Township of Springwater
Water and Wastewater Master Plan

Public Information Centre Phase 1

WELCOME

June 24 & 26, 2024

Township of Springwater

Ainley Group

Welcome!

- Please sign in, then browse the information panels
- Members of the Project Team are available to discuss the Master Plan with you and to answer your questions
- Your comments are important.
  Before exiting today's PIC complete a Comment Sheet or provide your input by July 26, 2024
- Presentation available on-line at:
  www.springwater.ca/WWWMasterPlan

Land Acknowledgement

The Township of Springwater acknowledges that the land on which we gather today is located on the traditional territory of the Anishinaabek (a-nish-i-na-beck) Nation, which includes the Ojibwe (o-jib-way), Odawa (o-dah-wa), and Pottawatomi (pot-a-wa-tom-ee) Nations, collectively known as the Three Fires Confederacy, the Ouendat (WENdatt) and the Haudenesaunee (ho-deen-nohSHAW-nee).

The Township of Springwater is dedicated to honouring Indigenous history and culture and is committed to coming together to learn, heal and create future prosperity, respect and understanding in our community.

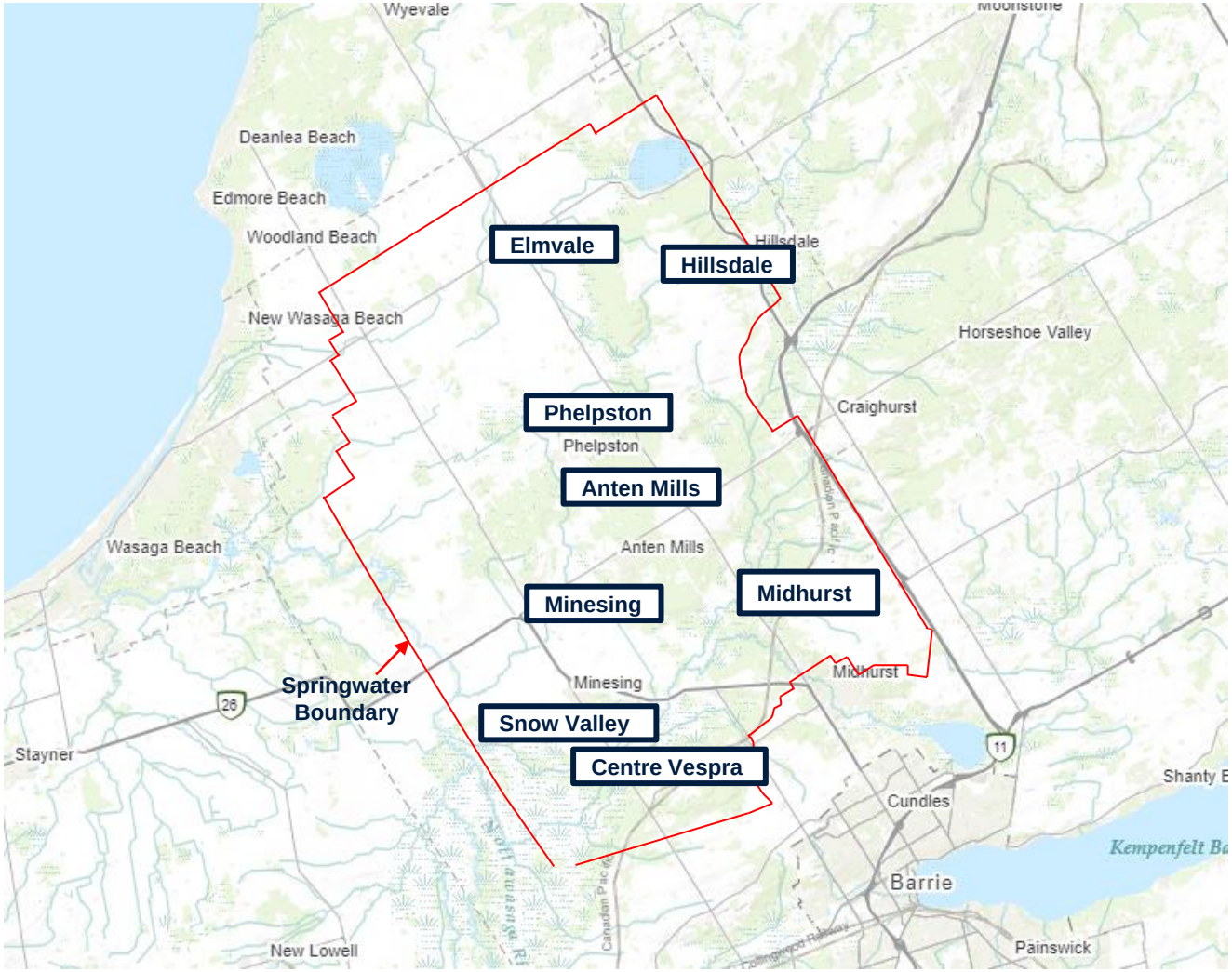
Purpose of this PIC

