

# IUWS Program Progress Update



September 25, 2023

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# IUWS Program Objectives

## NORFOLK COUNTY COUNCIL PRIORITY

Deliver safe drinking water

Ensure fire flow to all urban centres

Ensure water supply for long-term growth

Build reliable infrastructure

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# Program Benefits – Focus on Sustainability

Alignment with  
Long-Term  
Growth

Flexibility on  
Peak Demand

Water  
Conservation

Operational  
Efficiency

Increased  
Connectivity

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**NORFOLK COUNTY  
CURRENT WATER SUPPLY  
INDEPENDENT SYSTEMS**

**Before IUWS**

**Project Cancelled after Class EA  
in 2023**

**WATERFORD WELLS  
RE-RATING**  
Increased Capacity  
by 2,942 m<sup>3</sup>/day  
**Q1 2022**

**CURRENT APPROVED  
PROJECT**  
SIMCOE  
NE WELL  
CURRENT  
\$5,200,000  
Increase Capacity  
by 5,000m<sup>3</sup>/day  
**Q4 2024**

**DELHI WELLS  
RE-RATING**  
Increased Capacity  
by 4,872 m<sup>3</sup>/day  
**Q1 2022**

**SIMCOE WELLS  
RE-RATING**  
Decreased Capacity  
by 460 m<sup>3</sup>/day  
**Q1 2022**

**CURRENT APPROVED  
PROJECT**  
PT DOVER WTP  
EXPANSION  
CURRENT  
\$11,000,000  
Increase Capacity  
to 7,300m<sup>3</sup>/day  
**Q3 2023**

**CURRENT APPROVED  
PROJECT**  
PT ROWAN  
WTP  
CURRENT  
\$6,000,000  
Increase Capacity  
by 1,340m<sup>3</sup>/day  
**Q3 2024**

