







SURVEY FLOWN JUNE 2005 BY TERRAPOINT CANADA INC. SEODETIC DATUM.

INDEX MAP

APPROXIMATE UPSTREAM LIMIT OF HEADPOND Cc

ELC FOR AREA OF INUNDATION ISLAND FALLS HYDROELECTRIC PROJECT
YELLOW FALLS POWER LIMITED PARTNERSHII

Attachment C

Island Falls Vegetation Types

ISLAND FALLS VEGETATION AND WILDLIFE ASSESSMENT Attachment C – Vegetation Types

FOREST

Coniferous Forest and Swamp

FWSA-FOC Balsam Fir - White Spruce - Trembling Aspen

Habitat: Upland forests on various topographic locations. Substrate: fine sand to clay.

VEGETATION DESCRIPTION: Open-canopy communities of balsam fir, with admixtures of white spruce and balsam fir in the main canopy, and black spruce in the lower canopy. Balsam fir forms the majority of tree regeneration. Most of the aspen have been killed by tent caterpillar defoliation and fallen down. The shrub and herb layers are well developed. The major shrubs are beaked hazel (Corylus cornuta) and bush honeysuckle (Diervilla Ionicera), while the herbs are represented by large-leaved aster (Aster macrophyllus), dwarf raspberry (Rubus pubescens), rose twisted-stalk (Streptopus roseus), wild sarsaparilla (Aralia nudicaulis), naked mitrewort (Mitella nuda) and bunchberry (Cornus canadensis). Moss layer is developed poorly.

DISTRIBUTION: Sampled along Red Pine Road, but observed throughout the study area.

COMMENTS: Does not fit any Northeast Ontario FEC types.

CWS-FOC White Cedar – White Spruce

Habitat: Slope positions with uneven topography strongly controlled by bedrock and wind-blown tree boles. Common rock outcroppings. Soils very shallow, trees anchored in rock crevasses.

VEGETATION DESCRIPTION: Open forest due to tree windthrows—almost all trembling aspen that have been killed by tent caterpillar were windblown. Uneven age structure in all woody layers. Rock areas covered by feathermosses and lichens. The tallest canopy trees are white spruce and some white birch, and the discontinuous secondary layer is composed of balsam fir, white cedar, black spruce and remaining aspen. In the moderately developed low shrub layer grow velvet-leaved blueberry (Vaccinium myrtilloides) and low sweet blueberry (V. angustifolium). The herbs are scattered and include bunchberry, twinflower (Linnaea borealis), creeping snowberry (Gaultheria hispidula) and bluebead-lily (Clintonia borealis).

DISTRIBUTION: Sampled just below Yellow Falls, expected elsewhere in the project area.

COMMENTS: Approaches V14 (White Cedar-White Spruce-Mountain Maple-Ferns) of Northeast Ontario FEC, but does not contain mountain maple or ferns.

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WSF-FOC White Spruce - Balsam Fir

Habitat: In a variety of upland situations on flat to gently undulating terrain. Moderately well drained sands or silts.

VEGETATION DESCRIPTION: This is a large group of coniferous stands, generally dominated by white spruce and balsam fir, in variable proportions. Associate species are white birch, white cedar and trembling aspen. Shrubs are represented by low sweet blueberry, bush honeysuckle (Diervilla Ionicera) and beaked hazel. Herbs are usually numerous and include ground-pine (Lycopodium obscurum), bunchberry, goldthread (Coptis trifolia), star-flower (Trientalis borealis), large-leaved aster, bluebead-lily, wild sarsaparilla (Aralia nudicaulis) and kidney-leaved violet (Viola renifolia). The moss layer is moderately well developed.

DISTRIBUTION: Widely distributed in the entire study area.

COMMENTS: Does not fit any Northeast Ontario FEC V-Types.

BSH-FOC Black Spruce – Herb Rich (V15)

HABITAT: Lowland locations on mineral soil. Microtopography strongly mounded due to fallen trees.

VEGETATION DESCRIPTION: Black spruce is the dominant tree in the canopy, but there may be small representation of white spruce and trembling aspen. Low shrubs are moderately well developed, with wild red currant (*Ribes triste*) and speckled alder (*Alnus incana* ssp. *rugosa*). In the herb layer grow numerous species, including bunchberry, field horsetail (*Equisetum arvense*), wood horsetail (*E. sylvaticum*), bluebead-lily, twinflower, creeping snowberry, and dwarf raspberry.

DISTRIBUTION: Sampled locally east of Mattagami River. Uncommon in the project area.

COMMENTS: V15 is the best Northeast Ontario FEC fit, but our community has few hardwood associates and would not qualify as mixedwood.

BSLA-FOC Black Spruce – Labrador-tea – Speckled Alder – Stair-step Moss (V23)

HABITAT: Lowland locations on poorly drained, deep organic soils.

VEGETATION DESCRIPTION: Open stands dominated by black spruce, with admixtures of tamarack and balsam fir. Moderately developed low shrub cover, with Labrador-tea (Ledum groenlandicum), scattered speckled alder, and also low sweet ad velvet-leaf blueberries. In the moderately well developed herb layer grow creeping snowberry, bunchberry, wood horsetail, northern commandra (Geocaulon lividum) and three-leaved Solomon's seal (Maianthemum trifolium). Feathermosses Pleurozium schreberi, Ptilium crista-castrensis and Hylocomium splendens cover the forest floor where Sphagnum is also abundant. DISTRIBUTION: Common in the project area.

ISLAND FALLS VEGETATION AND WILDLIFE ASSESSMENT Attachment C – Vegetation Types

BSSA-FOC Black Spruce – Speckled Alder – Labrador-tea – Sphagnum (V24)

HABITAT: Poorly drained lowland locations on deep organic soils.

VEGETATION DESCRIPTION: Open-canopy to dense stands of black spruce. Tamarack and balsam fir may be associates. The shrub layer is usually sparse and includes Labrador-tea, speckled alder, leatherleaf (Chamaedaphne calyculata), velvet-leaf blueberry, bog rosemary (Andromeda polifolia), bog laurel (Kalmia polifolia) and Bebb's willow (Salix bebbiana). The herbs are well represented, although their total cover is low: bunchberry, creeping snowberry, cloudberry (Rubus chamaemorus), small cranberry (Vaccinium oxycoccos), three-leaved Solomon's seal, soft-leaved sedge (Carex disperma) and three-seeded sedge (C. trisperma) are most frequently found. Feathermosses and Sphagnum form a continuous carpet on the forest floor.

DISTRIBUTION: Very common throughout the project area.

BSLT-FOC Black Spruce – Labrador-tea – Feathermoss – Sphagnum (V27)

HABITAT: Poorly drained, deep organic lowland sites.

VEGETATION DESCRIPTION: Almost exclusively composed of black spruce, present in all woody layers from tree to dwarf shrub. The dominant low shrubs are Labrador-tea and leatherleaf, with minor amounts of bog laurel, bog rosemary and blueberries. The herb layer is well developed but species-poor, with three-leaved Solomon's seal, three-seeded sedge, creeping snowberry, few-flowered sedge (Carex pauciflora), goldthread and pitcher-plant (Sarracenia purpurea). Continuous forest floor cover of Sphagnum and feathermosses.

DISTRIBUTION: Very common throughout the project area.

BSTA-FOC Black Spruce – Tamarack – Sphagnum - Feathermoss

HABITAT: On very shallow soil over bedrock. Drainage poor. Substrate: organic pockets in bedrock depressions and crevices. Very hummocky, bedrock-controlled, microtopography.

VEGETATION DESCRIPTION: Black spruce and tamarack are the two dominant species. Spruce also abundant in all woody understorey layers (from regeneration and saplings to dwarf-shrub). Poorly developed shrub and herb layers, with patches of Labrador-tea, leatherleaf, low sweet blueberry, creeping snowberry and bunchberry.

DISTRIBUTION: Sampled only in the Yellow Falls area.

COMMENTS: The stand sampled is atypical in that it is not located on deep peat soil.

ISLAND FALLS VEGETATION AND WILDLIFE ASSESSMENT Attachment C – Vegetation Types

BSPH-FOC Black Spruce – Tamarack – Sphagnum (V28)

Habitat: On deep organic soils derived from Sphagnum moss. Poorly drained sites.

VEGETATION DESCRIPTION: Open stands of stunted black spruce and tamarack. The shrub layer well developed, with Labrador tea, leatherleaf, bog rosemary and pale laurel. Poorly developed herb layer, mostly of sedges. Complex microtopography composed of mounds and water-filled pits, made of Sphagnum moss and occasional feathermosses.

DISTRIBUTION: Common throughout the study area.

TASF-FOC Tamarack – Sphagnum - Feathermoss

HABITAT: Occurring on well drained organic sites, usually along creek floodplains.

VEGETATION DESCRIPTION: These stands are dominated by tamarack, with small amounts of black spruce in the lower canopy. In some stands spruce forms the majority of the regeneration layer. The tall shrub layer is usually well developed with speckled alder, some Bebb's willow, and short stature shrubs such as swamp black currant (*Ribes hudsonianum*), wild red currant, hairy honeysuckle (*Lonicera hirsuta*) and mountain fly honeysuckle (*Lonicera villosa*). The herb layer is usually well developed and dominated by dwarf raspberry, and Blue-joint grass (*Calamagrostis canadensis*), rough goldenrod (*Solidago rugosa*), palmateleaf sweet-coltsfoot (*Petasites frigidus*), twinflower and bunchberry. Moss cover varies from Sphagnum to feathermoss dominated.

DISTRIBUTION: Stands dominated by tamarack are rare in the project area and , when they occur, are small. Most of the time, lowlands on well drained organic substrates are covered by mixed stands of both tamarack and black spruce. The only sizeable tamarack stands were recorded at the north end of Red Pine Road and along the trail off Hwy 655 to the east side of Mattagami River.

COMMENTS: Probably due to rarity, this type is not recognized by the Northeast Ontario FEC system.

ISLAND FALLS VEGETATION AND WILDLIFE ASSESSMENT Attachment C – Vegetation Types

MIXED FOREST AND SWAMP

SFBA-FOM Spruce – Balsam Fir - White Birch – Trembling Aspen

Habitat: On variable terrain. Well to poorly drained soils, from fine sands, silts to clays.

VEGETATION DESCRIPTION: This is a general category incorporating a wide variety of mixedwood forests and swamps. The tree canopy may be composed of a number of species occurring in variable proportions, such as white and black spruce, balsam fir, trembling aspen, balsam poplar and white birch. The shrub and herb understoreys are extremely variable in the degree of development and species composition.

