

Public Information Centre

# Horseshoe Craighurst Corridor Water, Wastewater and Transportation Master Plan

January 23, 2019



## Welcome!

1. Please sign in at the Front Desk.
2. Feel free to review the boards.
3. Complete a comment sheet.
4. We are available to answer questions.

# PROJECT INTRODUCTION



## Purpose of the Project

The Horseshoe Craighurst Corridor (HCC) Landowners Group Inc. and the Township of Oro-Medonte are undertaking a Water, Wastewater and Transportation Master Plan to identify a long-term servicing plan for future development in the two settlement areas known as Horseshoe Valley and Craighurst.

This Master Plan is following Approach #2 in the Class EA process and will meet the requirements for Schedule A, A+ and B projects and set the stage for future Schedule C projects. This study will define existing problems and opportunities and consider and evaluate solutions and recommend a preferred water, wastewater and transportation servicing strategy.

## Study Timeline

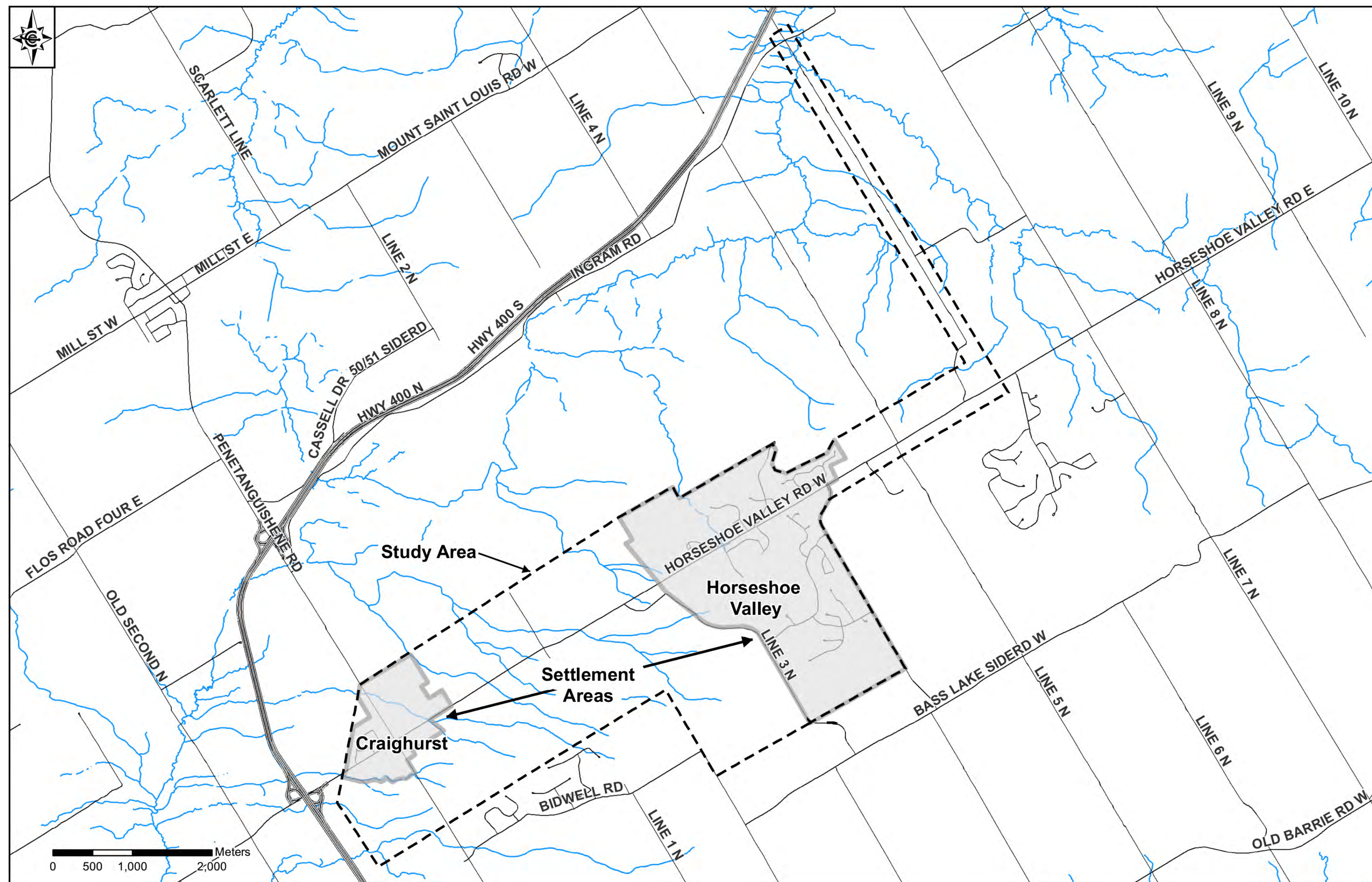


## Purpose of this Event

The purpose of this Public Information Centre is to provide an opportunity to gain public input and feedback on the water, wastewater and transportation alternatives and preliminary solutions.

Following this Public Information Centre, the Study Team will address the public input and feedback received and incorporate it into the final Master Plan Report.

# STUDY AREA



The Study Area includes the Craighurst and Horseshoe Valley Settlement Areas as well as adjacent lands.

Developments in the settlement areas are subject to the specific policies and related amendments of the Township of Oro-Medonte Official Plan (2007) and the County of Simcoe Official Plan (as adopted by the County in 2008, with amendments recommended in 2013 and decision by OMB in 2016)

Horseshoe Valley is a year-round vacation destination, best known for the Horseshoe Resort, which is located within the settlement area. The Resort includes alpine and Nordic skiing, golf courses, an adventure park, an inn, spa, restaurants, banquet facilities and timeshare units and over 40 km of recreational trails connected to the nearby Copeland Forest.

Craighurst is a Rural Settlement comprised of 94 single family detached residences along with a community hall, gas station, grocery store, liquor store, chocolate factory, two restaurants, churches and vehicle repair shops.

# PROJECT BACKGROUND

## Infrastructure & Servicing Needs

This Master Plan is needed to identify how best to provide long term water, wastewater and transportation servicing for the Horseshoe Valley and Craighurst Settlement Areas.

### In 2018



**2,000** people called Horseshoe Valley home  
**282** people called Craighurst home



**200,000** annual visitors to Horseshoe Valley during the winter months



**20,000** annual visitors to Horseshoe Valley during the summer months

## Policy Framework



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Various acts, regulations, guidelines, and policies govern water, wastewater and transportation, as well as development patterns for which those systems will be expanded to service. Several of the key regulatory requirements impacting this project include:

- Provincial Policy Statement (2014)
- Growth Plan for the Greater Golden Horseshoe (2013)
- Endangered Species Act
- Conservation Authorities Act
- Clean Water Act (2006)
- Fisheries Act (2012)
- County of Simcoe Official Plan
- County of Simcoe Water and Wastewater Visioning Statement (2012)
- County of Simcoe Transportation Master Plan Update (2014)
- Township of Oro-Medonte Official Plan (consolidated in 2017)
- Oro-Medonte Natural Heritage Plan (2002)
- County Road 22 Transportation Improvements, Municipal Class Environmental Assessment (2017)



### In Future...



**10,367** people will call Horseshoe Valley home  
**1,822** people will call Craighurst home

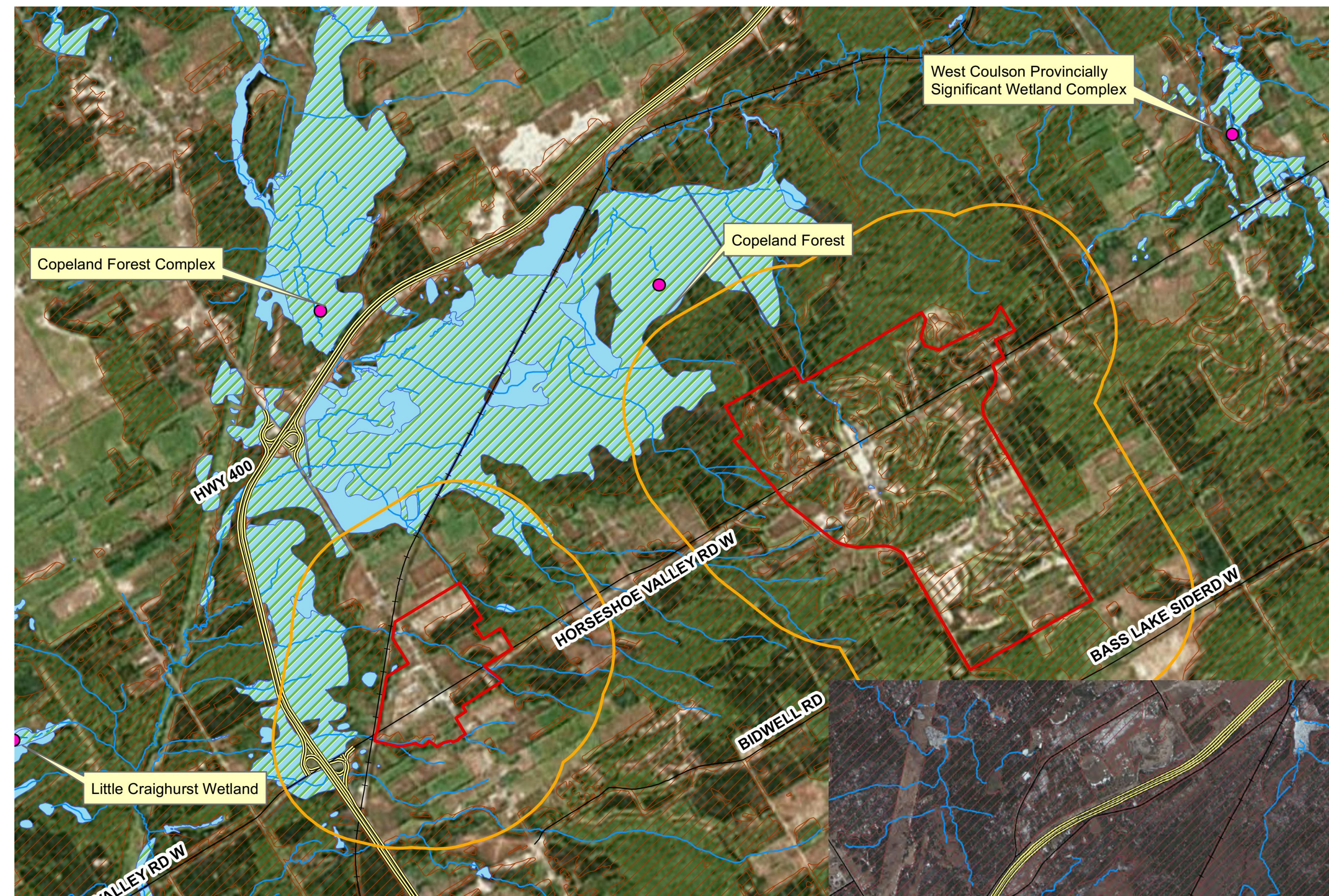


**356,000** square feet of commercial space will be added in these two settlement areas

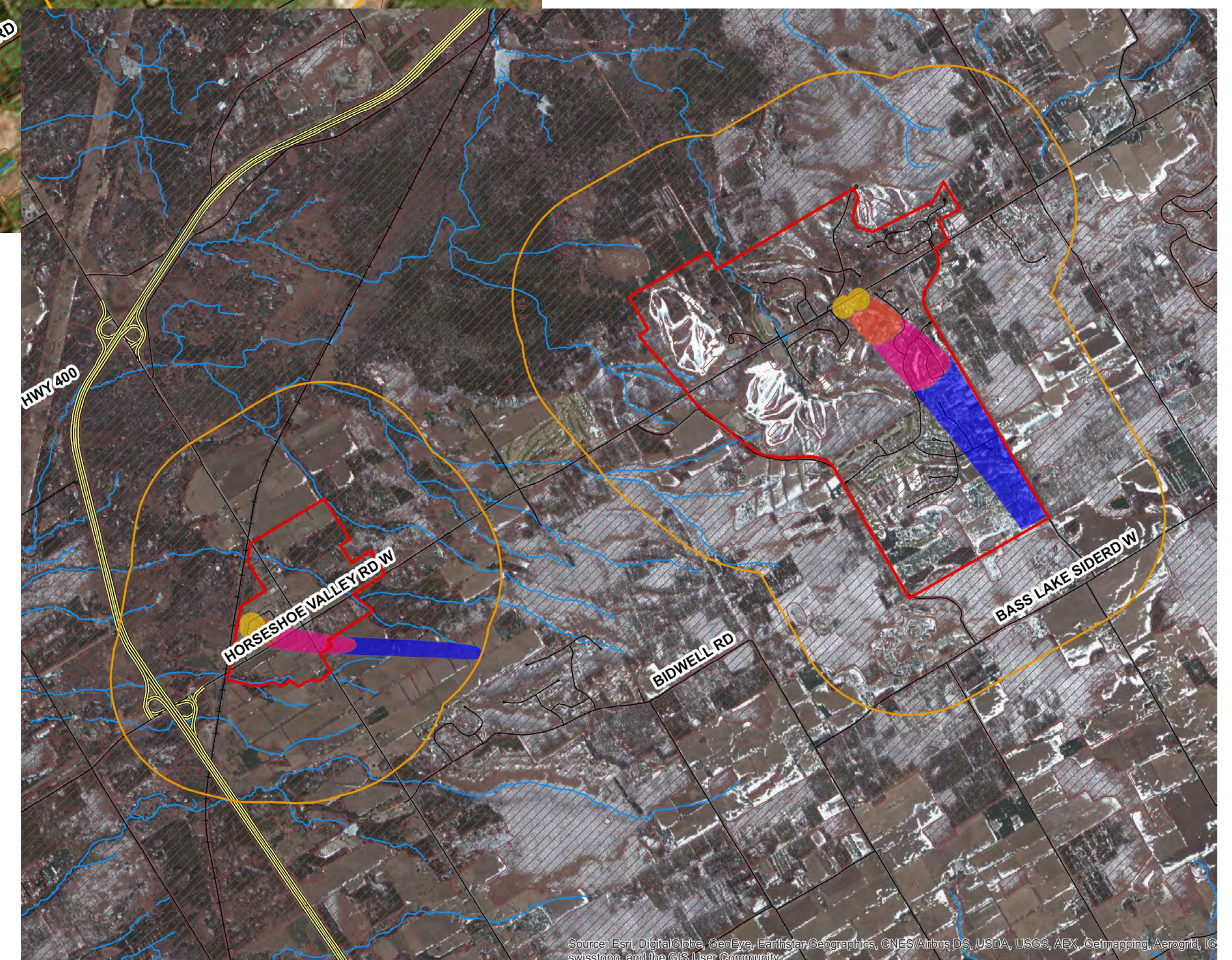
# STUDY AREA



- Extensive studies of study area features have been completed to support and information decision making. These studies include:
- Identification of natural environment features including wetlands, woodlots, wildlife habitat, areas of natural and scientific interest, fish habitat and species at risk.
  - Characterization of existing hydrology and drainage conditions within the larger study area.
  - Geomorphic assessment of Coldwater River and Matheson Creek.
  - Characterization of existing hydrogeological conditions in the larger study area
  - Stage 1 archaeological assessment
  - Built cultural heritage assessment
  - Existing water servicing conditions
  - Existing wastewater servicing conditions
  - Assimilative capacity assessment for Coldwater River and Matheson Creek.
  - Reasonable use assessment for a sub-surface discharge