**Q4 2025/Q2 2026**

**Q4 2024/Q2 2025**

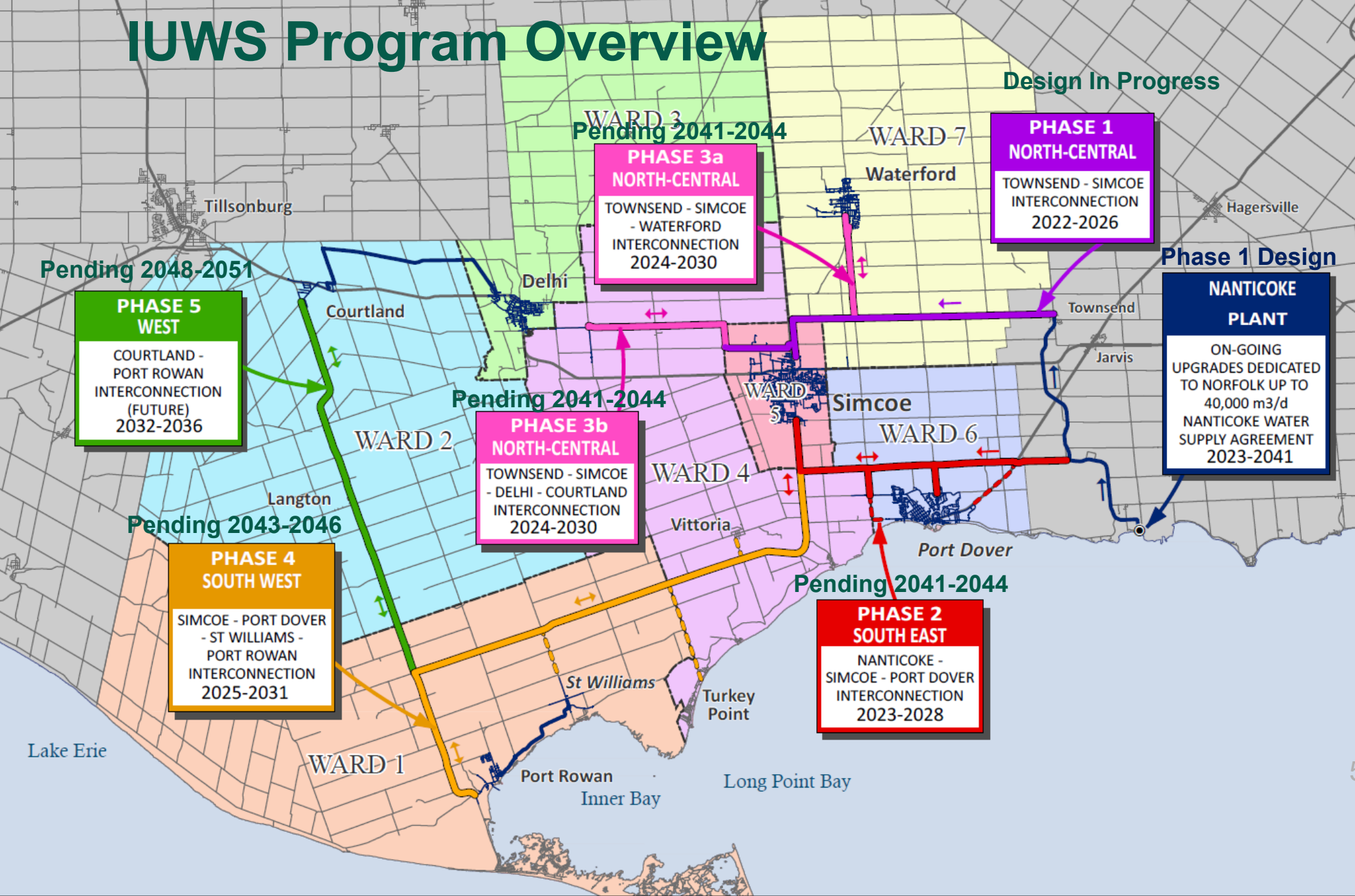
**2021 State:**

- 66.4K population
- 23.4 k jobs
- 19.5 km of local watermains
- 288.4 km of distribution network
- 5 water treatment facilities
- 21,000 m<sup>3</sup>/d treatment capacity
- 2021 rate: \$1.624/m<sup>3</sup>
- 2022 rate: \$1.722/m<sup>3</sup>



Revised: April 11, 2022

# IUWS Program Overview



## 2041-2051 Outlook

- 90,000 population
- 32.6k jobs
- 130 km IUWS transmission watermain
- 10,000 new housing units
- 10,000 new jobs
- 40,000 m<sup>3</sup>/d treatment capacity at the Nanticoke WTP
- \$450M Budget Estimate (2023\$)



