



AQUAWORLD RESORT
AND CONVENTION CENTRE

Augusta Township - September 21, 2019



Appeal Rights

- Planning Act Requirements
- Oral Presentation at Public Meeting
- Written submission prior to Council's decision
- Appeal period following Council's decision: 20 Days



Zoning By-law Amendment Process



- Receipt of complete Zoning By-law Amendment Application
- Initial review by the Township, peer review consultants and commenting agencies
- Proponent addresses initial comments
- Public Meeting –***No decisions are made at the public meeting***
- Review public, peer review and agency comments
- Planning Advisory Meeting
- Council Meeting
- 20 day appeal period following Council’s decision



ZANDErPLAN








Your rural land planning experts

Aquaworld Concept Plan - Entire Parcel
 1898 Merwin Lane
 Part Lots 6 - 8, Concession 1
 Township of Augusta



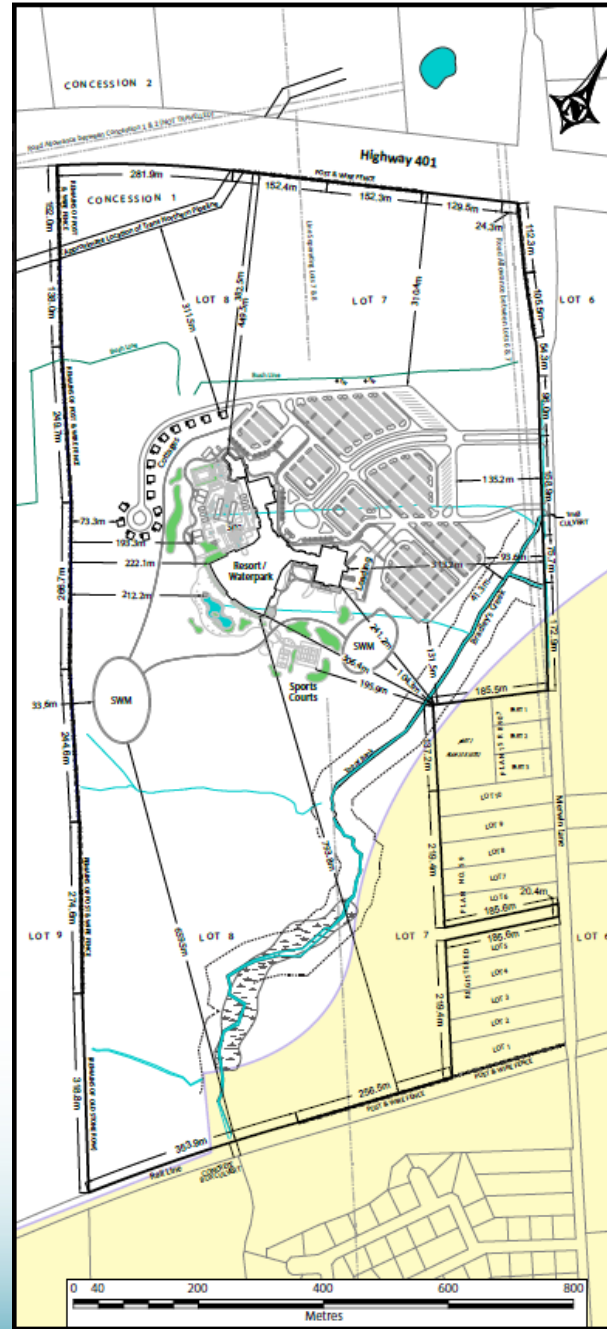
ZANDERPLAN
 Your rural land planning experts
 Version Date: October 5, 2018

Legend

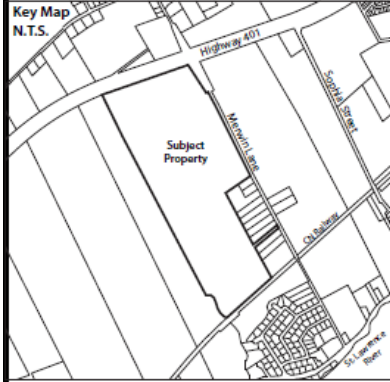
-  Boundary
-  Provincially Significant Wetlands
-  Settlement Area
-  Pool
-  Planting Areas
-  Watercourse
-  30m Watercourse Setback

Notes:

1. Locations of the Settlement Area and the PSW on-site derived from available Township Official Plan and Zoning By-Law schedules and are shown approximately.
2. Design and layout of the resort and indoor water park provided by A21 Architecture.
3. Design and layout of the outdoor spa, pool areas and landscaping features provided by SKS Studio.
4. Design and layout of the proposed parking areas provided by SKS Studio with final layout changes provided by Kollaard Associates.
5. Design and layout of the Stormwater Management (SWM) features on-site provided by Kollaard Associates.
6. Location of Bradley's Creek, the existing bush line on the north side of the property, tributaries, fencelines and abutting lot information derived from a Survey Plan of the property completed by Collett Surveying.
7. Boundary and dimensions of the subject property derived from a survey plan of the property completed by Collett Surveying.



Aquaworld Concept Plan
1898 Merwin Lane
Part Lots 6 - 8, Concession 1
Township of Augusta

