



APPENDIX J-3

2012 TERRESTRIAL BASELINE



RAINY RIVER

**RAINY RIVER GOLD PROJECT
2012 TERRESTRIAL BASELINE STUDY**

Submitted by:

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On behalf of:

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**December 2012
TC111504**



November 28, 2012
TC111504

Mr. Kyle Stanfield, P.Eng
Vice President, Environment & Sustainability
Rainy River Resources Ltd.
1111 Victoria Avenue East
Thunder Bay, ON
P7C 1B7

Dear Mr. Stanfield,

AMEC Environment & Infrastructure is pleased to submit the attached 2012 Terrestrial Baseline Study for the Rainy River Gold Project.

The 2012 Baseline Study augments the 2010 Baseline Study conducted by Klohn Crippen Berger and the 2011 study by AMEC Environment & Infrastructure by including surveys in project areas that were not yet mapped.

We greatly appreciate the opportunity to provide support for your Rainy River Gold Project. Should you have any questions regarding the study, please do not hesitate to contact us.

Yours Sincerely,

AMEC Environment & Infrastructure,
a division of AMEC Americas Limited

A handwritten signature in black ink that reads "Matt Evans".

Matt Evans, Ph.D.
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1.0 INTRODUCTION

AMEC Environment & Infrastructure, a division of AMEC Americas Limited (AMEC), was retained by Rainy River Resources Ltd. (RRR) to conduct 2012 terrestrial baseline environmental surveys at the Rainy River Gold Project (RRGP). The RRGP is located in the Township of Chapple, District of Rainy River, in northwestern Ontario, approximately 65 kilometres (km) northwest of Fort Frances, and 420 kilometres west of Thunder Bay (Figures 1 and 2).

Plant and wildlife baseline surveys were carried out for the immediate RRGP site area by Klohn Crippen Berger (KCB) in 2009 and 2010 (KCB 2011a) to support advanced exploration activities. A 2011 gap analysis conducted by AMEC recommended that additional terrestrial baseline studies be carried out to provide greater areal and temporal coverage of the RRGP site to support the Project environmental assessment and permitting phases, including additional information on Species at Risk (SAR). Accordingly, in 2011, AMEC conducted supplementary surveys on birds and amphibians and to a lesser extent on mammals, reptiles and insects (butterflies, dragonflies, damselflies) in the Local Study Area (LSA) (AMEC 2011a). A major focus of all the previous baseline studies, including the AMEC 2011 baseline studies, has been SAR surveys confirming the presence of SAR and their habitats (KCB 2011b, AMEC 2011b, AMEC 2012a).

With development of the RRGP Project Description report (AMEC 2012b) and a proposed Project layout, it was determined that further baseline studies were required for certain Project components whose precise locations had yet to be determined during previous studies. Therefore, additional wildlife and vegetation baseline surveys were conducted in 2012 to further augment the database. This report presents the results of the 2012 baseline studies. This report also presents habitat classification polygons within the LSA based on the Ontario Ministry of Natural Resources' (MNR) Forest Resources Inventory (FRI) mapping data.

2.0 STUDY OBJECTIVES

The primary objectives of the 2012 terrestrial baseline surveys were to:

- Conduct plant and wildlife surveys in Project component areas that were not yet mapped when previous baseline surveys were conducted;
- Compile species inventory lists and characterize existing site conditions for these new areas to support environmental approvals processes;

- Conduct another year of SAR surveys and SAR habitat mapping throughout the LSA in order to provide a higher degree of confidence in the final SAR list of species present and their habitat distribution within the LSA;
- Classify and map habitats within the LSA and ground-truth MNR FRI mapping and habitat classification polygon boundaries; and
- Collaborate with the MNR and Trent University on a 2011-2012 Whip-poor-will study.

3.0 METHODOLOGY

3.1 Bird Surveys

AMEC conducted focused surveys on breeding birds, marsh birds and waterfowl, owls and other crepuscular/nocturnal avian species (Whip-poor-will and Common Nighthawk), using established MNR approved survey protocols described in detail below. A raptor survey was conducted in April 2012, the results of which are provided in a separate report (AMEC 2012c).

The following surveys were conducted during June 18 to 22 and July 3 to 7. Weather conditions during these two survey periods were generally sunny to overcast, with winds between 0 (Calm) and 3 (Gentle Breeze) on the Beaufort Scale. Wildlife surveys were not conducted during periods of rain. Temperatures during the morning and evening wildlife surveys ranged between 5 and 17 degrees Celsius.

3.1.1 Breeding Bird Surveys

The breeding bird surveys were conducted in accordance with the protocol described in the Atlas of the Breeding Birds of Ontario (Cadman et al. 2007). Surveys were conducted at 104 predetermined survey stations located at least 300 m apart from each other (Figure 3). At each station, all birds seen or heard within a 10 minute continuous period were recorded and mapped. Surveys began one-half hour prior to sunrise and ended at 10:00 a.m.

3.1.2 Marsh Bird and Waterfowl Surveys

Although marsh bird monitoring was not a formal part of the studies conducted within the RRGP LSA, marsh birds were recorded opportunistically during other surveys, including the breeding bird surveys, owl surveys and amphibian surveys. Marsh bird surveys conducted during the night-time owl and amphibian surveys took place during the time frame considered to be standard for marsh bird monitoring and the amphibian survey points were located near habitats suitable for marsh birds. Contrary to methods used for the Marsh Monitoring Program (Bird Studies Canada 2009a), call playback tapes were not used.

3.1.3 Nocturnal Bird Surveys (Owls, Whip-poor-will and Common Nighthawk)

The nocturnal bird surveys were conducted using the Northern Ontario Nocturnal Owl Protocol described in Takats et al. (2001) as a guideline. Nineteen owl survey stations (Figure 4) were surveyed by playing recordings of six owl species previously recorded in the study area: Northern Saw-whet Owl (*Aegolius acadicus*), Boreal Owl (*Aegolius funereus*), Long-eared Owl (*Asio otus*), Barred Owl (*Strix varia*), Great Grey Owl (*Strix nebulosa*), and Great Horned Owl (*Bubo virginianus*). Calls of each species were played for 20 seconds, followed by a one minute listening period. The survey at each station began with a two-minute listening period. Species calls were played in order of the size of the owl species beginning with the lightest species and ending with the heaviest species. All owls recorded were recorded on a datasheet. Surveys began one-half hour after sunset and concluded at midnight.

Whip-poor-wills and Common Nighthawks were surveyed at 54 survey stations (Figure 5) using standardized protocols outlined in *Whip-poor-will Roadside Survey Participant's Guide* (BSC, 2012). These surveys were conducted within the recommended timing window starting 30 minutes after sunset and continued until midnight. Surveys at each station lasted six minutes. The June surveys were conducted under overcast conditions but the July surveys were conducted with clear skies and during a full moon phase. Results of the Whip-poor-will surveys are presented in the 2012 Species at Risk Report (AMEC 2012b).

3.1.4 Avian Species at Risk Surveys

Surveys were conducted for provincially (COSARO, ESA) and federally (COSEWIC, SARA) listed avian Species at Risk (SAR). Results are presented and discussed in the 2012 Species at Risk Report (AMEC 2012b).

3.2 Amphibian Surveys

Amphibian survey methods followed the Marsh Monitoring Program Amphibians Survey (Bird Studies Canada 2009b). Two rounds of point count call surveys were conducted (June 18 to 22 and July 3 to 7) in order to ensure that early and late-breeding frog species were detected. A total of 51 amphibian point count stations were surveyed once during each round of surveys (Figure 6). Calling amphibian species were recorded during a three minute period with a recording radius of unlimited distance. The calls of each amphibian species were assigned specific 'call level codes' according to the Marsh Monitoring Program Amphibians Survey (Bird Studies Canada 2009b; see Table 1 below). Surveys began one-half hour after sunset and ended at midnight.

**TABLE 1
CALL LEVEL CODES USED TO DESCRIBE CALLING AMPHIBIAN SPECIES DURING AMPHIBIAN
SURVEYS (BIRD STUDIES CANADA 2009b)**

Call Level Code	Description
0	None heard
1	Individuals can be counted, calls not overlapping
2	Numbers of some individuals can be estimated or counted
3	Full chorus, calls continuous and overlapping, individuals not distinguishable

3.3 Other Taxa

Mammal, reptile and insect species observed within the LSA were recorded opportunistically during all surveys (as were birds and amphibians when observed outside of the formal bird and amphibian surveys). Observations included, but were not limited to, visual observations, hearing vocalizations, road kills, tracks, droppings, burrows, and nests.

3.4 Vegetation Surveys and Habitat Classification

The 2012 vegetation surveys were conducted on June 18 to 21 and July 3 to 7. Surveys were undertaken by two botanists and typically lasted ten hours each day. Site investigations were targeted at several irregularly-shaped polygons within the LSA (Figure 7). These vegetation survey polygons covered approximately 1,300 hectares and overlapped with new locations for certain Project components and supplemented vegetation studies conducted by Klohn Crippen Berger in 2009 and 2010 (KCB 2011a).

3.4.1 Vegetation Community Mapping

Existing Forest Resource Inventory (FRI) mapping (Figures 8a, b, c) was acquired from the MNR prior to site investigations and was used to guide field transects during surveying. Each of the FRI communities within each vegetation survey polygon was visited to confirm the community classification. A plant species list was compiled for the LSA during this FRI ground-truthing.

3.4.2 Plant Species at Risk

Surveys were conducted for provincially (COSARO, ESA) and federally (COSEWIC, SARA) listed plant Species at Risk (SAR) species. These surveys occurred concurrently with the vegetation community mapping, as described above (Section 3.4.1) and the results are presented and discussed in the 2012 Species at Risk Report (AMEC 2012b).

4.0 RESULTS

4.1 Avian Community

A total of 121 bird species were observed within the LSA during the various wildlife surveys conducted in June and July (103 species were observed within the proposed mine footprint and 62 species were observed along the proposed transmission line corridor). Of the 121 bird species, 114 are suspected to be nesting within the LSA. The breeding bird point count surveys recorded 115 different species which are listed in order from most common to least common in Table 2.

**TABLE 2
MOST COMMON BIRD SPECIES TALLIED DURING 2012 BREEDING BIRD POINT COUNTS**

Common Name	Latin Name	Probability of Occurrence*	Average Maximum Occurrence**
White-throated Sparrow	<i>Zonotrichia albicollis</i>	0.798	1.769
Nashville Warbler	<i>Oreothlypis ruficapilla</i>	0.702	1.337
Ovenbird	<i>Seiurus aurocapilla</i>	0.702	1.337
Red-eyed Vireo	<i>Vireo olivaceus</i>	0.692	1.26
Hermit Thrush	<i>Catharus guttatus</i>	0.577	0.875
Black-and-white Warbler	<i>Mniotilta varia</i>	0.577	0.74
Veery	<i>Catharus fuscescens</i>	0.538	0.904
American Robin	<i>Turdus migratorius</i>	0.500	0.779
Blue Jay	<i>Cyanocitta cristata</i>	0.481	0.625
Common Yellowthroat	<i>Geothlypis trichas</i>	0.452	0.769
Chestnut-sided Warbler	<i>Setophaga pensylvanica</i>	0.452	0.635
Red-breasted Nuthatch	<i>Sitta canadensis</i>	0.394	0.548
Northern Flicker	<i>Colaptes auratus</i>	0.385	0.51
Mourning Warbler	<i>Oporornis Philadelphia</i>	0.279	0.394
Cedar Waxwing	<i>Bombycilla cedrorum</i>	0.269	0.413
Black-capped Chickadee	<i>Poecile atricapillus</i>	0.26	0.394
Magnolia Warbler	<i>Setophaga magnolia</i>	0.25	0.337
American Goldfinch	<i>Carduelis tristis</i>	0.24	0.327
Common Raven	<i>Corvus corax</i>	0.231	0.337
Winter Wren	<i>Troglodytes troglodytes</i>	0.231	0.327
Song Sparrow	<i>Melospiza melodia</i>	0.221	0.413
Black-throated Green Warbler	<i>Setophaga virens</i>	0.212	0.356
Least Flycatcher	<i>Empidonax minimus</i>	0.192	0.356
Alder Flycatcher	<i>Empidonax alnorum</i>	0.192	0.24
Swamp Sparrow	<i>Melospiza georgiana</i>	0.183	0.394
Rose-breasted Grosbeak	<i>Pheucticus ludovicianus</i>	0.183	0.221
Yellow-bellied Sapsucker	<i>Sphyrapicus varius</i>	0.173	0.202
Wilson's Snipe	<i>Gallinago delicata</i>	0.173	0.183
Red-winged Blackbird	<i>Agelaius phoeniceus</i>	0.163	0.356
American Crow	<i>Corvus brachyrhynchos</i>	0.163	0.25
Clay-colored Sparrow	<i>Spizella pallid</i>	0.135	0.337

Common Name	Latin Name	Probability of Occurrence*	Average Maximum Occurrence**
Savannah Sparrow	<i>Passerculus sandwichensis</i>	0.125	0.356
Sandhill Crane	<i>Grus canadensis</i>	0.125	0.221
American Redstart	<i>Setophaga ruticilla</i>	0.106	0.115
Yellow-rumped Warbler	<i>Setophaga coronata</i>	0.106	0.115
Northern Parula	<i>Setophaga americana</i>	0.096	0.154
Brown-headed Cowbird	<i>Molothrus ater</i>	0.096	0.135
Eastern Kingbird	<i>Tyrannus tyrannus</i>	0.096	0.135
Blue-headed Vireo	<i>Vireo solitaries</i>	0.087	0.115
Golden-crowned Kinglet	<i>Regulus satrapa</i>	0.087	0.115
Golden-winged Warbler	<i>Vermivora chrysoptera</i>	0.087	0.115
House Wren	<i>Troglodytes aedon</i>	0.087	0.106
Black-billed Cuckoo	<i>Coccyzus erythrophthalmus</i>	0.087	0.087
Great Crested Flycatcher	<i>Myiarchus crinitus</i>	0.087	0.087
Philadelphia Vireo	<i>Vireo philadelphicus</i>	0.087	0.087
Black-billed Magpie	<i>Pica pica</i>	0.077	0.173
Eastern Wood-Pewee	<i>Contopus virens</i>	0.077	0.096
Common Loon	<i>Gavia immer</i>	0.077	0.087
Scarlet Tanager	<i>Piranga olivacea</i>	0.077	0.087
Chipping Sparrow	<i>Spizella passerina</i>	0.077	0.077
Swainson's Thrush	<i>Catharus ustulatus</i>	0.067	0.087
European Starling	<i>Sturnus vulgaris</i>	0.058	0.317
Pine Siskin	<i>Carduelis pinus</i>	0.058	0.231
Sedge Wren	<i>Cistothorus platensis</i>	0.058	0.077
Yellow Warbler	<i>Setophaga petechia</i>	0.058	0.077
Downy Woodpecker	<i>Picoides pubescens</i>	0.058	0.058
Common Grackle	<i>Quiscalus quiscula</i>	0.048	0.106
Bobolink	<i>Dolichonyx oryzivorus</i>	0.048	0.087
Le Conte's Sparrow	<i>Ammodrammus</i>	0.048	0.067
Brown Thrasher	<i>Toxostoma rufum</i>	0.048	0.058
Blackburnian Warbler	<i>Setophaga fusca</i>	0.048	0.048
Gray Catbird	<i>Dumetella carolinensis</i>	0.048	0.048
Killdeer	<i>Charadrius vociferus</i>	0.048	0.048
Barn Swallow	<i>Hirundo rustica</i>	0.038	0.135
American White Pelican	<i>Pelecanus erythrorhynchos</i>	0.038	0.087
Palm Warbler	<i>Setophaga palmarum</i>	0.038	0.067
Northern Waterthrush	<i>Parkesia noveboracensis</i>	0.038	0.048
Tree Swallow	<i>Tachycineta bicolor</i>	0.038	0.048
Woodpecker sp		0.038	0.048
Yellow-bellied Flycatcher	<i>Empidonax flaviventris</i>	0.038	0.048
Belted Kingfisher	<i>Ceryle alcyon</i>	0.038	0.038
Wood Thrush	<i>Hylocichla mustelina</i>	0.038	0.038
Red Crossbill	<i>Loxia curvirostra</i>	0.029	0.067
Connecticut Warbler	<i>Opornis agilis</i>	0.029	0.038
American Bittern	<i>Botaurus lentiginosus</i>	0.029	0.029
Black-throated Blue Warbler	<i>Setophaga caerulescens</i>	0.029	0.029
Eastern Phoebe	<i>Sayornis phoebe</i>	0.029	0.029

Common Name	Latin Name	Probability of Occurrence*	Average Maximum Occurrence**
Pileated Woodpecker	<i>Dryocopus pileatus</i>	0.029	0.029
Trumpeter Swan	<i>Cygnus buccinator</i>	0.019	0.135
Brewer's Blackbird	<i>Euphagus cyanocephalus</i>	0.019	0.077
Canada Warbler	<i>Cardellina canadensis</i>	0.019	0.029
Warbling Vireo	<i>Vireo gilvus</i>	0.019	0.029
Black-backed Woodpecker	<i>Picoides arcticus</i>	0.019	0.019
Broad-winged Hawk	<i>Buteo platypterus</i>	0.019	0.019
Brown Creeper	<i>Certhia americana</i>	0.019	0.019
Dark-eyed Junco	<i>Junco hyemalis</i>	0.019	0.019
Great Blue Heron	<i>Ardea herodias</i>	0.019	0.019
Purple Finch	<i>Carpodacus purpureus</i>	0.019	0.019
Ruby-crowned Kinglet	<i>Regulus calendula</i>	0.019	0.019
Ruffed Grouse	<i>Bonasa umbellus</i>	0.019	0.019
Turkey Vulture	<i>Cathartes aura</i>	0.019	0.019
White-winged Crossbill	<i>Loxia leucoptera</i>	0.019	0.019
Wilson's Warbler	<i>Cardellina pusilla</i>	0.019	0.019
Yellow-throated Vireo	<i>Vireo flavifrons</i>	0.019	0.019
Canada Goose	<i>Branta canadensis</i>	0.01	0.048
Evening Grosbeak	<i>Coccothraustes vespertinus</i>	0.01	0.029
Common Goldeneye	<i>Bucephala clangula</i>	0.01	0.019
Mallard	<i>Anas platyrhynchos</i>	0.01	0.019
Ruby-throated Hummingbird	<i>Archilochus colubris</i>	0.01	0.019
Tennessee Warbler	<i>Oreothlypis peregrina</i>	0.01	0.019
American Kestrel	<i>Falco sparverius</i>	0.01	0.01
American Three-toed Woodpecker	<i>Picoides tridactylus</i>	0.01	0.01
Baltimore Oriole	<i>Icterus galbula</i>	0.01	0.01
Barred Owl	<i>Strix varia</i>	0.01	0.01
Boreal Chickadee	<i>Poecile hudsonica</i>	0.01	0.01
Cape May Warbler	<i>Setophaga tigrina</i>	0.01	0.01
Common Merganser	<i>Mergus merganser</i>	0.01	0.01
Gray Jay	<i>Perisoreus canadensis</i>	0.01	0.01
Hairy Woodpecker	<i>Picoides villosus</i>	0.01	0.01
Indigo Bunting	<i>Passerina cyanea</i>	0.01	0.01
Olive-sided Flycatcher	<i>Contopus borealis</i>	0.01	0.01
Pine Warbler	<i>Setophaga pinus</i>	0.01	0.01
Sharp-shinned Hawk	<i>Accipiter striatus</i>	0.01	0.01
Sharp-tailed Grouse	<i>Tympanuchus phasianellus</i>	0.01	0.01
Wood Duck	<i>Aix sponsa</i>	0.01	0.01

* Probability of Occurrence represents the total number of point count stations at which a species was observed divided by the total number of point count stations surveyed

** Average Maximum Occurrence represents the total of the highest number of individuals observed at each point count divided by the total number of point counts surveyed.

