

This version of the presentation has been reformatted with some graphics and background colours removed for Accessibility

Welcome

to the Public Information Centre
for the

Town of The Blue Mountains Municipal Master Plan for the Town-Wide Water Distribution System

We want to hear from you.

Please fill out the comment sheet provided at today's Public Information Centre and leave it in one of the boxes provided.

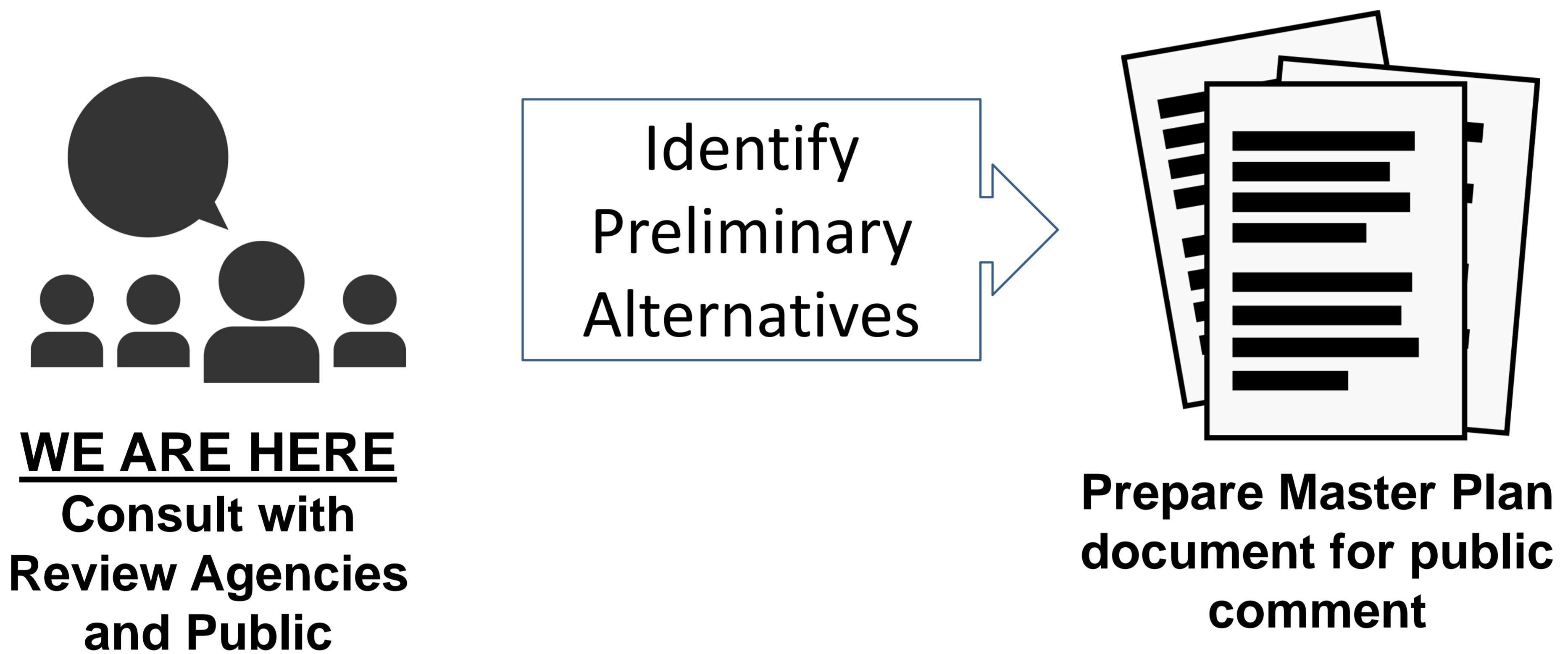
Additional information is available on the project website at <https://www.thebluemountains.ca> (under "Town Hall" select "Infrastructure Projects") and at the Town's Office.