Wetlands and Waterbodies



Wellhead Protection Areas

# MUNICIPAL CLASS EA PROCESS



## EA Project Schedules

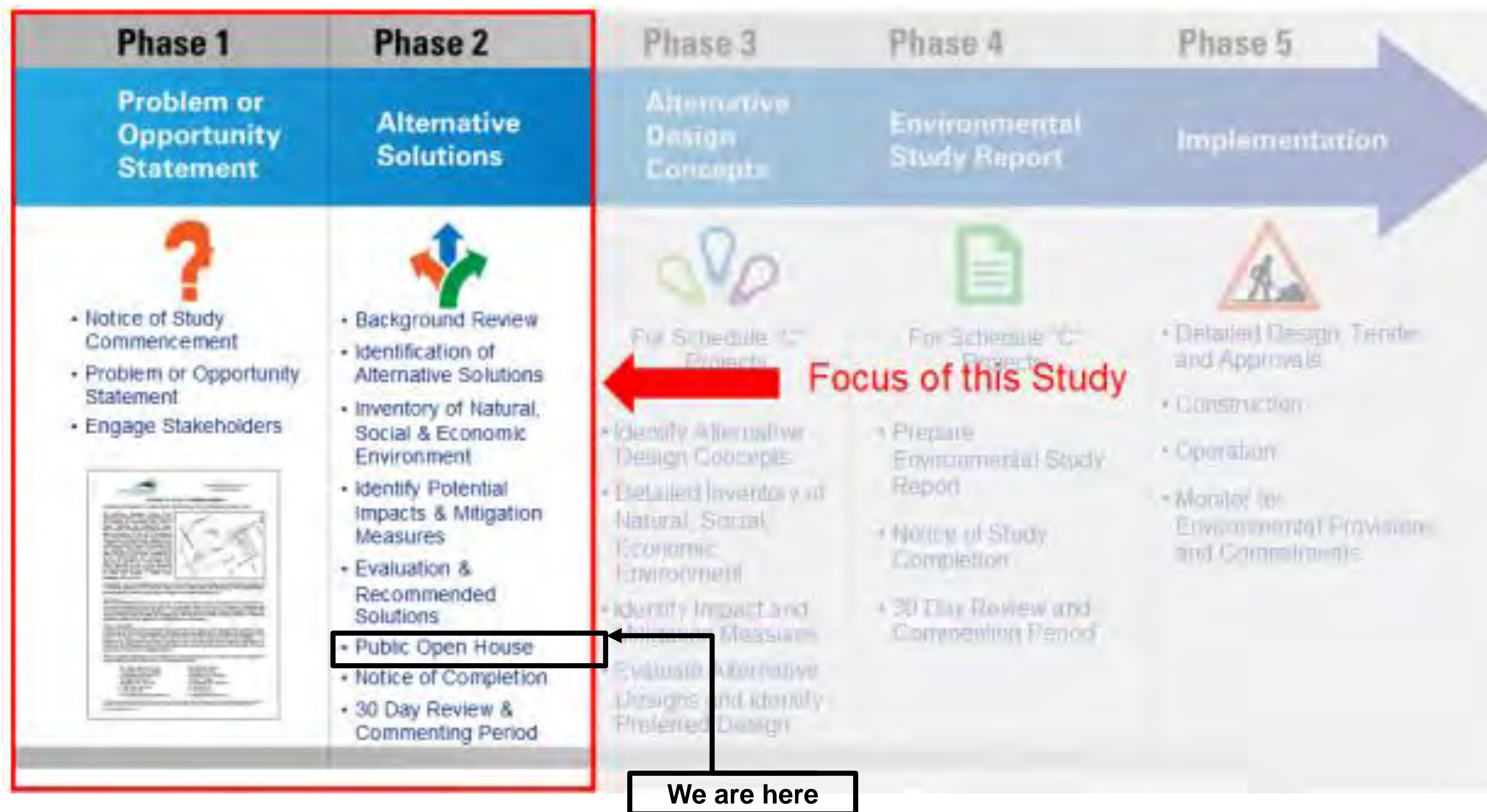
Projects undertaken as a result of this Master Plan are assigned to various project 'Schedules' according to their anticipated level of environmental impact.

**Schedule A** projects are limited in scale and have minimum adverse environmental effects. Examples of Schedule A projects include watermain repairs or installation of new service connections. These projects are pre-approved and do not require any planning or public consultation under the Class EA process.

**Schedule A+** projects are also pre-approved and do not require any planning under the Class EA process, however, the public is to be advised prior to project implementation. Examples of Schedule A+ projects include watermain or sewer extensions within an existing road right of way.

**Schedule B** projects have the potential for some adverse environmental effects and require the proponent to proceed through Phases 1 and 2 of the Class EA process. Examples of Schedule B projects include expansions or improvements to existing facilities. At the end of the Class EA process, a Project File is prepared to document the planning process and made available for public and agency review for 30 calendar days.

**Schedule C** projects have the potential for significant environmental effects and must proceed through Class EA Phases 1 to 4. Examples of Schedule C projects include a new facility or a major expansion to an existing facility.

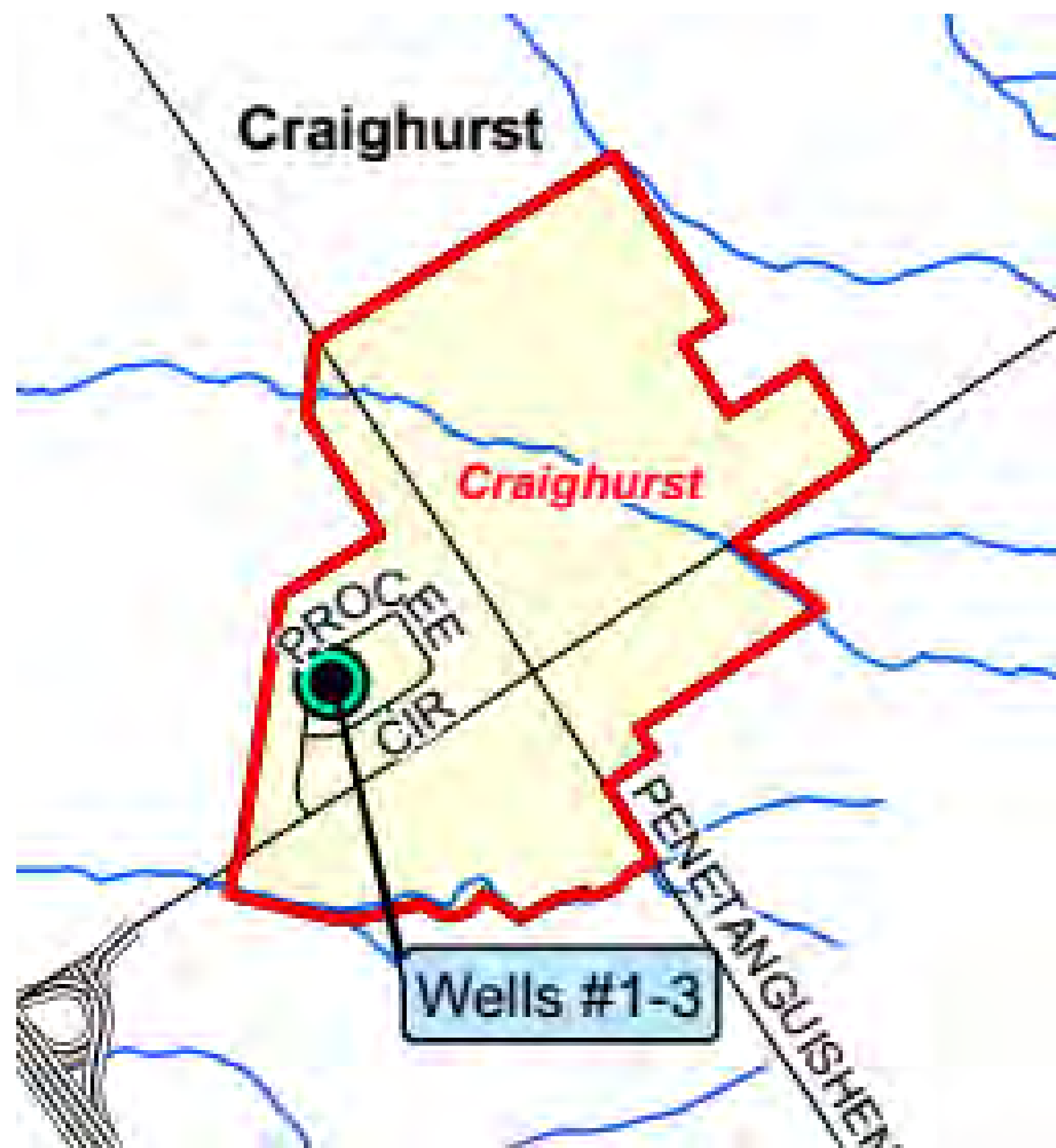


# OPPORTUNITIES AND CONSTRAINTS

## WATER



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Water supply system in Craighurst consists of:

- 3 municipal supply wells with treatment
- An underground storage reservoir
- Local water distribution system
- Privately owned wells

**Key capacity constraints:**

- **Additional storage is needed in Craighurst**



Water is supplied to Horseshoe Valley in two zones (Zone 1 and Zone 2). Water supply system consists of:

- Zone 1
  - Supply well and treatment train
  - Elevated storage tank and booster pumping station
  - Water distribution system
- Zone 2
  - 2 supply wells and treatment train
  - Elevated storage tank with additional storage planned
  - Water distribution system
  - A new storage facility and high lift pumping facilities are planned to be commissioned early in 2019

