



**CALEDONIA WASTEWATER
TREATMENT PLANT SCHEDULE C
MUNICIPAL CLASS EA**
Public Information Centre

Welcome to the Public Information Centre for the **Caledonia Wastewater Plant Schedule C Class EA**

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 [Caledonia Wastewater Treatment Plant Schedule C Municipal Class Environmental Assessment - Haldimand County](#)



How to get to the Class EA website: Government → Project and Initiatives → Caledonia Wastewater Treatment Plant Schedule C Municipal Class Environmental Assessment

Land Acknowledgement

As we gather, we humbly acknowledge that Haldimand County sits on the ancestral land of many generations of Indigenous nations, who have been here since time immemorial.

Today, this land continues to be home to many Indigenous peoples, including the Six Nations of the Grand River and the Mississaugas of the Credit First Nation, as well as non-Indigenous settlers from a variety of backgrounds. As a community, we have a shared responsibility for stewardship of the land on which we live and work. We are grateful for the opportunity to work together and to share the land we all call home.

Acknowledging reminds us that our living conditions are directly related to the abundant resources of the Indigenous peoples. We commit to continue learning, reflecting on our past, and working in allyship with Indigenous communities, toward respective community goals and objectives, in peace, respect and friendship.



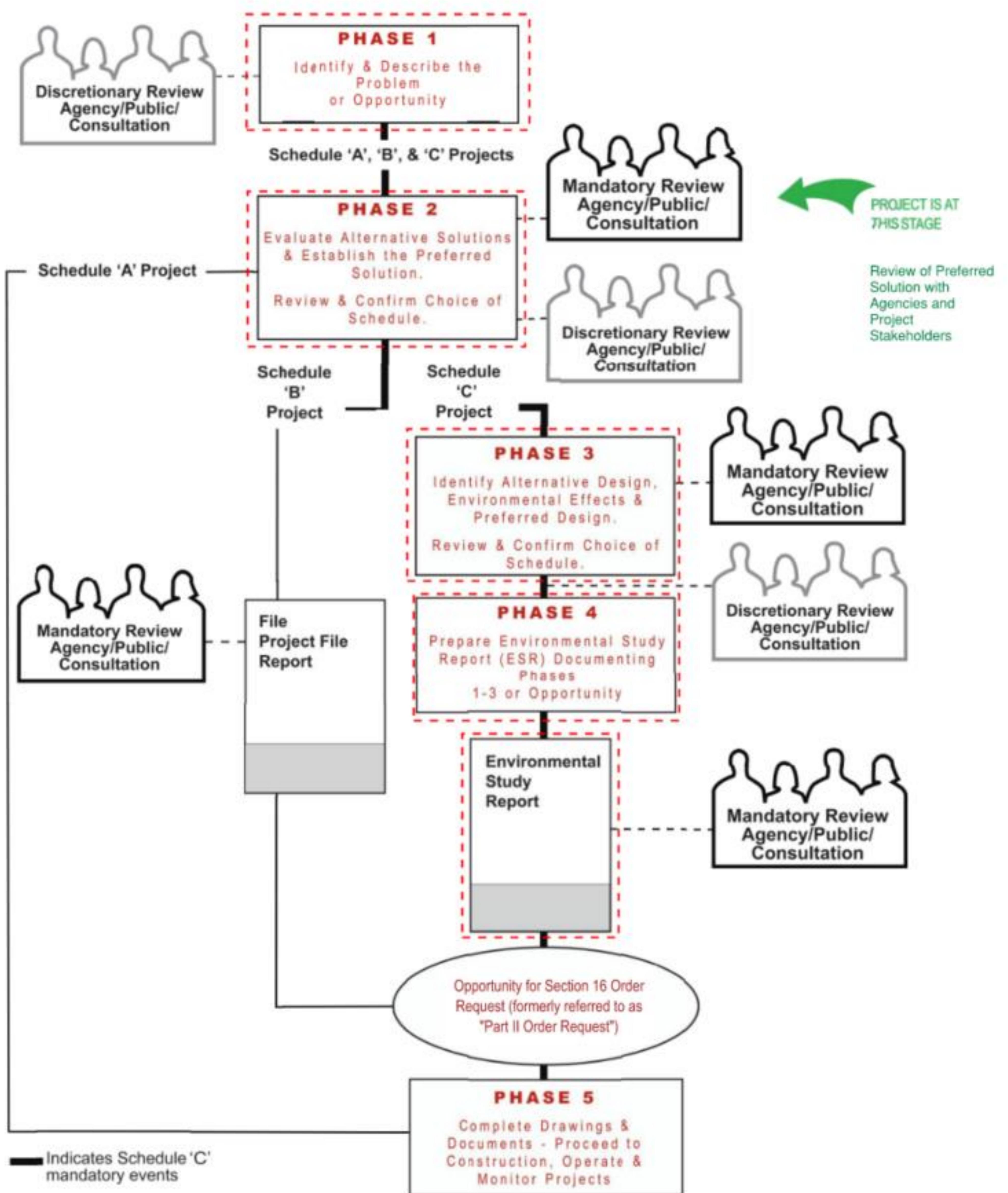


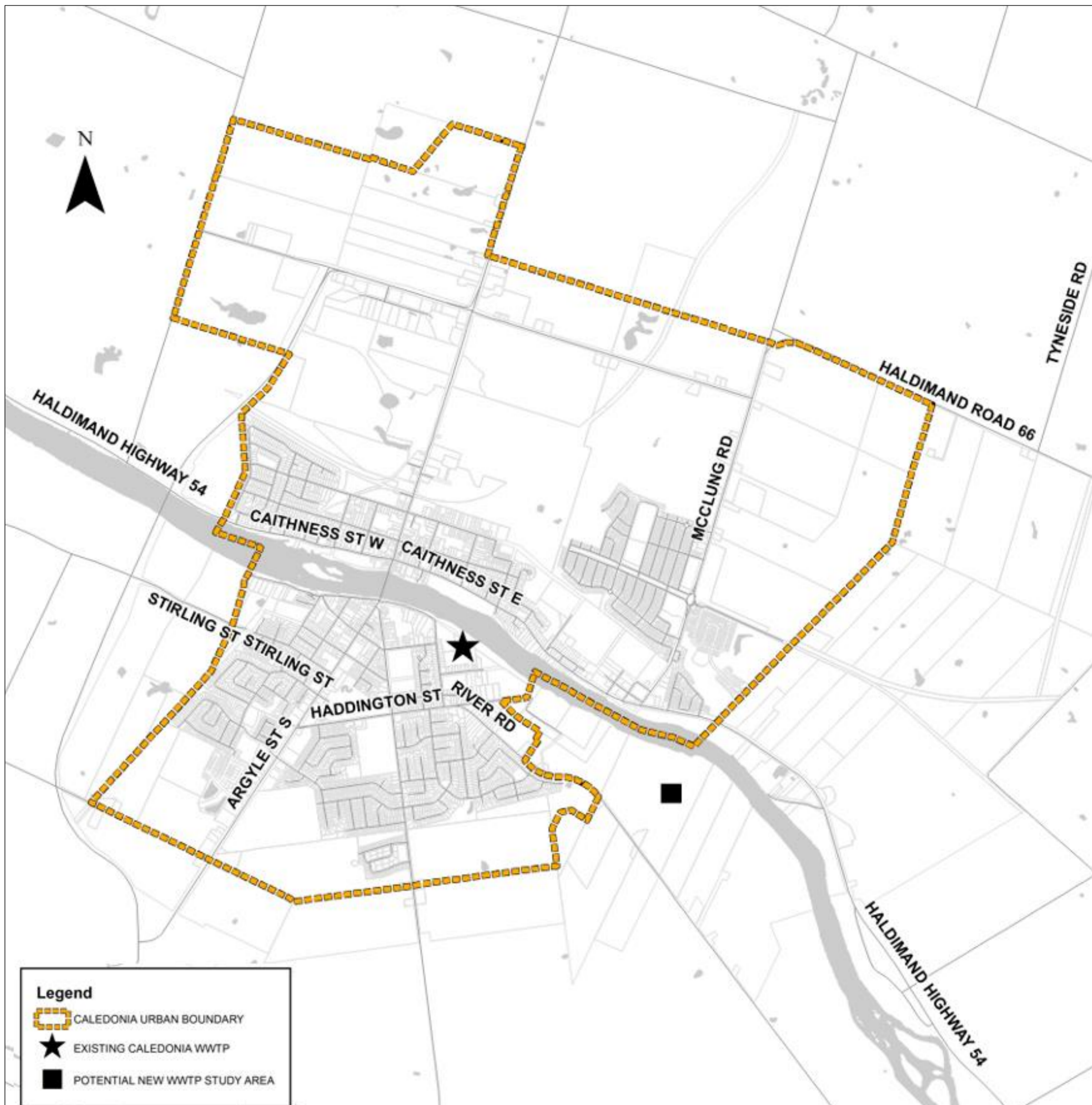
Haldimand
County

CALEDONIA WASTEWATER TREATMENT PLANT SCHEDULE C MUNICIPAL CLASS EA

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Schedule C Class EA Process