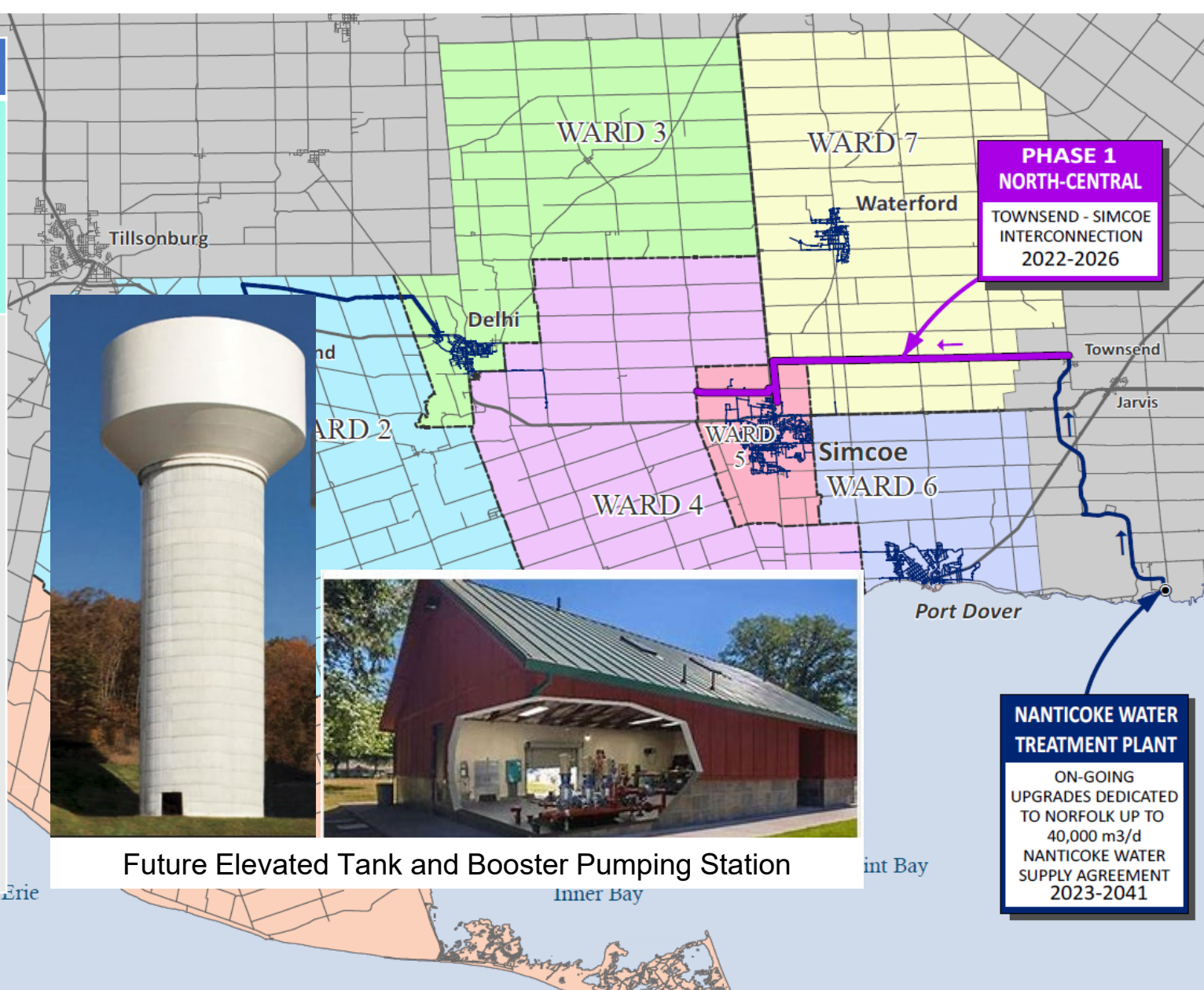
## Phase 1

### Simcoe – Townsend Interconnection & Nanticoke WTP (North-Central)

- 23 km transmission watermains
- Simcoe-Delhi Elevated Tank
- Nanticoke WTP Upgrade Phase 1
- Capital Budget \$110M
- Decommissioning \$4-5M
- In progress
- 2051 Capacity 13,000 m<sup>3</sup>/d



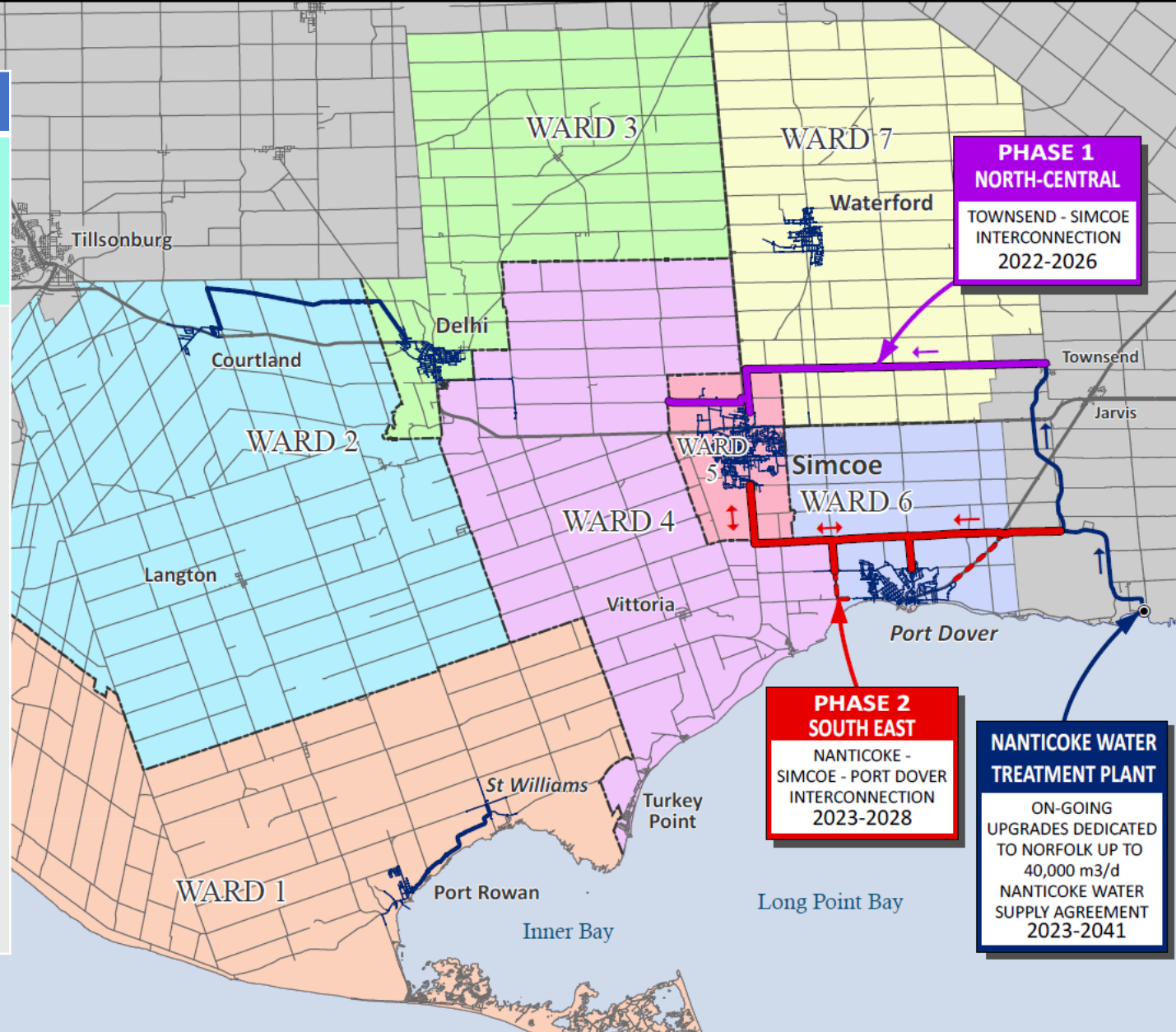
Future Elevated Tank and Booster Pumping Station



