



Jp2g Ref No. 18-7048A

June 25, 2019
(Revised December 4, 2019 and May 19, 2020)

Cameron Young
3144 9th Line Road
Carleton Place, ON K7C 3P2
613-297-4568
3144young@gmail.com

Attention Cameron Young

**Re: Environmental Impact Study (EIS) – Young Subdivision
Part Lot 3, Concession 8, Township of Beckwith, County of Lanark.
Our File No. 18-7048A.**

The purpose of this report is to provide details regarding Species at Risk (SAR) and their potential habitat on the subject lands in support of a subdivision application for the property. In addition to potential SAR concerns, natural heritage features on and surrounding the subject lands are also assessed. The location of the subject lands is shown on Map 1. This report also addresses the Environmental Impact Assessment criteria outlined in Section 4.6.8 4) of the Township of Beckwith Official Plan.

Site Context

The subject lands are located to the west of Ninth Line, a municipally maintained road on Mississippi Lake at civic address 3160 Ninth Line, within Part of Lot 3, Concession 8 in the Township of Beckwith, County of Lanark. The subject lands are approximately 24.3 acres (9.8 hectares) in land area and have about 430.8 metres of road frontage on Ninth Line and a total of approximately 205.9 metres of split water frontage on Mississippi Lake as shown on Map 2.

The subject lands are designated as Rural Lands on Schedule A to the Township of Beckwith Official Plan and a portion of lands along the shoreline of the Mississippi Lake are designated as Floodplain on Schedule B to the Township of Beckwith Official Plan. The subject lands are zoned Rural (RU) on Schedule "A" to the Township of Beckwith Zoning By-law No. 91-14, as amended by By-law No. 2015-020.

The subject lands are currently farmland with some hedgerows along the shoreline of Mississippi Lake as well as the existing laneways and Dalton Lane (a private road) which provides access to a few existing adjacent waterfront residential lots along Mississippi Lake. A farmhouse and large shed are also located on the subject lands. The property owner advises that these buildings will be demolished in September. Land use in the vicinity of the subject lands as shown on Map 1 includes vacant woodlands, fields and existing residential uses along Ninth Line to the east, fields and existing residential uses along Mississippi Lake to the south and north, and Mississippi Lake to the west.

Description of Proposed Development

The subdivision proposal consists of three (3) waterfront residential lots (Lots 4-6), eight (8) rural residential lots (Lots 1 -3 and 7 - 11), and two (2) blocks. The existing Dalton Lane on the subject lands will be severed as an easement (see Map 2 – Subject Lands). A new internal road (Road 'A') will provide access to the new lots.

The proposed lots will be serviced by private wells and septic systems and are on average approximately 2 acres in size.

Existing Conditions

Site visits to the subject lands were carried out by Bernie Muncaster (Muncaster Environmental Planning Inc.) on May 29, June 6, and June 13, 2019. Shaun St. Pierre (BCH Environmental Consulting Inc.) assisted with the



June 6 site visit. The purpose of these site visits was to complete an existing condition review of the subject lands, a vegetation inventory (including a butternut survey), and to carry out breeding bird, bobolink, eastern meadowlark and barn swallow surveys.

The subject lands primarily consist of fields with some deciduous hedgerows along the laneways and shoreline on the subject lands. A farmhouse and large shed are also located on the subject lands. The topography of the site gently slopes to the west towards Mississippi Lake and sandy loam soils dominate the site. The approximate location of the site features are shown on Map 3.

The fields on the subject lands are considered to be a cultural meadow (CUM). The fields were cultivated but not planted during the May 29, 2019 site visit. The property owner advised on May 29 that the fields would be planted in soybeans when they dry out. During the June 6, 2019 site visit the majority of the fields had been plowed, with all fields ploughed by the June 13, 2019 site visit (Photos 1-6). Vegetation in the fields includes yellow rocket, wormseed mustard, common dandelion, yellow goat's-beard, orchard grass, June meadow grass, timothy, common milkweed, Canada thistle, common brome grass, lesser stitchwort, common strawberry, purple loosestrife, Canada goldenrod, common mullein, hoary alyssum, common mugwort, tufted vetch, and regenerating ash stems.

