

Appendix 'M'
Council Presentation

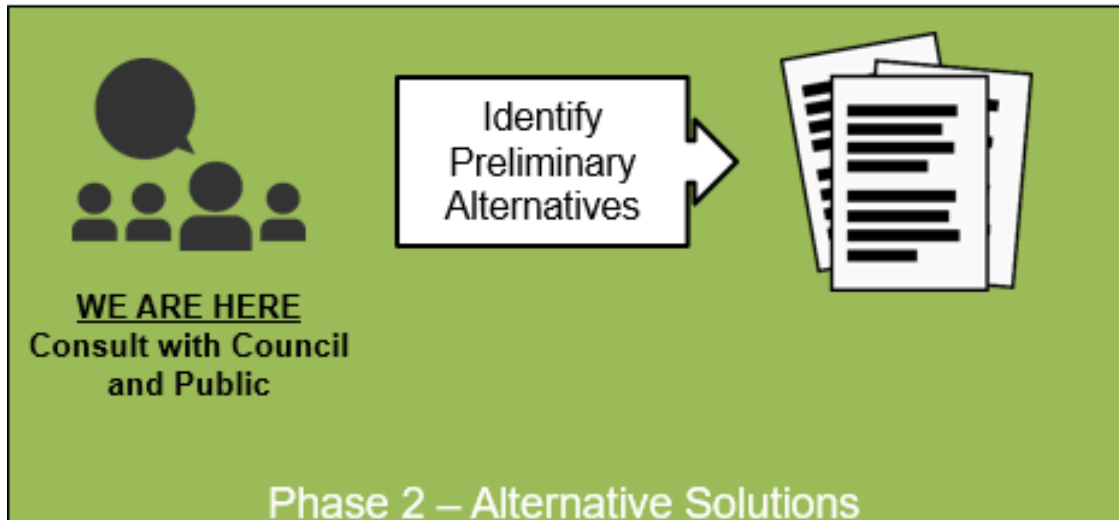
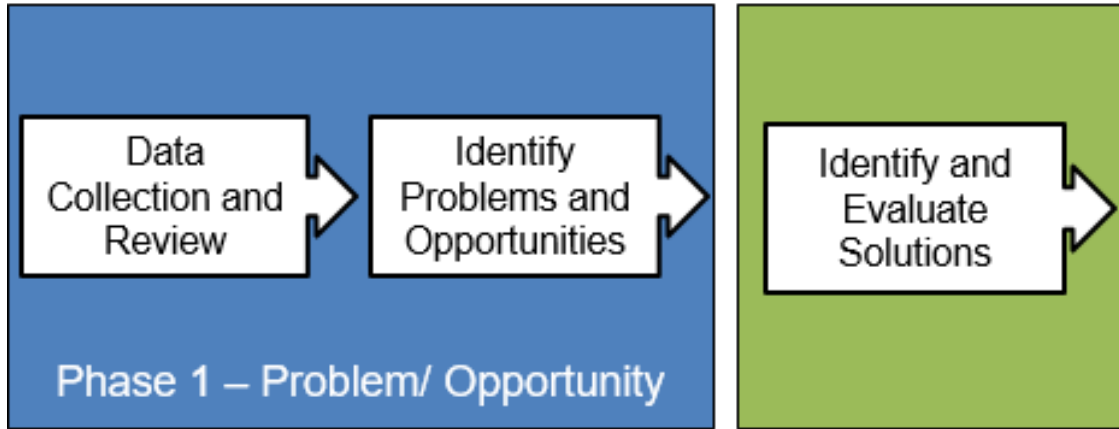
Town of The Blue Mountains Municipal Master Plan for Town-Wide Water Distribution

