

**Environmental Impact Statement (EIS_t)
Proposed Cottage Redevelopment
356A Ponacka Road, Baptiste Lake
Part Lot 30, Concession 6 (Herschel)
Municipality of Hastings Highlands,
County of Hastings**

Prepared For:

Lakeside Country Homes
159 Rabbit Trail Lane
Bancroft, Ontario
K0L 1C0

Project #: 24-3457

August 2024



ORE

Oakridge Environmental Ltd.

Environmental and Hydrogeological Services

August 31st, 2024

Lakeside Country Homes
159 Rabbit Trail Lane
Bancroft, Ontario
K0L 1C0

Attention: **Todd Bertram**

Re: Environmental Impact Statement (EIS_t)
Proposed Cottage Redevelopment
356A Ponacka Road, Baptiste Lake
Part Lot 30, Concession 6 (Herschel)
Municipality of Hastings Highlands, County of Hastings
ORE File No. 24-3457

We are pleased to provide this Environmental Impact Statement (EIS_t) for the above referenced property. Our report has been completed in support of your application to redevelop a cottage.

Based on our review of the site conditions, Baptiste Lake appears to be the main environmental receptor. Provided the recommendations outlined in this report are adhered to, any potential adverse impacts to Baptiste Lake should be mitigated.

We trust that this report will be sufficient for any agency reviews. Should you have any questions or require clarification, please do not hesitate to contact our office.

Yours truly,

Oakridge Environmental Ltd.



Rob West, HBS_c.
Senior Ecologist

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1.0 Introduction

Oakridge Environmental Ltd. (ORE) is pleased to present this Environmental Impact Statement (EIS_t) in support of an application to redevelop a cottage. The redevelopment will largely occur within the existing cottage footprint, although the rear portion of the building footprint will be extended to the north.

The property fronts onto Baptiste Lake, therefore, an EIS_t was requested by the Municipality to support the development application. A Terms of Reference (ToR) was not provided for the study. However, it was directed by the Municipality that the EIS_t must demonstrate that the development will not result in any negative impacts to the water quality of nearby Baptiste Lake, nor to sensitive wildlife habitat.

As such, the main focus of this study includes a review of sensitive hydrological features in the vicinity of the development. A high level screening for Species at Risk (SAR)/wildlife has also been included.

The following sections outline our data sources, methodologies, findings and recommendations.

2.0 Site Location and Description

The site is located at 356A Ponacka Road, on the west side of Baptiste Lake, within Part of Lot 30, Concession 6 (former Herschel Township), Municipality of Hastings Highlands, County of Hastings (Figure 1 and 2). The property has an approximate area of 0.15 ha (0.38 acres).

The property is accessed from Loop Road by turning east onto South Baptiste Lake Road, north onto Clarke Road, east on Storey Road, then south and east on Ponacka Road. The property is near the end (just prior to Camp Ponacka), on the south side of Ponacka Road.

The property currently possesses a cottage, septic system and a shed. There are existing cottages/residences on adjacent neighbouring parcels associated with the surrounding shoreline areas.

3.0 Proposed Development / Site Alteration

An application to tear down and reconstruct a new cottage is being considered. The location of the new cottage will remain in approximately the same location, however, the footprint will be expanded to the rear (north).

The reader is referred to the proponent's conceptual sketch (Appendix A).

4.0 Policy

This report has been prepared to meet the requirements of the Municipality.

It is understood that a scoped study with a focus on potential impacts to sensitive hydrologic features will be acceptable.

5.0 Scope of Work

The following tasks were completed for this assessment:

- Relevant background information regarding the site (air photos, mapping, etc.) was compiled and reviewed. A high level screening of Species at Risk (SAR) databases was also completed.
- One (1) site inspection was completed by ORE's Senior Ecologist. The inspection focussed on the proposed development envelope and nearby sensitive features.
- Terrain mapping of the site included an assessment of vegetation communities, habitat, surficial soils, springs, recharge zones, etc., and confirmation of the presence or absence of wetland/drainage features. Any incidental observations of wildlife were recorded. All features were delineated and mapped.
- The proposed development sketch/footprint was superimposed on a geo-referenced air photo. This information was used to determine any areas of potential concern (i.e., constraints) on the subject site.
- Upon completing the preceding tasks, the data were analysed and interpreted and this report was prepared.

6.0 Topography and Drainage

As illustrated by Figure 2, the subject property occurs on the southeast facing slope of a significant topographic ridge that forms a southwest to northeast trending peninsula, extending into Baptiste Lake. Although the ridge has a total relief of about 69 m, relief on the subject property is only on the order of 5 m. The ridge is likely a bedrock-controlled feature, typical of the Canadian Shield terrain.

The published mapping does not indicate the presence of any watercourses on or near the site, other than the lake.

7.0 Geological Setting

As illustrated by Figure 3, the subject property (and the large ridge it occurs within) occurs in an area mapped as being shield derived silty to sand till. This till tends to reflect the local bedrock composition and is believed to be a lodgement type deposit of moderate permeability, adhering to the bedrock surface. Elsewhere in the area, layered ice-contact deposits occur extensively, although none are mapped in the immediate area of the subject site. Small pockets of these highly permeable (sandy) soils could, however, be present locally. In contrast, other bedrock-controlled ridges in the area are mapped as having minimal overburden cover.

Published bedrock geology mapping (not illustrated)¹ indicates that the rock type present within the main ridge feature consists primarily of marble (crystalline limestone), with a small proportion of granitic gneiss. The dominance of the marble and the bedrock-derived till suggests that the soils and substrate are carbonate rich, thereby potentially affecting vegetation community types.

It is not possible to determine the thickness of the soil cover from the mapping. However, by perusing the Ministry of the Environment, Conservation and Parks (MECP) well record database for the site area, we note that nearby well No. 2912101 indicates the presence of 2.1 m of brown sand overlying the bedrock. Another nearby well (No. 7134401) also intersected a thin layer of sand (1.5 m) overlying the bedrock. At that location, although the aquifer was encountered at a depth below 36 m, the driller reported the static water level to be at the surface.

¹ Ontario Department of Mines, Map No. 1957b, Bancroft Area.

8.0 SAR Database Review

The following databases were reviewed as part of a high level screening to determine the potential for SAR to exist on or within the vicinity of the subject property:

- Natural Heritage Information Centre (NHIC);
- Ontario Breeding Bird Atlas (OBBA);
- eBird;
- iNaturalist;
- Ontario Reptile & Amphibian Atlas, and
- Fish ON-Line.

The search radius ranged from 1 km² square (NHIC) to 10 km² square (OBBA), depending on the available database. Excerpts from the database records are found in Appendix B. Based on our review, the following SAR occurrences were noted on or within proximity of the subject property:

NHIC

<u>Common Name</u>	<u>Scientific Name</u>	<u>SARO Status</u>
Eastern Wood-Pewee	<i>Contopus virens</i>	Special Concern
Ogden's Pondweed	<i>Potamogeton x ogdenii</i>	Endangered
Snapping Turtle	<i>Chelydra serpentina</i>	Special Concern
Wood Thrush	<i>Hylocichla mustelina</i>	Special Concern

No natural or wildlife concentration areas were noted in the records.

OBBA

<u>Common Name</u>	<u>Scientific Name</u>	<u>SARO Status</u>
Barn Swallow	<i>Hirundo rustica</i>	Special Concern
Bobolink	<i>Dolichonyx oryzivorus</i>	Threatened
Canada Warbler	<i>Cardellina canadensis</i>	Special Concern
Common Nighthawk	<i>Chordeiles minor</i>	Special Concern
Eastern Meadowlark	<i>Sturnella magna</i>	Threatened
Eastern Whip-poor-will	<i>Antrostomus vociferus</i>	Threatened
Eastern Wood-Pewee	<i>Contopus virens</i>	Special Concern
Olive-sided Flycatcher	<i>Contopus cooperi</i>	Special Concern
Peregrine Falcon	<i>Falco peregrinus</i>	Special Concern

Wood Thrush *Hylocichla mustelina* Special Concern

eBird

The nearest hotspot is located over 5 km away (east of the subject property). The records for that location indicated no SAR.

iNaturalist

<u>Common Name</u>	<u>Scientific Name</u>	<u>SARO Status</u>
Snapping Turtle	<i>Chelydra serpentina</i>	Special Concern

Rare species were reported as follows:

<u>Common Name</u>	<u>Scientific Name</u>	<u>S-Rank</u>
Canadian Owlet	<i>Calyptra canadensis</i>	Status N/A
Black-and-Yellow Lichen Moth	<i>Lycomorpha pholus</i>	Status N/A
Orange-dotted Dichomeris	<i>Dichomeris juncidella</i>	Status N/A

Ontario Reptile & Amphibian Atlas

<u>Common Name</u>	<u>Scientific Names</u>	<u>SAR Status</u>
Blanding's Turtle	<i>Emydoidea blandingii</i>	Threatened
Common Five-lined Skink ¹	<i>Plestiodon fasciatus pop. 2</i>	Special Concern
Snapping Turtle	<i>Chelydra serpentina</i>	Special Concern

¹ Great Lakes/St. Lawrence/Southern Shield population

Fish On-Line

Database reviewed and no SAR were observed.

9.0 Inspection Methodologies

The site has been characterized by its various vegetation communities using the methodologies included in the *Ecological Land Classification (ELC) - First*

Approximation and Its Applications (1998). The 1998 Ecological Land Classification - First Approximation is a guide used by Ecologists to standardize the classification of different vegetation community types across Ontario. The classification system enables an ecologist to identify vegetation communities based on the species present, soil materials and moisture regimes.

There have been a number of updates to the ELC scheme to further refine the classification of Ecosites throughout Ontario. As a result, the 2008 *Draft* ELC Guide provides a further breakdown of the 1998 ELC Guide - First Approximation communities and includes many new communities to index from. The 2008 ELC scheme also provides a cross-reference to the 1998 guide communities. This report uses a combination of the 1998 ELC communities (which are considered the primary vegetation communities) and the 2008 Draft ELC to supplement the wetland vegetation community lists.

The Field Guide to Forest Ecosystems of Central Ontario (FG-01) 1997, was utilized to classify any woodland communities. This field guide does not contain wetland or other cultural vegetation types, therefore, the ELC is the best available classification guide and relied upon in this regard. This guide is used to classify vegetation types in Ecoregion 5E, which is the Ecoregion the subject property occurs within.

Prior to conducting the site inspection, aerial photography of the subject site was analysed to roughly delineate communities based on recognizable vegetation differences. Each identified community was subsequently inspected. Dominant vegetation types were recorded and boundaries of the various communities mapped on an air photo. In some instances a dGPS maybe used to record/delineate the boundary of the community if it is considered sensitive and not easily observed on the air photo base.

In addition to identifying and mapping the vegetation communities, ORE staff assessed each vegetation community from the perspective of whether they are hydrologically sensitive or has the potential to be important wildlife habitat. The vegetation survey included examination of the development footprint and immediate surrounding areas.

10.0 Site Inspection Data

10.1 Site Inspection

ORE staff attended the site on the following date:

<u>Date of Inspection</u>	<u>Temp. °C</u>	<u>Beaufort (Wind) Scale</u>	<u>Conditions Reason for Inspections</u>
August 1 st , 2024 9:30 AM to 1:20 PM	26	3 - Gentle Breeze	25% Cloud cover. Hot and humid summer day. Observed vegetation/existing site conditions, vegetation mapping - species list, wildlife detection. Identify hydrological features, etc., focus on area of proposed building site, including the new cottage's expanded footprint of the building envelope and the proposed/existing septic field location.

Appendix C contains the list of species identified on the property during our inspection.

10.2 Ecological Land Classification (ELC)

Based on our site observations, we have determined that there are two (2) upland communities/habitats on-site, and two (2) aquatic communities associated with Baptiste Lake. The vegetation types were assessed by applying the protocols in the Ecological Land Classification for Southern Ontario (FG-02), 1998 (or draft 2008 version) and/or the Field Guide to Forest Ecosystems of Central Ontario (FG-01), 1997, as applicable.

Figure 4 illustrates the distribution of the on-site vegetation communities and the off-site aquatic community. These habitats and their associated vegetation and environmental sensitivities are characterized below.

Representative photos of these communities are provided in Figure 5. Descriptions of the communities are provided below.

Upland Community:

1. Rural Property (CVR_4)

There is no description in the ELC regarding the Residential-type community as there is no corresponding habitat type in FG-01.

This community includes the footprint of the existing cottage, existing outbuilding/shed, and what ORE staff believed was the existing septic area, the driveway/parking, and the maintained disturbed areas surrounding them. The vegetation in this ELC type

contains mainly areas of wooded slope development at the base of the slope. The building envelope area and access corridor are relatively tight/compressed to the existing cottage, suggesting the current owners have retained the property in a relatively natural state, with minimal tree/vegetation removal over the years.

This community encompasses the area where the existing cottage development occurs. ORE staff did not observe any significant flora or fauna in this community, nor were there any hydrological features towards the rear or sides of the existing cottage building. This area is completely an upland vegetation type and there are no hydrological features in this ecosite.

The nearest hydrological feature that would be considered a constraint to the proposed development is the wetland/shoreline of Baptiste Lake which occurs south of the existing cottage and Ponacka Road.

The redevelopment of this site includes demolishing the existing cottage structure and the construction of a new cottage in approximately the same footprint as the existing cottage. ORE staff anticipate the removal of approximately two (2) to three (3) mature trees to allow for the expanded footprint. According to the property owner's contractor, a new septic system is proposed to be constructed in the area of the existing septic field, which is located approximately 24 m (80 ft) from the shoreline. Therefore, measures to prevent unconsolidated materials from the disturbed areas from entering Baptiste Lake (resulting from construction of the new cottage and septic field), should be a priority.

ORE staff also noted that there has been some minor erosion-sedimentation along the east side of the existing cottage. The contractor should determine what steps will be necessary to better contain/prevent any eroded materials from the hillside from entering the lake.

2. Sugar Maple-White Birch-Poplar-White Pine: dry to moderately fresh soils (ES27.1)

The FG-01 characterizes the ES27.1 woodland community as:

Sugar Maple-White Birch-Poplar-White Pine dominated stands on dry to moderately fresh soils. Understorey with high levels of hardwood regeneration and tall shrubs. Moderate number of herbs. Soils typically sandy to coarse loamy.

The understorey is comprised of: Fly Honeysuckle (*Lonicera caerulea*). Beaked Hazel (*Corylus cornuta*), Mountain Maple (*Acer spicatum*), Striped Maple (*Acer pensylvanicum*), Northern Bush Honeysuckle (*Diervilla lonicera*).

The groundcovers consist of: Starflower (*Trientalis borealis*). Wild lily of the Valley (*Maianthemum canadense*), Wild Sarsaparilla (*Aralia nudicaulis*), Blue Bead-Lily (*Clintonia borealis*), Spinulose Wood Fern (*Dryopteris carthusiana*), Large-leaved Aster (*Eurybia macrophylla*), Ground Pine (*Lycopodium ssp.*). Rose Twisted-Stalk (*Streptopus lanceolatus*), (False Solomon's Seal (*Maianthemum racemosum*), Hairy Solomon's Seal (*Polygonatum biflorum*), Mountain Rice Grass (*Oryzopsis asperifolia*), and Indian Pipe (*Monotropa uniflora*).