Deciduous hedgerows (Photos 7-9) are present along the laneways and shoreline on the subject lands. White ash and trembling aspen are dominant, with Manitoba maple, white elm, basswood, sugar maple, green ash, and black cherry well represented in areas. Many of the ash trees are damaged by emerald ash borer and had greatly reduced leaf-out. Many of the white elm also showed reduced leaf-out. Most trees are in the 25cm to 35cm diameter at breast height (dbh) range with a 50cm Manitoba maple at the east end of the laneway west of Ninth Line and white ash up to 55cm dbh to the southwest along the laneway. The hedgerows along the shoreline have a greater conifer component including two mature white pine trees (65cm and 70cm dbh, Photo 9) and white cedar trees up to 38cm dbh.

Common buckthorn, tartarian honeysuckle and red raspberry shrubs were common among the hedgerow trees with, apple, hawthorn, chokecherry, grey dogwood, staghorn sumac, and red-osier dogwood also present, along with regenerating ash, white elm, and poplar stems. Ground flora associated with the hedgerows includes common burdock, garlic mustard, thicket creeper, periwinkle, poison ivy, and white bedstraw.

Woody vegetation around the central farmhouse included white spruce and Manitoba maple up to 44cm and 36cm dbh respectively and smaller white cedar trees. Common lilac shrubs were also among the trees.

Regenerating white and green ash are thick in a small adjacent area to the northwest portion of the centre field. Planted sugar maple, red oak, white spruce, red pine, and red maple stems up to 18cm dbh are also present in this adjacent area. Tartarian honeysuckle and common buckthorn shrubs are present among the young tree stems along with white bedstraw, reed canary grass, common brome grass, June meadow grass, yellow goat's-beard, common dandelion, common burdock, heart-leaved aster, tufted vetch, red clover, and common strawberry.

In terms of other adjacent vegetation communities, the deciduous hedgerows continue along the shoreline of Mississippi Lake to the north and south of the site and around the periphery of the existing severance. The adjacent hedgerows are dominated by white ash and white elm up to 45cm and 35cm dbh respectively, with black cherry, green ash, and trembling aspen also present. Staghorn sumac, tartarian honeysuckle, common buckthorn, chokecherry, and common lilac shrubs are among the adjacent deciduous hedgerow trees.

The contiguous meadow habitats to the north and south were not tilled in June 2019. The grassland avian point counts described in the next section included these adjacent lands. An upland mixed forest is to the east of the site, beginning about 70 metres east of Ninth Line.

Wildlife observed during the site visits to the property included grey squirrel, indigo bunting, eastern phoebe, white-tailed deer tracks, and an active osprey nest on an island about 350 metres into the lake. Other avian observations are included in the breeding bird section below.



Stone piles were noted adjacent to the shoreline at the west edge of the north fields within the shoreline setback and potential wildlife cavities were present in one of the mature white pines along the shoreline, also within the shoreline setback.

Species at Risk

The Kemptville District Species at Risk, Listed by Geographic Township document was reviewed for the species at risk in Beckwith Township which could potentially occur on the site or in proximity to it. Only those species from this list that are considered to have suitable habitat present on or adjacent to the subject lands are described below.

American Eel (Endangered)

American eel could potentially be utilizing Mississippi Lake as habitat. Fish habitat in Mississippi Lake will not be directly impacted as the proposed development will be setback from the highwater mark of Mississippi Lake. Indirect impacts on fish habitat as a result of the proposed development can be mitigated, provided the mitigation measures outlined in this report are properly implemented.

Bald Eagle (Special Concern)

According to the Ministry of Natural Resources and Forestry’s website, bald eagles build their nests in large trees usually near a major lake or river.

Suitable bald eagle habitat is present on the subject lands along Mississippi Lake, however, no bald eagles or their nests were observed during the site visits to the property. As the proposed development activities on the subdivision lands will be located away from Mississippi Lake, the proposed development activities are not anticipated to impact this species if present.

Barn Swallow (Threatened)

The subdivision lands contain two structures. Although no access to the interior was possible, some external rafters could be suitable barn swallow nesting habitat. No barn swallows were observed during the three morning spring site visits carried out at the property.

Bats (Endangered)

Acoustic surveys for bats were not carried out at the subdivision lands as they were not considered to contain suitable high potential maternity roost habitat for bats, due to the lack of cavity trees/snags greater than 25 cm in diameter on the subdivision lands. Potential wildlife cavities were only present in one of the mature white pines along the shoreline (within setback).

