

May 22, 2018

Brian Zeman
MHBC Planning Urban Design and Landscape Architecture
113 Collier Street
Barrie, ON
L4M 1H2

**Re: Application for Licence under the Aggregate Resources Act (ARA)
Class 'A' Licence, Category 2 Quarry
2287 Bay Lake Road: Part of Lots 51 and 52, Concession W.H.R.
Township of Faraday, County of Hastings**

Dear Mr. Zeman,

Thank you for your email dated April 3, 2018 which included a copy of your May 23, 2017 email; Letter from Robin Craig providing a response to MNRF's comments; and Report from Riverstone Environmental Solutions Inc. regarding the Pale-bellied Frost Lichen Survey. Staff of the Ministry of Natural Resources and Forestry (MNRF), Bancroft District, have reviewed this information and acknowledge that the objections raised in our letter dated April 3, 2017 will be addressed as follows:

Licence Area

Currently the existing Class 'B' Licence (#624804) overlaps with this Class 'A' quarry application. A new site plan for the existing Class 'B' Licence will need to be submitted in order to amend the boundary and remove the overlapping portion contained within Lot 52. Upon receiving this new site plan the existing licence will be amended to reflect the correct location information, which will then allow the Class 'A' quarry application to proceed. Freymond Lumber Limited will submit these new site plans to Paul Shalla, MNRF Aggregate Specialist to resolve this overlap.

Significant Habitat of Endangered and Threatened Species

Our office is in agreement with the recommendations within the Report from Riverstone Environmental Solutions Inc. regarding the Pale-bellied Frost Lichen Survey, dated July 20, 2017.

Also our office acknowledges that a survey will not be required for endangered bat species provided the site plans are updated to prohibit tree removal between April 1 and October 15.

Significant Wildlife Habitat (SWH)

Our office is in agreement with the SWH response / clarification provided in the “Letter from Robin Craig providing a response to MNRF’s comments, including Appendix 1 Significant Wildlife Habitat Analysis for Freymond Quarry Proposal”.

Fish Habitat

It is acknowledged that the applicant will provide our office with details regarding proposed mitigation measures related to fish habitat, and confirmation that the project will be consistent with the Fisheries Act.

Site Plans

The proposed Site Plan notes provided in the “Letter from Robin Craig providing a response to MNRF’s comments” are acceptable. Please include these proposed invasive species; planting plan; and list of species notes on the revised site plans.

If you have any questions or comments, please do not hesitate to contact me at trevor.harris@ontario.ca.

Sincerely,



Trevor Harris
District Planner
MNRF, Bancroft District

c.c. Graham Cameron, Management Biologist – MNRF
Jesse Van Allen, Resources Operations Supervisor – MNRF
Paul Shalla, Aggregate Technical Specialist - MNRF

April 3, 2018

Ms. Margaret Berube
District Planner
Ministry of Natural Resources and Forestry
Box 500, 106 Monck Street
Bancroft, ON K0L 1C0

Dear Ms. Berube:

RE: Application for Licence under the Aggregate Resources Act (ARA)
Class A Licence, Category 2 Quarry
2287 Bay Lake Road: Part of Lots 51 and 52, Concession W.H.R.
Township of Faraday, County of Hastings
OUR FILE 1515B

Thank you for your letter dated April 3, 2017 regarding the Freymond quarry application. Further to my email of May 23, 2017 (attached), please find enclosed:

- Letter from Robin Craig providing a response to MNRF's comments; and
- Report from Riverstone Environmental Solutions Inc. regarding the Pale-bellied Frost Lichen Survey.

As noted in Robin Craig's letter, the applicant is completing additional consultation with DFO and this information will be provided to MNRF upon completion.

Once MNRF has an opportunity to review the attached documents we would appreciate an opportunity to meet with MNRF to discuss proposed revisions to the site plans to incorporate changes as a result of the attached documents.

If you have any questions, please do not hesitate to call.

Yours truly,

MHBC



Brian Zeman, BES, MCIP, RPP
President

cc. *Paul Shalla, MNRF*
Lou Freymond, Freymond Lumber
Moreen Miller, Fowler Construction

From: Brian Zeman
Sent: May-23-17 11:37 AM
To: 'Margaret.Berube@ontario.ca'
Cc: 'Bev Wicks'; 'Robin Craig'; Patrick Townes; 'Lou Freymond'; 'Moreen Miller'; 'James Gordon'; 'carson@freymondlumber.ca'; 'Becky Freymond'; 'Dan Freymond'
Subject: RE: Freymond Lumber Ltd. Quarry Licence Application

Good morning Margaret

Thank you for your letter dated April 3, 2017 regarding the Freymond Quarry application. As a follow up to your letter, members of the project team have contacted MNRF staff and I wanted to provide you with an update.

1. License Area: Lou Freymond emailed Paul Shalla on April 27, 2017 requesting that Lot 52 be removed from the Class B licence and the licence be updated to correct the property description (Concession E.H.R. instead of W.H.R).
2. Significant Habitat of Endangered and Threatened Species:
 - a) Pale-bellied Lichen - Riverstone Environmental has spoken to MNRF staff and has completed the required surveys for Pale-bellied Frost Lichen; and
 - b) SARS Bats - - Riverstone Environmental has spoken to MNRF staff and since receipt of the letter it is understood that MNRF no longer requires a survey for this site provided the site plans are updated to prohibit tree removal between April 1 and October 15 and a letter is provided by Riverstone Environmental confirming that in their professional opinion that if this mitigation is implemented there will be no impacts to bats or bat habitat.
3. Ecological Land Classification: Robin Craig has discussed this with MNRF staff and it was agreed that a community typing has been included in the Natural Environment Report and is to a level that will allow for the application of the Significant Wildlife Habitat Guidelines. Mapping is not necessary because the vegetation community is uniform over a large area including the site.
4. Significant Wildlife Habitat (SWH): Robin Craig has spoken with MNRF staff and has agreed to format the SWH information and analysis into the table provided by MNRF.
5. Fish Habitat: Robin Craig has spoken to MNRF staff and we will provide MNRF an explanation on how this application fits into the DFO Self Assessment process and address MNRF's suggested mitigation measures.
6. Site Plans: MHBC will update the site plans to address MNRF's comments including any changes that result from the above noted items.

We appreciate the time MNRF staff spent with the project team to discuss their comments and once all of the information has been prepared we will circulate to MNRF for review.

Regards,
Brian Zeman

Robin Craig, Environmental Consultant
3092 Old Second South
Midhurst, ON, L9X 1P7
February 27, 2018

Mr. L. Freymond
Freymond Lumber Ltd.
15-2287 Bay Lake Road
RR # 1 Bancroft, ON
K0L 1C0

Re: Response to OMNRF Comments

Dear Mr. Freymond;

This letter is in response to the comments made by the Ontario Ministry of Natural Resources and Forestry in a letter regarding the Natural Environment Technical Report (NETR) for the proposed Freymond Quarry dated April 3, 2017. The response will specifically address comments made regarding “Significant Wildlife Habitat (SWH)” and the “Site Plan”. This response will not address “Significant Habitat of Endangered and Threatened Species”, which will be addressed in a report by Riverstone Environmental Solutions or “Fish Habitat”, which will be addressed in reports by MTE Consultants Inc. and Riverstone Environmental Solutions INC.

Significant Wildlife Habitat (SWH)

OMNRF Concern: “We will require that the Ecological Land Classification (ELC) and mapping be conducted and provided. We will also require that the attached spreadsheet ‘Significant Wildlife Habitat Review – 5E’ be completed and provided to demonstrate the appropriate analysis for the presence/absence to candidate and confirmed SWH.”

Response: To clarify the requirements of the requests for additional information regarding Significant Wildlife Habitat (OMNRF letter dated April 3, 2017) 2 conversations were completed with OMNRF Bancroft district staff. The first was a conference call on April 20, 2017 that included R. Craig, B. Wicks (biologist, Riverstone Environmental Solutions) and G. Cameron (OMNRF Biologist). The second call was on April 24, 2017 between R. Craig and M. Berube (OMNRF Planner).

OMNRF requested that Ecological Land Classification (ELC) surveys and mapping be conducted and provided. After conversations with staff, OMNRF agreed that Ecological Land Classification (ELC) community typing has been completed and was included in the Natural Environment Report to a level that will allow application of the Significant Wildlife Habitat Guidelines. Additional surveys were not deemed necessary. Additional mapping is not necessary because the vegetation community in which the site is located covers a large area of the local landscape and greatly exceeds the boundaries of the site.

The site is located in Site District 5E9 within ecosite ES27.1 as described in the “Field Guide to Forest Ecosystems of Central Ontario” (Ministry of Natural Resources SCSS Field Guide FG-01 November 1997, Chambers, B. A. et. al.). This was reported in Section 5.3 of the Natural Environment Report dated November 2016 (NETR) that accompanied the application. The entire site is forested and the community consists of Hard Maple – 50 %, Poplar – 20 %, White Birch – 10 % and White Pine – 10 %. The current age is about 85 to 90 years. The soils are sandy and drainage is good. Selective logging for the nearby mill has occurred regularly on the site for many years.