Haldimand County operates a municipal wastewater treatment system in the community of Caledonia that consists of the Caledonia Wastewater Treatment Plant (WWTP), seven sewage pump stations (SPSs), and a wastewater collection system. The Caledonia WWTP is located on the south side of Caledonia and treats all flow from north and south Caledonia. The WWTP provides tertiary treatment and disinfection of wastewater prior to discharge to the Grand River.

Growth within the community of Caledonia has been steady and there are vacant lands allocated to accommodate future growth. Servicing future growth creates an opportunity to evaluate and select a long-term wastewater treatment alternative that will support sustainable growth and development within the community. To achieve this, this Study is being conducted in accordance with Phases 1 through 4 of the Municipal Engineers Association (MEA) Municipal Class Environmental Assessment (MCEA) process (Updated November 2015)

CALEDONIA WASTEWATER TREATMENT PLANT

SCHEDULE C CLASS EA

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Project History and Overview

Master Servicing Plan Update (Draft December 2020)

Identified the need for additional wastewater capacity and that the preferred treatment servicing alternative would be confirmed through a Schedule C Class EA

Triggers for Re-Evaluating Treatment Alternatives

Trigger #1: Proposed development in Nanticoke, ON and proposed Lake Erie Industrial Park (LEIP) Wastewater Treatment Plant (WWTP)

Trigger #2: New Caledonia Planning Projections (2020)

Trigger #3: Updated Urban Boundary for Caledonia (2020)

Supporting Studies

Updated Wastewater Highway 6 Corridor Servicing Study (WSP, Draft October 2021)

Caledonia to Nanticoke Wastewater Conveyance Evaluation (WT Infrastructure, Draft January 2022)

Lake Erie Industrial Park WWTP Municipal Class EA Addendum (WSP, February 2022)

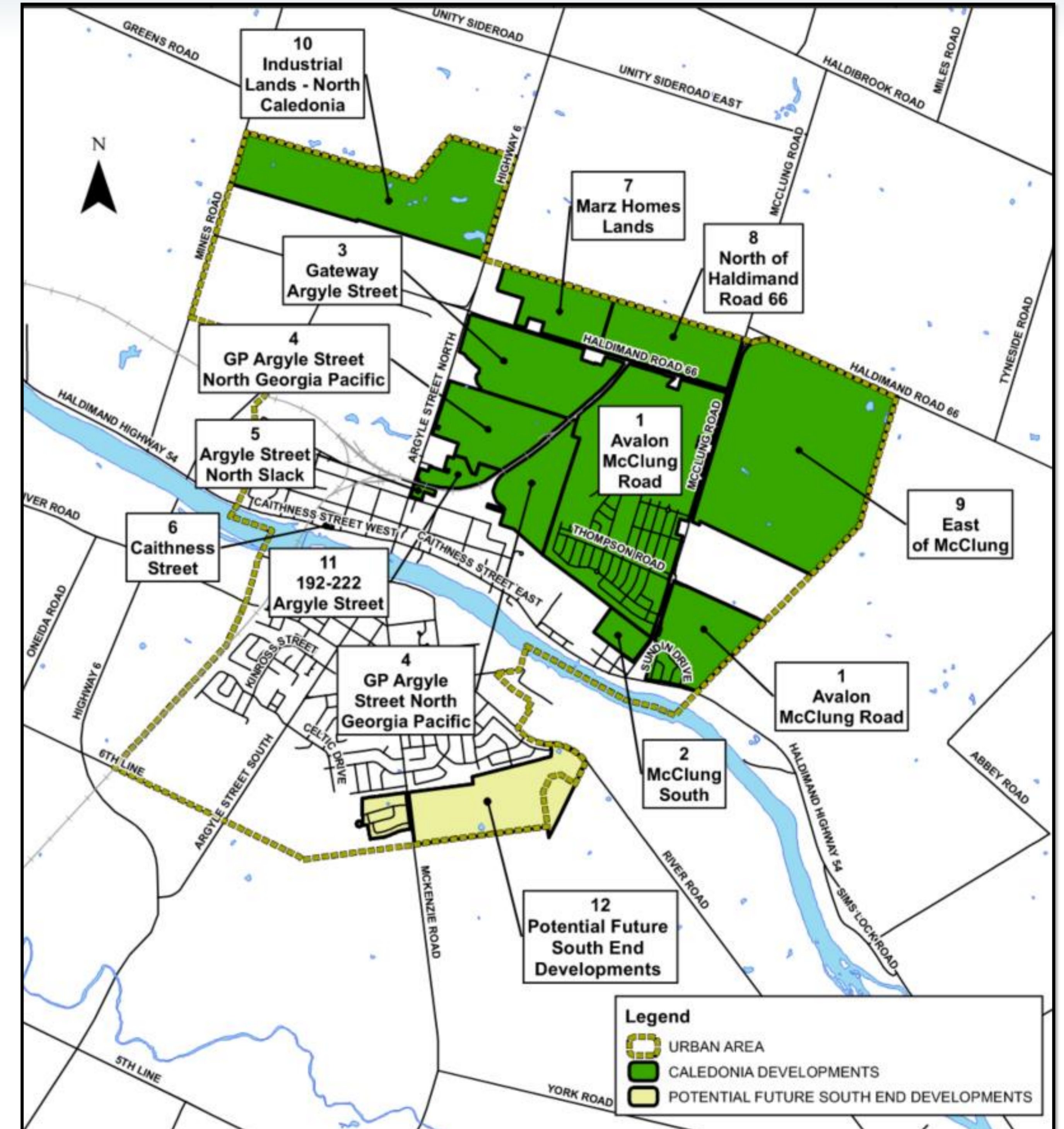
Where are we now?