## Phase 2

### Simcoe-Port Dover Interconnection (South –East)

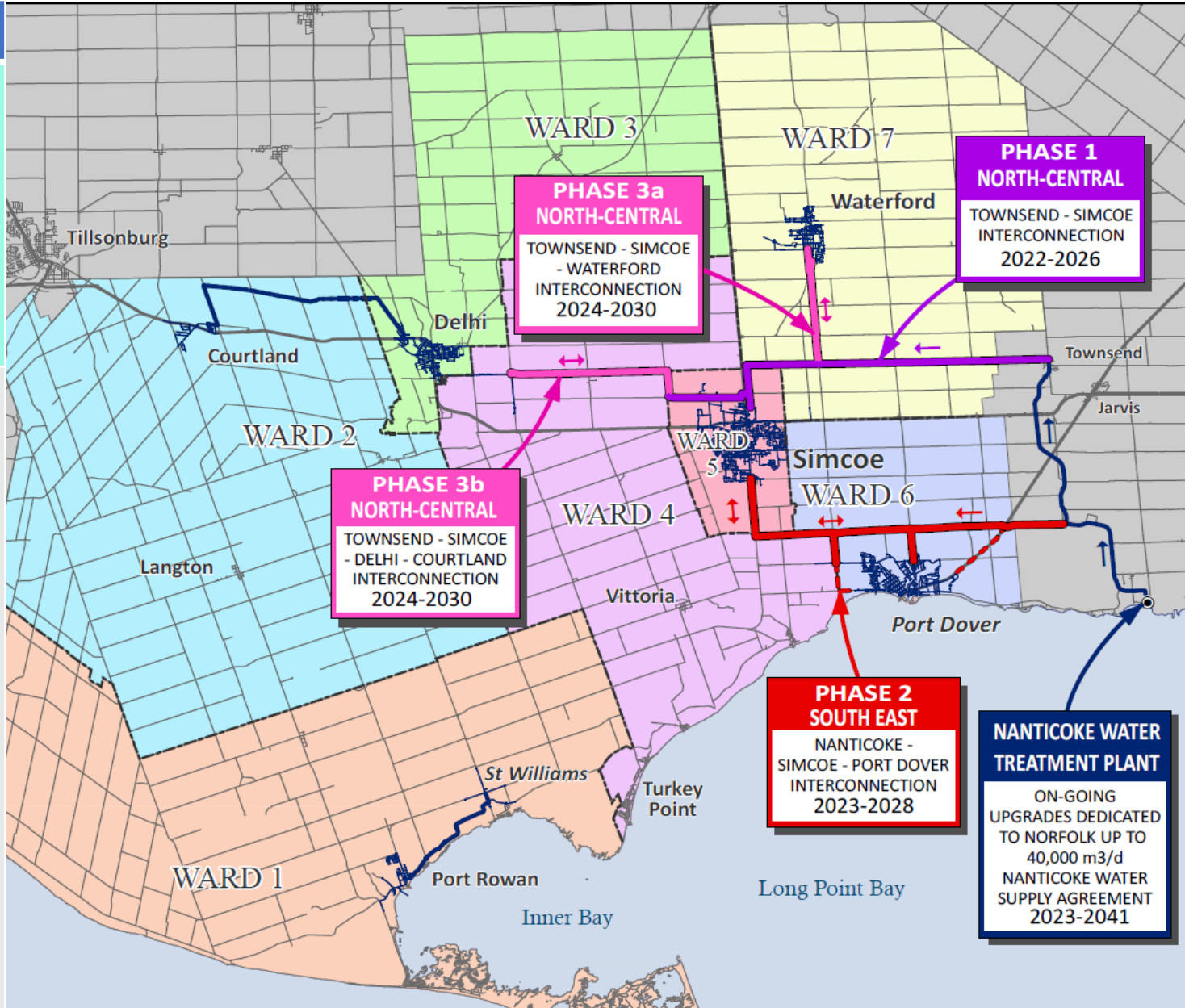
- 25 km transmission watermains
- Local connections
- Simcoe-NW Port Dover Elevated Tank
- Capital Budget \$106M
- Decommissioning \$3M
- Deferred to 2041 if no grants received
- 2051 Capacity 8,300 m<sup>3</sup>/d



## Phase 3

### Simcoe - Delhi-Courtland and Simcoe - Waterford Interconnections (North Central Expansion to West and East)

- 21 km transmission watermains to Delhi and Waterford
- Waterford Elevated Tank
- Courtland Elevated Tank
- Nanticoke WTP Upgrade Phase 2
- Capital Budget \$60M
- Decommissioning \$3M
- Deferred to 2041 if no grants received
- 2051 Capacity to Delhi-Courtland 7,050 m<sup>3</sup>/d
- 2051 Capacity to Waterford 3,700 m<sup>3</sup>/d