The ecosite ES27 was used when analysing the site for Significant Wildlife Habitat. The results are presented in the attached spreadsheet (Appendix 1). Only one Significant Wildlife Habitat was confirmed on the site. That is habitat for the avian species of concern, Eastern Wood-Pewee. This species prefers to nest and forage along forest edge habitat. Most of the site and adjacent lands are currently forested with the only edge occurring along the east boundary of the site. This is where the Wood-Pewee was found during breeding season surveys. As the phases of the quarry are cleared, forest edge along the different phases and the site boundaries will be created. This will increase the available nesting and foraging habitat for Wood-Pewee over the life of the quarry. Progressive rehabilitation of the site to forest will also create additional forest edge in time. To protect Eastern Wood-Pewee nesting, brood rearing and foraging habitats during the critical spring and summer periods, the following mitigation will be included on the site plans.

- To minimize the short term impact of forest removal on wildlife, vegetation clearing will be conducted in phases over time in anticipation of future extraction needs.
- No removal of vegetation or clearing land will occur from April 1 to October 15.

The dates have been extended from the dates proposed in the NETR to also protect at risk bat species during their reproductive season.

Therefore, there will be no negative impact to Significant Wildlife Habitat for the species of concern, Eastern Wood-Pewee.

Site Plans

OMNRF Concern #1 “detail the measures that will be undertaken to prevent the introduction and spread of invasive species”

Response: Proposed invasive species notes to be included on the site plans.

Invasive Species - General

- All disturbed areas of the licence will be surveyed annually by an experienced professional to determine if individual or colonies of invasive species including the following listed invasive species have become established;
Common Buckthorn (*Rhamnus cathartica*) and **Glossy Buckthorn** (*Frangula alnus*)
Dog-strangling Vine (*Cynanchum rossicum*)
Garlic Mustard (*Alliaria petiolata*)
Japanese Knotweed (*Polygonum cuspidatum*)
Phragmites or Common Reed (*Phragmites australis subsp. australis*)
Giant Hogweed (*Heracleum mantegazzianum*)
- If an individual or colony of any of the above listed invasive species is found within the licence area the individual or colony will be eradicated. The eradication method and/or methods will be determined and implemented by an experienced professional and may include manual, mechanical and/or chemical means.
- Copies of “Clean Equipment Protocol for Industry, Inspecting and cleaning equipment for the purposes of invasive species prevention by Halloran, Joe, Anderson, Hayley and Tassie, Danielle. 2013. Clean Equipment Protocol for Industry. Peterborough, Stewardship Council and Ontario Invasive Plant Council. Peterborough, ON. Printed April 2013 Updated May 2016. Peterborough, Ontario” will be present on the site at all times.
- Operational staff will receive invasive species training and will be familiarized with the above document and the recommended procedures.

Invasive Species - Equipment and Vehicles

- Procedures described in the “Clean Equipment Protocol” listed above will be followed.
- All equipment and vehicles entering the licence area will be inspected by a trained, designated person and cleaned if necessary.
- If an individual or colony of invasive species are found established on the licence area all equipment and vehicles leaving the site will be inspected and cleaned if necessary.
- Inspection will consist of searching the equipment or vehicle thoroughly inside and out for dirt, plant material and seeds that may be lodged or adhering to interior and exterior surfaces, especially the underside of the equipment or vehicle, radiators, spare tires, foot wells, bumper bars and by removing all easily removed guards, covers or plates.
- If clods of dirt, seed or other plant material are found adhered to the equipment or vehicle, the equipment or vehicle will be moved to a designated area at least 30 m from a watercourse and cleaned.

- Cleaning will begin at the top of the equipment or vehicle and worked downward.
- Cleaning will include knocking off large clods of dirt with an appropriate device, using compressed air on radiators and grills and finally high pressure water equipment. A stiff brush or other device will be used in combination with high pressure water. Emphasis will be placed on the undersides, wheels, wheel arches, guards, chassis, engine bays, radiator, grills, and other attachments. When the cleaning is finished the equipment or vehicle will not be driven through the resultant waste water.
- For equipment such as water trucks that may be exposed to aquatic invasive species, trucks will be disinfected with bleach solution before conducting work in a new area.

OMNRF Concern # 2 “revise the planting plan to include a greater diversity of tree species”

Response: Proposed planting plan notes to be included on the site plans.

- The planting of Phase 1 lands will be implemented by an experienced professional after determining the site conditions and the appropriate seeding rates
- The quarry floor in Phases 2, 3 and 4 will be planted with a cover crop of Oats. This will be followed by planting tree seedlings including Red Pine, Eastern White Pine, Red Oak and Sugar Maple. White Spruce seedlings will be considered for moist soil areas. All these species are currently found on the site.
- All tree planting will implemented by an experienced professional who will, after assessing the site conditions and determining appropriate species, develop planting plans.
- Plantings will be in nodes of about 900 sq m and each will include the four above mentioned tree species. The nodes will be placed in a linear a crossing pattern to provide forested connectivity to adjacent lands. Spaces between the nodes will allow for re-naturalization of native shrubs and tree species from adjacent forest areas.
- Talus slopes will be created at the base of quarry faces by backfilling 2:1 side slopes with on site materials. These slopes will be planted in nodes with tree seedlings of the above described species and native shrubs such as Red Elderberry (*Sambucus racemosa*).
- All tree and shrub plantings will receive regular tending during the first growing season after planting.
- Tending will consist of the installation and maintenance of tree guards around deciduous tree seedlings to protect the seedlings from rodents. Trees and shrub seedlings will be watered during drought or low rainfall periods

- All tree and shrub plantings will be monitored each year for five years after planting to assess survival. A stocking rate of 60 % after five years will be considered successful.
- Dead trees and shrubs will be replaced as required to ensure the area succeeds to a forest community.
- Logs, stumps and rocks will be placed among the nodes to increase habitat diversity and encourage wildlife to distribute plant reproductive material from nearby areas.

OMNRF Concern #3 “Include a list of species to be included in the Grass/Legume Area”

Response: Proposed list of species notes to be included on the site plans.

- The quarry floor of Phase 1 will be vegetated with a grass/forb mixture which will include the following native and non-invasive, non-native species, subject to availability, substitutions may be required;
 - Oat (*Avena fatua*) for a cover crop along with
 - Perennial Rye (*Lolium perenne*)
 - Canada Wild Rye (*Elymus canadensis*)
 - White Clover (*Trifolium repens*)
 - Common Milkweed (*Asclepias syriaca*)
 - New England aster (*Symphiotrichum novae-angliae*)
 - Goldenrod (*Solidago sp.*)

Conclusion:

I believe this response addresses the concerns raised by OMNRF regarding Significant Wildlife Habitat and the Site Plans as it relates to the Natural Environment Technical Report for proposed Freymond Quarry application.

Respectively submitted;

Robin E. Craig BSc., MSc.,
 Certified Wildlife Biologist, Environmental Consultant

APPENDIX 1

<u>Significant Wildlife Habitat Analysis for Freymond Quarry Proposal</u>						
<u>Wildlife Habitat</u>	<u>Wildlife Species</u>	<u>ELC Ecosite Codes</u>	Habitat Criteria and Information Sources	Candidate SWH? Yes or No. Provide Rationale	SWH Defining Criteria. State Criteria that Apply.	Confirmed? Yes or No with Rationale
<u>Seasonal Concentration Areas of Animals</u>						
Waterfowl Stopover and Staging Areas (Terrestrial)	American Black Duck, Wood Duck, Green-winged Teal, Blue-winged Teal, Mallard, Northern Pintail, Northern Shoveler, American Wigeon, Gadwall	G060-062, G077-079, G093-095, G109-111 - plus evidence of annual spring flooding from melt water or run-off.	Fields with sheet water during Spring (mid March to May). Fields flooding during spring melt and run-off provide important invertebrate foraging habitat for migrating waterfowl. Agricultural fields with waste grains are commonly used by waterfowl, these are not considered SWH unless they have spring sheet water available.	Candidate - No. Listed ecosites not present on or within 120 m of the site.		