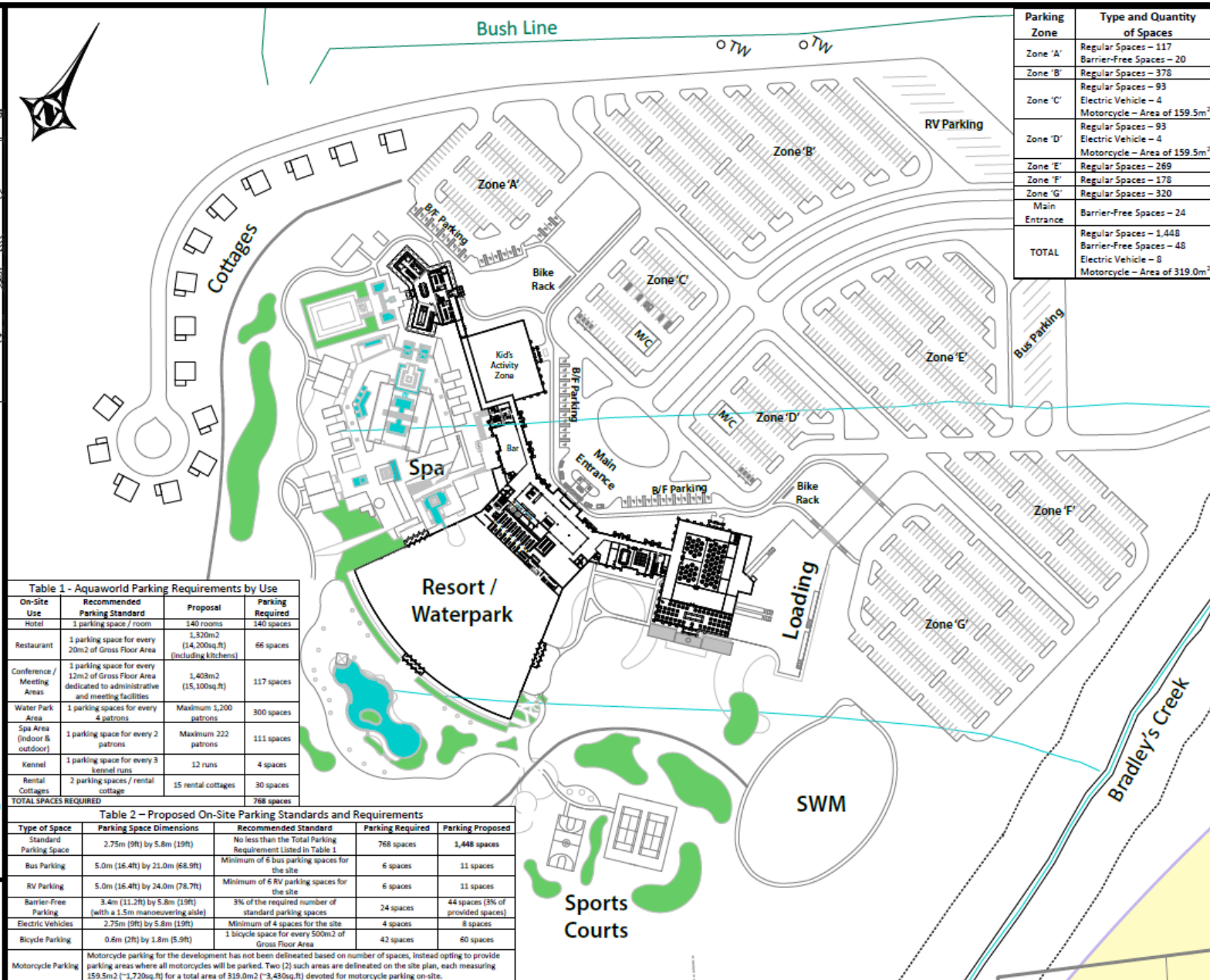


Legend

- Boundary
- Settlement Area
- Pool
- Planting Areas
- Watercourse
- 30m Watercourse Setback

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Parking Zone	Type and Quantity of Spaces
Zone 'A'	Regular Spaces - 117 Barrier-Free Spaces - 20
Zone 'B'	Regular Spaces - 378
Zone 'C'	Regular Spaces - 93 Electric Vehicle - 4 Motorcycle - Area of 159.5m ²
Zone 'D'	Regular Spaces - 93 Electric Vehicle - 4 Motorcycle - Area of 159.5m ²
Zone 'E'	Regular Spaces - 269
Zone 'F'	Regular Spaces - 178
Zone 'G'	Regular Spaces - 320
Main Entrance	Barrier-Free Spaces - 24
TOTAL	Regular Spaces - 1,448 Barrier-Free Spaces - 48 Electric Vehicle - 8 Motorcycle - Area of 319.0m ²

Table 1 - Aquaworld Parking Requirements by Use

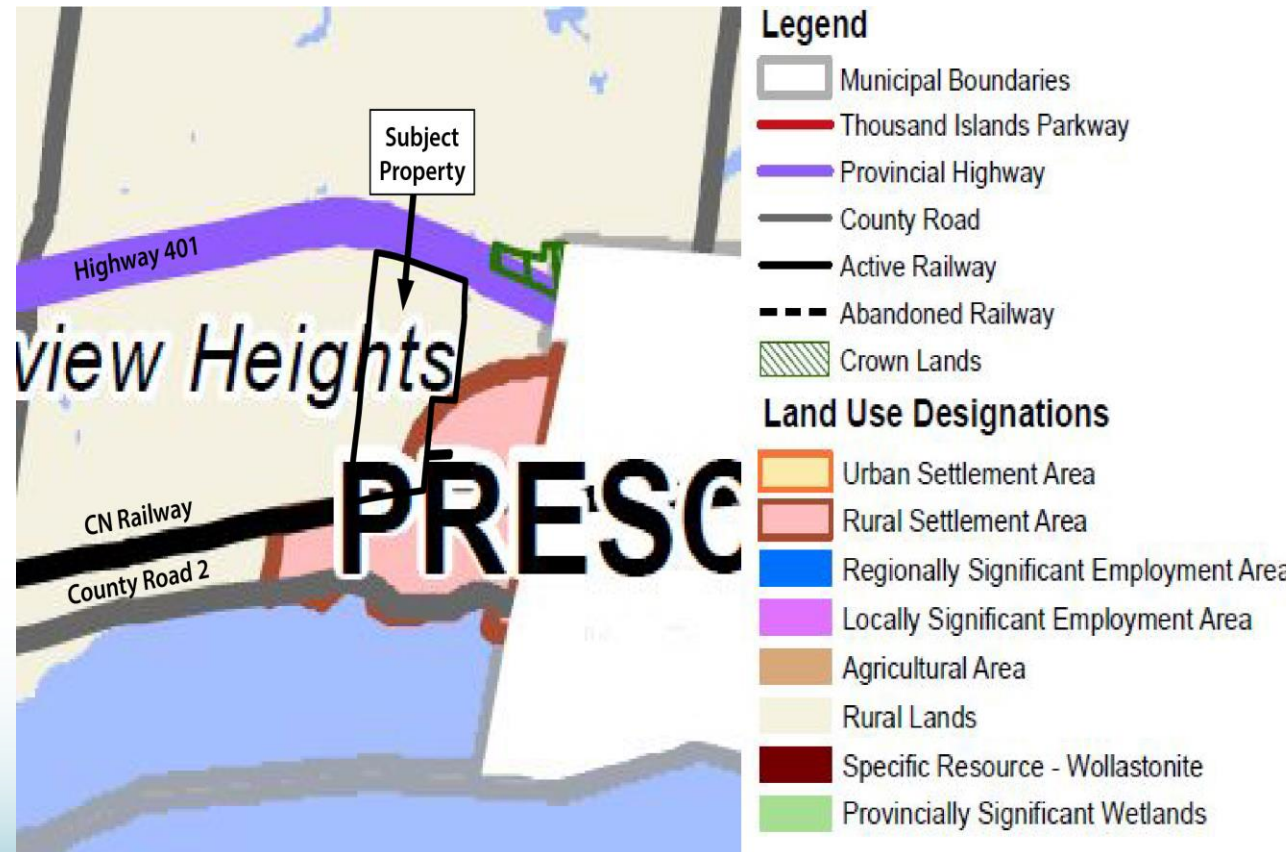
On-Site Use	Recommended Parking Standard	Proposal	Parking Required
Hotel	1 parking space / room	140 rooms	140 spaces
Restaurant	1 parking space for every 20m ² of Gross Floor Area	1,320m ² (14,200sq.ft) (including kitchens)	66 spaces
Conference / Meeting Areas	1 parking space for every 12m ² of Gross Floor Area dedicated to administrative and meeting facilities	1,403m ² (15,100sq.ft)	117 spaces
Water Park Area	1 parking spaces for every 4 patrons	Maximum 1,200 patrons	300 spaces
Spa Area (indoor & outdoor)	1 parking space for every 2 patrons	Maximum 222 patrons	111 spaces
Kennel	1 parking space for every 3 kennel runs	12 runs	4 spaces
Rental Cottages	2 parking spaces / rental cottage	15 rental cottages	30 spaces
TOTAL SPACES REQUIRED			768 spaces