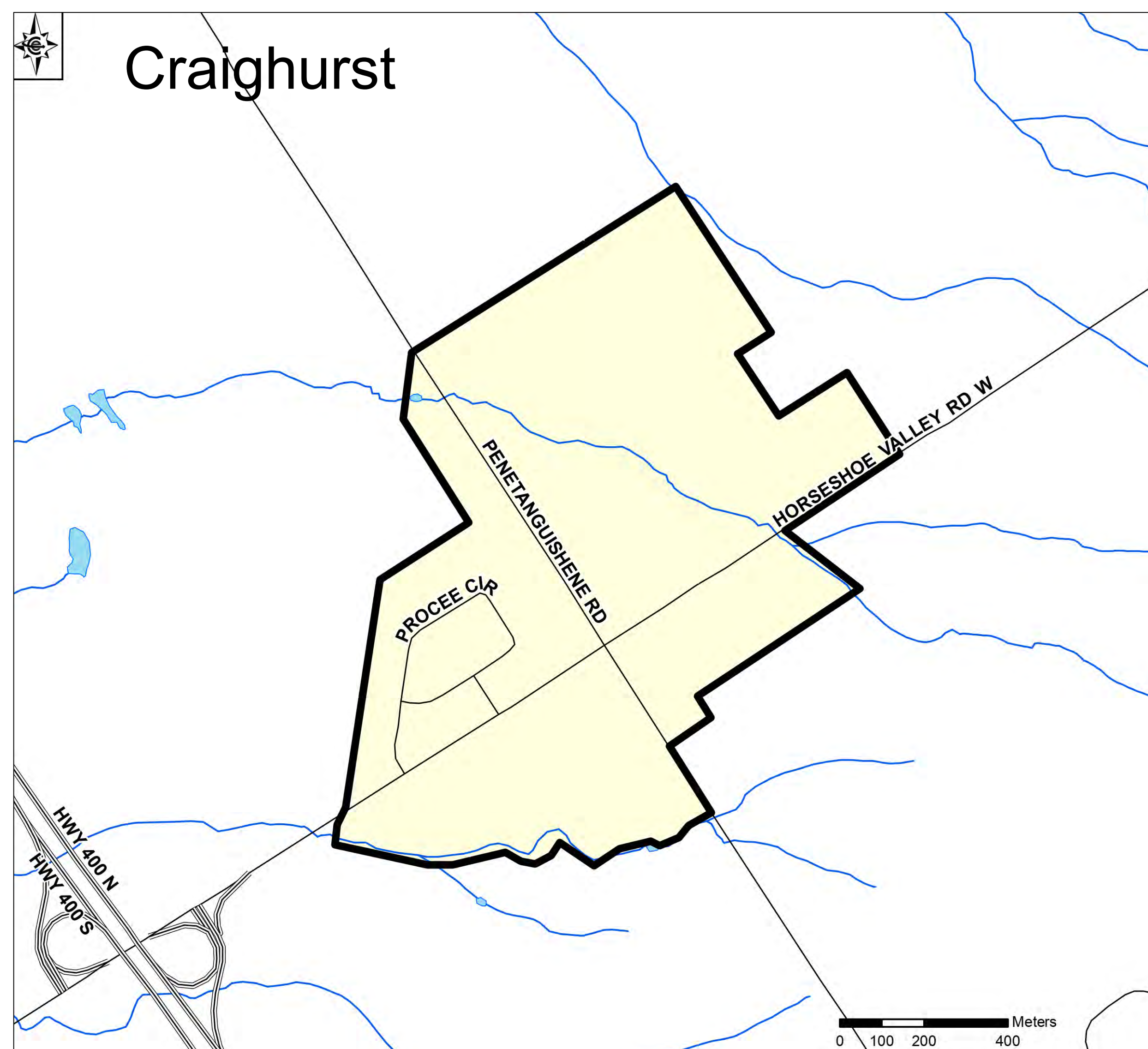
**Key capacity constraints:**

- **Additional storage is needed in Zone 1 in Horseshoe Valley**

# OPPORTUNITIES AND CONSTRAINTS WASTEWATER



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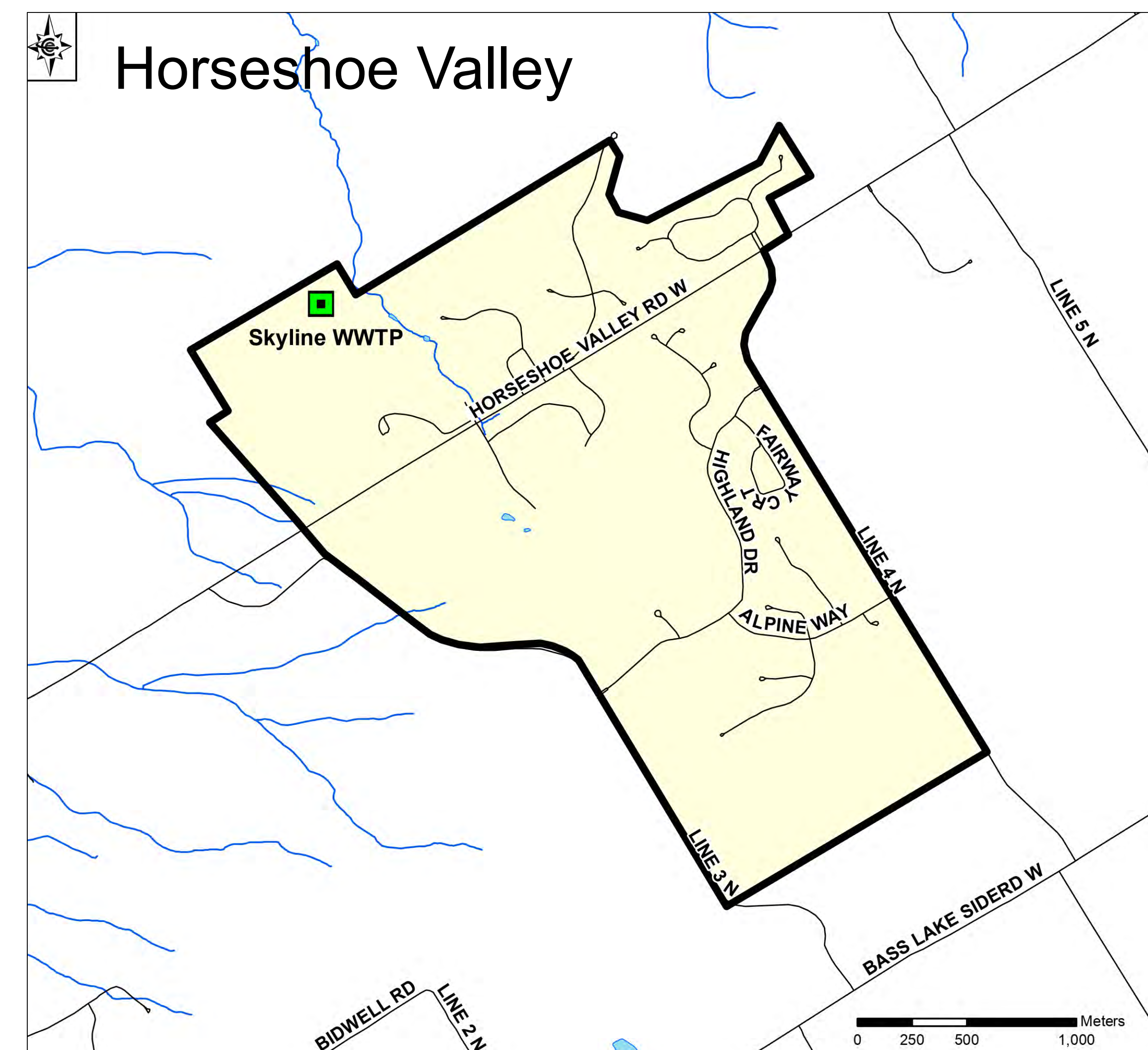


Wastewater system in Craighurst consists of:

- Privately owned lot level on-site treatment systems
- Currently no municipal or communal wastewater system

### Key constraints:

- **A wastewater treatment facility and a local system of sanitary sewers is needed to provide servicing to the community**



Wastewater system in Horseshoe Valley consists of:

- Private communal wastewater treatment plant (Skyline WWTP) with a subsurface discharge
- Local sanitary sewers that convey flow to Skyline WWTP
- Privately owned lot level on-site treatment systems

### Key constraints:

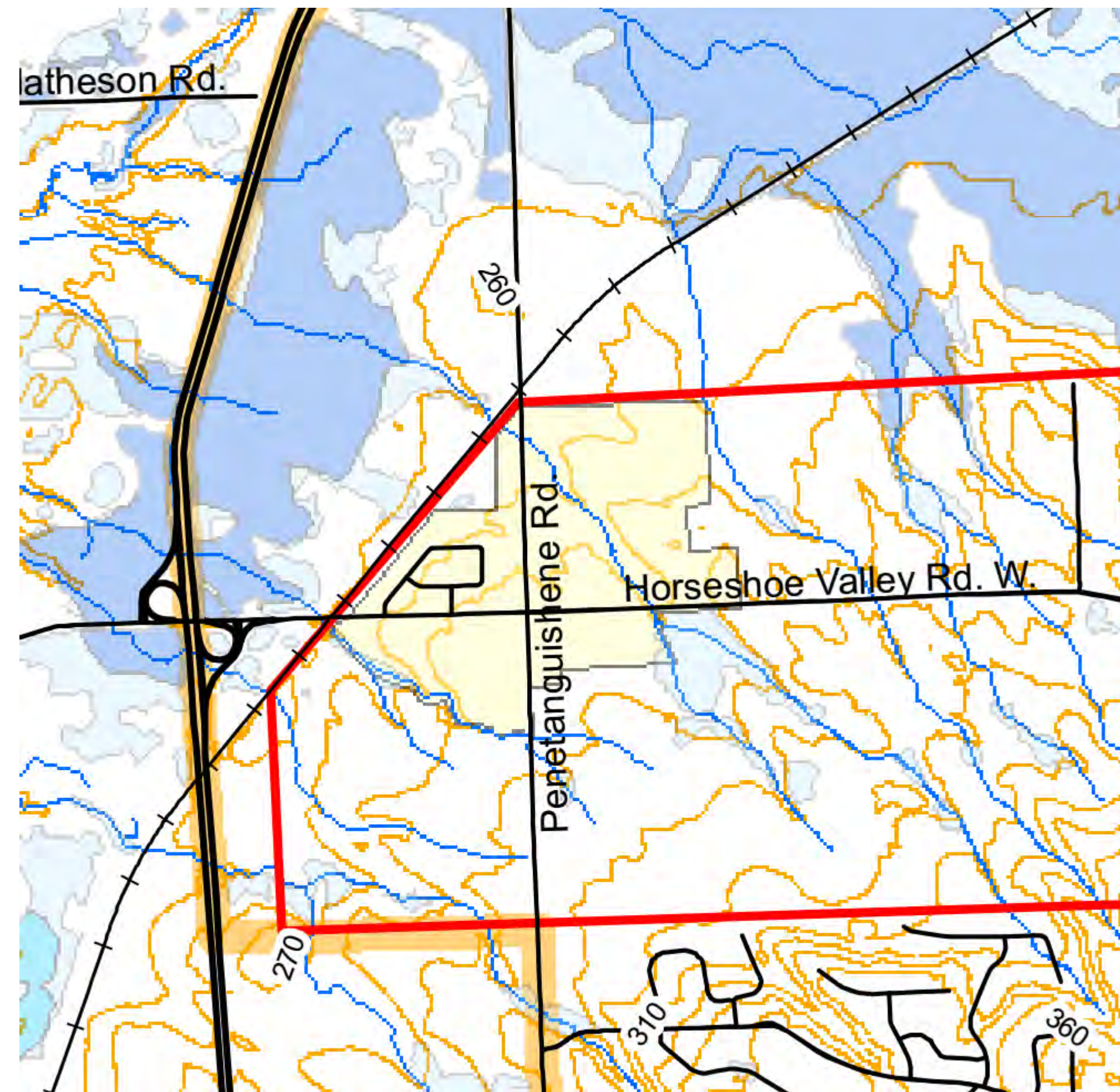
- **Additional treatment capacity and additional sewers are needed to provide wastewater servicing for the community**



# OPPORTUNITIES AND CONSTRAINTS TRANSPORTATION

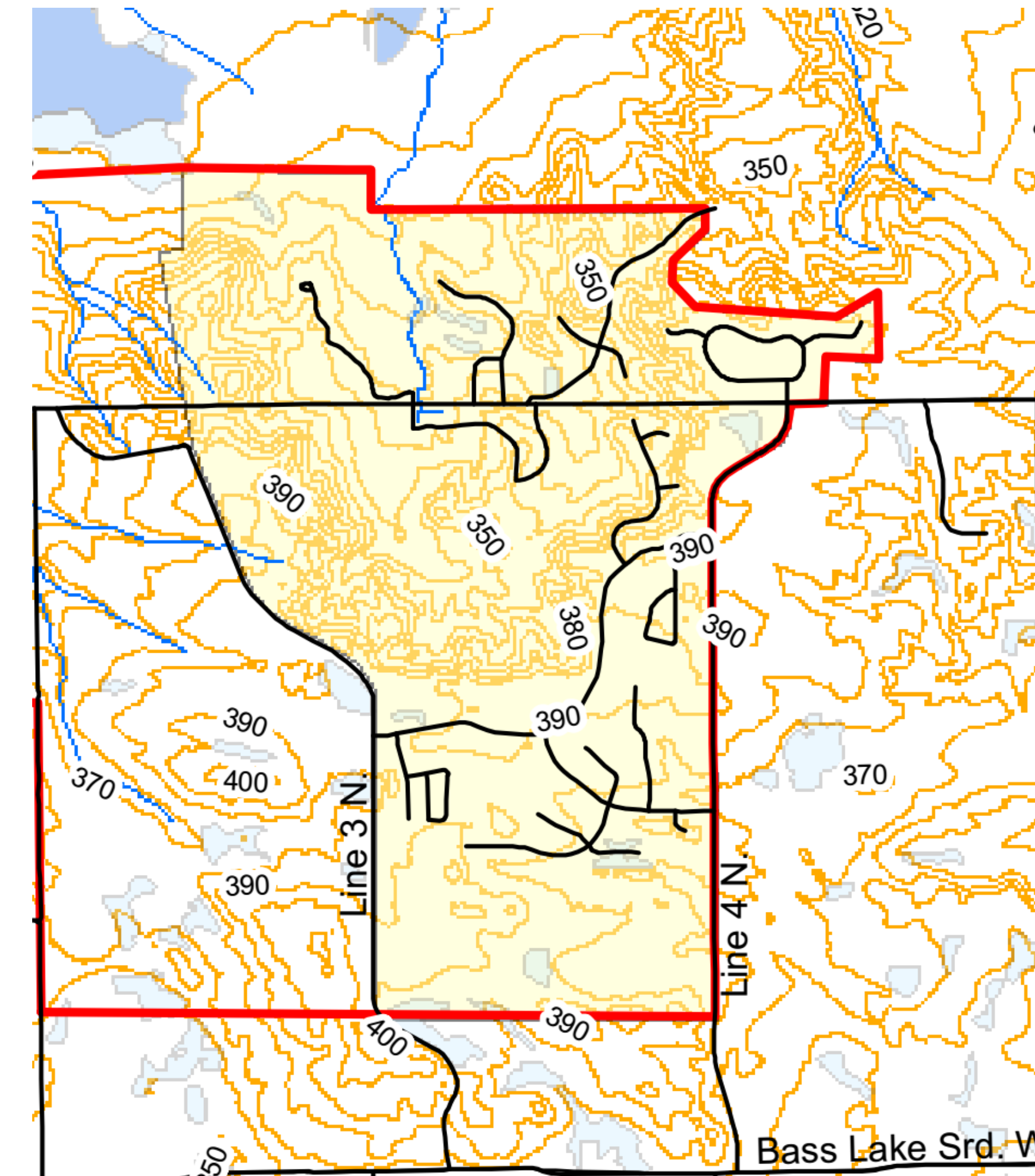


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## Transportation in Craighurst:

- Key roads are County Road 22 and County Road 93.
- Signalized intersection at County Roads 22 and 93 currently operates at an acceptable level of service (LoS 'B' or better).



## Transportation in Horseshoe Valley:

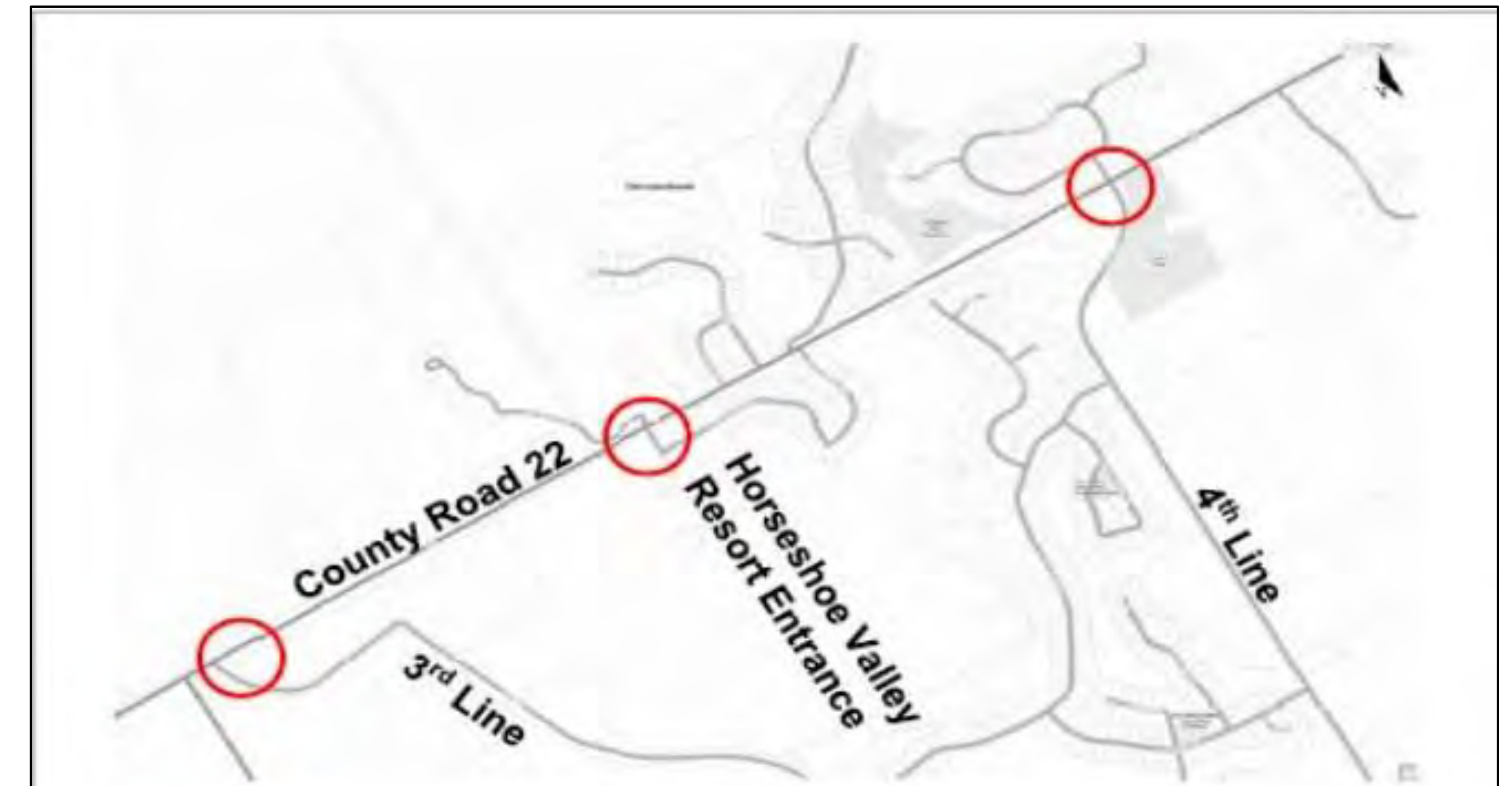
- Key roads are County Road 22 and Township of Oro-Medonte Line 3 and Line 4.
- County Road 22 at Horseshoe Resort Entrance is straight with rolling terrain on the east and west sides.
- Intersections of Line 3, Horseshoe Resort Entrance and Line 4 with County Road 22 operate at an acceptable level of service (LoS 'C' or better).
- County completed County Road 22 Transportation Requirements Class Environmental Assessment in 2017
- Recommendations from the County Road 22 Class Environmental Assessment are sufficient to provide transportation services for Horseshoe Valley Settlement Area