This community dominates the majority of the upland wooded areas that surround the existing cottage to the west, north and east, containing mature/large diameter Sugar Maple-Paper Birch-Large-toothed Aspen and White Pine.

None of the species identified within this community are Species at Risk. The sloped wooded area may be suitable habitat for Osprey nesting, considering the presence of tall trees overlooking the lakeshore. ORE staff inspected the shoreline areas with binoculars, observing a significant distance down the lakeside, in both directions from the existing dock. Neither Osprey nor its nest were identified/detected on-site during the site inspection.

The majority of the proposed new cottage will overlap the footprint of the existing cottage (with the exception of the deck encroaching within the shoreline allowance), occurring 15 m or more upgradient of the lakeshore, which is the nearest hydrological feature on the subject property. According to the property owner's contractor, the proposed new/existing septic system is to be located ~24 m or greater from the lakeshore. The additional 8 m separation distance, in addition to the Ontario Building Code's 15 m minimum requirement from a watercourse feature as illustrated on Figure 6.

ORE staff are unsure exactly where the existing septic location is on the property as the location provided by the contractor does not appear to occur within any open area on the property. This area is entirely wooded according to the geo-referencing on the subject property.

Wetland/Aquatic Community:

3. Open Aquatic (OAO)

The ELC (2008) describes OAO as:

An aquatic environment containing no macrophyte vegetation. This ecosite tends to be dominated by plankton and has a lake trophic status.

This ecosite represents the open water/offshore habitat of Baptiste Lake, which corresponds to the south edge of the subject property. The lake bottom substrate along the shoreline is comprised of exposed gravel and sand (presumably ice-contact deposits as discussed in Section 7, above) with minor/thin amounts of organic detritus from leaf-litter in the sandy substrates in the nearshore environment. There appears to be a relatively significant organic/detritus matt on the bottom that covers most of the sediments in the deeper offshore areas off the end of the dock where the sunlight penetration is reduced. ORE staff observed an abundance of submerged shallow aquatic vegetation in these deeper sections of the lake. There are some minor patches of Fragrant White Water-lily (*Nymphaea odorata*) further offshore beyond the dock, but not enough to include as a separate ELC type.

There was some evidence of Centrarchid spawning along the shoreline in the form of some redd areas cleared by fish within the sandy bottom sediments. The sporadic redds suggest the area is not used by an abundance of Centrarchid to spawn, and further suggest this is an infrequent spawning area, with relatively poor fisheries habitat for most species. It is possible that the submerged aquatic vegetation in the off-shore environments could be utilized by adult fish for cover to forage on young-of-year in the littoral zone and beneath the dock structure.

4. Submerged Shallow Aquatic (SAS1)

According to the ELC, Submerged Shallow Aquatic communities are dominated by submerged macrophytes (greater than 25%).

The SAS1 community possesses submerged aquatic plant species such as Pondweeds (primarily *Potamogeton spp.*), Common Horn-wort (*Ceratophyllum demersum*), Common Waterweed (*Elodea canadensis*), Muskgrass (*Chara spp.*), Common Water-Milfoil (*Myriophyllum sibiricum*), and Eurasian Milfoil (*Myriophyllum spicatum*).

The submerged aquatic plant species and mucky bottom does not represent suitable spawning habitat for any species, as the lake bottom drops off too quickly for the eggs to be exposed to sunlight. As mentioned above, there are some spawning redds in the shallow sand and gravel materials in the nearshore environment, however, there is little to no submerged aquatic bottom vegetation in this area.

10.3 Fauna

No significant fauna were observed directly on-site. Only tracks of common/secure mammals were observed on the subject parcel.

Due to the shoreline area being predominantly comprised of sandy sediments within 2 m of the existing lake waterline, spawning was limited to the littoral zone/nearshore environment. The off-shore area appears to be dominated by submerged aquatic vegetation and organic/muck deposits which is not suitable spawning for most fish species.

Although ORE staff did not observe any turtles in the area of the subject property, there is a potential for turtles to access the developed areas of the subject property (e.g. the access road) and to use these areas for nesting purposes. As such, the property owner/contractor should install measures to prevent all turtle species from entering the construction area/work zone on the west side of the existing cottage, especially if filling and grading are necessary.

ORE staff observed approximately six (6) Centrarchid spawning redds in the near-shore environment on either side of the dock during the inspection. It was not spawning season for Centrarchid species, however, some adults were observed utilizing the dock as cover.

No SAR fish nor SAR fauna were observed during the inspections. No SAR fish have been identified to occur within Baptiste Lake according to the databases.

The fauna species observed on-site are listed within Appendix C for completeness.

10.4 Flora

ORE staff inspected the subject parcel to detect any SAR plant species or wetland areas that would be sensitive to the proposed development.

Very few SAR plant species occur within the Ecoregion 5E - northerly landscape; they are predominantly in the Ecoregion 6E - southerly landscape, which corresponds to the geological contact that separates the two (2) Ecoregions.

No SAR species nor wetlands were detected on-site during the site surveys.

11.0 Impact Assessment

11.1 General Considerations

Based on our assessment, it is our opinion that potential impacts related to the proposed redevelopment of the site (to include the new cottage, septic field, etc.), could

include the following:

- 1) Potential impacts from the removal of the existing cottage and expanded footprint of the new cottage could impact Baptiste Lake. This hydrological feature occurs directly downgradient of the existing cottage, whereby erosion and/or sedimentation resulting in water quality deterioration could impact this waterway during the construction/disturbance period.

There is already some minor erosion of materials down the slope via the hillside runoff on the east side of the existing building. The slope is relatively steep in this location. As such, the contractors should determine what steps will be necessary to contain/prevent stable materials on the slopes from eroding/entering the lake in the post development era of the redevelopment. Consequently, the new development should not exacerbate the minor erosion-sedimentation already occurring on the east side of the new dwelling, once it is constructed.

- 2) Potential impacts related to non-contained construction activities (e.g., ground vegetation removal, etc.), including destabilisation and denuding of the groundcovers by equipment accessing the construction site on the northerly side of the proposed building footprint.
- 3) Potential impacts related to construction of a new septic system on the subject property, during the construction period and in the post construction period from effluent impacting the lake quality.
- 4) Potential impacts to nesting turtles in the spring season, as turtle species may enter the site via the lakeshore to nest within the disturbed soils of the construction area.

Further discussion of the above is provided in the following sections.

11.2 Development Envelope

Our field investigations have confirmed that the main concern with respect to the proposed redevelopment is the location of the proposed cottage and septic system relative to the lake's shoreline (as illustrated on Figure 6). Construction of the new cottage and septic system could result in two (2) relatively large areas of bare soils being exposed on the subject property adjacent to the lake front, as filling and grading will undoubtedly be necessary in both these areas.

Notwithstanding, it is expected that the construction zone will not expand significantly beyond the footprint of the existing cottage building and utilize existing open/used areas on-site. ORE also expects the majority of the construction can be completed from the existing on-site laneway and openings along the north side of the existing cottage (Figure 6).

The construction of the new cottage should be completed from the waterfront back (north) towards the existing laneway, to prevent machinery from advancing proximal to the shoreline. As such, the construction should be mostly confined to those areas that have been historically altered/disturbed, resulting in approximately two to three (2 to 3) mature trees being removed for the purpose of constructing the proposed new cottage.

As for the new septic system, it will be constructed within an entirely new area of the woodland approximately 24 m/80 ft from the shoreline. Although 3 to 5 trees may need to be removed, there will be an overall benefit to relocating the new septic system further back from the shoreline, compared to the existing septic field's location.

The gradient down to the shoreline from the proposed deck and existing cottage is relatively steep towards the mid to southern edge of the existing cottage. Any sheet flows derived from the construction area will drain towards the steeper slope area where the majority of the existing cottage's footprint (2/3) is located prior to the lakefront. As such, runoff flows will need to be properly managed during the construction and post construction phase, with respect to Baptiste Lake.

It is expected the redevelopment will require the area to be filled/raised and possibly hardened to contain the site alterations. Due to the proposed cottage having a larger impermeable roof surface, the property owner and contractor will have to be sure the runoff drains/down-spouts are situated to reduce gouging and erosion of the steeper embankments along the east and west side of the proposed new seasonal dwelling. The flows off the roof should be dispersed to continue as sheet flows around the building toward the shoreline.

ORE staff noted that the trees in this wooded area are mostly large diameter mature trees, sporadically interspersed on the more gentle slope in the area of the existing laneway. The building site contains two (2) mature trees located proximal to the existing dwelling, in addition to some patchy groundcovers. The mature trees are mainly comprised of deciduous species. It should be possible to remove only what is necessary to establish the footprint of the proposed cottage, while retaining the majority of shrubs and trees that have deep roots and are considered stabilizers in the side-yard areas (i.e., west and east side of the existing cottage).

The new septic system is proposed to occur further up the slope (approximately 24 m, 80 ft from the shoreline), away from the lakeshore as compared to the location of the

existing septic system. It will require the removal of some mature trees to situate the new system further back from the lakeshore.

The property owners have done well to retain and manage the woodland habitat in a natural state on all three (3) sides of the existing cottage. Although six to eight (6 to 8) trees in total will be removed for the purpose of constructing the cottage and septic system (depending on exactly where the septic is to be situated), the areas to the north (up the slope), east and west (between the other cottages) will still have an abundance of natural vegetation in the form of large diameter and small diameter tree/shrub cover.

Based on these findings, the proposed development should have undetectable adverse impacts on the shoreline and overall water quality of Baptiste Lake.

Recommendations are provided in a following section to mitigate general construction type impacts to Baptiste Lake.

11.3 Construction Related Impacts

The main potential impacts associated with construction activities could include the following:

- loss or disruption of vegetation (i.e., primarily in the construction area surrounding the footprint of the proposed cottage and septic system will result in some tree, shrub and groundcover removal) - it is not possible to avoid the mature trees on the property as the subject site is in a relatively natural state, however, it should be possible to limit the vegetation/tree removal to just what the expanded footprint of the new cottage and septic system requires;
- erosion and sediment generated by exposed and/or disturbed soils while operating equipment in the area of the build site;
- presence of construction debris and waste materials as a result of constructing the redevelopment;
- fauna such as turtles potentially entering the work area via the lake, and
- sensitivity of the site with respect to imported fill materials, invasive species, and stockpiling of these materials during construction.

Recommendations are provided below to ensure that the potential for impacts relating to occupation and use of the cottage are minimized.

12.0 Recommendations

12.1 Development Envelopes and Constraints

- The proposed cottage (with expanded footprint) can easily fit within the majority of the disturbed area of the existing cottage while minimizing vegetation loss (i.e., approximately 2 or 3 trees) within this area, as illustrated by Figure 6.

As for the new septic system, it is to be situated approximately 24 m/80 ft up from the shoreline and will require the removal of 3 to 5 mature trees, depending on its exact location.

Figure 6 also indicates the approximate limit of the *disturbance / construction areas* defined by the proponent's sketch.

- Provided the authorities are in agreement with the proposal, construction of the proposed cottage could proceed while resulting in minimal disturbance to vegetated areas. ORE staff anticipate that the construction equipment can access the building site from either the footprint of the existing cottage and/or the existing trail/roadway opening along the northern edge of the existing cottage. Construction would be completed from the southern edge of the proposed new cottage and proceed north/away from the lake so as not to disturb any areas between the proposed cottage and lakeshore.

Similarly, the new septic system's footprint could be accessed from either Ponacka Road or from the existing crescent-shaped laneway, thereby minimizing the disturbance area.

- It should be possible to construct the cottage and associated sewage disposal system while minimizing impacts to the mature trees in the area and having no impact on Baptiste Lake. Considering the proponent has just a conceptual sketch at this point, the septic system could be situated within an area that would maintain the distance yet further reduce tree loss on-site. That being said, as a means of compensating for the tree loss, ORE staff recommend planting one (1) new native tree and/or shrub for each tree removed (i.e., a 1:1 ratio) for losses within the new septic field location.

Considering the site is mostly treed, the compensatory trees/shrubs can be planted anywhere on-site within any existing openings to prevent

interference/competition with other trees/shrubs. This may include areas along the periphery of the shoreline or the lawn space where the existing septic system is located. Certain shrub species that do not grow to tree heights, can be planted without obscuring vistas of the lake. The shrubs can also be the type that can be trimmed on a seasonal basis to maintain a shorter height/stature. The shrubs will enhance the shoreline with respect to erosion-stabilization while improving the buffering capacity for runoff generated from the cottage area.

- ORE staff did not observe any other watercourses or wetlands in the area of the subject property, other than Baptiste Lake. Therefore, this Key Hydrologic Feature appears to be the only sensitive receptor downgradient of the construction area. Recommendations to retain the form and function of Baptiste Lake are provided below.
- To ensure the disturbed area does not advance any closer to the lake than necessary, a heavy-duty silt fence shall be installed along the southern edge of the proposed/existing limit of the buildings which minimally encroaches into the 15 setback to contain construction activities along the southern edge/perimeter of the work area, as illustrated by Figure 6. The two (3) to three (3) deck footings within the 15 m setback will not require a significant disturbance and therefore shall be allowed to occur within the 15 m setback. No significant grading shall be allowed within the 15 m area that the deck is proposed. It should be possible to either utilize a posthole digger/poured concrete type footing or manufactured deck block, whichever is necessary and has the least amount of disturbance upgradient of the shoreline.

The silt fence will prevent the construction crew and equipment from unnecessarily increasing the disturbance footprint in the area towards the lake, especially when the use of heavy equipment is necessary. The heavy-duty silt fence should be extended around the entire building envelope perimeter (with the exception of the north access trail). When the contractor is not working within the construction zone, a length of heavy duty silt fence should be installed along the north edge access swath to ensure turtles cannot migrate from the lake and nest within any exposed soils or sandy fill material areas placed in the building envelope (Appendix D).

The contractor can open the silt fence along the north corridor to allow access to the building site and continue with the day-to-day construction activities. The heavy-duty silt fencing will ensure that any loose/unconsolidated materials do not migrate beyond the cordoned construction area, thereby protecting Baptiste Lake.

- As there is a potential for SAR turtles to occur within Baptiste Lake waterway (e.g., Snapping Turtle, Blanding's Turtle, etc.), the heavy-duty silt fence will also serve as a turtle exclusion fence, as recommended by the Ministry of Natural Resources and Forestry (MNR). Light-duty silt fence is not considered an acceptable exclusion fence material, as large turtles such as Snapping Turtle, can dig beneath the fence or potentially push the fence over and enter the construction zone. Nesting turtles and/or their eggs can be damaged by construction equipment. The fence is there to prevent this from happening.
- Invasive/exotic species can also be an issue with respect to recently disturbed sites as they can out-compete other native species. As such, the contractor's machinery should be cleaned according to the provincial protocols to prevent transportation of invasive/exotic species to and from the subject site². If the equipment leaves the site, it should be cleaned prior to reentering the property.
- Considering construction of the cottage and existing/proposed septic system will disrupt some of the natural groundcover vegetation within lands directly upgradient of Baptiste Lake, the property owner shall plant either bare-root stock or small plugs in the areas specified above. Once the property owner plants the appropriate number of compensatory trees/shrubs on-site (according to the 1:1 ratio) and can confirm the location of the plantings, a qualified person could sign-off on the plantings, following a brief inspection. The planted vegetation's root balls/zones would become stabilizers preventing surficial sediments from eroding towards the lake.
- The property owner can plant smaller native seedling sized stock as mentioned above. These should be obtained from a reputable nursery as opposed to transplanting from the nearby woodland habitats. There are a variety of colourful native trees or shrubs that can be planted. ORE staff can provide recommendations in this regard.