Evaluating wastewater treatment alternatives to confirm the preferred servicing alternative and consulting stakeholders

CALEDONIA WASTEWATER TREATMENT PLANT SCHEDULE C CLASS EA

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Anticipated Development to 2051

Parcel Number	Development	Type (Residential, Commercial, or Industrial)	Build-out Equivalent Population (persons) ⁽¹⁾
1	Avalon McClung Road (Phases 3B, 4, 5, 5B, 6-16)	Residential	6775
2	McClung South	Residential	403
3	Gateway Argyle Street (Phases 1-3)	Residential/Commercial	1508
4	GP Argyle Street North Georgia Pacific	Residential	1097
5	Argyle Street North Slack	Residential	44
6	Caithness Street	Residential	59
7	Marz Homes Lands	Residential/Commercial ⁽²⁾	1214
8	North of Haldimand Road 66	Residential ⁽²⁾	1512
9	East of McClung	Residential ⁽²⁾	7064
10	Industrial Lands – North Caledonia	Industrial ⁽²⁾	8612
11	192-222 Argyle Street North	Commercial ⁽²⁾	348
12	Potential Future South End Developments	Residential ⁽²⁾	2,334

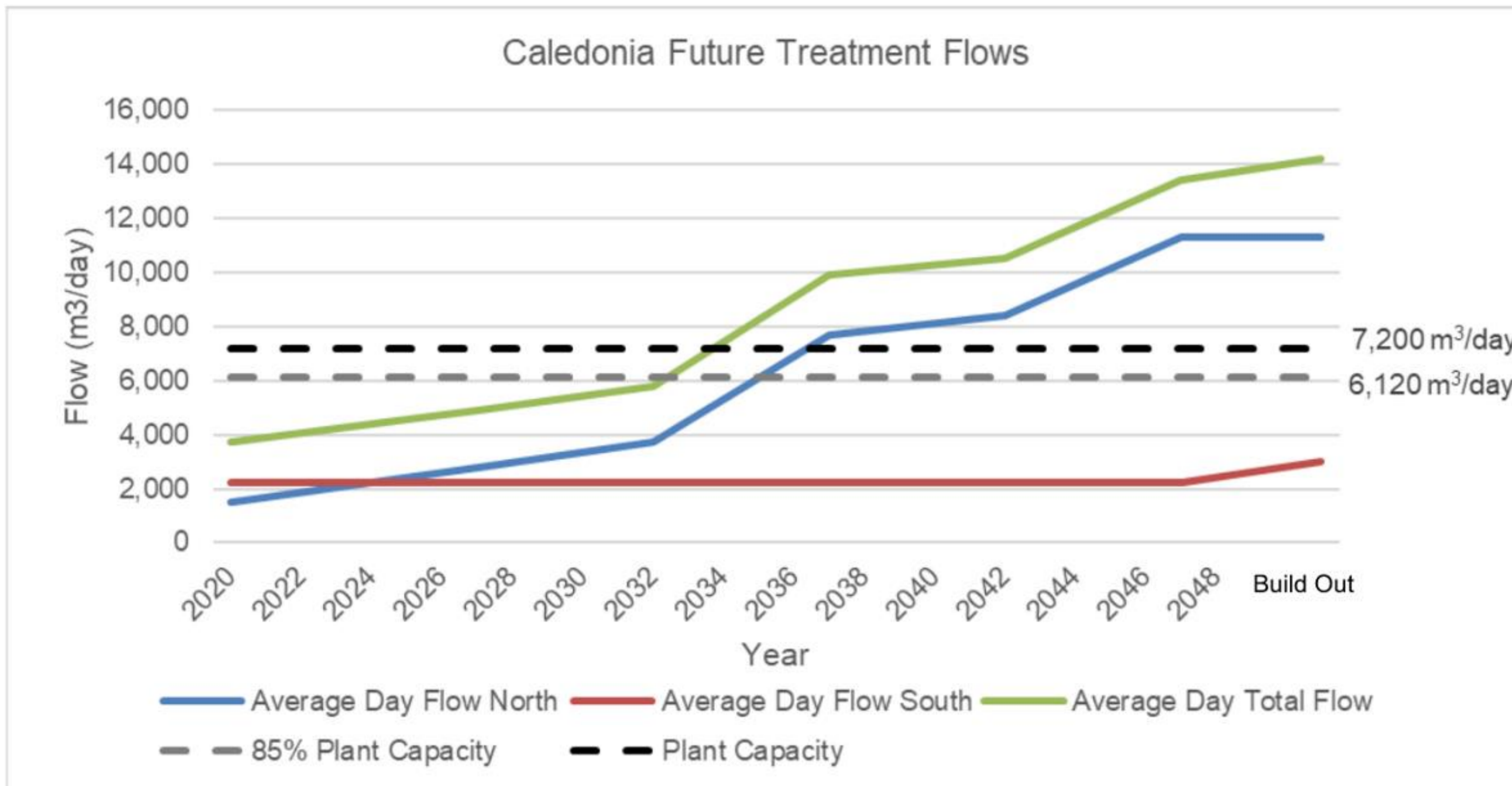


(1) The County provided the future development in units. The equivalent population was estimated using persons per unit from the Design Criteria

(2) The County provided area of development in hectares. The number of residential or ICI units was estimated using density (persons per hectare) and persons per unit from the Design Criteria.