DISTRIBUTION: The commonest mixedwood type in the study area.

COMMENTS: This classification category was used in situations where the forest composition was too variable to enable placement of stands in other vegetation type units described in this document or within the Northeast Ontario FEC framework.

WBF-FOM White Birch - Balsam Fir

HABITAT: On generally flat terrain. Moderately well to poorly drained. Soils vary from fine sands to heavy clays.

VEGETATION DESCRIPTION: White birch and balsam fir are the dominants, growing in various proportions. Associate species are white cedar, trembling aspen, white and black spruce, and balsam poplar. The shrub layer is moderately to well developed, with mountain maple (Acer spicatum), speckled alder, beaked hazel and shorter shrubs including blueberries (low sweet and velvet-leaf). The herbs include bunchberry, wild sarsaparilla, bluebead-lily, bristly club-moss (Lycopodium annotinum), wild lily-of-the-valley (Maianthemum canadense), creeping snowberry, dwarf raspberry, oak fern (Gymnocarpium dryopteris), goldthread and naked mitrewort. Moss cover is generally low.

DISTRIBUTION: Sampled on the east side of Mattagami River along trail off Hwy 655 and at Davis Rapids.

COMMENTS: Does not fit the Northeast Ontario FEC framework.

ISLAND FALLS VEGETATION AND WILDLIFE ASSESSMENT Attachment C – Vegetation Types

FTA-FOM Balsam Fir – Trembling Aspen

HABITAT: Poorly drained sites on heavy clays.

VEGETATION DESCRIPTION: The main tree layer is dominated by balsam fir and trembling aspen, with admixtures of white birch. Balsam fir saplings compose the bulk of the shrub stratum, where true shrubs are represented by bush honeysuckle, showy mountain-ash (Sorbus decora), involucred fly honeysuckle (Lonicera involucrata) and squashberry (Viburnum edule). In the well developed herb layer grow dwarf raspberry, wild sarsaparilla, bluebead-lily, bunchberry, twinflower and goldthread. Moss cover is moderate to low.

DISTRIBUTION: Sampled east of Mattagami River along trail off Hwy 655, likely to be found elsewhere.

COMMENTS: Does not fit the Northeast Ontario FEC framework.

SWB-FOM White Spruce – Black Spruce – White Birch

HABITAT: On a diversity of sites, from level terrain to slopes. Drainage variable. Substrate: fine sand to clay.

VEGETATION DESCRIPTION: Mixedwood stands dominated by white spruce, black spruce and white birch, usually associated with some balsam fir. The low shrub layer is composed of bush honeysuckle, small amounts of velvet-leaved blueberry and other species. The herbs are represented by bunchberry, bluebead-lily, bristly club-moss, wild sarsaparilla, large-leaved aster, naked mitrewort, dwarf raspberry, and palmate-leaf sweet-coltsfoot. Mosses are variously represented.

DISTRIBUTION: Sampled in the Island Falls area.

COMMENTS: Cannot be fit within the Northeast Ontario FEC framework.

ISLAND FALLS VEGETATION AND WILDLIFE ASSESSMENT Attachment C – Vegetation Types

DECIDUOUS FOREST AND SWAMP

WBMM-FOD White Birch – Mountain Maple (V2)

HABITAT: On dry-mesic, well drained sites on slopes. Substrate: fine sand to silty clay

VEGETATION DESCRIPTION: Generally deciduous stands dominated by white birch. Associated species are balsam poplar, white spruce, balsam fir and balsam poplar. In the well developed tall shrub layer the principal species are mountain maple, beaked hazel in addition to numerous fir saplings. The herb cover is high, with wild sarsaparilla, large-leaved aster, bunchberry, fireweed (Epilobium angustifolium), naked mitrewort, bluebead-lily, bristly club-moss, ground-pine, oak fern and lady fern (Athyrium filix-femina). Due to shade and deposition of leaf litter moss cover is low.

DISTRIBUTION: Rare in the project area, sampled at Davis Rapids.

BPOF-FOD Balsam Poplar – Ostrich Fern (V13)

HABITAT: Generally on flat terrain, on moderately well drained sites. Substrate: fine sand.

VEGETATION DESCRIPTION: Dominated by balsam poplar and minor amounts of trembling aspen. The shrub layer is moderately well developed, but the herb cover is high, consisting of ostrich fern (*Matteuccia struthiopteris*) and short herbs such as pink pyrola (*Pyrola asarifolia*), scarlet strawberry (*Fragaria virginiana*), calico aster (*Aster lateriflorus*) and tall meadow rue (*Thalictrum pubescens*).

DISTRIBUTION: Sampled on a small island in Mattagami River at Davis Rapids.

COMMENTS: The closest fit using the Northeast Ontario FEC is V13 (Balsam Poplar – Trembling Aspen – Mountain Maple – Ferns).

TAMM-FOD Trembling Aspen – Mountain Maple (V13)

Habitat: On level terrain or gentle slopes. Moderately well to imperfectly drained. Substrate: clay.

VEGETATION DESCRIPTION: Communities vary from pure trembling aspen stands to those where a few other species become associates, including balsam poplar, white birch, white spruce and balsam fir. The understorey is almost invariably composed of tall shrubs: mountain maple and various amounts of beaked hazel. Medium shrubs are prickly rose, wild red currant and American fly honeysuckle (Lonicera canadensis). The herb layer is rich and includes large-leaved aster, wild sarsaparilla, dwarf raspberry, spreading dogbane (Apocynum androsaemifolium), blebead-lily, wood anemone (Anemone quinquefolia), naked mitrewort and lady fern.

DISTRIBUTION: Common throughout the project area.

COMMENTS: The closest fit using the Northeast Ontario FEC is V13 (Balsam Poplar – Trembling Aspen – Mountain Maple – Ferns).

ISLAND FALLS VEGETATION AND WILDLIFE ASSESSMENT Attachment C – Vegetation Types

TABP-FOD Trembling Aspen – Balsam poplar – Speckled Alder (V10)

HABITAT: On level terrain and poorly drained sites. Substrate: organic (humus).

VEGETATION DESCRIPTION: Hardwoods composed of trembling aspen and balsam poplar, with small amounts of white birch. In the tall shrub layer grow balsam fir saplings and speckled alder, while the low shrubs are represented by red raspberry (Rubus idaeus). In the rich herb layer grow dwarf raspberry, kidney-leaved violet, naked mitrewort, wood horsetail and oak fern.

DISTRIBUTION: Common in the project area but pure aspen-poplar stands usually occur as small enclaves amongst mixedwoods.

COMMENTS: The sampled stand, east of Mattagami River along the trail off Hwy 655, although matching the vegetation characteristics of Northeast Ontario FEC's V10, occurs on deep humus, not on a mineral soil.

BPWB-FOD Balsam Poplar – White Birch

HABITAT: Occupying moist, moderately to poorly drained locations on lower slopes. Substrate: silty clays to clays.

VEGETATION DESCRIPTION: Generally, open-canopy deciduous stands of balsam poplar and white birch, with small amounts of white spruce or white cedar. Well developed tall shrub layer of mountain maple and speckled alder, with low shrubs represented by bush honeysuckle, swamp black currant and wild red currant. Rich herb layer of wild sarsaparilla, large-leaved aster, naked mitrewort, dwarf raspberry, bluebead-lily, rose twisted-stalk, oak fern, pink pyrola and kidney-leaved violet.

DISTRIBUTION: Infrequent due to scarcity of specialized habitat.

COMMENTS: Does not fit any V-Type in the Northeast Ontario FEC.

BPBA-FOD Balsam Poplar – Black Ash

HABITAT: On lower terraces of rivers. Sites poorly drained. Substrate: silt.

VEGETATION DESCRIPTION: Deciduous swamps dominated by balsam poplar, followed by black ash, and small admixtures of white cedar, white birch and balsam fir. Well developed shrub layers of mountain maple, speckled alder, alder-leaved buckthorn (Rhamnus alnifolia) and red osier dogwood (Cornus stolonifera). Rich herb cover with such species as ostrich fern, dwarf raspberry, field horsetail, bristly buttercup (Ranunculus pensylvanicus), calico aster, and many others.

DISTRIBUTION: Rare: found only in the Davis Rapids area.

COMMENTS: Does not fit any V-Type in Northeast FEC.

ISLAND FALLS VEGETATION AND WILDLIFE ASSESSMENT Attachment C – Vegetation Types

THICKET SWAMP

SATS Speckled Alder Thicket Swamp

HABITAT: Associated with seasonally flooded creek and river floodplains, typically forming long shoreline zones. Ground often hummocky with drier mounds and moister pits. Substrate: silt enriched with organic matter through deposition during spring floodings.

VEGETATION DESCRIPTION: Speckled alder (Alnus incana spp. rugosa) forms a tall (2-3 m), more or less continuous, dense shrub layer. A shorter shrub layer is usually present, with species such as alder-leaved buckthorn, narrow-leaved meadow-sweet (Spiraea alba), red osier dogwood (Cornus stolonifera), ninebark (Physocarpus opulifolius), and wild red currant (Ribes triste). Scattered trees (balsam fir, black ash or white ash) sometimes overtop the shrubs. The herb layer is well developed and composed of blue-joint grass (Calamagrostis canadensis), aquatic sedge (Carex aquatilis), tall meadow-rue (Thalictrum pubescens), marsh-marigold (Caltha palustris), Canada anemone (Anemone canadensis), calico aster (Aster lateriflorus), wood horsetail (Equisetum sylvaticum), lady fern (Athyrium filix-femina), dwarf raspberry (Rubus pubescens), spotted Joe-pye-weed (Eupatorium maculatum), naked mitrewort (Mitella nuda) and numerous other wetland species.

DISTRIBUTION: Very common in the entire study area.

WATS Willow - Speckled Alder Thicket Swamp

HABITAT: On creek and river floodplains, usually on mineral substrates, less so on organic soils.

VEGETATION DESCRIPTION: Various species of shrub willows (Salix spp.) occur in various proportions with speckled alder (Alnus incana spp. rugosa). Other shrub species may include red osier dogwood (Cornus stolonifera), narrow-leaved meadow-sweet (Spiraea alba) and wild red currant (Ribes triste). Depending on shrub density and flooding regime, the herb layer is variously developed.

DISTRIBUTION: Very common in the study area.

ROTS Red Osier Thicket Swamp

Habitat: Moist, yet well drained mineral sites along creeks or on borders of inriver islands. Substrate: silt.