THE MUNICIPAL CLASS EA PROCESS



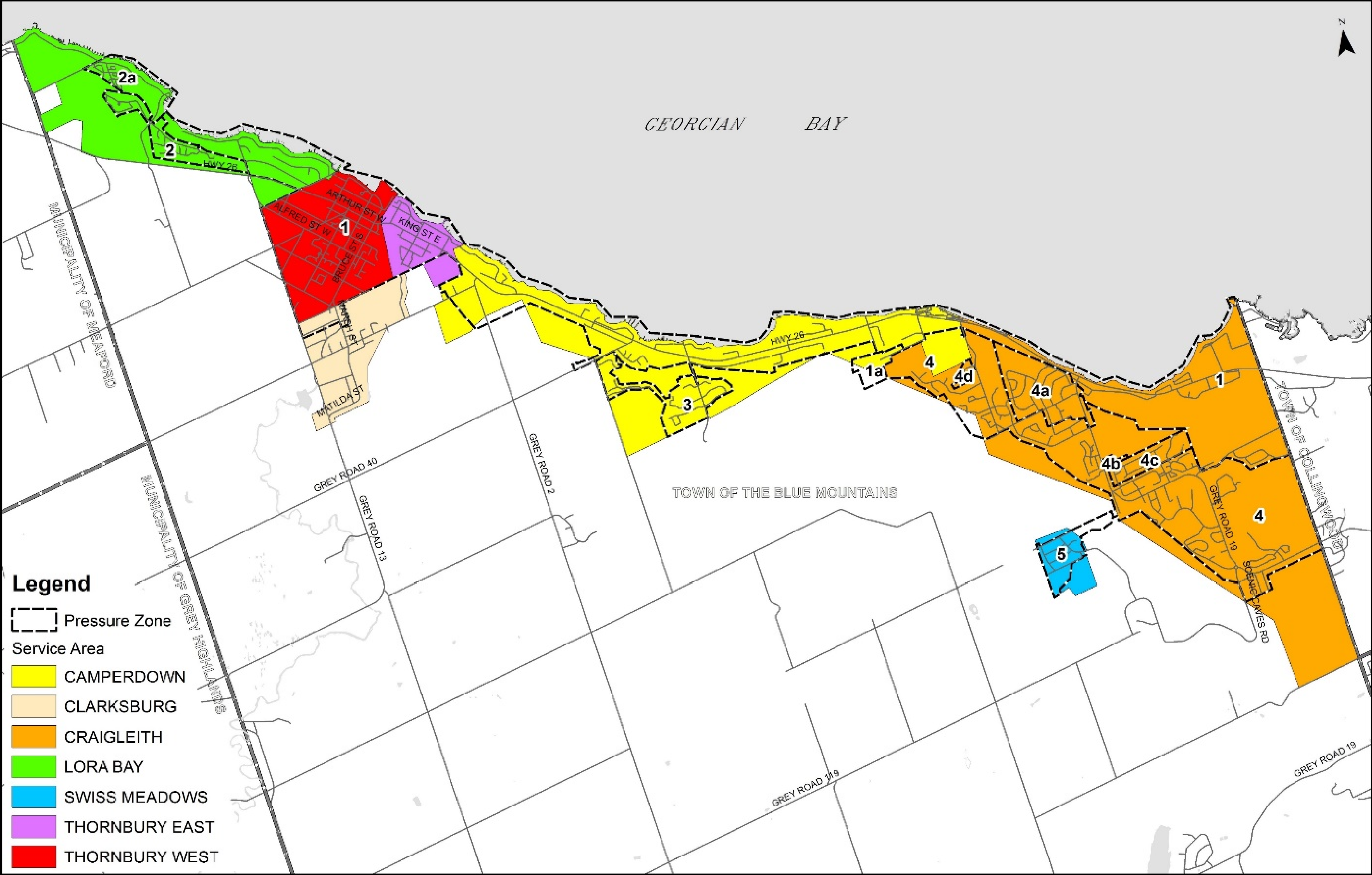
Phase 1 – Problem/ Opportunity



Phase 2 – Alternative Solutions

The purpose of the Town-Wide Water Distribution System Master Plan is to evaluate the Town’s long-term water distribution needs and identify preferred solutions to be implemented immediately and as required to match the Town’s growth over the next 20-years and to Build-Out of the service area boundary.

STUDY AREA – KEY PLAN



KEY INFRASTRUCTURE ISSUES

Issue No. 1 - East Side Supply:

There is a need to provide adequate, secure water supply to meet projected demands east of Arrowhead Road Booster Pumping Station. These areas include Pressure Zone 4 (Craigleith), Zone 5 (Swiss Meadows) and Castle Glen.

Issue No. 2 – Zone 1, 2, 3 Storage:

At Build-Out there are storage deficits in Pressure Zone 1 (Thornbury/Clarksburg), Zone 2 (Lora Bay) and Zone 3 (Camperdown) combined. There are near-term storage deficits in Zone 2 (Lora Bay).

Issue No. 3 – Zone 4 Storage:

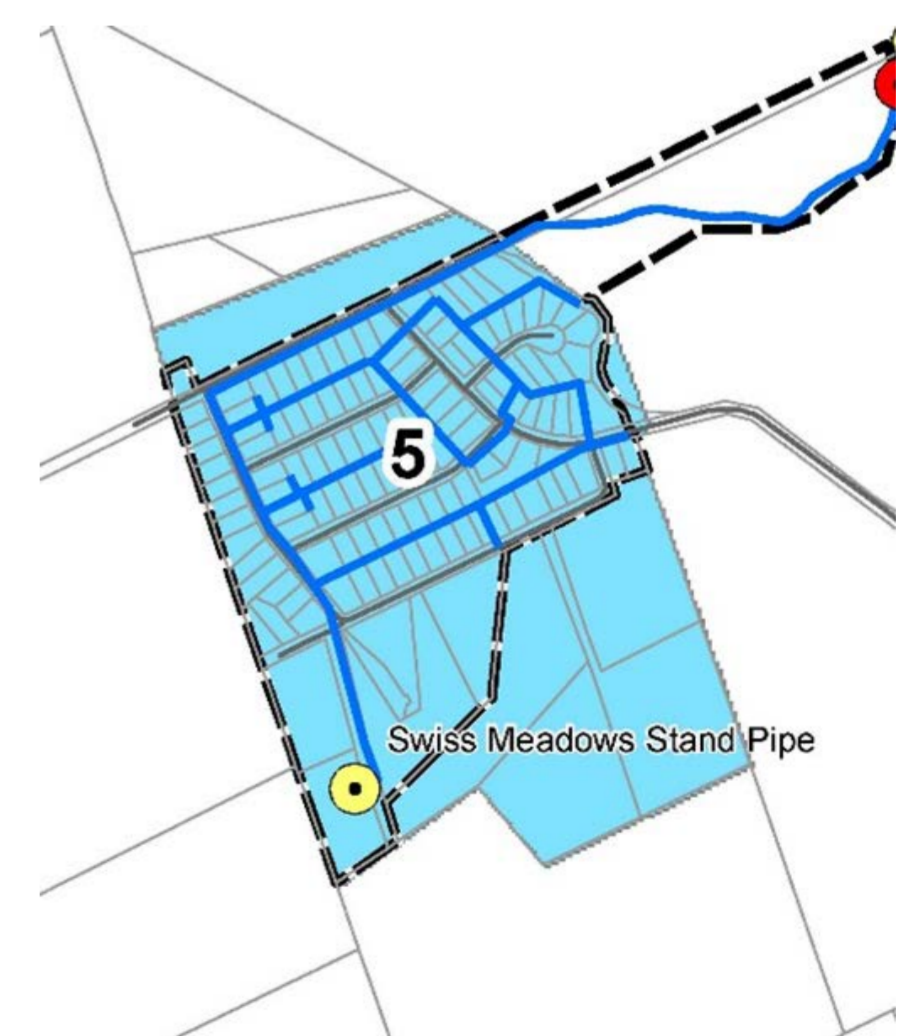
At Build-Out approximately 8,300 m³ of storage is required in Zone 4 (Craigleith). There is currently 5000 m³ of built storage that serves that pressure zone, which leaves a deficit of 3,300 m³.

Issue No. 4 – Zone 5 Storage and Fire Protection:

In the Build-Out scenario there is a 715 m³ storage deficiency in Zone 5 (Swiss Meadows). Currently, not all areas are serviced with adequate sized watermains and hydrants.

Issue No. 5 – Supply & Storage for Castle Glen:

For Build-Out of Castle Glen, municipal water supply will be required.



SELECTION OF ALTERNATIVES

Step 1 – Initial Screening: For each of the five (5) issues identified, a long-list of potential solutions was developed. Based on a pass/fail criteria, the list was shortened to 3 – 4 feasible alternatives to advance to detailed evaluation.

Step 2 – Detailed Evaluation: Criteria were identified by the study team and project stakeholders to guide the evaluation of different servicing options. Each option was evaluated using the criteria and an impact score (see details below).

Natural Environment and Archaeology

- Effect on Fish and Aquatic Habitat
- Effect on Wetlands, Woodlands, Wildlife Habitat
- Effect on Archeological or Heritage Resources

Technical Considerations

- Opportunities for Phased Implementation
- Optimized Use of Existing Infrastructure
- System Redundancy
- Maintenance/Operations Requirements

Social Environment

- Impacts During Construction
- Compatibility with Surrounding Land Use

Economic Considerations

- Land Acquisitions Required
- Capital Costing
- Lifecycle Costs

Impact Score	Score
High Positive	+2
Low/Moderate Positive Impact	+1
No Anticipated Impact	0
Low/Moderate Negative Impact	-1
High Negative	-2

Step 3 - Selection of Preferred Alternative: The highest scoring alternative was selected as the preferred and is being presented to the public for consideration.



OVERVIEW OF STORAGE FACILITY TYPES



Elevated Tower

- Similar to existing Victoria St. Tower
- 40 to 60 year service life
- Low energy costs (less pumping)
- Steel tanks require periodic re-coating
- High visual impact



At-Grade Storage (on escarpment)

- Similar to existing in Camperdown
- 40 to 60 year service life
- Low energy costs (less pumping)
- Requires minimal maintenance
- Construction may be very challenging
- Moderate visual impact