Presented by: Brent Bouteiller

Date: May 22, 2019

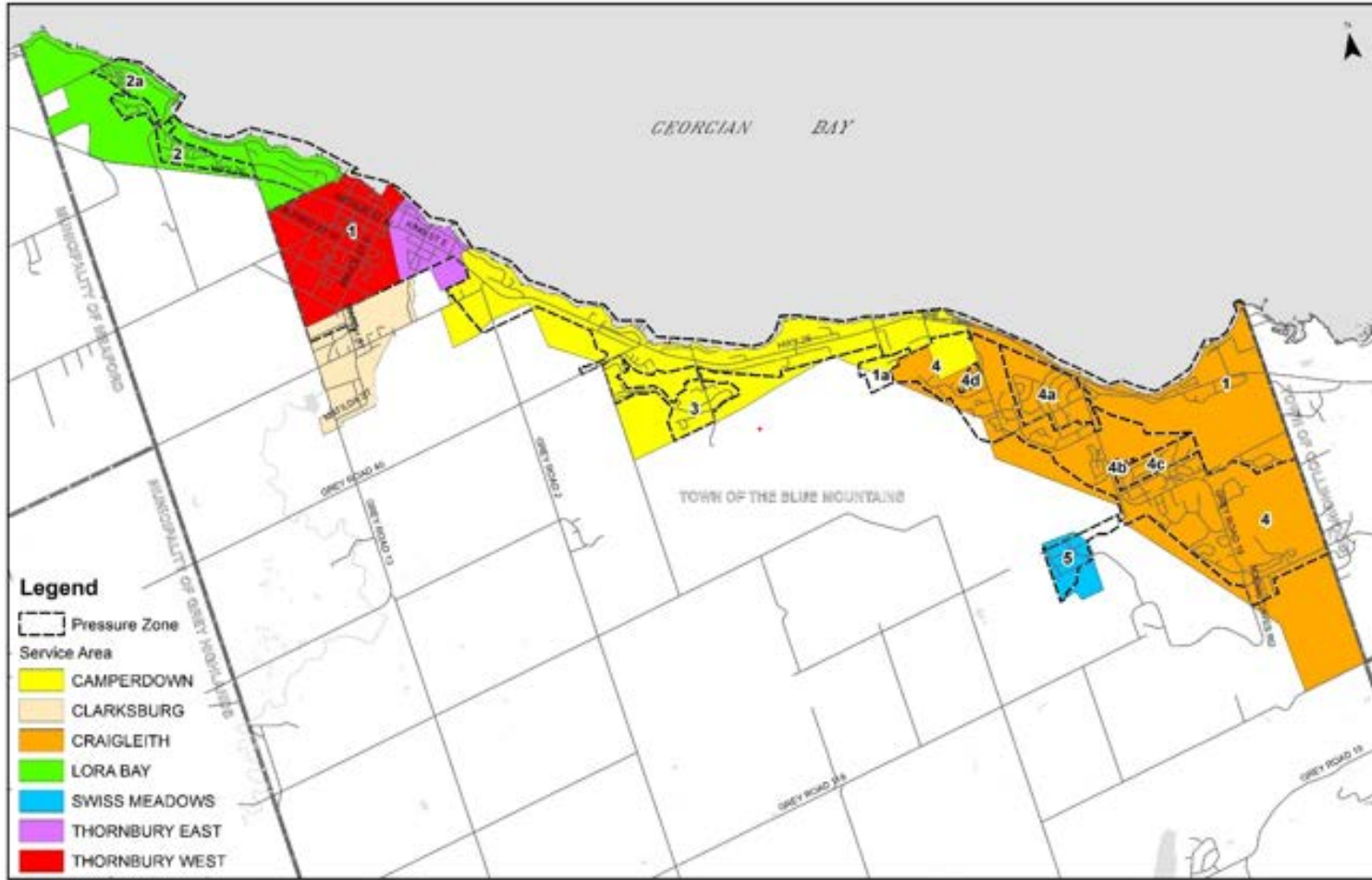
JLR No.: 27550-0001

Class EA Process – Approach 1 Master Plan



- Under the Environmental Assessment Act, municipalities must consider potential environmental effects before a potential project begins.
- The Master Plan will become the basis for additional investigations for the specific Schedule B and Schedule C projects identified within it.

Study Area – Key Plan



Key System 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.

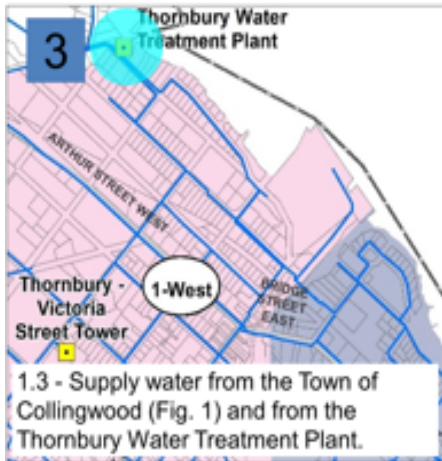
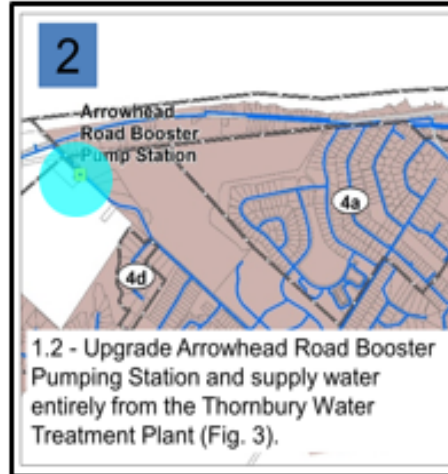
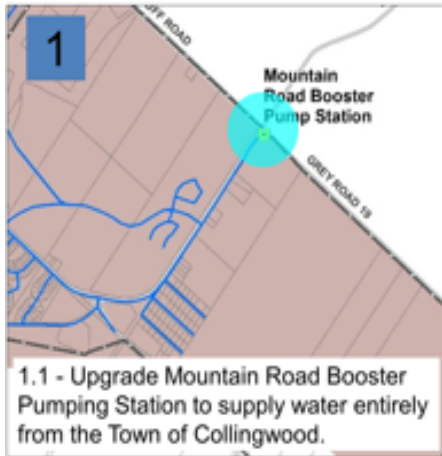
Issue No. 2 – Zone 1, 2, 3 Storage: In the 20-year and Build-Out scenarios there are storage deficits in Pressure Zone 1 (Thornbury/Clarksburg), Zone 2 (Lora Bay) and Zone 3 (Camperdown) combined. Storage in Zone 2 and 2a (Lora Bay) is accessed through the 10th line BPS and the system cannot supply near-term (i.e. 0 -10 year) projected maximum day plus fire flow demands to these areas.

Issue No. 3 – Zone 4 Storage: In the 20-year and Build-Out scenarios there is a storage deficiency in Zone 4 (Craigleith).

Issue No. 4 – Zone 5 Storage and Fire Protection: In the Build-Out scenario there is a storage deficiency in Zone 5 (Swiss Meadows). Currently, not all areas are serviced with adequate sized watermains and hydrants.