VEGETATION DESCRIPTION: Related to speckled alder thickets with which they often intermix. The tall, densely growing red osier dogwood may contain high bush cranberry (Viburnum trilobum), speckled alder, red raspberry (Rubus idaeus) and prickly rose (Rosa acicularis). Due to competition from the shrubs and shade, the herbs are poorly represented, with tall meadow-rue (Thalictrum pubescens), ostrich fern (Matteuccia struthiopteris) and tall goldenrod (Solidago altissima).

ISLAND FALLS VEGETATION AND WILDLIFE ASSESSMENT Attachment C – Vegetation Types

DISTRIBUTION: Pure stands of red osier dogwood are infrequent. Sampled in the Davis Rapids reach of Mattagami River.

LMTS Lowland Mixed Herb-Rich Thicket Swamp

HABITAT: Poorly drained sites on flat terrain depressions on thick accumulation of humus over clay.

VEGETATION DESCRIPTION: Very species-rich tall shrub thickets. Saplings and young trees of white birch, trembling aspen and balsam poplar occur together with tall shrubs, such as pussy willow (Salix discolor), mountain maple, speckled alder, red osier dogwood and showy mountain-ash (Sorbus decora). This main layer is often overtopped by young aspen, poplar, white spruce and fir. The herb layer is exceptionally rich in cover and species, with dwarf raspberry, naked mitrewort, field horsetail, wood horsetail, tall lungwort (Mertensia paniculata), sweet-scented bedstraw (Galium triflorum), rough goldenrod, smaller Enchanter's nightshade (Circaea alpina), bluebead-lily, and many others.

DISTRIBUTION: Sampled only at the north end of trail off Hwy 655. Probably rare in the project area.

SMTS Shoreline Mixed Herb-Rich Thicket

HABITAT: Located on alluvial terraces along shores of Mattagami River. May be occasionally flooded during high spring runoff events, but generally situated above water table. Substrate: sand and silt.

VEGETATION DESCRIPTION: Very diverse communities of tall to medium shrubs, 2-3 m in height. Many possible local dominants forming patches of their own, including speckled alder, high bush cranberry (Viburnum trilobum), choke cherry (Prunus virginiana), red osier dogwood, narrow-leaved meadow-sweet and red raspberry. Young trees (e.g. white birch, balsam fir, pin cherry) overtop the continuous shrub layer. The tall herb stratum is rich in species, with ostrich fern (Matteucia struthiopteris), tall meadow-rue, rough goldenrod (Solidago rugosa), tall white aster (Aster lanceolatus), Canada anemone, lady fern (Athyrium filix-femina), spotted Joe-pye-weed (Eupatorium maculatum) and bristly buttercup.

DISTRIBUTION: Sampled on west shore of Mattagami River, north of Davis Rapids, but should be expected elsewhere.

ISLAND FALLS VEGETATION AND WILDLIFE ASSESSMENT Attachment C – Vegetation Types

FEN

SAFE Speckled Alder - Willow Low Shrub Fen

HABITAT: Sheltered locations on deep sedge-Sphagnum floating peat mats. Sphagnum moss forms the hummocks, with channels filled with water 20-30 cm deep.

VEGETATION DESCRIPTION: The 1-1.5 m tall shrub layer is dominated by speckled alder and balsam willow (Salix pyrifolia), with small amounts of leatherleaf (Chamaedaphne calyculata), shrubby cinquefoil (Potentilla fruticosa), and saplings of black spruce and tamarack. Sedge-rich community, including inland sedge (Carex interior), silvery sedge (C. canescens), stunted sedge (C. magellanica), bristle-stalked sedge (C. leptalea), soft-leaved sedge (C. disperma) and aquatic sedge. Grasses are represented by blue-joint grass (Calamagrostis canadensis).

DISTRIBUTION: Likely infrequent in the project area, sampled in a wetland complex off trail from Hwy 655.

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HEATHLAND

HETH Speckled Alder – Leatherleaf – Labrador-tea Heathland

HABITAT: On poorly drained shallow (<25 cm) peat deposits over bedrock that dry up during the summer.

VEGETATION DESCRIPTION: Open communities of tall and low shrubs, mostly speckled alder, Labrador-tea and leatherleaf, with smaller amounts of other ericaceous shrubs, such as bog rosemary, velvet-leaf and low sweet blueberries. Scattered small trees: trembling aspen, white birch, black spruce and tamarack. Herb cover low, with wood horsetail being the leading species. Sphagnum forms an almost continuous ground cover.

DISTRIBUTION: Rare in the project area, sampled only in the Yellow Falls area where forms a large polygon.

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MEADOW MARSH

WGMM Wool-Grass Meadow Marsh

HABITAT: Occurring in sheltered locations, such as along shores of slowly flowing creeks or as parts of large wetland complexes. Water depth varies from 20-30 cm to just below ground level. Substrate: organic or mineral. Stands on organics may approach fens.

VEGETATION DESCRIPTION: Wool-grass is the main species, and is usually accompanied by lake-bank sedge (Carex lacustris), silvery sedge (Carex canescens) or blue-joint grass. Depending on site nutritional level, several other species may be present.

DISTRIBUTION: Sampled at two locations, both east of Mattagami River along trail off Hwy 655. May be expected elsewhere.

BGMM Blue-joint Grass Meadow Marsh

HABITAT: In a variety of situations, including shores of small ponds or as part of extensive marshes along meandering creeks. Substrate: mineral with thin veneer of organic.

VEGETATION DESCRIPTION: Blue-joint grass dominates communities and the representation of other grasses, sedges or forbs is limited. These are represented by wool-grass, fowl meadow grass (*Poa palustris*), awl-fruited sedge (*Carex stipata*), narrow-leaved willow-herb (*Epilobium leptophyllum*) and wild mint (*Mentha arvensis*).

DISTRIBUTION: Common throughout the study area.

SEMM Sedge Meadow Marsh

HABITAT: On creek floodplains and shores of rivers. Subjected to flooding and ice scouring. Substrate: mineral.

VEGETATION DESCRIPTION: Dominated by large sedges, such as lake-bank sedge, aquatic sedge or beaked sedge (Carex utriculata). There is usually good representation of grasses and forbs, including blue-joint grass, spotted touch-menot (Impatiens capensis), swamp loosestrife (Lysimachia terrestris), tall manna grass (Glyceria grandis), and wild mint. In most locations, scattered low shrubs (e.g. willow, dogwood, alder) emerge above the herbs.

DISTRIBUTION: Common throughout the project area.

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SGMM Sedge-Grass Meadow Marsh

Habitat: Wide floodplains of creeks subjected to spring flooding. Substrate: well decomposed peat.

VEGETATION DESCRIPTION: Blue-joint grass occurs in association with several sedge species, including Bebb's sedge (Carex bebbiana) and lake-bank sedge. A few forb species may be present, for example wild mint (Mentha arvensis), Canada anemone (Anemone canadensis), stick-tight (Bidens cernua), spotted Joe-pye-weed (Eupatorium maculatum) and bedstraw (Galium trifidum).

DISTRIBUTION: Sampled only at Two Finger Creek, but should be expected elsewhere.

GFMM Mixed Graminoid-Forb Meadow Marsh

HABITAT: The typical locations are along the shores of Mattagami River, where they are subjected to flooding events and ice scouring. Occasionally in sheltered situations on creek floodplains. Substrate: mineral.

VEGETATION DESCRIPTION: These are the most diverse herbaceous types in the project area. Several species can be dominant or play a major role, for example: lake-bank sedge, aquatic sedge, beaked sedge, Blue-joint grass, tall manna grass, Small's spike-rush (*Eleocharis smallii*), tall white aster, spotted Joe-pyeweed, spotted touch-me-not, monkey-flower (*Mimulus ringens*), swamp loosestrife, cut-leaved water-horehound (*Lycopus americanus*), tall goldenrod, and purple-stemmed aster (*Aster puniceus*),

DISTRIBUTION: Common along shores and islands of Mattagami River, occasional on creek floodplains, e.g Rat Creek.

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SHALLOW MARSH

CTSM Cattail Shallow Marsh

HABITAT: In sheltered bays and wetlands, often created by beaver dams. Water depth variable. Substrate: silt or organics.

VEGETATION DESCRIPTION: Typically almost entirely dominated by cattail (*Typha latifolia*), with occasional minor presence of hemlock water-parsnip (*Sium suave*), bulb-bearing water-hemlock (*Cicuta bulbifera*), reed-canary grass (*Phalaris arundinacea*) and blue-joint grass.

DISTRIBUTION: Common throughout the study area.

AHSM Arrowhead Shallow Marsh

HABITAT: A shoreline community along rivers, forming narrow zones 2-3 m wide, in shallow waters 30-50 cm deep. Substrate: silt.

VEGETATION DESCRIPTION: Dominated by broad-leaved arrowhead (Sagittaria latifolia), emerging 20-30 cm above water surface. Associate species are mostly submerged aquatics, such as hemlock water-pasnip, milfoil (Myriophyllum sibiricum), and pondweeds (Potamogeton richardsonii, P. amplifolius).

DISTRIBUTION: Sampled halfway between Yellow and Island Falls, along west shoreline of Mattagami River. Infrequent in the study area.

ISLAND FALLS VEGETATION AND WILDLIFE ASSESSMENT Attachment C – Vegetation Types

SHALLOW AQUATICS

BRFA Bur-reed Floating-leaved Aquatics

HABITAT: Occurs as narrow zones along shores and sheltered channels along Mattagami River, in shallow (50-100 cm) waters where wave action and ice scouring are factors. Submerged year round. Substrate: sand or soft silt.

VEGETATION DESCRIPTION: Bur-reed (Sparganium fluctuans) dominates the community, although its total cover may not be high. Broad-leaved arrow-head may have its leaves and stems emerged above the water surface. All the other aquatics are rooted in the bottom, including millfoil (Myriophyllum), Richardson's pondweed (Potamogeton richardsonii), water-starwort (Callitriche heterophylla), mare's-tail (Hippuris vulgaris) and hemlock water-parsnip.

DISTRIBUTION: Frequent along Mattagami River; sampled at Yellow Falls.

POSA Pondweed Submerged Aquatics

HABITAT: Occurring in slowly moving creeks and riverine sheltered bays and channels, less frequently along river shorelines, in water 30-80 cm deep. Substrate: sand or silt, often enriched with organic matter.

VEGETATION DESCRIPTION: Several species of pondweeds (*Potamogeton*) may form the communities which may be either totally submerged or with floating leaves. Component species are, for example, *Potamogeton epihydrus*, *P. pusillus*, *P. richardsonii*, *P. amplifolius*, and *P. foliosus*. A few emergent or floating leaves aquatics may be present, for example, broad-leaved arrowhead and floating bur-reed.