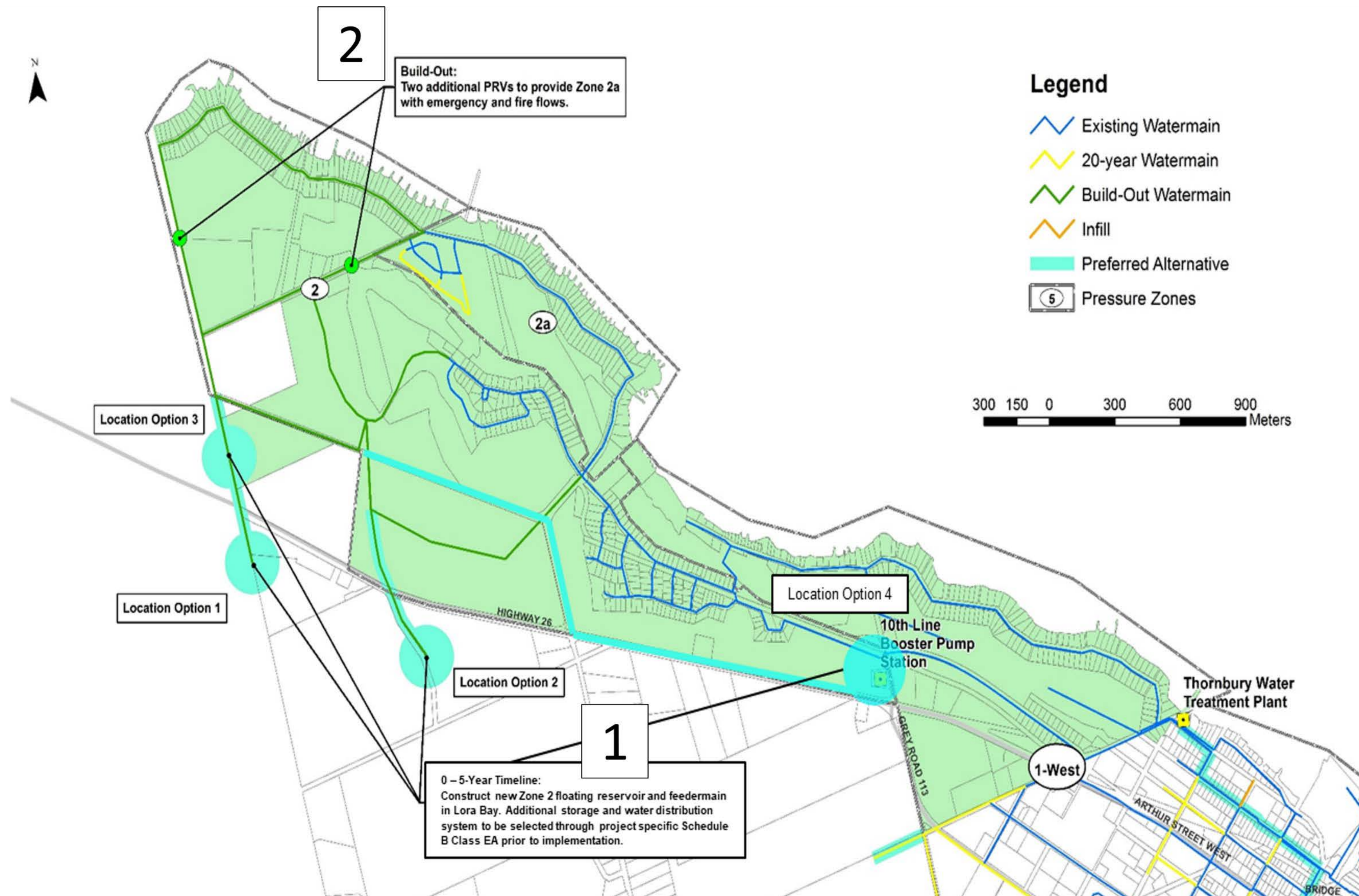


Below Grade Storage (at low elevation)

- Similar to existing Thornbury Reservoir
- 40 to 60 year service life
- Requires a booster pumping station
- High energy costs
- Tank requires minimal maintenance
- Pumping station requires maintenance
- Moderate visual impact

PRELIMINARY PREFERRED WATER SYSTEM

Pressure Zones 2 and 2a (Lora Bay)

