSP

Pickering Beach

Whitby WSP

Port Whitby

Oshawa WSP

Cedar Dale

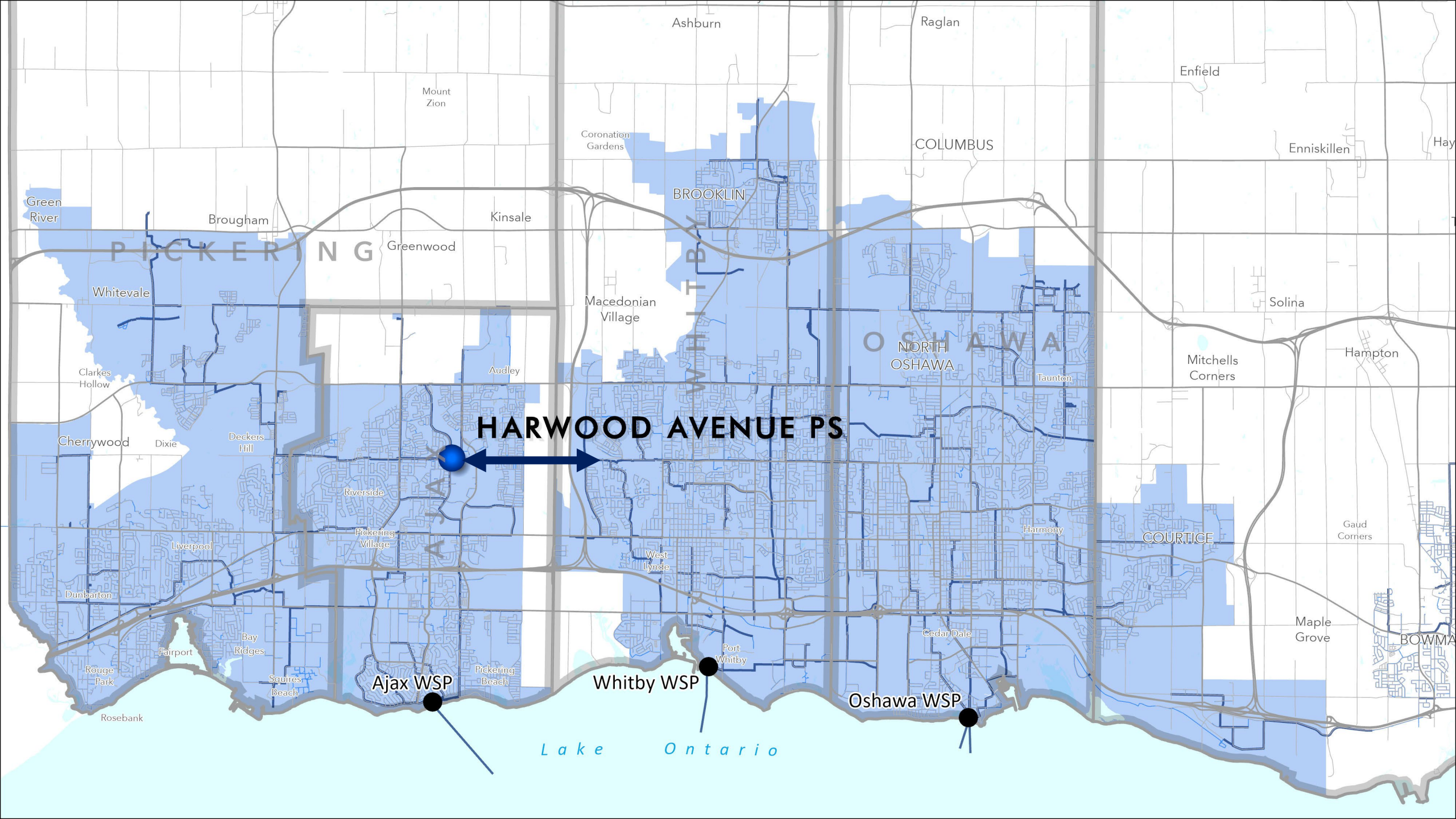
Maple Grove

BOWMAN

Rosebank

Rouge Park

Lake Ontario



HARWOOD AVENUE PS

Ajax WSP

Whitby WSP

Oshawa WSP

Lake Ontario

PICKERING

BROOKLIN

WHITBY

OSHAWA

COURTICE

BOWMANVILLE

Project Site: Ajax WSP



Existing Plant Constructed: 1995-1996



Ajax WSP Expansion

Key Objective:

Expand the current plant to approximately double its capacity by maximizing the utilization of the existing intake from Lake Ontario.

Existing Plant Capacity: 163.5 Million Litres/Day

Future Plant Capacity: 340 Million Litres/Day

Project Award Details:

Request for Proposal (RFP) Number: RFP-1088-2023

RFP Advertise Date: December 13, 2023

RFP Award Date: May 9, 2024

Consultant awarded the RFP: Jacobs partnering with RVA



Ajax WSP Expansion – Overview

Ajax WSP Expansion
Municipal Class
Environmental
Assessment (EA)

Municipal Class EA
Addendum

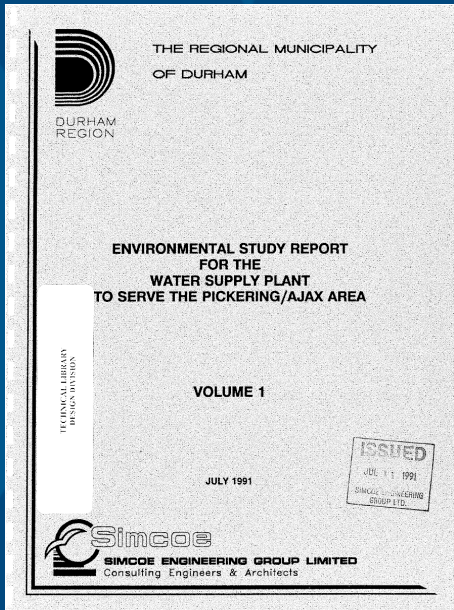
Detailed
Design



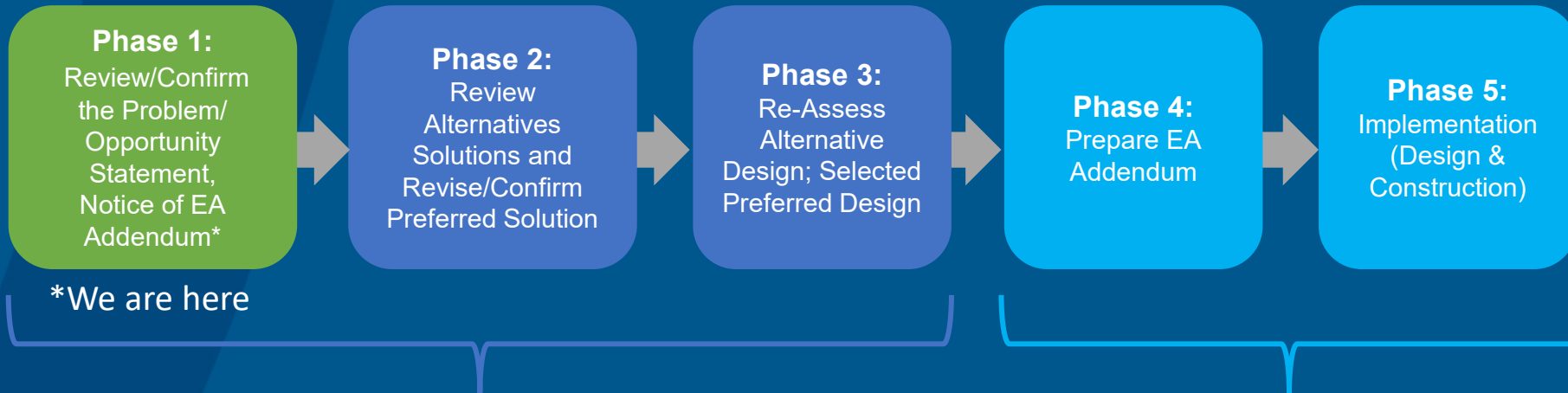
Ajax WSP
Construction

Preliminary
Design

Tender/
Construction



Ajax WSP: Municipal Class EA Addendum



Addendum Process Objectives:

- Identify & document any changes since the original Class EA was completed
- Update population and forecasted design flow
- Update background studies
- Identify necessary Plant upgrades & environmental impacts
- Reconfirm the preferred solution
- Consultation with Rights Holder and Stakeholders

Addendum Milestones:

- Q3 2025 - Public Information Centre
- Complete EA Addendum Report



Ajax WSP: Plant Expansion Phase

Primary Objectives:

Expand the plant and enable growth

Secondary Objectives:

Maintain compliance, climate change resilience, energy efficiency/greenhouse gas (GHG) reductions, community engagement

- Complete detail investigations and studies
- Evaluate and select the preferred treatment technologies
- Design, construct and commission the expanded plant

Considerations of Public Realm



Existing waterfront trail

Existing reservoir

Existing tanks/filters

Existing parkland all around

Existing visual buffers

Lake Driveway East

Existing residences nearby



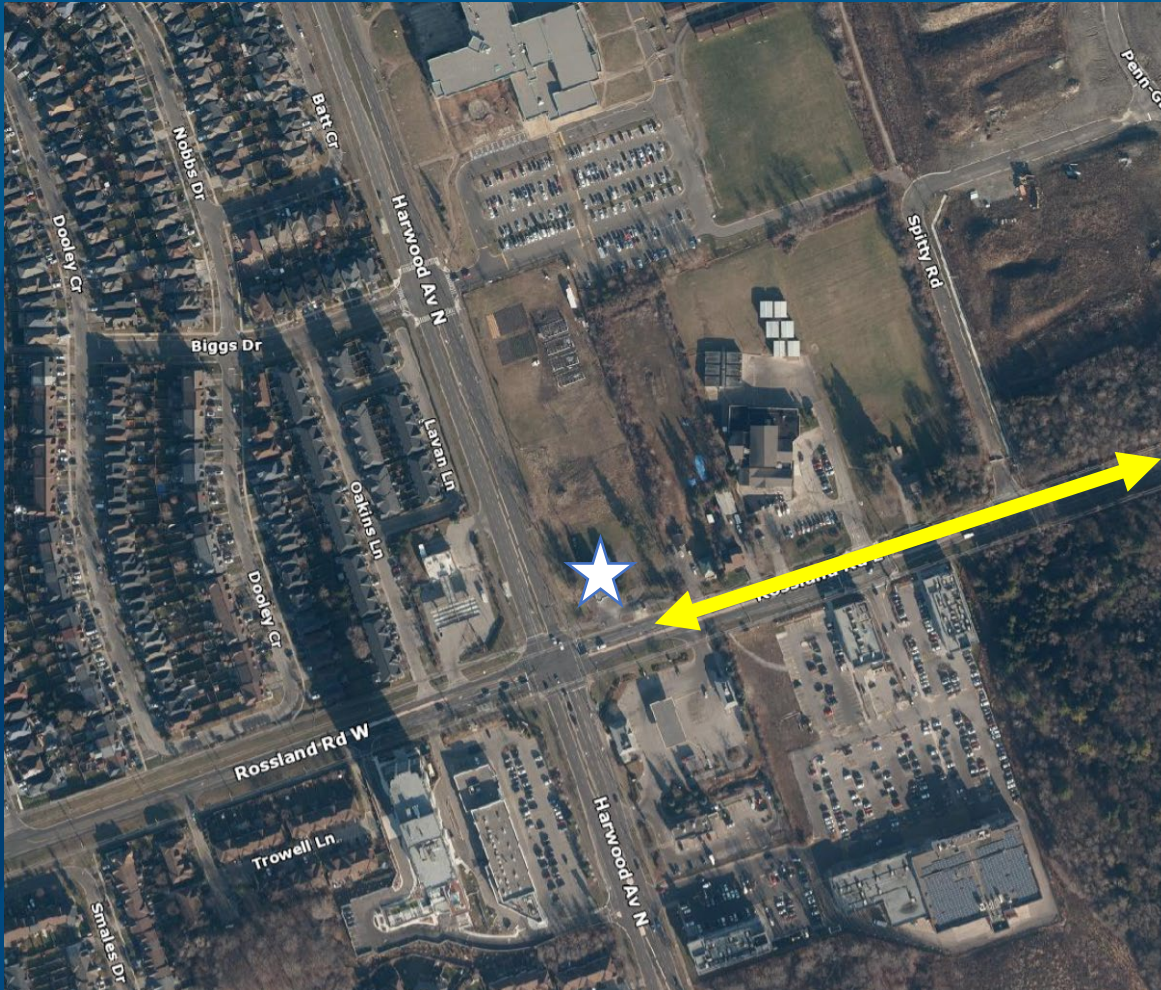
Ajax WSP Expansion Project Schedule

	2025				2026				2027				2028				2029				2030				2031				2032			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Class EA Addendum¹	█	█	█	█	█	█																										
Preliminary Design					█	█	█	█																								
Detailed Design									█	█	█	█	█	█																		
Tender														█	█																	
Construction²																	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█	

Notes

1. The Class EA is planned to be completed by the end of 2025. However, depending on the outcome of the rights holders and stakeholders consultations, it may extend into 2026 if additional studies are requested.
2. Timing of the construction contract will be subject to future Regional Council approval of construction phase funding.

Project Site: Harwood Avenue PS



- Constructed in 1984
- Facilitates the transfer of water between Whitby/Oshawa/Courtice and Pickering/Ajax systems, primarily from Pickering/Ajax to Whitby/Oshawa/Courtice.