The avian species diversity and population densities found within the LSA reflect the area's mosaic of mixed, deciduous-dominated forest, shrubby wetlands, and open field habitats.

Nine provincially and/or federally listed avian SAR species were observed in the LSA during the 2012 surveys and these are presented and discussed in the 2012 Species at Risk Report (AMEC 2012b).

4.1.1 Forest Bird Species

Approximately half of the LSA is covered by poplar-dominated forest (Figure 8) and thus the area supports a wide variety of forest-dwelling species. Twenty-six Area-Sensitive species of birds were recorded in the 2012 surveys and 20 of these were forest-dwelling species. Among the most numerous forest-dwelling bird species recorded during breeding bird counts were species such as the White-throated Sparrow (*Zonotrichia albicollis*), Nashville Warbler (*Oreothlypis ruficapilla*), Ovenbird (*Seiurus aurocapilla*), Veery (*Catharus fuscescens*), and Red-eyed Vireo (*Vireo olivaceus*). Areas of coniferous forest and bog present within the LSA supported boreal species such as the Palm Warbler (*Setophaga palmarum*) Connecticut Warbler (*Oporornis agilis*), Gray Jay (*Perisoreus canadensis*), and LeConte's Sparrow (*Ammodramus leconteii*). These results are consistent with the most frequently observed forest birds reported by Klohn Crippen Berger (2011) and AMEC (2011a).

Most forest-breeding species observed have extensive Canadian breeding ranges that extend from eastern Canada, across the boreal zone, and into western Canada. The Eastern Wood-pewee (*Contopus virens*) was an observed forest-dwelling species occurring at the northern edge of its North American range.

Three species of forest-dwelling owls were recorded during the 2012 owls surveys: a Barred Owl (*Strix varia*), a Great Horned Owl (*Bubo virginianus*), and a Long-eared Owl (*Asio otus*) were all recorded in the vicinity of the proposed Transmission Line Corridor.

4.1.2 Grassland and Open Country Bird Species

Pasture and agricultural lands cover approximately 17% of the LSA (Figure 8) and the following grassland and open country bird species were recorded in these fields: Savannah Sparrow (*Passerculus sandwichensis*), Clay-coloured Sparrow (*Spizella pallida*), Bobolink and Sandhill Crane (*Grus canadensis*).

Grassland and open country species at the northern edge of their North American range included Golden-winged Warbler and Brown Thrasher (*Toxostoma rufum*).

Black-billed Magpie (*Pica pica*), Brewer's Blackbird (*Euphagus cyanocephalus*) and Prairie Sharp-tailed Grouse (*Tympanuchus phasianellus campestris*) are prairie species whose Ontario population is concentrated wholly or in part in the Rainy River area. The Black-billed Magpie's breeding range in Ontario is restricted to the districts of Kenora and Rainy River. This species was commonly observed in agricultural lands close to anthropogenic features. The Prairie subspecies of the Sharp-tailed Grouse exists as two disjunctive populations in Ontario: one

Rainy River population and one population along the North Shore of Lake Huron. The *T. p. campestris* subspecies originated in the prairies and only occupies open plain and farmland habitats, and occupies different ecological and geographical niches than the Northern subspecies, *T. p. phasianellus* (Cadman et al. 2007). Brewer's Blackbird also occupies only two population centres in Ontario, one of which occurs in the Rainy River area and the other along the north shore of Lake Huron extending south into the Bruce Peninsula.

4.1.3 Wetland Bird Species

Wetlands cover approximately 25% of the LSA (Figure 8) and include riparian wetlands, meadow marshes, treed and open fens, and bogs. The most common wetland species recorded included Common Yellowthroat (*Geothlypis trichas*), Swamp Sparrow (*Melospiza Georgiana*) and Wilson's Snipe (*Gallinago delicata*). These species are common residents of riparian wetlands which bordered a great proportion of both woodlands and open country within the study area and were thus well represented during breeding bird surveys.

Colony-nesting swamp species that were recorded included Great Blue Heron (*Ardea herodias*) and Green Heron (*Butorides virescens*), though no heronries were found in the LSA. Open water breeding species recorded included American White Pelican, Herring Gull (*Larus delawarensis*) and Ring-billed Gull (*Larus delawarensis*). These species are wide-ranging in their search of food and will use the area for foraging. Colonies of these species are known to occur on Lake of the Woods, Rainy Lake, Kakagi Lake and other large lakes in the Rainy River District, yet no suitable breeding habitat occurs within the LSA.

Waterfowl were not readily observed in the study area, though five species were recorded which included Trumpeter Swan (*Cygnus buccinator*), Canada Goose (*Branta canadensis*), Mallard (*Anas platyrhynchos*), and Wood Duck (*Aix sponsa*). All four species nest in or near swamps or wooded ponds which are common in the study area. Canada Geese were most often observed near ponds in agricultural fields or pasture. Wood Ducks nest in tree cavities. The breeding bird atlas indicates that a small Trumpeter Swan breeding population exists in the Rainy River area and it is one of only four breeding populations in Ontario for this species.

Marsh bird species observed included American Bittern (*Botaurus lentiginosis*) and American White Pelicans. American Bittern was commonly encountered within the LSA and was recorded during breeding bird, nocturnal bird, and amphibian surveys. American White Pelicans (*Pelecanus erythrorhynchos*) were observed flying over the LSA numerous times in 2012 (typically in flocks of 5 to 20 birds) and 4 individuals were observed on a small marsh north of Teeple Road.

4.2 Amphibians

Only four amphibian species were recorded within the LSA during the designated amphibian surveys (Table 3): Spring Peeper (*Pseudacris crucifer*), Boreal Chorus Frog (*Pseudacris*

maculata), American Toad (*Anaxyrus americanus*) and Gray Treefrog (*Hyla versicolor*). However, three more species were recorded opportunistically during other wildlife surveys (i.e., during breeding bird surveys and/or owl surveys): Northern Green Frog (*Lithobates clamitans*), Northern Leopard Frog (*Lithobates pipiens*) and Wood Frog (*Lithobates sylvatica*). No salamander species were observed.

**TABLE 3
ABUNDANCE RANK AND FREQUENCY OF OCCURRENCE OF AMPHIBIAN SPECIES RECORDED
DURING THE 2012 AMPHIBIAN SURVEYS (N = 51 AMPHIBIAN SURVEY STATIONS)**

Species	Abundance Rank	Probability of Occurrence*
Gray Treefrog	1	0.5
American Toad	2	0.04
Spring Peeper	3	0.04
Boreal Chorus Frog	4	0.02

* = Probability of Occurrence represents the total number of survey stations at which a species was observed divided by the total number of stations surveyed.

4.3 Mammals (Incidental Observations)

A total of nine mammalian species were recorded within the LSA (listed in Appendix A). White-tailed Deer (*Odocoileus virginianus*) were commonly observed throughout the LSA as were their tracks and droppings, indicating a high level of local habitat use by this species. Aerial surveys recorded deer wherever a mosaic of agricultural and forested lands was found. White-tailed Deer was the only cervid species recorded during 2012 studies in region where Moose (*Alces alces*) and Elk (*Cervus elaphus*) may also occur.

In 1998 Ontario Ministry of Natural Resources created The Plan for the Restoration of Elk in Ontario and between 1998 and 2001, 443 Elk were released at four sites across Ontario including Cameron Lake near Lake of the Woods (the other three sites included French River, Bancroft and the north shore of Lake Huron). The Cameron Lake region was within the historic range of Ontario’s Elk population and was considered by the MNR to continue to provide suitable elk habitat. The Cameron Lake Elk population was been continually monitored by the MNR since their reintroduction and unfortunately the population has suffered high mortality rates due to wolf predation and poaching by hunters. The MNR estimates that there are currently 28 Elk located between Cameron Lake and Barwick, near Rainy River. No Elk have been observed within the RRGF study area during the 2008 – 2012 RRGF environmental studies.

Evidence of Beaver (*Castor canadensis*) activity such as dams, lodges, and chewed stumps were widespread throughout the LSA. Aerial surveys in April 2012 recorded at least one beaver lodge in most marshes in the LSA. High prevalence of beaver suggests this species exerts a strong ecological influence on wildlife diversity in the LSA through the modification of numerous and widespread marsh habitats in the region.

Three commercial traplines overlap with the LSA and fur returns for these traplines between 1993 to 2008 include Beaver, Red Fox (*Vulpes vulpes*), River Otter (*Lontra canadensis*), American Marten (*Martes americana*), Fisher (*Martes pennanti*) and American Mink (*Mustela vison*). A number of other small mammal species are also likely to be present in the LSA but small mammal trapping studies were not conducted.

American Black Bear (*Ursus americanus*) was occasionally observed over the course of the 2012 field studies. Bears were seen along access roads in proximity to the proposed transmission lines.

4.4 Reptiles (Incidental Observations)

The baseline surveys recorded two reptile species: Eastern Gartersnake (*Thamnophis sirtalis sirtalis*) and Western Painted Turtle (*Chrysemys picta bellii*).

4.5 Invertebrates (Incidental Observations)

The baseline surveys recorded ten dragonfly and damselfly species, and 27 butterfly species (Appendix A).

4.6 Vegetation and Habitat Classification

The Project site is located in a low density rural area within which some agricultural (focused on cattle and fodder cropping) and logging activities occur. Adjacent areas show mainly second growth poplar-dominated forests and wetlands. Lands in the immediate Project site vicinity are typically gently rolling to flat, with forested wetlands occurring in low-lying areas, and rounded bedrock outcrops and subcrops occurring in upland areas, and some of the area has been cleared for agricultural development. Local drainage systems are characterized by numerous small creeks draining to the Pinewood River, which drains most of the Project site area. Portions of the natural drainage systems have been altered near the RRGP site through the development of agricultural drains, road development and ongoing beaver activities. Area creeks are also small and frequently intermittent in nature. There are no lakes within the immediate RRGP site area except along the LSA transmission line corridor.

A total of 252 vascular plant species were observed in the LSA (Appendix B). The majority (85%) of these species are provincially ranked as S5 (Secure) and globally ranked as G5 (Very Common). Approximately 15% of the recorded species are exotic weeds typically associated with pastureland, roadsides and other disturbed habitats..

4.6.1 Vegetation Community Mapping

Ground-truthing surveys determined that the existing MNR FRI classifications and polygon boundaries are accurate and require only a few minor adjustments. The FRI data shown in Figure 8 illustrates the general mosaic of habitat types located in the LSA. Some minor discrepancies in the FRI classification were discovered during the ground-truthing surveys but these discrepancies were deemed to be insignificant to the overall LSA description. For example, Larch (*Larix laricina*) communities were, on rare occasions, incorrectly identified as Eastern White Cedar (*Thuja occidentalis*) communities, however, both may represent coniferous treed wetland habitats. Similarly, a few White Spruce (*Picea glauca*) communities were classified as Eastern White Cedar communities, both of which may represent upland forest communities. Photographs of FRI communities visited are found in Appendix C.

The most frequently occurring vegetation community types include: “Poplar – Regular” (37% cover), “Black Spruce – Regular” (12% cover), “Poplar – Barren and Scattered” (10% cover), and “Designated Agricultural Land” (8% cover).

“Poplar – Regular” communities are dominated by Trembling Aspen with an understory of Mountain Maple (*Acer spicatum*), raspberry species (*Rubus* spp.), and other deciduous shrubs. The ground layer is most commonly dominated by typical hardwood forest species such as Wild Sarsaparilla (*Aralia nudicaulis*) and White Snakeroot (*Ageratina altissima*). “Poplar – Barren and Scattered” communities are those which tend to be younger and regenerating, or those which include pockets of exposed bedrock which is a limiting factor to their frequency and size.

Rocky outcrops were commonly encountered within parts of the northeastern portion of the LSA. These communities are typically dominated by pine species (*Pinus* spp.) and/or spruce species (*Picea* spp.). They have typically been described in the FRI classification system as “Jack Pine – Regular” and “Jack Pine – Barren and Scattered”. The herbaceous layer of these communities includes Large-leaved Aster (*Eurybia macrophyllus*), Pale Corydalis (*Corydalis flavula*), Blueberry species (*Vaccinium* spp.), and Fringed Black Bindweed (*Polygonum cilinode*).

“Cedar – Regular” communities are dominated by Eastern White Cedar and can be found in association with either upland forests or lowland swamp habitats. Those communities which occur on higher ground tend to be dry, dominated by needle litter, and deficient in understory species diversity. In those cedar stands occurring in wet lowland areas Balsam Fir (*Abies balsamea*) is common in the understory while the ground cover layer includes wetlands species such as Marsh Marigold (*Caltha palustris*). Other treed wetland communities were dominated by either Larch (classified as “Larch – Regular”) or Black Spruce (*Picea mariana*) (classified as “Black Spruce – Regular”). *Sphagnum* mosses are abundant in these latter two communities as are low lying shrubs such as Labrador Tea (*Ledum groenlandicum*), Leatherleaf (*Chamaedaphne calyculata*) and occasionally Dwarf Birch (*Betula pumila*).

“Treed Muskeg” and “Open Muskeg” communities were also recorded in the LSA. “Treed Muskeg” communities consist of shrub species such as Speckled Alder (*Alnus incana*) and willow species (*Salix* spp.) are often found as thickets along the peripheries of wetlands and “Open Muskeg” communities. “Open Muskeg” communities are predominantly comprised of grass species such as Canada Blue-joint (*Calamagrostis canadensis*) and various sedge species (*Carex* spp.), as well as Common Cattail (*Typha latifolia*).

Black Ash (*Fraxinus nigra*) and White Elm (*Ulmus americana*) were occasionally recorded within the habitat polygons but they were not common enough to be individually mapped as their own communities.

Active and fallow agricultural fields are common throughout the proposed Project area, particularly in the southwest portion of the LSA. These fields tend to be dominated by non-native grasses and herbs such as Timothy (*Phleum pratense*), Smooth Brome (*Bromus inermis*) and clovers (e.g., Red Clover, *Trifolium pratense*).

4.6.2 Plant Species at Risk and Provincially Rare Species

No plant SAR or rare plant species were observed within the LSA during the 2012 vegetation surveys. KCB (2011) observed two provincially rare species within the LSA during the 2009 to 2010 vegetation surveys. The New England Violet (*Viola novae-angliae*), provincially ranked as S3 (Vulnerable) was observed at three locations in the LSA and the Field Sedge, also ranked as S3 (Vulnerable), was observed at two locations (Figure 13.7 in KCB 2011). These two species are not considered Threatened or Endangered by the Committee on the Status of Species at Risk in Ontario (COSSARO) and therefore are not afforded protection under Ontario Endangered Species Act (ESA). The New England Violet occurs in rock outcrops, meadows and grassy lake terraces, and may be distinguished from other violets on the basis of leaf shape and dentation (Coffin and Pfannmuller 1988). The Field Sedge is known to occur in moist meadows and prairies, or on sandy or gravelly beaches near the normal water line of lakes and ponds. This species flowers four to six weeks after the recession of spring water levels, typically in late June (Minnesota Department of Natural Resources 2012).

A review of existing literature and the MNR’s NHIC database revealed that approximately 90 provincially rare plant species (provincially ranked as S1: Critically Imperiled, S2: Imperiled, or S3: Vulnerable) occur in the Rainy River area (Oldham and Brinker 2009, MNR 2012). However, most of these species are associated with the shorelines of Lake of the Woods, Rainy Lake and Rainy River which are outside of the LSA, or with prairie and savannah habitats which do not occur within the LSA. Two other provincially rare plant species listed in the MNR’s NHIC database were historically known to occur in the LSA (NHIC 10 x 10 km square codes: 15VQ20, 15VQ21, 15VQ31). Muskroot (*Adoxa moschatellina*) and Eastern Swamp Saxifrage (*Micranthes pensylvanica*) are both provincially ranked as S1 (Critically Imperiled) but have not been recorded in the area since 1946 and 1961, respectively. Neither of these species were observed during AMEC’s 2012 vegetation surveys nor during surveys conducted by KCB in 2009 to 2010.

Muskroot grows in moist, rich hardwood forests. It flowers in the spring season (April to May) though its distinctive foliage may persist until late summer (Minnesota Department of Natural Resources 2012). The Eastern Swamp Saxifrage grows in swamp and marsh habitats and blooms in May and June (Michigan Flora Online 2011).

The MNR's NHIC database does not list any rare plant communities within the LSA (MNR 2012) and none were recorded during the baseline surveys.

5.0 CONCLUSIONS

The primary objective of the 2012 Terrestrial Baseline Study was to conduct plant and wildlife surveys in Project component areas that were not yet mapped when previous baseline surveys were conducted, in order to more fully compile species inventory lists and characterize existing site conditions.

A total of 121 bird species were observed within or adjacent to the LSA in the June and July surveys. Point count surveys recorded a total of 103 species within the proposed mine footprint and 62 species along the proposed transmission line corridor. Of these 121 bird species, 114 are suspected to be nesting within the study area. This relatively high level of avian species diversity reflects the LSA's mosaic of mixed, deciduous-dominated forest, shrubby wetlands, and open field habitats. Of the 121 bird species were observed within the LSA, nine are provincially and/or federally listed SAR species (including three *Species of Special Concern*, and six *Threatened* species). These are presented and discussed in the 2012 Species at Risk Report (AMEC 2012b).