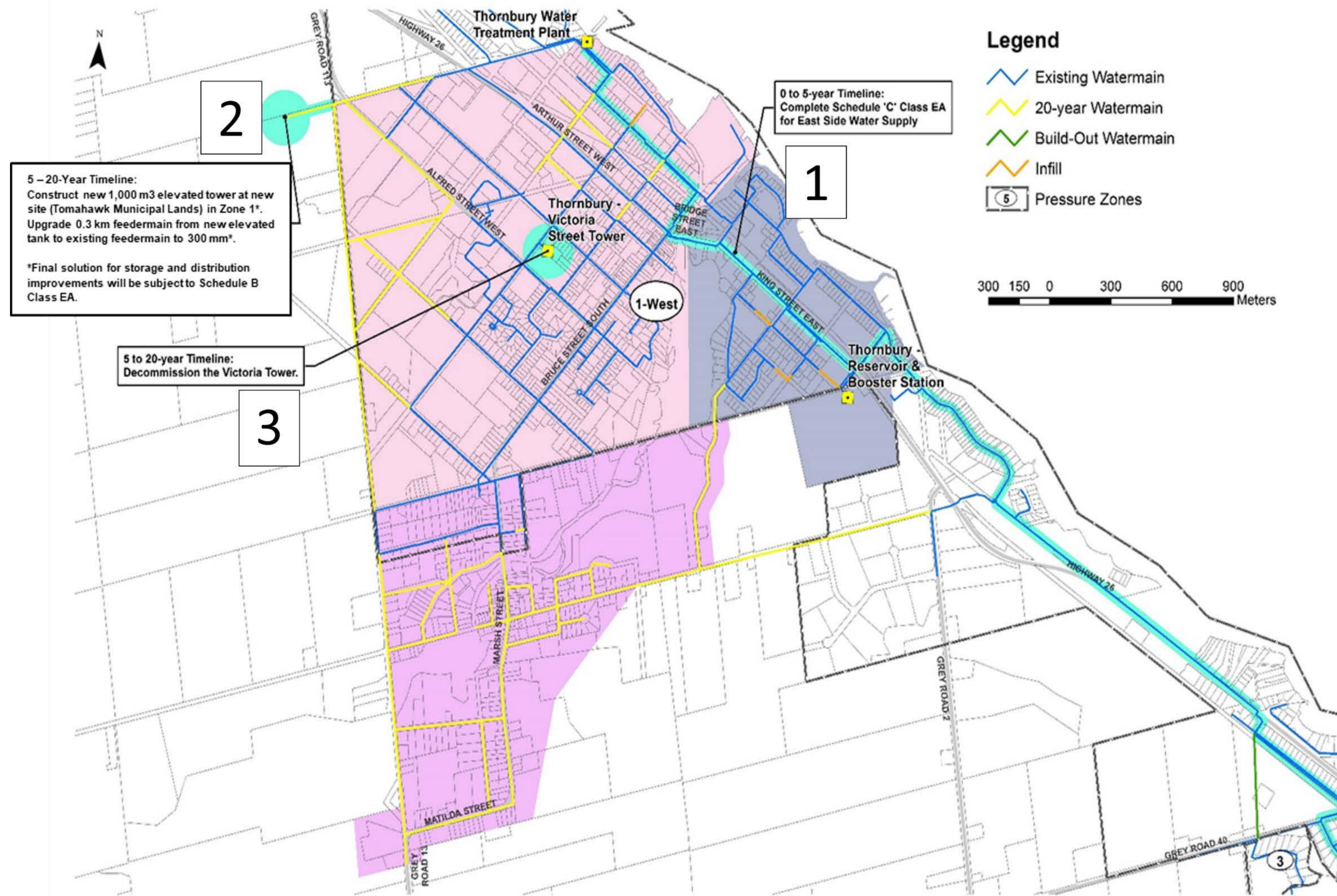


Proposed Project Overview:

- Complete Schedule “B” Class EA to determine preferred system for West Side Storage. Potential alternatives include:
 - Alternative 2.1 New Zone 1 Elevated Tower (Existing Location)
 - Alternative 2.2 New Zone 1 Elevated Tower (Tomahawk Municipal Lands or as determined by Class EA)
 - Alternative 2.3 Zone 1 Elevated Tower and In-ground Storage at 10th Line Booster Station
 - Alternative 2.4 Zone 1 Elevated Tower and Zone 2 Floating Reservoir - **Preliminary Preferred Alternative**
 - Alternative 2.5 Expand Thornbury Reservoir and In-ground Storage at 10th Line Booster Station
- Add two additional PRVs to provide emergency and fire flows.

PRELIMINARY PREFERRED WATER SYSTEM

Pressure Zone 1 (Thornbury and Clarksburg)