Table 2 - Proposed On-Site Parking Standards and Requirements

Type of Space	Parking Space Dimensions	Recommended Standard	Parking Required	Parking Proposed
Standard Parking Space	2.75m (9ft) by 5.8m (19ft)	No less than the Total Parking Requirement Listed in Table 1	768 spaces	1,448 spaces
Bus Parking	5.0m (16.4ft) by 21.0m (68.9ft)	Minimum of 6 bus parking spaces for the site	6 spaces	11 spaces
RV Parking	5.0m (16.4ft) by 24.0m (78.7ft)	Minimum of 6 RV parking spaces for the site	6 spaces	11 spaces
Barrier-Free Parking	3.4m (11.2ft) by 5.8m (19ft) (with a 1.5m manoeuvring aisle)	3% of the required number of standard parking spaces	24 spaces	44 spaces (3% of provided spaces)
Electric Vehicles	2.75m (9ft) by 5.8m (19ft)	Minimum of 4 spaces for the site	4 spaces	8 spaces
Bicycle Parking	0.6m (2ft) by 1.8m (5.9ft)	1 bicycle space for every 500m ² of Gross Floor Area	42 spaces	60 spaces
Motorcycle Parking		Motorcycle parking for the development has not been delineated based on number of spaces, instead opting to provide parking areas where all motorcycles will be parked. Two (2) such areas are delineated on the site plan, each measuring 159.5m ² (~1,720sq.ft) for a total area of 319.0m ² (~3,430sq.ft) devoted for motorcycle parking on-site.		



United Counties Of Leeds And Grenville Official Plan

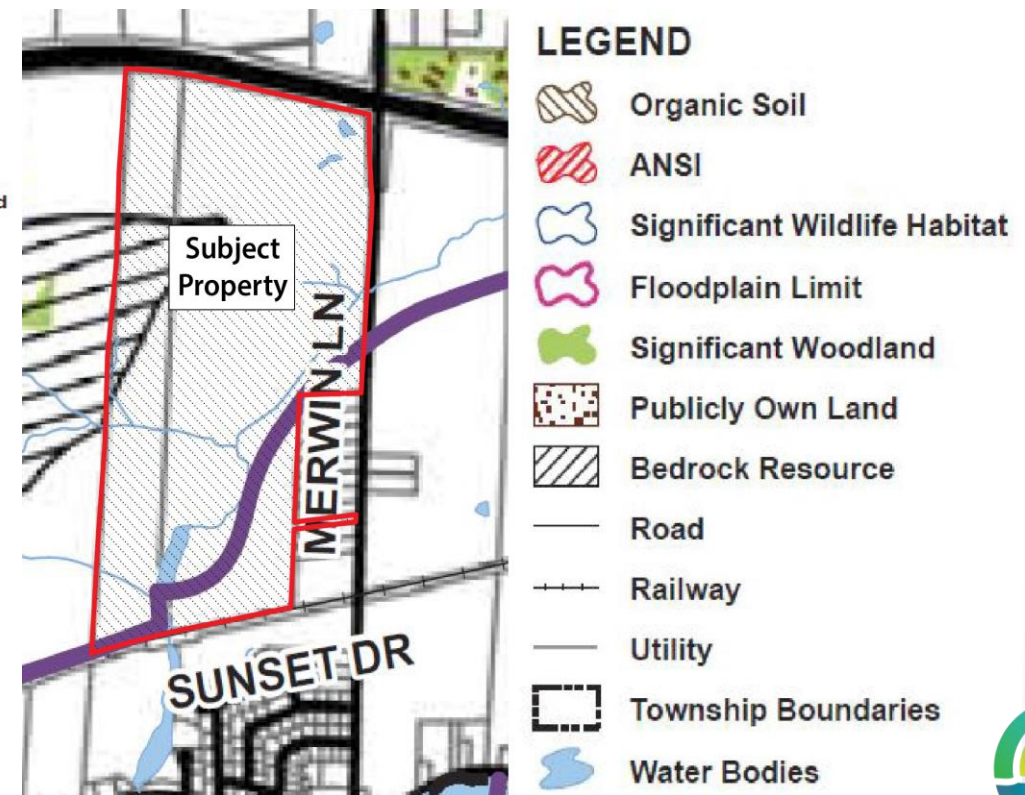
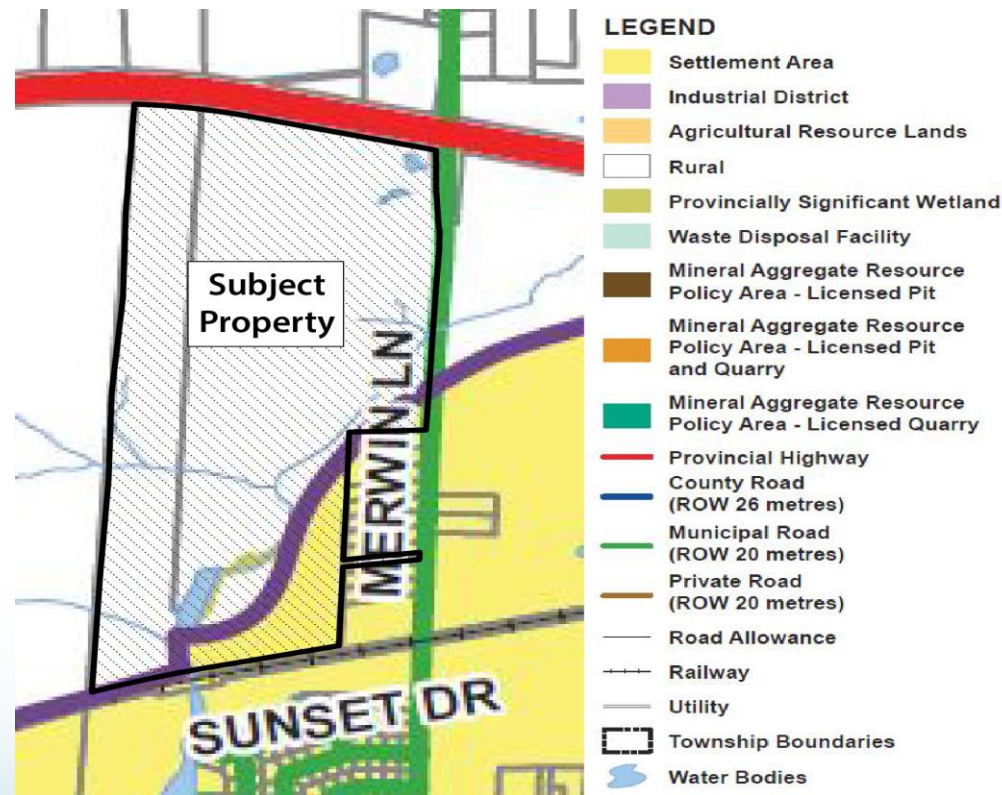