# COUNTY ROAD 22 CLASS EA RECOMMENDATIONS



Simcoe County completed a Schedule C Class Environmental Assessment for County Road 22 Transportation Requirements in 2017. The study concluded the following recommendations:

- Single lane roundabout intersection controls at Line 3 and Horseshoe Boulevard and a multilane roundabout at Line 4.
- Reconstruct County Road 22 to a 2 lane urban cross section complete with curb and gutter and storm sewer outlets.
- Widen County Road 22 to accommodate an eastbound climbing lane from County Club Lane to just east of Line 4 and a westbound climbing lane between Horseshoe Boulevard and Line 3.
- Minimize grading encroachment on private property through the use of retaining walls.
- Add right turn tapers at all side road intersections.
- Install partial illumination at all side road intersections.
- Add median left turn lane between Horseshoe Resort and Country Club Lane.
- Provide school bus lay by lane adjacent to westbound through lane between Pine Ridge Trail and Maplecrest Court.
- Close Beechwood intersection connection to County Road 22 to eliminate conflict point and improve traffic safety.
- Provide 3m wide paved shoulder for pedestrians and bicyclists.
- Reduce posted speed limit from 70 km/hr to 50 km/hr on approaches to roundabouts.
- Place additional pavement markings and signage to promote reduced travel speeds.
- Encourage safer driving habits and reduced speeds through increased law enforcement, education and periodic use of speed radar signs.
- Illuminations improvements at sideroads.
- Drainage upgrades and urbanization through the roadway section.



Recommended Intersection Improvements

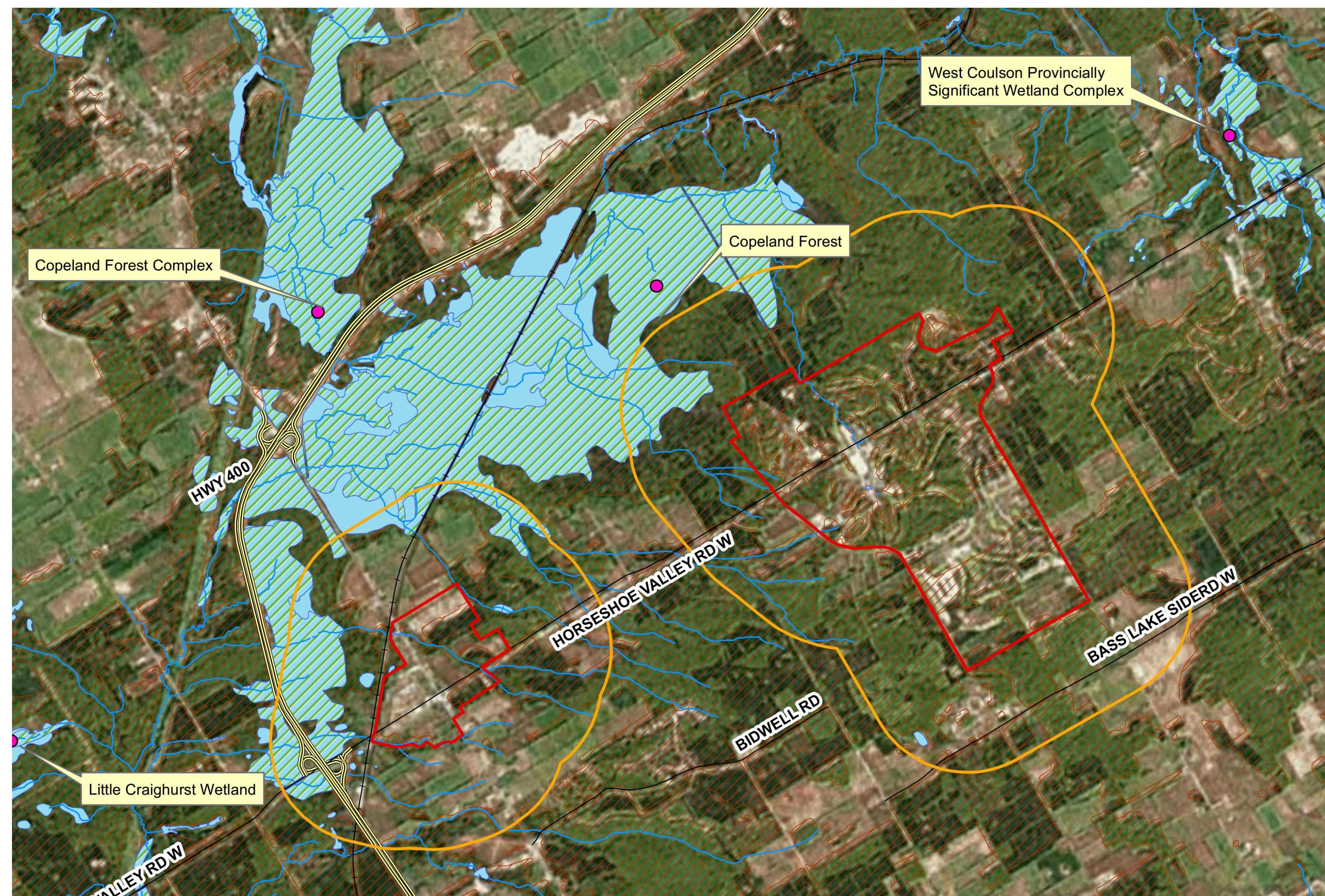


Recommended Intersection Improvements (County Road 22 and Line 3)

# PROBLEM STATEMENT



*The existing water, wastewater and transportation systems will need to be upgraded or provided, in areas currently without municipal services, to meet future needs in the Craighurst and Horseshoe Valley Settlement Areas all while minimizing the impacts on the natural, social and cultural features of the study area.*



# EVALUATION CRITERIA



Natural Environment	Social/ Cultural Environment
Potential effects on terrestrial features	Potential effects on heritage resources
Potential effects on designated natural areas	Potential effects on residents and businesses
Potential effects on water resources and hydrogeology	Compatibility with proposed land uses
Potential effects on species at risk	Potential effects to property
Potential effects on air quality	Nuisance and traffic impacts
Technical Considerations	Economic Considerations
Potential impacts from soil and groundwater conditions	Capital costs
Ease of construction	Operating and maintenance costs
Potential traffic management issues and/or opportunities	Land acquisition costs
Potential constructability issues	

# LONG-LIST ALTERNATIVES

## WATER



A long-list of alternative solutions to address water supply in the Craighurst and Horseshoe Valley Settlement Areas were developed and screened

### 1. Do Nothing

Under this alternative, the water system will continue to operate as it currently does. This alternative was eliminated from further consideration as it will not provide sufficient water supply to the Craighurst and Horseshoe Valley.



Alternative was eliminated from further consideration as it will not provide water servicing for approved growth in Craighurst and Horseshoe Valley Settlement Areas

### 2. Limit Growth

This alternative involves restricting population growth within the Craighurst and Horseshoe Valley Settlement Areas. This would include reversing past decisions regarding growth and development made by the Province, Simcoe County and The Township of Oro-Medonte.



Alternative was eliminated from further consideration as it would reverse past decisions regarding growth.

### 3. Water Efficiency/Conservation

This alternative involves implementing further water conservation and reduction strategies to reduce water demand, and provide overall resiliency to the system. In the Horseshoe Valley Settlement Area, water conservation and reduction strategies could include reductions in the use of potable water.



Alternative will not provide for future needs on its own and can be carried forward as an implementation strategy.

### 4. Enhance/ Expand Existing Systems

This alternative involves the enhancement and expansion of the existing water system and distribution systems in Craighurst and Horseshoe Valley to meet future needs.



Alternative carried forward and servicing alternatives developed.

# SERVICING ALTERNATIVES

## WATER



Water servicing alternatives were developed to address water supply in the Craighurst and Horseshoe Valley Settlement Areas based on the most promising alternatives from the long list

### **W1. Expand Horseshoe Valley Water System**

Expand Horseshoe Valley water system and construct new feedermain to provide water servicing to Craighurst

### **W2. Expand Craighurst Water System**

Expand Craighurst water system and construct new feedermain to provide water servicing to Horseshoe Valley.

### **W3. Expand Horseshoe Valley and Craighurst Water Systems**

Expand Horseshoe Valley water system to service existing residents and future growth in Horseshoe Valley and expand Craighurst water system to service existing residents and future growth in Craighurst.

### **W4. Expand and Interconnect Horseshoe Valley Water System and Expand Craighurst Water System**

Expand Craighurst water system to service existing residents and future growth in Craighurst. Interconnect Zones 1 and 2 in the Horseshoe Valley water system and expand interconnected water system to provide water servicing in Horseshoe Valley.

# SERVICING ALTERNATIVES SCREENING WATER



These two criteria were applied to screen the servicing alternatives:

1. Is this servicing alternative reasonably cost effective to construct and operate?
2. Is this servicing alternative reasonably capable of being approved?

Servicing Alternative ID	Description	Reasonable Cost Effective to Construct and Operate	Reasonably Capable of Being Approved	Servicing Alternative Carried Forward
W1	Expand Horseshoe Valley Water Systems and construct new feedermain to provide water servicing to Horseshoe Valley and Craighurst	x	x	x
W2	Expand Craighurst Water System and construct new feedermain to provide water servicing to Horseshoe Valley and Craighurst	x	x	x
W3	Expand Horseshoe Valley Water Systems to provide water servicing to Horseshoe Valley and expand Craighurst Water System to provide water servicing to Craighurst	✓	✓	✓
W4	Expand and interconnect Horseshoe Valley Water Systems to provide water servicing to Horseshoe Valley and expand Craighurst Water System to provide water servicing to Craighurst	✓	✓	✓

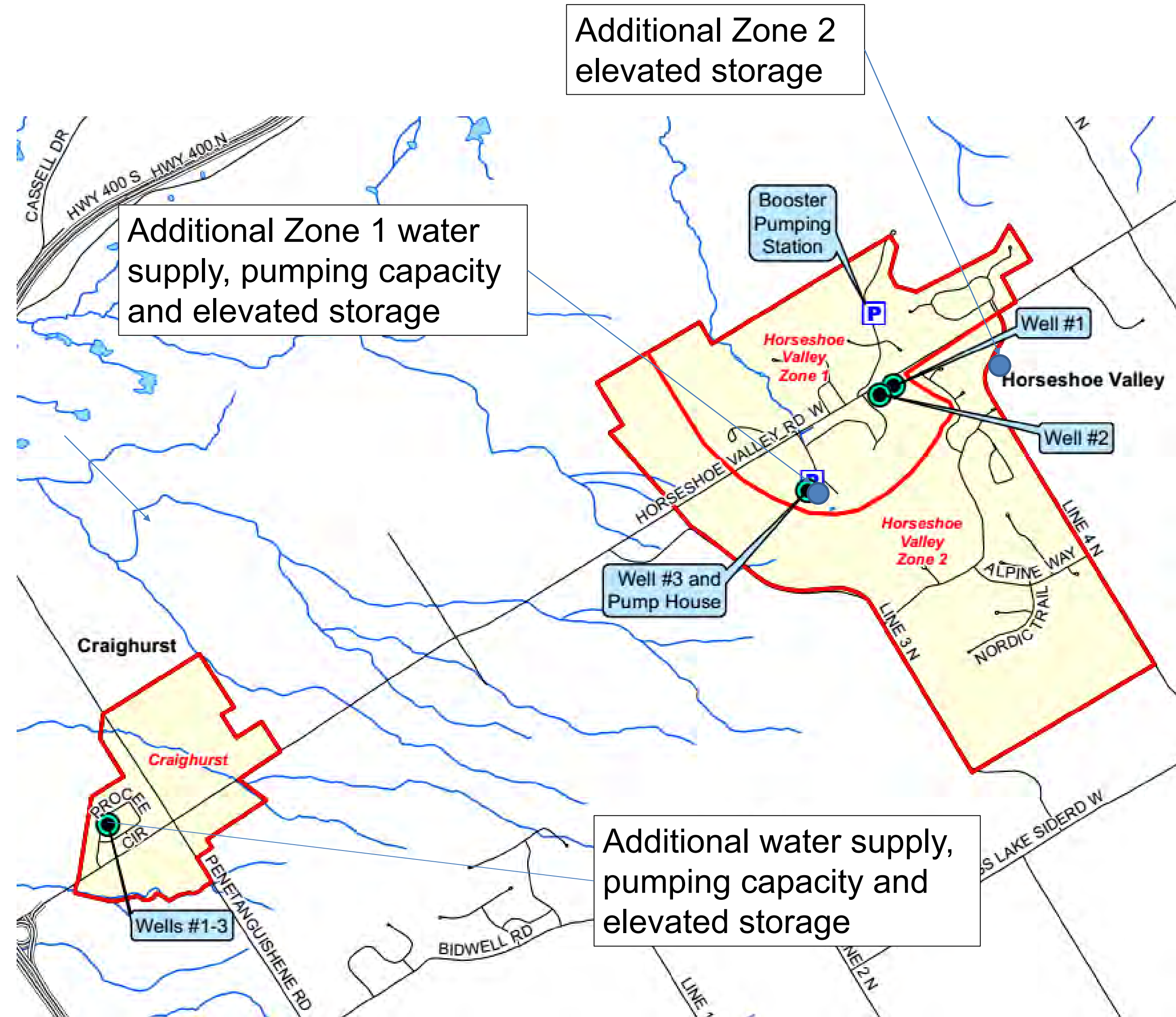
The screening process concluded there are two short-listed water alternatives (W3 and W4) which warranted further evaluation to address the problem statement.