Bobolink (Threatened), Eastern Meadowlark (Threatened) and Breeding Birds

Bobolink, eastern meadowlark and breeding bird surveys were carried out at the subject lands on May 29, June 6, and June 13, 2019. The bobolink and eastern meadowlark surveys were carried out as per the Ministry of Natural Resources and Forestry (MNR) methodology in order to determine if bobolink and/or eastern meadowlarks were using the grassed fields on the subject lands as habitat. The breeding bird surveys were carried out according to the Bird and Bird Habitats: Guidelines for Wind Power Projects (Ministry of Natural Resources, December 2011) document.

Ten minutes of passive listening was undertaken at three survey stations, as shown on Map 3. A description of when the surveys were carried out and the weather conditions for each survey date are provided below:

Date	Time	Temperature	Weather Conditions
May 29	8:18 to 8:58 am	15°C	light breeze, mix of sun and cloud with no precipitation
June 6	7:55 to 8:20 am (two observers)	12°C	light breeze, sunny skies with no precipitation
June 13	8:14 to 8:44 am	17°C	light breeze, partly sunny skies with no precipitation

The following bird species were recorded during the ten-minute point counts to be on or in close proximity to the subject lands; American crow, American robin, chipping sparrow, song sparrow, European starling, common grackle, red-winged blackbird, mourning dove, killdeer, Canada goose, turkey vulture, northern flicker, blue jay,



common grackle, common yellowthroat, American goldfinch, black-capped chickadee, northern cardinal and yellow warbler.

No bobolinks, barn swallow, or eastern meadowlarks were observed or heard during the point count surveys.

Two American robin nests were seen on the farmhouse (Photo 10), and one on the outside eaves of the large shed adjacent to the farmhouse. An active eastern phoebe nest was also seen behind the eavestrough on the large shed (Photo 11).

Butternut (Endangered)

The subject lands and adjacent lands are considered to contain suitable habitat for butternut, therefore a butternut survey was carried out on the subject lands during the May 29, 2019 site visit. No butternut trees were observed on or adjacent to the subject lands.

Chimney Swift (Threatened)

The chimneys on the farmhouse are vented with no access to the interior for chimney swift, therefore suitable chimney swift habitat does not exist on the subject lands. No chimney swifts were observed during the site visits to the property.

Turtles

Mississippi Lake could potentially be utilized by Blanding's turtle (threatened), eastern musk turtle (special concern) and/or snapping turtle (special concern) however, no turtles or their nests were observed during the site visits to the property. As the proposed development activities on the subdivision lands will be located on upland habitat at least 30 metres from Mississippi Lake, the proposed development activities are not anticipated to impact any turtle species which may be utilizing Mississippi Lake. Marsh or swamp wetland habitats were not present along the Mississippi Lake shoreline in the vicinity of the site.

Other SAR

Based on a desktop review using available SAR information from the NHIC database on the MNRF's Make a Natural Heritage Map website and Species at Risk lists provided by Kemptville MNRF as well as a site visit to the property, the subject lands do not contain suitable habitat for other SAR species.

Significant Habitat of Endangered and Threatened Species

As the majority of the subject lands and adjacent lands are actively being used as crop land or are developed, the potential for species at risk or their habitat on or adjacent to the subject lands is minimal. There is however potential for American eel (endangered) and Blanding's turtles (threatened) to occur in Mississippi Lake and butternut trees (endangered) could be located on or adjacent to the subject lands. However, none of these species were observed during the site visits to the property and no other SAR are anticipated to occur on or adjacent to the subject lands.

Therefore significant habitat of endangered and threatened species is not considered to be present on the subject lands, but could be present within Mississippi Lake. However, significant habitat of endangered and threatened species if present within Mississippi Lake will not be impacted. as the proposed development on the subject lands will be located away from Mississippi Lake.

Significant Wildlife Habitat

No species of special concern were observed on or adjacent to the subject lands during the site visits to the property. The potential for other species at risk or species of special concern and their habitat on the subject lands and adjacent lands is limited as the majority of the subject lands and adjacent lands are actively being used as crop land or are developed. There is however some potential for other species at risk or species of special concern and their habitat to occur along the shoreline on and adjacent to the subject lands.