United Counties Of Leeds And Grenville Official Plan

- Designated Rural Settlement Area and Rural Lands
- Tourism and recreation are supported in the OP
- Recreational and tourist commercial uses are permitted in the Rural area
- Natural heritage features have been addressed through the EIS



Augusta Township Official Plan

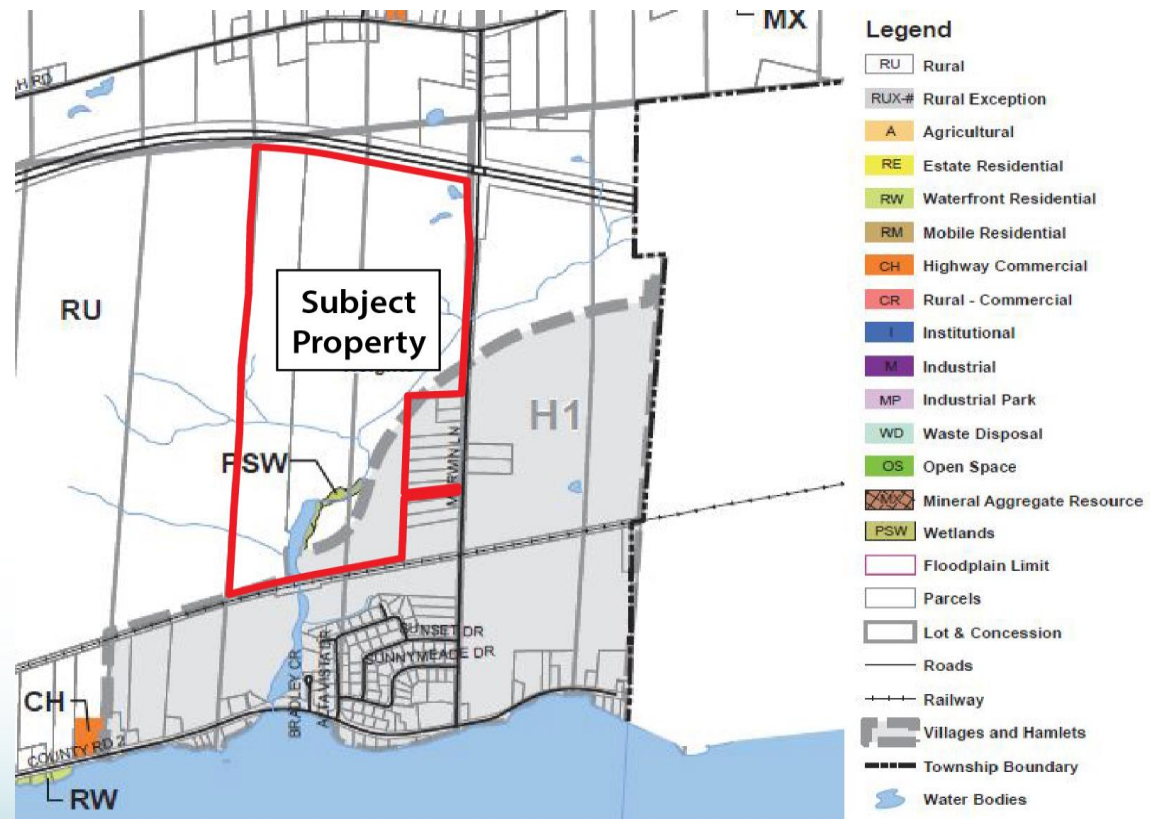


Augusta Township Official Plan

- Designated Rural, Settlement Area and PSW
- Bedrock Constraint on part of the site
- Proposed development falls in the Rural area
- Tourist Commercial uses are permitted in the Rural designation



Augusta Township Zoning By-Law Schedule H



Augusta Township Zoning By-law

- Property zoned Rural (RU) and Wetlands (PSW) with a Villages and Hamlets overlay at the south end
- Zoning Amendment is required to permit the proposed use
- Site-specific zone has been proposed to meet the very specific uses and parking requirements for the site



**Aquaworld - Zoning By-Law
Amendment Sketch**
1898 Merwin Lane
Part Lots 6 - 8, Concession 1
Township of Augusta

Key Map
N.T.S.