# SHORT-LIST OF SERVICING ALTERNATIVES

## WATER



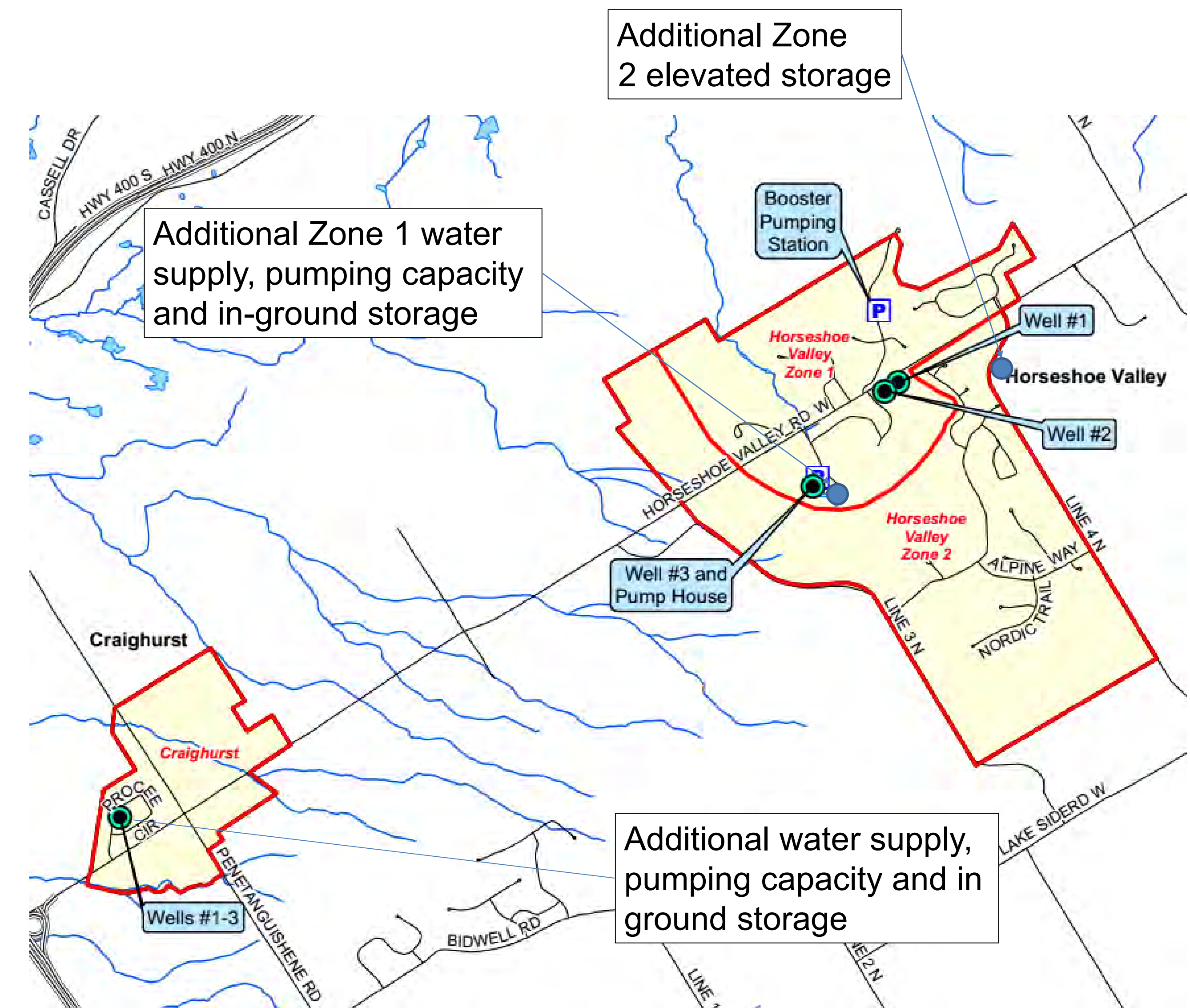
Short Listed servicing alternatives were reviewed and expanded to consider specific requirements in each community



### Water Servicing Alternative W3A

**Craighurst** – additional water supply, pumping capacity and elevated storage to meet future needs

**Horseshoe Valley** – additional water supply, pumping capacity and additional elevated storage in Zone 1 and additional elevated storage in Zone 2 to meet future needs.



### Water Servicing Alternative W3B

**Craighurst** – additional water supply, pumping capacity and in-ground storage to meet future needs

**Horseshoe Valley** – additional water supply, pumping capacity and in-ground storage in Zone 1 and additional elevated storage in Zone 2 to meet future needs.



# SHORT-LIST OF SERVICING ALTERNATIVES

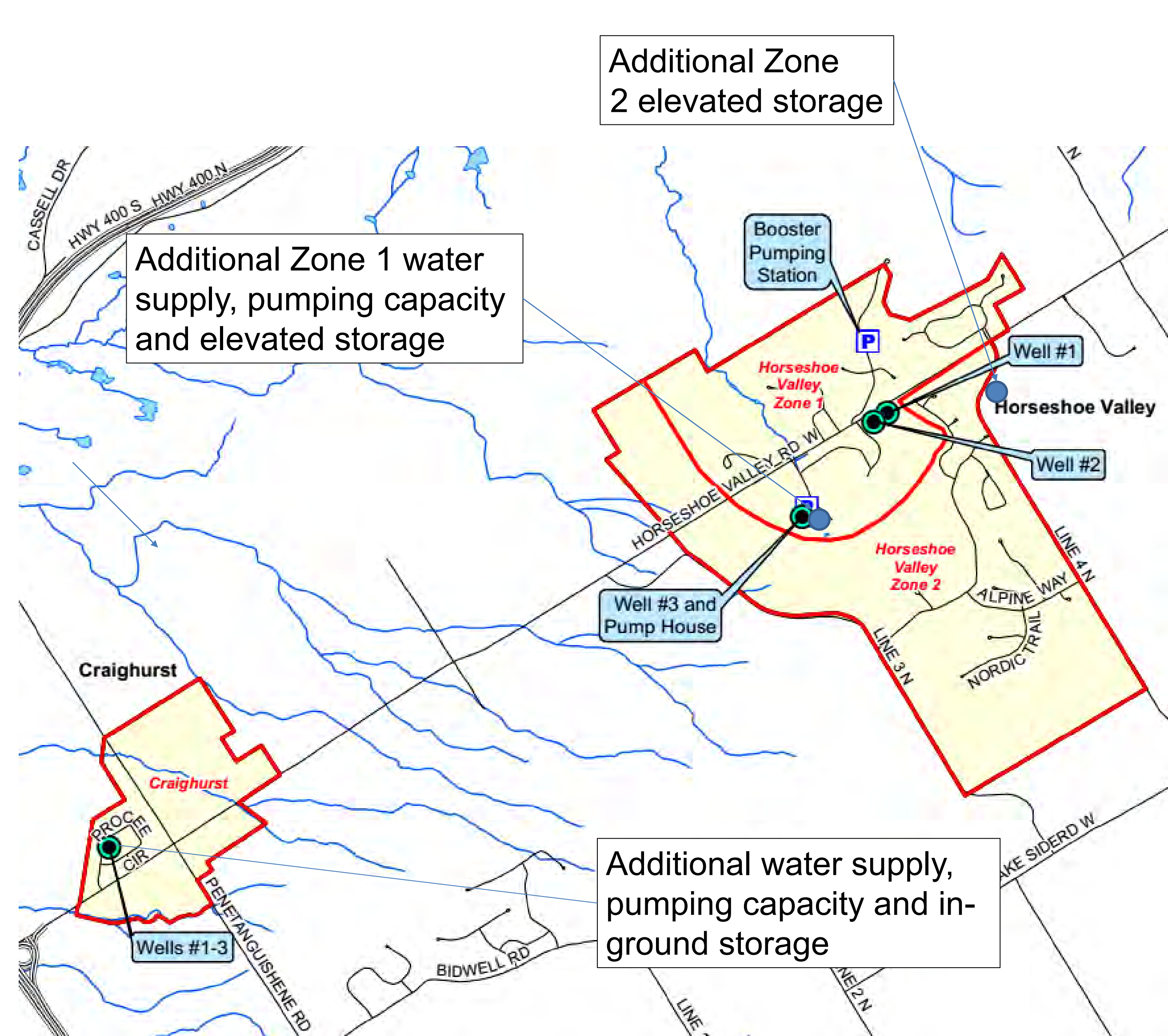
## WATER



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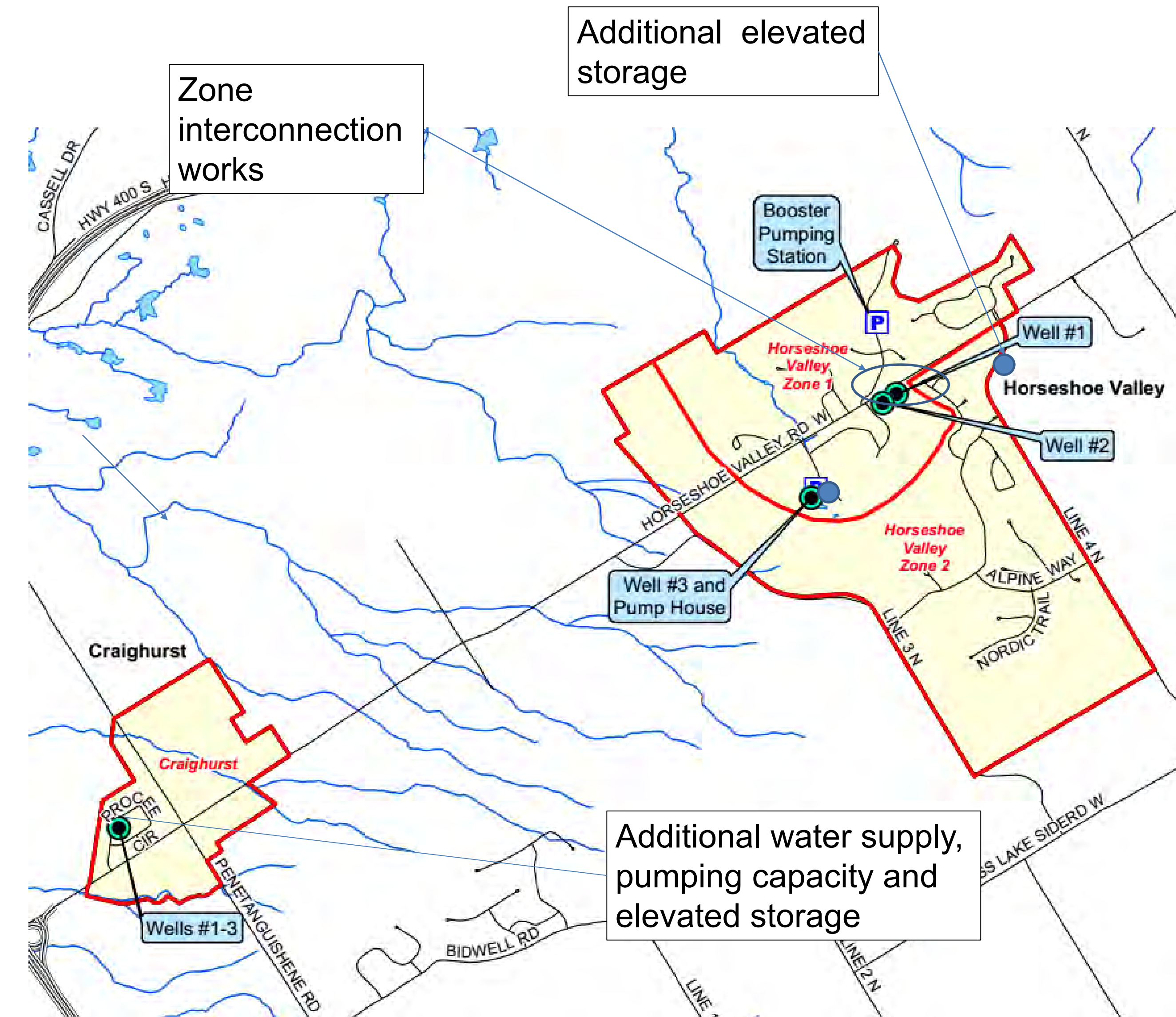
Short Listed servicing alternatives were reviewed and expanded to consider specific requirements in each community



### Water Servicing Alternative W3C

**Craighurst** – additional water supply, pumping capacity and in-ground storage to meet future needs

**Horseshoe Valley** – additional water supply, pumping capacity and elevated storage in Zone 1 and additional elevated storage in Zone 2 to meet future needs.