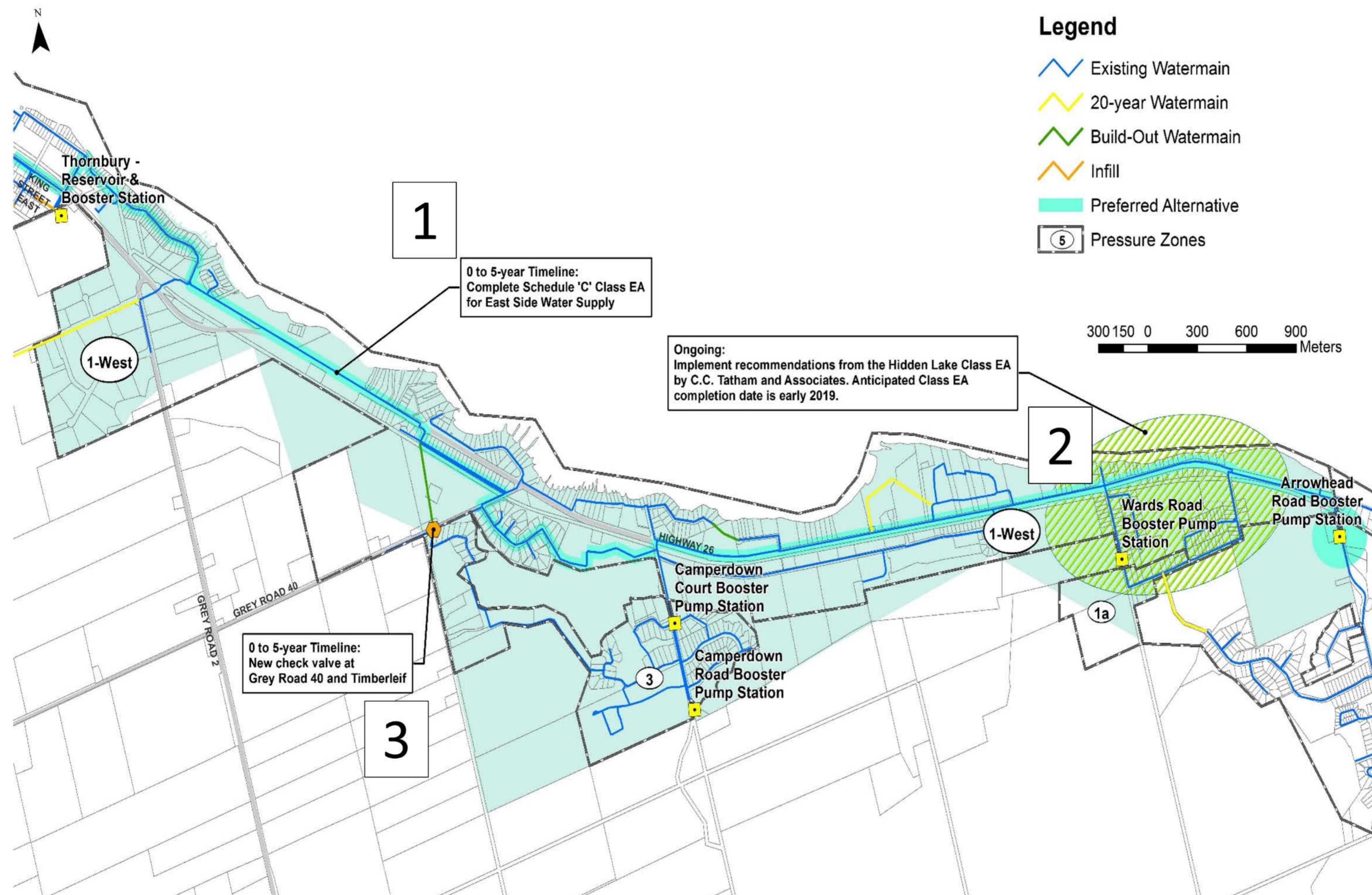


Proposed Project Overview:

- Complete Schedule “C” Class EA for East Side Water Supply to determine the preferred water supply alternative. Potential alternatives include:
 - Alternative 1.1 Upgrade Mountain Road Booster Station to supply water entirely from Collingwood
 - Alternative 1.2 Upgrade Arrowhead Road Booster Station and supply water entirely from Thornbury Water Treatment Plant - **Carried forward for budget purposes**
 - Alternative 1.3 Supply water from Collingwood and Thornbury Water Treatment Plant
 - Alternative 1.4 Construct a new Water Treatment Plant in Craigleith and supply water entirely from this new plant
- Complete Schedule “B” Class EA to determine preferred system for West Side Storage (refer to Pressure Zone 2).
- Decommission the Victoria Tower.

PRELIMINARY PREFERRED WATER SYSTEM

Pressure Zones 1a, 1, and 3 (Camperdown)