Subject Property

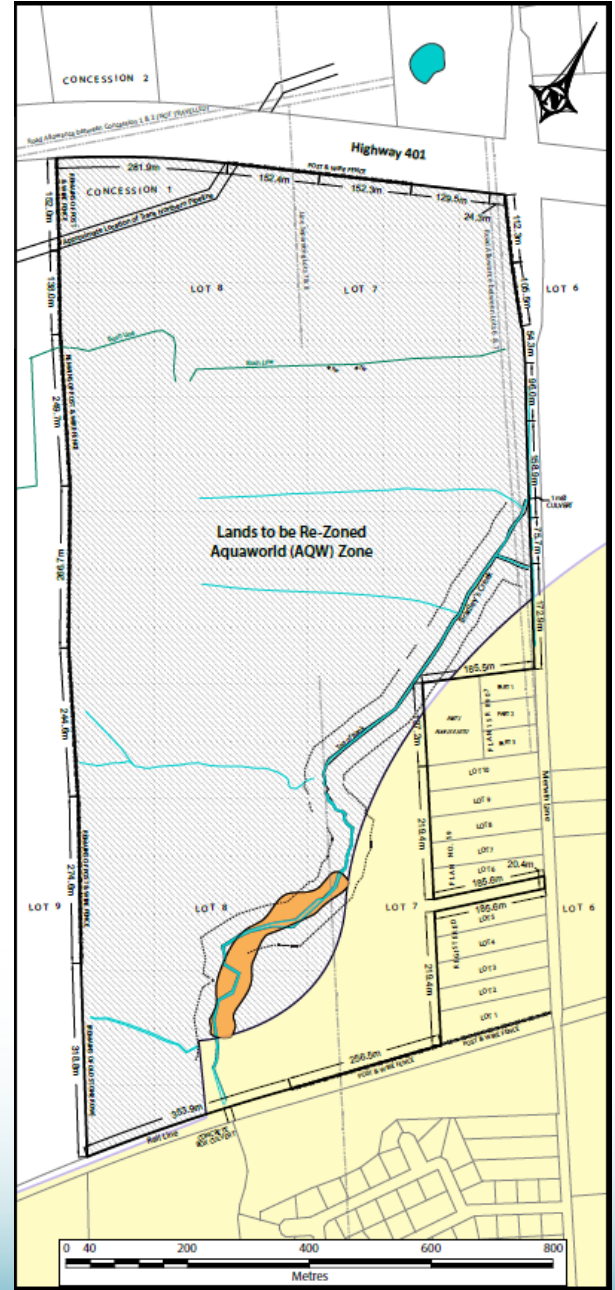
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Legend

- Boundary
- Lands to be Re-Zoned "AQW"
- Lands to Remain in the Settlement Area Zone
- Lands to Remain in the Wetlands (PSW) Zone

Notes:

1. The portions of the subject property falling in the Settlement Area and Wetlands zone are proposed to remain and will not be subject to the proposed re-zoning. The remainder of the lands zoned Rural (RU) are proposed to be re-zoned to Aquaworld (AQW) zone.
2. Boundary and dimensions of the subject property derived from a survey plan of the property completed by Collett Surveying.



Provincial Policy Statement (2014)

- Commercial uses are supported; contribute to the economy
- Natural heritage features have been evaluated and are protected
- Significant setbacks to sensitive land uses
- On site servicing will be provided
- Traffic has been evaluated; major transportation corridor abutting





AQUAWORLD RESORT
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BT ENGINEERING
BTE

Township of Augusta Traffic Statement for Zoning Amendment



Project Site

- Hotel Complex, including:
 - 140 guest suites and 15 four-plex cottages
 - Restaurant
 - Conference Centre
 - Waterpark and Miniature Golf
 - Indoor and outdoor Spa

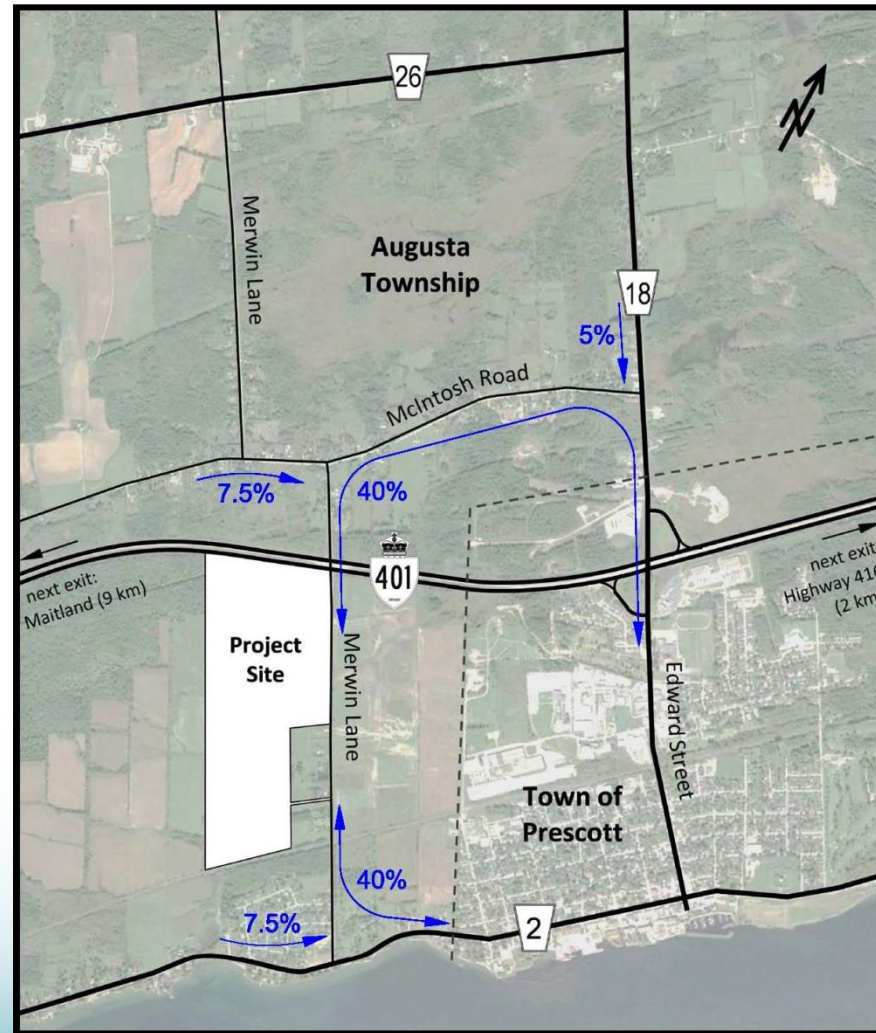


Merwin Lane Existing Conditions

- Narrow 2-lane rural roadway
- Posted speed limit of 60 km/h
- Intersections with County Road 2, McIntosh Road and County Road 26
 - unsignalized with stop signs on Merwin Lane