DISTRIBUTION: Common in the project area.

ISLAND FALLS VEGETATION AND WILDLIFE ASSESSMENT Attachment C – Vegetation Types

EXAMPLE OF VEGETATION ON A SELECTIVE CUT SITE

The long strips from which spruce was removed come back with saplings of balsam fir, white and black spruce and abundant low shrubs. The main herb species are: scarlet strawberry, wood horsetail, creeping snowberry, bristly clubmoss, oak fern and wild lily-of-the-valley. Feathermosses are *Pleurozium schreberi* and *Hylocomium splendens*.

Attachment D

List of Wildlife Species Known to Occur in the Study Area

LATIN NAME		COMMON NAME	COEFFICIENT OF CONSERVATISM	WETNESS INDEX	WEEDINESS INDEX	PROVINCIAL STATUS	OMNR STATUS	COSEWIC STATUS	GLOBAL STATUS
PTERIDOPHYTES		FERNS & ALLIES				-			+
Dennstaedtiaceae		Dracken Fem Femily							
Pteridium	aquilinum var. latiusculum	Bracken Fern Family Eastern Bracken-fern	2	3		S5			G5T
Plenalum	aquiiinum var. iatiusculum	Eastern Bracken-lem	2	3		33			GST
Dryopteridaceae		Wood Fern Family							
Athyrium	filix-femina var. angustum	Northern Lady Fern	4	0		S5			G5T5
Dryopteris	carthusiana	Spinulose Wood Fern	5	-2		S5			G5
Dryopteris	cristata	Crested Wood Fern	7	-5		S5			G5
	dryopteris	Oak Fern	7	0		S5			G5
Matteuccia	struthiopteris var. pensylvanica	Ostrich Fern	5	-3		S5			G5
Equisetaceae		Horsetail Family							
Equisetum	arvense	Field Horsetail	0	0		S5			G5
Equisetum	fluviatile	Water Horsetail	7	-5		S5			G5
Equisetum	pratense	Meadow Horsetail	8	-3		S5			G5
Equisetum	sylvaticum	Wood Horsetail	7	-3		S5			G5
Equisetum	variegatum ssp. variegatum	Variegated Horsetail	5	-3		S5			G5T
Lycopodiaceae		Clubmoss Family							
Huperzia	lucidula	Shining Fir-moss	7	-1		S5			G5
Lycopodium	annotinum	Bristly Club-moss	7	0		S5	<u>† </u>		G5
Lycopodium	clavatum	Running Club-moss	6	0		S5			G5
Lycopodium	obscurum	Ground-pine	6	3		S4			G5
Ophioglossaceae		Adder's Tongue Family							
Botrychium	virginianum	Rattlesnake Fern	5	3		S5			G5
Osmundaceae		Royal Fern Family	+						
Osmunda	cinnamomea	Cinnamon Fern	7	-3		S5			G5
Osmunda	claytoniana	Interrupted Fern	7	-1		S5			G5
					_				
GYMNOSPERMS		CONIFERS							
Cupressaceae		Cedar Family							
Thuja	occidentalis	Eastern White Cedar	4	-3		S5			G5

LATIN NAME		COMMON NAME	COEFFICIENT OF CONSERVATISM	WETNESS INDEX	WEEDINESS INDEX	PROVINCIAL STATUS	OMNR STATUS	COSEWIC STATUS	GLOBAL STATUS
Pinaceae		Pine Family							
Abies	balsamea	Balsam Fir	5	-3		S5			G5
Larix	laricina	Tamarack	7	-3		S5			G5
Picea	glauca	White Spruce	6	3		S5			G5
Picea	mariana	Black Spruce	8	-3		S5			G5
Pinus	resinosa	Red Pine	8	3		S5			G5
Taxaceae		Yew Family							
Taxus	canadensis	American Yew	7	3		S5			G5
DICOTYLEDONS		DICOTS							
Acer	spicatum	Mountain Maple	6	3		S5			G5
Apiaceae		Carrot or Parsley Family		+			+		
Cicuta	bulbifera	Bulb-bearing Water-hemlock	5	-5		S5	1		G5
Heracleum	lanatum	Cow-parsnip	3	-3		S5	1		G5
Pastinaca	sativa	Wild Parsnip	Ť	5	-3	SE5	1		G?
Sanicula	marilandica	Black Snakeroot	5	3	- -	S5	1		G5
Sium	suave	Hemlock Water-parsnip	4	-5		S5	1		G5
Apocynaceae		Dogbane Family							
Apocynum	androsaemifolium ssp. androsaemifolium	Spreading Dogbane	3	5		S5			G5T?
Araliaceae		Ginseng Family							
Aralia	hispida	Bristly Sarsaparilla	8	5		S5	1		G5
Aralia	nudicaulis	Wild Sarsaparilla	4	3		S5	1		G5
		·							
Asteraceae		Composite or Aster Family							
Achillea	millefolium ssp. millefolium	Common Yarrow		3	-1	SE?			G5T?
Anaphalis	margaritacea	Pearly Everlasting	3	5		S5			G5
Aster	ciliolatus	Ciliolate Aster	6	4		S5			G5
Aster	lanceolatus ssp. lanceolatus	Tall White Aster	3	-3		S5			G5T?
Aster	lateriflorus var. lateriflorus	Calico Aster	3	-2		S5			G5T5
Aster	macrophyllus	Large-leaved Aster	5	5		S5			G5
Aster	puniceus var. puniceus	Purple-stemmed Aster				S5			G5T?
Aster	umbellatus var. umbellatus	Flat-top White Aster	6	-3		S5			G5T?

LATIN NAME		COMMON NAME	COEFFICIENT OF CONSERVATISM	WETNESS INDEX	WEEDINESS INDEX	PROVINCIAL STATUS	OMNR STATUS	COSEWIC STATUS	GLOBAL STATUS
Bidens	cernua	Stick-tight	2	-5		S5			G5
Chrysanthemum	leucanthemum	Ox-eye Daisy		5	-1	SE5			G?
Cirsium	arvense	Canada Thistle		3	-1	SE5			G?
Cirsium	muticum	Swamp Thistle	8	-5		S5			G5
Cirsium	vulgare	Bull Thistle		4	-1	SE5			G5
Erigeron	annuus	Daisy Fleabane				S5			
Erigeron	philadelphicus ssp. philadelphicus	Philadelphia Fleabane	1	-3		S5			G5T?
Eupatorium	perfoliatum	Perfoliate Thoroughwort	2	-4		S5			G5
Eupatorium	maculatum ssp. maculatum	Spotted Joe-pye-weed	3	-5		S5			G5T5
Euthamia	graminifolia	Flat-topped Bushy Goldenrod	2	-2		S5			G5
Hieracium	aurantiacum	Devil's Paintbrush		5	-2	SE5			G?
Hieracium	caespitosum ssp. caespitosum	Field Hawkweed		5	-2	SE5			
Hieracium	piloselloides	Glaucous King Devil		5	-2	SE5			G?
Lactuca	biennis	Biennial Lettuce	6	0		S5			G5
Matricaria	matricarioides	Pineapple-weed				SE5			G5
Petasites	frigidus	Palmate-leaf Sweet-coltsfoot	8	-3		S5			G5
Prenanthes	racemosa ssp. racemosa	Glaucous White Rattlesnake-root	10			SU			G5T?
Solidago	altissima var. altissima	Tall Goldenrod	1	3		S5			
Solidago	canadensis	Canada Goldenrod	1	3		S5			G5
Solidago	nemoralis ssp. nemoralis	Gray Goldenrod	2	5		S5			G5T?
Solidago	rugosa ssp. rugosa	Rough Goldenrod	4	-1		S5			G5T?
Solidago	uliginosa	Marsh Goldenrod	9	-5		S5			G4G5
Taraxacum	officinale	Common Dandelion		3	-2	SE5			G5
Balsaminaceae		Touch-me-not Family				1			
Impatiens	capensis	Spotted Touch-me-not	4	-3		S5			G5
Impatiens	caperisis	Spotted Touch-me-not	4	-3		33	+		GS
Betulaceae		Birch Family							
Alnus	incana spp. rugosa	Speckled Alder	6	-5		S5		1	G5T5
Alnus	viridis spp. crispa	Green Alder				S5			G5T5
Betula	papyrifera	White Birch		2		S5			G5
Betula	pumila	Swamp Birch	9	-5		S5			G5
Corylus	cornuta ssp. cornuta	Beaked Hazel	5	5		S5			G5T
Boraginaceae		Borage Family							
Mertensia	paniculata	Tall Lungwort		-		S5		-	G5

LATIN NAME		COMMON NAME	COEFFICIENT OF CONSERVATISM	WETNESS INDEX	WEEDINESS INDEX	PROVINCIAL STATUS	OMNR STATUS	COSEWIC STATUS	GLOBAL STATUS
Brassicaceae		Mustard Family							
Erysimum	cheiranthoides ssp. cheiranthoides	Wormseed Mustard		3	-1	SE5			
Rorippa	palustris ssp. fernaldiana	Marsh Yellow-cress	3	-5		S5			G5T?
Callitrichaceae		Water-starwort Family							
Callitriche	hermaphroditica	Hermaphrodite Water-starwort	10	-5		S5			G5
Callitriche	palustris	Marsh Water-starwort	10	-5		S5			G5
Campanulaceae		Bellflower Family							
Campanula	aparinoides	Marsh Bellflower	7	-5		S5			G5
Caprifoliaceae		Honeysuckle Family							
Diervilla	Ionicera	Bush Honeysuckle	5	5		S5			G5
Linnaea	borealis ssp. longiflora	Twinflower	7	0		S5			G5T?
Lonicera	canadensis	American Fly Honeysuckle	6	3		S5			G5
Lonicera	dioica	Glaucous Honeysuckle	5	3		S5			G5
Lonicera	hirsuta	Hairy Honeysuckle	7	0		S5			G4G5
Lonicera	involucrata	Involucred Fly Honeysuckle				S5			G4G5
Lonicera	villosa	Mountain Fly Honeysuckle	10	-3		S5			G5
Sambucus	racemosa ssp. pubens	Red-berried Elderberry	5	2		S5			G5T4T5
Symphoricarpos	albus	Snowberry	7	4		S5			G5
Viburnum	edule	Squashberry				S5			G5
Viburnum	trilobum	High Bush Cranberry	5	-3		S5			G5T5
Caryophyllaceae		Pink Family					1		
Cerastium	fontanum	Larger Mouse-ear Chickweed		3	-1	SE5	1		G?
Cornaceae		Dogwood Family			1		1		
Cornus	canadensis	Bunchberry	7	0		S5			G5
Cornus	stolonifera	Red-osier Dogwood	2	-3		S5			G5
Duananas		Cundau Famili							
Droseraceae		Sundew Family	7		+	0.5	+	 	05
Drosera	rotundifolia	Round-leaved Sundew	7	-5		S5			G5
Ericaceae		Heath Family							