The vast majority of the species observed in the LSA are migratory species and therefore, compliance with the *Migratory Birds Convention Act* (MBCA 1994), regulations and guidelines for vegetation clearing, as recommended by Environment Canada, needs to be considered during the project's construction and operation phases. In order to minimize the potential for incidental take of any nesting migratory birds, clearing of vegetation and any proposed work activities in migratory bird habitat should be undertaken outside of the active breeding season. Clearing is generally to be avoided from mid-May to August 1. If clearing (or other work) in migratory bird habitat is required during the nesting season, a nest survey should be conducted by a qualified avian biologist immediately (i.e., within two days) prior to commencement of the works to identify and locate active nests of species covered by the MBCA. An adaptive mitigation plan (which may include establishing appropriate buffers around active nests) should then be developed to address any potential impacts on migratory birds or their active nests, and should be reviewed by Environment Canada prior to implementation.

Six amphibian species were recorded within the LSA and none of these are considered SAR. The six species recorded were American Toad, Northern Green Frog, Northern Leopard Frog, Spring Peeper, Tetraploid Gray Treefrog, and Wood Frog. No salamander species were

observed. The baseline surveys also recorded 10 mammalian species, 2 reptile species, 10 dragonfly and damselfly species, and 27 butterfly species (all listed in Appendix A).

A total of 252 vascular plant species were observed in the LSA (Appendix B). The majority of these species (85%) are provincially ranked as S5 (Secure) and globally ranked as G5 (Very Common). Approximately 15% of the recorded species are exotic weeds typically associated with pastureland, roadsides and other disturbed habitats.

6.0 REFERENCES

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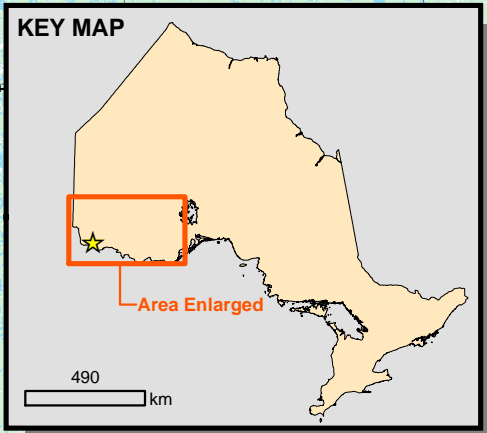
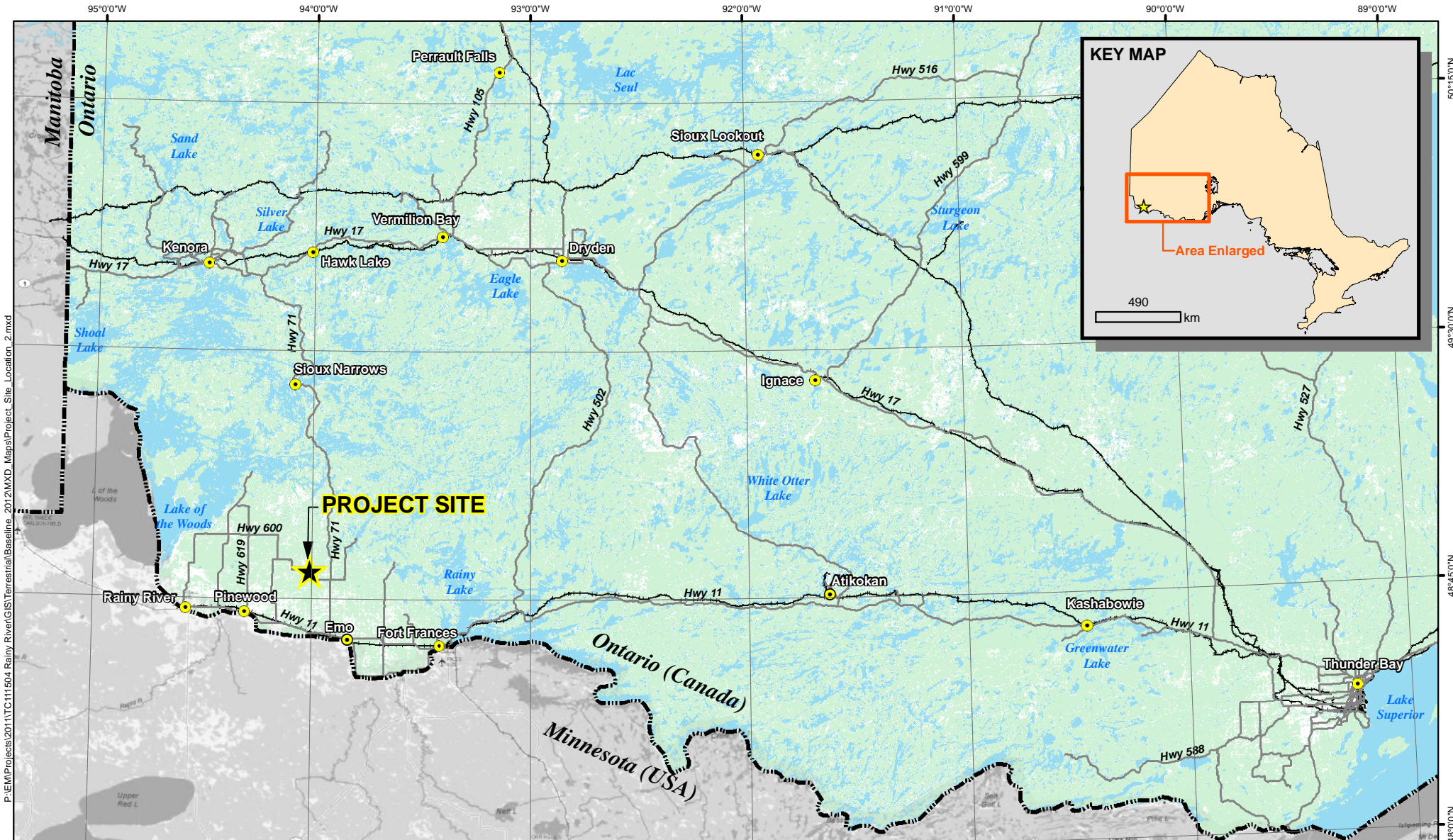


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- LEGEND**
- Project Site
 - Regional Communities
 - Provincial / National Border
 - Regional Road / Highway
 - Railway

NOTES:

- Ontario base data extracted from Land Information Ontario (MNR) data warehouse.
- Base data outside of Ontario extracted from ESRI DeLorme World Basemap



RAINY RIVER GOLD PROJECT

Project Location



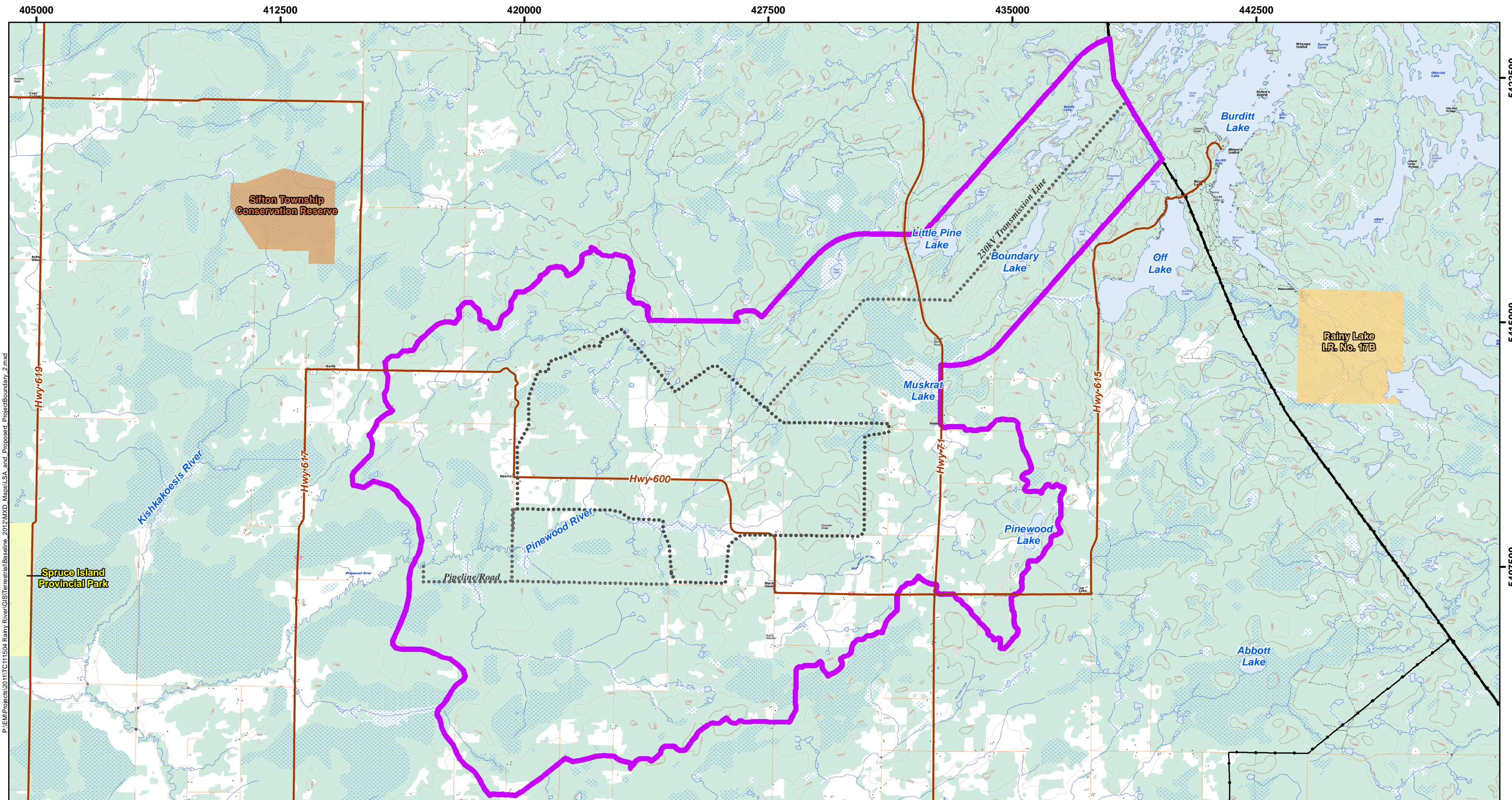
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PROJECT N^o: TC111504






FIGURE: 1


SCALE: 1:1,800,000

DATE: November 2012



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- LEGEND**
-  Approximate Project Boundary
 -  Local Study Area (LSA)
 -  Regional Road / Highway
 -  Secondary Road
 -  Existing Transmission Line

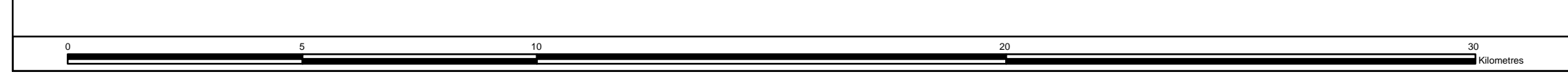
-  First Nation Reserve Lands
-  Conservation Reserve (Regulated)
-  Provincial Park

NOTES:
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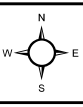


RAINY RIVER GOLD PROJECT

Local Study Area Boundary and Approximate Project Boundary

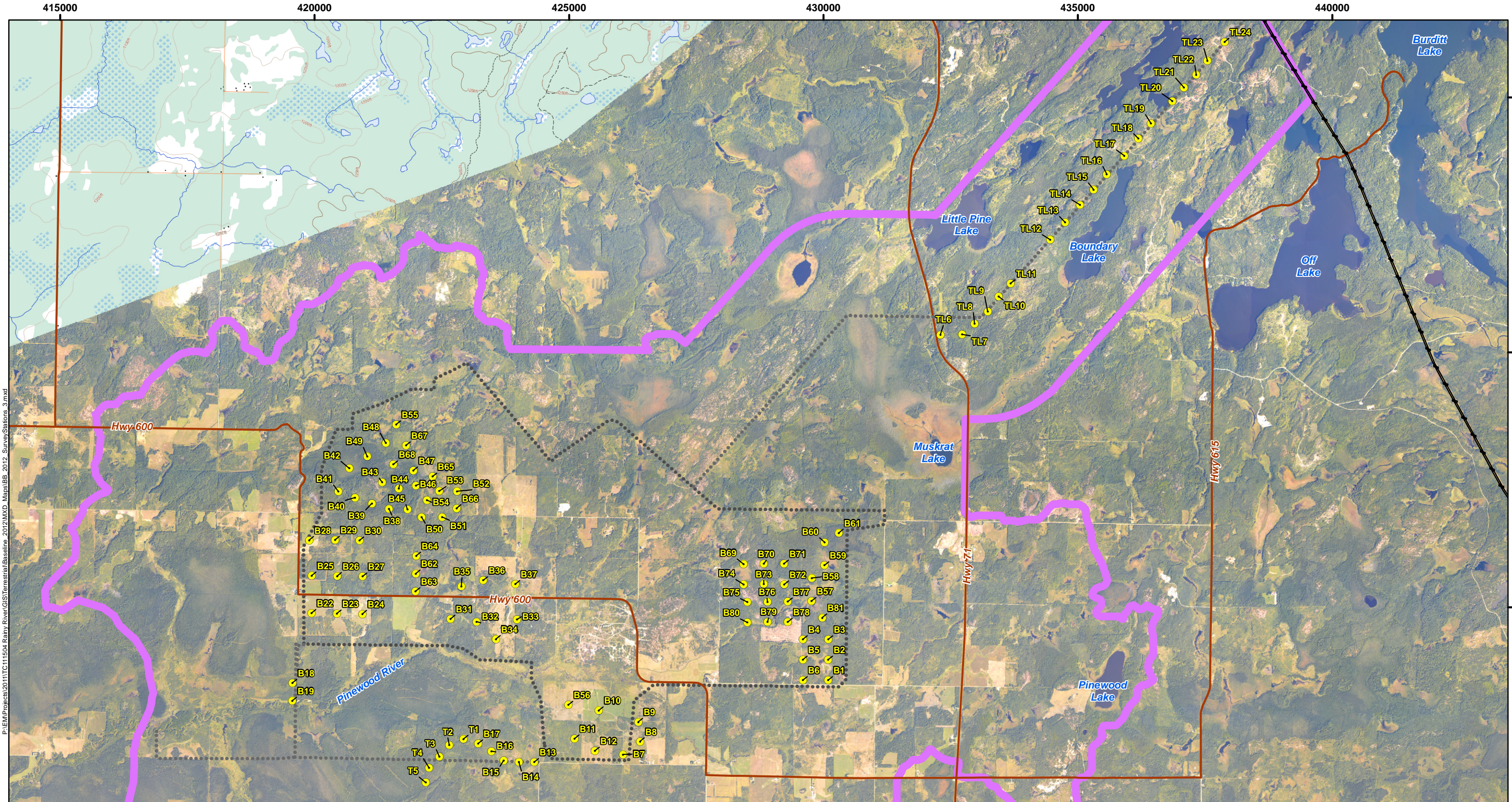


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PROJECT N^o: TC111504
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FIGURE: 2
 DATE: November 2012



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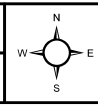
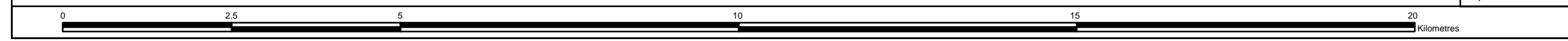
- LEGEND**
- Breeding Bird Survey Stations (Labelled with ID)
 - Approximate Project Boundary
 - Local Study Area (LSA)
 - Regional Road / Highway
 - Existing 230 kV Transmission Line

NOTES:
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 - Base map data from Geogratis NRCan Toporama DRG 1:50k sheets

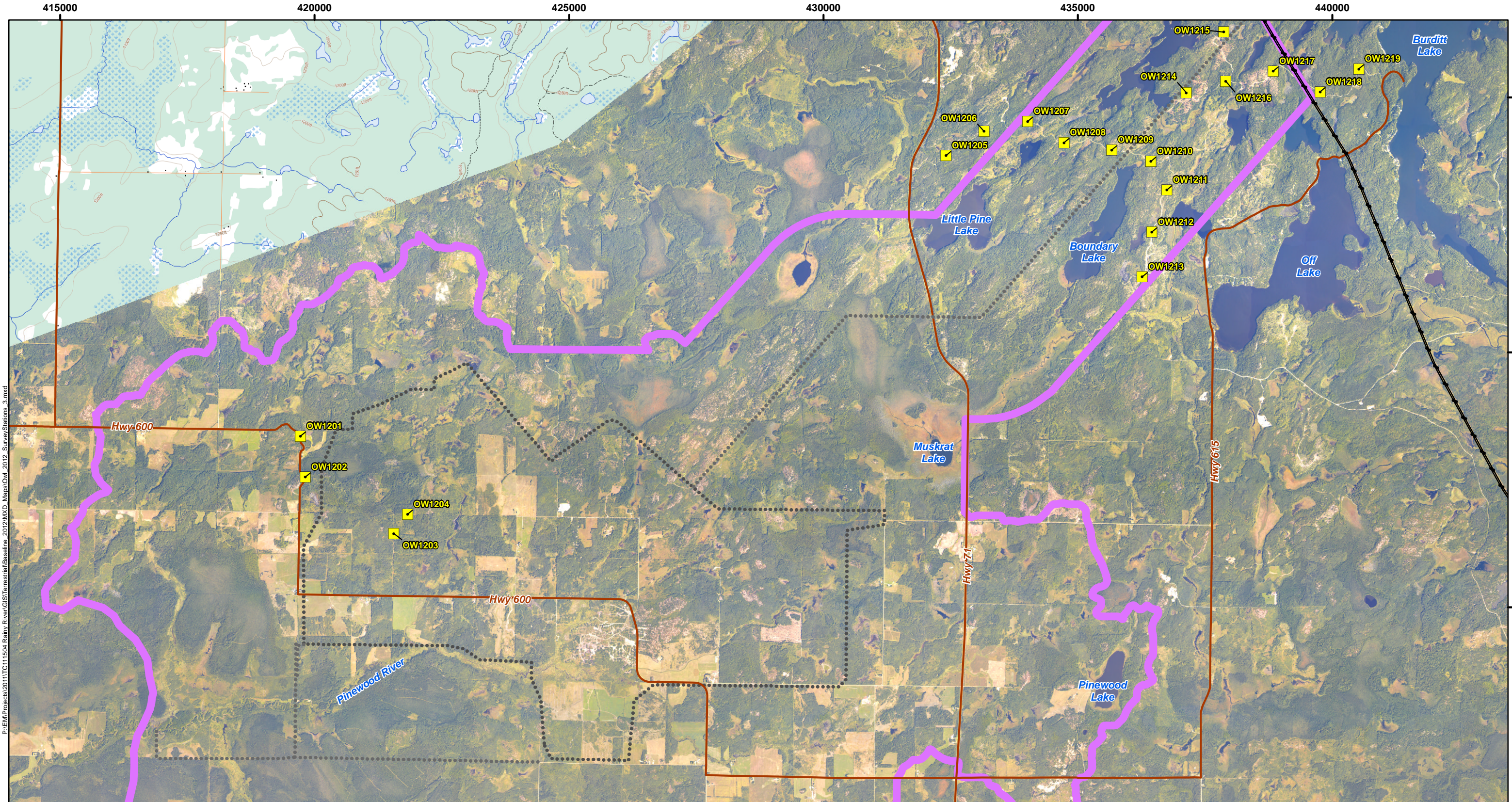


RAINY RIVER GOLD PROJECT

Locations of 2012 Breeding Bird Survey Stations



Datum: NAD83 Projection: UTM Zone 15N	PROJECT N^o: TC111504 FIGURE: 3
SCALE: 1:72,000	DATE: November 2012