CALEDONIA WASTEWATER TREATMENT PLANT SCHEDULE C CLASS EA

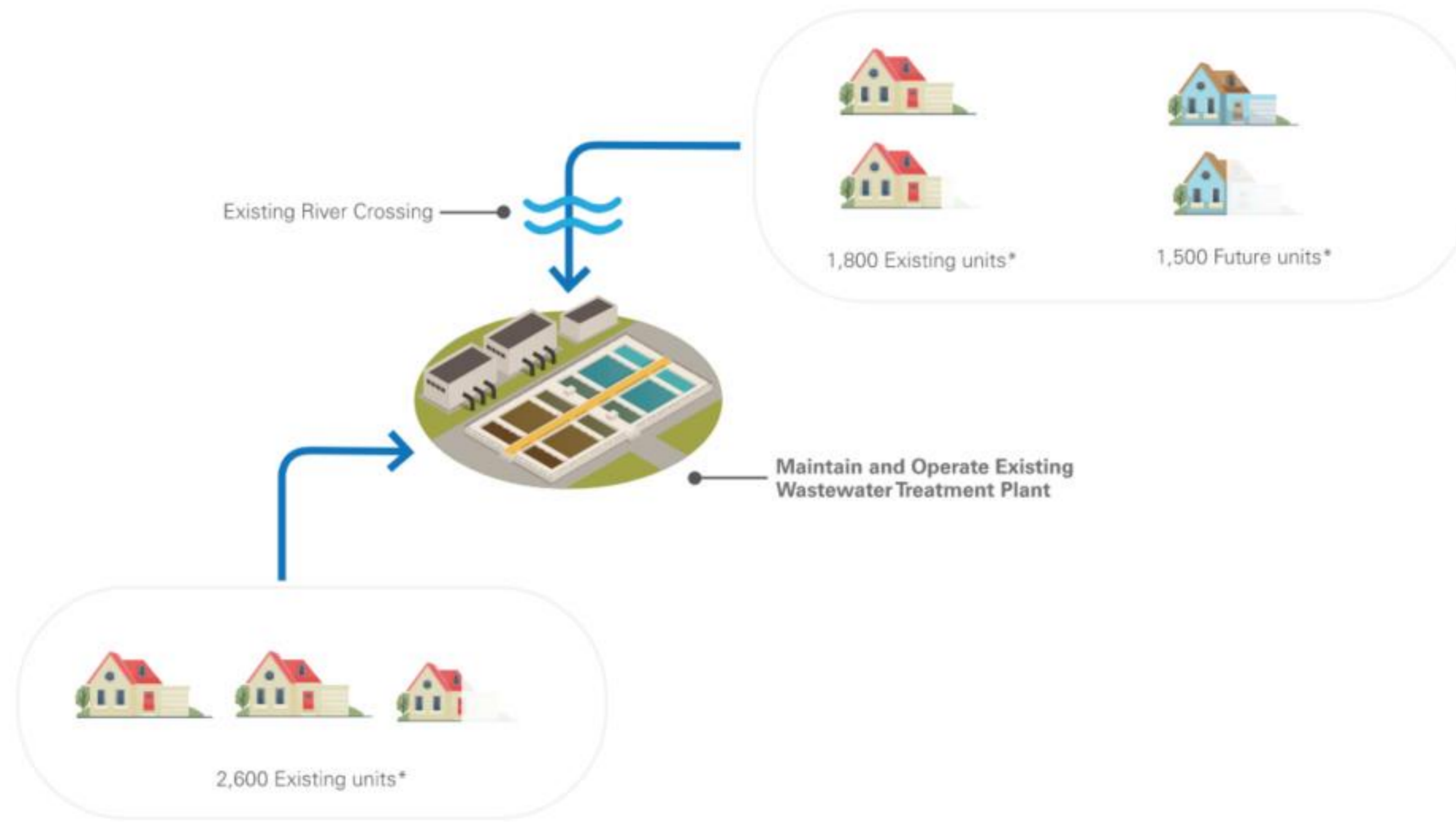
Public Information Centre
Future Treatment Flows



- Based on current flow estimates, the existing WWTP will **reach 85% of its rated capacity in 2032.**
- The rate of growth in the community (i.e., faster, or slower growth rate) will impact **the timing and phasing of the new WWTP.**

OPTION 1

Do nothing

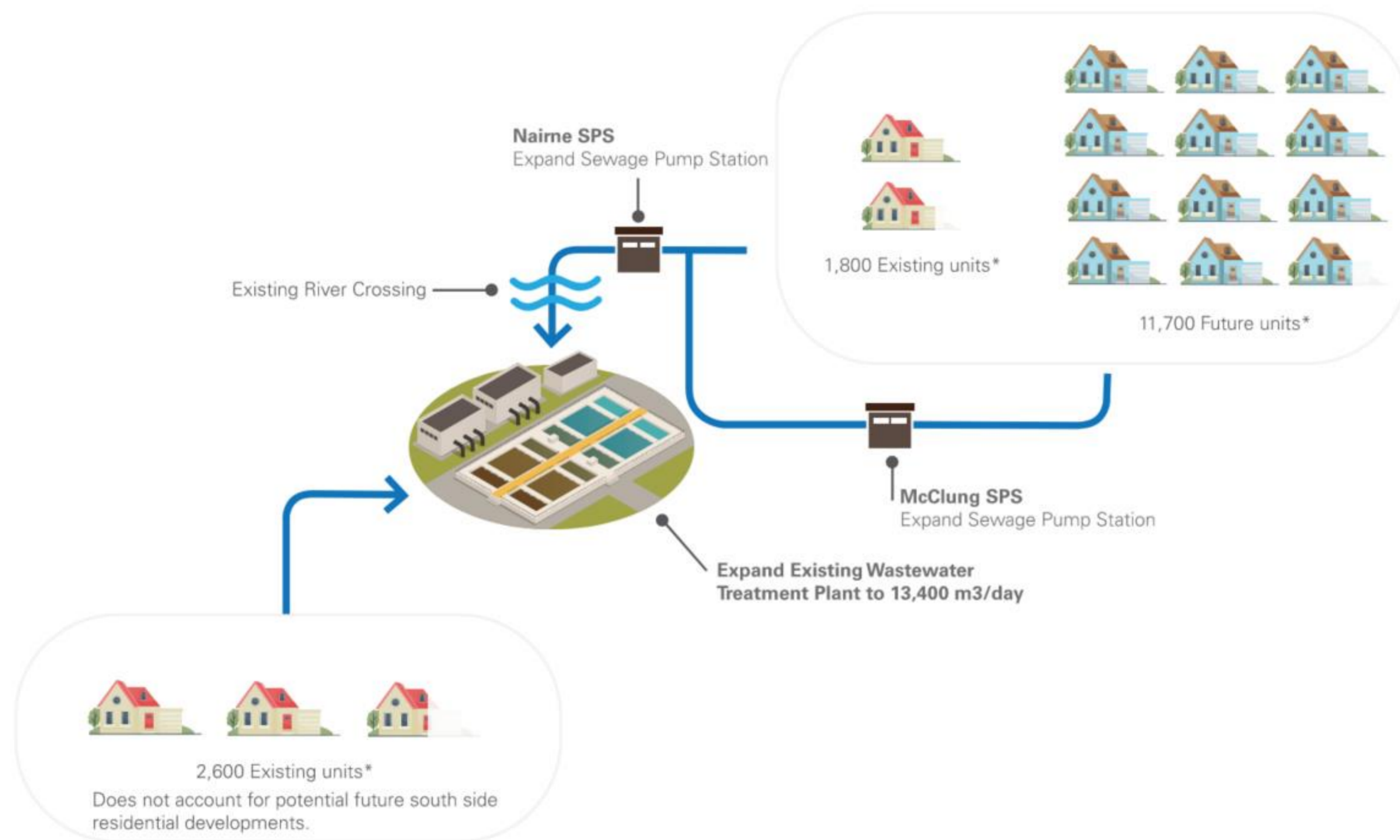


Receiver Impact	●
Floodplains and GRCA Natural Hazard Features	●
Ecology and Species at Risk	↑↑
Archeological and Heritage Resources	↑↑
Community Development	↓↓
Climate Change Mitigation	↑↑
Climate Change Adaptation	↓↓
Effluent Quality	●
Constructability	↑↑
Phasing and Expandability	↓↓
System Redundancy and Resiliency	↓↓
Capital Costing – N/A	●

⚠ Growth would be limited and does not address problem/opportunity statement and not carried forward for evaluation

OPTION 2

Increase Capacity at the Existing Caledonia WWTP



Receiver Impact	↑
Floodplains and GRCA Natural Hazard Features	↓
Ecology and Species at Risk	●
Archeological and Heritage Resources	●
Community Development	↓↓
Climate Change Mitigation	↓
Climate Change Adaptation	↓
Effluent Quality	↑
Constructability	↓↓
Phasing and Expandability	↓↓
System Redundancy and Resiliency	●
Capital Costing ~ \$99M	↑

👍 Enables the County to maximize use of existing treatment infrastructure in south Caledonia
Limited space will require complex treatment equipment and may not accommodate build out 🙏