The landscape type plantings are not meant to obscure the vistas of the lake, but rather improve, protect and beautify the property and the shoreline area. Shorelines that are predominantly devoid of vegetation (i.e., only groundcovers

² Clean Equipment Protocol for Industry - Inspecting and cleaning equipment for the purposes of invasive species prevention

such as grass) tend to contribute more nutrient laden runoff to the watercourse, resulting in a deterioration of water quality. Considering the lake is used for recreational purposes, any minor improvements would be beneficial.

- Grass seed and/or sod should also be applied to any exposed/bare soils resulting from site preparation and construction activities, in addition to the recommended shrub/tree planting.

12.2 General Design Considerations

- The proposed plan for the new cottage will not require any substantial site alterations and the footprints of these will be similar to what is existing. It is ORE's recommendation that the building envelope/disturbance area occur no closer than the existing/proposed southerly limit of the building (excludes the proposed deck). Although the redevelopment/site alterations under the PPS definition are to occur within 30 m of the lakeshore, there is an existing use in this area and impacts can be mitigated provided the recommendations are adhered to with respect to stabilizing the areas between the lake and proposed cottage, in addition to installing the silt fence perimeter around the disturbed area as illustrated on Figure 6.
- All recommended erosion controls should be installed prior to commencing any work on the property, to ensure the sensitive hydrological feature (lake) is not impacted. The prescribed vegetation to be planted on the property between the septic area and shoreline will help stabilize the soils and improve uptake of nutrients between the development and the shoreline and reduce shoreline erosion effects. Vegetation/seed/sod must be established on any/all bare soil areas at the end of the construction. The works cannot be considered complete until all surfaces are stable. The Site Plan should illustrate how all surfaces/grades will be stabilized/finished. In addition to the above-mentioned mitigation, the exact location of the existing septic system/tile field should be confirmed on-site to be sure it meets the Ontario Building Code setback requirement from the lakeshore. The location was not illustrated/confirmed on the survey.
- Passive stormwater management controls should be incorporated into the development design to extend roof leaders away from the newly constructed cottage. Roof leaders should discharge to an area where the flows will not gouge or destabilize soils over time. The warm flows from the roof leaders should be

infiltrated into the ground, so as to reduce thermal impacts to the lake. ORE expects the soils are relatively well drained sandy materials in the area of the existing cottage, therefore, it may be possible to outlet the roof leaders onto the grass/fill materials surface. Gravel can also be introduced at the end of the leaders (there are also plastic flow dissipaters that can be purchased at most hardware/landscaping retailers) to create an apron that dissipates the concentrated energy of the roof leader flows, distributing them over a larger area to enhance infiltration.

There was evidence of erosion-sedimentation on the east side of the existing cottage. The materials around the proposed cottage should be stable in the post-construction era to ensure eroded/transported soils are not deposited into the lake.

12.3 Construction Mitigation

- Proper erosion/sedimentation controls (ESC) will be required at all times while heavy equipment operates at the site. Heavy-duty silt fence should be installed around the limit of the proposed cottage to contain the construction area, as illustrated by Figure 6 (Appendix D). Construction should not continue during heavy precipitation events. After these events, the fence should be checked to ensure its effectiveness.
- The heavy-duty silt fence provides a solution to mitigate sheet runoff, not concentrated flows. Therefore, if a concentrated flow results during construction (not anticipated), another type of erosion/sedimentation control may be required to prevent sediment laden runoff from entering Baptiste Lake. The contractor or owner should illustrate any such interim or permanent ESC on their Site Plan. If the controls are insufficient, the contractor/owner should immediately install the necessary controls to contain eroded materials. If the ESC is different than what is proposed in the site plan, either the contractor or owner should update the site plan with the new installed ESC and submit it/contact the Municipality's Building official in this regard. If any soil material is transported to the lake, the contractor/owner shall manually remove the materials as no construction equipment is allowed to either occur within the 15 m setback or the lake itself.
- Only clean fill should be imported to the site. The fill should not contain organic materials such as plant debris or topsoil that may contain exotic or invasive species that could out-compete native species along the waterfront. If imported topsoil is required, screened topsoil should be the only material applied to top-

dress the fill. Any imported materials that are stockpiled on-site should also be surrounded by heavy-duty silt fence until the materials are applied. The silt fence will prevent species such as turtles from entering the piles via the lake to nest within.

- To reduce potential post-construction sedimentation, the site should be quickly seeded or sodded to re-establish the root structure where areas have been disturbed and soils are exposed. Planting of native vegetation is encouraged at this stage. Once the seeding or sodding is determined to be a success and the soils are stable, the erosion/sedimentation controls can be removed.
- Absolutely no construction equipment should be operated beyond the 15 m lakefront setback limitation, nor should equipment grade any new swales or other drainage works on-site to direct water toward the lake. All equipment must remain within the area designated for construction (to be outlined by the heavy-duty silt fence).

12.4 Closing Remarks

It is our opinion that the applicant should be granted a Building Permit and Zoning By-law Amendment for the purpose of constructing a new cottage in the approximate area of the existing cottage and proposed/existing septic system, provided the mitigation measures recommended herein are adhered to. The proponent should recognize that this *scoped* Environmental Impact Statement provides recommendations pertaining only to natural environmental issues. Other issues related to Land Use Planning/Zoning, servicing and/or Engineering may also need to be addressed with respect to any future application(s) and/or development plans.

The proponent should obtain all required permits from the agencies prior to commencing any construction on-site. Failure to do so may result in delays and/or other liabilities.

****End of *Scoped* EIS Report****

Yours truly,
Oakridge Environmental Limited

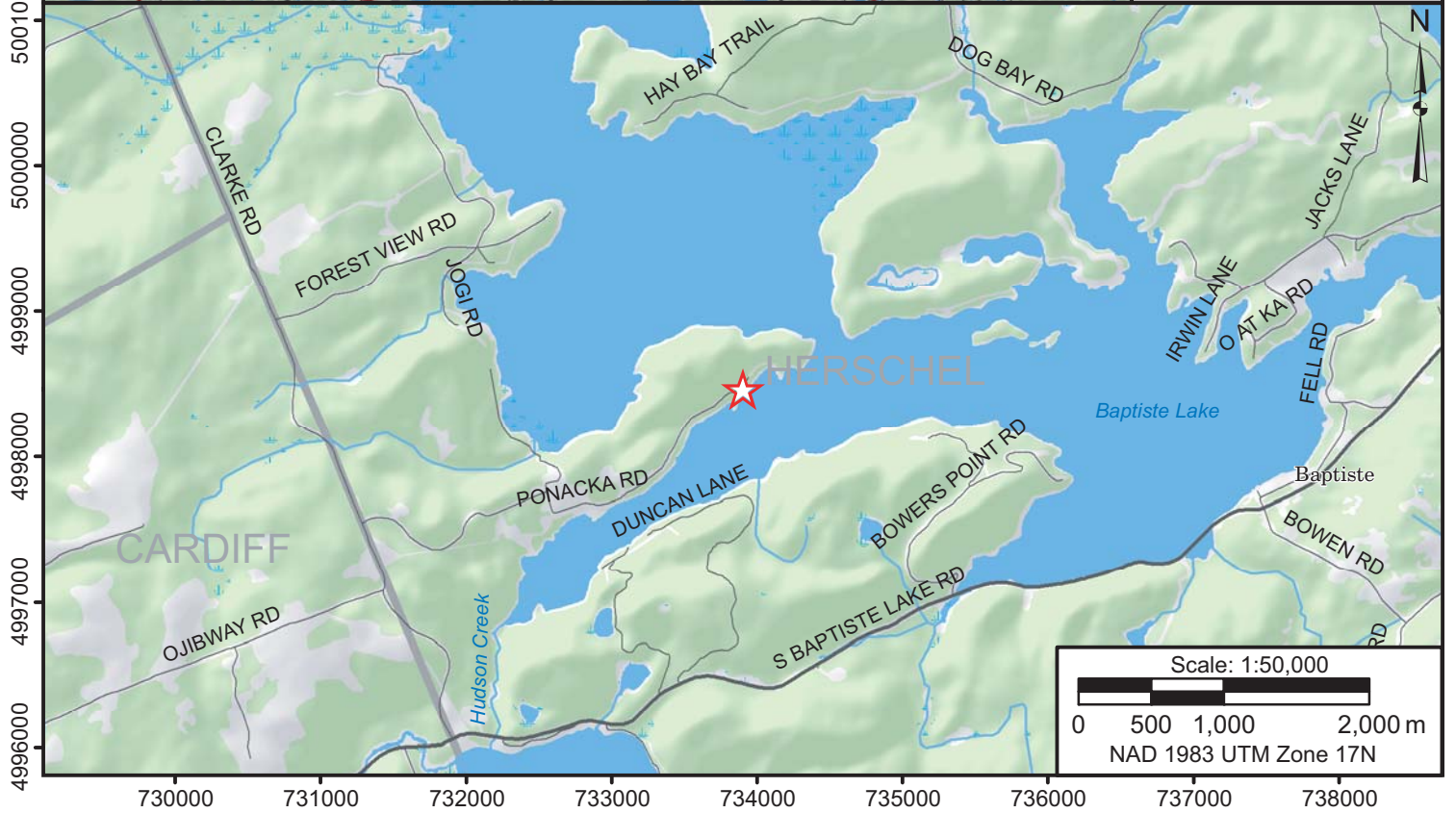
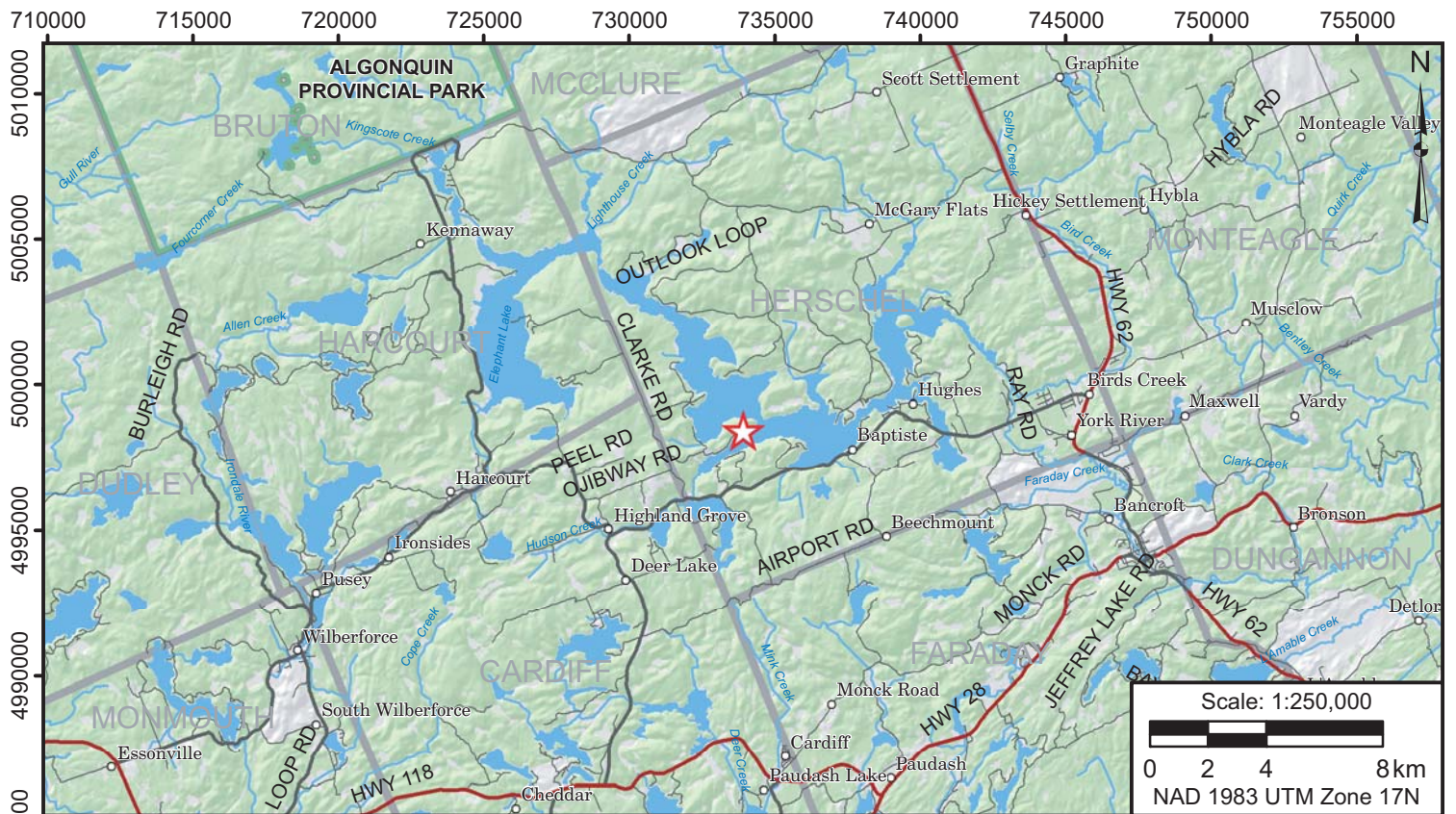
A handwritten signature in black ink, appearing to read "Rob West". The signature is fluid and cursive, with a long horizontal stroke at the end.