The hedgerows along the laneways and shoreline on the subject lands could be used as an animal movement corridor. A 30 metre wide buffer from the highwater mark of Mississippi Lake is recommended to be maintained in a natural state. No vegetation removals within this setback should occur with the exception of a pathway constructed of permeable materials leading to the Lake as well as the limbing of trees to provide for a view of the Lake and the removal of dead or diseased trees. It is also recommended that the vegetation along the laneways on the subject lands are retained in a natural state as possible except for the clearing of portions of



the property to allow for the construction of structures on the proposed lots. Therefore as part of the large rural lots, these wooded corridors will still function as animal movement corridors post development and will continue to provide habitat for species of special concern which may be utilizing the Lake and shoreline treed area as habitat. Significant features such as seasonal concentration areas of animals, rare vegetation communities, specialized habitat for wildlife, are not anticipated to occur on or adjacent to the site.

Fish Habitat

Mississippi Lake is located to the west of the subject lands. To ensure no adverse impacts on the water quality or fish habitat within the Lake occur as a result of the proposed development on the subject lands, all development on the three waterfront lots (Lots 4, 5 and 6) should occur at least 30 metres from the highwater mark of the Lake and the lands within the 30 metre setback should remain in a natural state as possible, with the exception of a meandering pathway constructed of permeable surface materials, and the limbing of dead or diseased trees, to provide a view of the Lake. Woody vegetation should be allowed to regenerate in the current open portions of the setback areas where a pathway is not present.

A watercourse is located on adjacent lands to the south of the subject lands, however, the proposed development on the subject lands will be greater than 30 metres from this watercourse. Therefore, there will be no adverse impacts on the water quality or fish habitat, if any, within this watercourse as a result of the proposed development on the subject lands.

Other Significant Features

Based on a review of available data sources including LIO data and the Make a Natural Heritage Map website as well as the field review, no other features such as significant woodlands, wetlands, valleylands, or Areas of Natural and Scientific Interest (ANSI's) are located on or in close proximity (within 120 metres) of the subject lands.

Conclusion

The recommendations from this study are intended to mitigate potential impacts arising from the future development of this property and should be implemented through the subdivision agreement between the owners and the Township of Beckwith in order to control development of the site. These recommendations are deemed sufficient to mitigate the potential impacts of the proposed development on the fish habitat within Mississippi Lake as well as the potential significant wildlife habitat located on/adjacent to the subject lands:

1. Nests and eggs of many bird species are protected under federal and/or provincial legislation such as the Migratory Birds Convention Act and the Fish and Wildlife Conservation Act. To protect breeding birds, no tree or shrub removal should occur between May 15th and July 31st, unless a breeding bird survey completed by a qualified biologist within five days of the woody vegetation removal identifies no nesting activity. A similar restriction applies to the removal of the on-site structures, which the owner advises will be demolished in September;
2. A 30.0 metre wide buffer area is to be maintained along the shoreline of Mississippi Lake. This buffer area should be maintained substantially in a natural vegetated state, with the exception of a pathway constructed of permeable surface materials leading to the Lake as well as the limbing of trees to provide for a view of the Lake and the removal of dead or diseased trees. Woody vegetation regeneration is to be encouraged in current open areas of the setback;
3. Vegetation on the subject lands should remain in a natural state as possible, except for the clearing of portions of the property to allow for the construction of structures;
4. The extent of exposed soils is to be kept to a minimum at all times. Re-vegetation of exposed, non-developed areas is to be achieved as soon as possible and should only use locally appropriate native species;
5. An erosion and sediment control plan shall be put in place prior to construction and shall remain in place for the duration of construction activities and until the area has completely stabilized. The erosion and sediment control measures are a critical component of the construction work. Effective sediment and erosion control measures are to be maintained until complete re-vegetation of disturbed areas is achieved. Silt fencing is to be installed along the edges of the



work areas. It is important that fencing is properly dug-in to treat any surface water flow and discourage wildlife in the work areas, and is maintained as required, including removal of accumulated sediment;

6. Additional mitigation measures to minimize the potential for inputs of sediments and other contaminants into the Lake and the environment in general include proper maintenance on construction equipment with respect to refuelling, washing and fluid changes, and proper disposal of fluids, filters and other waste materials. None of this work should take place within 30 metres of any surface water features;
7. Emergency spill kits will be located on site. The crew will be fully trained on the use of clean-up materials in order to minimize impacts of any accidental spills. The area would be monitored for leakage and in the unlikely event of a minor spillage the project manager would halt the activity and corrective measures would be implemented. Any spills would be immediately reported to the MECP Spills Action Centre (1800 268-6060); and
8. Municipal by-laws and provincial regulations for noise will be followed and utilities will be located as required in the vicinity of the site prior to construction.