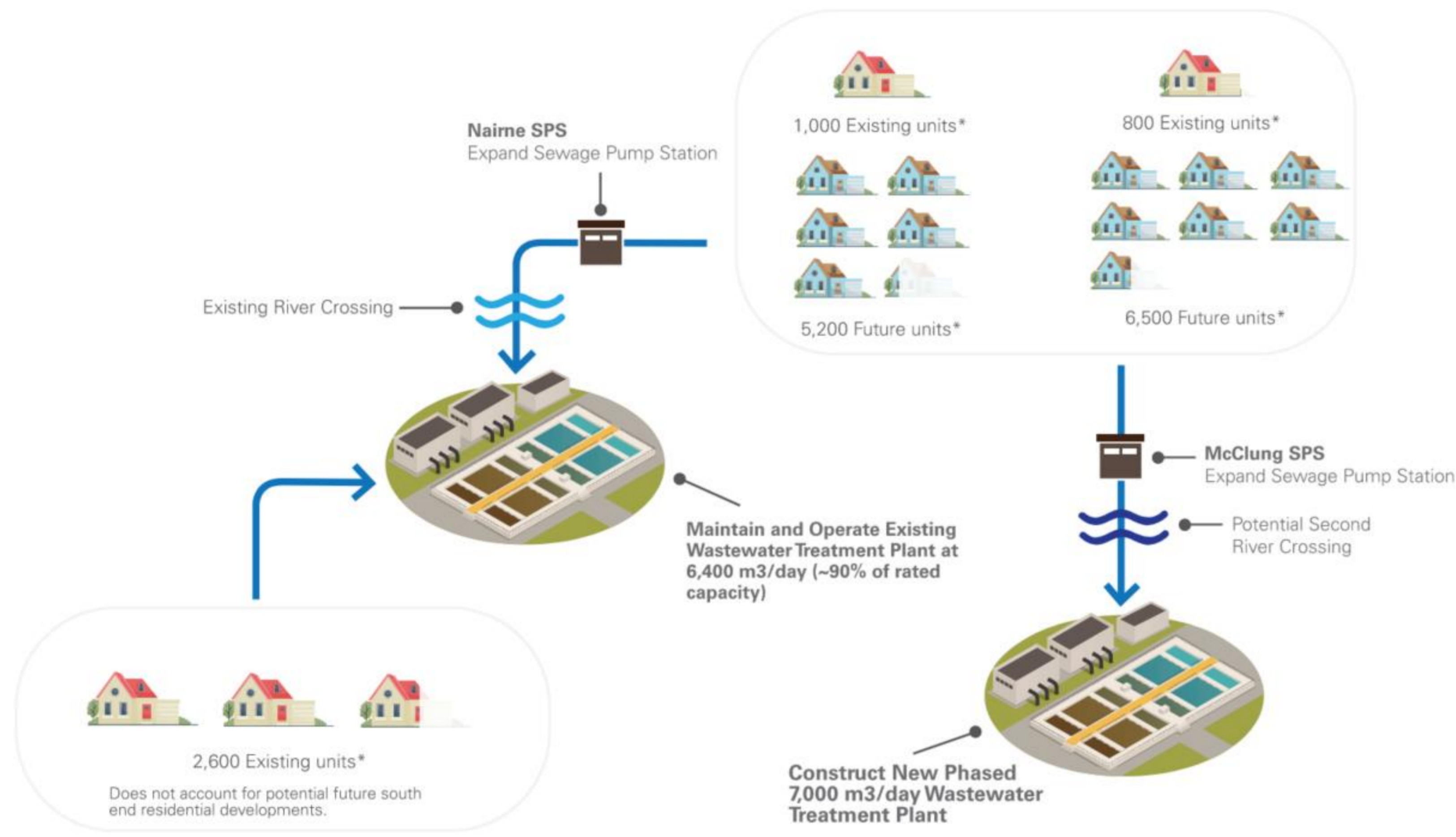
CALEDONIA WASTEWATER TREATMENT PLANT SCHEDULE C CLASS EA

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Solutions Alternatives Overview

**Preliminary Recommended Alternative*

OPTION 3

New South Side WWTP – Shared Treatment with Existing Caledonia WWTP

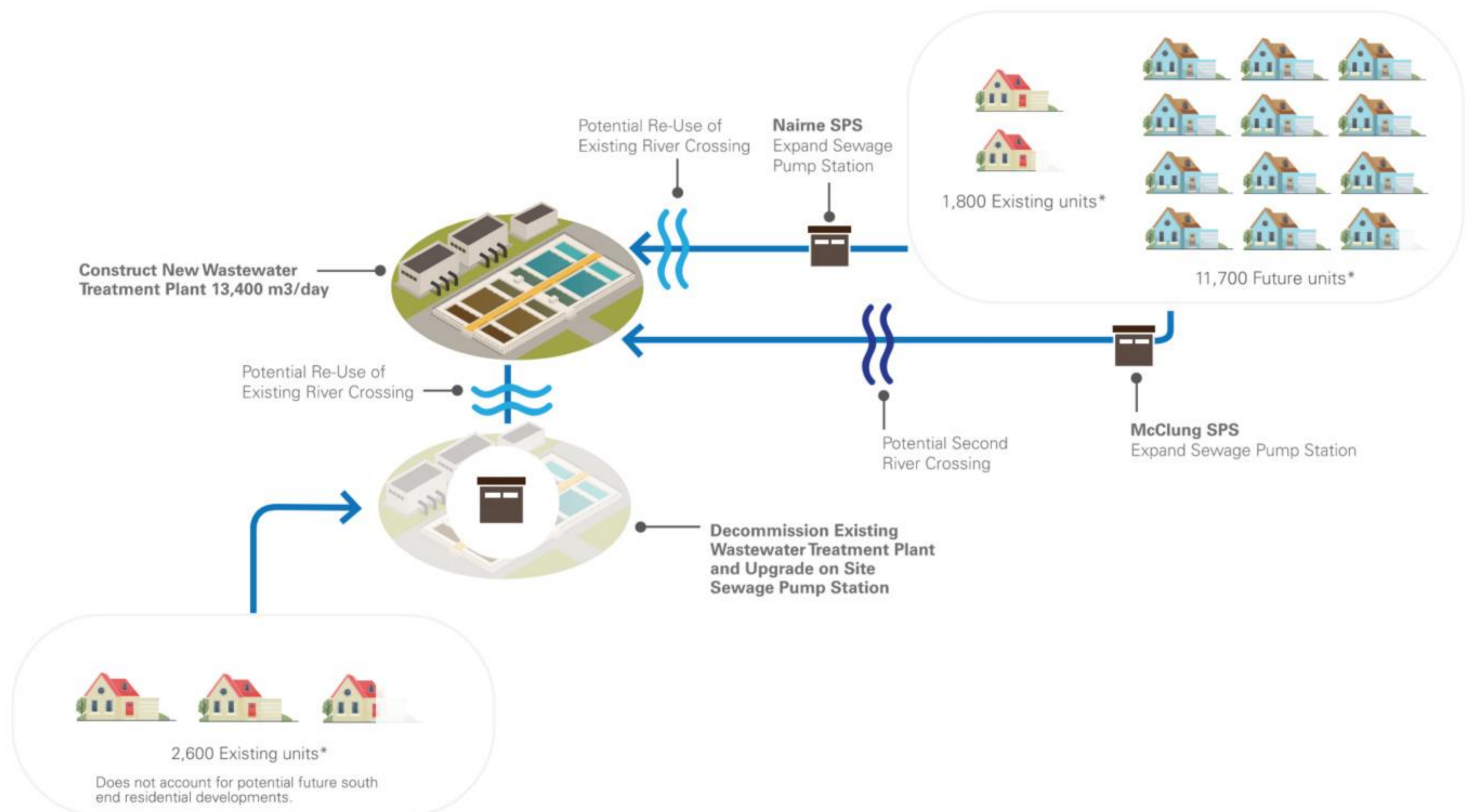


Receiver Impact	↑
Floodplains and GRCA Natural Hazard Features	↓
Ecology and Species at Risk	↓
Archeological and Heritage Resources	↓
Community Development	↑↑
Climate Change Mitigation	↓↓
Climate Change Adaptation	↑↑
Effluent Quality	↑
Constructability	↑
Phasing and Expandability	↑↑
System Redundancy and Resiliency	↑↑
Capital Costing ~ \$94M	↑