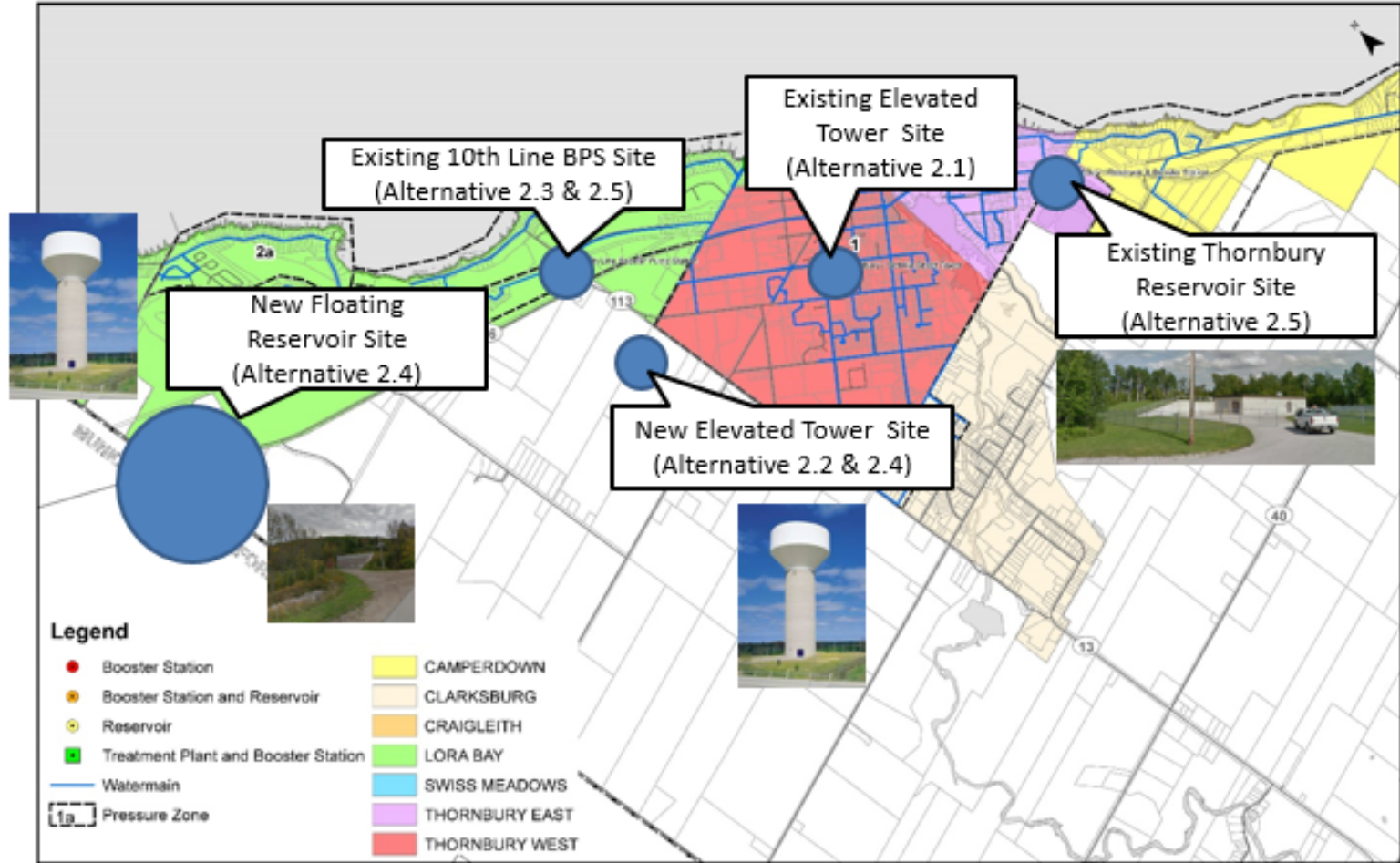
Issue No. 5 – Supply & Storage for Castle Glen: For Build-Out of Castle Glen, municipal water supply will be required.

Issue No. 1 East Side Water Supply – Overview



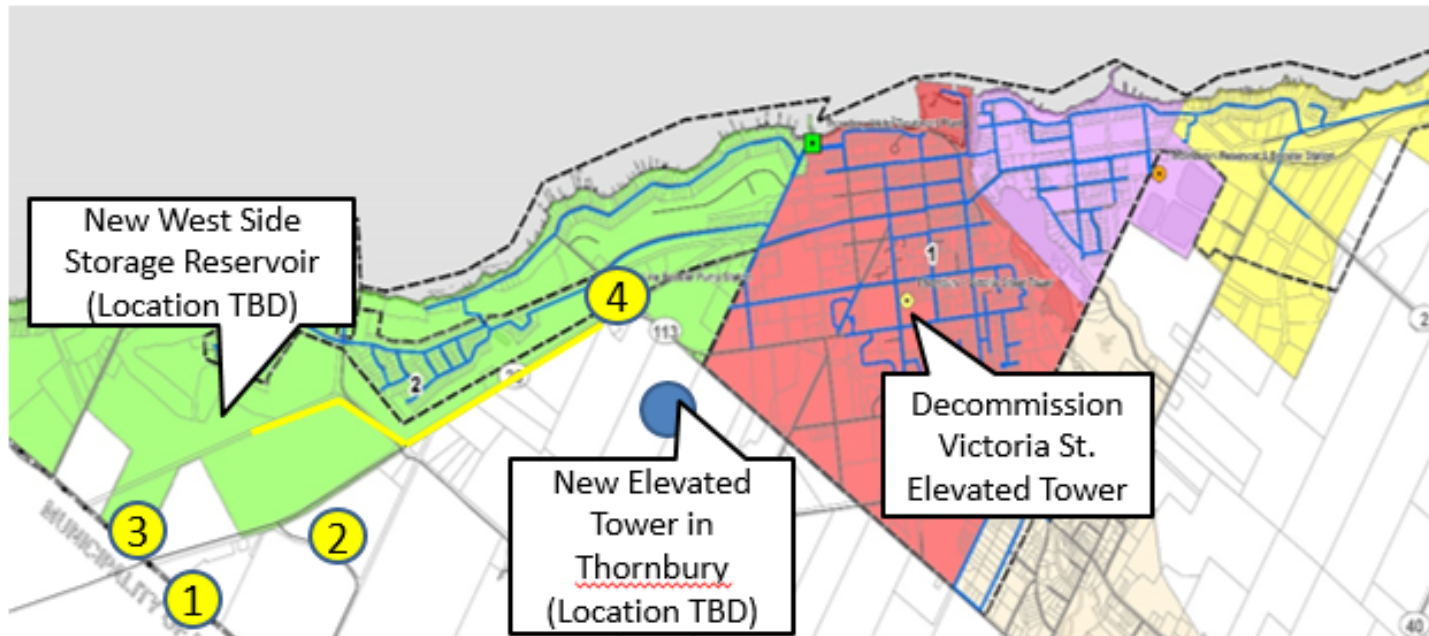
- Four main alternatives were identified.
- Due to the long term implications of selecting a 20-year/Build-Out supply alternative, it is recommended that a Schedule 'C' Water Supply Class EA for East Pressure Zones be conducted prior to implementation of any water supply alternative.
- In the interim, the baseline alternative to upgrade the west to east feedermain and Arrowhead Road BPS has been carried forward for budgeting purposes.