Waterfowl Stopover and Staging Areas (Aquatic)	Canada Goose, Cackling Goose, Snow Goose, American Black Duck, Northern Pintail, Northern Shoveler, American Wigeon, Gadwall, Green- winged Teal, Blue-winged Teal, Hooded Merganser, Common Merganser, Lesser Scaup, Greater Scaup, Long-tailed Duck, Surf Scoter, White- winged Scoter, Black Scoter, Ring-necked duck, Common Goldeneye, Bufflehead, Redhead, Ruddy Duck, Red-breasted Merganser, Brant, Canvasback, Ruddy Duck	G142-G152	Ponds, marshes, lakes, bays, coastal inlets, and watercourses used during migration. Sewage treatment ponds and storm water ponds do not qualify as a SWH, however a reservoir managed as a large wetland or pond/lake does qualify.	Candidate - No. Listed ecosites not present on or within 120 m of the site.		
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<p>Shorebird Migratory Stopover Area</p>	<p>Greater Yellowlegs, Lesser Yellowlegs, Marbled Godwit, Hudsonian Godwit, Black- bellied Plover, American Golden-Plover, Semipalmated Plover, Solitary Sandpiper, Spotted Sandpiper, Semipalmated Sandpiper, Pectoral Sandpiper, White-rumped Sandpiper, Baird's Sandpiper, Least Sandpiper, Purple Sandpiper, Stilt, Sandpiper , Short-billed Dowitcher, Red- necked, Phalarope Whimbrel, Ruddy Turnstone, Sanderling, Dunlin</p>	<p>G005-G006 G160-G162 G170-G172 G176-G178 G186-G188 G204-G214</p>	<p>Shorelines of lakes, rivers and wetlands, including beach areas, bars and seasonally flooded, muddy and un-vegetated shoreline habitats. Great Lakes coastal shorelines, including groynes and other forms of armour rock lakeshores, are extremely important for migratory shorebirds in May to mid-June and early July to October. Sewage treatment ponds and storm water ponds do not qualify as a SWH.</p>	<p>Candidate - No. Listed ecosites not present on or within 120 m of the site.</p>		
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Raptor Wintering Area	<p>Rough-legged Hawk, Long-eared Owl, Boreal Owl, Northern Saw-whet Owl</p> <p>Special Concern: Short-eared Owl</p>	<p>Combination of meadow/field and forest/woodland ecosites. Need to have a forest</p> <p>ELC Ecosite : G011-G019 G023-G028 G033-G043 G048-G059 G064-G076 G081-G092 G097- G108 G113-G125</p> <p>or</p> <p>Central Ontario FEC Ecosites ES11 – ES35</p> <p>And A meadow/field ELC Ecosite: G020-022 G029-032 G044-047 G060-063 G077-080 G093-096 G109-112</p>	<p>The habitat provides a combination of fields and woodlands that provide roosting, foraging and resting habitats for wintering raptors.</p> <p>Raptor wintering sites need to be > 20 ha with a combination of forest and upland.</p> <p>Least disturbed sites, idle/fallow or lightly grazed field/meadow (>15ha) with adjacent woodlands</p> <p>Field area of the habitat is to be wind swept with limited snow depth or accumulation.</p>	<p>Candidate - No. Listed ELC ES27-1 Ecosite present but not adjacent to a meadowland ecosite.</p>		
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<p>Bat Hibernacula</p>	<p>Big Brown Bat Tri-colored Bat</p>	<p>Bat Hibernacula may be found in association with components of cliffs and rock talus in these ELC Ecosites; G158-G159 G164 G180-G181 Calcareous bedrock is fairly rare in ecoregion 5E. Or Central Ont. FEC: ES4 ES5 (Note: buildings are not considered to be SWH)</p>	<p>Hibernacula may be found in caves, mine shafts, underground foundations and Karsts. Active mine sites are not SWH. The locations of bat hibernacula are relatively poorly known.</p>	<p>Candidate - No. Listed ELC Ecosite(s) not present. Caves, mine shafts underground foundations or Karsts not present on or within 120 m.</p>		
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<p>Bat Maternity Colonies</p>	<p>Big Brown Bat Silver-haired Bat</p>	<p>Maternity colonies considered SWH are found in forested Ecosites. ELC Ecosites: G016-G019 G028 G040-G043 G055-G059 G070-G076 G088-G092 G103- G108 G118-G125 or: Central Ontario Forest Ecosites: ES14 ES17 ES18 ES23 ES24 ES25 ES26 ES27 ES28 ES29 ES30</p>	<p>Maternity colonies can be found in tree cavities, vegetation and often in buildings</p> <p>xxxix (buildings are not considered to be SWH).</p> <p>Maternity roosts are not found in caves and mines in Ontario</p> <p>Maternity colonies located in Mature (dominant trees > 80yrs old) deciduous or mixed forest stands</p> <p>ccv with >10/ha large diameter (>25cm dbh) wildlife trees</p> <p>Female Bats prefer wildlife trees (snags) in early stages of decay, class 1-3 or class 1 or 2</p> <p>Silver-haired Bats prefer older mixed or deciduous forest and form maternity colonies in tree cavities and small hollows. Older forest areas with at least 21 snags/ha are preferred</p>	<p>Candidate - No. Although the Forest ecosite ES27 is present, surveys confirm the presence of 8 snags (wildlife trees) per ha. SWH criteria requires more than 10 wildlife trees per ha. Big Brown Bats prefer dead trees in early stages of decay (classes 1-3). Only 4 early decay stage trees per ha. were found on the site. Silver-haired Bats prefer older forests and find cover in abandoned woodpecker holes. Although</p>		
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				<p>there is evidence of Pileated Woodpecker probing on some wildlife trees there were no cavities large enough for nesting or bat cover. At least 21 wildlife trees per ha. are required for Silver-haired at SWH.</p>		
<p>Turtle Wintering Areas</p>	<p>Midland Painted Turtle</p> <p>Special Concern: Northern Map Turtle, Snapping Turtle</p>	<p>For Snapping and Midland Painted turtles; ELC Ecosites: G128-G135, G140-G152. For Northern Map Turtle - Open Water areas such as deeper rivers or</p>	<p>For most turtles, wintering areas are in the same general area as their core habitat. Water has to be deep enough not to freeze and have soft mud substrates.</p> <p>Over-wintering sites are permanent water bodies, large wetlands, and bogs or fens with adequate Dissolved Oxygen cix,</p>	<p>Candidate - No. Listed ELC ecosite(s) not present on or within 120 m.</p>		

		streams and lakes with current can also be used as over-wintering habitat.	Man-made ponds such as sewage lagoons or storm water ponds should not be considered SWH.			
Reptile Hibernaculum	<p>Snakes: Eastern Gartersnake Northern Watersnake N. Red-bellied Snake Brownsnake Smooth Green Snake Ring-necked Snake</p> <p>Special Concern: Milksnake Eastern Ribbonsnake Five-lined Skink</p>	<p>For all snakes, habitat may be found in any forested ecosite in central Ontario other than very wet ones. Talus, Rock Barren, Crevice and Cave, and Alvar sites may be directly related to these habitats. The existence of rock piles or slopes, stone fences, and crumbling foundations assist in identifying candidate SWH. For Five-lined Skink; Central Ontario Forest Ecosites: ES14.2, ES17 – ES20, ES23 – ES30</p>	<p>For snakes, hibernation takes place in sites located below frost lines in burrows, rock crevices and other natural or naturalized locations. The existence of features that go below frost line; such as rock piles or slopes, old stone fences, and abandoned crumbling foundations assist in identifying candidate SWH. Areas of broken and fissured rock are particularly valuable since they provide access to subterranean sites below the frost line</p> <p>Wetlands can also be important over-wintering habitat in conifer or shrub swamps and swales, poor fens, or depressions in bedrock terrain with sparse trees or shrubs with sphagnum moss or sedge hummock ground cover.</p> <p>Five-lined skink prefer mixed forests with rock outcrop openings providing cover rock overlaying granite bedrock with fissures</p>	<p>Candidate - No. For snakes, no rock piles or slopes, old stone fences, or abandoned crumbling building foundations present. No areas of broken and fissured rock present. No wetlands present. For Five-lined Skinks, although ecosite ES27 is present there are no rock outcrops or fissures present.</p>		

		Or; ELC Ecosites: G056-G059 G070-G076 G087-G092 G103-G108 G118-G125				
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<p>Colonially-Nesting Bird Breeding Habitat (Bank and Cliff)</p>	<p>Cliff Swallow Northern Rough-winged Swallow (this species is not colonial but can be found in Cliff Swallow colonies)</p>	<p>Eroding banks, sandy hills, borrow pits, steep slopes, sand piles, cliff faces, bridge abutments, silos, barns. Habitat found in the following ELC Ecosites: G001-G004 G007-G008 G020-G021 G029-G031 G044-G046 G060-G062 G077-G079 G093-G095 G109-G111 G173-G175 G201-G203 G210-G212</p>	<p>Any site or areas with exposed soil banks, sandy hills, borrow pits, steep slopes, and sand piles that are undisturbed or naturally eroding that is not a licensed/permitted aggregate area.</p> <p>Does not include man-made structures (bridges or buildings) or recently (2 years) disturbed soil areas, such as berms, embankments, soil or aggregate stockpiles.</p> <p>Does not include a licensed/permitted Mineral Aggregate Operation.</p>	<p>Candidate – No. Listed avian species not present.</p> <p>Eroding banks, sandy hills etc. not present.</p> <p>Listed ELC Ecosite(s) not present on or within 120 m.</p>		
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<p>Colonially-Nesting Bird Breeding Habitat (Trees/Shrubs)</p>	<p>Great Blue Heron Black-crowned Night Heron</p>	<p>ELC Ecosites: G064-G076 G081-G092 G097-G108 G113-G125 G128-G136 Central Ontario Forest Ecosites: ES11.2 ES12.2 ES13.2 ES14.2 ES15.2 ES16.2 ES17.2 ES18.2 ES19.2 ES20.2 ES21.2 ES23.2 ES24.2 ES25.2 ES26.2 ES27.2 ES28.2 ES29.2 ES30.2 ES31 ES32 ES33 ES34 ES35</p>	<p>Nests in live or dead standing trees in wetlands, lakes, islands, and peninsulas. Shrubs and occasionally emergent vegetation may also be used.</p> <p>Most nests in trees are 11 to 15 m from ground, near the top of the tree.</p>	<p>Candidate - No. Ecosite not present on or within 120 m of the site.</p>		
<p>Deer Yarding Areas</p>	<p>White-tailed Deer</p>	<p>May be found in all Tall Treed forest and</p>	<p>Deer wintering areas or winter concentration areas (yards) are areas deer move to in response to</p>	<p>Candidate - Yes. Listed ELC ES27-1</p>	<p>.</p>	<p>Confirmed - No: OMNRF has not</p>