Flexible construction sequencing and ability to phase expansion. New site can meet long-term needs.
More potential for impacts on the natural and cultural environment due to new site development

OPTION 4

New South Side WWTP – Decommissioning Existing Caledonia WWTP



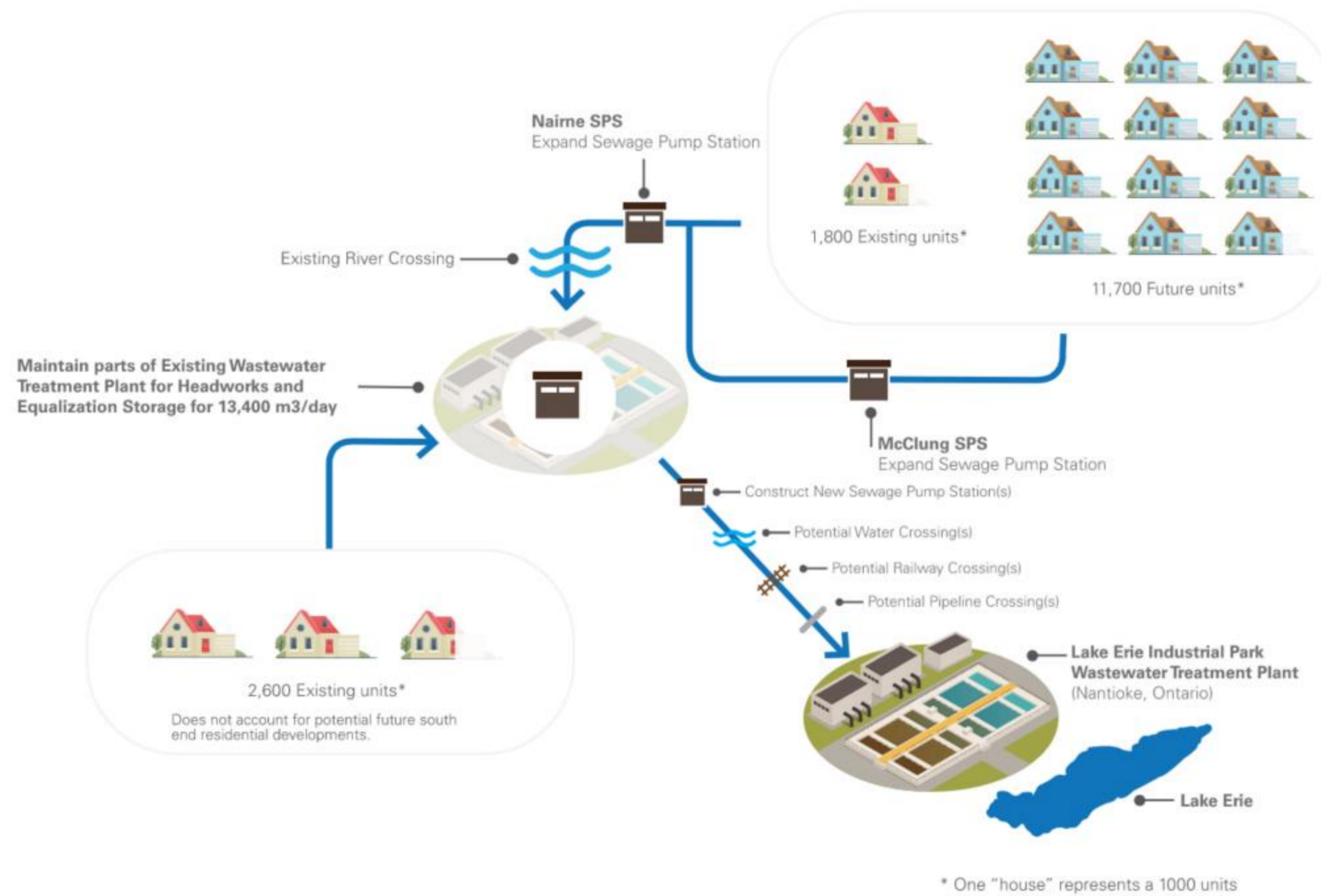
Receiver Impact	↑
Floodplains and GRCA Natural Hazard Features	↓
Ecology and Species at Risk	↓
Archeological and Heritage Resources	↓
Community Development	↑↑
Climate Change Mitigation	↓
Climate Change Adaptation	↑↑
Effluent Quality	↑
Constructability	↑
Phasing and Expandability	↑
System Redundancy and Resiliency	↑
Capital Costing ~ \$130M	↓

👍 The County would be able to meet build-out growth and beyond. One plant simplifies operations.

High capital cost and includes retiring existing assets before the end of their useful life. 👎

OPTION 5

Pump all or some Wastewater to a new potential WWTP in Nanticoke



Receiver Impact	↑↑
Floodplains and GRCA Natural Hazard Features	↓
Ecology and Species at Risk	↓
Archeological and Heritage Resources	↓
Community Development	↑↑
Climate Change Mitigation	↓↓
Climate Change Adaptation	●
Effluent Quality	↑
Constructability	●
Phasing and Expandability	↓
System Redundancy and Resiliency	●
Capital Costing ~ \$187M	↓↓

Discharging to Lake Erie directly removes nutrient loading from the Grand River and allows for future expansions long term.