Issue No. 2 Storage Deficiency Pressure Zones 1, 2, 3 - Overview

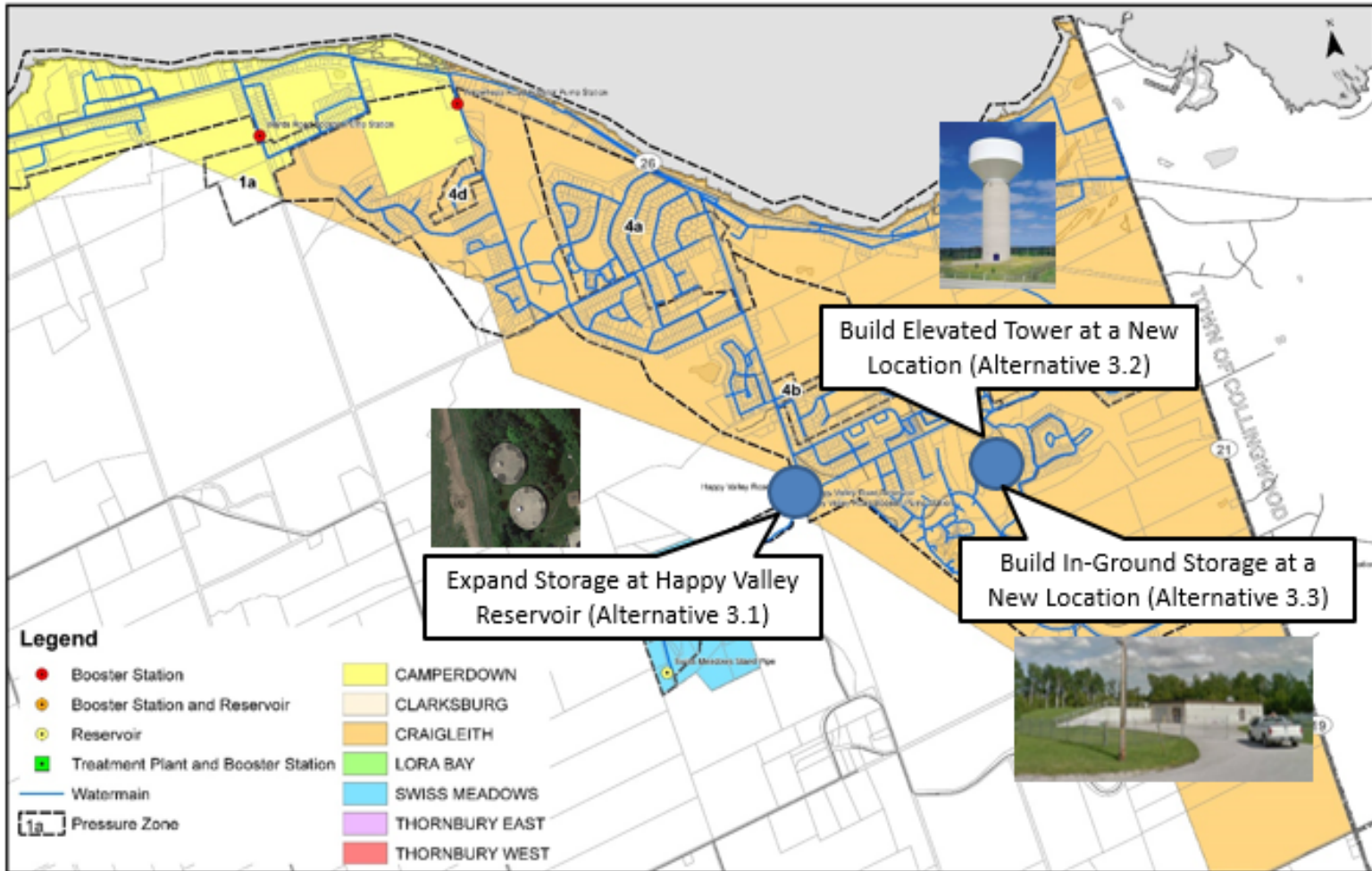


Issue No. 2 Storage Deficiency Pressure Zones 1,2,3 – Preferred Alternative

- A Schedule 'B' Class EA for the West Pressure Zones Storage is required to select the preferred water storage and distribution alternative prior to project implementation.
- The preliminary preferred alternative is Zone 1 Elevated Tower (at the Tomahawk municipal golf course) and Zone 2 Reservoir (at one of four potential locations in Lora Bay).
- For budgeting purposes the cost of Alternative 2.4 – Zone 1 Elevated Tower and Zone 2 Floating Reservoir (Alternative Location No. 1) has been carried forward.