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LEGEND

- Owl Survey Stations (Labelled with ID)
- Approximate Project Boundary
- Local Study Area (LSA)
- Regional Road / Highway
- Existing 230 kV Transmission Line

NOTES:
 - Road data extracted from Land Information Ontario, Ontario Road Network, MNR
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Datum: NAD83
 Projection: UTM Zone 15N



RAINY RIVER GOLD PROJECT

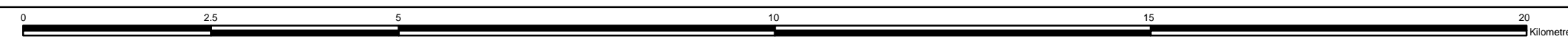
Locations of 2012 Owl Survey Stations

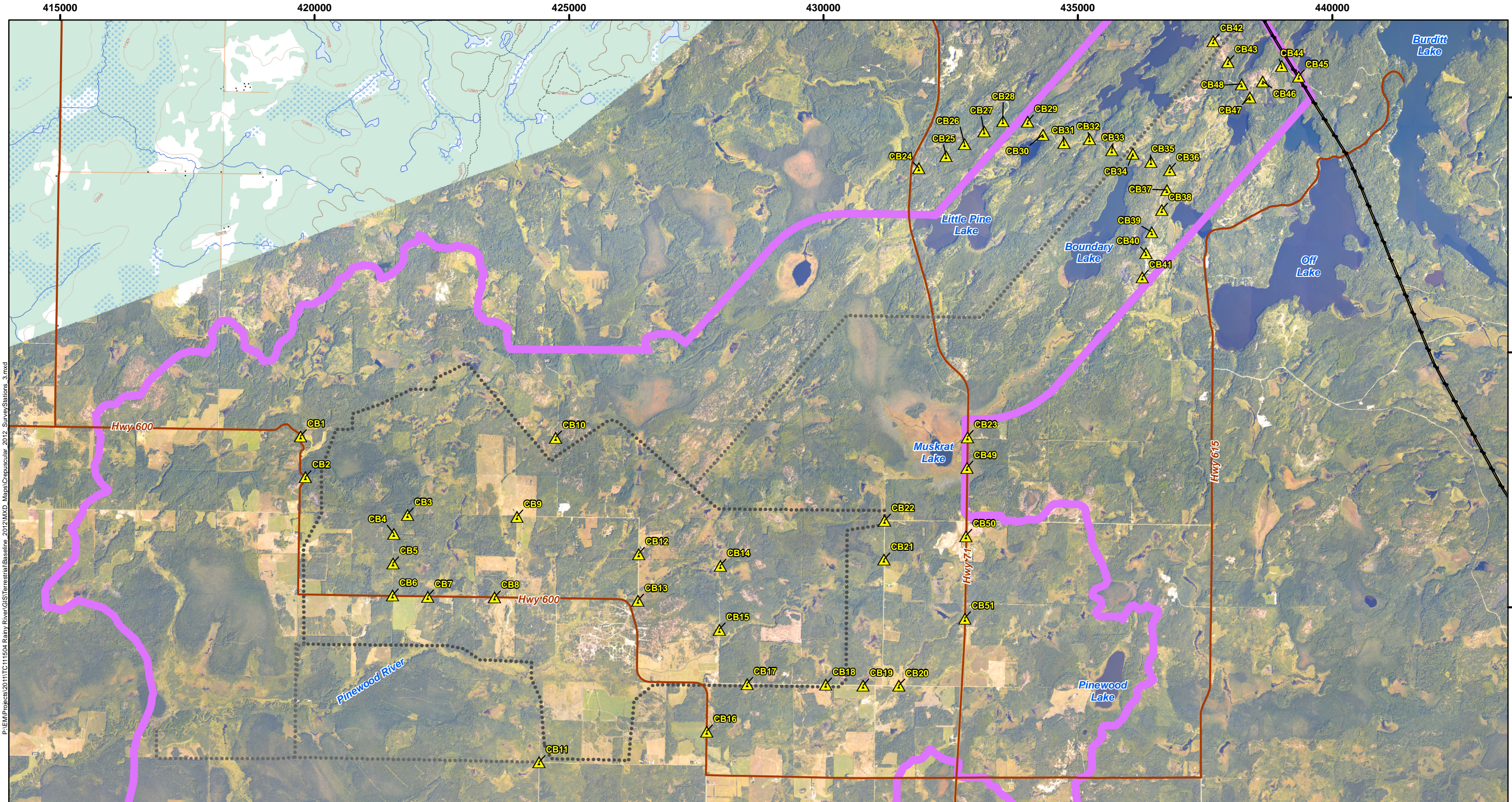
PROJECT N^o: TC111504

FIGURE: 4

SCALE: 1:72,000

DATE: November 2012





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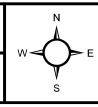
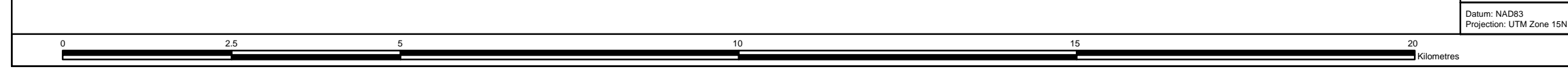
- LEGEND**
- Crepuscular Bird Survey Stations (Labelled with ID)
 - Approximate Project Boundary
 - Local Study Area (LSA)
 - Regional Road / Highway
 - Existing 230 kV Transmission Line

NOTES:
 - Road data extracted from Land Information Ontario, Ontario Road Network, MNR
 - Base map data from Geogratis NRCan Toporama DRG 1:50k sheets

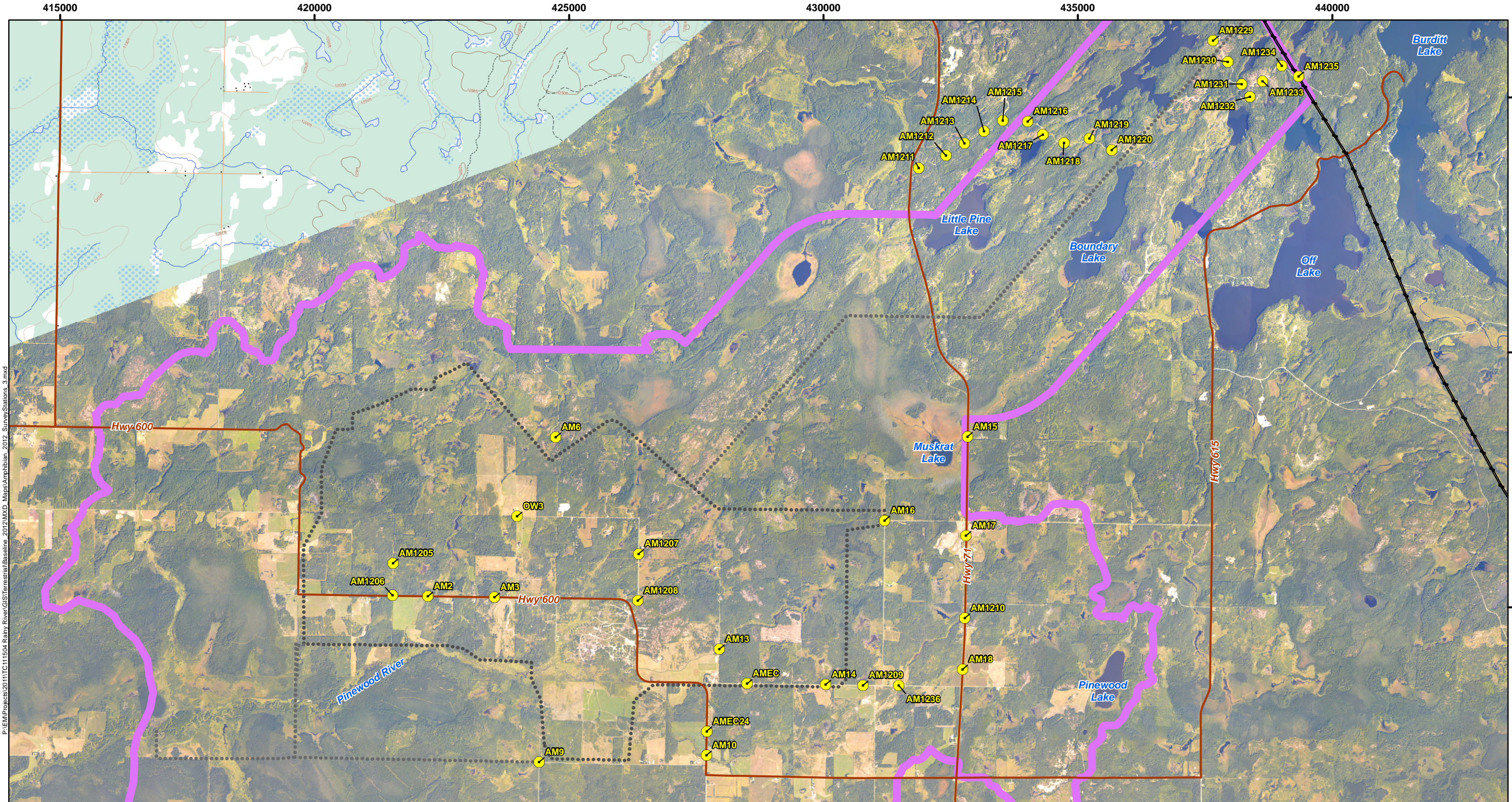


RAINY RIVER GOLD PROJECT

**Locations of 2012
Crepuscular Bird Survey Stations**



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	FIGURE: 5
SCALE: 1:72,000	DATE: November 2012



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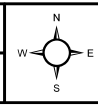
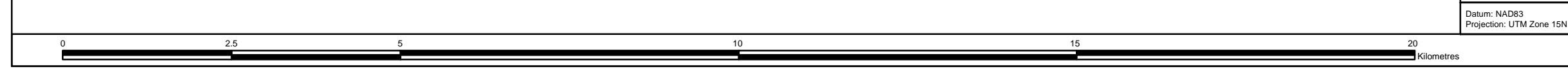
- LEGEND**
- Amphibian Survey Stations (Labelled with ID)
 - Approximate Project Boundary
 - Local Study Area (LSA)
 - Regional Road / Highway
 - Existing 230 kV Transmission Line

NOTES:

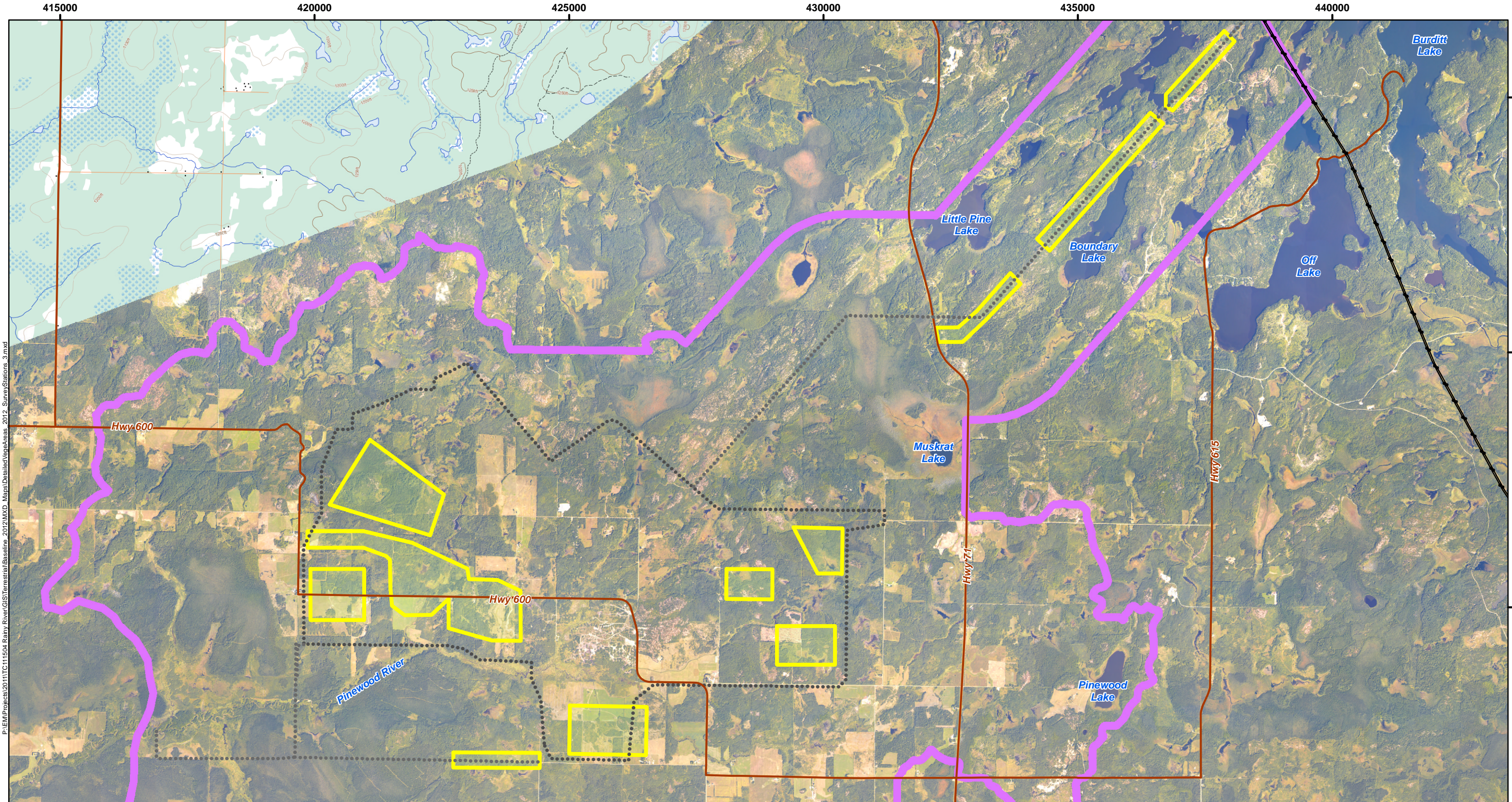
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- Base map data from Geogratis NRCan Toporama DRG 1:50k sheets

RAINY RIVER GOLD PROJECT

Locations of 2012 Amphibian Survey Stations



PROJECT N ^o : TC111504	FIGURE: 6
SCALE: 1:72,000	DATE: November 2012



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- LEGEND**
- General Area where Detailed Vegetation Surveys were Conducted
 - Approximate Project Boundary
 - Local Study Area (LSA)
 - Regional Road / Highway
 - Existing 230 kV Transmission Line

NOTES:
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 - Base map data from Geogratis NRCan Toporama DRG 1:50k sheets