Rob West, HBSc.
Senior Ecologist

Selected References

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Figures



 Approximate Site Location

Environmental Impact Statement (EIS)
Proposed Cottage Redevelopment
356A Ponacka Road, Baptiste Lake
 Part of Lot 30, Concession 6 (Herschel)
 Municipality of Hastings Highlands,
 County of Hastings

North American Datum (NAD) 1983

TITLE
General Location

Notes:
 Base mapping provided by the Ontario Ministry of Natural Resources and Forestry (MNR) Land Information Ontario (LIO) database, copyright the King's Printer (2023)

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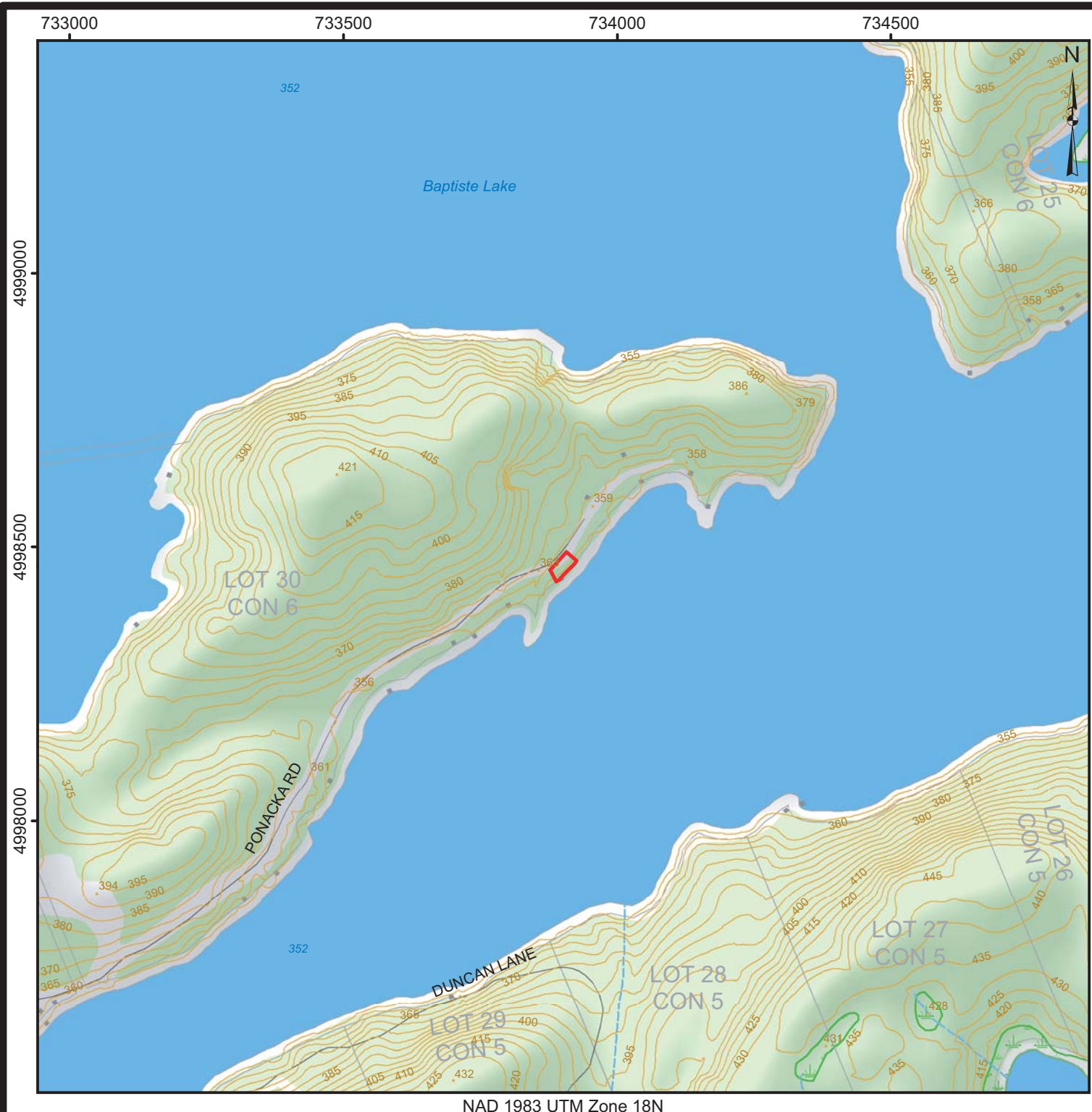


PROJECT #
 24-3457











DATE
 August 2024

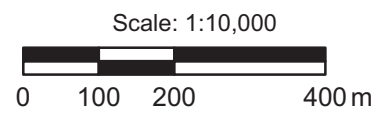
FIGURE NO.

1



Environmental Impact Statement (EIS)
Proposed Cottage Redevelopment
356A Ponacka Road, Baptiste Lake
 Part of Lot 30, Concession 6 (Herschel)
 Municipality of Hastings Highlands,
 County of Hastings

-  Approximate Property Boundary
-  Wooded Area
-  Waterbody
-  Wetland (Unevaluated)
-  Geographic Lot Fabric
-  Intermittent Watercourse
-  Contour (5m Intervals)
-  Spot Height (m asl)
-  Building (symbol)
-  Road



Notes:
 Base mapping provided by the Ontario Ministry of Natural Resources and Forestry (MNR) Land Information Ontario (LIO) database, copyright the King's Printer (2023)

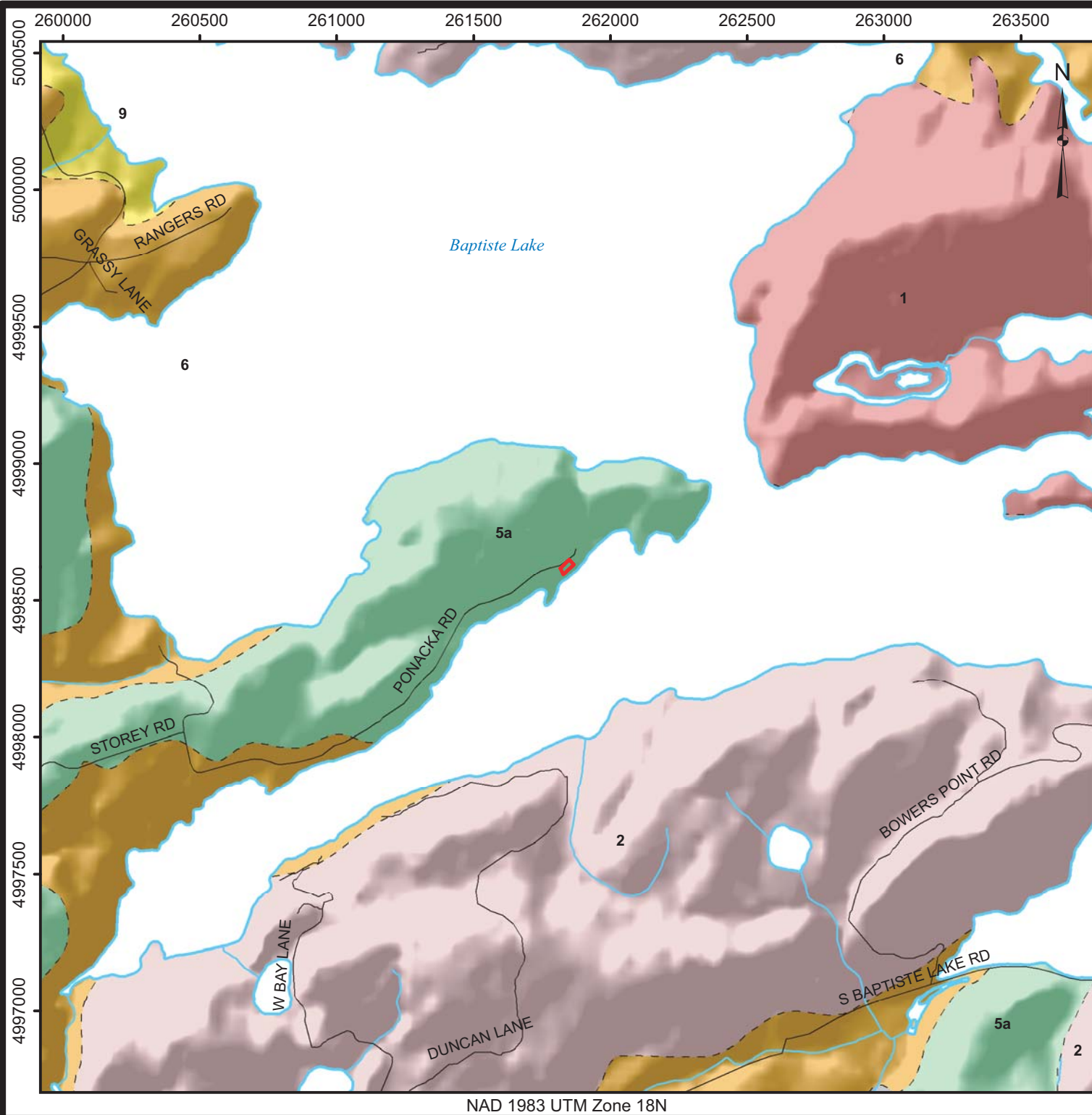
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 TITLE
Topography and Drainage



PROJECT #
24-3457
 DATE
August 2024

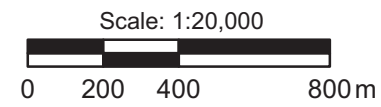
FIGURE NO.
2

NAD 1983 UTM Zone 18N



Environmental Impact Statement (EIS)
Proposed Cottage Redevelopment
356A Ponacka Road, Baptiste Lake
 Part of Lot 30, Concession 6 (Herschel)
 Municipality of Hastings Highlands,
 County of Hastings

- Approximate Property Boundary
- Waterbody
- Watercourse
- Contact (approximate/assumed)
- 1 Precambrian bedrock
- 2 Precambrian bedrock-drift complex
- 5a Glacial Deposits (Till):
Shield-derived silty to sandy till
- 6 Ice-contact stratified deposits
- 9 Coarse-textured glaciolacustrine deposits
- 20 Organic deposits



Notes:
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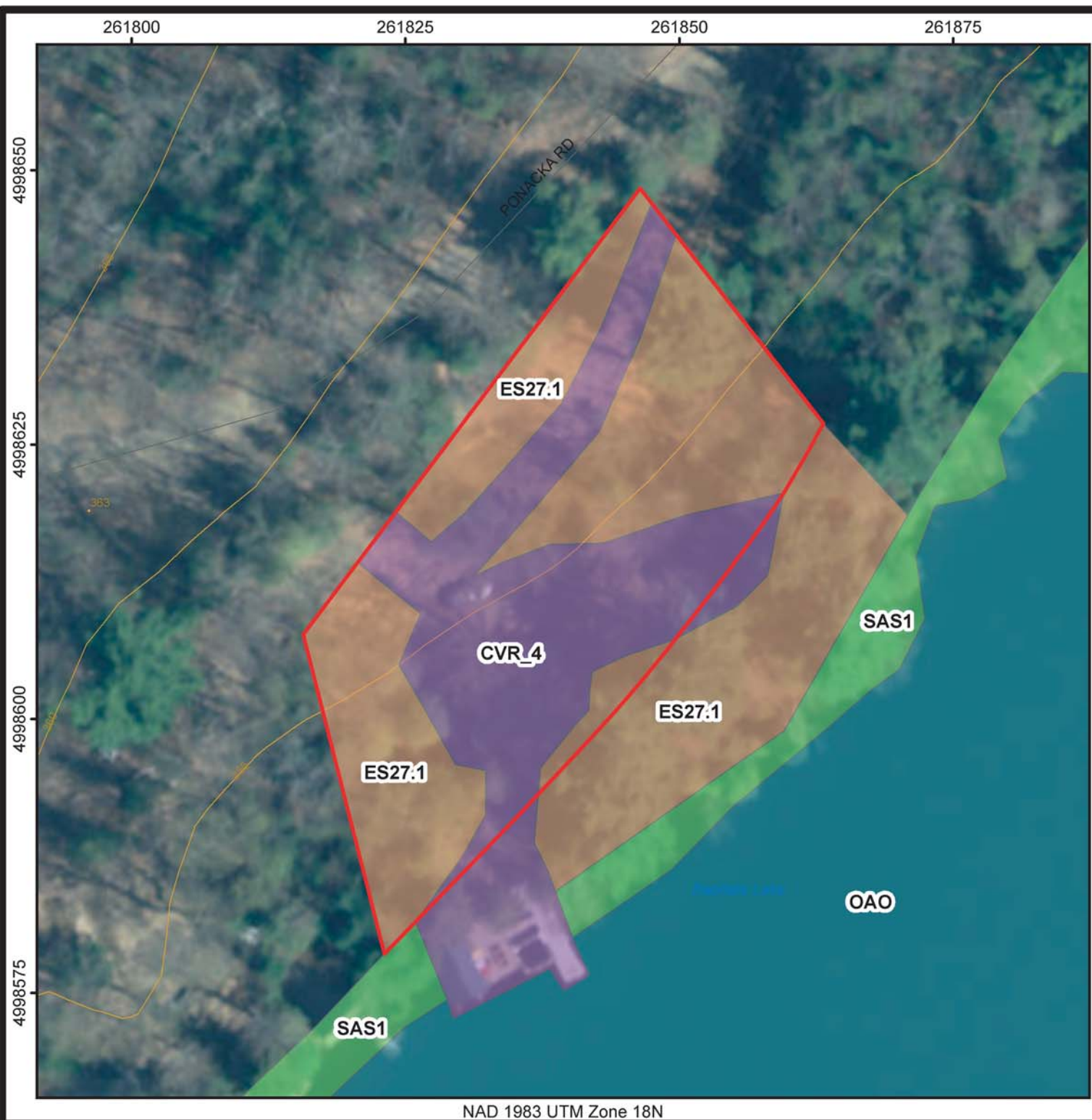
TITLE
Surficial Geology



PROJECT #
24-3457









FIGURE NO.
3

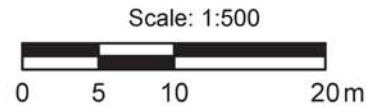
DATE
August 2024



NAD 1983 UTM Zone 18N

Environmental Impact Statement (EIS)
Proposed Cottage Redevelopment
356A Ponacka Road, Baptiste Lake
 Part of Lot 30, Concession 6 (Herschel)
 Municipality of Hastings Highland,
 County of Hastings

-  Approximate Property Boundary
-  Rural Property (CVR_4)
-  Sugar Maple-White Birch-Poplar-White Pine: dry to moderately fresh soils (ES27.1)
-  Open Aquatic (OAO)
-  Submerged Shallow Aquatic (SAS1)
-  Road
-  Contour (5 m Intervals)
-  Spot Height (m asl)



Notes:
 Base mapping provided by Ontario Ministry of Natural Resources and Forestry (MNRF) Land Information Ontario (LIO) database, copyright the King's Printer (2023)

Imagery provided by South Central Ontario Orthophotography Project SCOOP (2013)

Feature locations determined by differential GPS (+/- 3.0 m)

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TITLE	Vegetation
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PROJECT #	24-3457
DATE	August 2024

FIGURE NO.	4
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Photo A: photo of the rear part of the building, taken from the road looking at the area where the new building would flow over into.



Photo B: minor erosion down the west side of the existing cottage.



Photo C: photo looking at the rear of the building, the septic field is in the background of the photo.



Photo D: photo of the littoral zone conditions where some of the Centrarchid spawning occurs.

Site photos taken on August 1, 2024

Environmental Impact Statement (EIS)
Proposed Cottage Redevelopment
356A Ponacka Road, Baptiste Lake
 Part of Lot 30, Concession 6 (Herschel)
 Municipality of Hastings Highlands,
 County of Hastings

TITLE

Site Photos

PROJECT #

24-3457

FIGURE NO.