- The station is a key piece of infrastructure designed to enhance and increase the overall security of service to the Pickering/Ajax and Whitby/Oshawa/Courtice water systems.

★ Harwood Avenue PS



Harwood Avenue Pumping Station Upgrades

Key Objective:

Upgrade by building a new pumping station on the existing property to increase the overall security of service for pumping capacity between the two systems.

Project Award Details

Project was awarded as part of the Ajax WSP Expansion RFP.

Consultant: RVA is the lead on this project

Considerations of Public Realm



New station will be on the same property. The Building footprint size will be determined based on background and technical studies.

The existing driveway location will be examined as part of the design and will follow the standard design process of entrance location approval with the Town of Ajax.

Construction related impacts on Rossland Road East and Harwood Avenue North will be coordinated.



Harwood Avenue PS Upgrade Schedule

	2025				2026				2027				2028				2029			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Preliminary Design ¹	█	█	█	█	█	█	█	█												
Detailed Design						█	█	█	█	█										
Tender											█	█								
Construction ²												█	█	█	█	█	█	█	█	█

Notes

1. The preliminary design phase includes several investigative studies and testing. Timelines can potentially be improved on positive results of those studies.
2. Timing of the construction contract will be subject to future Regional Council approval of construction phase funding.

Questions?

Hammad Khan, P.Eng.
Project Engineer, Water and Wastewater Infrastructure Design
Capital Projects Delivery
hammad.khan@durham.ca



Michael Harris, P.Eng.
Manager, Water and Wastewater Infrastructure Design
Capital Projects Delivery
michael.harris@durham.ca

Dan Waechter, P.Eng.
Director, Capital Projects Delivery
dan.waechter@durham.ca

durham.ca

@RegionofDurham