RAINY RIVER GOLD PROJECT

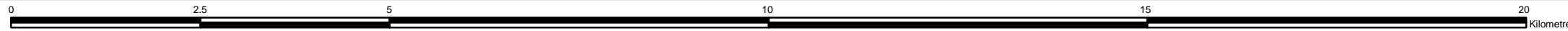
Locations of 2012 Vegetation Surveys

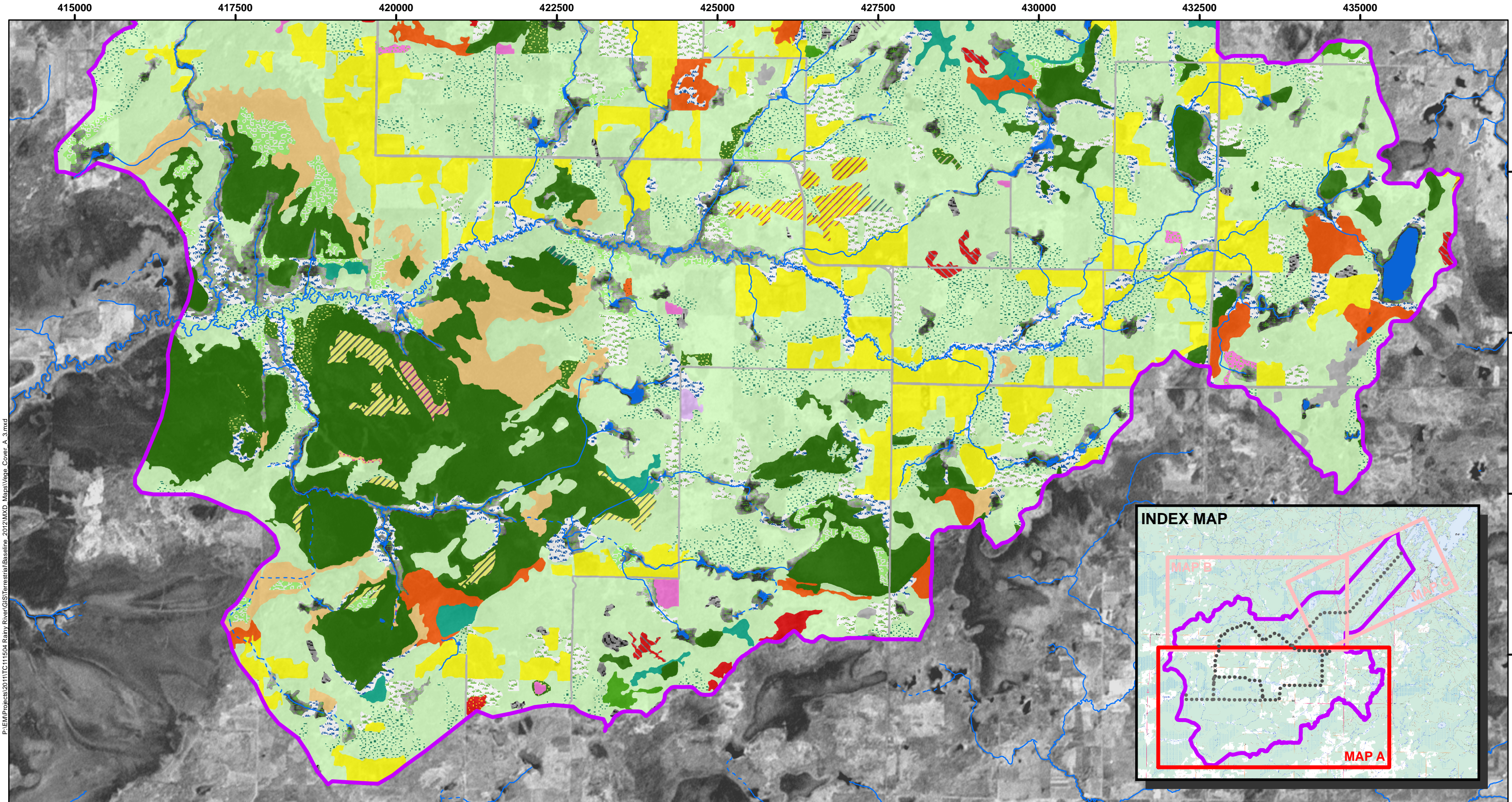
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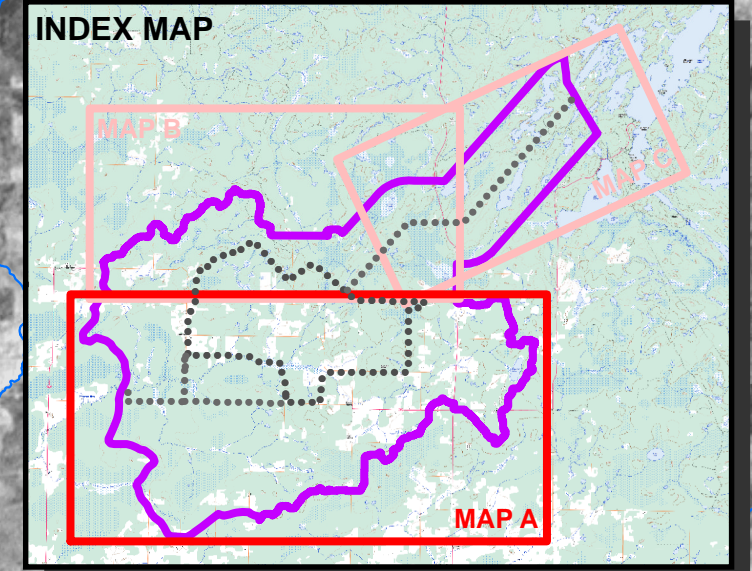
FIGURE: 7
 DATE: November 2012





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LEGEND		Vegetation/Land Cover Class (Derived from Forest Resource Inventory)					
Local Study Area (LSA) Boundary	Unknown	Balsam Fir- Barren and Scattered Regular	Cedar- Barren and Scattered Regular	Larch- Regular	Soft Maple- Protection Site (Class 4)	Water	
Unclassified	Balsam Fir- Regular	Cedar- Protection Site (Class 4)	Poplar- Barren and Scattered Regular	Poplar- Barren and Scattered Reserve	White Birch- Barren and Scattered Regular	Brush and Alder	
Water	Balsam Fir- Reserve	Cedar- Regular	Poplar- Protection Site (Class 4)	Poplar- Regular	White Birch- Reserve	Designated Agricultural Land	
Designated Agricultural Land	Black Ash- Barren and Scattered Regular	Jack Pine- Barren and Scattered Regular	Poplar- Reserve	Red Pine- Barren and Scattered Regular	White Birch- Protection Island	Grass and Meadow	
Grass and Meadow	Black Ash- Regular	Jack Pine- Barren and Scattered Reserve	Red Pine- Reserve	Red Pine- Regular	White Pine- Regular	Open Muskeg	
Open Muskeg	Black Spruce- Barren and Scattered Regular	Jack Pine- Protection Site (Class 4)	Red Pine- Regular	Red Pine- Reserve	White Pine- Reserve	Rock	
Rock	Black Spruce- Barren and Scattered Reserve	Jack Pine- Regular	Soft Maple- Regular	Soft Maple- Regular	White Spruce- Barren and Scattered Regular	Treed Muskeg	
Treed Muskeg	Black Spruce- Protection Site (Class 4)	Jack Pine- Reserve			White Spruce- Regular		
	Black Spruce- Regular	Larch- Barren and Scattered Regular					
	Black Spruce- Reserve	Larch- Protection Site (Class 4)					



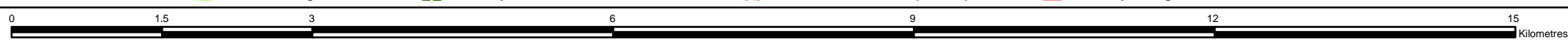
NOTES:
 - Road data extracted from Land Information Ontario, Ontario Road Network, MNR
 - Ontario base data extracted from Land Information Ontario (MNR) data warehouse.
 - Watershed delineations are approximate and are derived from MNR Ontario
 - Vegetation Classes are based on the lead species in forest stands and the MNR stand type classification from FRI data, provided by MNR Information access, Peterborough ON
 - Base map data from Geogratis NRCan Toporama DRG 1:50k sheets

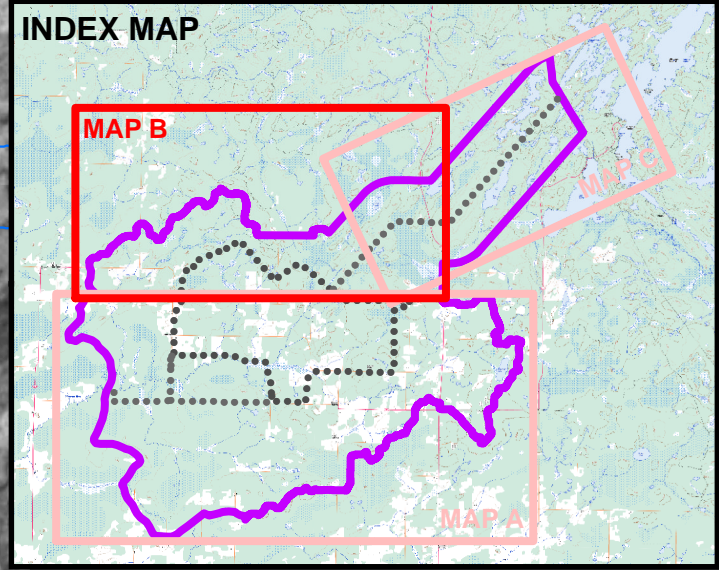
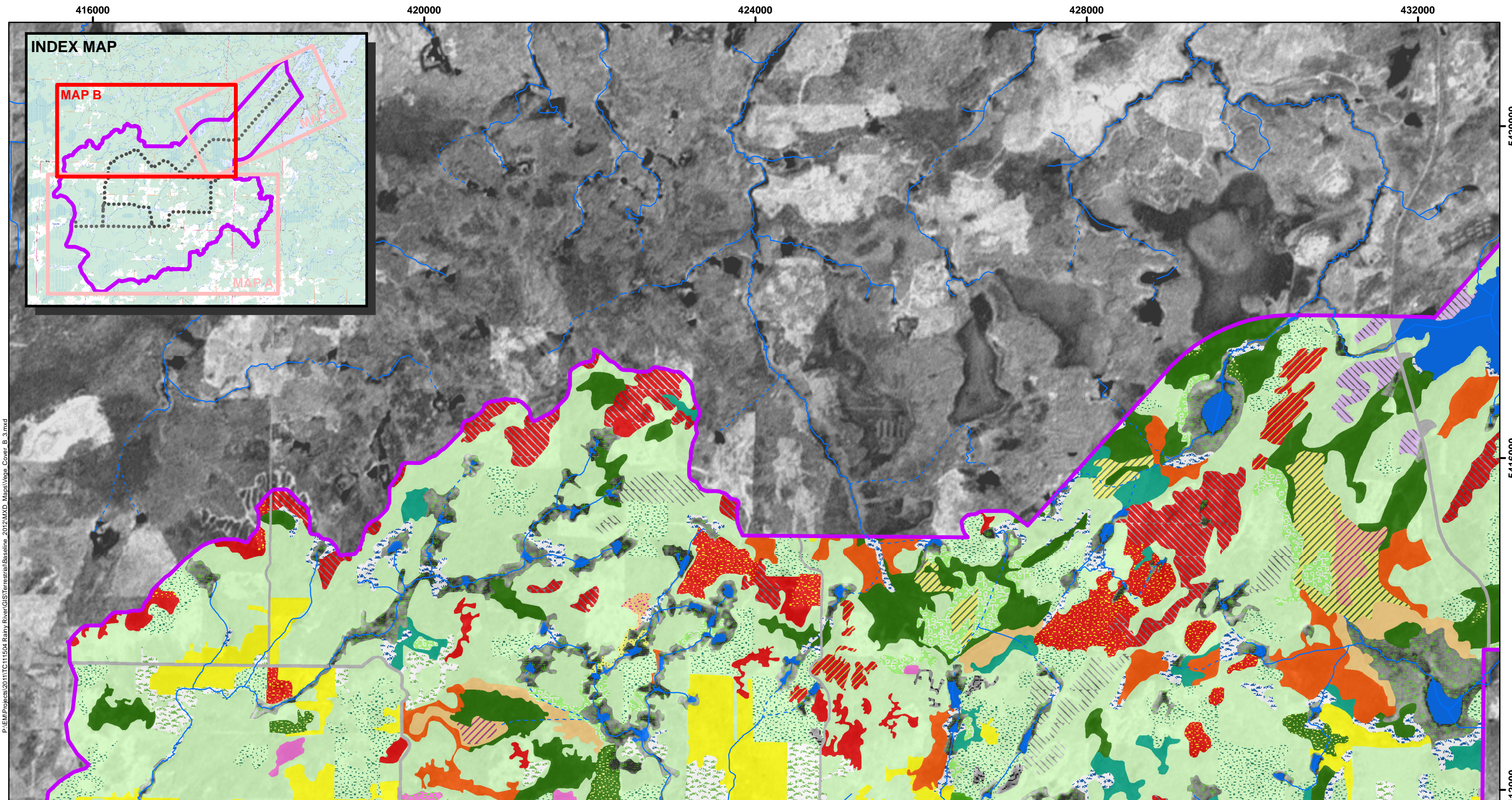
Datum: NAD83
 Projection: UTM Zone 15N

RAINY RIVER GOLD PROJECT

Forest Resource Inventory (FRI)/Vegetation Cover Map of the Local Study Area - MAP A

PROJECT N ^o : TC111504	FIGURE: 8a
SCALE: 1:57,000	DATE: November 2012





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LEGEND Local Study Area (LSA) Boundary		Vegetation/Land Cover Class (Derived from Forest Resource Inventory)				NOTES: - Road data extracted from Land Information Ontario, Ontario Road Network, MNR - Ontario base data extracted from Land Information Ontario (MNR) data warehouse. - Watershed delineations are approximate and are derived from MNR Ontario - Vegetation Classes are based on the lead species in forest stands and the MNR stand type classification from FRI data, provided by MNR Information access, Peterborough ON - Base map data from Geogratis NRCan Toporama DRG 1:50k sheets Datum: NAD83 Projection: UTM Zone 15N	RAINY RIVER amec	RAINY RIVER GOLD PROJECT	
<ul style="list-style-type: none"> Unknown - Protection Island Unclassified Water Brush and Alder Designated Agricultural Land Grass and Meadow Open Muskeg Rock Treed Muskeg 	<ul style="list-style-type: none"> Balsam Fir- Barren and Scattered Regular Balsam Fir- Regular Balsam Fir- Reserve Black Ash- Barren and Scattered Regular Black Ash- Regular Black Spruce- Barren and Scattered Regular Black Spruce- Barren and Scattered Reserve Black Spruce- Protection Site (Class 4) Black Spruce- Regular Black Spruce- Reserve 	<ul style="list-style-type: none"> Cedar- Barren and Scattered Regular Cedar- Protection Site (Class 4) Cedar- Regular Jack Pine- Barren and Scattered Regular Jack Pine- Barren and Scattered Reserve Jack Pine- Protection Site (Class 4) Jack Pine- Regular Jack Pine- Reserve Larch- Barren and Scattered Regular Larch- Protection Site (Class 4) 	<ul style="list-style-type: none"> Larch- Regular Poplar- Barren and Scattered Regular Poplar- Barren and Scattered Reserve Poplar- Protection Site (Class 4) Poplar- Regular Poplar- Reserve Red Pine- Barren and Scattered Regular Red Pine- Regular Red Pine- Reserve Soft Maple- Regular 	<ul style="list-style-type: none"> Soft Maple- Protection Site (Class 4) White Birch- Barren and Scattered Regular White Birch- Reserve White Birch- Regular White Birch- Protection Island White Pine- Regular White Pine- Reserve White Spruce- Barren and Scattered Regular White Spruce- Regular 	Forest Resource Inventory (FRI)/Vegetation Cover Map of the Local Study Area - MAP B				
				PROJECT N ^o : TC111504	FIGURE: 8b				
				SCALE: 1:44,000	DATE: November 2012				

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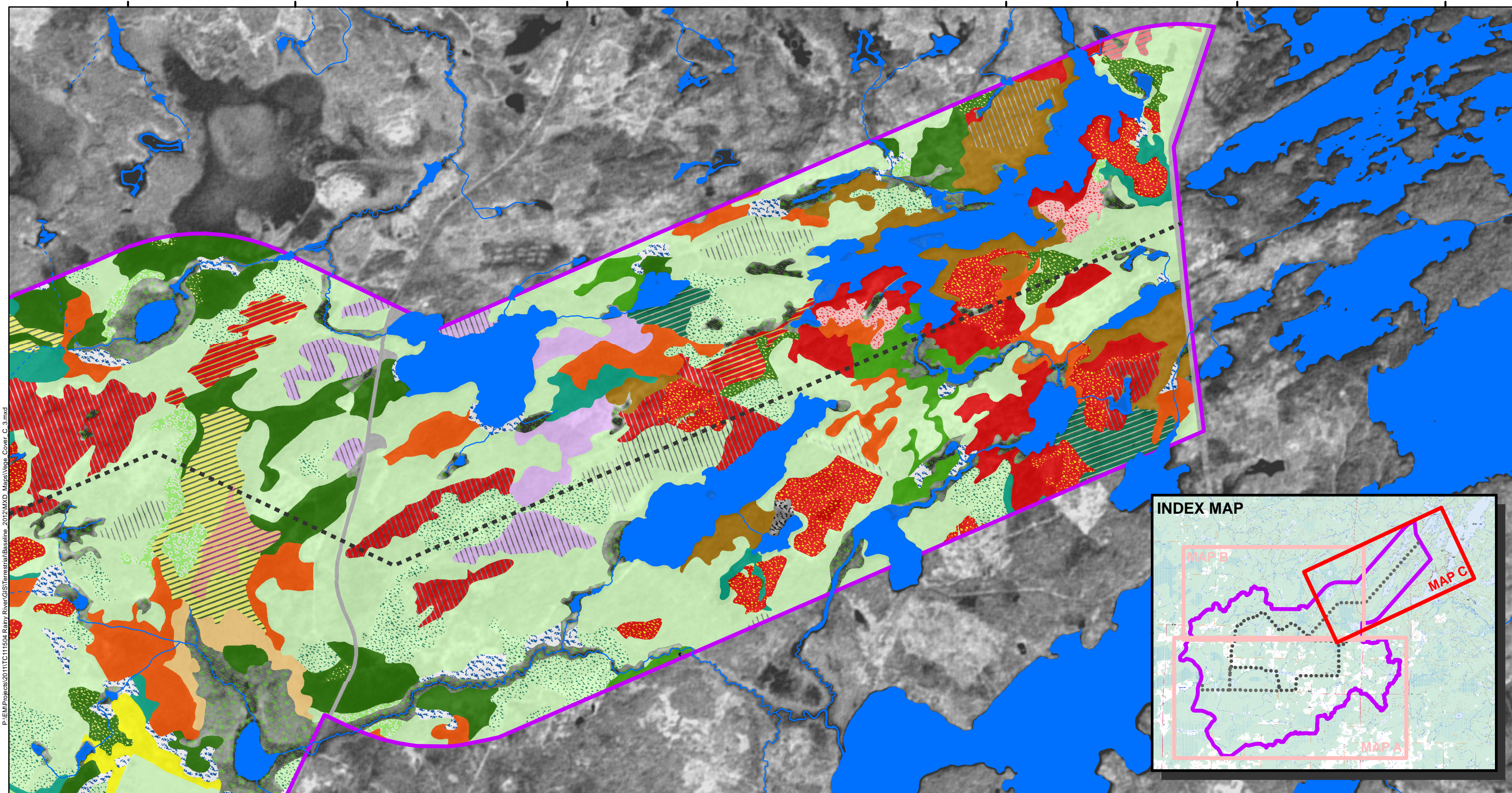
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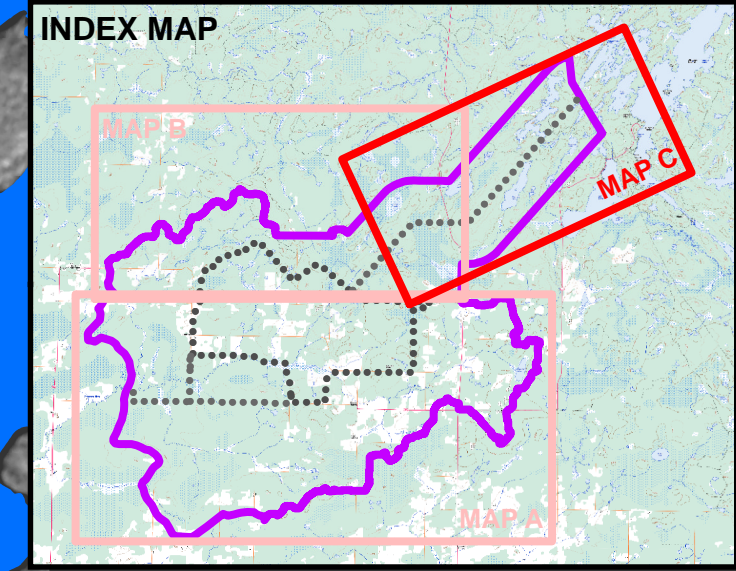
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LEGEND