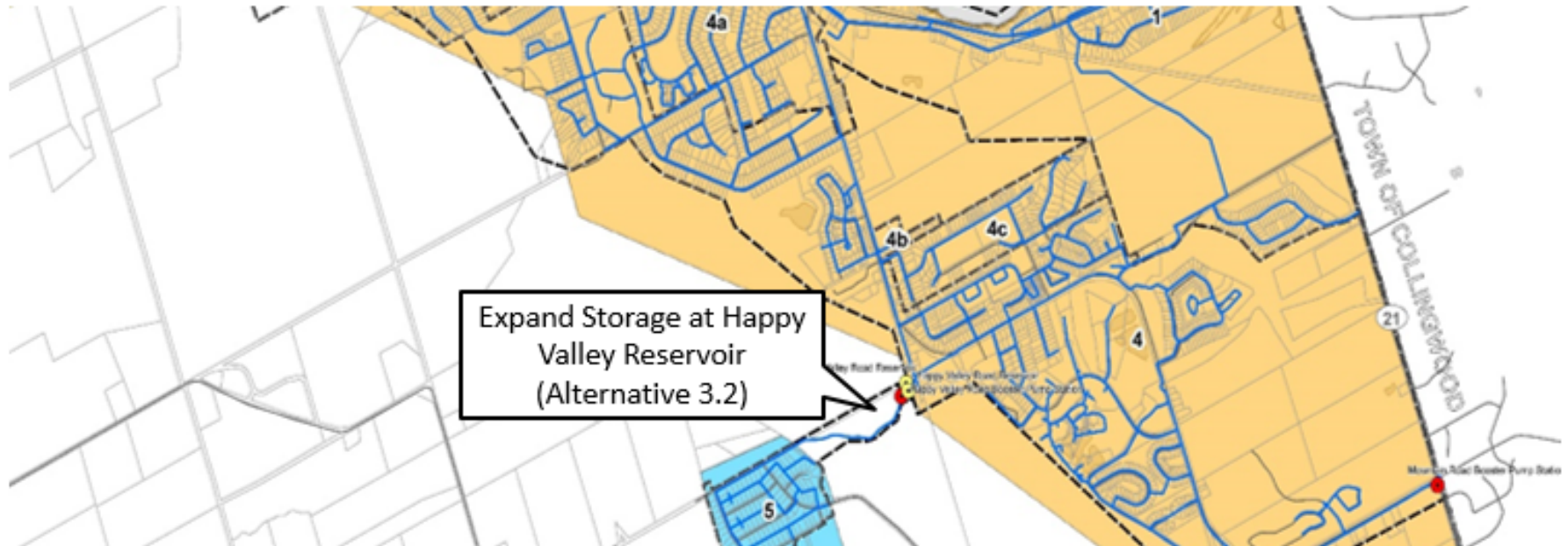
Issue No. 3 Storage Deficiency Pressure Zone 4 - Overview



Issue No. 3 Storage Deficiency

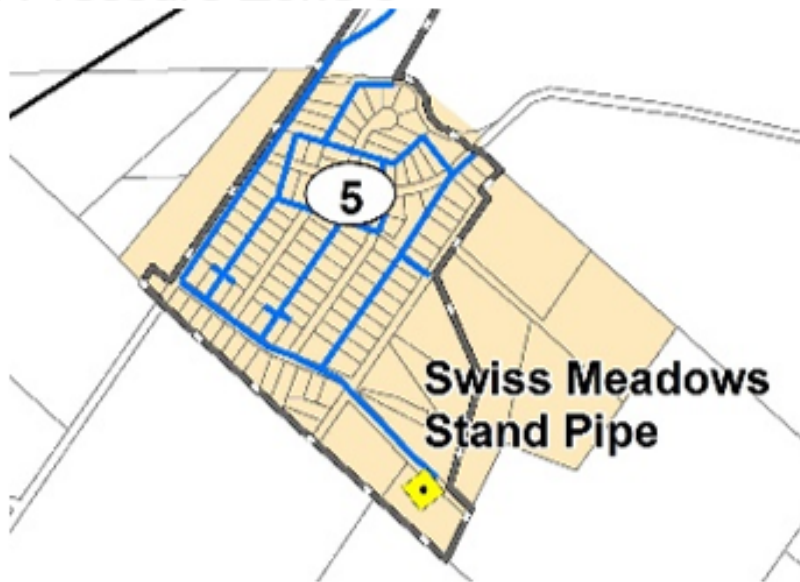
Pressure Zone 4 – Preferred Alternative

- A Schedule 'B' Class EA for the East Pressure Zones Storage is required to select the preferred water storage and distribution alternative prior to project implementation. This Class EA could be combined with the Schedule 'C' Class EA for East Side Supply.
- The preliminary preferred alternative is Alternative 3.2 – Expand Storage at Happy Valley Reservoir and this alternative has been carried forward for budgeting purposes.