		<p>swamp ELC Ecosites; G12-G15 G23-G27 G33-G38 G48-G54 G64-G69 G81-G87 G97-G103 G113-G118 G128-G129 Central Ontario Forest Ecosites: ES11 ES14 ES16.....ES18 ES20 ES21 ES22 ES27 ES28 ES30 ES31 ES32 ES33 ES34 Note: OMNRF to determine this habitat.</p>	<p>the onset of winter snow and cold. This is a behavioural response and deer will establish traditional use areas. The yard is composed of two areas referred to as Stratum I and Stratum II. Stratum II covers the entire winter yard area and is usually a mixed or deciduous forest with plenty of browse available for food. Agricultural lands can also be included in this area. Deer move to these areas in early winter and generally, when snow depths reach 20 cm, most of the deer will have moved here. If the snow is light and fluffy, deer may continue to use this area until 30 cm snow depth. In mild winters, deer may remain in the Stratum II area the entire winter.</p> <p>The Core of a deer yard (Stratum I) is located within Stratum II and is critical for deer survival in areas where winters become severe. It is primarily composed of coniferous trees (pine, hemlock, cedar, spruce) with a canopy cover of more than 60%</p> <p>OMNRF determines deer yards following methods outlined in "Selected Wildlife and Habitat Features: Inventory Manual"</p> <p>Woodlots with high densities of deer due to artificial feeding are not significant.</p>	<p>ecosite present.</p>		<p>determined or mapped any deer yards to be present on or within 120 m of the site</p>
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Beach/Beach Ridge/Bar/Sand Dunes	<p>Central Ontario FEC: ES1 ES2 ELC Ecosites: G005-G006 G166-G168 G182-G184 G213-G214 Indicator Spp. Marram Grass (<i>Ammophila breviligulata</i>) Beach Pea (<i>Lathyrus japonicus</i>)</p>	<p>Vegetation can vary from patchy and barren to tree cover but less than 60%. Characterized by unstable sand.</p>	<p>Any identified beach, beach ridge, or sand dune. Information Sources • OMNR Planner, Forester, Ecologist or Biologist may be aware of locations. • Local Naturalist clubs • Conservation Authorities • County soil maps (sand map units along coastal bays).</p>	<p>Candidate - No. Listed ecosites not present on or within 120 m of the site.</p>		
Shallow Atlantic Coastal Marsh	<p>ELC Ecosites: G143-G145 G148-G152 Indicator Spp.: Virginia Meadow-beauty (<i>Rhexia virginica</i>) Other Associated Spp: <i>Rhynchospora capitellata</i>, <i>Xyris difformis</i>, <i>Panicum spretum</i>, <i>Triadenum virginicum</i>, <i>Polygonum careyi</i> and <i>Juncus militaris</i>.</p>	<p>Shallow marsh occurs on shallow mineral (sand) or mineral organic (sandy peat) shoreline subject to low wave energy, on inland lakes and beaver ponds particularly those that experience fluctuating water levels from year to year (i.e. some years with exposed shorelines in summer</p>	<p>Information Sources • NHIC database • Local naturalist clubs • Nature Serve Canada</p>	<p>Candidate - No. Ecosite not present on or within 120 m of the site.</p>		

Cliffs and Talus Slopes	<p>ELC Ecosites: G158-G159 G166-G168 G173G175G182 -G184 G201-G203 Central Ontario Forest Ecosites: ES6 ES7 Characteristic flora for cliffs and talus slopes include: lichen, such as Rock Tripe <i>Umbilicaria</i> spp., and ferns <i>Polypodium virginianum</i>, <i>Cystopteris fragilis</i> and <i>Woodsia ilvensis</i>, <i>Cryptogramma stelleri</i>, <i>Woodsia alpina</i>, and <i>Saxifraga paniculata</i></p>	<p>Vegetation can vary from patchy and barren to tree cover but less than 60%. Cliffs and talus slopes in 5E are primarily Precambrian rock and are typically sparsely vegetated.</p>	<p>Any cliff or talus slope. Information Sources • OMNR Planner, Forester, Ecologist or Biologist maybe aware of locations. • NHIC will have information on known locations. • Local Naturalist clubs • Conservation Authorities</p>	<p>Candidate - No. Ecosite not present on or within 120 m of the site.</p>	.	
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Rock Barren	<p>ELC Ecosites: G163-G165 G179-G181 Central Ontario Forest Ecosites: ES8 Characteristic flora for Rock Barrens include: lichens <i>Cladina</i> spp. and mosses <i>Polytrichum</i> spp.), sparse grasslands of <i>Danthonia</i> <i>spicata</i> and <i>Deschampsia</i> <i>flexuosa</i>, low shrubs (<i>Juniperus</i> <i>communis</i>, <i>Vaccinium</i> <i>angustifolium</i>, <i>Comptonia</i> <i>peregrina</i>, and stunted open grown trees <i>Quercus alba</i>, <i>Quercus rubra</i> and <i>Pinus</i> <i>strobus</i>. Also, <i>Pteridium</i> <i>aquilinum</i>, <i>Aralia</i> <i>hispida</i>, <i>Spiranthes</i> <i>casei</i>, <i>Saxifraga</i> <i>virginiensis</i>, <i>Gaylussacia</i></p>	<p>Vegetation can vary from patchy and barren to tree cover but less than 60%. Rock barrens are characterized by extensive areas of exposed granitic rock bedrock sparsely vegetated.</p>	<p>Any rock barren area greater than 1 ha. Information Sources • OMNR Planner, Forester, Ecologist or Biologist may be aware of locations. • NHIC will have information on known locations. Local Naturalist clubs • Conservation Authorities • County soil maps will show these as bedrock with sparse soil map units.</p>	<p>Candidate - No. Listed ecosites not present on or within 120 m of the site.</p>		
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	<i>baccata</i> , <i>Corydalis</i> <i>sempervirens</i> , <i>Prunus</i> <i>pensylvanica</i> , and <i>Comandra</i> <i>umbellata</i> .					
Sand Barren	ELC Ecosites: G007 G215 Central Ontario Forest Ecosite: ES10 Characteristic plant species of sand barrens in 5E include: <i>Cladina</i> <i>spp.</i> , <i>Carex</i> <i>houghtoniana</i> , <i>Carex merritt-</i> <i>fernaldii</i> , <i>Comptonia</i> <i>peregrina</i> , <i>Rubus</i> <i>flagellaris</i> , <i>Selaginella</i>	Sand Barrens typically are exposed sand, generally sparsely vegetated and caused by lack of moisture, periodic fires and erosion. They have little or no soil and the underlying rock protrudes through the surface. Usually located within other types of natural habitat such as forest or	Any sand barren area no minimum size. Information Sources • OMNR Planner, Forester, Ecologist or Biologist may be aware of locations. • Local Naturalist clubs • Conservation Authorities	Candidate - No. Ecosite not present on or within 120 m of the site.		

	<i>rupestris</i> , and <i>Viola labradorica</i> , <i>Polygonella articulata</i> , and <i>Stipa spartea</i> .	savannah. Vegetation can vary from patchy and barren to tree covered but less than 60%.				
Alvar	Southern Ontario ELC Ecosites: ALO1 ALS1 ALT1 FOC1 FOC2 CUM2 CUS2 CUT2-1CUW2 Central Ontario Forest Ecosites on very shallow soils: ES13.1 ES14.1 ES16.1 ES21.1 ES9 5E Alvar Plant Indicator species: <i>Penstemon hirsutus</i> , <i>Panicum</i>	An alvar is typically a level, mostly unfractured calcareous bedrock feature with a mosaic of rock pavements and bedrock overlain by a thin veneer of soil. The hydrology of alvars may be complex, with alternating periods of inundation and drought. Vegetation cover varies from sparse lichen-moss associations to grasslands and shrublands and comprising a	An Alvar site > 0.5 ha in size lxxv. Information Sources • Alvars of Ontario (2000), Federation of Ontario Naturalists ^{xxvi} . • Ontario Nature – Conserving Great Lakes Alvars. • Natural Heritage Information Centre. • OMNR Ecologists or Biologists. • Local Naturalist clubs. • Conservation Authorities.	Candidate - No. Listed ecosites not present on or within 120 m of the site.		