- | | |
|--|--|
| <p> Local Study Area (LSA) Boundary</p> <p> Proposed 230kV Transmission Line</p> | <p>Vegetation/Land Cover Class (Derived from Forest Resource Inventory)</p> <ul style="list-style-type: none"> Unknown - Protection Island Unclassified Water Brush and Alder Designated Agricultural Land Grass and Meadow Open Muskeg Rock Treed Muskeg Balsam Fir- Barren and Scattered Regular Balsam Fir- Regular Balsam Fir- Reserve Black Ash- Barren and Scattered Regular Black Ash- Regular Black Spruce- Barren and Scattered Regular Black Spruce- Barren and Scattered Reserve Black Spruce- Protection Site (Class 4) Black Spruce- Regular Black Spruce- Reserve Cedar- Barren and Scattered Regular Cedar- Protection Site (Class 4) Cedar- Regular Jack Pine- Barren and Scattered Regular Jack Pine- Barren and Scattered Reserve Jack Pine- Protection Site (Class 4) Jack Pine- Regular Jack Pine- Reserve Larch- Barren and Scattered Regular Larch- Protection Site (Class 4) Larch- Regular Poplar- Barren and Scattered Regular Poplar- Barren and Scattered Reserve Poplar- Protection Site (Class 4) Poplar- Regular Poplar- Reserve Red Pine- Barren and Scattered Regular Red Pine- Regular Red Pine- Reserve Soft Maple- Regular Soft Maple- Protection Site (Class 4) White Birch- Barren and Scattered Regular White Birch- Reserve White Birch- Regular White Birch- Protection Island White Pine- Regular White Pine- Reserve White Spruce- Barren and Scattered Regular White Spruce- Regular |
|--|--|

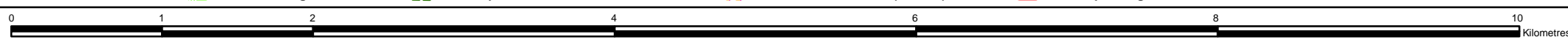
NOTES:

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- Ontario base data extracted from Land Information Ontario (MNR) data warehouse.
- Watershed delineations are approximate and are derived from MNR Ontario
- Vegetation Classes are based on the lead species in forest stands and the MNR stand type classification from FRI data, provided by MNR Information access, Peterborough ON
- Base map data from Geogratis NRCan Toporama DRG 1:50k sheets

Datum: NAD83
Projection: UTM Zone 15N



RAINY RIVER GOLD PROJECT	
Forest Resource Inventory (FRI)/Vegetation Cover Map of the Local Study Area - MAP C	
PROJECT N ^o : TC111504	FIGURE: 8c
SCALE: 1:37,000	DATE: November 2012





APPENDIX A
WILDLIFE SPECIES LIST

**Appendix A
 2012 Wildlife Species List**

Common Name	Latin Name	Federal COSEWIC Status	Provincial SARO Status	Provincial S-Rank (NHIC)
MAMMALS				
Beaver	<i>Castor canadensis</i>	--	--	S5
Black Bear	<i>Ursus americanus</i>	NAR	NAR	S5
Eastern Chipmunk	<i>Tamias striatus</i>	--	--	S5
Little Brown Bat	<i>Myotis lucifugus</i>	--	--	S5
Red Squirrel	<i>Tamiasciurus hudsonicus</i>	--	--	S5
Snowshoe Hare	<i>Lepus americanus</i>	--	--	S5
Striped Skunk	<i>Mephitis mephitis</i>	--	--	S5
White-tailed Deer	<i>Odocoileus virginianus</i>	--	--	S5
Wolf	<i>Canus lupus</i>	--	--	S5
Woodchuck	<i>Marmota monax</i>	--	--	S5
BIRDS				
Alder Flycatcher	<i>Empidonax alnorum</i>	--	--	S5B
American Bittern	<i>Botaurus lentiginosus</i>	--	--	S4B
American Crow	<i>Corvus brachyrhynchos</i>	--	--	S5B
American Goldfinch	<i>Spinus tristis</i>	--	--	S5B
American Kestrel	<i>Falco sparverius</i>	--	--	S5
American Redstart	<i>Setophaga ruticilla</i>	--	--	S5B
American Robin	<i>Turdus migratorius</i>	--	--	S5B
American Three-toed Woodpecker	<i>Picoides dorsalis</i>	--	--	S4
American White Pelican	<i>Pelecanus erythrorhynchos</i>	NAR	THR	S2B
American Woodcock	<i>Scolopax minor</i>	--	--	S5N
Bald Eagle	<i>Haliaeetus leucocephalus</i>	NAR	SC	S4
Baltimore Oriole	<i>Icterus galbula</i>	--	--	S4B
Barn Swallow	<i>Hirundo rustica</i>	THR	THR	S4B
Barred Owl	<i>Strix varia</i>	--	--	S4S5
Belted Kingfisher	<i>Ceryle alcyon</i>	--	--	S4B
Black-and-white Warbler	<i>Mniotilta varia</i>	--	--	S5B
Black-backed Woodpecker	<i>Picoides arcticus</i>	--	--	S4B
Black-billed Cuckoo	<i>Coccyzus erythrophthalmus</i>	--	--	S5B
Black-billed Magpie	<i>Pica pica</i>	--	--	S3?
Blackburnian Warbler	<i>Setophaga fusca</i>	--	--	S5B
Black-capped Chickadee	<i>Poecile atricapillus</i>	--	--	S5
Black-throated Blue Warbler	<i>Setophaga caerulescens</i>	--	--	S5B
Black-throated Green Warbler	<i>Setophaga virens</i>	--	--	S5B
Blue Jay	<i>Cyanocitta cristata</i>	--	--	S5B

Appendix A 2012 Wildlife Species List

Common Name	Latin Name	Federal COSEWIC Status	Provincial SARO Status	Provincial S-Rank (NHIC)
Blue-headed Vireo	<i>Vireo solitarius</i>	--	--	S5B
Bobolink	<i>Dolichonyx oryzivorus</i>	THR	THR	S4B
Boreal Chickadee	<i>Poecile hudsonica</i>	--	--	S5
Brewer's Blackbird	<i>Euphagus cyanocephalus</i>	--	--	S4B
Broad-winged Hawk	<i>Buteo platypterus</i>	--	--	S5
Brown Creeper	<i>Certhia americana</i>	--	--	S5B
Brown Thrasher	<i>Toxostoma rufum</i>	--	--	S4B
Brown-headed Cowbird	<i>Molothrus ater</i>	--	--	S4B
Canada Goose	<i>Branta canadensis</i>	--	--	S5B
Canada Warbler	<i>Cardellina canadensis</i>	THR	SC	S4B
Cape May Warbler	<i>Setophaga tigrina</i>	--	--	S5B
Cedar Waxwing	<i>Bombycilla cedrorum</i>	--	--	S5B
Chestnut-sided Warbler	<i>Setophaga pensylvanica</i>	--	--	S5B
Chipping Sparrow	<i>Spizella passerina</i>	--	--	S5B
Clay-coloured Sparrow	<i>Spizella pallida</i>	--	--	S4B
Common Goldeneye	<i>Bucephala clangula</i>	--	--	S5
Common Grackle	<i>Quiscalus quiscula</i>	--	--	S5B
Common Loon	<i>Gavia immer</i>	NAR	NAR	S5B, S5N
Common Merganser	<i>Mergus merganser</i>	--	--	S5B, S5N
Common Nighthawk	<i>Chordeiles minor</i>	THR	SC	S4B
Common Raven	<i>Corvus corax</i>	--	--	S5B
Common Yellowthroat	<i>Geothlypis trichas</i>	--	--	S5B
Connecticut Warbler	<i>Oporornis agilis</i>	--	--	S4B
Dark-eyed Junco	<i>Junco hyemalis</i>	--	--	S5B
Downy Woodpecker	<i>Picoides pubescens</i>	--	--	S5B
Eastern Kingbird	<i>Tyrannus tyrannus</i>	--	--	S4B
Eastern Phoebe	<i>Sayornis phoebe</i>	--	--	S5B
Eastern Whip-poor-will	<i>Antrostomus vociferus</i>	THR	THR	S4B
Eastern Wood-Pewee	<i>Contopus virens</i>	--	--	S4B
European Starling	<i>Sturnus vulgaris</i>	--	--	SNA
Evening Grosbeak	<i>Coccothraustes vespertinus</i>	--	--	S4B
Golden-crowned Kinglet	<i>Regulus satrapa</i>	--	--	S5B
Golden-winged Warbler	<i>Vermivora chrysoptera</i>	THR	SC	S4B
Gray Catbird	<i>Dumetella carolinensis</i>	--	--	S4B
Gray Jay	<i>Perisoreus canadensis</i>	--	--	S5B
Great Blue Heron	<i>Ardea herodias</i>	--	--	S5

Appendix A 2012 Wildlife Species List

Common Name	Latin Name	Federal COSEWIC Status	Provincial SARO Status	Provincial S-Rank (NHIC)
Great Crested Flycatcher	<i>Myiarchus crinitus</i>	--	--	S4B
Great Horned Owl	<i>Bubo virginianus</i>	--	--	S5
Hairy Woodpecker	<i>Picoides villosus</i>	--	--	S5B
Hermit Thrush	<i>Catharus guttatus</i>	--	--	S5B
Herring Gull	<i>Larus argentatus</i>	--	--	S5B
House Wren	<i>Troglodytes aedon</i>	--	--	S5B
Indigo Bunting	<i>Passerina cyanea</i>	--	--	S4B
Killdeer	<i>Charadrius vociferus</i>	--	--	S5B
Least Flycatcher	<i>Empidonax minimus</i>	--	--	S4B
LeConte's Sparrow	<i>Ammodramus leconteii</i>	--	--	S4B
Long-eared Owl	<i>Asio otus</i>	--	--	S4
Magnolia Warbler	<i>Setophaga magnolia</i>	--	--	S5B
Mallard	<i>Anas platyrhynchos</i>	--	--	S5
Mourning Warbler	<i>Geothlypis philadelphia</i>	--	--	S4B
Nashville Warbler	<i>Oreothlypis ruficapilla</i>	--	--	S5B
Northern Flicker	<i>Colaptes auratus</i>	--	--	S4B
Northern Parula	<i>Setophaga americana</i>	--	--	S4B
Northern Waterthrush	<i>Parkesia noveboracensis</i>	--	--	S5B
Olive-sided Flycatcher	<i>Contopus borealis</i>	THR	SC	S4B
Ovenbird	<i>Seiurus aurocapilla</i>	--	--	S4B
Palm Warbler	<i>Setophaga palmarum</i>	--	--	S5B
Philadelphia Vireo	<i>Vireo philadelphicus</i>	--	--	S5B
Pileated Woodpecker	<i>Dryocopus pileatus</i>	--	--	S5
Pine Siskin	<i>Spinus pinus</i>	--	--	S5B
Pine Warbler	<i>Setophaga pinus</i>	--	--	S5B
Purple Finch	<i>Haemorhous purpureus</i>	--	--	S5B
Red Crossbill	<i>Loxia curvirostra</i>	--	--	S4B
Red-breasted Nuthatch	<i>Sitta canadensis</i>	--	--	S5
Red-eyed Vireo	<i>Vireo olivaceus</i>	--	--	S5B
Red-winged Blackbird	<i>Agelaius phoeniceus</i>	--	--	S4
Ring-billed Gull	<i>Larus delawarensis</i>	--	--	S5B
Rose-breasted Grosbeak	<i>Pheucticus ludovicianus</i>	--	--	S4B
Ruby-crowned Kinglet	<i>Regulus calendula</i>	--	--	S4B
Ruby-throated Hummingbird	<i>Archilochus colubris</i>	--	--	S5B
Ruffed Grouse	<i>Bonasa umbellus</i>	--	--	S5B
Sandhill Crane	<i>Grus canadensis</i>	NAR	NAR	S5B

Appendix A 2012 Wildlife Species List

Common Name	Latin Name	Federal COSEWIC Status	Provincial SARO Status	Provincial S-Rank (NHIC)
Savannah Sparrow	<i>Passerculus sandwichensis</i>	--	--	S4B
Scarlet Tanager	<i>Piranga olivacea</i>	--	--	S4B
Sedge Wren	<i>Cistothorus platensis</i>	NAR	NAR	S4B
Sharp-shinned Hawk	<i>Accipiter striatus</i>	NAR	NAR	S5
Sharp-tailed Grouse	<i>Tympanuchus phasianellus</i>	--	--	S4
Song Sparrow	<i>Melospiza melodia</i>	--	--	S5B
Swainson's Thrush	<i>Catharus ustulatus</i>	--	--	S4B
Swamp Sparrow	<i>Melospiza georgiana</i>	--	--	S5B
Tennessee Warbler	<i>Oreothlypis peregrina</i>	--	--	S5B
Tree Swallow	<i>Tachycineta bicolor</i>	--	--	S4B
Trumpeter Swan	<i>Cygnus buccinator</i>	NAR	NAR	S4
Turkey Vulture	<i>Cathartes aura</i>	--	--	S5B
Veery	<i>Catharus fuscescens</i>	--	--	S4B
Warbling Vireo	<i>Vireo gilvus</i>	--	--	S5B
White-throated Sparrow	<i>Zonotrichia albicollis</i>	--	--	S5B
White-winged Crossbill	<i>Loxia leucoptera</i>	--	--	S5B
Wilson's Snipe	<i>Gallinago delicata</i>	--	--	S5B
Wilson's Warbler	<i>Cardellina pusilla</i>	--	--	S4B
Winter Wren	<i>Troglodytes troglodytes</i>	--	--	S5B
Wood Duck	<i>Aix sponsa</i>	--	--	S5B
Wood Thrush	<i>Hylocichla mustelina</i>	--	--	S4B
Yellow Warbler	<i>Setophaga petechia</i>	--	--	S5B
Yellow-bellied Flycatcher	<i>Empidonax flaviventris</i>	--	--	S5B
Yellow-bellied Sapsucker	<i>Sphyrapicus varius</i>	--	--	S5B
Yellow-rumped Warbler	<i>Setophaga coronata</i>	--	--	S5B
Yellow-throated Vireo	<i>Vireo flavifrons</i>	--	--	S4B
REPTILES				
Eastern Gartersnake	<i>Thamnophis sirtalis sirtalis</i>	--	--	S5
Western Painted Turtle	<i>Chrysemys picta bellii</i>	--	--	S5
AMPHIBIANS				
American Toad	<i>Anaxyrus americanus</i>	--	--	S5
Boreal Chorus Frog	<i>Pseudacris maculata</i>	--	--	S5
Northern Green Frog	<i>Lithobates clamitans</i>	--	--	S5
Northern Leopard Frog	<i>Lithobates pipiens</i>	NAR	NAR	S5
Spring Peeper	<i>Pseudacris crucifer</i>	--	--	S5
Tetraploid Gray Treefrog	<i>Hyla versicolor</i>	--	--	S5

Appendix A 2012 Wildlife Species List

Common Name	Latin Name	Federal COSEWIC Status	Provincial SARO Status	Provincial S-Rank (NHIC)
Wood Frog	<i>Lithobates sylvatica</i>	--	--	S5
BUTTERFLIES				
American Painted Lady	<i>Vanessa virginiensis</i>	--	--	S5
Atlantis Fritillary	<i>Speyeria atlantis</i>	--	--	S5
Canadian Tiger Swallowtail	<i>Papilio canadensis</i>	--	--	S5
Clouded Sulphur	<i>Colias philodice</i>	--	--	S5
Common Wood-Nymph	<i>Cercyonis pegala</i>	--	--	S5
European Skipper	<i>Thymelicus lineola</i>	--	--	SE
Great Spangled Fritillary	<i>Speyeria cybele</i>	--	--	S5
Grey Comma	<i>Polygonia progne</i>	--	--	S5
Harris' Checkerspot	<i>Chlosyne harrisii</i>	--	--	S4
Harvester	<i>Feniseca tarquinius</i>	--	--	S4
Hoary Comma	<i>Polygonia gracilis</i>	--	--	S4
Little Wood-Satyr	<i>Megisto cymela</i>	--	--	S5
Meadow Fritillary	<i>Boloria bellona</i>	--	--	S5
Milbert's Tortoiseshell	<i>Nymphalis milberti</i>	--	--	S5
Monarch	<i>Danaus plexippus</i>	SC	--	S2N, S4B
Mourning Cloak	<i>Nymphalis antiopa</i>	--	--	S5
Mustard White	<i>Pieris oleracea</i>	--	--	S4
Northern Cloudy Wing	<i>Thorybes pylades</i>	--	--	S5
Northern Crescent	<i>Phycoides pascoensis</i>	--	--	S5
Northern Pearly Eye	<i>Enodia anhedon</i>	--	--	S4
Orange Sulphur	<i>Colias eurytheme</i>	--	--	S5
Painted Lady	<i>Vanessa cardui</i>	--	--	S5
Red Admiral	<i>Vanessa atalanta</i>	--	--	S5
Silver-bordered Fritillary	<i>Boloria selene</i>	--	--	S5
Tawny Crescent	<i>Phyciodes batesii</i>	--	--	S4
Variiegated Fritillary	<i>Euptoieta claudia</i>	--	--	SNA
White Admiral	<i>Limenitis arthemis</i>	--	--	S5
ODONATA				
Belted Whiteface	<i>Leucorrhinia proxima</i>	--	--	S5
Canada Darner	<i>Aeshna canadensis</i>	--	--	S5
Chalk-fronted Corporal	<i>Ladona julia</i>	--	--	S5
Dot-tailed Whiteface	<i>Leucorrhinia intacta</i>	--	--	S5
Four-spotted Skimmer	<i>Libellula quadrimaculata</i>	--	--	S5
Frosted Whiteface	<i>Leucorrhinia frigida</i>	--	--	S5