### Water Servicing Alternative W4A

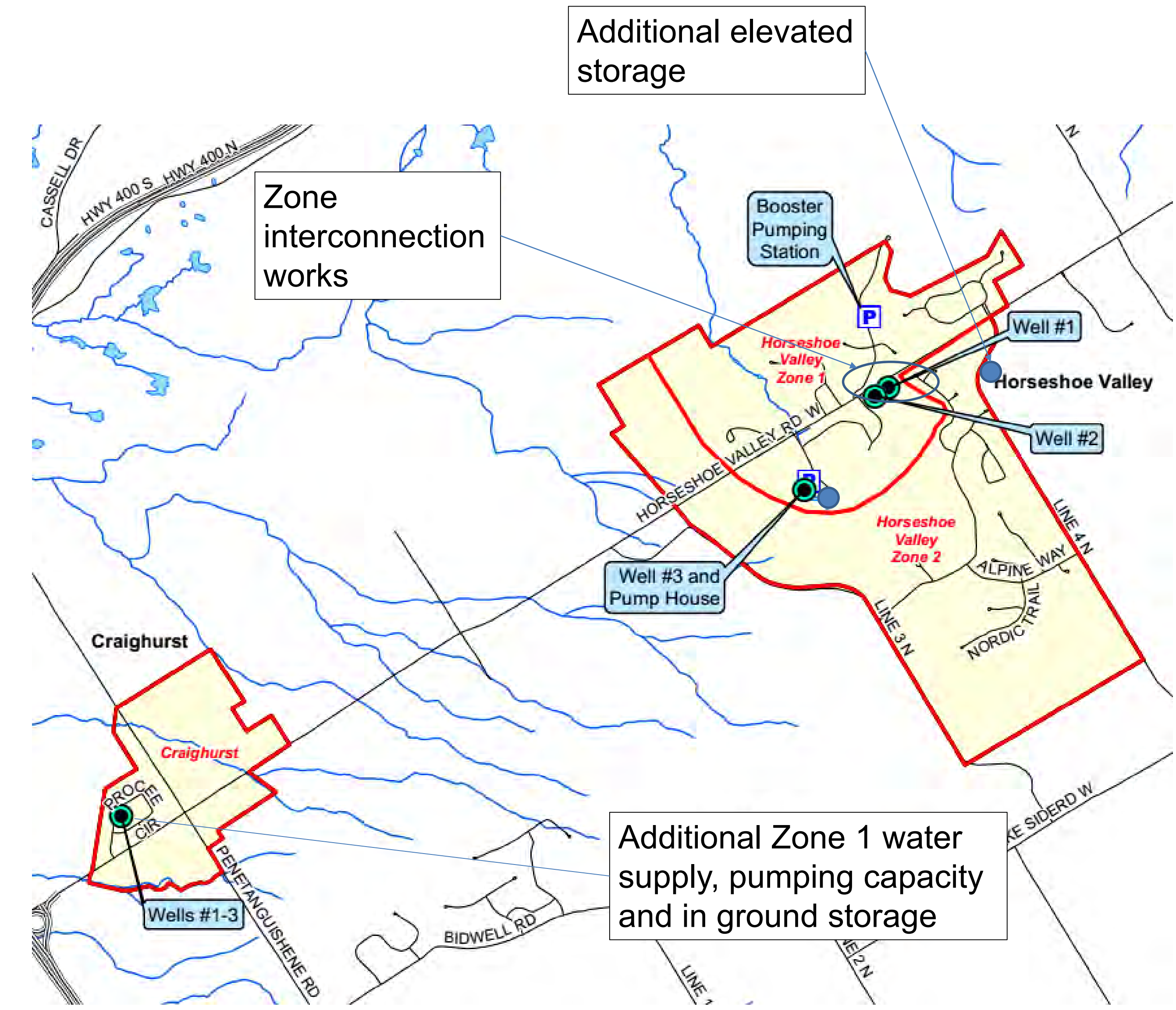
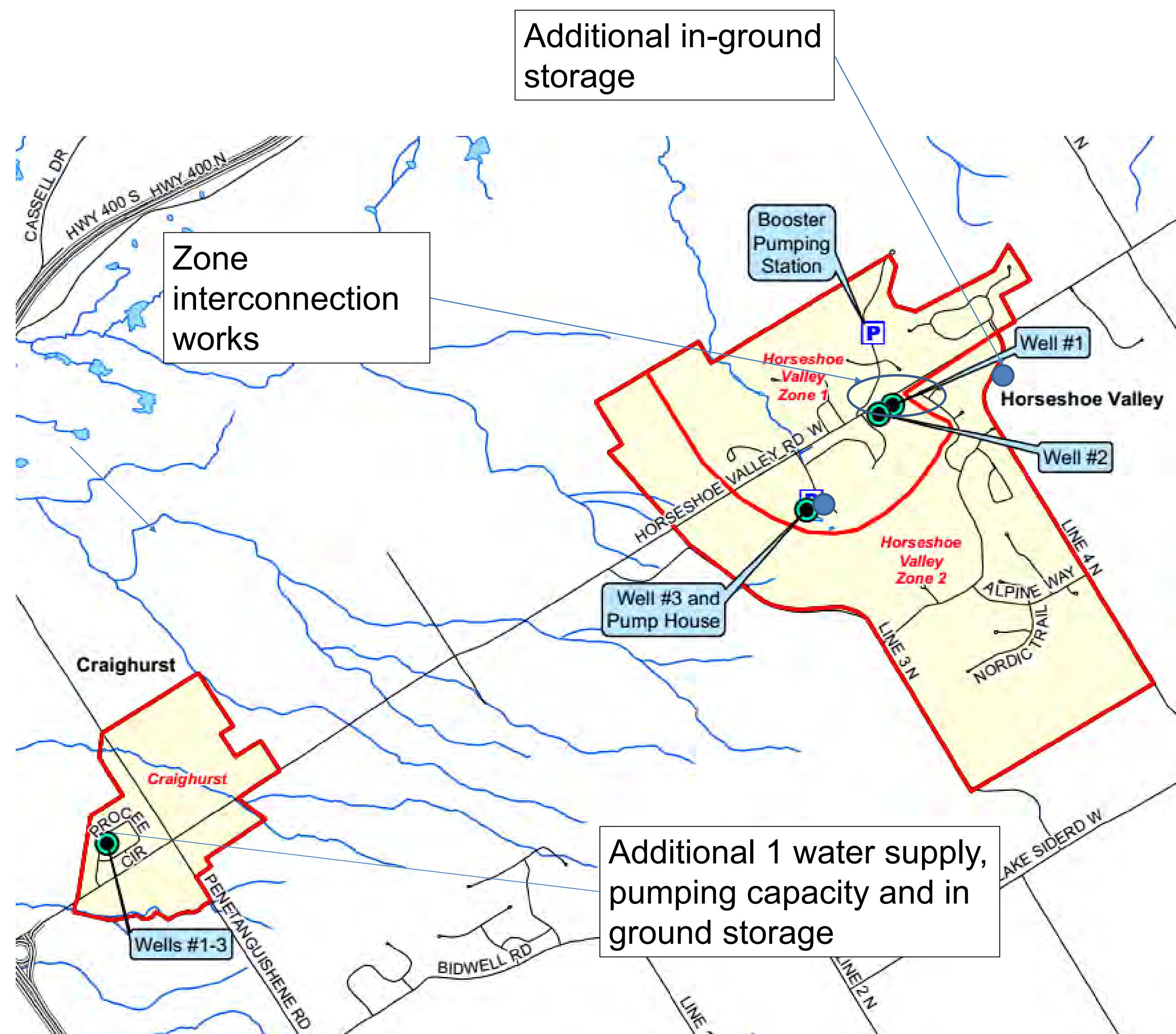
**Craighurst** – additional water supply, pumping capacity and elevated storage to meet future needs

**Horseshoe Valley** – interconnection of Zones 1 and 2, additional treatment capacity and additional elevated storage in interconnected zone to meet future needs.

# SHORT-LIST OF SERVICING ALTERNATIVES WATER



Short Listed servicing alternatives were reviewed and expanded to consider specific requirements in each community



## Water Servicing Alternative W4B

**Craighurst** – additional water supply, pumping capacity and in ground storage to meet future needs

**Horseshoe Valley** – interconnection of Zones 1 and 2, additional treatment capacity and additional in-ground storage in interconnected zone to meet future needs.

## Water Servicing Alternative W4C

**Craighurst** – additional water supply, pumping capacity and in-ground storage to meet future needs

**Horseshoe Valley** - interconnection of Zones 1 and 2, additional treatment capacity and additional elevated storage in interconnected zone to meet future needs

# EVALUATION OF ALTERNATIVES

## WATER



Water Servicing Alternative/ Evaluation Criteria	Natural Environment	Social/ Cultural Environment	Technical Considerations	Economic Considerations
<b>Alternative 3A</b>	Additional elevated storage will be required in Zone 1 in Horseshoe Valley and in Craighurst. The new Horseshoe Highlands Water Storage Facility on Line 4 is part of this alternative. Potential natural environment impacts can be mitigated through site selection.	Additional elevated storage will be required in Zone 1 in Horseshoe Valley and in Craighurst. The New Horseshoe Highlands Water Storage Facility on Line 4 is part of this alternative. Higher potential for community impacts associated with elevated storage tanks.	Construction of new elevated storage facilities will occur within significant groundwater recharge areas which will require construction dewatering. Limited opportunities to phase construct to match demands.	High capital cost and higher operating and maintenance cost due to larger number of facilities.
<b>Alternative 3B</b>	In-ground storage will be required in Zone 1 in Horseshoe Valley and in Craighurst. The new Horseshoe Highlands Water Storage Facility on Line 4 is part of this alternative. Potential natural environmental impacts can be mitigated through site selection.	New in-ground storage will be required in Zone 1 in Horseshoe Valley and in Craighurst. The new Horseshoe Highlands Water Storage Facility on Line 4 is part of this alternative. Potential social/ cultural impacts can be mitigated through site selection.	Construction of in-ground storage facilities will occur within significant groundwater recharge areas which will require construction dewatering.	High capital cost and higher operating and maintenance cost due to larger number of facilities.
<b>Alternative 3C</b>	Additional elevated storage will be required in Zone 1 in Horseshoe Valley and new in- ground storage in Craighurst. The new Horseshoe Highlands Water Storage Facility on Line 4 is part of this alternative. Potential natural environment impacts can be mitigated through site selection.	Additional elevated storage will be required in Zone 1 in Horseshoe Valley and a new ground storage facility will be needed in Craighurst. The new Horseshoe Highlands Water Storage Facility on Line 4 is part of this alternative. Higher potential for community impacts associated with elevated storage tank.	Construction of in-ground and elevated storage facilities will occur within significant groundwater recharge areas which will require construction dewatering.	High capital cost and higher operating and maintenance cost due to larger number of facilities.

*\*the colour assigned to each alternative/criteria indicates a ranking*

Legend		
Low Impact	Moderate Impact	High Impact

# EVALUATION OF ALTERNATIVES

## WATER

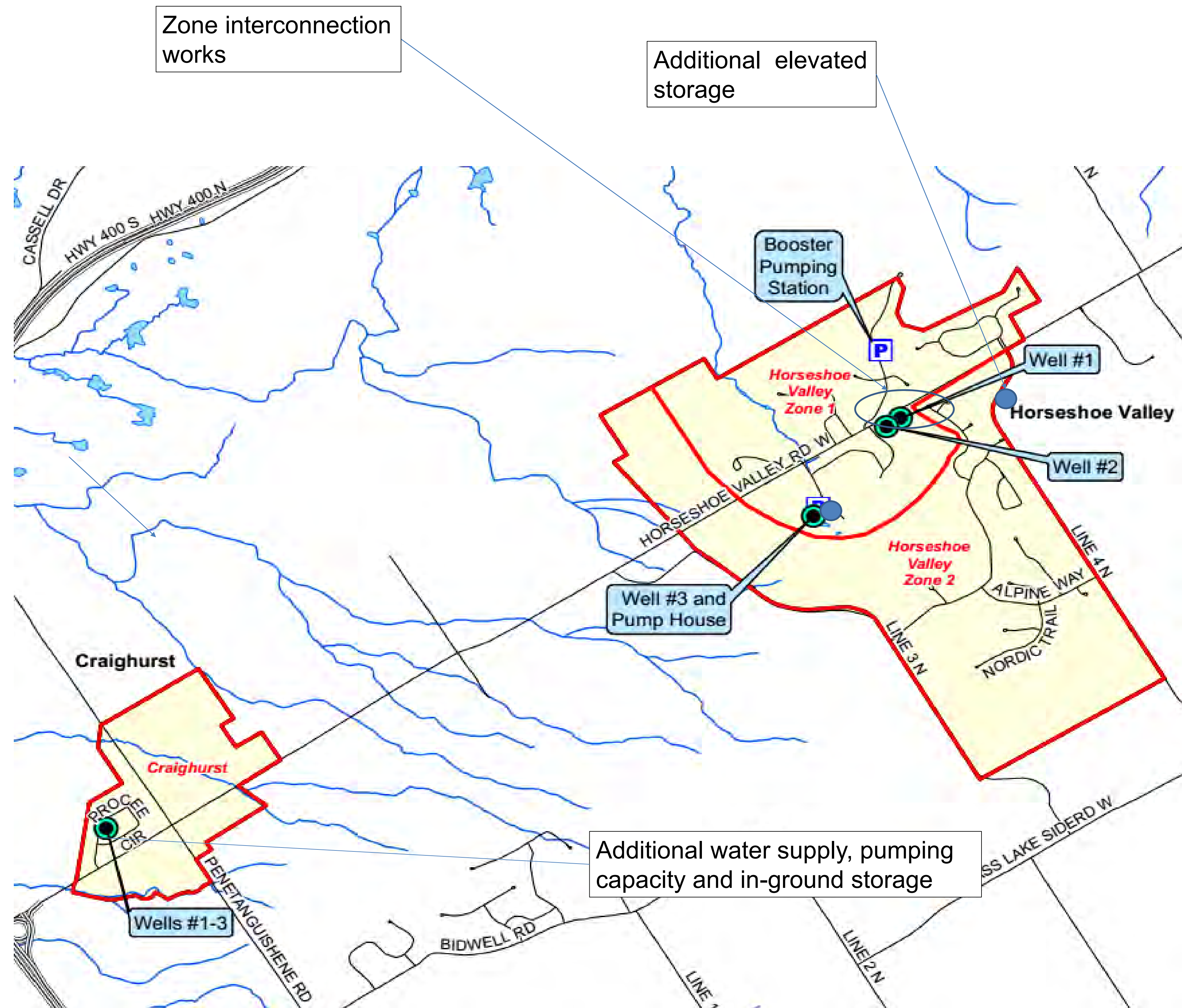


Water Servicing Alternative/ Evaluation Criteria	Natural Environment	Social/ Cultural Environment	Technical Considerations	Economic Considerations
<b>Alternative 4A</b>	Required storage in interconnected Horseshoe Valley Zone will be provided through expansion of the new Horseshoe Highlands Water Storage Facility located on Line 4. New elevated storage will be required in Craighurst. Potential natural environment impacts in Craighurst can be mitigated through site selection.	Additional elevated storage in interconnected Horseshoe Valley Zone will be consolidated at new Horseshoe Highlands Water Storage Facility on Line 4. Alternative will result in two storage facilities for the settlement areas. Fewer sites and footprint areas minimizes potential for social/ cultural impacts. Higher potential for community impacts associated with elevated storage tanks.	Smaller number of construction sites in Horseshoe Valley will reduce construction dewatering requirements. Opportunity to phase construction of Interconnected elevated storage facility in Horseshoe Valley. Limited opportunities to phase Craighurst facility	Lower capital cost and lower operating and maintenance costs due to smaller number of facilities.
<b>Alternative 4B</b>	Required storage in interconnected Horseshoe Valley Zone will be provided through new in-ground storage tank. New in ground storage will be required in Craighurst. Potential natural environment impacts for new storage facilities can be mitigated through site selection.	New In-ground storage in interconnected Horseshoe Valley Zone. Alternative will result in three storage facilities for the settlement areas. Larger number of sites increases the potential for social/ cultural impacts.	Smaller number of construction sites in Horseshoe Valley will reduce construction dewatering requirements. Opportunity to phase construction of Interconnected in ground storage facility in Horseshoe Valley.	Higher capital cost and lower operating and maintenance costs due to larger number of facilities.
<b>Alternative 4C</b>	Required storage in interconnected Horseshoe Valley Zone will be provided through expansion of the new Horseshoe Highlands Water Storage Facility on Line 4. New in ground storage will be required in Craighurst. Potential natural environment impacts in Craighurst can be mitigated through site selection.	Additional elevated storage in interconnected Horseshoe Valley Zone will be consolidated at new Horseshoe Highlands Water Storage Facility on Line 4. Alternative will result in two storage facilities for the settlement areas. Fewer sites and footprint areas minimizes potential for social/ cultural impacts.	Smaller number of construction sites in Horseshoe Valley will reduce construction dewatering requirements. Opportunity to phase construction of Interconnected elevated storage facility in Horseshoe Valley.	Lowest capital cost and lower operating and maintenance costs due to smaller number of facilities.

*\*the colour assigned to each alternative/criteria indicates a ranking*

Legend		
Low Impact	Moderate Impact	High Impact

# PREFERRED WATER SERVICING ALTERNATIVE (ALTERNATIVE W4C)



## Craighurst

- Additional water supply, pumping capacity and in-ground storage

## Horseshoe Valley

- Interconnection of Zones 1 and 2
- Additional elevated storage located at new Horseshoe Highlands Water Storage Facility on Line 4

# LONG-LIST ALTERNATIVES WASTEWATER



A long-list of alternative solutions to address wastewater collection and treatment in the Craighurst and Horseshoe Valley Settlement Areas were developed and screened

## 1. Do Nothing

Under this alternative, the wastewater system will continue to operate as it currently does. This alternative was eliminated from further consideration as it will not address wastewater needs.