- Describe the Master Plan process
- Present the work done to date
- Describe the existing water and wastewater systems
- Show opportunities and challenges / constraints within existing systems
- Show expected development and growth in each Urban Settlement Area
- Describe next steps
- Receive feedback on Master Plan progress to date

Introduction

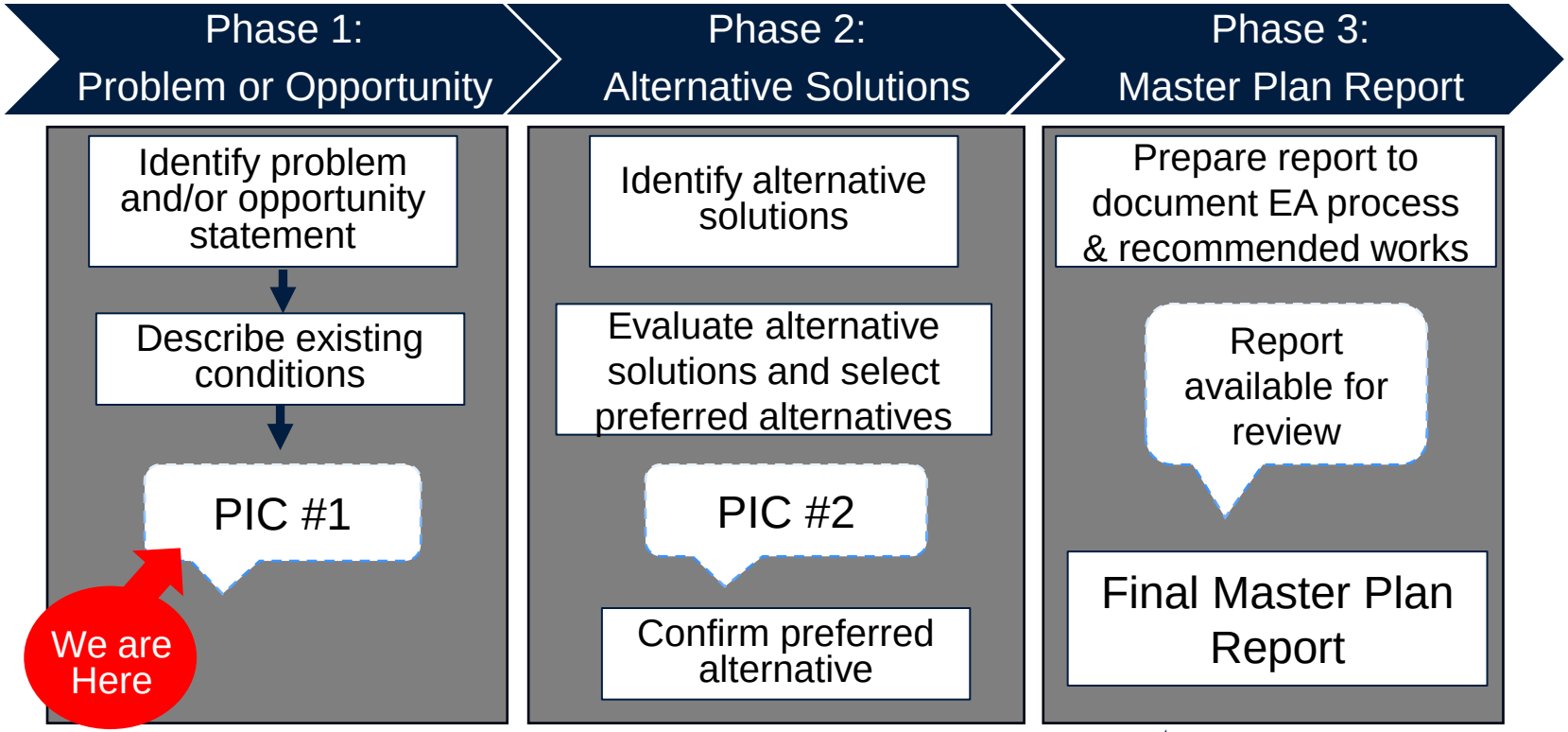
- The Township of Springwater is embarking on a Master Plan (MP) to evaluate current and future water and wastewater servicing needs to address growth over the next 20 years and support the Township's Official Plan.
- The Master Plan will:
  - Evaluate current and future servicing needs to the year 2041.
  - Apply to areas designated as Urban Settlement Areas including: Anten Mills, Centre Vespra, Elmvale, Hillsdale, Midhurst, Minesing, Phelpston, and Snow Valley.
  - Capture servicing needs of the communities within the Township, recognizing each one has its own, specific priorities, and to develop alternative solutions addressing these needs.
  - Support the Township's Official Plan and its mission of supporting development in designated areas, maintaining community characteristics, and preserving natural heritage.