Issue No. 4 and No. 5 – Overview & Preferred Alternative

Issue No. 4: Storage Deficiency in Pressure Zone 5



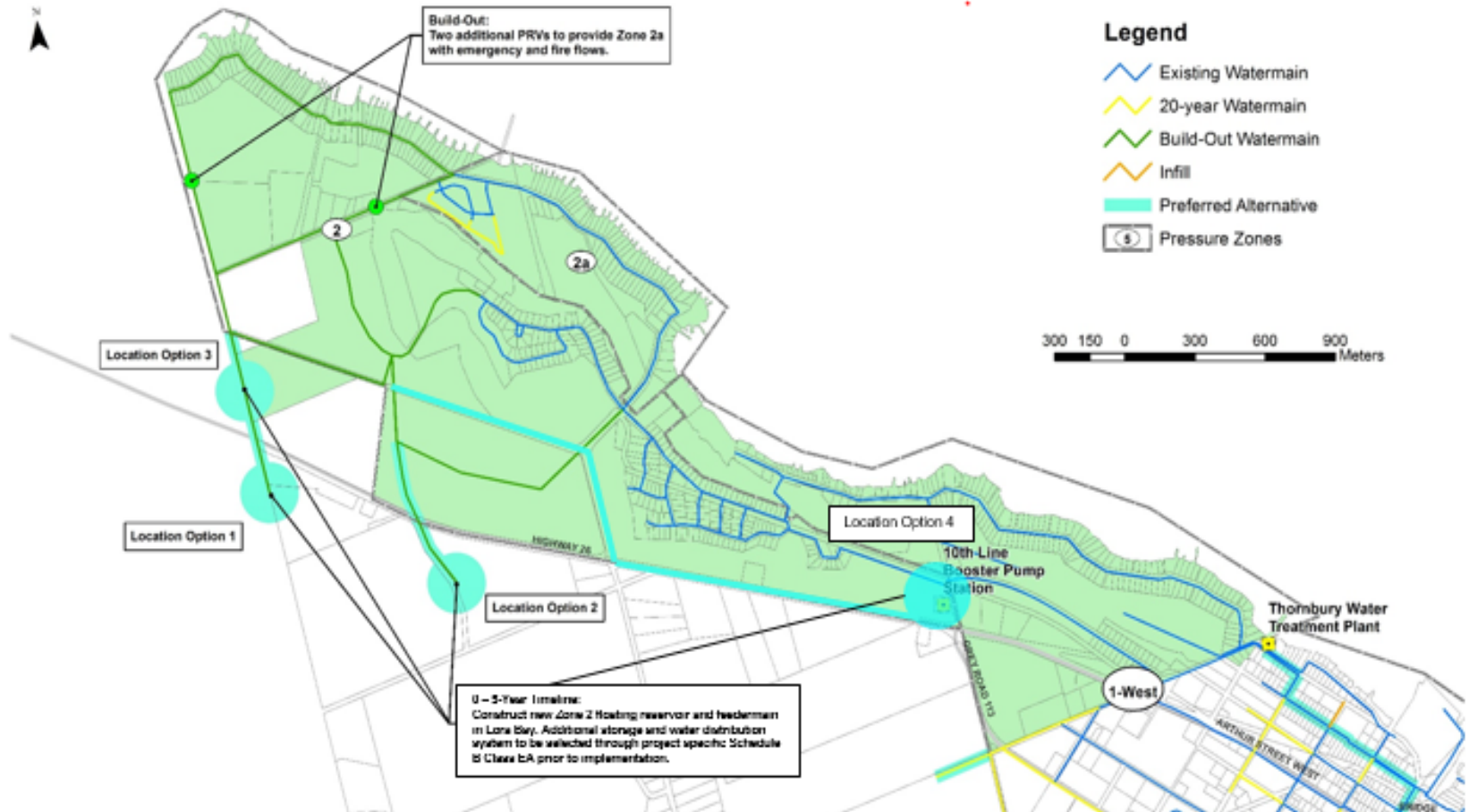
Recommendation: Maintain the current level of service (i.e. fire protection supplemented with tanker trucks).