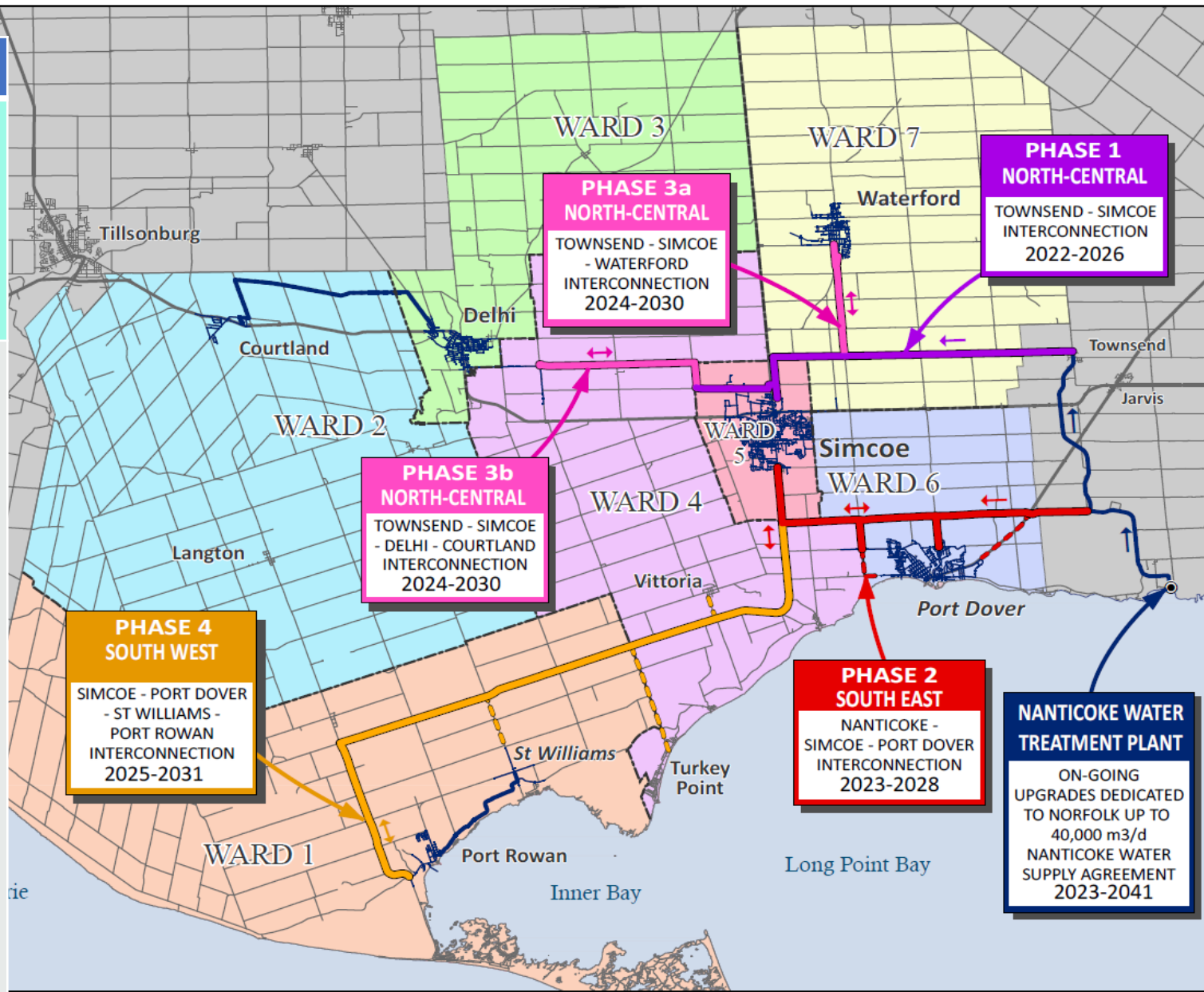




## Phase 4

### Simcoe - Port Dover-St. Williams-Port Rowan & Area Interconnection (South-West)

- 36 km transmission watermains
- Booster Station
- Local connections
- Phase 3 Nanticoke WTP Upgrade
- Capital Budget \$116M
- Decommissioning \$3M
- Deferred to 2043 if no grants received
- 2051 Capacity 3,040 m<sup>3</sup>/d