Springwater's Urban Settlement Areas



Class Environmental Assessment Process

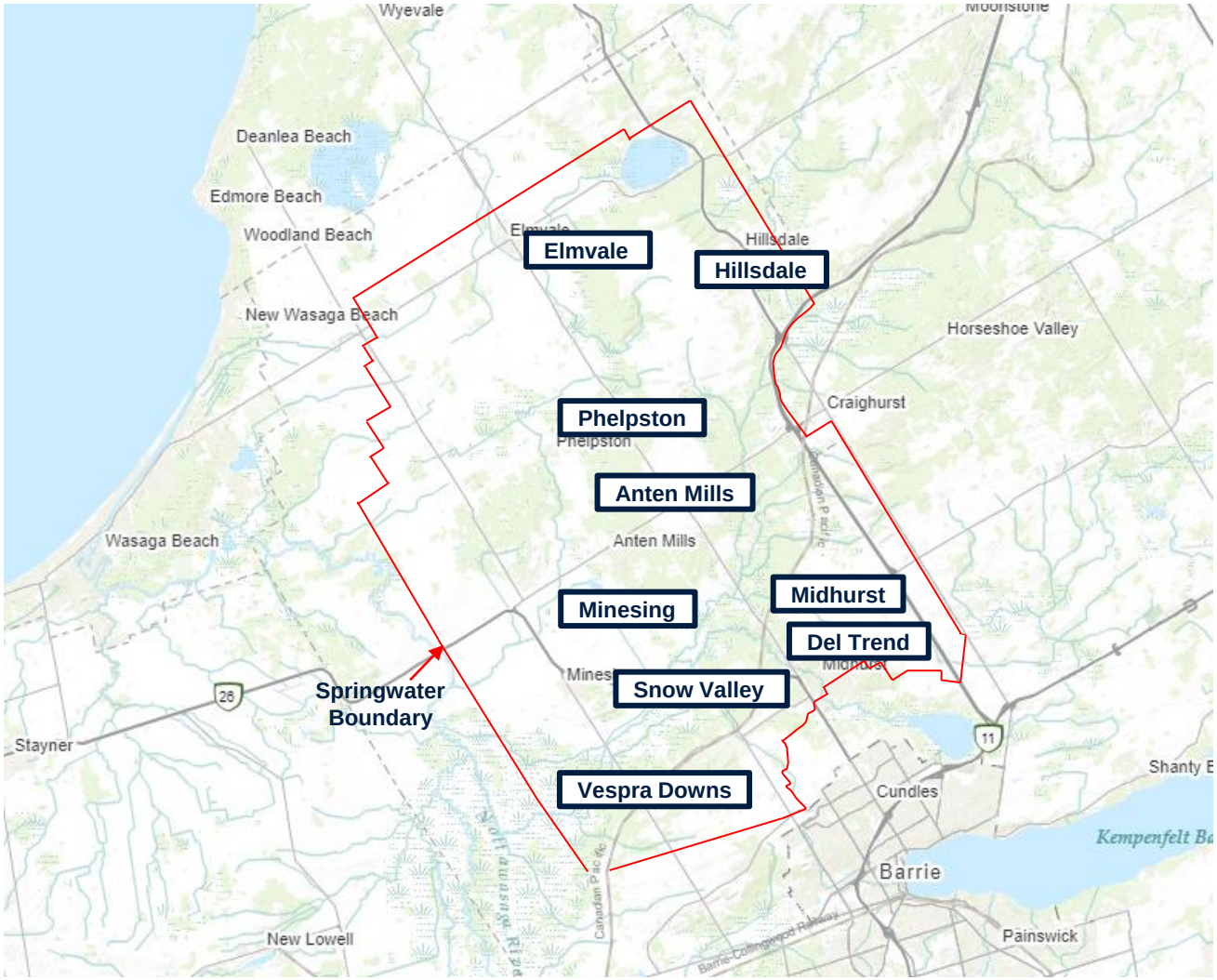
This Master Plan is being carried out in accordance with the Master Plan Modified Approach #2 as identified in the 2024 Amended Municipal Class Environmental Assessment document. Opportunities for input include providing comments on 2 PICs and the Master Plan report.