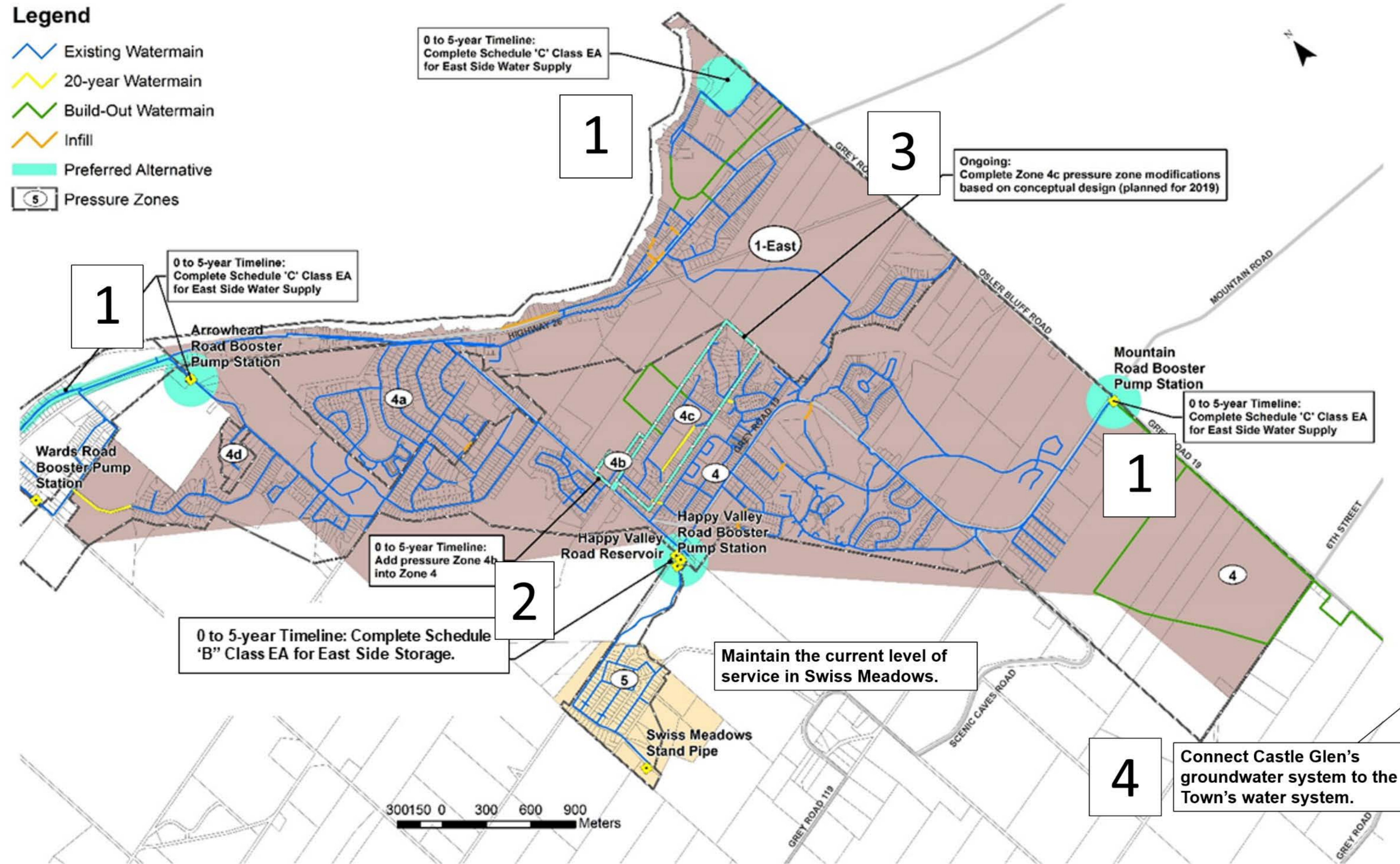


Proposed Project Overview:

1. Complete Schedule "C" Class EA for East Side Water Supply to determine the preferred water supply alternative (refer to Pressure Zone 1 – Thornbury and Clarksburg).
2. Implement recommendations from the Hidden Lake Class EA.
3. Install new check valve at Grey Road 40 and Timberleif.

PRELIMINARY PREFERRED WATER SYSTEM

Pressure Zones 1-East, 4a-d, and 5 (Craigleith and Swiss Meadows)



Proposed Project Overview:

1. Complete Schedule "C" Class EA for East Side Water Supply to determine the preferred water supply alternative (Refer to Pressure Zone 1 – Thornbury and Clarksburg).
2. Complete Schedule "B" Class EA to determine preferred system for East Side Storage. Three potential alternatives for storage in Zone 4 include:
 - Alternative 3.1 Expand Storage at Happy Valley Reservoir - **Preliminary Preferred Alternative**
 - Alternative 3.2 Build Elevated Tower at a New Location
 - Alternative 3.3 Build At- or Below-grade Reservoir at a New Location
3. Complete Zone 4C Pressure Zone modifications
4. Implement the recommendations established in Castle Glen Development Corporation Phase 1 Water Supply Class EA. Connect Castle Glen groundwater system to the Town's water system.

PRELIMINARY CAPITAL COSTING

0 TO 5-YEAR CAPITAL COSTS

Proposed Project	Budget	Funding
Schedule 'B' Class EA and Pre-Design for West Pressure Zones Storage	\$0.25M	Development Charges
Schedule 'C' East Side Water Supply and Water Storage Class EA and Pre-Design	\$0.75M	Development Charges
Pending Outcome of Class EA-1,700 m ³ Zone 2 reservoir (excludes feedermain)	\$3.50M	Development Charges
Implement findings from Hidden Lake Class EA	TBD	Development Charges
Check valve at Grey Road 40 and Timberleif	\$0.15M	Non-Growth
Implement findings from Zone 4c Pressure Modification Conceptual Design	\$0.35M	Non-Growth
Add pressure Zone 4b into 4 (PRV not operating)	---	Non-Growth

Total 5-Year Capital Costs = \$5.00M

5 TO 20-YEAR CAPITAL COSTS

Proposed Project	Budget	Funding
Implement findings from Schedule 'C' Water Supply Class EA for East Zones	\$14.00M	Development Charges
Pending Outcome of Class EA – Decommission Victoria Street Tower and construct 1,000 m ³ elevated tank on Municipal Lands (excludes feedermain)	\$3.10M	Development Charges/Non-Growth
Pending Outcome of Class EA - 1,000 m ³ reservoir near Happy Valley Reservoir	\$3.00M	Development Charges
Looping of watermain in existing distribution system	\$2.50M	Non-Growth
Extend existing watermain into new growth areas (includes road reinstatement)	\$9.00M	Developer Built & Development Charges