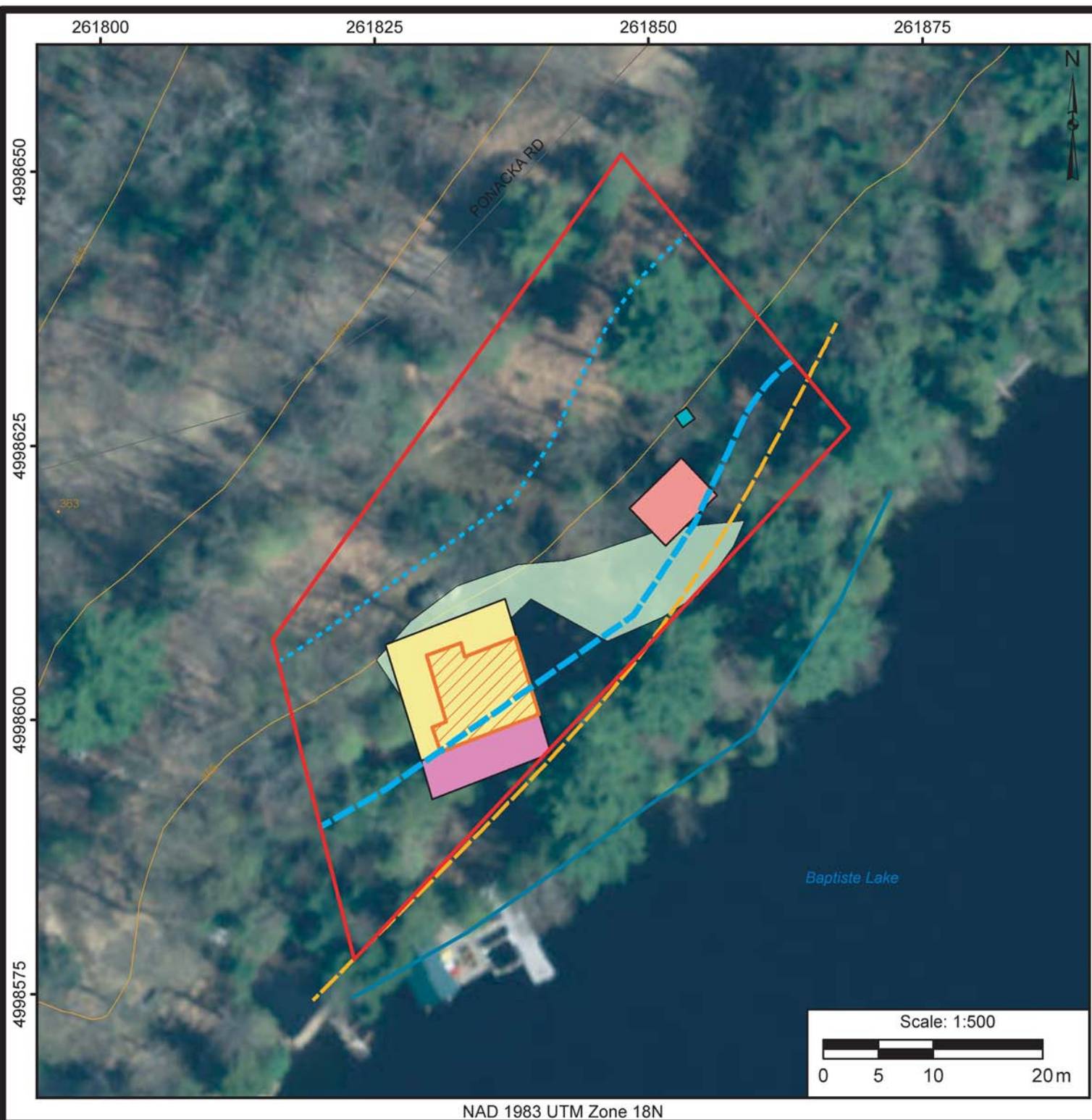
5

DATE

August 2024



ORE
Oakridge Environmental Ltd.
 Environmental and Hydrogeological Services



Environmental Impact Statement (EIS)
Proposed Cottage Redevelopment
356A Ponacka Road, Baptiste Lake
 Part of Lot 30, Concession 6 (Herschel)
 Municipality of Hastings Highland,
 County of Hastings

- Property Boundary (Richmond Surveying, 2024)
- Existing Residence (Richmond Surveying, 2024)
- Proposed Residence (Ponaka INC, 2024)
- Existing/ Proposed Septic Area: As Provided by Proponent (Ponaka INC, 2024)
- Outhouse Location (Richmond Surveying, 2024)
- Proposed Deck (Ponaka INC, 2024)
- Open Area (ORE)
- Inner Limit of Shore Road Allowance (Richmond Surveying, 2024)
- Road
- Contour (5 m Intervals)
- Shoreline
- Shoreline Buffer 30m
- Shoreline Buffer 15m
- Spot Height (m asl)

Notes:
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Property boundary and shoreline after Richmond Surveying inc. (June 12th, 2024)

Approximate location of proposed residence and approximate location of proposed/existing septic location after Ponacka Inc. (August 31st, 2024)

Imagery provided by South Central Ontario Orthophotography Project (SCOOP) 2013

Feature locations determined by differential GPS (+/- 3.0 m)

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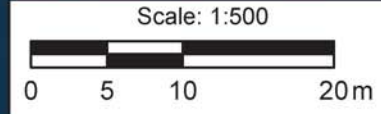
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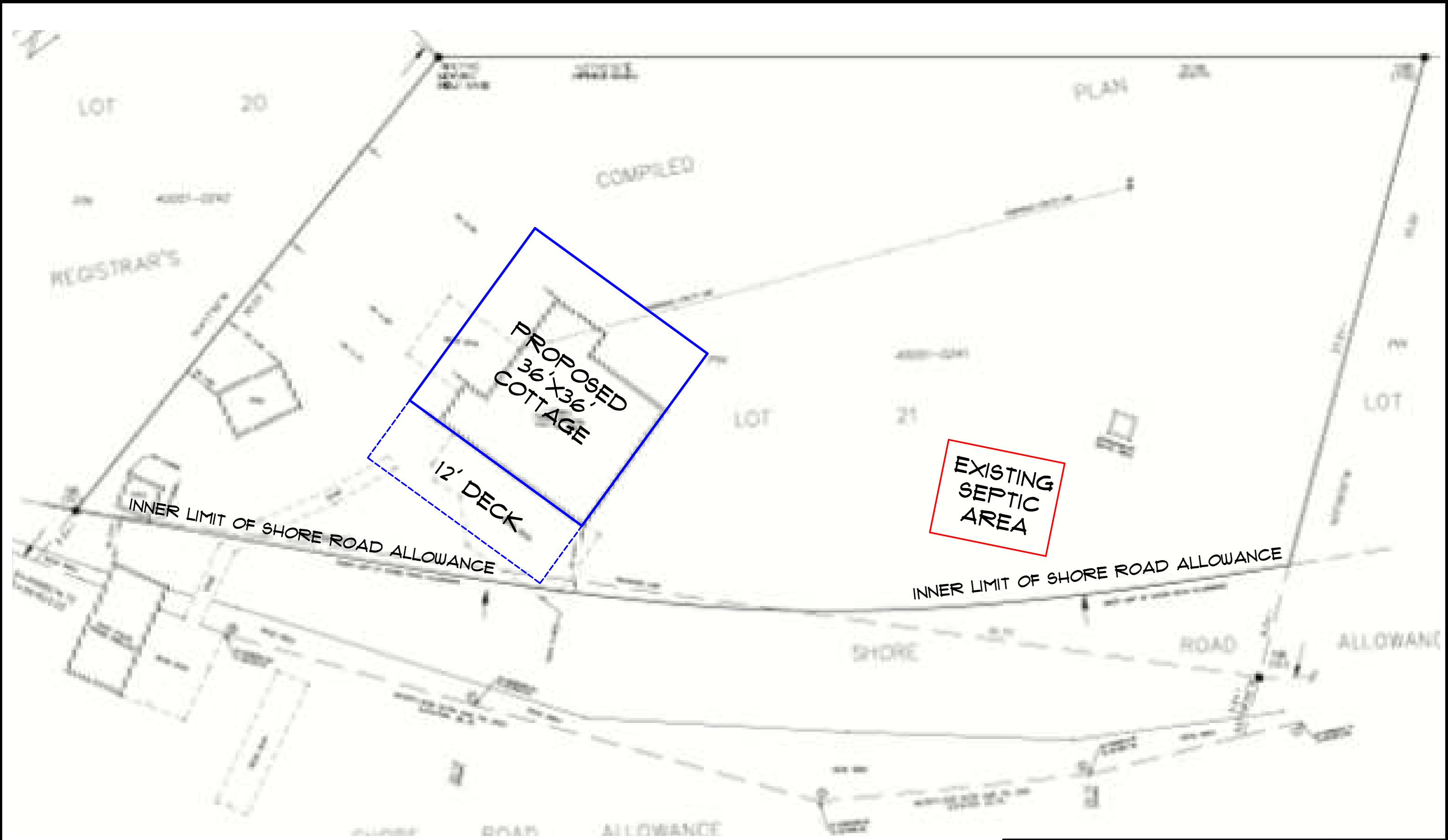
PROJECT # 24-3457	FIGURE NO. 6
DATE August 2024	

NAD 1983 UTM Zone 18N



Appendix A

Conceptual Development Plan



LAKESIDE COUNTRY HOMES
BANCROFT, ONTARIO
613-332-7100

PONACKA INC
356A PONACKA ROAD
HASTINGS HIGHLANDS

SCALE:	AS SHOWN	DRAWN BY:	TODD BERTRAM
DATE ISSUED:	31-AUG-24	BCIN:	40215
DRAWING:	LOT LAYOUT		DWG#:
			A1

Appendix B

SAR Database Excerpts

Change Region ▾

Redmond Bay Hastings, Ontario, Canada



▶ HOTSPOT NAVIGATION

Bird List

Updated ~11 seconds ago

37

All Years

22

This Year

13

This Month



Last Observed

First Observed

High Count

Custom Time Period ▾

SPECIES NAME	COUNT	DATE ▾	OBSERVER	LOCATION
1. Ring-billed Gull <i>Larus delawarensis</i>	1	4 Aug 2024	Jacob Gerard	Redmond Bay
2. Blue Jay <i>Cyanocitta cristata</i>	1	4 Aug 2024	Jacob Gerard	Redmond Bay
3. Black-capped Chickadee <i>Poecile atricapillus</i>	6	4 Aug 2024	Jacob Gerard	Redmond Bay
4. Red-breasted Nuthatch <i>Sitta canadensis</i>	1	4 Aug 2024	Jacob Gerard	Redmond Bay
5. American Robin <i>Turdus migratorius</i>	4	4 Aug 2024	Jacob Gerard	Redmond Bay
6. Common Grackle <i>Quiscalus quiscula</i>	50	4 Aug 2024	Jacob Gerard	Redmond Bay
7. Osprey <i>Pandion haliaetus</i>	2	4 Aug 2024	Jacob Gerard	Redmond Bay
8. Mallard <i>Anas platyrhynchos</i>	2	4 Aug 2024	Jacob Gerard	Redmond Bay
9. Ruby-throated Hummingbird <i>Archilochus colubris</i>	1	4 Aug 2024	Jacob Gerard	Redmond Bay

10.	American Crow <i>Corvus brachyrhynchos</i>	1	4 Aug 2024	Jacob Gerard	Redmond Bay	
11.	American Goldfinch <i>Spinus tristis</i>	2	3 Aug 2024	Jacob Gerard	Redmond Bay	
12.	Common Loon <i>Gavia immer</i>	3	3 Aug 2024	Jacob Gerard	Redmond Bay	
13.	Turkey Vulture <i>Cathartes aura</i>	1	3 Aug 2024	Jacob Gerard	Redmond Bay	
14.	Northern Flicker <i>Colaptes auratus</i>	1	19 May 2024	Eden Porter	Redmond Bay	
15.	Eastern Phoebe <i>Sayornis phoebe</i>	X	19 May 2024	Eden Porter	Redmond Bay	
16.	Blue-headed Vireo <i>Vireo solitarius</i>	X	19 May 2024	Eden Porter	Redmond Bay	
17.	Red-eyed Vireo <i>Vireo olivaceus</i>	X	19 May 2024	Eden Porter	Redmond Bay	
18.	Dark-eyed Junco <i>Junco hyemalis</i>	X	19 May 2024	Eden Porter	Redmond Bay	
19.	White-throated Sparrow <i>Zonotrichia albicollis</i>	X	19 May 2024	Eden Porter	Redmond Bay	
20.	Ovenbird <i>Seiurus aurocapilla</i>	X	19 May 2024	Eden Porter	Redmond Bay	
21.	Pine Warbler <i>Setophaga pinus</i>	X	19 May 2024	Eden Porter	Redmond Bay	
22.	Yellow-rumped Warbler <i>Setophaga coronata</i>	1	19 May 2024	Eden Porter	Redmond Bay	
23.	Canada Goose <i>Branta canadensis</i>	15	9 Oct 2023	Kyle Blaney	Redmond Bay	
24.	Greater Yellowlegs <i>Tringa melanoleuca</i>	1	8 Oct 2023	Kyle Blaney	Redmond Bay	 
25.	Song Sparrow <i>Melospiza melodia</i>	1	8 Oct 2023	Kyle Blaney	Redmond Bay	
26.	Hooded Merganser	2	23 Apr 2023	Sandra N	Redmond Bay	

Lophodytes cucullatus

27.	Great Blue Heron <i>Ardea herodias</i>	1	20 Sep 2022	John Blaney	Redmond Bay
28.	Common Merganser <i>Mergus merganser</i>	3	29 Mar 2021	Belinda Gallagher	Redmond Bay
29.	Trumpeter Swan <i>Cygnus buccinator</i>	1	4 Apr 2020	Sandra N	Redmond Bay
30.	Wood Duck <i>Aix sponsa</i>	2	4 Apr 2020	Sandra N	Redmond Bay
31.	Common Goldeneye <i>Bucephala clangula</i>	1	4 Apr 2020	Sandra N	Redmond Bay
32.	Red-winged Blackbird <i>Agelaius phoeniceus</i>	4	4 Apr 2020	Sandra N	Redmond Bay
33.	Herring Gull <i>Larus argentatus</i>	6	9 Nov 2019	Sandra N	Redmond Bay
34.	Green-winged Teal <i>Anas crecca</i>	2	12 Apr 2019	Sandra N	Redmond Bay
35.	Common Raven <i>Corvus corax</i>	1	12 Apr 2019	Sandra N	Redmond Bay
36.	Bufflehead <i>Bucephala albeola</i>	6	12 Nov 2018	Sandra N	Redmond Bay
37.	Bald Eagle <i>Haliaeetus leucocephalus</i>	1	4 Dec 2017	Sandra N	Redmond Bay

ADDITIONAL TAXA (4)

	Common/Red-breasted Merganser <i>Mergus merganser/serrator</i>	100	9 Nov 2019	Sandra N	Redmond Bay
	duck sp. <i>Anatidae (duck sp.)</i>	2	19 Apr 2019	Sandra N	Redmond Bay
	gull sp. <i>Larinae sp.</i>	3	12 Apr 2019	Sandra N	Redmond Bay
	new world sparrow sp. <i>Passerellidae sp.</i>	1	12 Apr 2019	Sandra N	Redmond Bay