Approach to Master Plan

- Assess constraints and determine spare capacity in existing systems.
- Project population growth, as well as future water demand and wastewater flows for each Urban Settlement Area.
- Determine areas requiring capacity increases.
- Develop a problem statement for each Urban Settlement Area based on the findings of the background assessments and projections.
- Identify and evaluate alternative solutions to each identified problem and recommend a preferred general solution for each problem.
- Summarize the list of general solutions in the Master Plan document, including costs and timing of required upgrades and expansions along with additional Class EA planning needed for more complex individual projects.

Water Systems Overview



Existing Water Systems

- 9 groundwater systems currently provide drinking water to 12,800 people, as follows:

URBAN SETTLEMENT AREA	WATER SUPPLY RATED CAPACITY (m^3/d)	STORAGE (m^3)	WATERMAINS (km)	Maximum Day Demand (MDD) (% of Capacity)
Elmvale	4,546	2,120	18.5	23%
Hillsdale	1,434	1,517	11.5	46%
Midhurst	Idlewood – 3,498 Greenpine – 1,958 Carson Rd – 1,642	2,075	31.7	41% 59% 43%
Anten Mills	1,558	733	5.5	33%
Del Trend	1,074	675	1.9	54%
Minesing	740	1200	6.2	46%
Phelpston	656	635		20%
Snow Valley	Old SV – 1,132 SV Highlands – 1,634	3,278	34.7	74% 94%
Vespra Downs	169		1.3	49%

- The remainder of the population (approximately 10,000) is privately serviced.

Water Supply & Storage Capacity Findings

- There are no current supply or storage issues in Elmvale, Hillsdale, Midhurst, Anten Mills, Del Trend, Minesing, Phelpston or Vespra Downs.
- Phelpston has surplus water supply (currently operating at only 20% of MDD capacity).
- There are no current supply or storage issues with the Old Snow Valley system; however, Snow Valley Highlands is at 94% of its rated capacity and may need additional water storage.
- The September 2023 Addendum to the 2017 Hillsdale Water Treatment Plant (WTP) Class EA confirms the need for capacity expansion to accommodate new developments.
- As established in the March 2020 Midhurst Water, Wastewater and Transportation Environmental Study Report, the Carson Road and Midhurst Heights developments in Midhurst will be serviced by 2 major new WTPs.