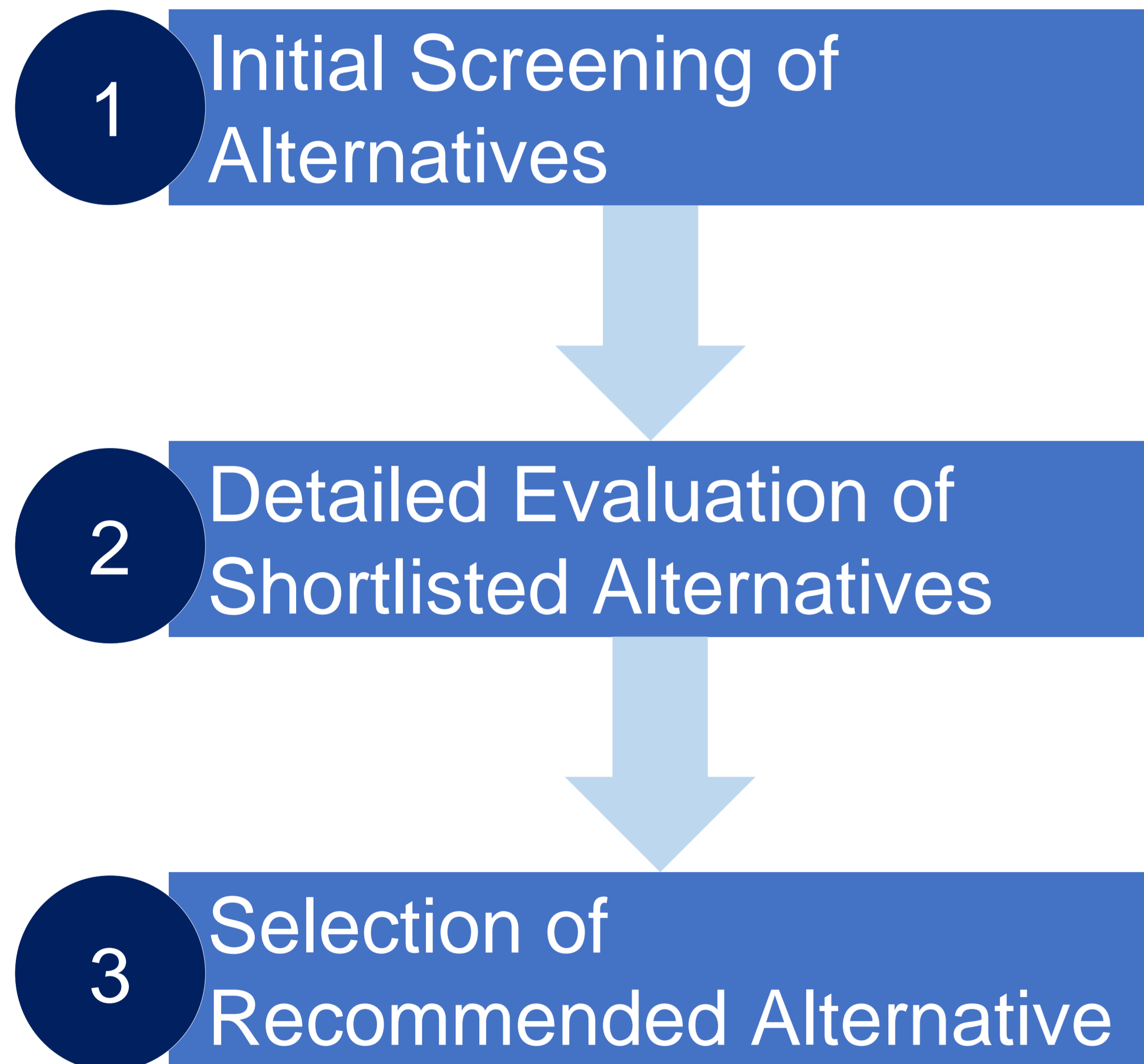
Highest anticipated capital and operating costs and relies on uncertain development.

CALEDONIA WASTEWATER TREATMENT PLANT SCHEDULE C CLASS EA

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Financial Considerations and Implications



- (1)The cost estimates are contingent on the final location of the new WWTP, conveyance options/river crossing location, and phasing . All costs must be verified in subsequent stages of the MCEA process.
- (2)The cost is based on the preliminary design concept for Alternative A.1: Caledonia WWTP to Nanticoke WWTP – Direct connection (single forcemain) prepared by WT Infrastructure (WT Infrastructure, January 2022).
- (3)An Opinion of Probable Construction Costs (OPCC) with a Class ‘D’ (Indicative Estimate) level of accuracy was developed for each of the shortlisted alternates and includes allowances for design elements that have not been fully developed. Class ‘D’ OPCCs developed for this assignment are expected to be within +/- 30%. The OPCCs were developed based on experience on similar projects, professional judgment, and equipment costs provided by suppliers



Major Criteria	Minor Criteria
Natural & Cultural Environment	Floodplains and GRCA Natural Hazard Features
	Ecology and Species at Risk
	Archeological and Heritage Resources
	Community Development
	Climate Change Mitigation Climate Change Adaptation
Technical Environment	Effluent Quality
	Constructability
	Phasing and Expandability
	System Redundancy and Resiliency
Economic Environment	Synergies with Other Proposed Developments within Haldimand County
	Capital Costs and Impact on Existing Rate payers



CALEDONIA WASTEWATER TREATMENT PLANT SCHEDULE C CLASS EA

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Evaluation Results :Identification of Preferred Option

	Alternative 1	Alternative 2	Alternative 3	Alternative 4	Alternative 5
Criteria	Do Nothing	Increase capacity at/ or near Existing Caledonia WWTP	New South Side WWTP - Shared Treatment with Existing Caledonia WWTP	New South Side WWTP - Decommission Existing Caledonia WWTP	Pump all or some Wastewater to a new potential WWTP in Nanticoke
Natural & Cultural Environment					
Receiver Impact	●	↑	↑	↑	↑↑
Floodplains and GRCA Natural Hazards	●	↓	↓	↓	↓
Ecology and Species at Risk	↑↑	●	↓	↓	↓
Archaeological and Heritage Resources	↑↑	●	↓	↓	↓
Community Development	↓↓	↓↓	↑↑	↑↑	↑↑
Climate Change Mitigation	↑↑	↓	↓↓	↓	↓↓
Climate Change Adaptation	↓↓	↓	↑↑	↑↑	●
Technical Environment					
Effluent Quality	●	↑	↑	↑	↑
Constructability	↑↑	↓↓	↑	↑	●
Phasing and Expandability	↓↓	↓↓	↑↑	↑	↓
System Redundancy and Resiliency	↓↓	●	↑↑	↑	●
Economic Environment					
Capital Costs	●	↑	↑	↓	↓↓
Proposed Rating					
Overall Rating	↓	↓	↑	↑	↓

Based on the evaluation the preliminary preferred alternative is:

Alternative 3, New South Side WWTP with Shared Treatment with Existing Caledonia WWTP.

It is anticipated that the County will transition to a single plant (Alternative 4) as the existing plant approaches the end of its useful life and requires major lifecycle rehabilitation