Issue No. 5: Water Supply and Storage for Castle Glen

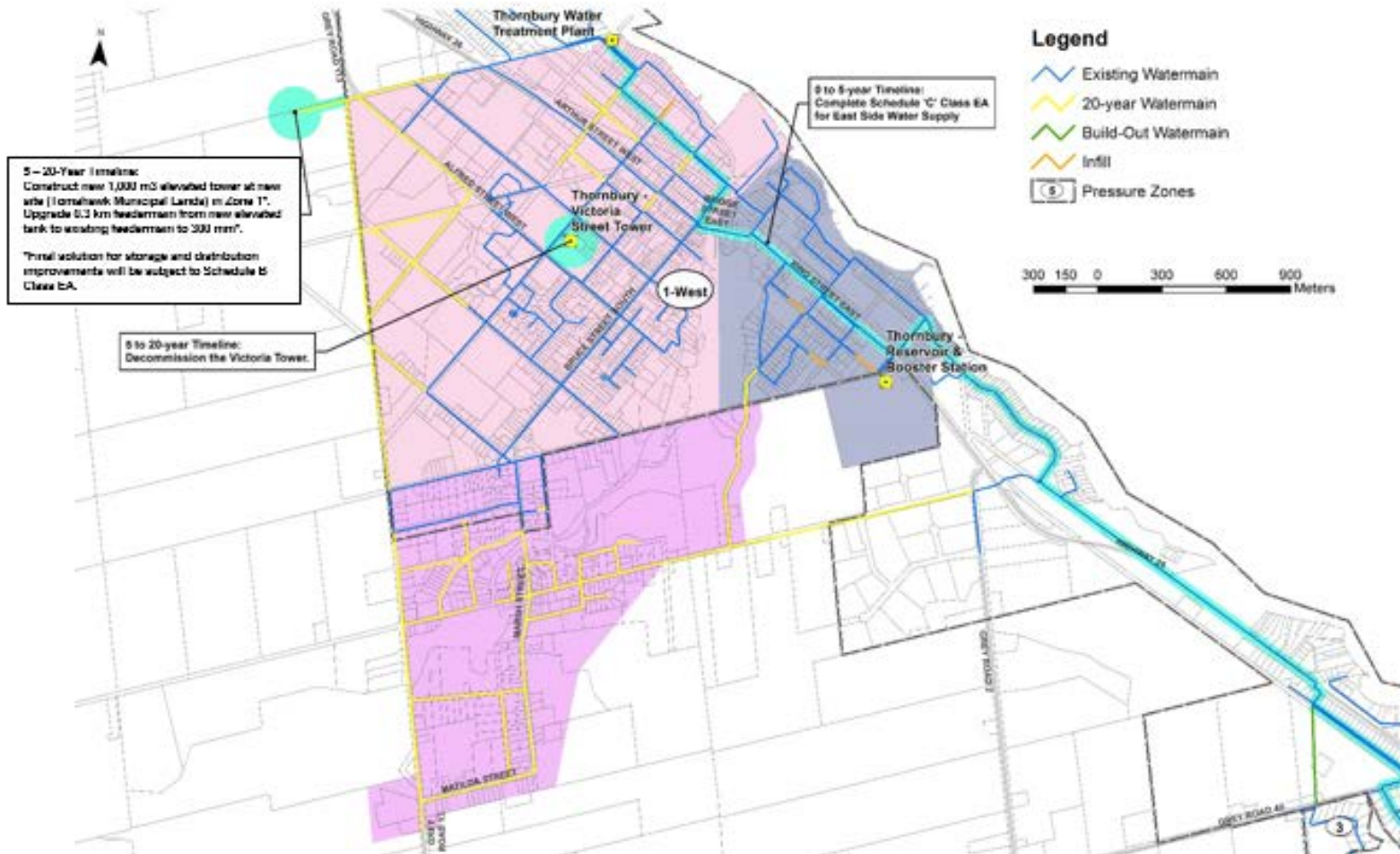


Recommendation: Connect to Castle Glen groundwater system (constructed in development Phase 1) to the Town's water system.

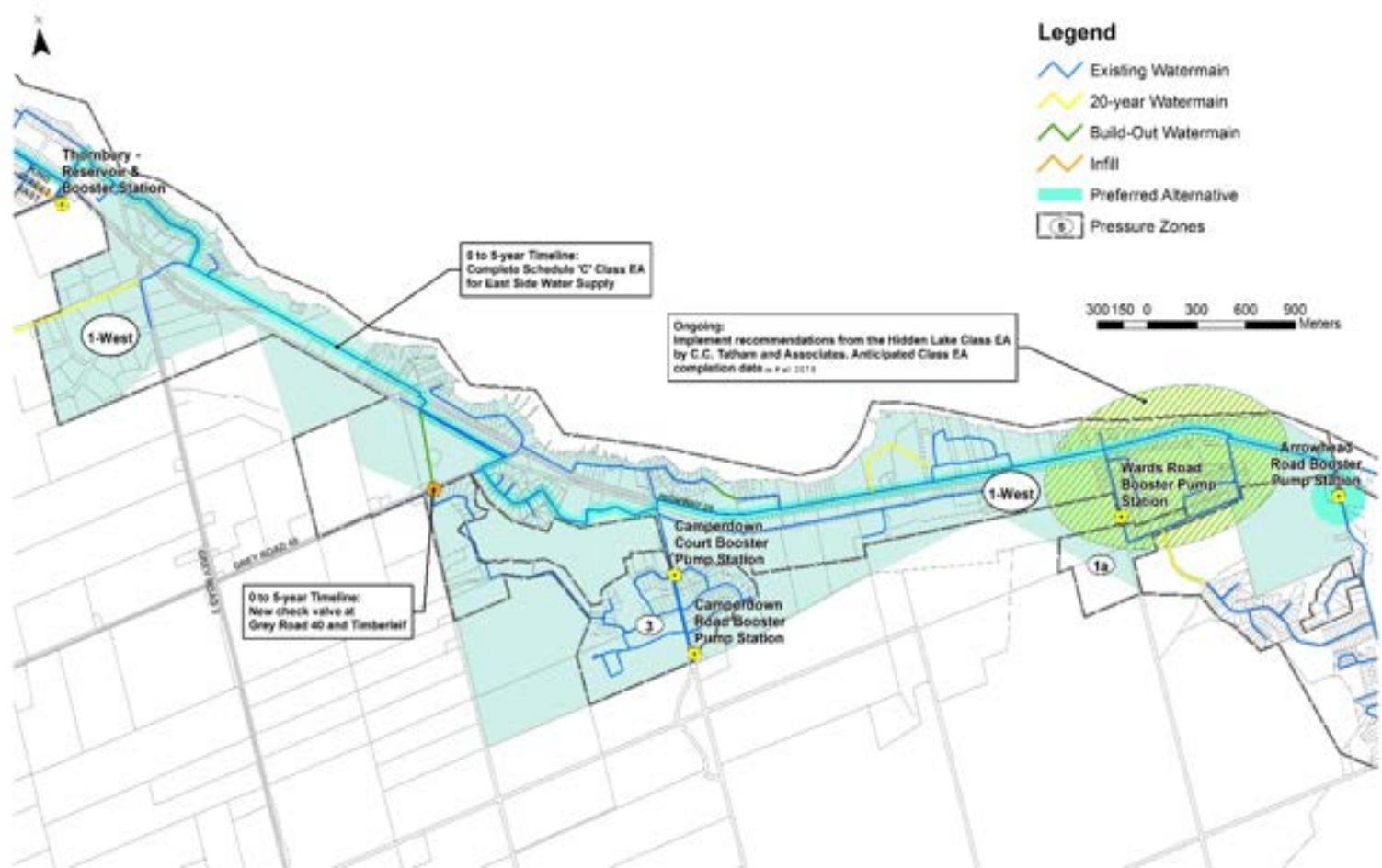
Future Water Distribution, 20-Years and Build Out Pressure Zones 2 and 2a (Lora Bay)