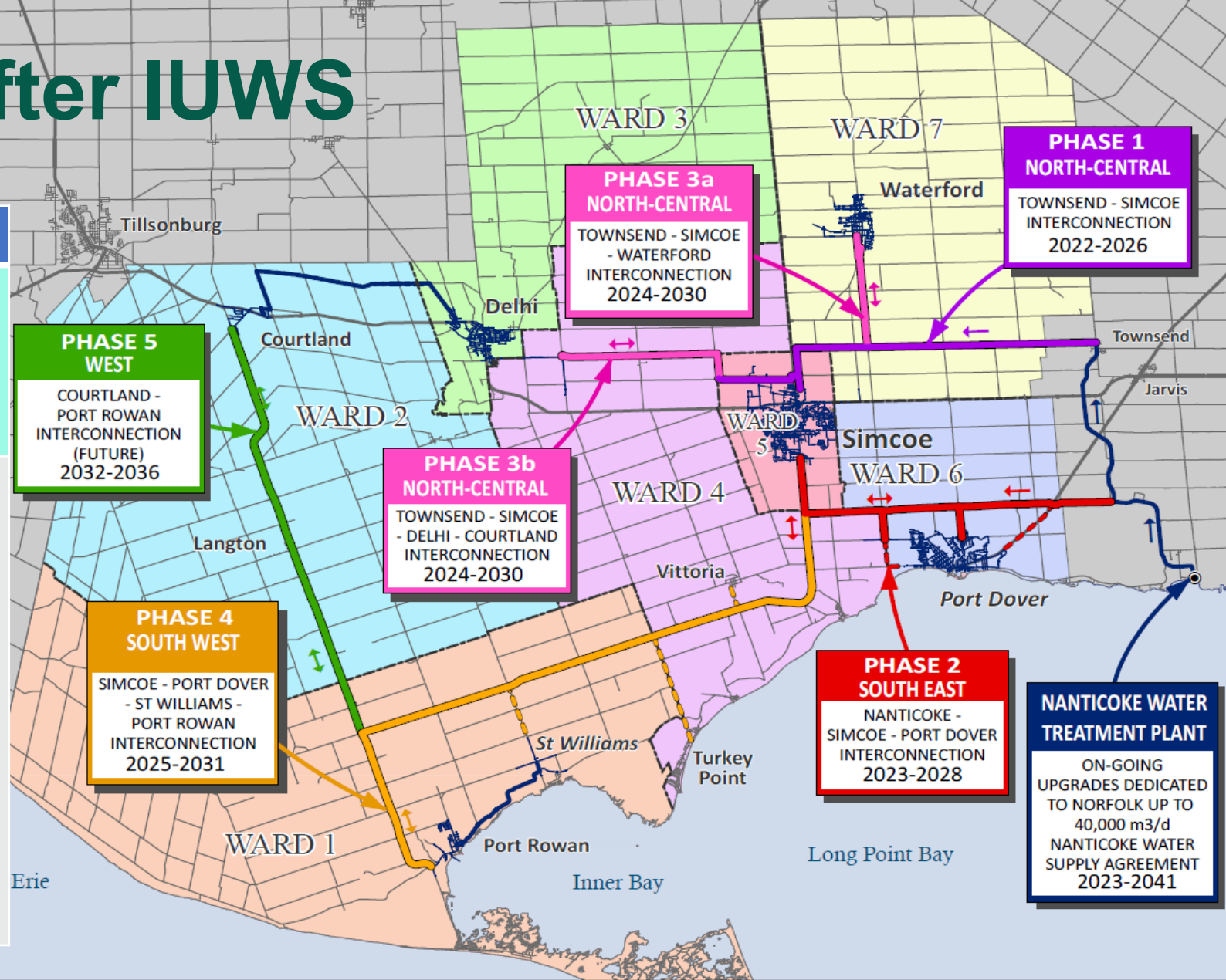


# After IUWS

## Phase 5

### Port Rowan-Courtland-Delhi Interconnection (West Area)

- 25 km transmission watermains
- Port Rowan-Courtland Booster Station
- Capital Budget \$41.4M
- Deferred to 2048 if no grants received
- 2051 Capacity 6,340 m<sup>3</sup>/d



## 2041-2051 Targets

- 90,000 population
- 32.6k jobs
- 130 km IUWS transmission watermain
- 10,000 new housing units
- 10,000 new jobs
- 40,000 m<sup>3</sup>/d treatment capacity at the Nanticoke WTP
- \$450M Budget Estimate (2023\$)

# IUWS Scope Overview

Dates and timelines are subject to Council approval

\$456M Budget  
130 Km Pipelines & Fire Flow Storage  
40,000 m<sup>3</sup>/d from Nanticoke WTP

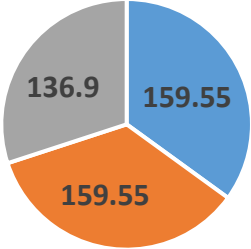
Phase 1	Phase 2	Phase 3	Phase 4	Phase 5
<b>Simcoe – Townsend Interconnection &amp; Nanticoke WTP (North-Central)</b>	<b>Simcoe-Port Dover Interconnection (South –East)</b>	<b>Simcoe - Delhi-Courtland and Simcoe - Waterford Interconnections (North Central Expansion to West and East)</b>	<b>Simcoe - Port Dover-St. Williams-Port Rowan &amp; Area Interconnection (South-West)</b>	<b>Port Rowan-Courtland-Delhi Interconnection (West Area)</b>
<ul style="list-style-type: none"> <li>• 23 km transmission watermains</li> <li>• Simcoe-Delhi Elevated Tank</li> <li>• Nanticoke WTP Upgrade Phase 1</li> </ul>	<ul style="list-style-type: none"> <li>• 25 km transmission watermains</li> <li>• Local connections</li> <li>• Simcoe-NW Port Dover Elevated Tank</li> </ul>	<ul style="list-style-type: none"> <li>• 21 km transmission watermains to Delhi and Waterford</li> <li>• Waterford Elevated Tank</li> <li>• Courtland Elevated Tank</li> <li>• Nanticoke WTP Upgrade Phase 2</li> </ul>	<ul style="list-style-type: none"> <li>• 36 km transmission watermains</li> <li>• Booster Station</li> <li>• Local connections</li> </ul>	<ul style="list-style-type: none"> <li>• 25 km transmission watermains</li> <li>• Port Rowan-Courtland Booster Station</li> <li>• Nanticoke WTP Upgrade Phase 3</li> </ul>
2026	2029	2031	2031	2036 – Norfolk Linear 2041 – Nanticoke Plant