Site Map



Traffic Generation/Analysis



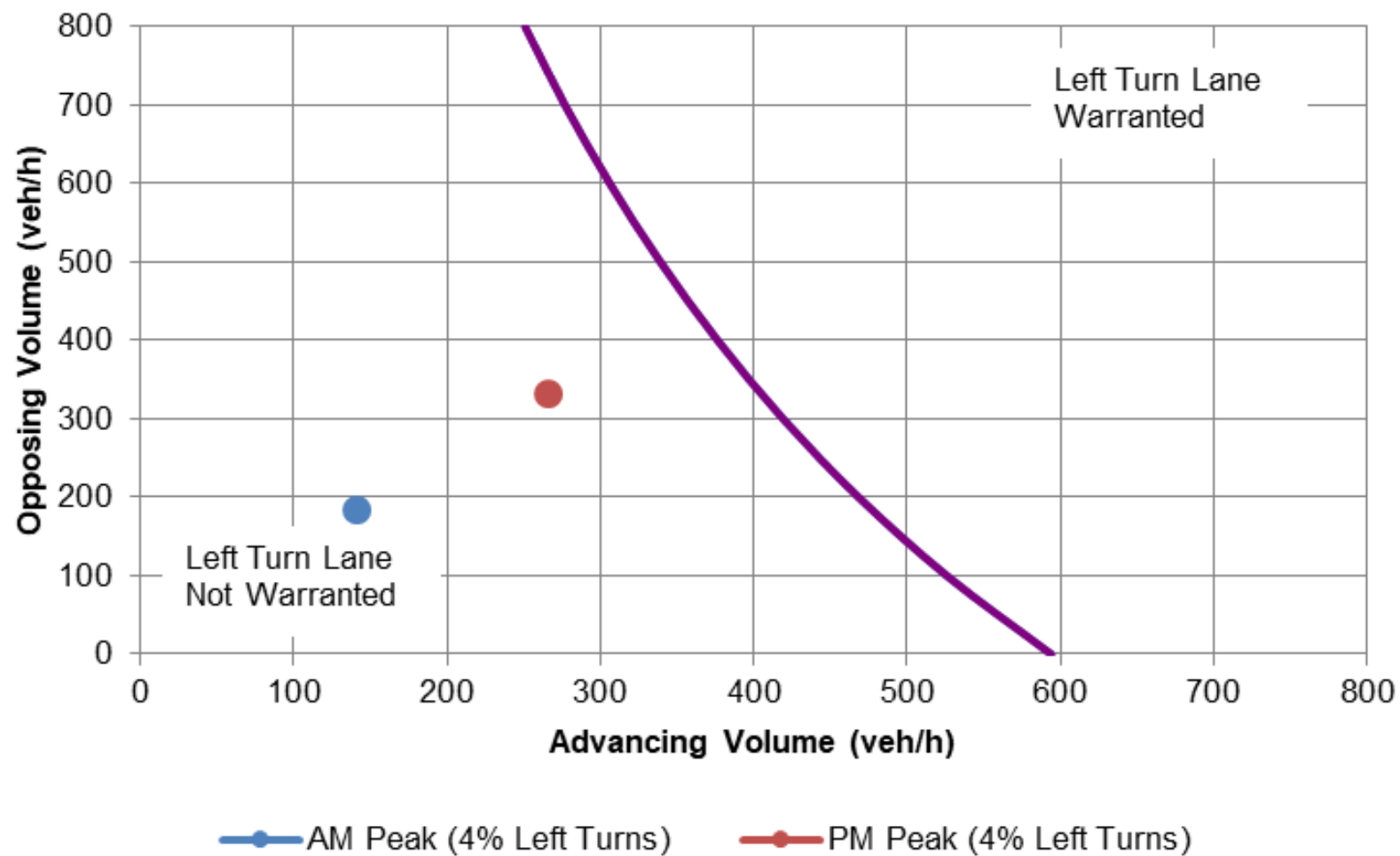
- Basis of forecast traffic considered ITE industry rates and BTE traffic counts at Great Wolf Lodge in Niagara Falls
- Forecast traffic included on area roads
- Operation and safety of future conditions assessed



Summary of Analysis

- No roadway improvements required
- Development would generate limited volume of traffic during peak hours
- Additional traffic would not significantly impact intersections
- Sightlines:
 - Merwin North – 401 exceeds minimum requirement
 - Merwin South not expected to be a issue
- Driveway locations in site layout appropriate
- Left turn lanes not warranted







AQUAWORLD RESORT
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Kollaard Associates
Engineers

Hydrogeology and Terrain Study

Project Outline

- 140 room hotel
- Convention centre with capacity of 700-900
- Restaurants including sports bar and buffet
- Indoor and outdoor water park with capacity of ~2680 people per day

Scope of Work

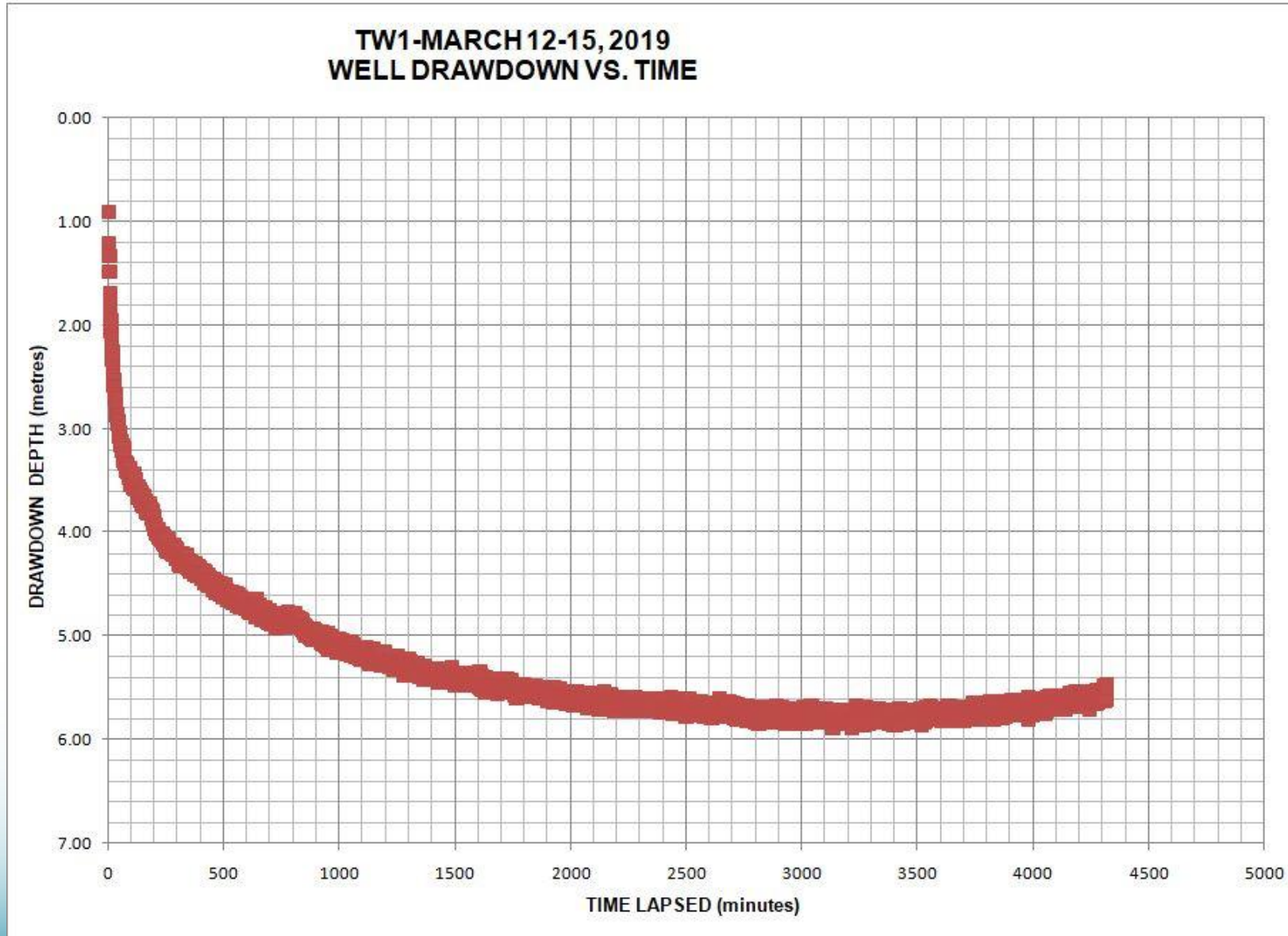
- Preliminary pumping tests at two drilled wells on subject site in 2017
- Subsequent 72 hour test at a drilled well from March 12 to 15, 2019
- Monitoring of water levels in 6 offsite water supply wells and 1 shallow monitoring well beside Bradley's Creek