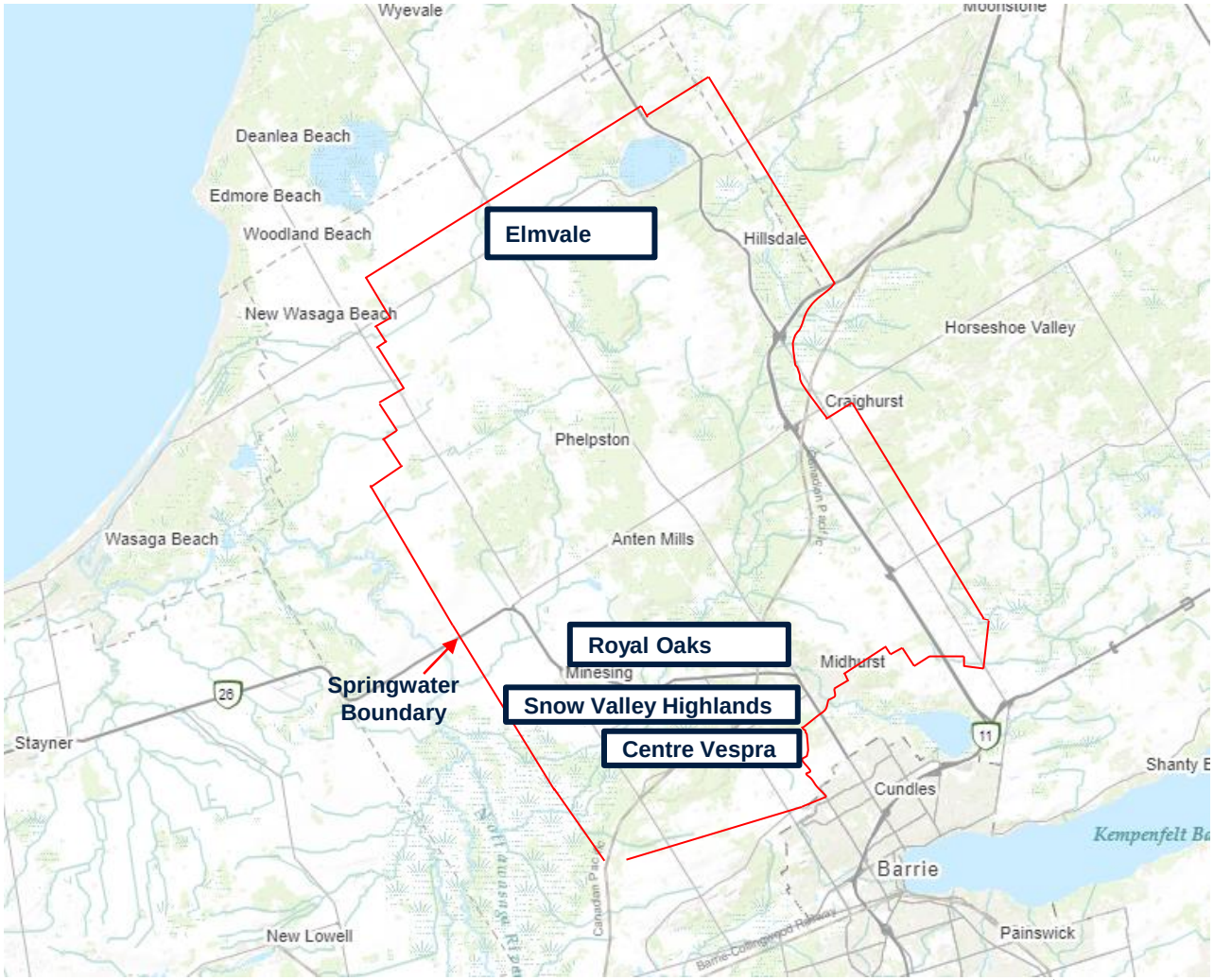
Existing Water Distribution System Modelling

- 6 water distribution system models were developed or updated: Anten Mills, Minesing, Snow Valley, Elmvale, Hillsdale and Midhurst.
- Ministry (MECP) Design Guidelines recommend normal operating pressures in the distribution system of not less than 275kPa, and not more than 700 kPa to avoid damage to household plumbing and unnecessary water and energy consumption.
- System pressures were within this range for all existing systems except Midhurst, where there were some areas with pressure marginally higher than 700kPa.
- In the event of a fire, a minimum fire flow of 38L/s at 140kPa residual pressure is recommended by the MECP Design Guidelines to allow for extinguishing a typical detached single-family dwelling fire. A minimum pressure of 140kPa is also required for the remainder of the system, i.e. areas not in the fire area.
- The models determined that fire flows greater than 38L/s under these conditions were available to all dwellings in each system.