Should you have any questions, please do not hesitate to contact our office.

Yours truly,

Jp2g Consultants Inc.
Engineers • Planners • Project Managers

**Muncaster Environmental
Planning Inc.**

Bryana Musson, B.Sc. (Hons.)
Biologist | Planner

Bernie Muncaster, M.Sc., Principal



Photo 1 - Middle field looking west to deciduous hedgerow adjacent to the shoreline of Mississippi Lake
(June 6, 2019)



Photo 2 - Middle field looking south to existing severance from point count 1 in the middle of the field
(June 6, 2019)



Photo 3 - North field looking west from point count 2 along the north edge of the property (June 6, 2019)



Photo 4 - Meadow to the north of the north site edge and point count 2. View looking north (June 13, 2019)



Photo 5 - South field looking west from point count 3 in the middle of the field
(June 6, 2019)



Photo 6 - South field looking north to farmhouse from point count 3
(May 29, 2019)



Photo 7 - Deciduous hedgerow along the south edge of the north field.
View looking northwest (June 6, 2019)



Photo 8 - White elm in deciduous hedgerow along laneway off Ninth Line in the north-central portion of the site.
View looking north (May 29, 2019)



Photo 9 - Mature white pine along Mississippi Lake shoreline to the west of the south field.
View looking northwest (May 29, 2019)



Photo 10 - Robin's nest on west side of farmhouse
(June 6, 2019)



Photo 11- Large shed to the northeast of the farmhouse.
View looking north (June 13, 2019)



References

J.L. Richards & Associates Limited. August 25, 2015. Township of Beckwith Zoning By-law No. 91-14. J.L. Richards & Associates Limited.

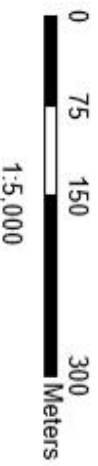
J.L. Richards & Associates Limited. Approved November 15, 1989. Office Consolidation Official Plan of the Township of Beckwith. J.L. Richards & Associates Limited.

Ministry of Natural Resources and Forestry. 2016. Bald Eagle. Ministry of Natural Resources and Forestry. <https://www.ontario.ca/page/bald-eagle>

Ministry of Natural Resources and Forestry, Kemptville District. November 2018. Kemptville District Species at Risk, Listed by Geographic Township.



NOTES:
 1. Map Layers Obtained from LIDAR
 2. All Photos Obtained from Aerial Imagery



Map 1
Site & Surrounding
Land Use

Jp2g Consultants Inc.
 ENGINEERS • PLANNERS • PROJECT MANAGERS

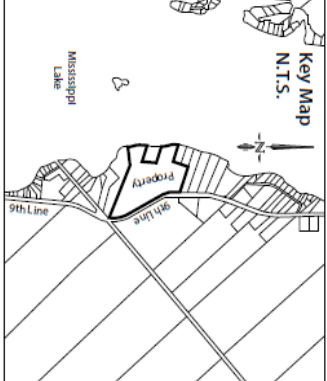
Date: June 2019

Project No. 18-7048A

Map 1: Site and Surrounding Land Use

Young Subdivision Concept

3160 Ninth Line Beckwith
 Part Lot 3, Concession 8
 Parts 1 - 3, 27R-2652, Parts 1 & 2,
 27R-2874, Part 1, 27R-9676
 Township of Beckwith
 COUNTY OF LANARK