	<p><i>philadelphicum,</i> <i>Scutellaria</i> <i>parvula,</i> <i>Rhus</i> <i>aromatica,</i> <i>Monarda</i> <i>fistulosa,</i> <i>Senecio</i> <i>pauperculus</i></p>	<p>number of characteristic or indicator plant. Undisturbed alvars can be phyto- and zoo-geographically diverse, supporting many uncommon or are relict plant and animal species. Vegetation cover varies from patchy to barren with a less than 60% tree cover</p>				
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<p>Old Growth Forest</p>	<p>Long-lived forest spp. within these Central Ontario Forest Ecosites: ES11 ES12 ES14 ES20 ES21 ES22 ES23 ES24 ES25 ES26 ES27 ES28 ES29 ES30 or; ELC Ecosites: G011-G15 G017-G018 G023 G027 G033 G036 G039-G042 G048 G051 G054-G058 G064 G066 G069 G071-G075 G081 G084 G087 G089-G091 G103 G105-G107 G113 G115 G118 G120-G124</p>	<p>Old Growth forests are characterized by exhibiting the greatest number of old-growth characteristics, such as mature forest with large trees that has been undisturbed. Heavy mortality or turnover of over-storey trees resulting in a mosaic of gaps that encourage development of a multi-layered canopy and an abundance of snags and downed woody debris.</p>	<p>Stands 30 ha or greater in size or with at least 10 ha interior habitat assuming 100 m buffer at edge of forest. Information Sources • OMNR Forest Resource Inventory mapping • OMNR Forester, Ecologist or Biologist • Local Naturalist clubs • Conservation Authorities • Sustainable Forestry Licence (SFL) companies will possibly know locations through field operations.</p>	<p>Candidate - Yes. The forest on the site and including adjacent lands is 30 ha or greater in size and contains at least 10 ha or interior habitat more than 100 m from an edge.</p>	<p>Confirmed - No. The dominant tree species of the site are about 80 years old. The site has been logged on a regular basis to supply material for the adjacent mill</p>
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Bog	ELC Ecosites: G126 G137-G138	Bogs are nutrient-poor, acid peatlands dominated by peat mosses (<i>Sphagnum</i> sp.), ericaceous shrubs and sedges (<i>Cyperaceae</i>). The water table is at or near the surface in spring and slightly lower the remainder of the year and is virtually isolated from mineral soil waters	Any size Bog. Information Sources • Ontario wetland Evaluation System available at OMNR District Offices • OMNR ecologist or biologist may be aware of locations. • NHIC has information on known locations. • Local Naturalist clubs. • Conservation Authorities.	Candidate - No. Listed ecosites not present on or within 120 m of the site.		
Tallgrass Prairie	Southern ELC Ecosites: TPO1 TPO2 Central Ontario Ecosite: ES10 Indicator Spp. <i>Andropogon gerardii</i> and <i>Spartina pectinata</i> Characteristic Spp. <i>Bromus kalmii</i> , <i>Ceanothus herbaceus</i> , <i>Lechea intermedia</i> , <i>Monarda</i>	Tallgrass Prairie is an open vegetation with less than < 25% tree cover, and dominated by prairie species, including grasses.	Tallgrass Prairie is an open vegetation with less than < 25% tree cover, and dominated by prairie species, including grasses.	Candidate - No. Listed ecosites not present on or within 120 m of the site.		

	<i>fistulosa,</i> <i>Penstemon</i> <i>hirsutus,</i> <i>Polygala</i> <i>polygama,</i> <i>Rudbeckia hirta,</i> <i>Sorghastrum</i> <i>nutans, Viola</i> <i>fimbriatula,</i>					
Savannah	Southern ELC Ecosites: TPS1 TPS2 TPW1 TPW2 CUS2	A Savannah is related to tallgrass prairie, but includes trees, which vary from 25 – 60% canopy cover. The open areas between the trees are dominated by prairie species, while forest species are found beneath the tree canopy.	No minimum size to site Site must be restored or a natural site. Information Sources • Natural Heritage Information Centre. • OMNR Ecologists and Biologists. • Local Naturalists clubs. • Conservation Authorities.	Candidate - No. Listed ecosites not present on or within 120 m of the site.		

<p>Rare Forest Type - Red Spruce</p>	<p>ELC Ecosites: G036 G051 G066 G084 G086 G100 G102 G116 G117 Central Ontario Forest Ecosites: ES 30.1 ES 30.2</p>	<p>Red Spruce is a valued wildlife cover tree. Historically red spruce was much more abundant than it is now within the Ecoregion 5e forests.^{ccxiii} Red spruce is a shade tolerant conifer that evolved within tolerant hardwood forests^{ccxiii}. Red spruce grows best in a cool, moist climate. It will grow in shallow, till soils (ave. of 46 cm) and may grow on sites unfavourable for other species such as organic soils over rock, steeper slopes, and wet bottomlands, although poorly drained sites will inhibit growth.</p>	<p>No minimum size to stand. Information Sources • OMNR Forester, Ecologist or Biologist may be aware of locations. • Local Naturalist clubs • Conservation Authorities</p>	<p>Candidate - No. Listed ecosites not present on or within 120 m of the site.</p>		
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Rare Forest Type - White Oak	White Oak ELC Ecosites: G017 G041 G057 G072 G090 G106 G121 Central Ont. FEC: ES 14.1 ES14.2	White oak is a valued wildlife mast producing tree. The mast produced by the white oak tree is often preferred over the more common red oak acorn. Forest stands containing white oak trees are uncommon in the Great Lakes St. Lawrence Forest.	No minimum size to stand.	Candidate - No. Listed ecosites not present on or within 120 m of the site.		
<u>Specialized Habitat for Wildlife</u>						
Waterfowl Nesting Area	American Black Duck Northern Pintail Northern Shoveler Gadwall Blue-winged Teal Green-winged Teal Wood Duck Hooded Merganser Common Merganser Red-breasted Merganser Mallard Canada Goose	All upland habitats located adjacent to these wetland ELC Ecosites are Candidate SWH: G129-G135 G142-G152 Note: includes adjacency to provincially Significant Wetlands	A waterfowl nesting area extends 120 m ^{cxlix} from a wetland (> 0.5 ha) or a cluster of 3 or more small (<0.5 ha) wetlands within 120 m of each individual wetland where waterfowl nesting is known to occur ^{cxlix} . • Upland areas should be at least 120 m wide so that predators such as raccoons, skunks, and foxes have difficulty finding nests. • Wood Ducks, Bufflehead, Common Goldeneye and Hooded Mergansers utilize large diameter trees (>40cm dbh) in woodlands for cavity nest sites. Information Sources • Ducks Unlimited staff may know the locations of particularly	Candidate - No. Listed ecosites not present on or within 120 m of the site.		

	American Widgeon Bufflehead Common Goldeneye		productive nesting sites. <ul style="list-style-type: none"> • OMNR Wetland Evaluations for indication of significant waterfowl nesting habitat. • EIS reports and other studies prepared by CA's. 			
Bald Eagle and Osprey Nesting, Foraging and Perching Habitat	Osprey Special Concern Bald Eagle	Forest communities directly adjacent to riparian areas – rivers, lakes, ponds and wetlands	Nests are associated with lakes, ponds, rivers or wetlands along forested shorelines, islands, or on structures over water. Osprey nests are usually at the top a tree whereas Bald Eagle nests are typically in super canopy trees in a notch within the tree's canopy. Nests located on man-made objects are not to be included as SWH (e.g. telephone poles and constructed nesting platforms). Information Sources <ul style="list-style-type: none"> • NHIC compiles all known nesting sites for Bald Eagles in Ontario. • MNR values information (LIO/NRVIS) will list known nesting locations • Nature Counts, Ontario Nest Records Scheme data. • OMNR Ecologist or Biologist 	Candidate - No. Habitat not present on or within 120 m of the site. No evidence of use of the area by the listed species.		