Alternative was eliminated from further consideration as it will not provide wastewater servicing for approved growth in the Craighurst and Horseshoe Valley Settlement Areas

## 2. Limit Growth

This alternative involves restricting population growth within the Craighurst and Horseshoe Valley Settlement Areas. This alternative would include reversing past decisions regarding growth and development made by the Province, Simcoe County and The Township of Oro-Medonte.



Alternative was eliminated from further consideration as it would reverse past decisions regarding growth.

## 3. Water Efficiency/Conservation

This alternative involves implementing further water conservation and reduction strategies to reduce or eliminate the need for wastewater services.



Alternative will not provide for future needs on its own and can be carried forward as an implementation strategy.

## 4. Enhance Existing Systems and Build New Systems

This alternative involves the enhancement of the existing wastewater system and building new systems to provide wastewater services.



Alternative carried forward and servicing alternatives developed.

# SERVICING ALTERNATIVES SCREENING WASTEWATER



These two criteria were applied to screen the servicing alternatives:

- 1. Is this servicing alternative reasonably cost effective to construct and operate?**
- 2. Is this servicing alternative reasonably capable of being approved?**

The screening process concluded there are two short-listed wastewater alternatives (WW2 and WW6) which warranted further evaluation to address the problem statement.

ID	Wastewater Servicing Alternative	Reasonable Cost Effective to Construct and Operate	Reasonably Capable of Being Approved	Servicing Alternative Carried Forward
WW1	New wastewater treatment facility (surface discharge) in Craighurst to service Craighurst and Horseshoe Valley with continued use of the Skyline Wastewater Treatment Facility (WWTP)	x	x	x
WW2	New wastewater treatment facility (surface discharge) in Horseshoe Valley to service Craighurst and Horseshoe Valley with continued use of the Skyline WWTP	✓	✓	✓
WW3	New wastewater treatment facility (surface discharge) in Horseshoe Valley to service Horseshoe Valley, new wastewater treatment facility in Craighurst (surface discharge) to Service Craighurst and continued operation of the Skyline WWTP	x	x	x
WW4	New wastewater treatment facility (subsurface discharge) in Craighurst to service Craighurst, multiple new wastewater treatment facilities (subsurface discharge) to service Horseshoe Valley and continued use of the Skyline WWTP	x	x	x
WW5	New wastewater treatment facility (subsurface discharge) in Horseshoe Valley to service Horseshoe Valley, new wastewater treatment facility in Craighurst (subsurface discharge) to service Craighurst and continued use of the Skyline WWTP	x	x	x
WW6	New wastewater treatment facility (surface discharge) in Horseshoe Valley to service Horseshoe Valley, new wastewater treatment facility in Craighurst (subsurface discharge) to service Craighurst and continued use of the Skyline WWTP	✓	✓	✓

# SERVICING ALTERNATIVES SCREENING WASTEWATER



These two criteria were applied to screen the servicing alternatives:

1. Is this servicing alternative reasonably cost effective to construct and operate?
2. Is this servicing alternative reasonably capable of being approved?

ID	Servicing Alternative	Reasonable Cost Effective to Construct and Operate	Reasonably Capable of Being Approved	Servicing Alternative Carried Forward
WW7	New wastewater treatment facility (subsurface discharge) in Craighurst to service Craighurst and continued use of the Skyline Wastewater Treatment Facility (WWTP)	✓	✗	✗
WW8	Upgrade Skyline WWTP to provide servicing for Craighurst and Horseshoe Valley	✓	✗	✗
WW9	New wastewater treatment facility (surface discharge) at Horseshoe Valley to service Craighurst and Horseshoe Valley with decommissioning of Skyline WWTP	✓	✗	✗
WW10	New wastewater treatment facility (surface discharge) at Craighurst to service Craighurst and Horseshoe Valley with decommissioning of Skyline WWTP	✓	✗	✗

The screening process concluded there are two short-listed wastewater alternatives (WW2 and WW6) which warranted further evaluation to address the problem statement.

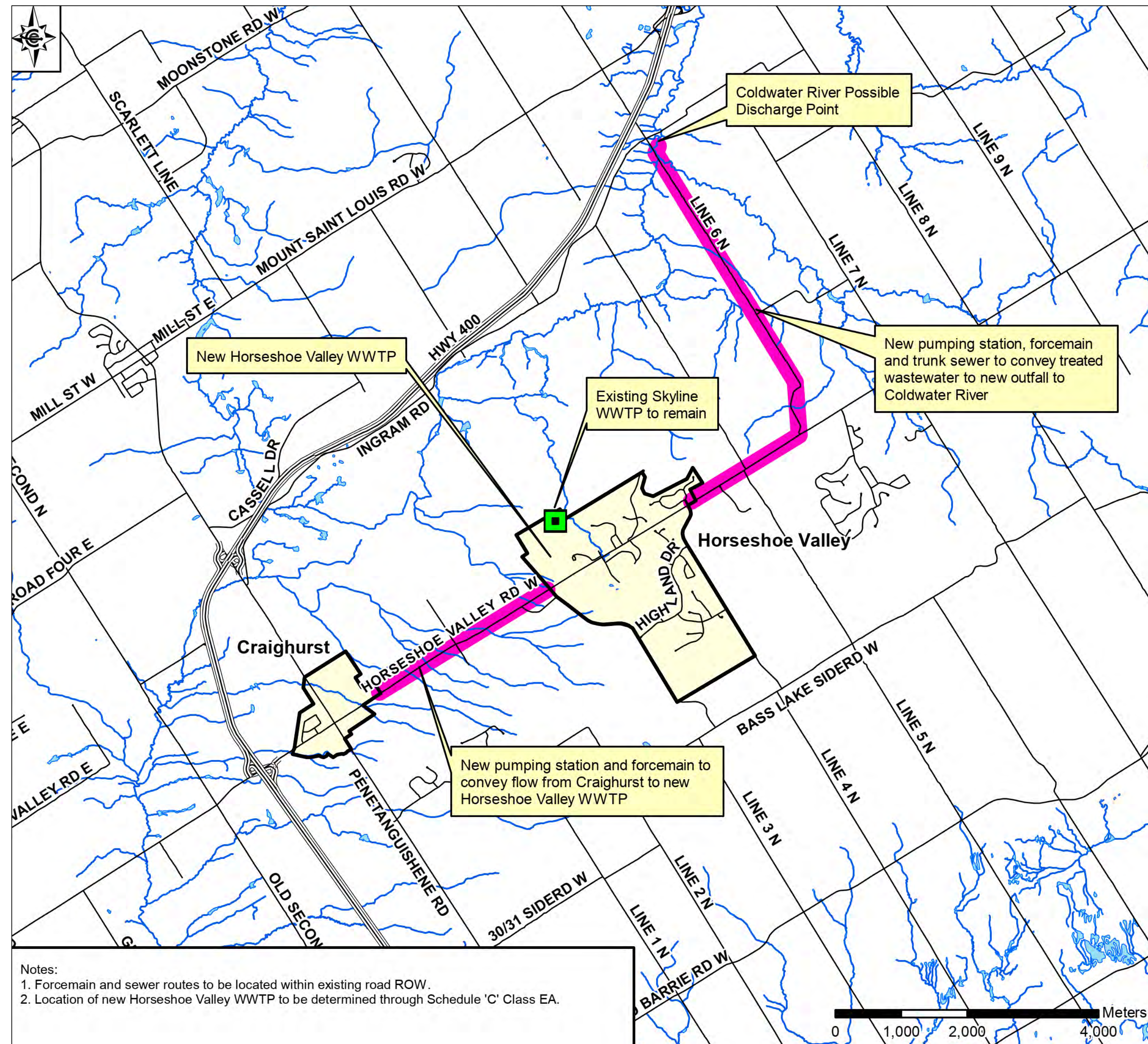


# SHORT-LIST OF SERVICING ALTERNATIVES

## WASTEWATER

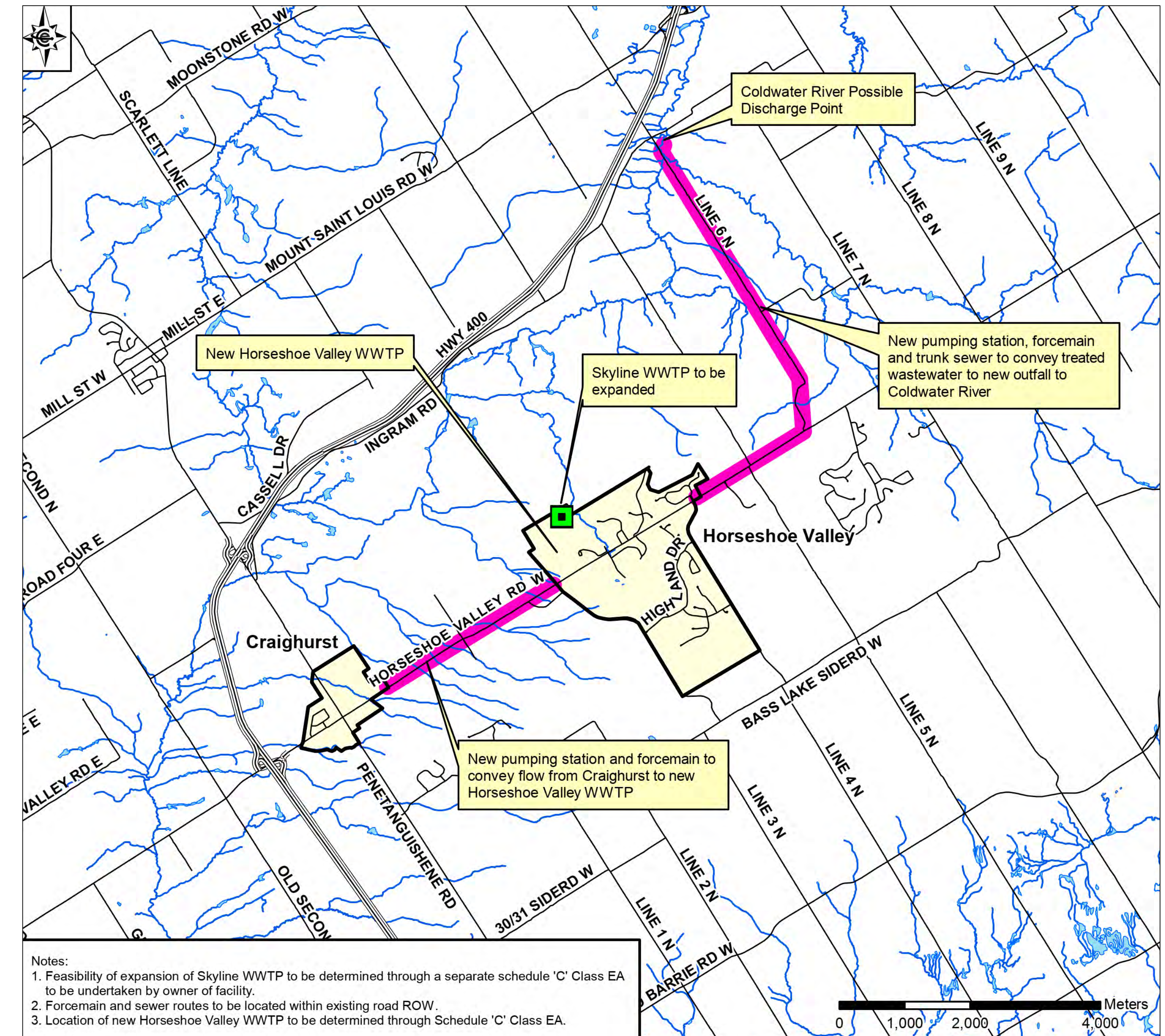


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### WW2A

New Horseshoe Valley WWTP (surface discharge to Coldwater River) with maintenance of the current capacity of the Skyline WWTP