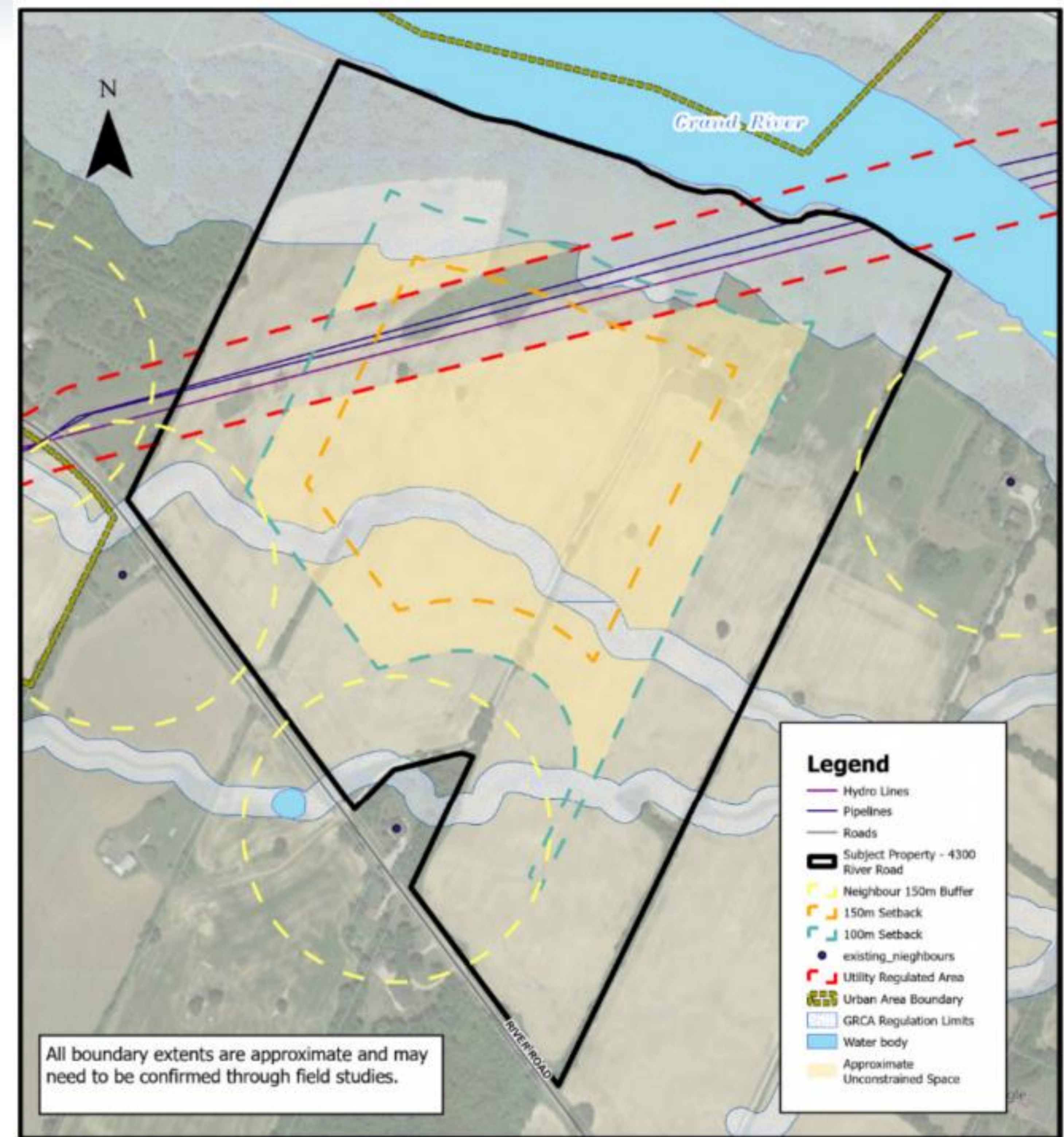
Evaluation Impact Level	Indicator
High Positive	↑↑
Positive	↑
Neutral	●
Negative	↓
High Negative	↓↓

CALEDONIA WASTEWATER TREATMENT PLANT

SCHEDULE C CLASS EA

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Next Steps

- ✓ Receive feedback
- ✓ Confirm preferred servicing alternative
- ✓ Confirmation of site location and land acquisition
 - Preliminary studies indicate this property has the least constraints and is most feasible for construction of a new WWTP
- ✓ Optimize preferred servicing alternative
 - Infrastructure placement and routing of linear infrastructure
 - Phasing to match growth, ultimately transitioning to a single WWTP that will service all of Caledonia / Option 4





CALEDONIA WASTEWATER TREATMENT PLANT SCHEDULE C MUNICIPAL CLASS EA

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Cumulative Effects and Potential Impacts to Treaty Rights

Haldimand County is home to many Indigenous peoples, including the Six Nations of the Grand River and the Mississaugas of the Credit First Nation. The United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP), and Canada’s commitment to implement these rights under the UNDRIP Act (UNDRIPA), was used as reference to determine the potential impacts of this Municipal Class EA to the rights of Indigenous People within the project study area:

Rights Relating to Culture, Traditions, Customs, and Spirituality:

UNDRIP Act Article	Impact Considerations	Impact Mitigation
<ul style="list-style-type: none"> Articles 11.1, 12.1, 15.1, 24.1, 25, 31.1 	<ul style="list-style-type: none"> Several areas within the project study area have been identified as having the potential for archaeological and cultural heritage significance. Natural features of traditional significance (e.g., hardwood trees, medicinal plants, animals) may be present on proposed project sites. 	<ul style="list-style-type: none"> Once preferred project sites are known, a walk-through could be conducted with the affected Indigenous community for further investigation to determine specific concerns and mitigation measures. Knowledge learned from these site walk-throughs could be incorporated into the project.

Rights Relating to Decision Making and Participation in Projects:

UNDRIP Act Article	Impact Considerations	Impact Mitigation
<ul style="list-style-type: none"> Articles 13.2, 18 	<ul style="list-style-type: none"> Indigenous peoples have the right to participate in decision-making for matters that affect their rights. Several types of project information are used to inform interested persons of the project; there may be interested persons who are unable to understand provided information and unable to participate in the project. 	<ul style="list-style-type: none"> By following the MCEA process, the study will meet the intention of meaningful consultation with Indigenous communities, including ensuring all provided project information can be understood by Indigenous peoples. Indigenous peoples can participate in the evaluation and decision-making process of the MCEA by providing comments and concerns on proposed projects.

Rights Relating to Development and Economic & Social Conditions:

UNDRIP Act Article	Impact Considerations	Impact Mitigation
<ul style="list-style-type: none"> Articles 21.1, 21.2, 23 	<ul style="list-style-type: none"> Indigenous peoples living in Caledonia have the right to improvement of their municipal services without discrimination. 	<ul style="list-style-type: none"> By following the MCEA process, areas of Caledonia requiring municipal service improvement will be identified without discrimination against Indigenous communities. Appropriate provincial guidelines will be followed for preferred projects so that members of Indigenous communities will be protected from municipal services in poor condition.

Rights Relating to the Environment and Conservation:

UNDRIP Act Article	Impact Considerations	Impact Mitigation
<ul style="list-style-type: none"> Articles 29.1, 29.2 	<ul style="list-style-type: none"> Development of municipal services will be proposed as part of this Municipal Class EA, which may have environmental impacts. 	<ul style="list-style-type: none"> By following the MCEA process, potential projects will undergo an evaluation process that considers the protection and conservation of the environment. Through meaningful consultation, particular areas or conditions of concerns held by Indigenous communities can be discussed and incorporated into the project.



CALEDONIA WASTEWATER TREATMENT PLANT SCHEDULE C MUNICIPAL CLASS EA

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Get Involved!

- Complete the sign-in form to join the study mailing list.
- Check the website ([Caledonia Wastewater Treatment Plant Schedule C Municipal Class Environmental Assessment - Haldimand County](#)) for study updates.



- Plan to attend the next Public Information Centre, details to follow.
- If you have questions regarding the study, or have any accessibility requirements in order to participate in this project, please contact one of the individuals below at any time:

Jane Wilson, P.Eng.

Senior Environmental Engineer
J.L. Richards & Associates Limited
107-450 Speedvale Avenue West
Guelph, ON N1H 7Y6
Phone: 226-780-7487
Email: jwilson@jlrichards.ca

Philip Wilson, C.E.T., PMP

Manager – Water and Wastewater Engineering
Haldimand County, Administration Building
53 Thorburn Street South
Cayuga, ON N0A 1E0
Phone: 905-318-5932 ext. 6431
Email: pwilson@haldimandcounty.on.ca