Future Water Distribution, 20-Years and Build Out Pressure Zones 1-West (Thornbury and Clarksburg)



Future Water Distribution, 20-Years and Build Out Pressure Zones 1a, 1-West and 3 (Camperdown)



Preferred Alternative 5-Year Capital Cost

Proposed Project	Budget	Funding
Complete Schedule 'B' Class EA and Pre-Design for West Pressure Zones Storage	\$0.25M	Growth
Complete Schedule 'C' East Side Water Supply and Schedule 'B' East Side Water Storage Class EA and Pre-Design	\$0.75M	Growth
Pending Outcome of Class EA - New 1,700 m ³ reservoir in Zone 2 (excludes feedermain)	\$3.50M	Growth
Implement findings from Hidden Lake Class EA	TBD	Growth
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

Preferred Alternative 20-Year Capital Cost

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

Total 20-Year Capital Costs= \$31.60M

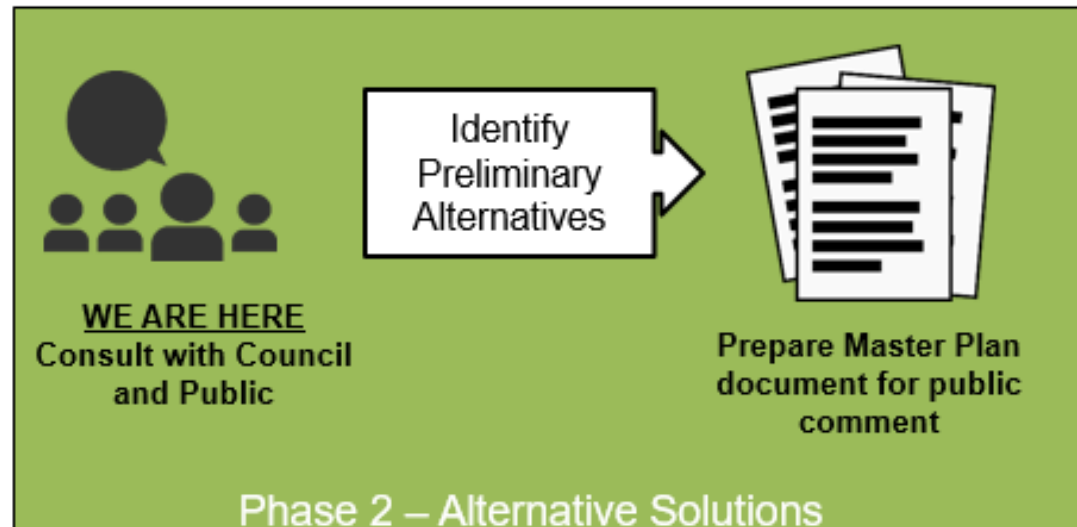
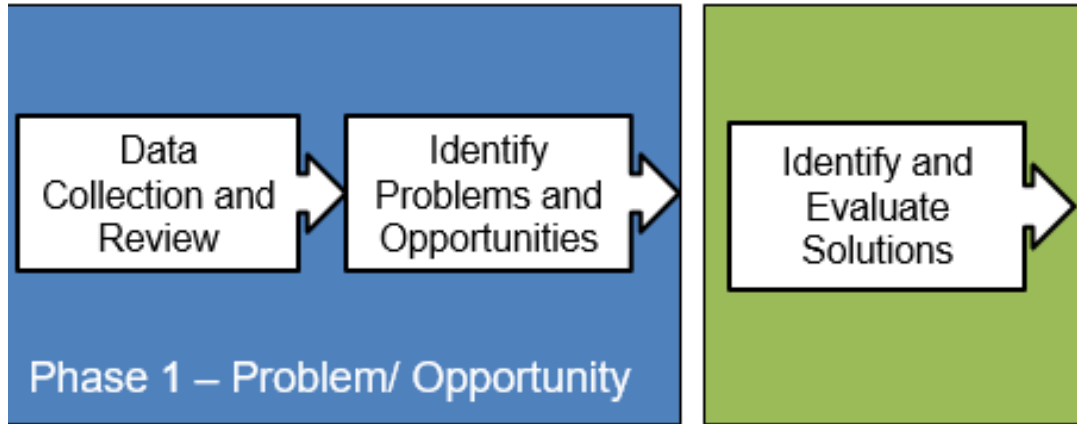
Preferred Alternative Build-Out Capital Cost

Proposed Project	Budget	Funding
Pending outcome of Class EA - Expand the storage near the Happy Valley Reservoir site to add 2,300 m ³	\$3.40M	Growth
Add two additional PRVs in Zone 2a	\$0.35M	Growth
Extend existing watermain into new growth areas	\$14.40M	Growth

Total Build-Out Capital Costs = \$18.15M

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

Next Steps



1. Hold Public Information Center to receive public comments (May 29).
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 and Schedule C projects, Class EA's must be completed prior to implementation.

Contact Us

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