LATIN NAME		COMMON NAME	COEFFICIENT OF CONSERVATISM	WETNESS INDEX	WEEDINESS INDEX	PROVINCIAL STATUS	OMNR STATUS	COSEWIC STATUS	GLOBAL STATUS
Andromeda	polifolia ssp. glaucophylla	Bog Rosemary	10	-5		S5			G5T5
Chamaedaphne	calyculata	Leatherleaf	9	-5		S5			G5
Gaultheria	hispidula	Creeping Snowberry	8	-3		S5			G5
Kalmia	polifolia	Bog Laurel	10	-5		S5			G5
Ledum	groenlandicum	Labrador-tea	9	-5		S5			G5
Vaccinium	angustifolium	Low Sweet Blueberry	6	3		S5			G5
Vaccinium	myrtilloides	Velvet-leaf Blueberry	7	-2		S5			G5
Vaccinium	oxycoccos	Small Cranberry	10	-5		S5			G5
Fabaceae		Pea Family							
Astragalus	canadensis	Canada Milkvetch	8	-1		S4			G5
Lathyrus	ochroleucus	Cream-coloured Vetchling	8	5		S4			G4G5
Lathyrus	palustris	Marsh Vetchling	6	-3		S5			G5
Lotus	corniculatus	Bird's-foot Trefoil		1	-2	SE5			G?
Medicago	lupulina	Black Medick		1	-1	SE5			G?
Melilotus	alba	White Sweet-clover		3	-3	SE5			G?
Trifolium	pratense	Red Clover		2	-2	SE5			G?
Trifolium	repens	White Clover		2	-1	SE5			G?
Vicia	cracca	Tufted Vetch		5	-1	SE5			G?
Fumariaceae		Fumitory Family							
Corydalis	sempervirens	Pale Corydalis	7	5		S5			G5
Corydans	Scripervirens	i ale oorydalis	1			00			00
Grossulariaceae		Currant Family							
Ribes	glandulosum	Skunk Currant	6	-3		S5			G5
Ribes	hirtellum	Smooth Gooseberry	6	-3		S5			G5
Ribes	hudsonianum	Hudson Bay Currant	8	-5		S5			G5
Ribes	lacustre	Swamp Black Currant	7	-3		S5			G5
Ribes	triste	Wild Red Currant	6	-5		S5			G5
Guttiferae		St. John's-wort Family							
Hypericum	canadense	Canadian St. John's-wort	8	-3	+	S4?			G5
Пуренсин	Canadense	Odinadian St. John S-WOIL		-5		04:			93
Haloragaceae		Water-milfoil Family							
Myriophyllum	alterniflorum	Loose-flowered Water-milfoil	8	-5		S4			G5
Myriophyllum	sibiricum	Pale Water-milfoil		-5		S5			G5

LATIN NAME		COMMON NAME	COEFFICIENT OF CONSERVATISM	WETNESS INDEX	WEEDINESS INDEX	PROVINCIAL STATUS	OMNR STATUS	COSEWIC STATUS	GLOBAL STATUS
Hippuridaceae		Mare's-tail Family							
Hippuris	vulgaris	Common Mare's-tail	10	-5		S5			G5
Lamiaceae		Mint Family							
Lycopus	americanus	Cut-leaved Water-horehound	4	-5		S5	1		G5
Lycopus	uniflorus	Northern Water-horehound	5	-5		S5			G5
Mentha	arvensis ssp. borealis	American Wild Mint	3	-3		S5			
Prunella	vulgaris ssp. lanceolata	Heal-all	5	5		S5			G5T?
Scutellaria	galericulata	Hooded Skullcap	6	-5		S5			G5
Scutellaria	lateriflora	Mad-dog Skullcap	5	-5		S5			G5
Stachys	palustris	Hedge-nettle		-5	-1	SE5	1		G5
Lentibulariaceae		Bladderwort Family		_	+		+		+
Utricularia	vulgaris	Greater Bladderwort	4	-5		S5	+		G5
Ciricalaria	vaigano	Creater Bladderwort	7	 	+	- 00	†		1 00
Monotropaceae		Indian Pipe Family							
Monotropa	hypopithys	Pinesap	6	5		S4			G5
Myricaceae		Wax-myrtle Family							
Myrica	gale	Sweet Gale	6	-5		S5			G5
,									
Nymphaeaceae		Water-lily Family							
Nuphar	variegata	Bulhead Pond-lily	4	-5		S5			G5
Oleaceae		Olive Family	_				ļ		
Fraxinus	nigra	Black Ash	7	-4		S5			G5
Onagraceae		Evening-primrose Family					1		
Circaea	alpina	Smaller Enchanter's Nightshade	6	-3		S5			G5
Epilobium	angustifolium	Fireweed	3	0		S5			G5
Epilobium	ciliatum ssp. ciliatum	Ciliate Willow-herb	3	3		S5			G5T?
Epilobium	leptophyllum	Narrow-leaved Willow-herb	7	-5		S5			G5
Oxalidaceae		Wood Cornel Family							
	sectoralla con montara	Wood Sorrel Family	0		+	0.5			05
Oxalis	acetosella ssp. montana	True Wood-sorrel	8	3		S5			G5

LATIN NAME		COMMON NAME	COEFFICIENT OF CONSERVATISM	WETNESS INDEX	WEEDINESS INDEX	PROVINCIAL STATUS	OMNR STATUS	COSEWIC STATUS	GLOBAL STATUS
Plantaginaceae		Plantain Family							
Plantago	major	Common Plantain		-1	-1	SE5			G5
		15 "			1	1	1		
Polygonaceae		Smartweed Family	<u> </u>			0.5			0.5
Polygonum	amphibium	Water Smartweed	5	-5	 	S5	1		G5
Polygonum	convolvulus	Black Bindweed		1	-1	SE5			G?
Polygonum	lapathifolium	Pale Smartweed	2	-4		S5			G5
Rumex	orbiculatus	Great Water Dock	6	-5		S4S5			G5
Drimulassas		Duimana a Familia					1		
Primulaceae Lysimachia	terrestris	Primrose Family Swamp Loosestrife	6			S5			G5
	· ·			-5			1		
Lysimachia	thyrsiflora	Tufted Loosestrife	7	-5		S5			G5
Trientalis	borealis ssp. borealis	Star-flower	6	-1		S5			G5T?
Pyrolaceae		Wintergreen Family							
Orthilia	secunda	One-sided Shinleaf	5	-1		S5	1		G5
Pyrola	asarifolia	Pink Pyrola	7	-3		S5		1	G5
Pyrola	chlorantha	Green-flowered Pyrola	6	3	+	S4S5	1		G5
Pyrola	elliptica	Shinleaf	5	5		S5			G5
Pyrola	minor	Lesser Wintergreen				S4			G5
Ranunculaceae		Buttercup Family							
Actaea	rubra	Red Baneberry	5	5		S5			G5
Anemone	canadensis	Canada Anemone	3	-3		S5			G5
Anemone	quinquefolia var. quinquefolia	Wood Anemone	7	0		S5			G5
Caltha	palustris	Marsh-marigold	5	-5		S5			G5
Coptis	trifolia	Goldthread	7	-3		S5			G5T5
Ranunculus	acris	Tall Buttercup			-2	SE5			G5
Ranunculus	flammula var. reptans	Creeping Spearwort	8	-5		SU			G5T
Ranunculus	hispidus var. caricetorum	Swamp Buttercup	5	-5		S5			G5T5
Ranunculus	pensylvanicus	Bristly Buttercup	3	-5		S5			G5
Thalictrum	pubescens	Tall Meadow-rue	5	-2		S5			G5
					1	<u> </u>	1		
Rhamnaceae		Buckthorn Family							
Rhamnus	alnifolia	Alder-leaved Buckthorn	7	-5		S5			G5

LATIN NAME		COMMON NAME	COEFFICIENT OF CONSERVATISM	WETNESS INDEX	WEEDINESS INDEX	PROVINCIAL STATUS	OMNR STATUS	COSEWIC STATUS	GLOBAL STATUS
Rosaceae		Rose Family							
Amelanchier	laevis	Smooth Juneberry	5	5		S5			G4G5Q
Amelanchier	sanguinea	Roundleaf Juneberry	7	5		S5?			G5
Fragaria	virginiana ssp. virginiana	Scarlet Strawberry	2	1		SU			G5T?
Geum	aleppicum	Yellow Avens	2	-1		S5			G5
Physocarpus	opulifolius	Ninebark	5	-2		S5			G5
Potentilla	anserina ssp. anserina	Silverweed	5	-4		S5			
Potentilla	fruticosa ssp. floribunda	Shrubby Cinquefoil	9	-3		S5			G5T
Potentilla	norvegica ssp. norvegica	Cinquefoil				SU			G5T?
Potentilla	tridentata	Three-toothed Cinquefoil				S5			G5
Prunus	pensylvanica	Pin Cherry	3	4		S5			G5
Prunus	virginiana ssp. virginiana	Choke Cherry	2	1		S5			G5T?
Rosa	acicularis ssp. sayi	Prickly Rose	7	3		S5			G5TU
Rubus	chamaemorus	Cloudberry				S5			G5
Rubus	idaeus ssp. melanolasius	Wild Red Raspberry	0	-2		S5			G5T
Rubus	pubescens	Dwarf Raspberry	4	-4		S5			G5
Sorbus	americana	American Mountain-ash	8	-1		S5			G5
Sorbus	decora	Showy Mountain-ash	8	3		S5			G4G5
Spiraea	alba	Narrow-leaved Meadow-sweet	3	-4		S5			G5
•									
Rubiaceae		Madder Family							
Galium	aparine	Cleavers	4	3		S5			G5
Galium	trifidum ssp. trifidum	Small Bedstraw	5	-4		S5			G5T?
Galium	triflorum	Sweet-scented Bedstraw	4	2		S5			G5
Salicaceae		Willow Family							
Populus	balsamifera ssp. balsamifera	Balsam Poplar	4	-3		S5			G5T?
Populus	tremuloides	Trembling Aspen		0		S5			G5
Salix	species	Willow species							
Salix	bebbiana	Long-beaked Willow	4	-4		S5			G5
Salix	candida	Hoary Willow	10	-5		S5			G5
Salix	discolor	Pussy Willow	3	-3		S5			G5
Salix	eriocephala	Missouri Willow	4	-3	1	S5	†	†	G5
Salix	lucida	Shining Willow	5	-4	1	S5	†	†	G5
Salix	pedicellaris	Bog Willow	9	-5	+	S5	1		G5