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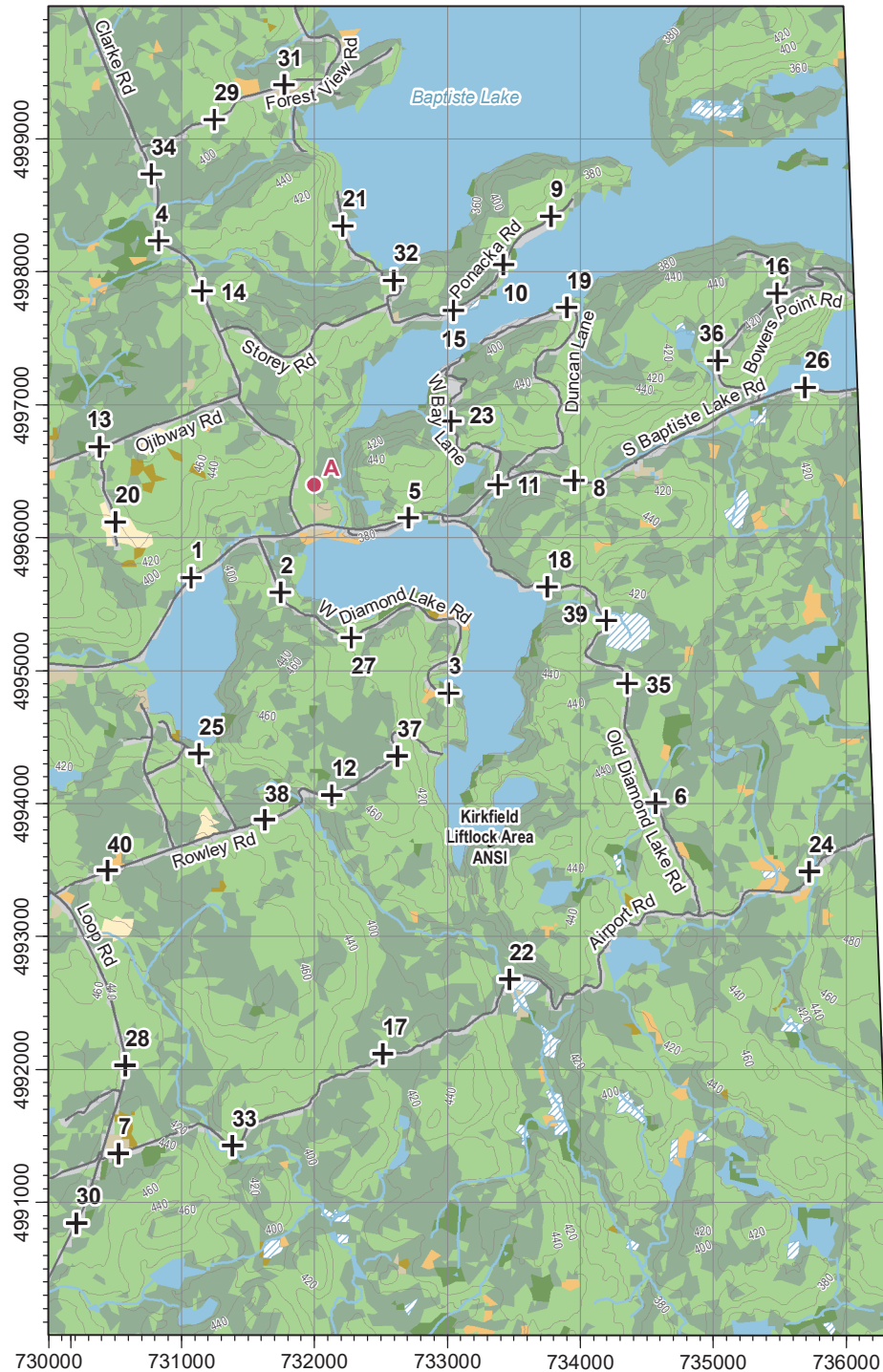
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POINT +	EASTING UTM Est	NORTHING UTM Nord
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2	731745	4995591
3	733012	4994832
4	730830	4998238
5	732706	4996152
6	734565	4994005
7	730526	4991368
8	733956	4996431
9	733778	4998422
10	733419	4998055
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15	733047	4997710
16	735480	4997839
17	732514	4992117
18	733753	4995633
19	733901	4997734
20	730505	4996118
21	732214	4998348
22	733468	4992678
23	733027	4996879
24	735722	4993487
25	731133	4994377
26	735687	4997132
27	732281	4995248
28	730576	4992028
29	731247	4999147
30	730210	4990842
31	731773	4999411
32	732598	4997938
33	731384	4991428
34	730773	4998738
35	734355	4994903
36	735034	4997334
37	732626	4994356
38	731626	4993877
39	734200	4995380
40	730442	4993495

Legend	Légende
Expressway or highway	Autoroute ou route nationale (asphaltée)
Regional or local road	Route régionale ou locale (asphaltée ou non)
Resource / Recreation	Ressource / route récréative
Rail line	Chemin de fer
Utility corridor	Ligne de transport d'énergie
Watercourse	Rivière ou ruisseau
Protected or conserved area	Zone protégée ou conservée
Fire disturbance since 2000	Incendie perturbé depuis 2000
Broadleaf forest	44 Forêt de feuillus
Coniferous forest	2 Forêt de conifères
Mixed forest	34 Forêt mixte
Shrubland	1 Milieu arbustif
Grassland	Prairie
Barren	Dénuqué
Wetland	1 Milieu humide
Agriculture	Milieu agricole
Water	15 Eau
Developed area	3 Zone développée
Unclassified	Non classifié

**Number of off-road point counts
Nombre de points d'écoute hors route**

Broadleaf forest:	3	Grassland:	0
Coniferous forest:	0	Wetland:	0
Mixed forest:	2	Shrubland:	0

**Predefined / Prédéterminés: 20
Off-road / Hors route: 5**

Atlas-2 off-road point Point hors route Atlas-2



0 1 km

The approximate percent coverage of each habitat type is indicated by the numbered box in the legend.

La couverture approximative est indiquée en pourcentage dans le rectangle coloré de la légende.

Cartographic production by Birds Canada
Production cartographique par oiseaux Canada

Note: The project partners are in no way responsible for any inaccuracies, mistakes or omissions in the information that appears on this map.

Avis : Les responsables du projet d'atlas ne peuvent être tenus responsables de toute inexactitude, erreur ou omission concernant les informations apparaissant sur cette carte.

6° Universal Transverse Mercator (UTM) Projection; Zone 17, Central Meridian -81°; North American Datum 1983 (NAD 83)

Projection universelle transverse de Mercator (UTM) 6° Zone 17, méridien central -81°;

Système de référence géodésique nord-américain 1983 (NAD 83)



BIRDS CANADA OISEAUX CANADA

March 2021 / mars 2021

<https://www.birdsontario.org/>



**BIRDS CANADA
OISEAUX CANADA**

Square Summary (17TQK39) [\[change\]](#)

	#species				#hours		#pc done	
	poss	prob	conf	total	total	peak	road	offrd
Curr.	15	26	36	77	15.7	5.2	39	0
Prev.	30	34	33	97	99	—	25	

Region summary (#26: Renfrew, ON)

#squares	#sq with data	#species	#squares (pc)	
			target	compl.
71	69	177	71	52
71	70	172	0	61

Target number of point counts in this square: 25 in total: 20 road side, 5 off road (Broadleaf Forest in 3, Mixed Forest in 2). Please try to ensure that each off-road station is located such that the entire 100m radius circle is within the prescribed habitat. **Predef. completed:** [03, 04, 05, 06, 07, 08, 09, 10, 11, 12, 13, 14, 15, 16, 17, 19, 20, 23, 24, 29, 30, 33, 34, 35, 36, 37, 38]

SPECIES	Prev.	Code	%
Canada Goose	P	FY	86
Mute Swan ‡			0
Trumpeter Swan ‡			11
Wood Duck	FY	FY	69
Blue-winged Teal ‡			2
Northern Shoveler ‡			2
Gadwall ‡			1
American Wigeon ‡			0
Mallard	T	FY	81
American Black Duck	P		17
Northern Pintail ‡			0
Green-winged Teal			5
Ring-necked Duck		P	42

Lesser Scaup ‡			0
Common Goldeneye ‡			7
Hooded Merganser	P	H	57
Common Merganser	FY	FY	50
Ruddy Duck ‡			0
<u>Wild Turkey</u>			81
Ruffed Grouse	FY	NE	91
Spruce Grouse ‡			0
Gray Partridge †			1
Pied-billed Grebe			20
<u>Rock Pigeon (Feral Pigeon)</u>			56
<u>Mourning Dove</u>	H		85
Yellow-billed Cuckoo ‡			7
<u>Black-billed Cuckoo</u>			60
Common Nighthawk §			23
Eastern Whip-poor-will §		T	40
Chimney Swift §			18
Ruby-throated Hummingbird	H	FY	86
Virginia Rail	FY		37
Sora			11

SPECIES	Prev. Code %		
Common Gallinule ‡			1
American Coot ‡			2
Sandhill Crane ‡			18
Killdeer §	H		44
Upland Sandpiper †			4
American Woodcock	D	T	73
<u>Wilson's Snipe</u>			62
Spotted Sandpiper	H		39
Ring-billed Gull §			11
Herring Gull §	T		21
Black Tern † §			1
Common Tern § ‡			1
Common Loon	AE	NE	79
Double-crested Cormorant § ‡			8
<u>American Bittern</u>			57

Least Bittern †			5
Green Heron §			24
Great Blue Heron §	H	H	42
Turkey Vulture	P	H	85
Osprey	H	A	42
Northern Harrier			17
Sharp-shinned Hawk	H		24
Cooper's Hawk ‡			13
American Goshawk §			0
Eurasian/American Goshawk ‡	AE		0
Bald Eagle §		H	37
Red-shouldered Hawk	T		14
Broad-winged Hawk	T	AE	97
Red-tailed Hawk			24
Eastern Screech-Owl ‡			0
Great Horned Owl	H		5
Barred Owl	T	H	72
Long-eared Owl ‡	S		1

SPECIES	Prev.	Code	%
Northern Saw-whet Owl	S		17
Belted Kingfisher	T	H	84
Yellow-bellied Sapsucker	D	FY	98
Red-headed Woodpecker †			1
Red-bellied Woodpecker ‡			0
Black-backed Woodpecker ‡			2
Downy Woodpecker	FY	H	89
Hairy Woodpecker	FY	H	97
<u>Pileated Woodpecker</u>	T		89
Northern Flicker	FY	NY	98
<u>American Kestrel §</u>	H		65
<u>Merlin</u>			52
Peregrine Falcon ‡		NY	10
Olive-sided Flycatcher §	S	T	31
Eastern Wood-Pewee §	S	S	92
Yellow-bellied Flycatcher ‡			4
Alder Flycatcher	T	T	94

Willow Flycatcher ‡			2
Least Flycatcher	S	A	84
Eastern Phoebe	NB	NY	98
Great Crested Flycatcher	D	T	94
Eastern Kingbird	AE	FY	94
Yellow-throated Vireo			1
Blue-headed Vireo	S	NB	91
Philadelphia Vireo ‡			20
<u>Warbling Vireo</u>	S		56
Red-eyed Vireo	S	FY	100
Loggerhead Shrike †			0
Canada Jay ‡			14
Blue Jay	FY	FY	98
American Crow	P	FY	98
Common Raven	CF	NY	97
Black-capped Chickadee	FY	NY	100

Breeding Bird Atlas - Summary Sheet for Square 17TQK39 (page 2 of 2)










SPECIES	Prev.	Code	%
Boreal Chickadee ‡			0
Horned Lark ‡			1
Bank Swallow §			10
Tree Swallow	H	S	88
Purple Martin ‡			1
Northern Rough-winged Swallow			11
<u>Barn Swallow</u> §	FY		81
Cliff Swallow §			7
Ruby-crowned Kinglet	S		28
Golden-crowned Kinglet	A	T	72
White-breasted Nuthatch	CF	FY	88
Red-breasted Nuthatch	AE	S	94
Brown Creeper	NY	S	82
Blue-gray Gnatcatcher ‡			0
<u>House Wren</u>	S		76
Winter Wren		T	91
Pacific/Winter Wren ‡	T		0
Sedge Wren ‡			4
Marsh Wren			14
European Starling	H	NE	85
Gray Catbird		T	78
<u>Brown Thrasher</u>			78
Northern Mockingbird ‡			2
<u>Eastern Bluebird</u>	FY		66
Veery	T	T	98
Swainson's Thrush			17
Hermit Thrush	T	T	94
Wood Thrush §	T	T	89
American Robin	CF	NY	98
Cedar Waxwing	CF	H	89
House Sparrow			24
Evening Grosbeak §			10
House Finch ‡			2
SPECIES			
	Prev.	Code	%

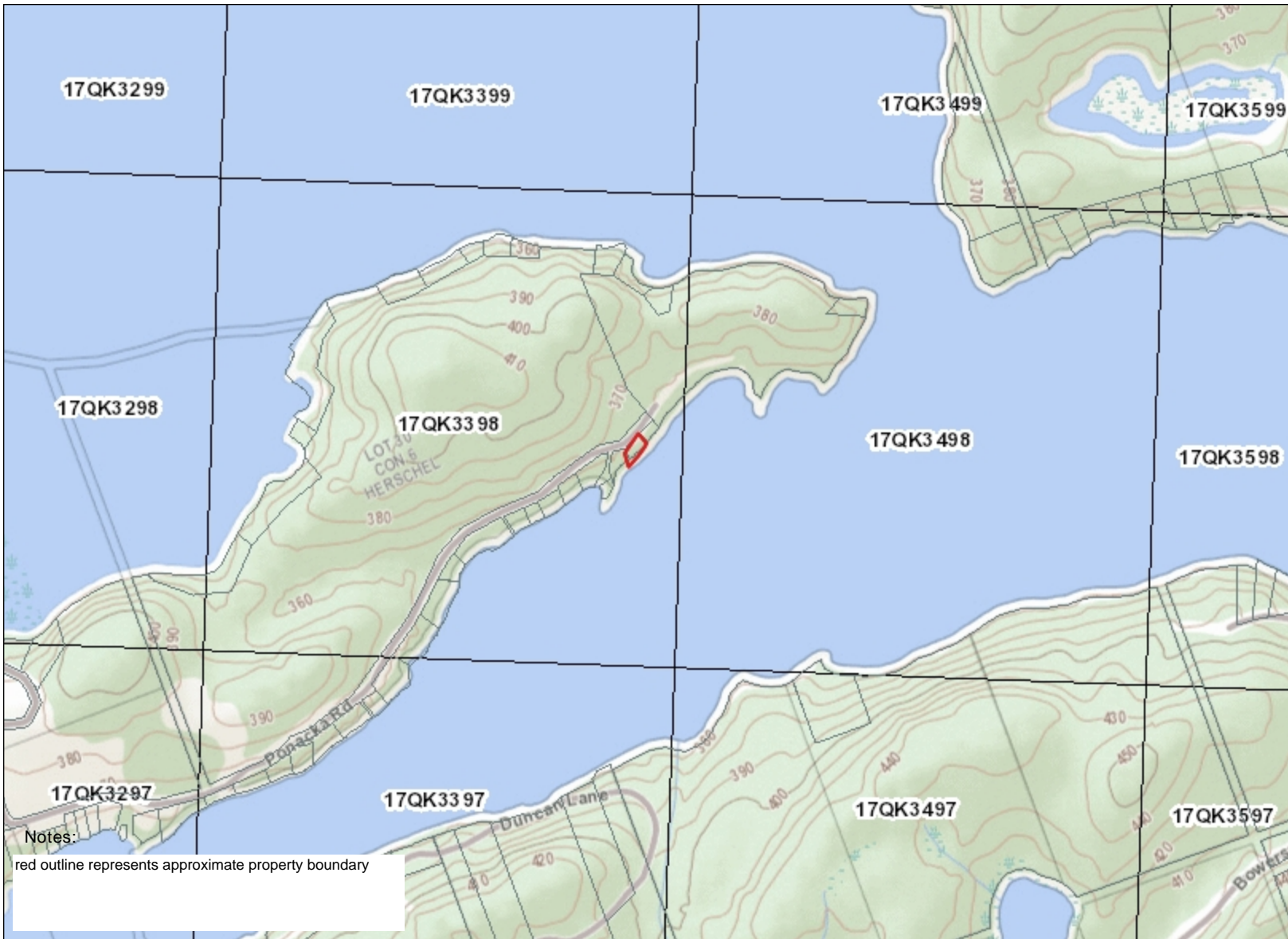
Purple Finch	FY	FY	94
Red Crossbill §			49
White-winged Crossbill	P		2
Pine Siskin §	H	FY	44
American Goldfinch	S	H	91
Grasshopper Sparrow §			8
Chipping Sparrow	FY	FY	95
Clay-colored Sparrow ‡			7
Field Sparrow §			31
Dark-eyed Junco			42
White-throated Sparrow	FY	T	97
Vesper Sparrow			14
<u>Savannah Sparrow</u>	T		62
Song Sparrow	CF	FY	98
Lincoln's Sparrow ‡			1
Swamp Sparrow	CF	FY	98
Eastern Towhee §			15
<u>Bobolink §</u>	S		57
<u>Eastern Meadowlark §</u>			62
Orchard Oriole ‡			0
<u>Baltimore Oriole</u>	S		62
Red-winged Blackbird	CF	CF	98
Brown-headed Cowbird	H		37
Rusty Blackbird ‡			0
Common Grackle	CF	FY	98
Ovenbird	T	CF	97
Northern Waterthrush	CF	T	91
Golden-winged Warbler †			7
Blue-winged Warbler ‡			0
Black-and-white Warbler	D	FY	98
Tennessee Warbler ‡			7
Nashville Warbler	A	T	98
Mourning Warbler	S	T	69
SPECIES			Prev. Code %
Common Yellowthroat	CF	T	98
American Redstart	S	FY	95