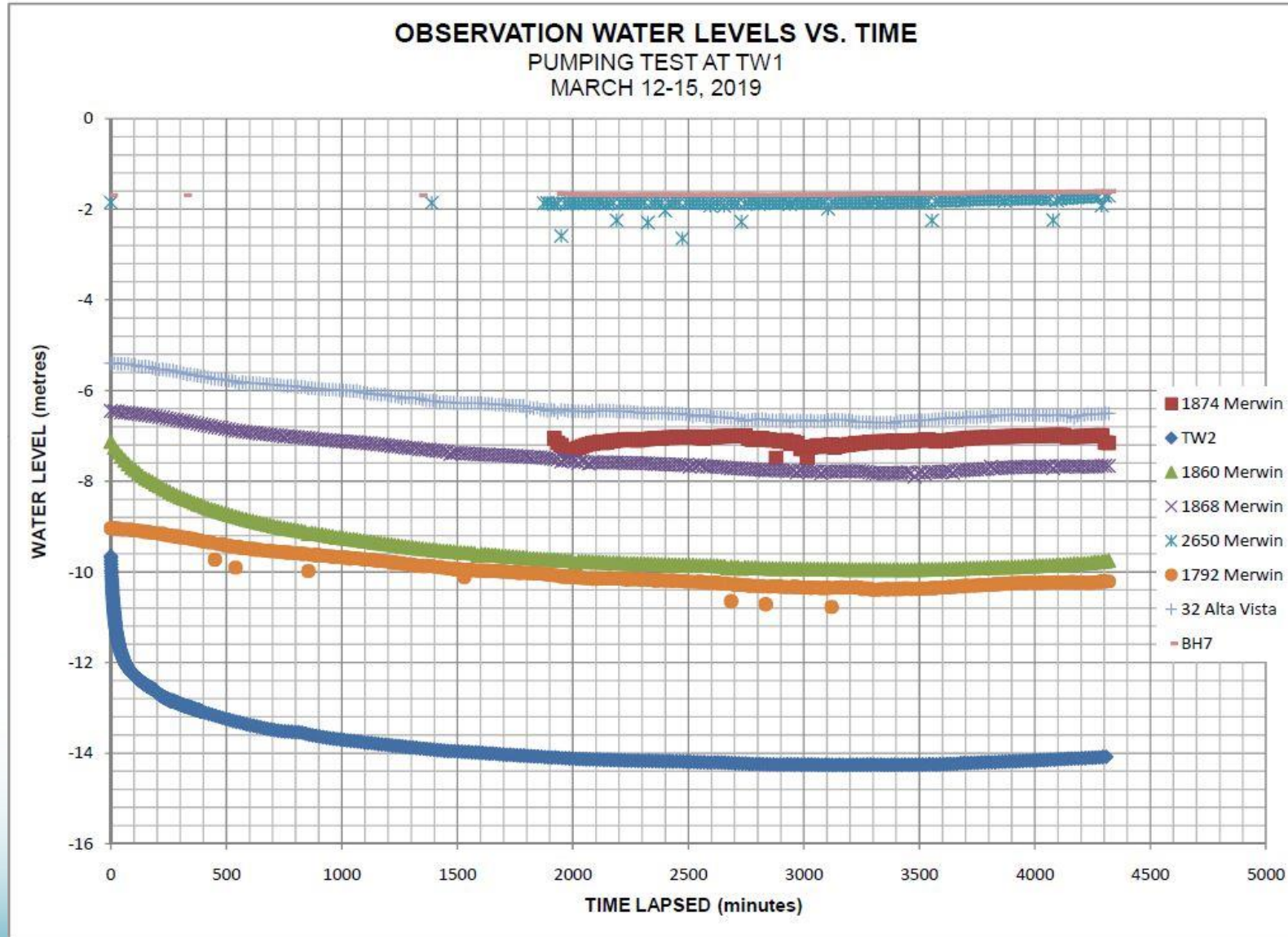
Water Demand and Pumping Test Rate

- Average Daily Demand (ADD): annual average water use expressed on daily basis
- Maximum Daily Demand (MDD): peak daily demand based on full usage of all facilities
- ADD = 320 m³/day
- MDD = 413 m³/day
- Pumping Test Rate = 504 m³/day for three days (72 hours)