LATIN NAME		COMMON NAME	COEFFICIENT OF CONSERVATISM	WETNESS INDEX	WEEDINESS INDEX	PROVINCIAL STATUS	OMNR STATUS	COSEWIC STATUS	GLOBAL STATUS
Salix	pellita	Satiny Willow				S5			G5
Salix	petiolaris	Slender Willow	3	-4		S5			G4
Salix	pyrifolia	Balsam Willow	10	-4		S5			G5
Santalaceae		Sandalwood Family							
Geocaulon	lividum	Northern Commandra	9	-2		S5			G5
Sarraceniaceae		Pitcher-plant Family							+
Sarracenia	purpurea	Pitcher-plant	10	-5		S5			G5
Saxifragaceae		Saxifrage Family							
Mitella	nuda	Naked Mitrewort	6	-3		S5			G5
Scrophulariaceae		Figwort Family							
Euphrasia	stricta	European Eyebright		-3	-1	SE4?			G?Q
Mimulus	ringens	Square-stemmed Monkey-flower	6	-5		S5			G5
Rhinanthus	minor ssp. groenlandicus	Yellow-rattle		0	-1	S3			G4T?
Veronica	beccabunga	Bachbungen's Speedwell		-5	-1	SE2			G?
Veronica	scutellata	Marsh Speedwell	7	-5	·	S5			G5
Urticaceae		Nettle Family							
Urtica	dioica ssp. gracilis	American Stinging Nettle	2	-1		S5			G5T?
Violaceae		Violet Family							
Viola	nephrophylla	Northern Bog Violet			+	S4	†		G5
Viola	renifolia	Kidney-leaved Violet				S5			G5
MONOCOTYLEDO	NS	MONOCOTS							
Alismataceae		Water-plantain Family			1		1		+
Sagittaria	latifolia	Broad-leaved Arrowhead	4	-5		S5			G5
Araceae		Arum Family							
Calla	palustris	Wild Calla	8	-5		S5			G5
Cyperaceae		Sedge Family							
Carex	aquatilis	Aquatic Sedge	7	-5		S5			G5

LATIN NAME		COMMON NAME	COEFFICIENT OF CONSERVATISM	WETNESS INDEX	WEEDINESS INDEX	PROVINCIAL STATUS	OMNR STATUS	COSEWIC STATUS	GLOBAL STATUS
Carex	arctata	Drooping Wood Sedge	5	5		S5			G5?
Carex	aurea	Golden-fruited Sedge	4	-4		S5			G5
Carex	bebbii	Bebb's Sedge	3	-5		S5			G5
Carex	canescens ssp. canescens	Silvery Sedge	7	-5		S5			G5T?
Carex	castanea	Chestnut Sedge	7	-4		S5			G5
Carex	deweyana	Dewey's Sedge	6	4		S5			G5
Carex	disperma	Soft-leaved Sedge	8	-5		S5			G5
Carex	flava	Yellow Sedge	5	-5		S5			G5
Carex	interior	Inland Sedge	6	-5		S5			G5
Carex	intumescens	Bladder Sedge	6	-4		S5			G5
Carex	lacustris	Lake-bank Sedge	5	-5		S5			G5
Carex	leptalea ssp. leptalea	Bristle-stalked Sedge	8	-5		S5			G5T?
Carex	leptonervia	Finely-nerved Sedge	5	0		S5			G4
Carex	magellanica ssp. irrigua	Stunted Sedge	10	-5		S5			G5T?
Carex	pauciflora	Few-flowered Sedge	10	-5		S5			G5
Carex	pedunculata	Long-stalked Sedge	5	5		S5			G5
Carex	pensylvanica	Pennsylvania Sedge	5	5		S5			G5
Carex	retrorsa	Retrorse Sedge	5	-5		S5			G5
Carex	stipata	Awl-fruited Sedge	3	-5		S5			G5
Carex	tenera	Straw Sedge	4	-1		S5			G5T
Carex	trisperma var. trisperma	Three-seeded Sedge				S5			G5T
Carex	utriculata	Beaked Sedge	7	-5		S5			G5
Eleocharis	acicularis	Needle Spike-rush	5	-5		S5			G5
Eleocharis	obtusa	Blunt Spike-rush	5	-5		S5			G5
Eleocharis	smallii	Small's Spike-rush	6	-5		S5			G5?
Scirpus	atrovirens	Dark-green Bulrush	3	-5		S5			G5?
Scirpus	cyperinus	Wool-grass	4	-5		S5			G5
Scirpus	validus	American Great Bulrush	5	-5		S5			G?
Iridaceae		Iris Family					1		
Iris	versicolor	Multi-coloured Blue-flag	5	-5		S5			G5
Sisyrinchium	montanum	Montane Blue-eyed-grass		-1		S5			G5
Juncaceae		Rush Family					+		
Juncus	articulatus	Jointed Rush	5	-5		S5			G5
Juncus	canadensis	Canada Rush	6	-5		S5			G5

LATIN NAME		COMMON NAME	COEFFICIENT OF CONSERVATISM	WETNESS INDEX	WEEDINESS INDEX	PROVINCIAL STATUS	OMNR STATUS	COSEWIC STATUS	GLOBAL STATUS
Juncus	dudleyi	Dudley's Rush	1	0		S5			G5
Juncus	effusus ssp. solutus	Soft Rush	4	-5		S5			G5T?
Juncus	filiformis	Thread Rush	8	-3		S4S5			G5
Luzula	multiflora ssp. multiflora	Woodrush	6	3		S5			G5T5
Lemnaceae		Duckweed Family							
Lemna	minor	Lesser Duckweed	2	-5		S5			G5
Liliaceae		Lily Family							
Clintonia	borealis	Bluebead-lily	7	-1		S5			G5
Lilium	philadelphicum	Wood Lily	8	1		S5			G5
Maianthemum	canadense	Wild Lily-of-the-valley	5	0		S5			G5
Maianthemum	trifolium	Three-leaved Solomon's Seal	10	-5		S5			G5
Streptopus	amplexifolius	Clasping-leaved Twisted-stalk	10	-1		S4S5			G5
Streptopus	roseus	Rose Twisted-stalk	7	0		S5			G5
Trillium	cernuum	Nodding Trillium	8	0		S5			G5
Trillium	grandiflorum	White Trillium	5	5		S5			G5
Orchidaceae		Orchid Family							
Corallorhiza	maculata	Spotted Coral-root	7	4		S5			G5
Cypripedium	acaule	Moccasin Flower	7	-3		S5			G5
Goodyera	repens	Dwarf Rattlesnake-plantain	8	3		S5			G5
Goodyera	tesselata	Checkered Rattlesnake-plantain	7	3		S4S5			G5
Platanthera	obtusata	Small Northern Bog Orchis	9	-3		S5			G5
Poaceae		Grass Family			1				
Agrostis	gigantea	Red-top		0	-2	SE5			G4G5
Agrostis	scabra	Fly-away Grass	6	0	_	S5			G5
Bromus	ciliatus	Fringed Brome	6	-3		S5			G5
Bromus	inermis ssp. inermis	Awnless Brome		5	-3	SE5	Ì		G4G5T?
Calamagrostis	canadensis	Blue-joint Grass	4	-5		S5			G5
Cinna	latifolia	Broad-leaved Reed Grass	7	-4		S5	Ì		G5
Danthonia	spicata	Poverty Oat Grass	5	5		S5			G5
Deschampsia	cespitosa ssp. cespitosa	Tufted Hairgrass	9	-4		S4S5	Ì		G5T?
Elymus	repens	Quack Grass		3	-3	SE5	Ì		G?
Festuca	pratensis	Meadow Fescue		4	-1	SE5	Ì		G5

LATIN NAME		COMMON NAME	COEFFICIENT OF CONSERVATISM	WETNESS INDEX	WEEDINESS INDEX	PROVINCIAL STATUS	OMNR STATUS	COSEWIC STATUS	GLOBAL STATUS
Glyceria	borealis	Northern Manna Grass	8	-5		S5			G5
Glyceria	canadensis	Rattlesnake Grass	7	-5		S4S5			G5
Glyceria	grandis	Tall Manna Grass	5	-5		S4S5			G5
Glyceria	striata	Fowl Meadow Grass	3	-5		S5			G5
Hordeum	jubatum ssp. jubatum	Squirrel-tail Grass		-1	-1	SE5			G5T?
Muhlenbergia	frondosa	Leafy Satin Grass	5	-3		S4			G5
Oryzopsis	asperifolia	White-grained Mountain-rice	6	5		S5			G5
Phalaris	arundinacea	Reed Canary Grass	0	-4		S5			G5
Phleum	pratense	Timothy		3	-1	SE5			G?
Poa	compressa	Canada Blue Grass	0	2		S5			G?
Poa	nemoralis	Woodland Spear Grass		0	-1	SE3			G5
Poa	palustris	Fowl Meadow Grass	5	-4		S5			G5
Schizachne	purpurascens ssp. purpurascens	False Melic Grass	6	2		S5			G5T?
Spartina	pectinata	Tall Cord Grass	7	-4		S4			G5
Potamogetonace] 36	Pondweed Family							
Potamogeton	amplifolius	Large-leaved Pondweed	5	-5		S5			G5
Potamogeton	epihydrus	Nuttall's Pondweed	5	-5		S4S5			G5
Potamogeton	foliosus	Leafy Pondweed	4	-5		S5			G5
Potamogeton	pusillus	Small Pondweed	5	-5		S4S5			G5
Potamogeton	richardsonii	Richardson's Pondweed	5	-5		S5			G5
Sparganiaceae		Bur-reed Family							
Sparganium	emersum ssp. emersum	Green-fruited Bur-reed	5	-5		S5			
Sparganium	fluctuans	Floating Bur-reed	9	-5	+	S4?			G5
Typhaceae	nuctuaris	Cattail Family	9	-5		34 !			<u> </u>
Typha	latifolia	Broad-leaved Cattail	3	-5		S5	1		G5
FLORISTIC SU	UMMARY & ASSESSMEN	 T							
Species Diversity	,								+
Total Species:		288							
Native Species:		257	89%						
Exotic Species		31	11%						
S1-S3 Species		1	0%						