Kirtland's Warbler †			0
Cape May Warbler ‡			15
Cerulean Warbler †			0
Northern Parula	S	T	71
Magnolia Warbler	CF	T	89
Bay-breasted Warbler ‡			1
Blackburnian Warbler	S	FY	91
<u>Yellow Warbler</u>	P		88
Chestnut-sided Warbler	CF	FY	97
Black-throated Blue Warbler	T	T	85
Pine Warbler	T	FY	89
Yellow-rumped Warbler	A	FY	92
Black-throated Green Warbler	A	T	94
Canada Warbler §	T	S	66
Scarlet Tanager	D	T	88
Northern Cardinal			36
Rose-breasted Grosbeak	NB	T	98
Indigo Bunting	T	T	88

This list includes all breeding species expected in the region #26 (Renfrew). Underlined species are those that you should try to add to this square (17TQK39). They have not yet been reported in this square, but have been reported in more than 50% of the squares in this region so far. "Prev." is the code for the highest breeding evidence for that species in square 17TQK39 in the previous atlas. "Code" is the code for the highest breeding evidence for that species in square 17TQK39 over the last 5 years. The % columns give the percentage of squares in that region where that species was reported (this gives an idea of the expected chance of finding that species in region #26). Rare/Colonial Species Report Forms should be completed for species marked: § (Species of interest), ‡ (regionally rare), † (provincially rare). An up-to-date version of this sheet is available from <https://naturecounts.ca//nc//atlas/squaresummaryform.jsp?squareID=17TQK39&lang=EN> Data current as of **19/08/2024 18:39**.

Legend

-  Assessment Parcel
-  NHIC 1 Km Grid
- ANSI
-  Earth Science Provincially Significant/sciences de la terre d'importance provinciale
-  Earth Science Regionally Significant/sciences de la terre d'importance régionale
-  Life Science Provincially Significant/sciences de la vie d'importance provinciale
-  Life Science Regionally Significant/sciences de la vie d'importance régionale
-  Conservation Reserve
-  Provincial Park
-  Natural Heritage System



Notes:
red outline represents approximate property boundary



Absence of a feature in the map does not mean they do not exist in this area.

This map should not be relied on as a precise indicator of routes or locations, nor as a guide to navigation. The Ontario Ministry of Natural Resources and Forestry (OMNRF) shall not be liable in any way for the use of, or reliance upon, this map or any information on this map.
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NHIC Data

To work further with this data select the content and copy it into your own word or excel documents.

OGF ID	Element Type	Common Name	Scientific Name	SRank	SARO Status	COSEWIC Status	ATLAS NAD83 IDENT	COMMENTS
1065640	SPECIES	Wood Thrush	<i>Hylocichla mustelina</i>	S4B	SC	THR	17QK3398	
1065640	SPECIES	Eastern Wood-pewee	<i>Contopus virens</i>	S4B	SC	SC	17QK3398	
1065640	SPECIES	Snapping Turtle	<i>Chelydra serpentina</i>	S4	SC	SC	17QK3398	
1065640	SPECIES	(Potamogeton hillii X Potamogeton zosteriformis)	<i>Potamogeton x ogdenii</i>	SNA	END	END	17QK3398	
1065650	SPECIES	Wood Thrush	<i>Hylocichla mustelina</i>	S4B	SC	THR	17QK3498	
1065650	SPECIES	Eastern Wood-pewee	<i>Contopus virens</i>	S4B	SC	SC	17QK3498	
1065650	SPECIES	Snapping Turtle	<i>Chelydra serpentina</i>	S4	SC	SC	17QK3498	
1065650	SPECIES	(Potamogeton hillii X Potamogeton zosteriformis)	<i>Potamogeton x ogdenii</i>	SNA	END	END	17QK3498	

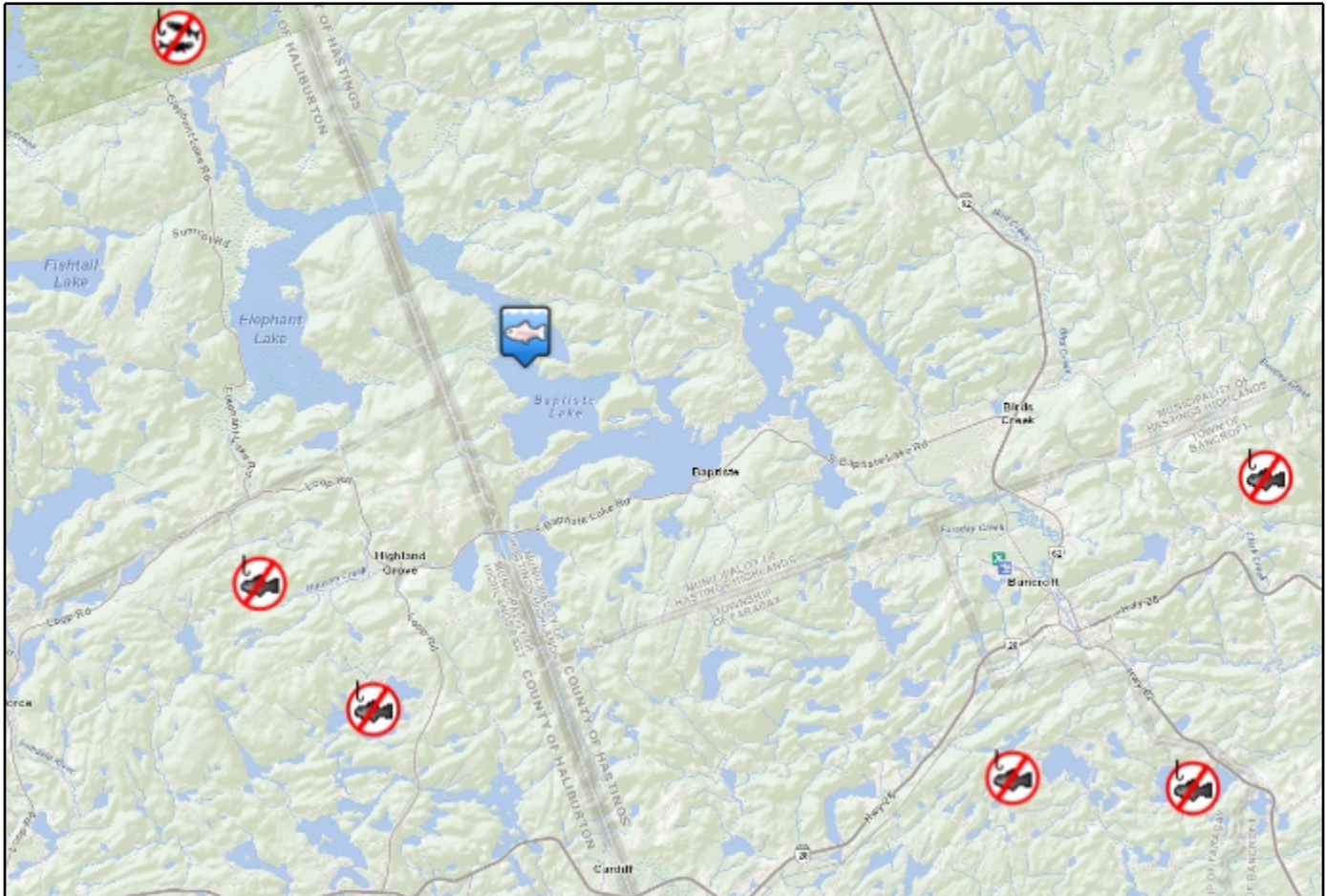


Species list in taxonomic order for square 17QK39

All species

Number of rows of data displayed below: 14.

Species #	Common Name	# of Records	Earliest Yr _____	Latest Yr
1	Blanding's Turtle	1	2017	2017
6	Snapping Turtle	3	1961	2017
12	Eastern Gartersnake	3	1962	2017
20	Northern Watersnake	1	1962	1962
22	Red-bellied Snake	2	1962	1988
25	American Bullfrog	3	1962	2018
28	Gray Treefrog	13	1988	1988
29	Green Frog	5	1962	2018
31	Northern Leopard Frog	2	1988	2017
33	Spring Peeper	14	1962	2011
36	American Toad	3	1988	1988
40	Blue-spotted Salamander	1	2017	2017
53	Spotted Salamander	1	2017	2017
54	Five-lined Skink	3	2011	2011



Waterbody Information	
Latitude:	45.127251
Longitude:	-78.043944
Surface Area (ha):	-
Maximum Depth (m):	-
Average Depth (m):	-
Fisheries Management Zone(s):	15

Legend

	Waterbody		Licence Issuer	
	Fish Sanctuary		Fisheries Management Zone	
	Lake Depth Contours (m)		Fishing Access Points	

Fish Species Found in Waterbody

Black Crappie, Bluegill, Brown Bullhead, Burbot, Cisco, Lake Trout, Lake Whitefish, Largemouth Bass, Muskellunge, Northern Pike, Pumpkinseed, Rock Bass, Smallmouth Bass, Walleye, White Sucker, Yellow Perch

Zone 15 Seasons & Limits

Species	Open Seasons	Limits
Brook Trout*	Jan. 1 - Sept. 30	S - 5 C - 2
Brown Trout*	Open all year	S - 5 C - 2
Channel Catfish	Open all year	S - 12 C - 6
Crappie	Open all year	S - 30 C - 10
Lake Trout*	Jan. 1 - Sept. 30	S - 2 C - 1
Lake Whitefish	Open all year	S - 12 C - 6
Largemouth and Smallmouth Bass or any combination	4th Sat. in June - Nov. 30	S - 6 C - 2
Muskellunge	1st Sat. in June - Dec. 15	S - 1, must be greater than 91 cm (36 in.) C - 0
Northern Pike	Jan. 1 - Mar. 31 & 3rd Sat. in May - Dec. 31	S - 6 C - 2
Pacific Salmon*	Open all year	S - 5 C - 2
Rainbow Trout*	Open all year	S - 5 C - 2
Splake*	Open all year	S - 5 C - 2
Sunfish	Open all year	S - 50 C - 25
Walleye and Sauger or any combination	Jan. 1 - Mar. 15 & 3rd Sat. in May - Dec. 31	S - 4, not more than 1 greater than 46 cm (18.1 in.) C - 2, not more than 1 greater than 46 cm (18.1 in.)
Yellow Perch	Open all year	S - 50 C - 25

Exceptions to Zone Regulations

Description: Baptiste Lake (45°06'59" N., 78°00'12" W.) - Herschel Township

Species	Open Seasons	Limits
Lake Trout	3rd Sat. in May - Sept. 30	None between 40 - 55 cm (15.7 - 21.7 in.)

Report a Violation

All Ontarians can play a part in protecting our natural resources from waste, abuse and depletion. If you are witness to a resource violation within Ontario, please call the Ministry of Natural Resources and Forestry TIPS line at: 1-877-TIPS-MNR (847-7667)

In order to investigate an occurrence, it will assist an officer to know the following information:

- o Nature of violation
- o Vehicle information
- o Location of violation (address, county, township, municipality, lot, concession)
- o Particulars of violation, other relevant information

The TIPS-MNR reporting line is not an emergency response telephone number. If you are calling to report public safety matters please call 911 or the police.

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This is a summary of information dealing with fishing licences and fishing laws. This summary is neither a legal document nor a complete collection of the current regulations. It is meant to be a convenient reference only.

For details on the current regulations see:

- o Fish and Wildlife Conservation Act and regulations
- o Federal Fisheries Act
- o Ontario Fishery Regulations
 - o Close times, fishing quotas and limits on the size of fish established in the Ontario Fishery Regulations may be changed through Variation Orders which are available at [ontario.ca/fishing](https://www.ontario.ca/fishing) <<https://www.ontario.ca/fishing>>.

The maps presented in this summary are provided as a guide only. Due to the scale of the maps, the official plan (detailed information) for the boundaries of the Zones cannot be provided in this summary.

You can obtain specific details of the regulations, including more detailed maps of Zone boundaries, from [ontario.ca/fishing](https://www.ontario.ca/fishing) <<https://www.ontario.ca/fishing>> or local MNRF offices.

Birds

Barn Swallow (*Hirundo rustica*) is listed as “Special Concern” by SARO and is not protected under the ESA. The Barn Swallow inhabits open-rural and urban sites where buildings are situated near watercourses. Nesting is typically sporadic within loose colonies on building structures, bridges and other suitable overhanging structures. The cup-like mud nest is adhered to areas beneath the roof of the structure to conceal the nest from predators and keep it dry. The Barn Swallow feeds on insects by catching them on the wing.

Bobolink (*Dolichonyx oryzivorus*) is listed as “Threatened” by SARO and is protected under the ESA. The Bobolink prefers large tracts of tallgrass areas, either true prairies or hay fields, as it forages low to the ground in search of larvae and seeds.

Canada Warbler (*Cardellina canadensis*) is listed as “Special Concern” by SARO, and is not protected under the ESA. It prefers large tracts of mixed forests on bottomlands within wetlands or drainage courses. The species nests within the upper extremities of the canopy in deciduous and coniferous trees. The Canada Warbler feeds on beetles, caterpillars and common insects. Typically, this species prefers creeks and mixed forests with a coniferous edge along a moving creek, tributary or river system.