			<p>may be aware of locations of nesting raptors. In addition, these staff may know local naturalists that may be aware of the locations of raptor nests.</p> <ul style="list-style-type: none">• Sustainable Forestry Licence (SFL) companies will identify additional nesting locations through field operations.• Check the Breeding Bird Atlas or Rare Breeding Birds in Ontario for species documented• EIS reports and other studies prepared by CA's.• Local naturalists may know of other locations.• Use maps and aerial photographs to identify forests with few roads that tend to have less human disturbance.			
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<p>Woodland Raptor Nesting Habitat</p>	<p>Red-tailed Hawk Great Horned Owl: Broad-winged Hawk Sharp-shinned Hawk Merlin Barred Owl Red-shouldered Hawk Coopers Hawk Northern Goshawk</p>	<p>May be found in all forested ELC Ecosites in Community Class: TR May also be found in the forested swamp ELC Ecosites: G128-G133</p>	<p>All natural or conifer plantation woodland/forest stands ^{lxxxviii, lxxxix, xc, xci, xciii, xciv, xcv,xcvi, cxxxiii.}</p> <ul style="list-style-type: none"> • Stick nests found in a variety of intermediate-aged to mature conifer, deciduous or mixed forests within tops or crotches of trees. Species such as Merlin or Coopers hawk nest along forest edges sometimes on peninsulas or small off-shore islands. • Includes nest sites within tree cavities for Barred Owl and sometime Great Horned Owls and Merlin. • In disturbed sites, nests may be used again, or a new nest will be in close proximity to old nest. <p>Information Sources</p> <ul style="list-style-type: none"> • OMNR Ecologist or Biologist may be aware of locations of nesting raptors. • Sustainable Forestry Licence (SFL) companies will identify additional nesting locations through field operations. • Check the Breeding Bird Atlas or Rare Breeding Birds in Ontario for species documented. • Check data from Bird Studies Canada. • EIS reports and other studies prepared by CA's. • Use maps and aerial photographs to identify forests with few roads that tend to have less human disturbance. 	<p>Candidate - Yes. Site is a forested ecosite.</p>	<p>Confirmed - No. No active nests of the listed species were present on the site. No nest defense evidence by nesting raptors observed during site visits.</p>
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<p>Turtle and Lizard Nesting Areas</p>	<p>Midland Painted Turtle Special Concern Species Northern Map Turtle Snapping Turtle Five-lined Skink</p>	<p>Turtle Nesting areas may be adjacent to these ELC Ecosites: G138 G140-149 For Five-lined Skink; Central Ontario Forest Ecosites: ES14.2, ES17 – ES20, ES23 – ES30Or; ELC Ecosites: G056-G059 G070-G076 G087-G092 G103-G108 G118-G125</p>	<ul style="list-style-type: none"> • Best nesting habitat for turtles are close to water and away from roads and sites less prone to loss of eggs by predation from skunks, raccoons or other animals. • For an area to function as a turtle-nesting area, it must provide sand and gravel that turtles are able to dig in and are located in open, sunny areas. Nesting areas on the sides of municipal or provincial road embankments and shoulders are not SWH. • Sand and gravel beaches adjacent to undisturbed shallow weedy areas of marshes, lakes, and rivers are most frequently used. <p>Information Sources</p> <ul style="list-style-type: none"> • Use Ontario Soil Survey reports and maps to help find suitable substrate for nesting turtles (well-drained sands and fine gravels). • Check the Ontario Herpetofaunal Summary records for uncommon turtles; location information may help to find potential nesting habitat for them. • Use aerial photographs and maps to narrow the search for prime nesting areas including shoreline beaches located near weedy areas of wetlands, lake and river shorelines, road embankments near turtle habitat, and stream crossings/culverts. • Skinks will nest under logs, in stumps or under loose rock in partially wooded areas 	<p>Candidate - No for turtle nesting. Listed ecosites not present on or within 120 m of the site.</p> <p>Yes for Five-lined Skink nesting. Ecosite ES27 is present.</p>	<p>No Five-lined Skink nesting identified in NHIC or other data. and no evidence of Five-lined Skink nesting was observed on or near the site.</p>	<p>Confirmed. No. The site is entirely forested and not "partially wooded" as is preferred by nesting Five-lined Skinks.</p>
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			<ul style="list-style-type: none"> • EIS reports and other studies prepared by CA's. • Sightings by local Naturalist groups 			
Seeps and Springs	<p>Wild Turkey Ruffed Grouse Spruce Grouse Moose White-tailed Deer Salamander spp.</p>	<p>Seeps/Springs are areas where ground water comes to the surface. Often they are found within headwater areas within forested habitats. Any forested Ecosite within the headwater areas of a stream could have</p>	<p>Any forested area (with <25% meadow/field/pasture) within the headwaters of a stream or river system cxvii, cxlix.</p> <ul style="list-style-type: none"> • Seeps and springs are important feeding and drinking areas especially in the winter will typically support a variety of plant and animal species ^{cxix, cxx, cxxi, cxxii, cxiii, cxiv.} <p>Information Sources</p> <ul style="list-style-type: none"> • Topographical Map. • Thermography. • Hydrological surveys conducted 	<p>Candidate - No. No seeps or springs found on or within 120 m of the site.</p>		

		seeps/springs.	<p>by CA's and MOE.</p> <ul style="list-style-type: none"> • Local naturalists and landowners may know some locations. • Municipalities may have drainage maps and headwater areas mapped. 			
Aquatic Feeding Habitat	Moose White-tailed Deer	Habitat may be found in all forested ecosites adjacent to water.	<p>MNR maps these location on Crown land and rates the site on a scale of 0 – 4, with 4 being the best. Feeding sites classed 3 or 4 are potential/candidate significant. Where MAFA habitat is in low supply, class 2 MAFA habitat could also be considered potential/candidate MNR maps these location on Crown land and rates the site on a scale of 0 – 4, with 4 being the best. Feeding sites classed 3 or 4 are potential/candidate significant. Where MAFA habitat is in low supply, class 2 MAFA habitat could also be considered potential/candidate significant Wetlands and isolated embayments in rivers or lakes which provide an abundance of submerged aquatic vegetation such as pondweeds, water milfoil and yellow water lily are preferred sites. Adjacent stands of lowland</p>	Candidate - No. Although the site is forested it is not adjacent to water. No aquatic feeding habitat on site or within 120 m of the site.		

			<p>conifer or mixed woods will provide cover and shade^{cxlviii}. Information Sources</p> <ul style="list-style-type: none"> • Local naturalists and landowners may know some locations. • MNR values information (NRVIS) may list known locations • OMNR Ecologist or Biologist may be aware of locations. • Sustainable Forestry Licence (SFL) companies may identify additional MAFA locations through field operations. • Topographical Maps together with aerial photographs will help locate potential sites. <p>Methods for identification of Moose Aquatic Feeding Areas are outlined in OMNR's Selected Wildlife and Habitat Features: Inventory Manual</p>			
Mineral Licks	Moose White-tailed Deer	Habitat may be found in all forested ecosites.	<p>This habitat component is found in upwelling groundwater and the soil around these seepage areas. It typically occurs in areas of sedimentary and volcanic bedrock. In areas of granitic bedrock, the site is usually overlain with calcareous glacial till^{cxlviii}.</p> <p>Information Sources</p> <ul style="list-style-type: none"> • Local naturalists and landowners may know some locations. • MNR values information (NRVIS) may list known locations • OMNR Ecologist or Biologist may be aware of locations. 	Candidate - No. Although the site is forested, there are no areas of upwelling groundwater. The bedrock is not sedimentary or volcanic but rather granitic. There is no		

			<ul style="list-style-type: none"> • Sustainable Forestry Licence (SFL) companies may identify additional calving locations through field operations. 	calcareous till over lying the granitic bedrock. no mineral licks were found on or within 120 m of the site.		
Denning Sites for Mink, Otter, Marten, Fisher, and Eastern Wolf	Mink Otter Marten Fisher Grey Wolf Special Concern Eastern Wolf	Habitat may be found in all forested ecosites.	<p>Mink prefer shorelines dominated by coniferous or mixed forests with dens usually underground. Mink will sometimes use old muskrat lodges ^{cxlviii}.</p> <p>Otters prefer undisturbed shorelines along water bodies that support productive fish populations with abundant shrubby vegetation and downed woody debris for denning. They often use old beaver lodges or log jams and crevices in rock piles ^{cxlviii}.</p> <p>Marten and fisher share the same general habitat, requiring large tracts of coniferous or mixed forests of mature or older age classes. Denning sites are often in cavities in large trees or under large downed woody debris ^{cxlviii}.</p> <p>Information Sources</p> <ul style="list-style-type: none"> • Local naturalists and landowners may know some locations. • MNR values information (NRVIS) may list known locations • OMNR Ecologist or Biologist 	Candidate - No. Although the site is forested there are no known denning sites on or within 120 m of the site. No evidence of denning sites observed on site.		