# IUWS Budget and Funding Needs

Priority/Project	Estimated Total Value	35% Provincial Grant Ask (\$M)	35% Federal Grant Ask (\$M)	30% County* (\$M)
Norfolk – New Transmission Mains, Elevated Tanks, Booster Stations including connections to Haldimand System	\$271M	94.8	94.8	81.4
Nanticoke Treatment Plant Upgrade (Norfolk-Haldimand Agreement)	\$165M	57.75	57.75	49.5
Decommissioning of Norfolk Assets	\$20M	7	7	6
<b>Total</b>	<b>\$456M</b>	<b>159.55</b>	<b>159.55</b>	<b>136.9</b>

\*Projected 35-50% Development Charges for Growth

IUWS \$456M Proposed Grant Funding Strategy



- 35% Provincial Grant Ask
- 35% Federal Grant Ask
- 30% County\*



# Norfolk – Linear Infrastructure Capital Delivery Plan

Priority/Project	Estimated Total Value	RFP & Award	Tender & Award	Substantial Completion	In Service
Phase 1 - Simcoe-Townsend	\$64.6M	2022	2024	Dec 2026	Q1 2027
Phase 2 - Simcoe-Port Dover Nanticoke	\$45.85M	2023	2025	Dec 2027	Q1 2028
Phase 3 - Simcoe-Delhi and Simcoe-Waterford	\$60.02M	2024	2026	Oct 2030	Q1 2031
Phase 4 - Simcoe-Port Dover- St. Williams-Port Rowan	\$55.56M	2027	2029	Dec 2031	Q1 2032
Phase 5 – Port Rowan- Courtland-Delhi	\$41.3M	2032	2034	2036	Q1 2037
Program Support Engineering	\$3.63M	2026	-	-	-
Total Program including Contingency	\$271M	2023\$ not indexed for inflation			

# Norfolk Vertical Infrastructure Capital Delivery Plan

## Cost Sharing with Haldimand County

Priority/Project	Estimated Total Value	RFP & Award	Tender & Award	Substantial Completion	In Service
Phase 1 - Nanticoke WTP by Haldimand (add 10MLD* MDD)	\$45M	2023	2024	2026	2026-2027
Phase 2 – Nanticoke WTP by Haldimand (add 15MLD MDD)	\$60M	Pending	Pending	Pending	Pending
Phase 3 – Nanticoke WTP by Haldimand (add 15MLD MDD)	\$60M	Pending	Pending	Pending	Pending
Total Program including Contingency	\$165M	<b>2023\$ not indexed for inflation</b>			