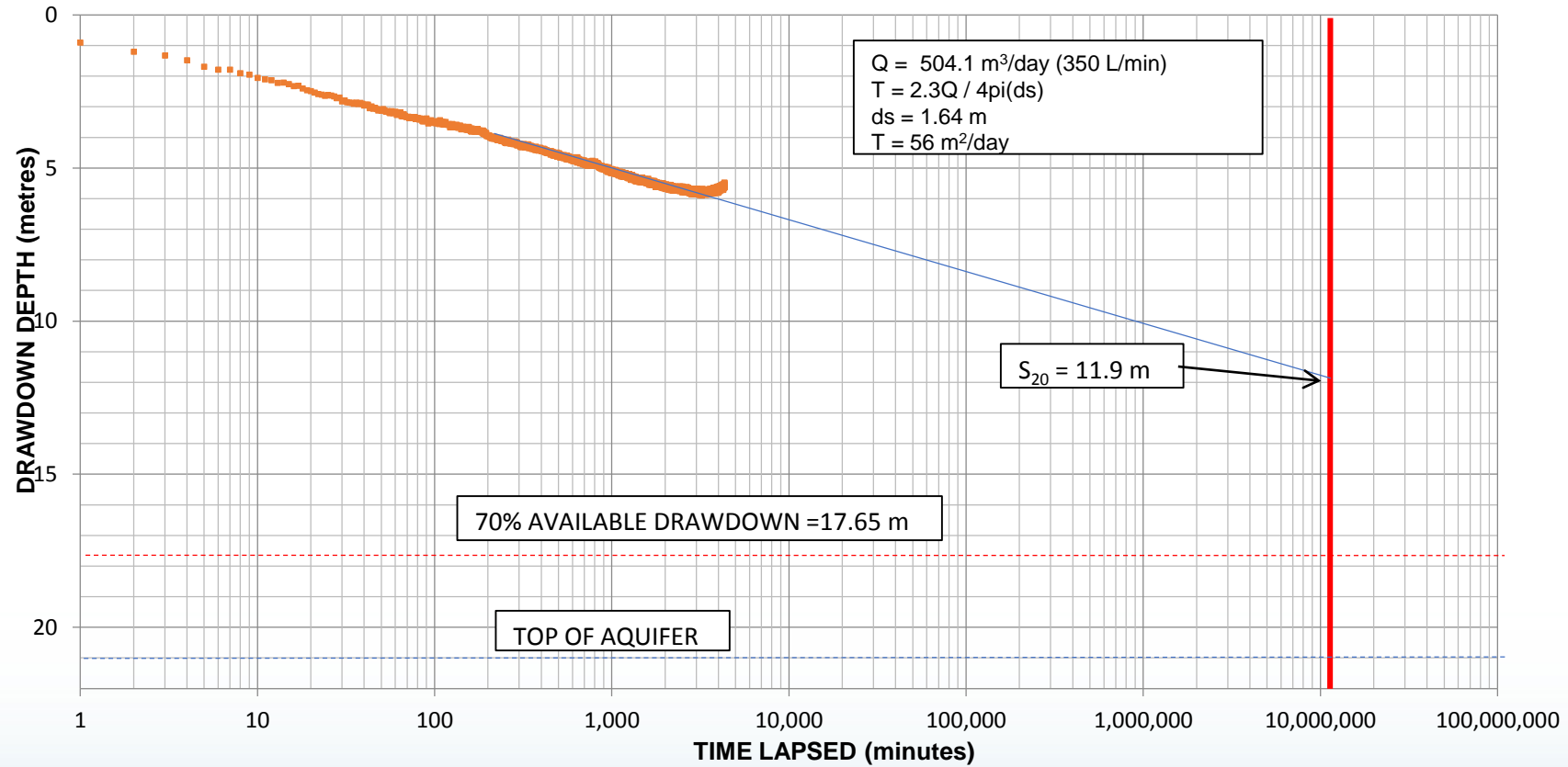
Well Interference



Well Interference



TW1-WELL DRAWDOWN VS. TIME-KOLLAARD FILE 170191



Safe Yield

		Long-Term Safe Yield
depth uppermost fracture		21 metres
static water level		9.8 metres
Available Head = uppermost fracture - static water level		
Ha		11.2 m
Transmissivity		60 m ² /day
Q (test pumping rate)		504.1 m ³ /day
s ₂₀ (derived from graph)		11.9 m
Safe Yield	=Q x AD/S ₂₀	
	474	m ³ /day

Modified Moell Method (Maathius and van der Kamp)

$$Q_{20} = 0.7 * Q * H_a / (s_{100 \text{ min}} + (s_{20 \text{ yrs}} - s_{100 \text{ min}})_{\text{theor}})$$

s_{100 min} using pump test data 3.5 metres

s_{20 yrs} 11.9 metres

s_{100 min theoretical} using interpolated line 3.4 metres

Q₂₀ 329 m³/day

Farvolden Method (confined aquifers)

$$Q_{20} = 0.68 * T * H_a * 0.7$$

321 m³/day



Safe Yield

Long-Term Safe Yield

depth uppermost fracture	21 metres
static water level	9.8 metres
Available Head = uppermost fracture - static water level	
Ha	11.2 m
Transmissivity	60 m ² /day
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Farvolden Method (confined aquifers)

$$Q_{20} = 0.68 * T * H_a * 0.7$$

321 m³/day



Findings

Water Demand	Equivalent Pumping Rate (litres/minute)
<i>Average Daily Demand</i> 320.038 m ³ /day	222 litres/minute
<i>Maximum Daily Demand</i> 413.111 m ³ /day	287 litres/minute
<i>**Maximum Hourly Demand</i> 30.9 m ³ /hour	515 litres/minute
<i>Maximum Instantaneous Pumping Rate</i> 350 litres/minute	350 litres/minute

Findings

- Maximum well interference on adjacent water supply wells was between 1.3 to 2.8 metres of drawdown, while available drawdown in the wells is 8 to 10 metres or more.
- ADD of 320 m³/day is within the safe yields of 321 to 329 m³/day
- Safe Yields do not include the recharge effects which are caused by connection to the St. Lawrence River

Monitoring and Contingency

- Water well will be restricted to 350 litres/minute using a flow restrictor
- Water meter shall be installed to ensure that maximum flow rates of 350 litres/minute and monthly and semi annual water takings do not surpass the allowable limits.
- Monitoring wells will be installed at the site to monitor water levels to measure potential impact to offsite wells.
- During summer drought conditions (levels 2 to 3 in severity), the owner/operator should reduce water use by:
 - trucking in potable water for the water park flows (pools and slides)
 - In more severe circumstances, limit maximum occupancy of hotel and water park to reduce water demands

Monitoring and Contingency

- Future expansion (including campgrounds, additional hotel/cottages, etc.) will require an updated hydrogeology assessment
- If commercial water demand exceeds predictions or has significant impact on water supply in offsite wells, alternate water servicing using surface water supply from the Town of Prescott will be provided as a contingency measure or to service future expansion.



AQUAWORLD RESORT
AND CONVENTION CENTRE

QUEST PROJECT MANAGEMENT

About

- In Business since 2006
- Incorporated in 2008
- Specializes in Hospitality



Experience

- Worked with the hospitality Industry since 1990
- Worked with Delta Hotels 1990 -1998
- Westin Hotels 1990 – 2004
- Starwood Hotels & Resorts 2004 – 2006
- Started Quest Project Management in 2006
- Managed Approximately \$250M of Construction
- Quest Project Management is the preferred Construction
- Managers in the hospitality industry



Work with major hotel companies

- Westin
- Sheraton
- Le Meridien
- Delta
- Marriott
- Independent Hotels (One King West)





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