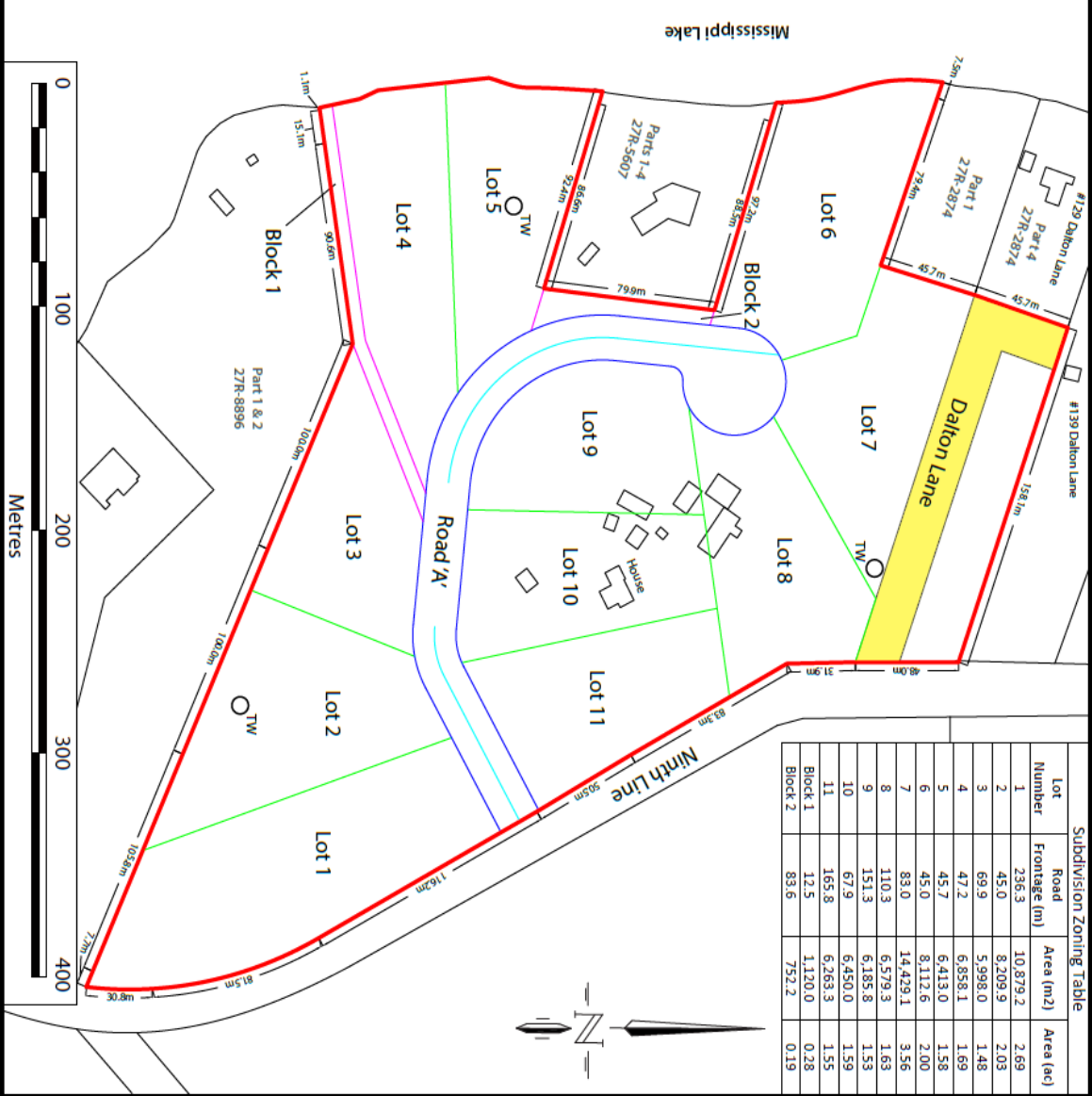


- Legend**
- Proposed Easement
 - Subdivision Boundary
 - Right-of-Way / Edge of Road
 - Road Centreline
 - Lot Lines
 - Block Lines
 - TW Test Wells

Notes:

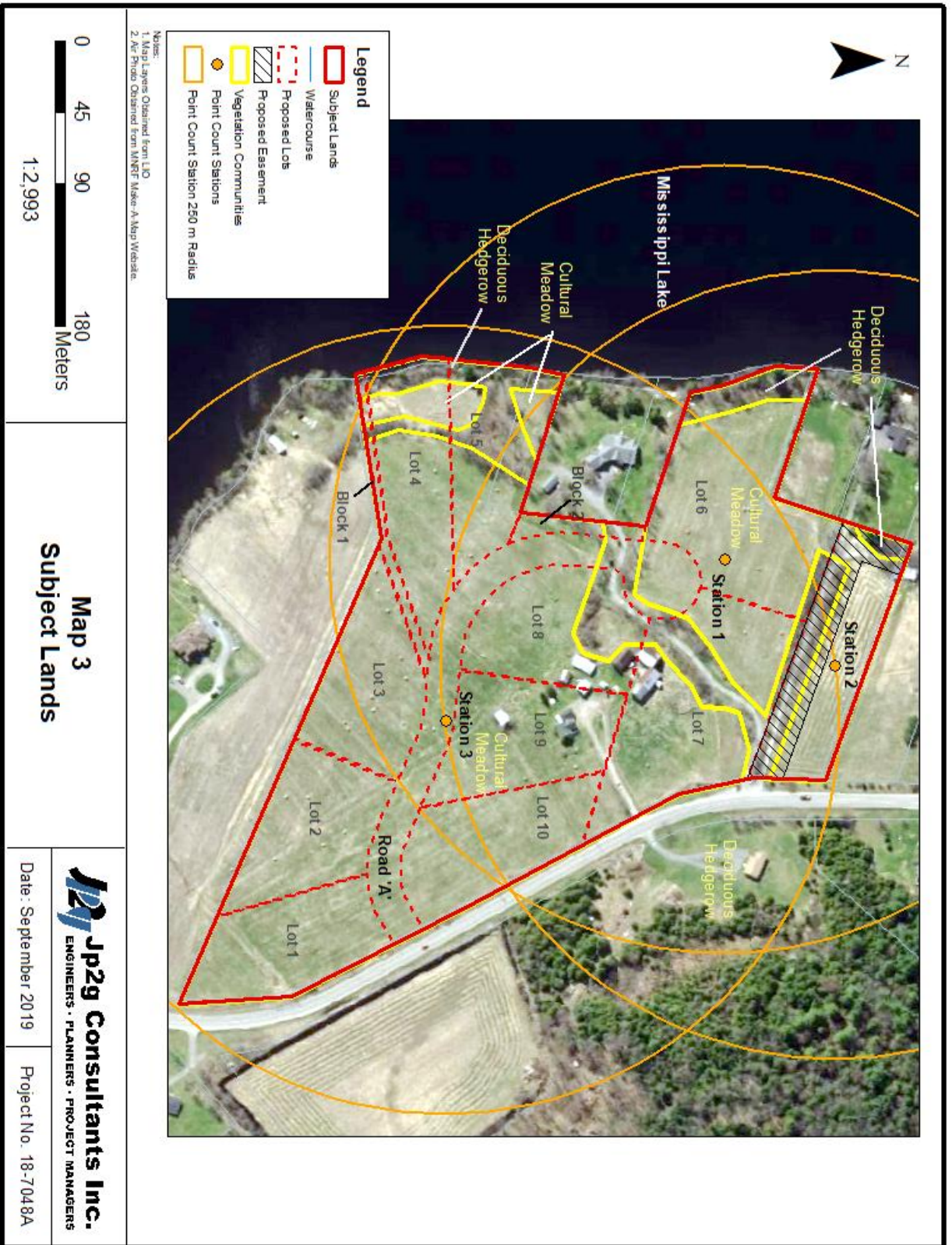
1. The proposed easement is to protect the access for those lots fronting on Mississippi Lake which currently use Dalton Lane for road access.
2. Block 2 will form an addition onto the proponents property, described as Parts 1 - 4 on 27R-5607.
3. Boundary and dimensions of the subject property derived in part from Plan 27R-2652, Plan 27R-2874, Plan 27R-4439, Plan 27R-5607 and Plan 27R-8896 with some dimensions approximated using aerial photography.

ZONDERPLAN
 Your rural land planning experts
 Version Date: February 18, 2020



Subdivision Zoning Table			
Lot Number	Road Frontage (m)	Area (m ²)	Area (ac)
1	236.3	10,879.2	2.69
2	45.0	8,209.9	2.03
3	69.9	5,998.0	1.48
4	47.2	6,858.1	1.69
5	45.7	6,413.0	1.58
6	45.0	8,112.6	2.00
7	83.0	14,429.1	3.56
8	110.3	6,579.3	1.63
9	151.3	6,450.0	1.59
10	67.9	6,263.3	1.55
11	165.8	6,263.3	1.55
Block 1	12.5	1,120.0	0.28
Block 2	83.6	752.2	0.19

Map 2: Young Subdivision Concept



JP2g Consultants Inc.
 ENGINEERS • PLANNERS • PROJECT MANAGERS

Date: September 2019

Project No. 18-7048A