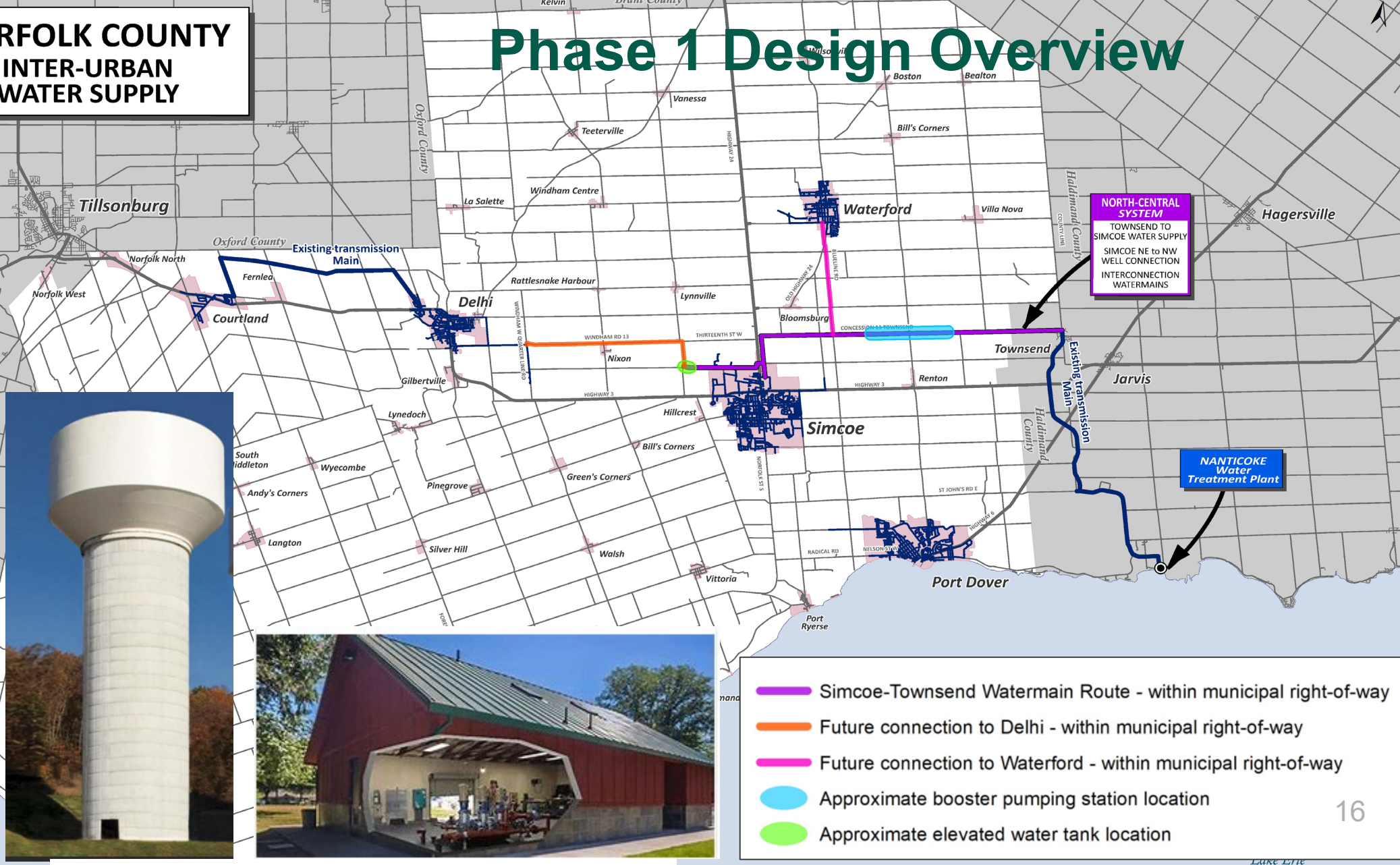
1 million litres per day (MLD) = 1,000 cubic metres/day

# Norfolk- Decommissioning Delivery Plan

Priority/Project	Estimated Total Value	RFP & Award	Tender & Award	Substantial Completion	Total Performance
Engineering	\$2M	2026	2028	2044	2026-2044
Construction (re-purpose and disposal)	\$18M	2032	Pending	Pending	Pending
Total including contingency and exclusive taxes	\$20M	2023\$ not indexed for inflation			

**NORFOLK COUNTY  
INTER-URBAN  
WATER SUPPLY**

# Phase 1 Design Overview



Future Elevated Tank and Booster Pumping Station

- Simcoe-Townsend Watermain Route - within municipal right-of-way
- Future connection to Delhi - within municipal right-of-way
- Future connection to Waterford - within municipal right-of-way
- Approximate booster pumping station location
- Approximate elevated water tank location

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- Over 20 km of transmission mains
- New Elevated Tank in Simcoe
- Booster Pumping Station for Phase 1 and Phase 3
- 10,000 m<sup>3</sup>/d treatment capacity at the Nanticoke WTP
- \$65M Budget (2023\$)
- Completion Q4 2026
- Status: 60% Design

Lake Erie





# Phase 1 – Townsend-Simcoe Delivery Plan

Priority/Project	Estimated Total Value	RFP & Award	Tender & Award	Substantial Completion	Total Performance
Engineering Linear*	\$6.4M	2023	2024	2026	2026-2027
Construction**	\$58.2M	-	Pending	Pending	Pending
Total Program including Contingency	\$64.6M	2023\$ not indexed for inflation			

\*Committed \$3.075M – budget to be amended

\*\*Council-Approved \$43.94M – budget to be amended

# Norfolk-Haldimand Water Agreement

- Stage 1 by 2026: up to 10,000 m<sup>3</sup>/d – 100% Simcoe
- Stage 2 by 2031: up to 25,000 m<sup>3</sup>/d – 100% Simcoe, Port Dover Delhi-Courtland, Waterford, Port Rowan-St. Williams plus growth in urban areas
- Stage 3 by 2041: up to 40,000 m<sup>3</sup>/d – 100% Delhi-Courtland, Waterford, Port Rowan-St. Williams plus growth in urban areas and some of the expanded rural hamlets



# Work In Progress by Norfolk County

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- Continuous wells monitoring and reporting to MECP in Simcoe (one failing well)
  - Water Treatment Plant (WTP) Upgrades in Port Dover and Port Rowan
  - Phase 1- Simcoe-Townsend Interconnection – 60% Detailed Design
  - Phase 2 - Simcoe-Port Dover-Nanticoke Interconnection – ON HOLD
  - Rehabilitation of watermains and leak detection pilot

# Next Steps by Norfolk & Haldimand Counties