Water System Opportunities & Constraints

- Snow Valley Water System continues to experience increased demand. To improve system performance and increase capacity, development of a new well supply and upgrading or adding to the existing storage should be considered.
- Servicing upgrades for the Hillsdale water system are recommended to accommodate planned developments.
- Phelpston's water treatment system is operating at only 20% of its MDD capacity; could potentially service an expanded area, including supplementing Anten Mills (5 km from Phelpston), which may need additional supply and storage in 10-15 years.

Wastewater Systems Overview



Existing Wastewater Systems

- Currently 4 wastewater conveyance and treatment systems service an estimated population of 6,000 in:

URBAN SETTLEMENT AREA	WASTEWATER TREATMENT CAPACITY (m^3/d)	SEWAGE PUMPING STATIONS (SPS)	PIPELINES (km)	AVERAGE DAILY FLOW (ADF) (% of Capacity)
Elmvale	1,800	2	Sewer – 19.2 Forcemain – 6.2	59%
Snow Valley Highlands	260	3	Sewer – 11.8 Forcemain – 4.8	45%
Snow Valley Lowlands (Royal Oaks)	260	5	Sewer – 4.4 Forcemain – 5.7	38%
Centre Vespra (Stonemanor)	1,558	2	Sewer – 11.7 Forcemain – 2.4	41%

- The Midhurst wastewater conveyance and treatment system is under construction
- The remainder of the population (approximately 16,800) is privately serviced.