Total 20-Year Capital Costs = \$31.60M

20-YEAR TO BUILD-OUT CAPITAL COSTS

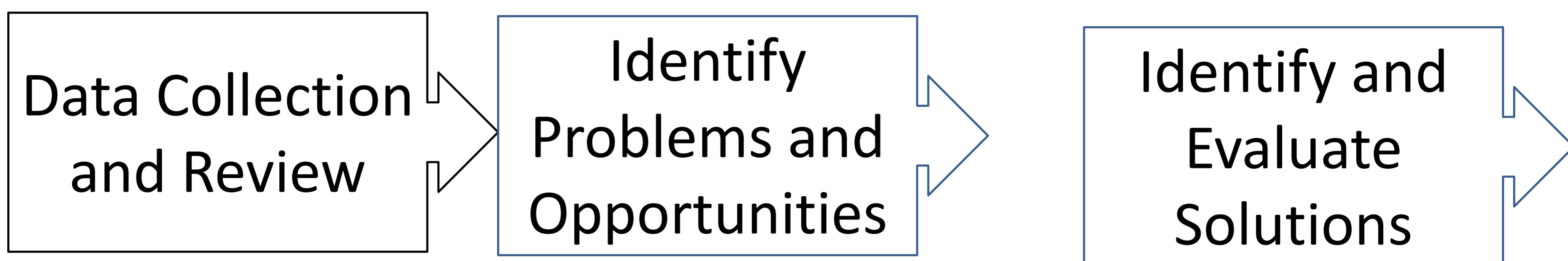
Proposed Project	Budget	Funding
Pending outcome of Class EA - Expand the storage near Happy Valley Reservoir	\$3.40M	Development Charges
Add two additional PRVs in Zone 2a	\$0.35M	Development Charges
Extend existing watermain into new growth areas	\$14.40M	Developer Built & Development Charges

Total Build-Out Capital Costs = \$18.15M

Total Capital Costs 2019 to Build Out = \$54.75M



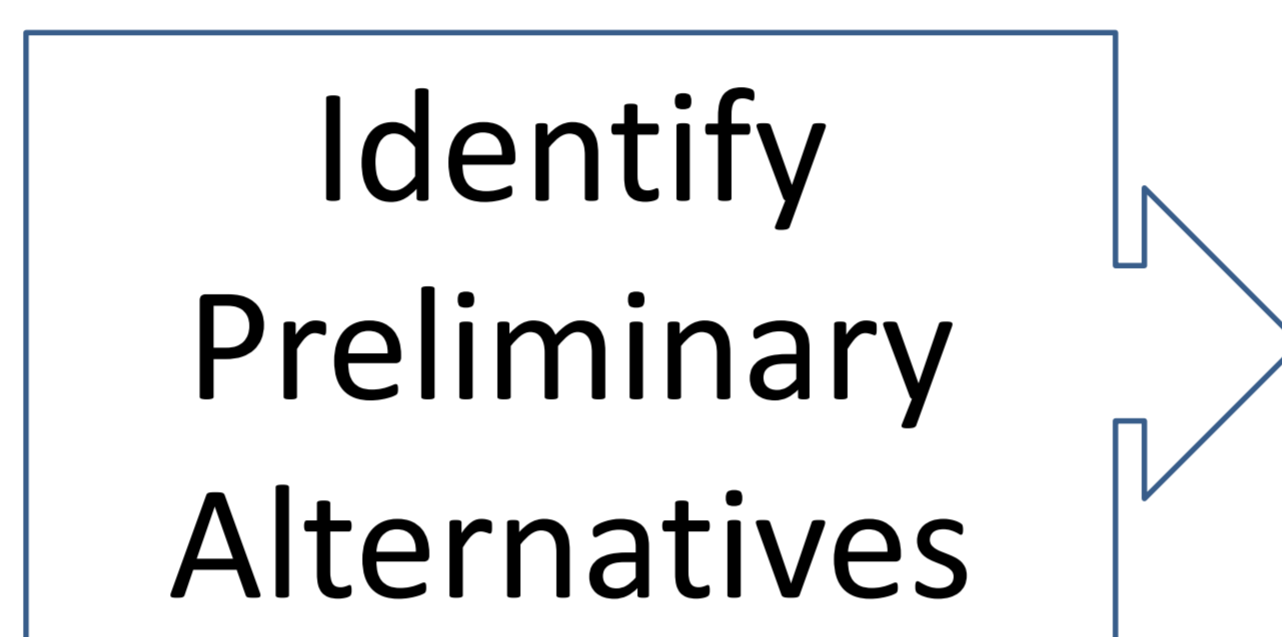
NEXT STEPS



Phase 1 – Problem/ Opportunity



WE ARE HERE
**Consult with
Review Agencies
and Public**



**Prepare Master Plan
document for public
comment**

Phase 2 – Alternative Solutions

1. Public comments will be incorporated in the draft Master Plan Report on the Class EA to be presented to Town Council this spring.
2. Draft Master Plan report to be presented to Council for acceptance.
3. Town can implement Schedule A and A+ projects.
4. For Schedule B (e.g. water storage) and Schedule C projects (e.g. treatment plant expansions), Class EA's must be completed prior to implementation.