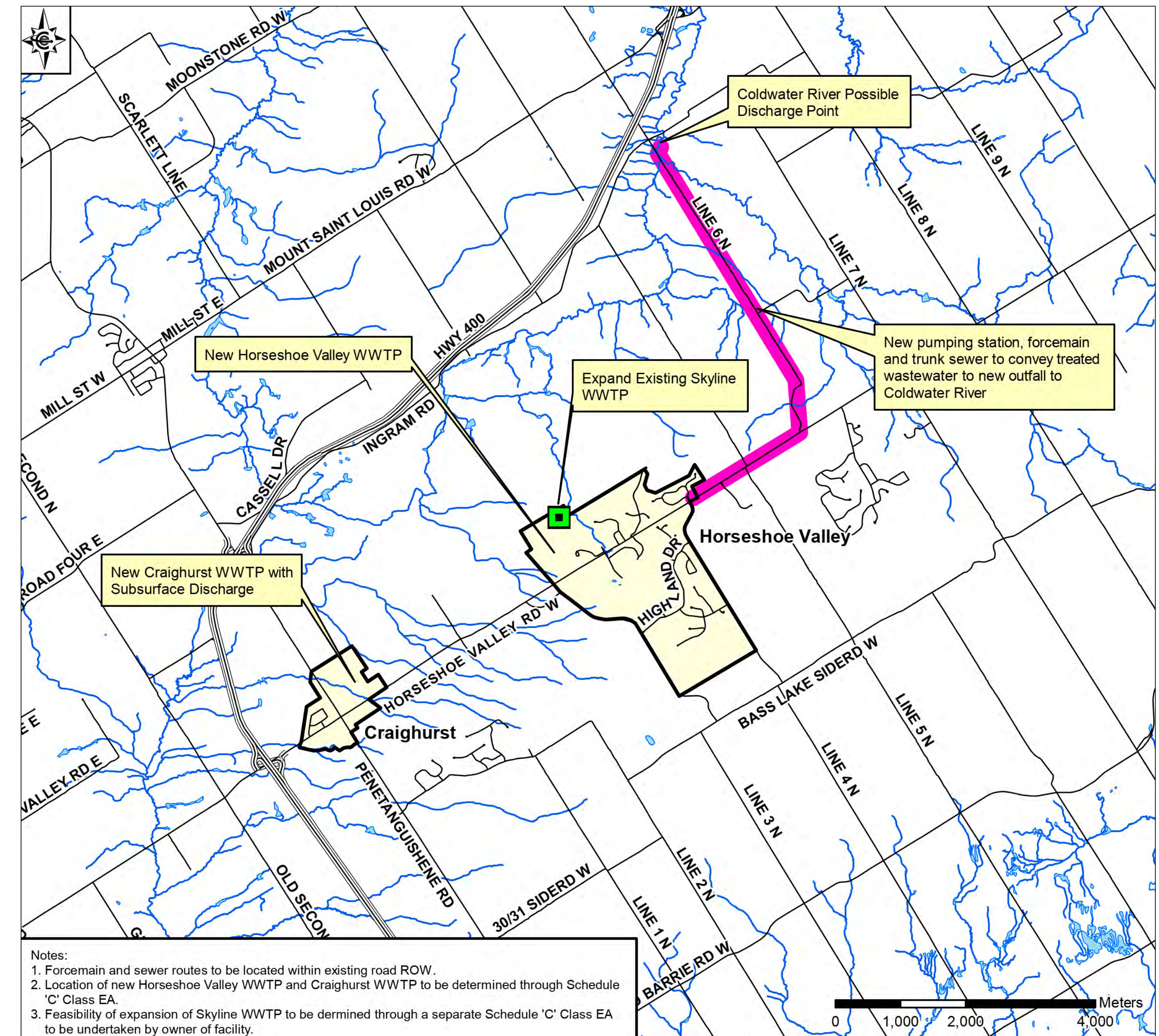
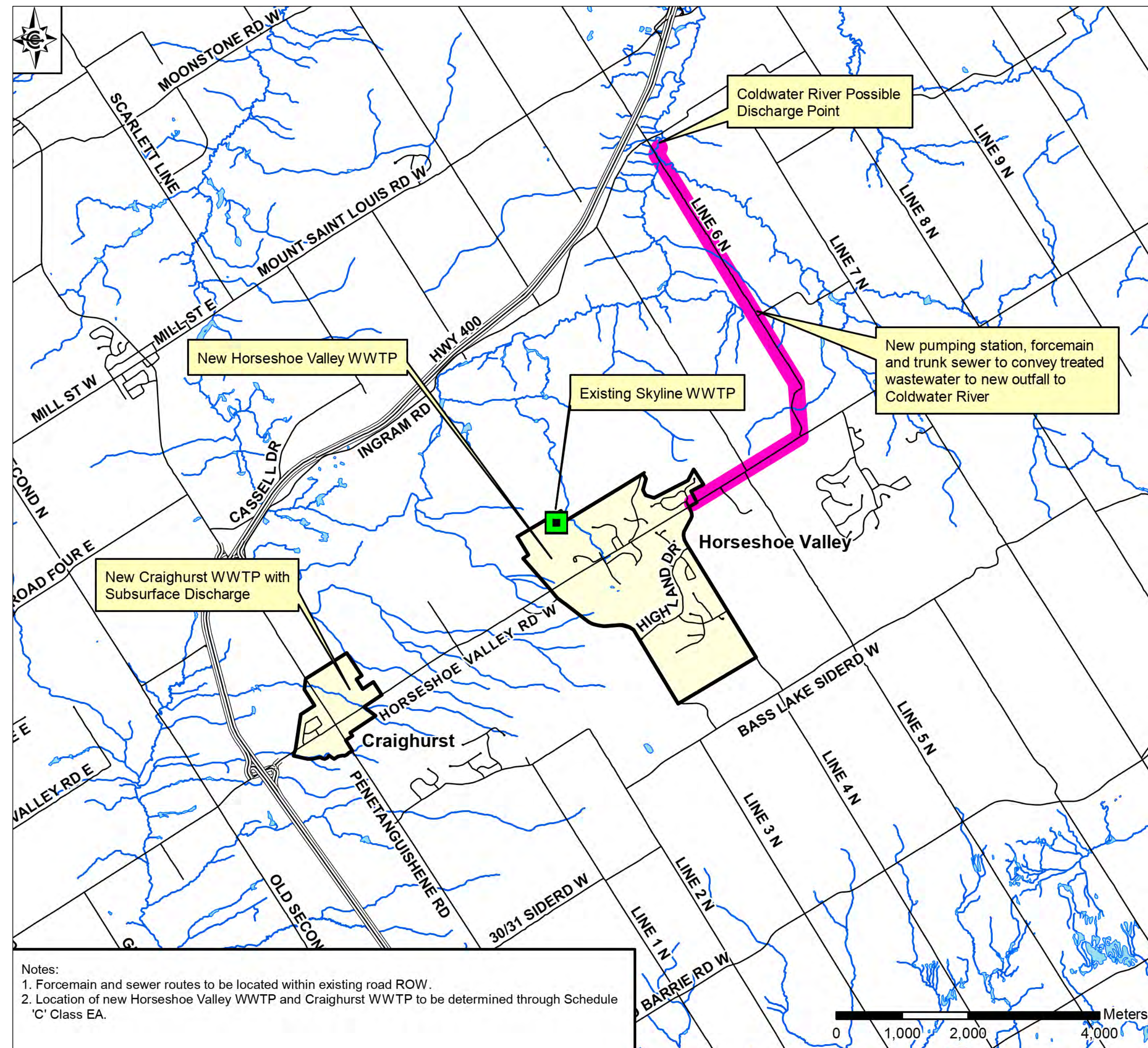
### WW2B

New Horseshoe Valley WWTP (surface discharge to Coldwater River) with an expansion to the Skyline WWTP

# SHORT-LIST OF SERVICING ALTERNATIVES WASTEWATER



COLE



## WW6A

New Craighurst WWTP (subsurface discharge), new Horseshoe Valley WWTP (surface discharge to Coldwater River) and maintenance of the current capacity of the Skyline WWTP

## WW6B

New Craighurst WWTP (subsurface discharge), new Horseshoe Valley WWTP (surface discharge to Coldwater River) and expansion to the current capacity of the Skyline WWTP

# EVALUATION OF ALTERNATIVES

## WASTEWATER



Wastewater Servicing Alternative/ Evaluation Criteria	Natural Environment	Social/ Cultural Environment	Technical Considerations	Economic Considerations
<b>Alternative WW2A</b>	New forcemain from Craighurst to Horseshoe Valley to be constructed along County Road 22 will pass through two unevaluated wetland areas, four small woodlots and Oro Moraine core area. Wetlands and woodlots are located on the south side of road.	New forcemain from Craighurst to Horseshoe Valley to be sited to minimize potential impacts to cultural heritage resources. Alternative will require multiple pumping stations and new Horseshoe Valley WWTP. Land will be needed for new treatment facility.	Siting of new Horseshoe Valley WWTP to avoid groundwater recharge areas to facilitate ease of construction.	High capital cost and lower annual and operating and maintenance costs.
<b>Alternative WW2B</b>	New forcemain from Craighurst to Horseshoe Valley to be constructed along County Road 22 will pass through two unevaluated wetland areas, four small woodlots, Oro Moraine core area. Wetlands and woodlots are located on the south side of the road. New Horseshoe Valley WWTP would be sited to avoid impacts on Copeland Craighurst Guthrie Wetland Complex.	New forcemain from Craighurst to Horseshoe Valley to be sited to minimize potential impacts to cultural heritage resources. Alternative will require multiple new pumping stations and new Horseshoe Valley WWTP. Land will be needed for new treatment facility.	Siting of new Horseshoe Valley WWTP to avoid groundwater recharge areas to facilitate ease of construction.	Highest capital cost and lower annual operating and maintenance costs.
<b>Alternative WW6A</b>	New Horseshoe Valley WWTP would be sited to avoid impacts on Copeland Craighurst Guthrie Wetland Complex. New pumping stations, forcemain and gravity sewer needed for surface outfall to Coldwater Creek. All new infrastructure will be located within road allowance.	Alternative will require fewer new pumping stations and new Craighurst and Horseshoe Valley WWTPs. Land will be required for these facilities	New Craighurst WWTP sub-surface discharge effluent attenuation zone will need to consider wellhead protection for Craighurst water supply wells and location of any cultural heritage resources. Siting of new Horseshoe Valley WWTP to avoid groundwater recharge areas to facilitate ease of construction.	Lowest capital cost and higher annual operating and maintenance cost
<b>Alternative WW6B</b>	New Horseshoe Valley WWTP would be sited to avoid impacts on Copeland Craighurst Guthrie Wetland Complex. New pumping stations, forcemain and gravity needed for surface outfall to Coldwater Creek. All new infrastructure will be located within road allowance. Expanded Skyline WWTP is located near Copeland Forest and siting of expansion requirements will need to consider potential impacts on natural areas.	Alternative will require three new pumping stations and new Craighurst and Horseshoe Valley WWTPs. Land will be require for these facilities.	New Craighurst WWTP sub-surface discharge effluent attenuation zone will need to consider wellhead protection for Craighurst water supply wells and location of any cultural heritage resources. Siting of new Horseshoe Valley WWTP to avoid groundwater recharge areas to facilitate ease of construction. Expanded Skyline WWTP will provide additional flexibility for phasing of new Horseshoe Valley WWTP.	Lower capital cost and higher annual operating and maintenance cost

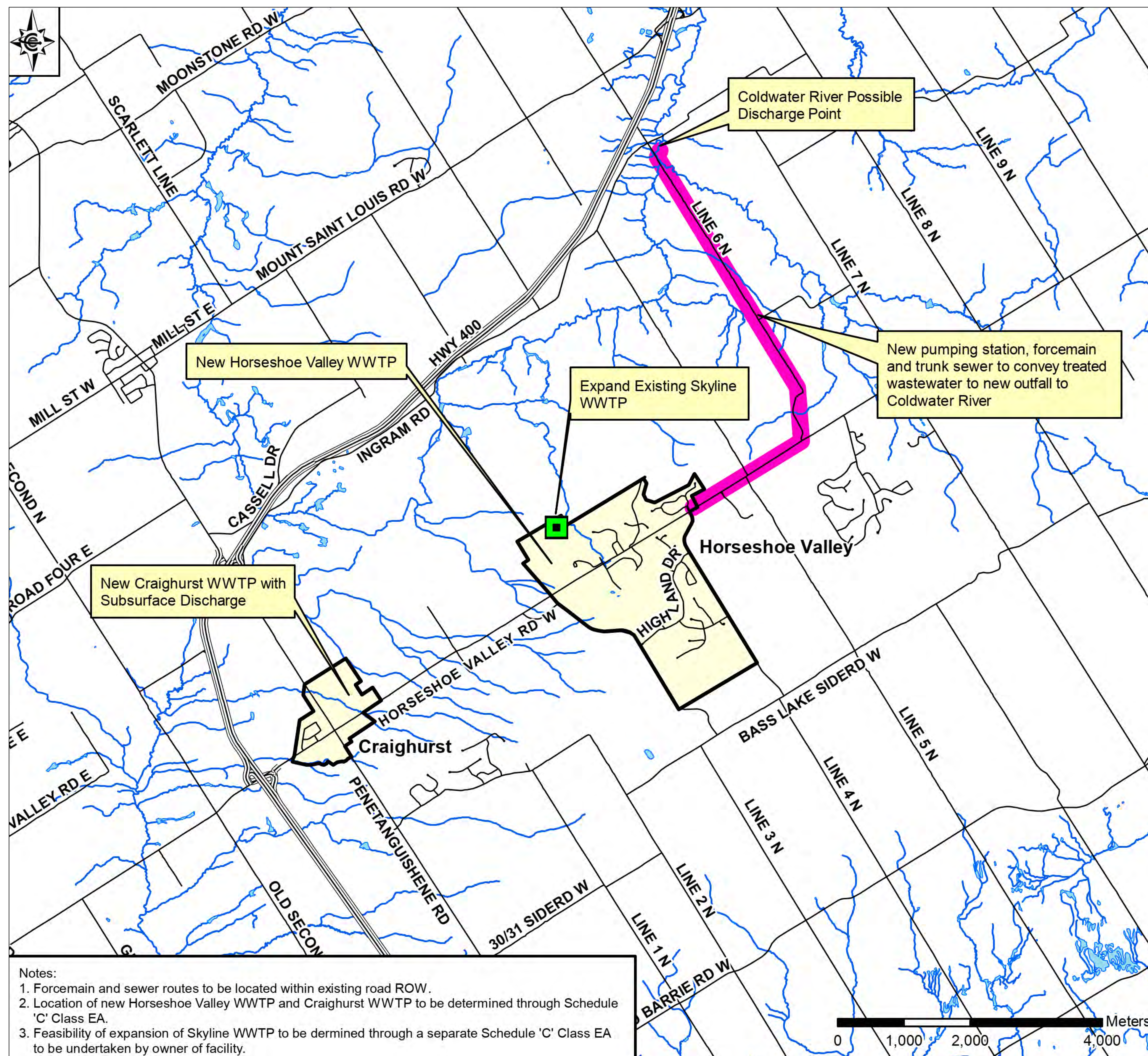
\*the colour assigned to each alternative/criteria indicates a ranking

Legend		
Low Impact	Moderate Impact	High Impact

# PREFERRED WASTEWATER SERVICING ALTERNATIVE (ALTERNATIVE WW6B)



COLE



## Craighurst

- New Craighurst WWTP with subsurface discharge

## Horseshoe Valley

- Expansion of the Skyline WWTP
- New Horseshoe Valley WWTP (site to be determined) to service Horseshoe Valley.
- Schedule C Class Environmental Studies will be required to selected preferred design concepts for expansion of the Skyline WWTP and new Horseshoe Valley WWTP.
- New pumping stations, forcemain and gravity sewer to convey treated wastewater to new surface discharge into Coldwater River.

# PREFERRED ALTERNATIVES



WATER		
PROJECT	TIMING	FUTURE ACTIONS
New Craighurst well	Implementation can be timed to coincide with development	Design
New Craighurst in-ground storage	Implementation can be timed to coincide with development	Design
Interconnection of Zones 1 and 2 in Horseshoe Valley	Implementation can proceed at any time	Design
Expansion of new Horseshoe Highlands Water Storage Facility on Line	Future expansion can be timed to match future needs	Design

WASTEWATER		
PROJECT	TIMING	FUTURE ACTIONS
New Craighurst WWTP with subsurface discharge	Implementation can be timed to coincide with development	Schedule C Class EA will be required to select a preferred design concept
Skyline WWTP Expansion	Schedule C Class EA will be required prior to implementation	Schedule C Class EA will be required to select a preferred design concept for expansion
New Horseshoe Valley WWTP	Schedule C Class EA will be required prior to implementation	Schedule C Class EA required to select a preferred design concept and site for new facility
New pumping station, forcemain, and outfall sewer to Coldwater River	Implementation to coincide with construction of new Horseshoe Valley WWTP	Further study to be completed as part of the New Horseshoe Valley WWTP Schedule C EA

TRANSPORTATION		
PROJECT	TIMING	FUTURE ACTIONS
County Road 22 Roadway Mainline Phases 1 and 2 (Simcoe County Project)	Implementation can be timed to coincide with development	Design
County Road 22 Intersection Improvements (Line 3, Horseshoe Boulevard and Line 4) (Simcoe County Project)	Implementation can be timed to coincide with development	Design

# NEXT STEPS



## CONCLUSIONS

- The Master Plan identifies a preferred servicing strategy for providing water, wastewater and transportation services to support growth in the Craighurst and Horseshoe Valley Settlement Areas.
- This study has used a long-term vision to understand the future conditions and requirements.

## Next Steps

### Winter 2019 – Master Plan Report

- These documents will summarize the overall EA process and will be available for public review and comment. People who have expressed an interest to be kept informed of the project will be notified directly.

### Winter 2019 – Master Plan Approval

- A Notice of Completion will be advertised and copies of the Master Plan will be made available at two public locations for review by members of the public. The public will have a minimum of 30 days to file a Part 2 order with the Ministry of the Environment, Conservation and Parks.

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