			<p>may be aware of locations.</p> <ul style="list-style-type: none">• Sustainable Forestry Licence (SFL) companies may identify additional denning sites through field operations.• Topographical Maps together with aerial photographs will help locate potential sites.• Local trappers may know the location of prime denning sites.			
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<p>Amphibian Breeding Habitat (Woodland)</p>	<p>Eastern Newt Blue-spotted Salamander Spotted Salamander Four-toed Salamander Northern Two-lined Salamander Spring Peeper Wood Frog American Toad</p>	<p>All forested, ELC Ecosites; The wetland breeding ponds (including vernal pools) may be permanent, seasonal, ephemeral, large or small in size and could be located within or adjacent to the woodland lxxii.</p>	<ul style="list-style-type: none"> • Presence of a wetland, lake or pond >500m² (about 25m diameter) ccvii within or adjacent (within 120m) to a woodland (no minimum size) ^{clxxxii, lxiii, lxxv, lxvi, lxvii, lxxviii, lxxix, lxx} The wetland, lake or pond and surrounding forest, would be the Candidate SWH. Some small wetlands may not be mapped and may be important breeding pools for amphibians. • Breeding ponds within the woodland or the shortest distance from forest habitat are more significant because of reduced risk to migrating amphibians and more likely to be used. • Woodlands with permanent ponds or those containing water in most years until mid-July are more likely to be used as breeding habitat ^{cxlvi}. <p>Information Sources</p> <ul style="list-style-type: none"> • Refer to the Ontario Herpetofaunal Summary for historical records. • Local landowners may also provide assistance as they may hear spring-time choruses of amphibians on their property. • Contact local OMNR Ecologist or Biologist and wetland evaluations. • Local field naturalist clubs • Canadian Wildlife Service Amphibian Road Call Survey information. • Ontario Vernal Pool Association (http://www.ontariovernalpools.org/) 	<p>Candidate - Yes. There are 3 woodland ponds on site that are larger than the minimum of 500 sq. m. One pond is 1256 sq. m. located in the central area of the site and the other 2 are about 1500 sq. m. each are located in the southwest edge of the site. In the central pond, 1 egg mass of the Blue-spotted Salamander was found but fewer than 20 Wood Frogs and Spring Peepers were present in each of 2 years of surveys. No amphibians were found</p>	<p>Confirmed - No. Woodland breeding habitat for amphibians is well represented in the area. The low permeability of the granitic bedrock in the area controls groundwater flow by limiting infiltration thus providing abundant amphibian breeding habitat. Therefore the on site woodland ponds are not SWH.</p>
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				at the 2 south-west area ponds.		
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<p>Amphibian Breeding Habitat (Wetlands)</p>	<p>Eastern Newt American Toad Spotted Salamander Four-toed Salamander Blue-spotted Salamander Gray Treefrog Western Chorus Frog Northern Leopard Frog Pickerel Frog Green Frog Mink Frog Bullfrog</p>	<p>ELC Ecosites: G129-G135 G142-G152</p>	<ul style="list-style-type: none"> • Wetlands and pools (including vernal pools) >500m² (about 25m diameter)^{ccvii} isolated from woodland/forest habitat(>120m) supporting high species diversity are significant; some small or ephemeral habitats may not be identified on MNR mapping and could be important amphibian breeding habitats^{clxxxiv}. Amphibians mostly breed in habitats that lack fish. • Presence of shrubs and logs increase significance of pond for some amphibian species because of available structure for calling, foraging, escape and concealment from predators. • Bullfrogs require permanent water bodies with abundant emergent vegetation. <p>Information Sources</p> <ul style="list-style-type: none"> • Ontario Herpetofaunal Summary database. • Canadian Wildlife Service Amphibian Road Surveys and Backyard Amphibian Call Count. • OMNR Ecologist or Biologist may know of populations, wetland evaluations may be a good source of information.. • Use maps or aerial photography to locate marsh habitat. • EIS reports and other studies prepared by CA's. 	<p>Candidate - No. Listed ecosites not present on or with 120 m of the site.</p>		
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<p>Mast Producing Areas</p>	<p>Black Bear White-tailed deer Wild Turkey Ruffed Grouse</p>	<p>ELC Ecosites: G015 G017 G019 G027-G028 G041-G043 G057 G059 G072 G090 G106 G108 G121 Central Ontario Forest Ecosites: ES14 ES17.1 ES23 ES24 ES25 ES26</p>	<p>Most important areas are mature forests >0.5 ha containing numerous large beech and red oak trees that supply the energy-rich mast that wildlife prefer cxlviii. Other significant tree species include hickory, basswood, black cherry, ironwood, mountain ash, pin cherry, and butternut. Significant shrub species include blueberries, wild black berry, serviceberry, raspberry, beaked hazel, choke cherry and hawthorn cxlviii. Sites providing long-term, relatively stable food supplies, forest openings or barrens >1 ha provide excellent sites for mast producing shrubs cxlviii. Sites such as clear-cuts or burns are temporary source of food and are less significant cxlviii.</p> <p>Information Sources</p> <ul style="list-style-type: none"> • OMNR Ecologists, Biologists or Foresters may know of important feeding sites or areas with high composition of mast producing trees. • FRI maps to locate stands with mast producing trees. • SFL companies may know of areas through regular forest inventory work. • Local naturalists clubs or hunters may be aware of important locations.. • Aerial photography will assist in locating forest openings and bedrock outcrops 	<p>Candidate - No. Listed ecosites not present on or within 120 m of the site. Although there are mast producing trees on the site they are few in number.</p>		
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<p>Marsh Bird Breeding Habitat</p>	<p>American Bittern Sora Red-necked Grebe Pie-billed Grebe Redhead Ring-necked Duck Lesser Scaup Ruddy Duck Common Moorhen American Coot Wilson's Phalarope Common Loon Sandhill Crane Green Heron Sedge Wren Marsh Wren Trumpeter Swan Special Concern: Yellow Rail Black Tern</p>	<p>ELC Ecosites: G138-G152 For Green Heron: Above Ecosites plus: G129-G136.</p>	<ul style="list-style-type: none"> • Nesting occurs in wetlands. • All wetland habitat is to be considered as long as there is shallow water with emergent aquatic vegetation present ^{cxxiv}. • For Green Heron, habitat is at the edge of water such as sluggish streams, ponds and marshes sheltered by shrubs and trees. Less frequently, it may be found in upland shrubs or forest a considerable distance from water. <p>Information Sources</p> <ul style="list-style-type: none"> • Contact OMNR, wetland evaluations are a good source of information. • Local naturalist clubs • NHIC Records. • EIS reports and other studies prepared by CA's. • Ontario Breeding Bird Atlas ^{ccv}. 	<p>Candidate - No. Listed ecosites not present on or within 120 m of the site.</p>		
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<p>Open Country Bird Breeding Habitat</p>	<p>Upland Sandpiper Grasshopper Sparrow Vesper Sparrow Northern Harrier Savannah Sparrow Special Concern Short-eared Owl</p>	<p>ELC Ecosites: G008-G009 G020-G021 G029- G031G044-G046 G060-G062 G077-G079 G093-G095 G109-G111</p>	<p>Large grassland areas (includes natural and cultural fields and meadows) >30 ha ^{clx, clxi, clxii, clxiii, clxiv, clxv, clxvi, clxvii, clxviii, clxix}. Grasslands not Class 1 or 2 agricultural lands, and not being actively used for farming (i.e. no row cropping or intensive hay or livestock pasturing in the last 5 years) ^í. Grassland sites considered significant should have a history of longevity, either abandoned fields, mature hayfields and pasturelands that are at least 5 years or older. The Indicator bird species are area sensitive requiring larger grassland areas than the common grassland species. Information Sources</p> <ul style="list-style-type: none"> • Use Agricultural land classification maps with aerial photographs to determine the potential grasslands that might be candidate sites. • Ask local birders for location of grasslands that support abundant and species rich populations of area-sensitive species. • EIS reports and other studies prepared by CA's. 	<p>Candidate - No. Listed ecosites not present on or within 120 m of these site.</p>		
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<p>Shrub/Early Successional Bird Breeding Habitat</p>	<p>Willow Flycatcher Brown Thrasher Blue-winged Warbler Tennessee Warbler Prairie Warbler Eastern Towhee Clay-colored Sparrow Field Sparrow Special Concern: Golden-winged Warbler</p>	<p>ELC Ecosites: G009-G010 G021-G022 G031-G032 G046-G047 G062-G063 G079-G080 G095-G096 G111-G112 G134-G135 Patches of shrub ecosites can be complexed into a larger habitat for some bird species.</p>	<p>Large field areas succeeding to shrub and thicket habitats >30 ha in size. Shrub land or early successional fields, not class 1 or 2 agricultural lands, not being actively used for farming (i.e. no row-cropping, haying or live-stock pasturing in the last 5 years) í. Larger shrub thicket habitats (>30 ha) are most likely to support and sustain a diversity of these species clxxiii. Shrub and thicket habitat sites considered significant should have a history of longevity, either abandoned fields or lightly grazed pasturelands. Information Sources • Use agricultural land classification maps and recent aerial photographs to determine the amount of potential shrub and thicket habitats. • Ask local birders for location of shrub and thicket habitats that support abundant and species rich populations of area-sensitive species. • EIS reports and other studies prepared by CA's.</p>	<p>Candidate - No. Listed ecosites not present on or within 120 m of the site.</p>		
<p>Special Concern and Rare Wildlife Species</p>	<p><i>Rhizocarpon oederi</i> - lichen rare species S2S3</p>		<p><i>Rhizocarpon oederi</i> is a lichen that grows in upland environments on exposed, sedimentary, siliceous rock that is enriched with iron. Information source NHIC.</p>	<p>Candidate - No rock on the site is metamorphic not sedimentary therefore suitable habitat for</p>		