Common Nighthawk (*Chordeiles minor*) is listed as “Special Concern” by SARO, and is not protected under the ESA. The Common Nighthawk is part of the Nightjar family which prefers forest openings, bogs and sometimes open field/meadow areas. Nesting is on bare ground where both adults feed the young. Feeding can take place during day or night, while the species constantly forages for all types of insects.

Eastern Meadowlark (*Sturnella magna*) is listed as “Threatened” by SARO and is protected under the ESA. The Eastern Meadowlark is similar to Bobolink, as this species also prefers large tracts of agricultural fields or tallgrass prairies to nest within. Eastern Meadowlark is a ground nester, thus requires the tall grass to conceal its nest and eggs. Feeding includes beetles, crickets and spiders.

Eastern Whip-poor-will (*Anthrostomus vociferus*) is listed as “Threatened” by SARO and is protected under the ESA. The Whip-poor-will prefers a combination of large natural tracts of secondary succession forest, watercourses and edge habitat consisting of meadow areas, with open deciduous and pine woodlands. The Whip-poor-will does not construct a nest, but rather uses the soft leaf litter on the ground to form a nest and lay the eggs directly on the ground. The Whip-poor-will is a nighttime hunter, calling its own name while searching for large flying insects, beetles, moths, mosquitos and sometimes grasshoppers. The Whip-poor-will often

Eastern Wood-Pewee (*Contopus virens*) is listed as “Special Concern” by SARO and is not protected under the ESA. This species prefers mixed deciduous and coniferous woodlands which are open or considered edge habitat. Nesting occurs on a tree branch as the species catches insects from a perch.

Olive-sided Flycatcher (*Contopus cooperi*) is listed as “Special Concern” by SARO and is not protected under the ESA. This species is typically found within natural forest edges and openings. Its preferred habitat is within coniferous or mixed forests adjacent to rivers or wetlands. It likes to inhabit conifers such as White/Black Spruce, Jack Pine, and Balsam Fir.

Peregrine Falcon (*Falco peregrinus*) is listed as “Special Concern” by SARO and is not protected under the ESA. This species usually nests on tall, steep cliff ledges close to large bodies of water, but it also builds nests on ledges of tall buildings in urban centres. Cities offer peregrines a good year-round supply of pigeons and starlings to feed on.

Wood Thrush (*Hylocichia mustelina*) is listed as “Special Concern” by SARO and is not protected under the ESA. The Wood Thrush enjoys relatively undisturbed, mature woodlands. Nesting occurs low in the fork of a tree as this species forages for berries and insects at ground level. Similar to the Eastern Wood-Pewee, this species prefers large tracts of woodland.

Amphibians & Reptiles

Blanding’s Turtle (*Emydoidea blandingii*) is listed as “Threatened” by SARO and is protected under the ESA. It tends to inhabit shallow waters within large wetlands or shallow lakes that have lots of aquatic plants. However, they have been known to travel hundreds of metres from a main body of water for nesting or mating. This species is most easily identified by its bright yellow throat and chin.

Common Five-lined Skink (Great Lakes/St. Lawrence/Southern Shield population) (*Plestiodon fasciatus*) is listed as “Special Concern” by SARO and is not protected under the ESA. This species of lizard basks on sunny rocks and logs to maintain a preferred body temperature (28 - 36°C). During the winter, they hibernate in crevices among rocks or buried in the soil. The Great Lakes/St. Lawrence/Southern Shield population can be found underneath rocks on open bedrock in forests.

Snapping Turtle (*Chelydra serpentina*) is listed as “Special Concern” by SARO and is not protected under the ESA. Snapping Turtles spend most of their lives in water. They prefer shallow waters so they can hide under the soft mud and leaf litter, with only their noses exposed to the surface to breathe. During the nesting season, from early to mid summer, females travel overland in search of a suitable

nesting site, usually gravelly or sandy areas along streams. Snapping Turtles often take advantage of man-made structures for nest sites, including roads (especially gravel shoulders), dam and aggregate pits.

Plants

Ogden's Pondweed (*Potamogeton ogdenii*) is listed as "Endangered" by SARO and is protected under the ESA. This species is described as a submerged plant with branching, string-like stems and narrow greenish-brown leaves 5 cm to 7 cm long. It prefers clear, slow-moving streams, beaver ponds and lakes.

Appendix C

Species List

Species List

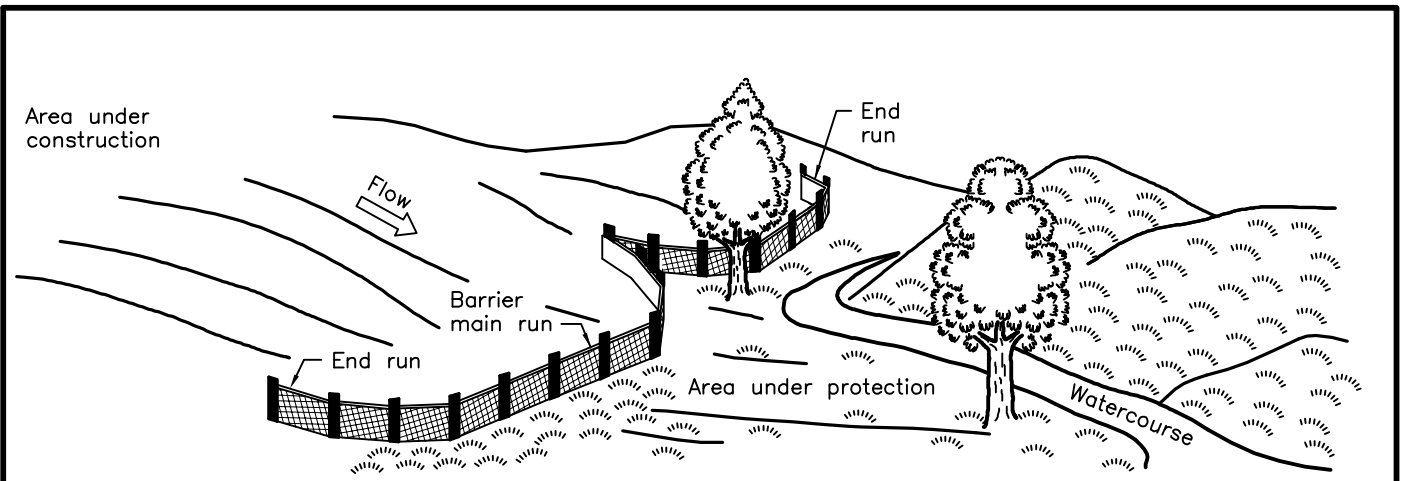
KINGDOM	Common Name	Scientific Name	SARO	SARA
Animalia	American Goldfinch	Spinus tristis		
	American Redstart	Setophaga ruticilla		
	American Robin	Turdus migratorius		
	Black-capped Chickadee	Poecile atricapillus		
	Blue Jay	Cyanocitta cristata		
	Bluegill	Lepomis macrochirus		
	Cedar Waxwing	Bombycilla cedrorum		
	Common Grackle	Quiscalus quiscula		
	Common Loon	Gavia immer	NAR	
	Common Merganser	Mergus merganser		
	Common Tern	Sterna hirundo	NAR	
	Eastern Chipmunk	Tamias striatus		
	Eastern Cottontail	Sylvilagus floridanus		
	Eastern Elliptio	Elliptio complanata		
	Eastern Fishing Spider	Dolomedes scriptus		
	Eastern Phoebe	Sayornis phoebe		
	European Starling	Sturnus vulgaris		
	Fox Squirrel	Sciurus niger		
	Hairy Woodpecker	Dryobates villosus		
	Largemouth Bass	Micropterus salmoides		
	Logperch	Percina caprodes		
	Northern Cardinal	Cardinalis cardinalis		
	Northern Flicker	Colaptes auratus		
	Northern Raccoon	Procyon lotor		
	Northern Spreadwing	Lestes disjunctus		
	Pumpkinseed	Lepomis gibbosus		

KINGDOM	Common Name	Scientific Name	SARO	SARA
	Red-breasted Merganser	Mergus serrator		
	Rock Bass	Ambloplites rupestris		
	Yellow-rumped Warbler	Setophaga coronata		
Plantae				
	Alternate-leaved Dogwood	Cornus alternifolia		
	American Beech	Fagus grandifolia		
	American Eelgrass	Vallisneria americana		
	Basswood	Tilia americana		
	Blue Cohosh	Caulophyllum thalictroides		
	Blue-stemmed Goldenrod	Solidago caesia		
	Bracken Fern	Pteridium aquilinum		
	Broad-leaved Helleborine	Epipactis helleborine		
	Canada Goldenrod	Solidago canadensis		
	Common Bugloss	Anchusa officinalis		
	Common Burdock	Arctium minus		
	Common Dandelion	Taraxacum officinale		
	Common Hornwort	Ceratophyllum demersum		
	Common Lilac	Syringa vulgaris		
	Common Oak Fern	Gymnocarpium dryopteris		
	Common Plantain	Plantago major		
	Common Self-heal	Prunella vulgaris		
	Common Speedwell	Veronica officinalis		
	Common St. John's-wort	Hypericum perforatum		
	Common Yarrow	Achillea millefolium		
	Eastern Hop-hornbeam	Ostrya virginiana		
	Eastern White Cedar	Thuja occidentalis		
	Eastern White Pine	Pinus strobus		
	Ground-ivy	Glechoma hederacea		
	Hard Fescue	Festuca trachyphylla		
	Heart-leaved Aster	Symphotrichum cordifolium		

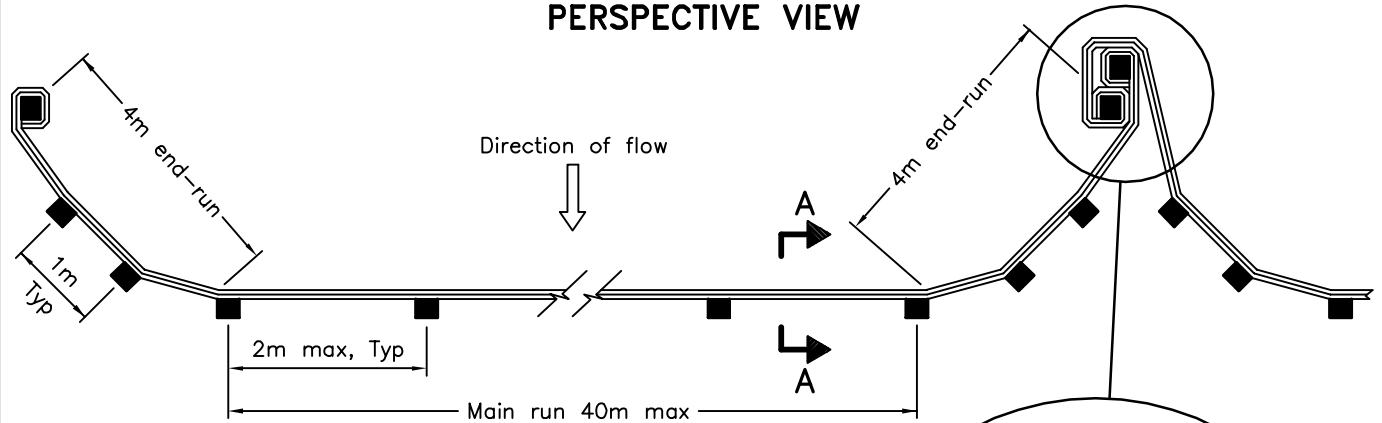
KINGDOM	Common Name	Scientific Name	SARO	SARA
	Large-toothed Aspen	<i>Populus grandidentata</i>		
	Northern Red Oak	<i>Quercus rubra</i>		
	Paper Birch	<i>Betula papyrifera</i>		
	Red Maple	<i>Acer rubrum</i>		
	Staghorn Sumac	<i>Rhus typhina</i>		
	Sugar Maple	<i>Acer saccharum</i>		
	Tuberous White Water-lily	<i>Nymphaea odorata</i> ssp. <i>tuberosa</i>		
	White Ash	<i>Fraxinus americana</i>		
	Wild Lily-of-the-valley	<i>Maianthemum canadense</i>		
	Wild Sarsaparilla	<i>Aralia nudicaulis</i>		
	Woolly Blue Violet	<i>Viola sororia</i>		
	Yellow Violet	<i>Viola pubescens</i>		
	Zigzag Goldenrod	<i>Solidago flexicaulis</i>		

Appendix D

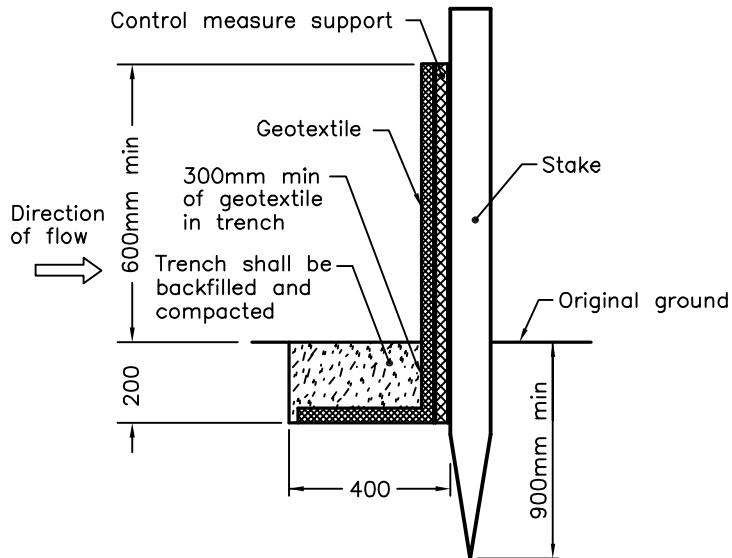
OPSD Heavy-duty Silt Fence



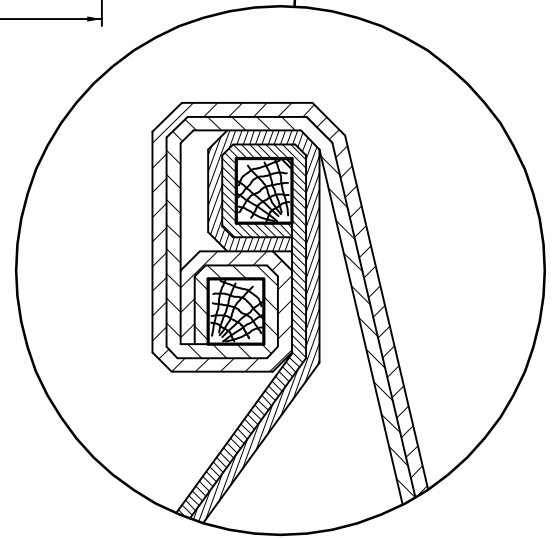
PERSPECTIVE VIEW



PLAN



SECTION A-A



JOINT DETAIL

NOTE:

A All dimensions are in millimetres unless otherwise shown.

ONTARIO PROVINCIAL STANDARD DRAWING		Nov 2015	Rev 2	
<p style="text-align: center;">HEAVY-DUTY SILT FENCE BARRIER</p>		-----		
		<p style="text-align: center;">OPSD 219.130</p>		