LATIN NAME		COMMON NAME	COEFFICIENT OF CONSERVATISM	WETNESS INDEX	WEEDINESS INDEX	PROVINCIAL STATUS	OMNR STATUS	COSEWIC STATUS	GLOBAL STATUS
212			00/						
S4 Species		21	8%						
S5 Species		231	91%		_	4	1		-
Co-efficient of Conservatism and Floristic Quali		ity Index							
Co-efficient of Conservatism (CC) (average)		5.7							
CC 0 to 3	lowest sensitivity	41	17%						
CC 4 to 6	moderate sensitivity	107	45%						
CC 7 to 8	high sensitivity	65	27%						
CC 9 to 10	highest sensitivity	24	10%						
Floristic Quality Index (FQI)		88							
Presence of Weedy & Invasive Species									
mean weediness		-1.5							
weediness = -1	low potential invasiveness	19	61%						
weediness = -2	moderate potential invasiveness	8	26%						
weediness = -3	high potential invasiveness	4	13%						
Presence of Wetl	and Species								
average wetness value		-1.4							
upland		28	10%						
facultative upland		45	17%						
facultative		42	15%						
facultative wetland	1	67	25%						
obligate wetland		89	33%						

Attachment E

Atlas of the Breeding Birds of Ontario List of Species

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YELLOW FALLS VEGETATION AND WILDLIFE ASSESSMENT Attachment E – List of Wildlife Species Known to Occur in the Study Area

COMMON NAME	SCIENTIFIC NAME	ONTARIO STATUS	GLOBAL STATUS	COSSARO	COSEWIC	REGION	AREA	SOURCE	COMMENTS
BUTTERFLIES									
Eastern Tiger Swallowtail	Papilio glaucus	S4S5	G5					Stantec 2006	
Cabbage White	Pieris rapae	SE	G5					Stantec 2006	
Clouded Sulphur	Colias philodice	S5	G5					Stantec 2006	
Pearl Crescent	Phyciodes tharos	S4	G5					Stantec 2006	
Northern Crescent	Phycoides pascoensis	S5	G5					Stantec 2006	
Mourning Cloak	Nymphalis antiopa	S5	G5					Stantec 2006	
White Admiral	Limenitis arthemis	S5	G5					Stantec 2006	
Viceroy	Limenitis archippus	S5	G5					Stantec 2006	
Monarch	Danaus plexippus	S4	G4	NIAC	SC			Stantec 2006	
AMPHIBIANS									
Blue-spotted Salamander	Ambystoma laterale	S4	G5					Oldham and Weller 2000	
Spotted Salamander	Ambystoma maculatum	S4	G5					Oldham and Weller 2000	
Northern Two-lined Salamander	Eurycea bislineata	S4	G5					Oldham and Weller 2000	
American Toad	Bufo americanus	S5	G5					Stantec 2006	
Tetraploid Gray Treefrog	Hyla versicolor	S5	G5					Oldham and Weller 2000	
Spring Peeper	Pseudacris crucifer	S5	G5					Stantec 2006	
Boreal Chorus Frog	Pseudacris maculata	S5	G5					Oldham and Weller 2000	
Northern Green Frog	Rana clamitans	S5	G5					Oldham and Weller 2000	
Wood Frog	Rana sylvatica	S5	G5					Oldham and Weller 2000	
Northern Leopard Frog	Rana pipiens	S5	G5	NIAC	NAR			Stantec 2006	
Mink Frog	Rana septentrionalis	S5	G5	NIAO	14/413			Stantec 2006	
Willik 1 Tog	Trana septemmonans	00	00					Clarice 2000	
REPTILES									
Eastern Gartersnake	Thamnophis sirtalis	S5	G5				+	Stantec 2006	
Lastern Gartersnake	mannopnis sirtais	33	03				+	Starited 2000	
BIRDS									
Canada Goose	Branta canadensis	S5	G5					Stantec 2006	
American Black Duck	Anas rubripes	S5	G5					Stantec 2006	
Mallard	Anas platyrhynchos	S5	G5					Stantec 2006	
Northern Pintail	Anas acuta	S5	G5					Stantec 2006	flyover - non-breeding
Ring-necked Duck	Aythya collaris	S5	G5			6,7		Stantec 2006	ilyover floir breeding
Lesser Scaup	Aythya affinis	S4	G5				7	Stantec 2006	flyover
Common Goldeneye	Bucephala clangula	S5	G5				'	Stantec 2006	liyovei
Hooded Merganser	Lophodytes cucullatus	S5	G5				7	Stantec 2006	
Common Merganser	Mergus merganser	S5	G5				7	Stantec 2006	
Red-breasted Merganser	Mergus merganser Mergus serrator	S5 S4	G5	1	1	6,7	'	Stantec 2006 Stantec 2006	+
Spruce Grouse	Falcipennis canadensis	S5	G5	 	-	0,1	1	Stantec 2006	+
•		S5 S5	G5 G5		+	+	+ .	25 Stantec 2006	+
Ruffed Grouse	Bonasa umbellus			NUAG	NAD		_		+
Common Loon	Gavia immer	S4	G5	NIAC	NAR	+	+	70 Stantec 2006	G
Great Blue Heron	Ardea herodias	S5	G5	00		1	+	Stantec 2006	flyover - non-breeding
Bald Eagle	Haliaeetus leucocephalus	S4	G4	SC	NAR			Stantec 2006	
Northern Harrier	Circus cyaneus	S4	G5		NAR		;	30 Stantec 2006	flyover

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COMMON NAME	SCIENTIFIC NAME	ONTARIO STATUS	GLOBAL STATUS	COSSARO	COSEWIC	REGION	AREA	SOURCE	COMMENTS
Sharp-shinned Hawk	Accipiter striatus	S5	G5	NIAC	NAR			30 Stantec 2006	
Northern Goshawk	Accipiter gentilis	S4	G5	NIAC	NAR		7	100 Stantec 2006	
Broad-winged Hawk	Buteo platypterus	S5	G5					100 Stantec 2006	
Merlin	Falco columbarius	S4	G5		NAR		6	Stantec 2006	
Sandhill Crane	Grus canadensis	S4BSZN	G5					Stantec 2006	
Killdeer	Charadrius vociferus	S5	G5					Stantec 2006	
Solitary Sandpiper	Tringa solitaria	S4	G5					Stantec 2006	
Spotted Sandpiper	Actitis macularia	S5	G5					Stantec 2006	
American Woodcock	Scolopax minor	S5	G5					Stantec 2006	
Bonaparte's Gull	Larus philadelphia	S4	G5					Stantec 2006	
Ring-billed Gull	Larus delawarensis	S5	G5					Stantec 2006	flyover - non-breeding
Herring Gull	Larus argentatus	S5	G5					Stantec 2006	flyover - non-breeding
Common Tern	Sterna hirundo	S4	G5		NAR			Stantec 2006	flyover - non-breeding
Black-billed Cuckoo	Coccyzus erythropthalmus	S4	G5					Stantec 2006	,
Common Nighthawk	Chordeiles minor	S4	G5					Stantec 2006	
Belted Kingfisher	Ceryle alcyon	S5	G5					Stantec 2006	
Yellow-bellied Sapsucker	Sphyrapicus varius	S5	G5					30 Stantec 2006	
Downy Woodpecker	Picoides pubescens	S5	G5					Stantec 2006	
Hairy Woodpecker	Picoides villosus	S5	G5					10 Stantec 2006	
Northern Flicker	Colaptes auratus	S5	G5					Stantec 2006	
Pileated Woodpecker	Dryocopus pileatus	S4S5	G5				30-50	Stantec 2006	
Olive-sided Flycatcher	Contopus borealis	S5	G5				6	Stantec 2006	
Yellow-bellied Flycatcher	Empidonax flaviventris	S5	G5				6	Stantec 2006	
Alder Flycatcher	Empidonax alnorum	S5	G5					Stantec 2006	
Least Flycatcher	Empidonax minimus	S5	G5					Stantec 2006	
Eastern Kingbird	Tyrannus tyrannus	S5	G5					Stantec 2006	
Blue-headed Vireo	Vireo solitarius	S5	G5			6,7		100 Stantec 2006	
Philadelphia Vireo	Vireo philadelphicus	S5	G5	1		0,7	6	Stantec 2006	
Red-eyed Vireo	Vireo olivaceus	S5	G5				<u> </u>	Stantec 2006	
Blue Jay	Cyanocitta cristata	S5	G5	+				Stantec 2006	
American Crow	Corvus brachyrhynchos	S5	G5	+				Stantec 2006	
Common Raven	Corvus corax	S5	G5	+			6	Stantec 2006	
Tree Swallow	Tachycineta bicolor	S5	G5	+			<u> </u>	Stantec 2006	
Black-capped Chickadee	Poecile atricapilla	S5	G5	+				Stantec 2006	
Boreal Chickadee	Poecile hudsonica	S5	G5	1				Stantec 2006	
Red-breasted Nuthatch	Sitta canadensis	S5	G5	1				10 Stantec 2006	
		S5	G5 G5	+				30 Stantec 2006	
Brown Creeper	Certhia americana	S5	G5	+	+	+		30 Stantec 2006	
Winter Wren	Troglodytes troglodytes	S5 S5	G5 G5	-	-	-	7		
Golden-crowned Kinglet	Regulus satrapa	S5 S5	G5 G5	-	-	6.7	7	30 Stantec 2006	
Ruby-crowned Kinglet	Regulus calendula		G5 G5	+	-	6,7		Stantec 2006	
Veery	Catharus fuscescens	S4		1	-	_		10 Stantec 2006	
Swainson's Thrush	Catharus ustulatus	S5	G5	1	+	+	6	Stantec 2006	
Hermit Thrush	Catharus guttatus	S5	G5	1	-		/	100 Stantec 2006	
American Robin	Turdus migratorius	S5	G5	1			1	Stantec 2006	