				<p>this species is not present. No <i>Rhizocarpon oederi</i> was observed during surveys.</p>		
	<p>Common Nighthawk - special concern</p>		<p>Common Nighthawks prefer woodland with open area and little of no ground cover, such as logged or burned over areas, forest clearings, rock barrens, peat bogs, lakeshores and mine tailings. Information sources, Species at Risk in Ontario list (SARO) and Ontario Breeding Bird Atlas (OBBA).</p>	<p>Candidate - No. There are few open area on the site that have little or no vegetation. Not identified as occurring on or near the site in NHIC data and no Common Nighthawks were encountered during surveys.</p>		
	<p>Red-headed Woodpecker - special concern</p>		<p>Red-headed Woodpeckers live in open woodlands and edges that include many dead trees for cavity nesting. Information sources SARO and OBBA</p>	<p>Candidate - No. Although there are woodland edges on the site, there are few dead trees. Not identified as occurring on</p>		

				or near the site in NHIC data and no Red-headed Woodpeckers were observed during surveys.		
	Eastern Wood-Pewee - special concern		Eastern Wood-Pewee habitat includes the mid-canopy layer of forest clearings and edges of forest area.	Candidate - Yes. Although there are no forest clearings on the site, the eastern boundary adjacent to the mill yard provides edge habitat suitable for this species. Information sources, field surveys, SARO and OBBA.	Eastern Wood-Pewee were observed calling at least twice during the breeding season.	Confirmed - Yes. Therefore, breeding within the forest edge along the eastern boundary of the site.
	Louisiana Waterthrush - special concern		Louisiana Waterthrush are usually found in steep forested ravines with fast flowing streams. It can also be found in wooded swamps. Information sources SARO and OBBA.	Candidate - No. No preferred habitat on the site. Not identified as occurring on or near the site in OBBA		

				or NHIC data and no Louisiana Waterthrush were observed during surveys.		
	Olive-sided Flycatcher - special concern		Olive-sided Flycatchers are found along forest edges and openings usually adjacent to rivers or wetlands. Information sources, SARO and OBBA.	Candidate - No. Preferred habitat is not available on the site. The only forest edge is on the east boundary adjacent to the lumber mill yard. Nowhere on the site is close to a river or wetlands. Not identified as occurring on or near the site in NHIC data and no Olive-sided Flycatchers were observed during surveys.		

	Wood Thrush - special concern		Wood Thrush are usually found in mature deciduous and mixed forests. It prefers moist forest stands with well developed undergrowth. Information sources, SARO and OBBA,	Candidate - No. Although the site is forested it is not a moist forest. Because of the dense canopy the undergrowth is not well developed. Not identified as occurring on or near the site in NHIC data and no Wood Thrush were observed during surveys.		
	Golden-winged Warbler - special concern		Golden-winged Warbler habitat includes areas near recently disturbed forests. They prefer to nest in areas of young shrubs close to mature forests. Information source SARO and OBBA.	Candidate - No. Although the forest cover on the site is mature there are no shrub areas that would offer suitable nesting habitat nearby. Not identified as occurring on or near the		

				site in NHIC data and no Golden-winged Warblers were observed during surveys.		
	Canada Warbler - special concern		Canada Warbler habitat includes deciduous and coniferous forests that are usually wet and have a well developed and dense shrub layer where they nest. Information source OBBA.	Candidate - No. Although there is forest cover on the site, the site is not wet and the shrub layer is not dense or well developed. Not identified as occurring on or near the site in NHIC data and no Canada Warblers were observed during surveys.		
	Common Five-lined Skink - special concern		Five-lined Skink habitat includes open bedrock areas near moist areas within forested landscapes. Information sources Ontario Reptile and Amphibian Atlas	Candidate - No. the forest canopy on the site is		

			(ORAA)	closed and is dry not moist. There are no open exposed bedrock areas on the site. Not identified as occurring on or near the site in NHIC data and no Five-lined Skinks were observed during surveys.		
<u>Animal Movement Corridors</u>	Monarch - special concern	-	The Monarch occupies a variety of habitats during its life cycle. The caterpillars feed only on milkweed plants and they are confined to meadows and open areas where milkweed grows. The adults can use more diverse habitats but they require food in the form of flower nectar. Again open habitats. Information source, Ontario Butterfly Atlas (OBA).	Candidate - No. The site is entirely forested except for the area at the east boundary which is within the existing mill yard. A few Common Milkweed were found adjacent to the mill yard but no evidence of caterpillar use was		

				observed. A single Monarch was observed on September 9, 2009 but it was considered to be migrating and just passing through the site. Not identified as occurring on or near the site in NHIC information.		
Amphibian Movement Corridors	Blue-spotted Salamander Spotted Salamander Gray Treefrog Spring Peeper Western Chorus Frog Wood Frog Northern Leopard Frog Pickerel Frog Green Frog Mink Frog Bullfrog American Toad	Corridors may be found in all ecosites associated with water. • Corridors will be determined based on identifying the significant breeding habitat for these species in Table 1.1	Movement corridors between breeding habitat and summer ^{habitat} clxxiv, clxxv, clxxvi, clxxvii, clxxviii, clxxix, clxxx, clxxxi . Movement corridors must be determined when Amphibian breeding habitat is confirmed as SWH from Table 1.2.2(Amphibian Breeding Habitat –Wetland) of this Schedule I. Information Sources • MNR District Office. • NHIC. • EIS reports and other studies prepared by CA's • Naturalist Clubs.	Candidate. No. No Significant breeding habitat for the listed species present on or within 120 m of the site.		

Cervid Movement Corridors	White-tailed Deer Moose	Corridors may be found in all forested ecosites .	<p>Movement corridor must be determined when Deer Wintering Habitat is confirmed as SWH from Table 1.1 and Moose Aquatic Feeding Area and Mineral Lick Habitat from Table 1.2.2 of this schedule. í</p> <p>A deer wintering habitat identified by the OMNR as SWH in Table 1.1 of this Schedule will have corridors that the deer use during fall migration and spring dispersion Corridors typically follow riparian areas, woodlots, areas of physical geography (ravines, or ridges). Corridors will be multi-functional i.e. these will function for any smaller mammal species as well.</p> <p>Information Sources</p> <ul style="list-style-type: none"> • MNR District Office. • NHIC. • EIS reports and other studies prepared by CA's. • Naturalist Clubs. 	Candidate. No. No Deer Wintering Habitat from Table 1.1, Moose Aquatic Feeding Area or Mineral Lick Habitat from Table 1.2.2 confirmed on or within 120 m of the site.		
Furbearer Movement Corridor	Mink Otter	All Forested Ecosite Codes adjacent to or within shoreline habitats.	<p>Mink and Otter den sites are typically found within a riparian area of a lake, river, stream or wetland. The den site will potentially have a movement corridor associated with it. All Mink or Otter den sites identified using Table 1.22 of this schedule under the habitat of Denning Sites for Mink, Otter, Marten Fisher and Eastern Wolf are to be considered for an animal movement corridor.</p> <p>Information Sources</p>	Candidate. No. The site is not adjacent to or within shoreline habitats.		

			<ul style="list-style-type: none"> • Local naturalists and landowners may know some locations. • MNR values information (NRVIS) may list known locations • OMNR Ecologist or Biologist may be aware of locations. • Topographical Maps together with aerial photographs will help locate potential sites. • Local trappers may know the location of prime denning sites and movement corridors. 			
<u>Exceptions for EcoRegion 5E</u>						
Eco-District 5E-11 - Rare Forest Types:	Jack Pine Rationale; Uncommon to rare in southern area of Ecoregion 5E.	Jack Pine ELC Ecosites: G012 G023 G034-G035 G049 G065 G068 G082-G083 G098-G099 G114 Central Ont. FEC: ES13.1 ES13.2 ES15.1 ES 15.2	Jack Pine grows best on soils that are sandy, silty or a coarse loam on dry to moist sites	Candidate. No. Listed ecosites not present on or within 120 m of the site.		

<p>Eco-District 5E-13 – Late Winter Moose Habitat</p>	<p>Moose</p>	<p>The preferred ecosites are described in the Field Guide to Forest Ecosystems of Central Ontario ^{ccvi}.</p> <p>ES 16 ES 22 ES 30 ES 33 ES 34 Corresponding ELC Ecosites: G012-G014 G024-G026 G035-G038 G050-G053 G066-G068 G083-G086 G099-G102</p>	<p>Conifer stands >50ha^{cxcv}, dominated by tall trees >10mccvi, on gentle to moderately rugged sites with deep soils. Areas identified as rating 3 or 4 cxcv for late winter moose habitat are Candidate SWH. Information Sources • OMNR Forester, Ecologist or Biologist may be aware of locations. • The Selected Wildlife and habitat Inventory Manual (1998)^{cxcv} outlines the inventory method for Late Winter Moose Habitat.</p>	<p>Candidate. No. Listed ecosites not present on or within 120 m of the site.</p>		
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