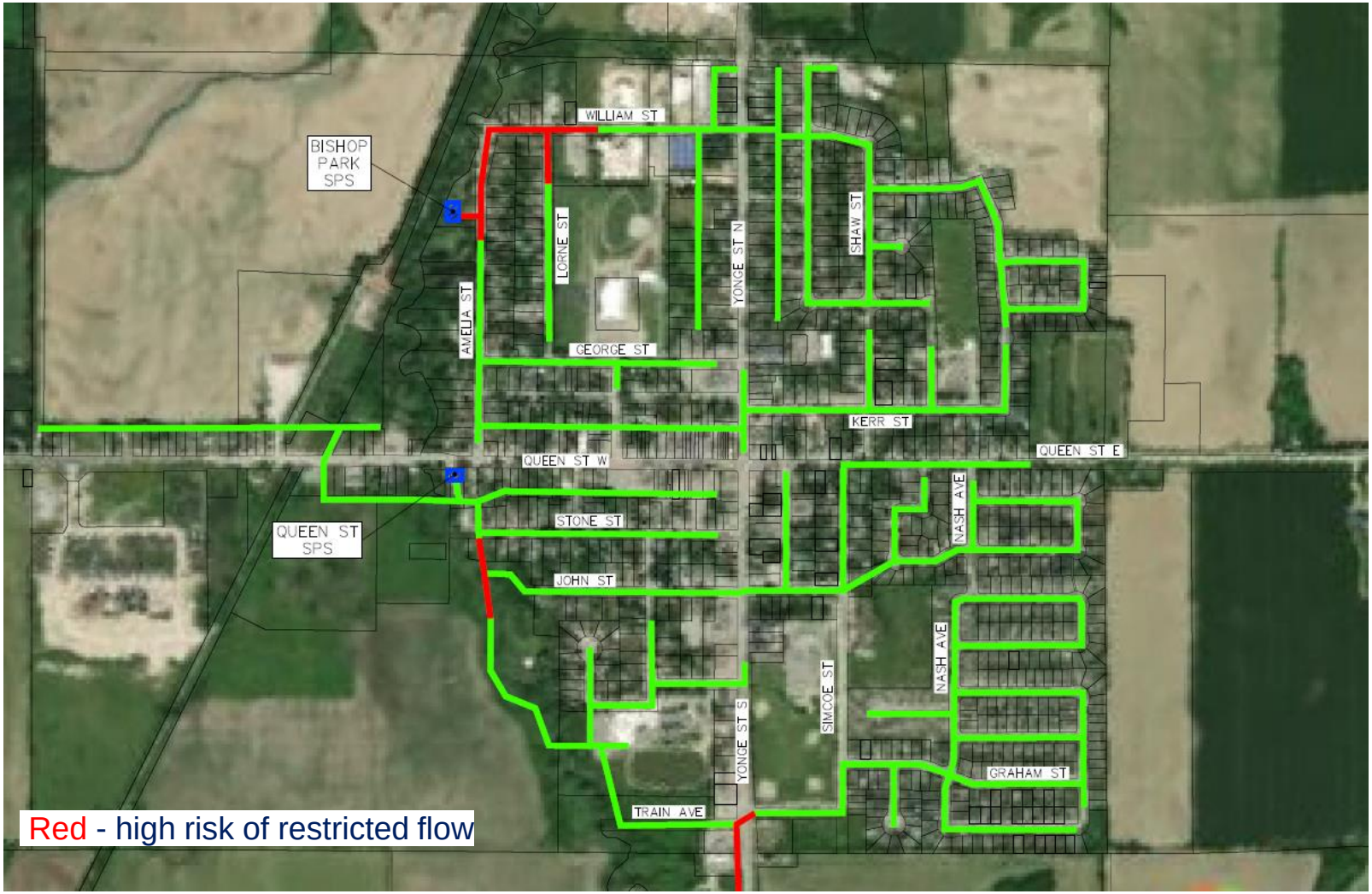
Wastewater Treatment Capacity Findings

- The Elmvale Wastewater Treatment Plant (WWTP), currently at 59% capacity will need expansion when capacity reaches 80%.
- Although nominally under their rated capacities, the Centre Vespra WWTP experiences issues meeting effluent targets when treatment trains are taken offline for maintenance.
- Royal Oaks and Snow Valley Highlands WWTPs are not equipped with biosolids (sludge) storage facilities and the biosolids are regularly hauled by truck to the Elmvale WWTP, at a cost.
- As established in the March 2020 Midhurst Water, Wastewater and Transportation Environmental Study Report, Midhurst will be serviced by a new WWTP, sewage pumping stations, and forcemains.

Existing Wastewater Conveyance System Modelling

- Wastewater models were developed for all 4 systems.
- The models analyze the hydraulic performance of the conveyance system including gravity sewer pipes as well as the SPSs and associated forcemains.
- The model identifies areas where the gravity sewer pipes are >80% full during the peak flow simulation – these are areas at high risk of restricted flow.
- Analysis revealed no issues with the Snow Valley Highlands, Royal Oaks or Centre Vespra conveyance systems
- The Elmvale analysis revealed a few areas of >80% full sewers - upstream of the Bishop Park SPS and an area in the south end of Elmvale. These require more investigation.
- The Bishop Park SPS needs expansion.