**Appendix A
 2012 Wildlife Species List**

Common Name	Latin Name	Federal COSEWIC Status	Provincial SARO Status	Provincial S-Rank (NHIC)
Hudsonian Whiteface	<i>Leucorrhinia hudsonica</i>	--	--	S5
Lilypad Clubtail	<i>Arigomphus furcifer</i>	--	--	S3
River Jewelwing	<i>Calopteryx aequabilis</i>	--	--	S5
Saffron-bordered Meadowhawk	<i>Sympetrum costiferum</i>	--	--	S4

*****Provincial S-RANK (NHIC)**

- S1 Critically Imperiled
- S2 Imperiled
- S3 Vulnerable
- S4 Apparently Secure
- S5 Secure
- S? Not Ranked Yet: if follow a rank, Rank Uncertain
- SNR Unranked
- SNA Not Applicable
- NAR Not at Risk
- SC Special Concern
- THR Threatened
- B Breeding
- N Nonbreeding



APPENDIX B

PLANT SPECIES LIST

Appendix B
2012 Plant Species List

Common Name	Latin Name	Coefficient of Conservatism*	Wetness Index**	Provincial S-RANK*** (NHIC)	Federal COSEWIC Status	Provincial SARO Status	Global G-RANK****	Ontario General Status	Canada General Status
HERBACEOUS FLOWERING SPECIES									
Agrimony	<i>Agrimonia gryposepala</i>	2	2	S5	-	-	G5	SECURE	SECURE
Agrimony Woodland	<i>Agrimonia striata</i>	-	-	S4?	-	-	G5	SECURE	SECURE
Alfalfa	<i>Medicago sativa</i> <i>ssp. sativa</i>	-	5	SE5	-	-	G?T?	EXOTIC	EXOTIC
Anemone Canada	<i>Anemone canadensis</i>	3	-3	S5	-	-	G5	SECURE	SECURE
Aster Hairy	<i>Symphotrichum pilosum</i> var. <i>pilosum</i>	4	2	S5	-	-	G5T5	-	-
Aster Heart-leaved	<i>Symphotrichum cordifolium</i>	5	5	S5	-	-	G5	SECURE	SECURE
Aster Large-leaved	<i>Eurybia macrophyllus</i>	5	5	S5	-	-	G5	SECURE	SECURE
Avens White	<i>Geum canadense</i>	3	0	S5	-	-	G5	SECURE	SECURE
Avens Yellow	<i>Geum aleppicum</i> var. <i>strictum</i>	2	-1	S5	-	-	G5	SECURE	SECURE
Baneberry sp.	<i>Actaea sp.</i>	-	-	-	-	-	-	-	-
Barren Strawberry	<i>Waldsteinia fragarioides</i>	5	5	S5	-	-	G5	SECURE	SECURE
Bedstraw Marsh	<i>Galium palustre</i>	5	-5	S5	-	-	G5	SECURE	SECURE
Bedstraw Northern	<i>Galium boreale</i>	7	0	S5	-	-	G5	SECURE	SECURE
Bedstraw Rough	<i>Galium asprellum</i>	6	-5	S5	-	-	G5	SECURE	SECURE

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Bellwort Sessile-leaved	<i>Uvularia sessilifolia</i>	7	1	S4	-	-	G5	SECURE	SECURE
Birds-foot Trefoil	<i>Lotus corniculatus</i>	-	1	SNA	-	-	GNR	EXOTIC	EXOTIC
Bishop's-cap Naked	<i>Mitella nuda</i>	6	-3	S5	-	-	G5	SECURE	SECURE
Black Medic	<i>Medicago lupulina</i>	-	1	SNA	-	-	GNR	EXOTIC	EXOTIC
Bloodroot	<i>Sanguinaria canadensis</i>	5	4	S5	-	-	G5	SECURE	SECURE
Bluebells Northern	<i>Mertensia paniculata</i>	-	-	S5	-	-	G5	SECURE	SECURE
Blue-eyed Grass Strict	<i>Sisyrinchium montanum</i>	4	-1	S5	-	-	G5	SECURE	SECURE
Blueflag	<i>Iris versicolor</i>	5	-5	S5	-	-	G5	SECURE	SECURE
Bog-orchid Northern	<i>Platanthera hyperborea</i>	-	-	S4	-	-	-	-	-
Boneset Common	<i>Eupatorium perfoliatum</i>	2	-4	S5	-	-	G5	SECURE	SECURE
Bugleweed Northern	<i>Lycopus uniflorus</i>	5	-5	S5	-	-	G5	SECURE	SECURE
Burdock Common	<i>Arctium minus</i> ssp. <i>minus</i>	-	-	SNA	-	-	GNRTNR	-	-
Buttercup Bristly	<i>Ranunculus hispidus</i> var. <i>hispidus</i>	8	0	S3	-	-	G5T5	-	-
Buttercup Tall	<i>Ranunculus acris</i>	-	-2	SNA	-	-	G5	EXOTIC	EXOTIC
Campion White	<i>Lychnis alba</i>	-	-	-	-	-	-	-	-
Catnip	<i>Nepeta cataria</i>	-	1	SNA	-	-	GNR	EXOTIC	EXOTIC

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Cattail Common	<i>Typha latifolia</i>	3	-5	S5	-	-	G5	SECURE	SECURE
Chickweed Common Mouse-ear	<i>Cerastium fontanum</i>	-	3	SNA	-	-	GNR	EXOTIC	EXOTIC
Cinquefoil Marsh	<i>Comarum palustre</i>	7	-5	S5	-	-	G5	SECURE	SECURE
Cinquefoil Rough-fruited	<i>Potentilla recta</i>	-	5	SNA	-	-	GNR	EXOTIC	EXOTIC
Clintonia	<i>Clintonia borealis</i>	7	-1	S5	-	-	G5	SECURE	SECURE
Clover Red	<i>Trifolium pratense</i>	-	2	SNA	-	-	GNR	EXOTIC	EXOTIC
Columbine	<i>Aquilegia canadensis</i>	5	1	S5	-	-	G5	SECURE	SECURE
Comandra Northern	<i>Geocaulon lividum</i>	0	-2	S5	-	-	G5	SECURE	SECURE
Corydalis Pale	<i>Corydalis flavula</i>	7	5	S5	-	-	G4G5	SECURE	SECURE
Cow-parsnip	<i>Heracleum maximum</i>	3	-3	S5	-	-	G5	SECURE	SECURE
Cow-wheat American	<i>Melampyrum lineare</i>	6	1	S4S5			G5	SECURE	SECURE
Crane's-bill Bicknell Northern	<i>Geranium bicknellii</i>	5	5	S4	-	-	G5	SECURE	SECURE
Daisy Ox-eye	<i>Leucanthemum vulgare</i>	-	-	SNA	-	-	GNR	EXOTIC	EXOTIC
Dandelion Common	<i>Taraxacum officinale</i>	-	3	SNA	-	-	G5	SECURE	SECURE
Dock Curly	<i>Rumex crispus</i>	-	-1	SNA	-	-	GNR	EXOTIC	EXOTIC

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Dogbane Spreading	<i>Apocynum androsaemifolium</i> ssp. <i>androsaemifolium</i>	3	5	S5	-	-	G5	SECURE	SECURE
Enchanter's Nightshade	<i>Circaea quadrisulcata</i>	-	-	-	-	-	-	-	-
Evening Primrose Common	<i>Oenothera biennis</i>	0	3	S5	-	-	G5	SECURE	SECURE
Everlasting Pearly	<i>Anaphalis margaritacea</i>	3	5	S5	-	-	G5	SECURE	SECURE
Fleabane Daisy	<i>Erigeron strigosus</i>	0	1	S5	-	-	G5	SECURE	SECURE
Fleabane Philadelphia	<i>Erigeron philadelphicus</i>	1	-3	S5	-	-	G5	SECURE	SECURE
Gentian Spurred	<i>Halenia deflexa</i>	7	0	S5	-	-	G5	SECURE	SECURE
Goldenrod Marsh	<i>Solidago uliginosa</i>	9	-5	S5	-	-	G4G5	SECURE	SECURE
Goldenrod Tall	<i>Solidago altissima</i> var. <i>altissima</i>	-	-	S4?	-	-	-	-	-
Goldthread	<i>Coptos trifolia</i> ssp. <i>groenlandica</i>	7	-3	S5	-	-	G5	SECURE	SECURE
Harebell	<i>Campanula rotundifolia</i>	7	1	S5	-	-	G5	SECURE	SECURE
Hawksbeard Narrow-leaf	<i>Crepis tectorum</i>	-	5	SNA	-	-	GNR	EXOTIC	EXOTIC
Hawkweed Orange	<i>Hieracium aurantiacum</i>	-	-	SNA	-	-	GNR	EXOTIC	EXOTIC

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Hedge-nettle Marsh	<i>Stachys palustris</i>	-	-5	SNA	-	-	G5	SECURE	SECURE
Hempnettle Bristle-stem	<i>Galeopsis tetrahit</i>	-	5	SNA	-	-	GNR	EXOTIC	EXOTIC
Herb-robert	<i>Geranium robertianum</i>	-	5	SNA	-	-	G5	EXOTIC	EXOTIC
Indian-paintbrush Scarlet	<i>Castilleja coccinea</i>	9	0	S5	-	-	G5	SECURE	SECURE
Jack-in-the-pulpit	<i>Arisaema triphyllum</i> ssp. <i>triphyllum</i>	5	-2	S5	-	-	G5	SECURE	SECURE
Jewel-weed Spotted	<i>Impatienscapensis</i>	4	-3	S5	-	-	G5	SECURE	SECURE
Joe-pye-weed Spotted	<i>Eupatroidium maculatum</i> spp. <i>maculatum</i>	-	-	S5	-	-	G5TNR	-	-
Lady's-slipper Pink	<i>Cypripedium acaule</i>	7	-3	S5	-	-	G5	SECURE	SECURE
Lady's-slipper Showy	<i>Cypripedium reginae</i>	7	-4	S4	-	-	G4	SECURE	SECURE
Lady's-slipper Yellow Large	<i>Cypripedium parviflorum</i> var. <i>pubescens</i>	5	-1	S5	-	-	G5T5	-	-
Lettuce Prickly	<i>Lactuca serriola</i>	-	0	SNA	-	-	GNR	EXOTIC	EXOTIC
Lobelia Great Blue	<i>Lobelia siphilitica</i>	6	-4	S5	-	-	G5	SECURE	SECURE
Loosestrife Fringed	<i>Lysimachia ciliata</i>	4	-3	S5	-	-	G5	SECURE	SECURE
Loosestrife Tufted	<i>Lysimachia thysiflora</i>	7	-5	S5	-	-	G5	SECURE	SECURE

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Mandarin Yellow	<i>Disporum lanuginosum</i>	8	5	S4	-	-	G5	SECURE	SECURE
Marsh Marigold	<i>Caltha palustris</i>	5	-5	S5	-	-	G5	SECURE	SECURE
Meadow-rue Tall	<i>Thalictrum pubescens</i>	5	-2	S5	-	-	G5	SECURE	SECURE
Mustard Tower	<i>Arabis glabra</i>	4	5	S5	-	-	G5	SECURE	SECURE
Nettle Stinging	<i>Urtica dioica ssp. gracilis</i>	2	-1	S5	-	-	G5T5	SECURE	SECURE
Nettle Tall	<i>Urtica procera</i>	-	-	-	-	-	-	-	-
Nettle Wood	<i>Laportea canadensis</i>	6	-3	S5	-	-	G5	SECURE	SECURE
Nodding Trillium	<i>Rillium cemuum</i>	8	0	S5	-	-	G5	SECURE	SECURE
Penny-cress Field	<i>Thlaspi arvense</i>	-	5	SNA	-	-	GNR	EXOTIC	EXOTIC
Pineapple-weed	<i>Chamomilla suaveolens</i>	-	-	SNA	-	-	G5	EXOTIC	EXOTIC
Pipsissewa	<i>Chimaphila umbellata ssp. cisatlantica</i>	8	5	S5	-	-	G5	SECURE	SECURE
Plantain Common	<i>Plantago major</i>	-	-1	SNA	-	-	G5	EXOTIC	EXOTIC
Poison Ivy	<i>Toxicodenron radicans ssp. negundo</i>	5	-1	S5	-	-	G5T5	SECURE	SECURE
Ragwort Balsam	<i>Senecio pauperculus</i>	7	-1	S5	-	-	G5	SECURE	SECURE

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Rattlesnake-plantain Dwarf	<i>Goodyera repens</i>	8	3	S5	-	-	G5	SECURE	SECURE
Rattlesnake-root White	<i>Prenanthes alba</i>	6	3	S5	-	-	G5	SECURE	SECURE
Rose Twisted Stalk	<i>Streptopus roseus</i>	7	0	S5	-	-	G5	SECURE	SECURE
Sarsaparilla Bristly	<i>Aralia hispida</i>	8	5	S5	-	-	G5	SECURE	SECURE
Sarsaparilla Wild	<i>Aralia nudicaulis</i>	4	3	S5	-	-	G5	SECURE	SECURE
Self-heal	<i>Prunella vulgaris</i> <i>ssp. Lanceolata</i>	5	5	S5	-	-	G5T5	SECURE	SECURE
Shepherd's Purse Common	<i>Capsella bursa-pastoris</i>	-	1	SNA	-	-	GNR	EXOTIC	EXOTIC
Skullcap Hooded	<i>Scutellaria galericulata</i>	6	-5	S5	-	-	G5	SECURE	SECURE
Snakeroot Black	<i>Sanicula marilandica</i>	5	3	S5	-	-	G5	SECURE	SECURE
Snakeroot White	<i>Ageratina altissima</i> <i>var. altissima</i>	5	3	S5	-	-	G5T5	SECURE	SECURE
Solomon's Seal Three-leaf	<i>Maianthemum trifolium</i>	10	-5	S5	-	-	G5	SECURE	SECURE
Sorrel Sheep	<i>Rumex acetosella</i> <i>spp. acetosella</i>	-	-	SE	-	-	-	EXOTIC	EXOTIC
Star-flower	<i>Trientalis borealis</i> <i>ssp. borealis</i>	6	-1	S5	-	-	G5	SECURE	SECURE
Stitchwort Chickweed	<i>Stellaria media</i> <i>ssp. pallida</i>	-	-	SNA	-	-	GNRTNR	EXOTIC	EXOTIC

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Stitchwort Longleaf	<i>Stellaria longifolia</i>	2	-4	S5	-	-	G5	SECURE	SECURE
Strawberry Wild	<i>Fragaria virginiana</i>	2	1	S5	-	-	G5	SECURE	SECURE
Strawberry Woodland	<i>Fragaria vesca</i> ssp. <i>americana</i>	4	4	S5	-	-	G5	SECURE	SECURE
Sweet- clover White	<i>Melilotus alba</i>	-	3	SNA	-	-	G5	EXOTIC	EXOTIC
Sweet-cicely Hairy	<i>Osmorhiza claytonii</i>	5	4	S5	-	-	G5	SECURE	SECURE
Sweet-coltsfoot Arrow-leaved	<i>Petasites sagittatus</i>	-	-	S5	-	-	G5	-	-
Sweet-coltsfoot Northern	<i>Petasites frigidus</i>	8	-3	S5	-	-	G5	SECURE	SECURE
Tansy Common	<i>Tanacetum vulgare</i>	-	5	SNA	-	-	GNR	EXOTIC	EXOTIC
Thistle Bull	<i>Cirsium vulgare</i>	-	4	SNA	-	-	GNR	EXOTIC	EXOTIC
Thistle Canada	<i>Cirsium arvense</i>	-	3	SNA	-	-	GNR	EXOTIC	EXOTIC
Vetch Cow	<i>Vicia cracca</i>	-	5	SNA	-	-	GNR	EXOTIC	EXOTIC
Vetchling Peavine	<i>Lathyrus palustris</i>	6	-3	S5	-	-	G5	SECURE	SECURE
Violet Kidney-leaf	<i>Viola renifolia</i>	7	-3	S5	-	-	G5	SECURE	SECURE
Violet sp.	<i>Viola sp.</i>	-	-	-	-	-	-	-	-
Viper's-bugloss Common	<i>Echium vulgare</i>	-	5	SNA	-	-	GNR	EXOTIC	EXOTIC
Water-parsnip Hemlock	<i>Sium suave</i>	4	-5	S5	-	-	G5	SECURE	SECURE
Water-plantain Common	<i>Alisma plantago-aquatica</i>	-	-	S4?	-	-	-	-	-
Wild Carrot	<i>Daucus corata</i>	-	5	SNA	-	-	GNR	EXOTIC	EXOTIC

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Wild-ginger Canada	<i>Asarum canadense</i>	6	5	S5	-	-	G5	SECURE	SECURE
Wild-lily-of-the-valley	<i>Maianthemum canadense</i>	5	0	S5	-	-	G5	SECURE	SECURE
Wintergreen Pink	<i>Pyrola asarifolia</i>	7	-3	S5	-	-	G5	SECURE	SECURE
Yarrow Common	<i>Achillea millefolium</i> <i>var. millefolium</i>	-	3	SNA	-	-	G5T5?	EXOTIC	EXOTIC
GRASSES, SEDGES AND RUSHES									
Blue-joint Canada	<i>Calamagrostis canadensis</i>	4	-5	S5	-	-	G5	SECURE	SECURE
Brome-grass Smooth	<i>Bromus inermis</i> <i>ssp. inermis</i>	-	5	SNA	-	-	G5TNR	EXOTIC	EXOTIC
Grass Orchard	<i>Dactylis glomerata</i>	-	3	SNA	-	-	GNR	EXOTIC	EXOTIC
Grass Rough Hair	<i>Agrostis scabra</i>	0	-3	S5	-	-	G5	SECURE	SECURE
Sedge Awned	<i>Carex atherodes</i>	6	-5	S4S5	-	-	G5	SECURE	SECURE
Sedge Bebb's	<i>Carex bebbii</i>	3	-5	S5	-	-	G5	SECURE	SECURE
Sedge Bladder	<i>Carex intumescens</i>	6	-4	S5	-	-	G5	SECURE	SECURE
Sedge Blunt Broom	<i>Carex tribuloides</i>	5	-4	S4S5	-	-	G5	SECURE	SECURE
Sedge Chestnut-colored	<i>Carex castanea</i>	7	-4	S5	-	-	G5	SECURE	SECURE
Sedge Fox	<i>Carex vulpinoidea</i>	3	-5	S5	-	-	G5	SECURE	SECURE
Sedge Fringed	<i>Carex crinita</i>	6	-4	S5	-	-	G5	SECURE	SECURE
Sedge Graceful	<i>Carex gracillima</i>	4	3	S5	-	-	G5	SECURE	SECURE
Sedge Hop	<i>Carex lupulina</i>	6	-5	S5	-	-	G5	SECURE	SECURE
Sedge Lake-bank	<i>Carex lacustris</i>	5	-5	S5	-	-	G5	SECURE	SECURE