Elmvale Sewer Pipe Analysis



Wastewater System Opportunities & Constraints

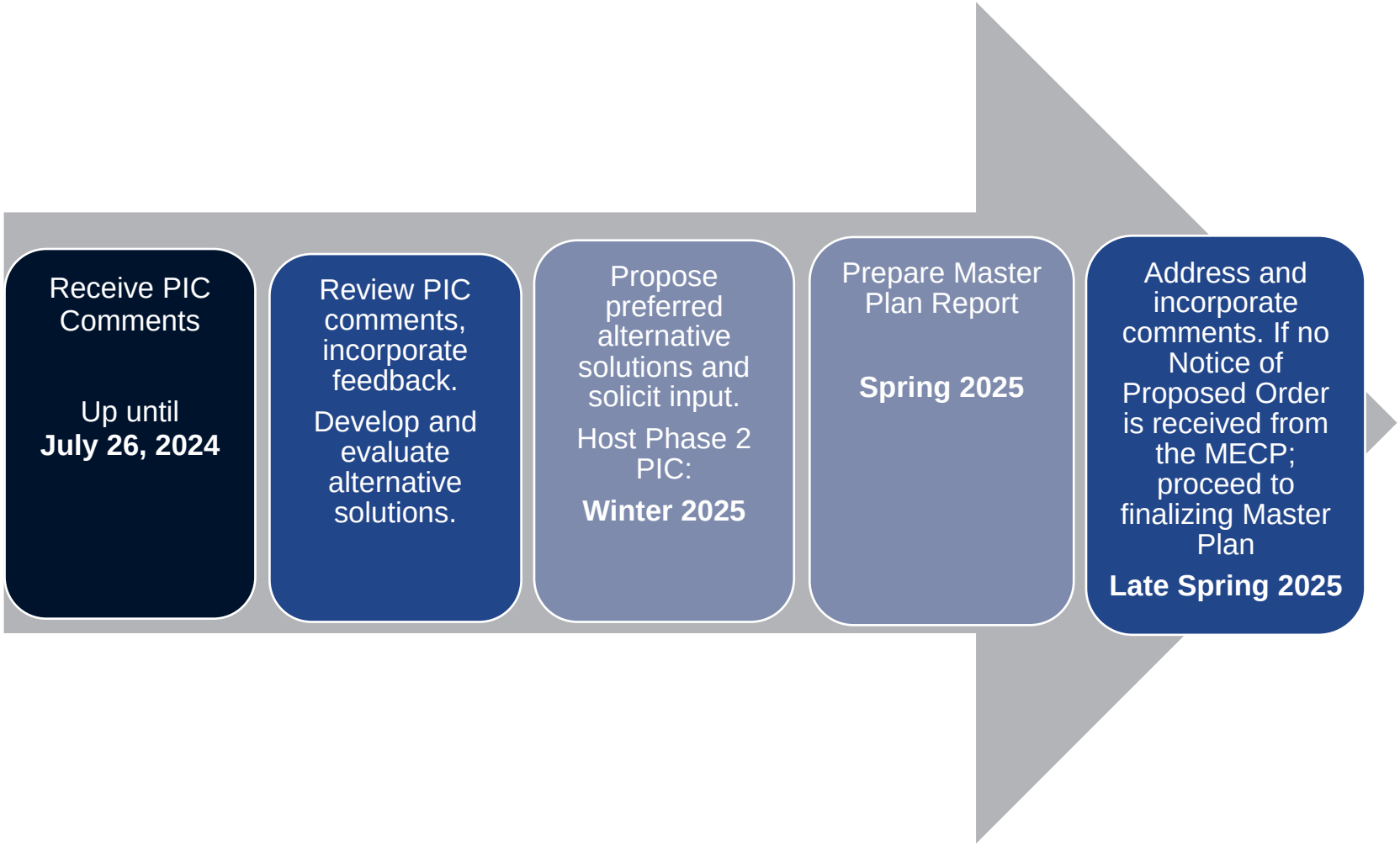
- Larger pumps, equalization storage and/or duplicate forcemain are potential alternatives to resolve the Elmvale Bishop Park SPS issue.
- An additional treatment train for the Centre Vespra WWTP could resolve its performance issues when another train is off-line for maintenance.
- Additional studies should be conducted into modifications/ upgrades to the Royal Oaks, Snow Valley Highlands and Centre Vespra WWTPs that could improve operational flexibility and address overall performance issues.
- Evaluation of on-site sludge storage options for Royal Oaks and Snow Valley Highlands should be considered.
- Some gravity sewer in Elmvale may need upsizing.

Forecasted Population Growth

The Official Plan categorizes urban settlements within the Township into Major, Intermediate and Minor urban settlement areas. Urban Settlement Areas are anticipated to be where the majority of new developments will proceed over the next 20+ years. Forecasted growth is anticipated as follows:

	Elmvale	Hillsdale	Midhurst	Centre Vespra	Snow Valley	Anten Mills	Minesing	Phelpston
2021	3036	1158	2889	1853	3555	531	738	258
2031	5584	2545	15470	2911	3804	909	738	258
2041	5678	4481	23504	3160	8952	909	738	258

Next Steps


Receive PIC Comments
Up until **July 26, 2024**
Review PIC comments, incorporate feedback.
Develop and evaluate alternative solutions.
Propose preferred alternative solutions and solicit input.
Host Phase 2 PIC:
Winter 2025
Prepare Master Plan Report
Spring 2025
Address and incorporate comments. If no Notice of Proposed Order is received from the MECP; proceed to finalizing Master Plan
Late Spring 2025

Your Comments are Important

Input is encouraged throughout the Master Plan process and will be given consideration as the final report is prepared

If you want to be kept informed as the Master Plan proceeds ensure you are added to the MP contact list.

Submit your feedback to today's PIC by filling out a Comment Sheet and placing it in the comment box before you exit or return the Sheet to either of the following members of the Project Team:

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Input and feedback on Phase 1 PIC will be received until **July 26, 2024**.