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Sedge Mud	<i>Carex limosa</i>	10	-5	S5	-	-	G5	SECURE	SECURE
Sedge Rosy	<i>Carex rosea</i>	-	-	S5	-	-	G5	SECURE	SECURE
Sedge Sallow	<i>Carex lurida</i>	6	-5	S5	-	-	G5	SECURE	SECURE
Sedge Slender	<i>Carex lasiocarpa</i>	8	-5	S5	-	-	G5	SECURE	SECURE
Sedge Slender	<i>Carex tenera</i>	4	-1	S4S5	-	-	G5	SECURE	SECURE
Sedge Stalk-grain	<i>Carex stipata</i>	3	-5	S5	-	-	G5	SECURE	SECURE
Sedge Stellate	<i>Carex radiata</i>	4	5	S4	-	-	G4	SECURE	SECURE
Sedge Tussock	<i>Carex stricta</i>	4	-5	S5	-	-	G5	SECURE	SECURE
Sedge Water	<i>Carex aquatilis</i>	7	-5	S5	-	-	G5	SECURE	SECURE
Grass Poverty Oat	<i>Danthonia spicata</i>	5	5	S5	-	-	G5	SECURE	SECURE
Sedge Three-way	<i>Dulichium arundinaceum</i>	7	-5	S5	-	-	G5	SECURE	SECURE
Spike-rush Blunt	<i>Eleocharis obtusa</i>	5	-5	S5	-	-	G5	SECURE	SECURE
Grass Quack	<i>Elymus repens</i>	-	3	SNA	-	-	GNR	EXOTIC	EXOTIC
Cotton-grass Tussock	<i>Eriophorum vaginatum</i>	10	-5	S5	-	-	G5	SECURE	SECURE
Cottongrass Green Keeled	<i>Eriophorum viridicarinatum</i>	9	-5	S5	-	-	G5	SECURE	SECURE
Mannagrass American	<i>Glyceria grandis</i>	5	-5	S4S5	-	-	G5	SECURE	SECURE
Manna-grass Fowl	<i>Glyceria striata</i> var. <i>stricta</i>	-	-	S4S5	-	-	G5T5	-	-
Rush Canada	<i>Juncus canadensis</i>	6	-5	S5	-	-	G5	SECURE	SECURE

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Rush Soft	<i>Juncus effuses</i> <i>spp. solutus</i>	4	-5	S5	-	-	G5	SECURE	SECURE
Rush Path	<i>Juncus tenuis</i>	0	0	S5	-	-	G5	SECURE	SECURE
Grass Reed-canary	<i>Phalaris arundinacea</i>	0	-4	S5	-	-	G5	SECURE	SECURE
Timothy	<i>Phleum pratense</i>	-	3	SNA	-	-	GNR	EXOTIC	EXOTIC
Bluegrass Canada	<i>Poa compressa</i>	0	2	SNA	-	-	GNR	SECURE	SECURE
Bluegrass Fowl	<i>Poa palustris</i>	5	-4	S5	-	-	G5	SECURE	SECURE
Bluegrass Kentucky	<i>Poa pratensis</i> <i>spp. pratensis</i>	0	2	S5	-	-	G5T5	SECURE	SECURE
Bulrush Black	<i>Scirpus atrovirens</i>	3	-5	S5	-	-	G5?	SECURE	SECURE
Wool-grass	<i>Scirpus cyperinus</i>	4	-5	S5	-	-	G5	SECURE	SECURE
Bulrush sp.	<i>Scirpus sp.</i>	-	-	-	-	-	-	-	-
Cattail Common	<i>Typha latifolia</i>	3	-5	S5	-	-	G5	SECURE	SECURE
AQUATIC PLANTS									
Arrowhead Broadleaf	<i>Sagittaria latifolia</i>	4	-5	S5	-	-	G5	SECURE	SECURE
Calla Wild	<i>Calla palustris</i>	8	-5	S5	-	-	G5	SECURE	SECURE
Coontail Hornwort	<i>Ceratophyllum demersum</i>	4	-5	S5	-	-	G5	SECURE	SECURE
Duckweed Great	<i>Spirodela polyrihiza</i>	-	-	S5	-	-	G5	-	-
Lesser duckweed	<i>Lemna minor</i>	2	-5	S5	-	-	G5	SECURE	SECURE
Pondweed Floating-leaf	<i>Potamogeton natans</i>	5	-5	S5	-	-	G5	SECURE	SECURE

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Yellow Cowlily	<i>Nuphar lutea ssp. variegata</i>	-	-	S5	-	-	G5T5	SECURE	SECURE
FERNS AND ALLIES									
Clubmoss Stiff	<i>Lycopodium annotinum</i>	7	0	S5	-	-	G5	SECURE	SECURE
Clubmoss Tree	<i>Lycopodium obscurum</i>	6	3	S4	-	-	G5	SECURE	SECURE
Fern Bracken	<i>Pteridium aquilinum</i>	2	3	S5	-	-	G5	SECURE	SECURE
Fern Interrupted	<i>Osmunda claytoniana</i>	7	-1	S5	-	-	G5	SECURE	SECURE
Fern Ostrich	<i>Matteuccia struthiopteris</i> var. <i>pensylvanica</i>	5	-3	S5	-	-	G5	SECURE	SECURE
Fern Rattlesnake	<i>Botrychium virginianum</i>	5	3	S5	-	-	G5	SECURE	SECURE
Fern Sensitive	<i>Onoclea sensibilis</i>	4	-3	S5	-	-	G5	SECURE	SECURE
Horsetail Field	<i>Equisetum arvense</i>	0	0	S5	-	-	G5	SECURE	SECURE
Horsetail Water	<i>Equisetum fluviatile</i>	7	-5	S5	-	-	G5	SECURE	SECURE
Pine Running	<i>Lycopodium clavatum</i>	6	0	S5	-	-	G5	SECURE	SECURE
Polypody Rock	<i>Polypodium virginianum</i>	6	5	S5	-	-	G5	SECURE	SECURE
Spleenwort Maidenhair	<i>Asplenium trichomanes</i> spp. <i>trichomanes</i>	8	5	S5	-	-	G5	SECURE	SECURE

Appendix B
2012 Plant Species List

Common Name	Latin Name	Coefficient of Conservatism*	Wetness Index**	Provincial S-RANK*** (NHIC)	Federal COSEWIC Status	Provincial SARO Status	Global G-RANK****	Ontario General Status	Canada General Status
Wood Fern Crested	<i>Dryopteris cristata</i>	-	-	-	-	-	-	-	-
Wood Fern sp.	<i>Dryopteris sp.</i>	-	-	-	-	-	-	-	-
Wood Fern Spinulose	<i>Dryopteris carthusiana</i>	5	-2	S5	-	-	G5	SECURE	SECURE
Woodsia Rusty	<i>Woodsia ilvensis</i>	8	5	S5	-	-	G5	SECURE	SECURE
VINES									
Bindweed Field	<i>Convolvulus arvensis</i>	-	5	SNA	-	-	GNR	EXOTIC	EXOTIC
Bindweed Fringed Black	<i>Polygonum cilinode</i>	2	5	S5	-	-	G5	SECURE	SECURE
Fir Balsam	<i>Abies balsamea</i>	5	-3	S5	-	-	G5	SECURE	SECURE
Honeysuckle Fly	<i>Lonicera canadensis</i>	6	3	S5	-	-	G5	SECURE	SECURE
Honeysuckle Hairy	<i>Lonicera hirsuta</i>	7	0	S5	-	-	G4G5	SECURE	SECURE
Virginia Creeper	<i>Parthenocissus quinquefolia</i>	6	1	S4?	-	-	G5	SECURE	SECURE
CONIFEROUS TREES AND SHRUBS									
Cedar Eastern White	<i>Thuja occidentalis</i>	4	-3	S5	-	-	G5	SECURE	SECURE
Hemlock Eastern	<i>Tsuga canadensis</i>	7	3	S5	-	-	G4G5	SECURE	SECURE
Juniper Common	<i>Juniperus communis</i>	4	3	S5	-	-	G5	SECURE	SECURE
Larch	<i>Larix laricina</i>	7	-3	S5	-	-	G5	SECURE	SECURE
Pine Eastern White	<i>Pinus strobus</i>	4	3	S5	-	-	G5	SECURE	SECURE

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Pine Jack	<i>Pinus banksiana</i>	9	3	S5	-	-	G5	SECURE	SECURE
Pine Red	<i>Pinus resinosa</i>	8	3	S5	-	-	G5	SECURE	SECURE
Spruce Black	<i>Picea mariana</i>	8	-3	S5	-	-	G5	SECURE	SECURE
Spruce White	<i>Picea glauca</i>	6	3	S5	-	-	G5	SECURE	SECURE
DECIDUOUS SHRUBS									
Alder Speckled	<i>Alnus incana ssp. rugosa</i>	6	-5	S5	-	-	G5	SECURE	SECURE
Arrow-wood Downy	<i>Viburnum rafinesquianum</i>	7	5	S5	-	-	G5	SECURE	SECURE
Birch Dwarf	<i>Betula pumila</i>	9	-5	S5	-	-	G5	SECURE	SECURE
Blackberry Allegheny	<i>Rubus allegheniensis</i>	2	2	S5	-	-	G5	SECURE	SECURE
Blueberry Late Low-bush	<i>Vaccinium angustifolium</i>	6	3	S5	-	-	G5	SECURE	SECURE
Blueberry Velvetleaf	<i>Vaccinium myrtilloides</i>	7	-2	S5	-	-	G5	SECURE	SECURE
Buckthorn Alder-leaved	<i>Rhamnus alnifolia</i>	7	-5	S5	-	-	G5	SECURE	SECURE
Buckthorn sp.	<i>Rhamnus sp.</i>	-	-	-	-	-	-	-	-
Bunchberry	<i>Cornus canadensis</i>	7	0	S5	-	-	G5	SECURE	SECURE
Bush-honeysuckle Northern	<i>Diervilla lonicera</i>	5	5	S5	-	-	G5	SECURE	SECURE
Cherry Choke	<i>Prunus virginiana ssp. Virginiana</i>	2	1	S5	-	-	G5	SECURE	SECURE

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Common Name	Latin Name	Coefficient of Conservatism*	Wetness Index**	Provincial S-RANK*** (NHIC)	Federal COSEWIC Status	Provincial SARO Status	Global G-RANK****	Ontario General Status	Canada General Status
Cloudberry	<i>Rubus chamaemorus</i>	-	-	S5	-	-	G5	SECURE	SECURE
Cranberry High-bush	<i>Viburnum opulus var. americanum</i>	5	-3	S5	-	-	G5T5	SECURE	SECURE
Cranberry Large	<i>Vaccinium macrocarpon</i>	10	-5	S4S5	-	-	G4	SECURE	SECURE
Cranberry Small	<i>Vaccinium oxycoccos</i>	10	-5	S5	-	-	G5	SECURE	SECURE
Creeping Snowberry	<i>Gaultheria hispidula</i>	8	-3	S5	-	-	G5	SECURE	SECURE
Currant Bristly Black	<i>Ribes lacustre</i>	7	-3	S5	-	-	G5	SECURE	SECURE
Currant Northern Wild Black	<i>Ribes hudsonianum</i>	8	-5	S5	-	-	G5	SECURE	SECURE
Currant Swamp Red	<i>Ribes triste</i>	6	-5	S5	-	-	G5	SECURE	SECURE
Dogwood Grey	<i>Cornus foemina ssp. racemosa</i>	2	-2	S5	-	-	G5	SECURE	SECURE
Dogwood Red-osier	<i>Cornus sericea</i>	5	-4	S5	-	-	G5	SECURE	SECURE
Dogwood Round-leaved	<i>Cornus rugosa</i>	6	5	S5	-	-	G5	SECURE	SECURE
Gooseberry Prickly	<i>Ribes cynosbati</i>	4	5	S5	-	-	G5	SECURE	SECURE
Hazel Beaked	<i>Corylus cornuta</i>	5	5	S5	-	-	G5	SECURE	SECURE
Huckleberry Dwarf	<i>Vaccinium caespitosum</i>	-	-	S4?	-	-	G5	SECURE	SECURE
Labrador Tea	<i>Ledum groenlandicum</i>	9	-5	S5	-	-	G5	SECURE	SECURE

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2012 Plant Species List

Common Name	Latin Name	Coefficient of Conservatism*	Wetness Index**	Provincial S-RANK*** (NHIC)	Federal COSEWIC Status	Provincial SARO Status	Global G-RANK****	Ontario General Status	Canada General Status
Leatherleaf	<i>Chamaedaphne calyculata</i>	9	-5	S5	-	-	G5	SECURE	SECURE
Maple Mountain	<i>Acer spicatum</i>	6	3	S5	-	-	G5	SECURE	SECURE
Meadow-sweet Narrow-leaved	<i>Spiraea alba</i>	3	-4	S5	-	-	G5	SECURE	SECURE
Mountain-ash Northern	<i>Sorbus decora</i>	8	3	S5	-	-	G4G5	SECURE	SECURE
Raspberry Common Red	<i>Rubus idaeus ssp. Idaeus</i>	-	-	SE1	-	-	G5T5	EXOTIC	EXOTIC
Raspberry Dwarf (Catherinettes Berry)	<i>Rubus pubescens</i>	4	-4	S5	-	-	G5	SECURE	SECURE
Rose Prickly Wild	<i>Rosa acicularis</i>	7	3	S5	-	-	G5	SECURE	SECURE
Rosemary Bog	<i>Andromeda polifolia var. glaucophylla</i>	-	-	S5	-	-	G5T5	-	-
Serviceberry sp.	<i>Amelanchier sp.</i>	-	-	-	-	-	-	-	-
Sumac Smooth	<i>Rhus glabra</i>	1	5	S5	-	-	G5	SECURE	SECURE
Twinflower	<i>Linnaea borealis</i>	7	0	S5	-	-	G5	SECURE	SECURE
Willow Crack	<i>Salix fragilis</i>	-	-1	SNA	-	-	GNR	EXOTIC	EXOTIC
Willow Meadow	<i>Salix petiolaris</i>	3	-4	S5	-	-	G5	SECURE	SECURE
Willow Shining	<i>Salix lucida</i>	5	-4	S5	-	-	G5	SECURE	SECURE
Willow sp.	<i>Salix sp.</i>	-	-	-	-	-	-	-	-
DECIDUOUS TREES									
Ash Black	<i>Fraxinus nigra</i>	7	-4	S5	-	-	G5	SECURE	SECURE

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Common Name	Latin Name	Coefficient of Conservatism*	Wetness Index**	Provincial S-RANK*** (NHIC)	Federal COSEWIC Status	Provincial SARO Status	Global G-RANK****	Ontario General Status	Canada General Status
Aspen Large-tooth	<i>Populus grandifolia</i>	5	3	S5	-	-	G5	SECURE	SECURE
Aspen Trembling	<i>Populus tremuloides</i>	2	0	S5	-	-	G5	SECURE	SECURE
Birch White	<i>Betula papyrifera</i>	2	2	S5	-	-	G5	SECURE	SECURE
Elm White	<i>Ulmus americana</i>	3	-2	S5	-	-	G5?	SECURE	SECURE
Maple Red	<i>Acer rubrum</i>	4	0	S5	-	-	G5	SECURE	SECURE
Poplar Balsam	<i>Populus balsamea</i>	4	-3	S5	-	-	G5	SECURE	SECURE

Reference: Ministry of Natural Resources (MNR). 2012. Natural Heritage Information Centre (NHIC). Accessed July, 2012 from <https://www.biodiversityexplorer.mnr.gov.on.ca/>.

Total Species: 252 Species; **Native Species:** 214 (85%); **Exotic Species:** 38 (15%).

***Coefficient of Conservatism:** Values for range from 0 for extremely weedy species, to 10 for those species which exhibit a marked fidelity to specialized habitats. Plants found in a wide variety of plant communities, including disturbed sites, are ranked 0 to 3. Taxa that typically are associated with a specific plant community, but tolerate moderate disturbance, are assigned ranks of 4 to 6. Rankings of 7 to 8 apply to those taxa associated with a plant community in an advanced successional stage that has undergone minor disturbance. Those plants with high degrees of fidelity to a narrow range of synecological parameters are assigned a value of 9 to 10.

****Wetness Index:** The "+" sign denotes that the species generally has a greater estimated probability of occurring in uplands. The "-" sign denotes that the species generally has a lesser estimated probability of occurring in wetlands. A value of -5 is assigned to obligate wetland species and a value of 5 to obligate upland species.

*****Provincial S-RANK (NHIC)**

- S1 Critically Imperiled
- S2 Imperiled
- S3 Vulnerable
- S4 Apparently Secure
- S5 Secure
- S? Not Ranked Yet: if follow a rank, Rank Uncertain
- SNR Unranked
- SNA Not Applicable

******Global G-RANK**

- G1 Extremely rare

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G2	Very rare
G3	Rare to Uncommon
G4	Common
G5	Very common
T#	Rank applies to a subspecies or variety (# corresponds to GRANK)
G?	Unranked or tentatively assigned rank (if placed after a ranking)
GNR	Unranked
GNA	Not Applicable



APPENDIX C

PHOTOS OF SOME REPRESENTATIVE HABITAT TYPES PRESENT IN THE LSA

Appendix C Photographs of Vegetation Communities



Photo 1: "Poplar Regular" community with dense shrub and ground cover layer.



Photo 2: "Jack Pine – Barren, Scattered" community typical of rock outcrops.

Appendix C Photographs of Vegetation Communities



Photo 3: "Cedar Regular" community found in both upland and wetland habitat.



Photo 4: Typical "Open Muskeg" community containing grasses, sedges, and cattails. Often bordered by a Willow Thicket "Treed Muskeg".

Appendix C Photographs of Vegetation Communities



Photo 5: Less common “Black Spruce Regular” bog with Labrador Tea understory.



Photo 6: Typical forest community along the transmission line route, “Jack Pine – Barren, Scattered” rock community pockets interspersed within a Poplar communities, often associated with coniferous species.