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European Starling	Sturnus vulgaris	SE	G5					Stantec 2006	
Cedar Waxwing	Bombycilla cedrorum	S5	G5					Stantec 2006	
Tennessee Warbler	Vermivora peregrina	S5	G5				6	Stantec 2006	
Nashville Warbler	Vermivora ruficapilla	S5	G5					Stantec 2006	
Northern Parula	Parula americana	S4	G5			6,7		100 Stantec 2006	
Yellow Warbler	Dendroica petechia	S5	G5					Stantec 2006	
Chestnut-sided Warbler	Dendroica pensylvanica	S5	G5					Stantec 2006	
Magnolia Warbler	Dendroica magnolia	S5	G5				7	30 Stantec 2006	
Cape May Warbler	Dendroica tigrina	S5	G5				6	Stantec 2006	
Yellow-rumped Warbler	Dendroica coronata	S5	G5				7	30 Stantec 2006	
Black-throated Green Warbler	Dendroica virens	S5	G5					30 Stantec 2006	
Blackburnian Warbler	Dendroica fusca	S5	G5				7	50 Stantec 2006	
Palm Warbler	Dendroica palmarum	S5	G5				6	Stantec 2006	
Bay-breasted Warbler	Dendroica castanea	S5	G5				6	Stantec 2006	
Black-and-white Warbler	Mniotilta varia	S5	G5					100 Stantec 2006	
American Redstart	Setophaga ruticilla	S5	G5					30 Stantec 2006	
Ovenbird	Seiurus aurocapilla	S5	G5					20 Stantec 2006	
Northern Waterthrush	Seiurus noveboracensis	S5	G5					20 Stantec 2006	
Mourning Warbler	Oporornis philadelphia	S5	G5					30 Stantec 2006	
Common Yellowthroat	Geothlypis trichas	S5	G5					Stantec 2006	
Wilson's Warbler	Wilsonia pusilla	S5	G5				6	Stantec 2006	
Canada Warbler	Wilsonia canadensis	S5	G5					30 Stantec 2006	
Chipping Sparrow	Spizella passerina	S5	G5					Stantec 2006	
LeConte's Sparrow	Ammodramus leconteii	S4BSZN	G4					Stantec 2006	
Fox Sparrow	Passerella iliaca	S4	G5					Stantec 2006	
Song Sparrow	Melospiza melodia	S5	G5					Stantec 2006	
Lincoln's Sparrow	Melospiza lincolnii	S5	G5			6,7		Stantec 2006	
Swamp Sparrow	Melospiza georgiana	S5	G5			0,1		Stantec 2006	
White-throated Sparrow	Zonotrichia albicollis	S5	G5			-		20 Stantec 2006	
White-crowned Sparrow	Zonotrichia leucophrys	S4	G5			-		Stantec 2006	
Dark-eyed Junco	Junco hyemalis	S5	G5			-	7	Stantec 2006	
Lapland Longspur	Calcarius Iapponicus	S4	G5	1		+		Stantec 2006	
Red-winged Blackbird	Agelaius phoeniceus	S5	G5	1		+		Stantec 2006	
Rusty Blackbird	Euphagus carolinus	S5	G5	1			6	Stantec 2006	
Brewer's Blackbird	, , ,	S4	G5		-	6.7	0	Stantec 2006	
Common Grackle	Euphagus cyanocephalus	S5 S5	G5			0,7			
	Quiscalus quiscula		G5			_		Stantec 2006	
Purple Finch	Carpodacus purpureus	S5 S5	G5 G5	 		0.7	+	Stantec 2006	
Red Crossbill	Loxia curvirostra			 		6,7	+	Stantec 2006	
White-winged Crossbill	Loxia leucoptera	S5	G5	 		6,7	+	Stantec 2006	
Common Redpoll	Carduelis flammea	S4	G5	!		+	_	Stantec 2006	
Pine Siskin	Carduelis pinus	S5	G5				/	Stantec 2006	
American Goldfinch	Carduelis tristis	S5	G5	-		+		Stantec 2006	-
Evening Grosbeak	Coccothraustes vespertinus	S5	G5					Stantec 2006	flyover
	1								

YELLOW FALLS VEGETATION AND WILDLIFE ASSESSMENT

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MAMMALS									
Masked Shrew	Sorex cinereus	S5	G5					Dobbyn 1994	
Smoky Shrew	Sorex fumeus	S5	G5					Dobbyn 1994	
Pygmy Shrew	Sorex hoyi	S4	G5				7	Dobbyn 1994	
Northern Short-tailed Shrew	Blarina brevicauda	S5	G5					Dobbyn 1994	
Snowshoe Hare	Lepus americanus	S5	G5				7 20	Y. Arsenault, Dobbyn 1994	
Least Chipmunk	Tamius minimus	S5	G5					Dobbyn 1994	
Woodchuck	Marmota monax	S5	G5					Dobbyn 1994	
Red Squirrel	Tamiasciurus hudsonicus	S5	G5					Stantec 2006	
Northern Flying Squirrel	Glaucomys sabrinus	S5	G5				7	Dobbyn 1994	
Beaver	Castor canadensis	S5	G5					Stantec 2006	
Deer Mouse	Peromyscus maniculatus	S5	G5					Dobbyn 1994	
Meadow Vole	Microtus pennsylvanicus	S5	G5					Dobbyn 1994	
Muskrat	Ondatra zibethicus	S5	G5					Dobbyn 1994	
House Mouse	Mus musculus	SE	G5					Dobbyn 1994	
Porcupine	Erethizon dorsatum	S5	G5				7	Dobbyn 1994	
Grey Wolf	Canis lupus	S4	G4		NAR		6	Stantec 2006	
Red Fox	Vulpes vulpes	S5	G5					Y. Arsenault, Dobbyn 1994	
Black Bear	Ursus americanus	S5	G5	NIAC	NAR			Stantec 2006	
Raccoon	Procyon lotor	S5	G5					Dobbyn 1994	
Marten	Martes americana	S5	G5				6	Y. Arsenault, Dobbyn 1994	
Fisher	Martes pennanti	S5	G5				6	Dobbyn 1994	
Mink	Mustela vison	S5	G5					Y. Arsenault, Dobbyn 1994	
Striped Skunk	Mephitis mephitis	S5	G5					Dobbyn 1994	
River Otter	Lutra canadensis	S5	G5					Y. Arsenault, Dobbyn 1994	
Lynx	Lynx canadensis	S5	G5		NAR		6	Y. Arsenault, Dobbyn 1994	
Moose	Alces alces	S5	G5				6	Stantec 2006	
SUMMARY									
Total Butterflies: 9									
Total Amphibians: 11									
Total Reptiles: 1									
Total Birds: 103									
Total Breeding Birds: 98									
Total Mammals: 26									
SOURCES									
				1					
Arsenault V local tranner ners				1			1	I	1

Arsenault, Y. local trapper, pers.comm. January 25, 2007
Dobbyn, J. S. 1994. Atlas of the Mammals of Ontario. Federation of Ontario Naturalists, Don Mills, Ontario.

Oldham, M.J. and W.F. Weller. 2000. Ontario Herpetofaunal Atlas. Natural Heritage Information Centre, Ontario Ministry of Natural Resources.

Stantec Consulting Ltd. 2006 field observations

Attachment F

Bird Species Abundance by Habitat Type

	Bree	ding Evide	ence	Point Counts				
Species	Max BE	Category	#Sq	#PC	%PC	Abundance	#Sq	
Common Loon	NY	CONF	76	46	3.26	0.0383	21	
Pied-billed Grebe	S	POSS	2	1	0.07	0.0007	1	
Red-necked Grebe	AE	CONF	6					
Double-crested Cormorant	NY	CONF	12					
American Bittern	FY	CONF	18	4	0.28	0.0028	3	
Great Blue Heron	NY	CONF	38					
Turkey Vulture	Н	POSS	1					
Snow Goose	X	OBS	1		0.55	0.0040		
Canada Goose	FY	CONF	36	8	0.57	0.0213	4	
Trumpeter Swan	Н	POSS	1					
Wood Duck	NU	CONF	8					
American Wigeon American Black Duck	FY FY	CONF CONF	13 29					
Mallard	FY	CONF	39	2	0.14	0.0021	2	
Blue-winged Teal	Р	PROB	12		0.14	0.0021		
Northern Shoveler	P	PROB	7					
Green-winged Teal	FY	CONF	20					
Redhead	Р	PROB	1					
Ring-necked Duck	FY	CONF	31					
Lesser Scaup	FY	CONF	8	1	0.07	0.0028	1	
White-winged Scoter	X	OBS	1	'	0.07	0.0020	'	
Long-tailed Duck	X	OBS	1					
Bufflehead	FY	CONF	3	1	0.07	0.0007	1	
Common Goldeneye	FY	CONF	71	5	0.35	0.0142	5	
Hooded Merganser	FY	CONF	29		0.00	0.0		
Common Merganser	FY	CONF	33	8	0.57	0.0064	5	
Red-breasted Merganser	FY	CONF	4	1	0.07	0.0007	1	
Ruddy Duck	D	PROB	5					
Osprey	NY	CONF	22					
Bald Eagle	NY	CONF	16					
Northern Harrier	DD	CONF	54	7	0.5	0.0050	4	
Sharp-shinned Hawk	CF	CONF	16					
Northern Goshawk	Н	POSS	3					
Broad-winged Hawk	CF	CONF	33	6	0.43	0.0043	6	
Red-tailed Hawk	AE	CONF	29	6	0.43	0.0057	3	
Rough-legged Hawk	Х	OBS	2					
Golden Eagle	Х	OBS	2					
American Kestrel	NY	CONF	83	24	1.7	0.0213	16	
Merlin	Α	PROB	19	4	0.28	0.0043	3	
Ruffed Grouse	FY	CONF	58	51	3.62	0.0390	18	
Spruce Grouse	FY	CONF	27	7	0.5	0.0085	6	
Sharp-tailed Grouse	FY	CONF	20	2	0.14	0.0050	2	
Virginia Rail	S	POSS	1	ļ.,				
Sora	S	POSS	7	1	0.07	0.0007	1	

	Bree	ding Evide	ence		Poi	nt Counts	
Species	Max BE	Category	#Sq	#PC	%PC	Abundance	#Sq
American Coot	Р	PROB	4				
Sandhill Crane	NE	CONF	36	29	2.06	0.0532	15
Killdeer	NE	CONF	29	9	0.64	0.0071	6
Greater Yellowlegs	DD	CONF	30	29	2.06	0.0248	14
Lesser Yellowlegs	X	OBS	3				
Solitary Sandpiper	FY	CONF	21	5	0.35	0.0035	4
Spotted Sandpiper	NY	CONF	55	5	0.35	0.0057	5
Least Sandpiper	X	OBS	1				
Wilson's Snipe	FY	CONF	62	34	2.41	0.0383	19
American Woodcock	D	PROB	25	1	0.07	0.0007	1
Wilson's Phalarope	Р	PROB	1		0.55	0.0004	
Bonaparte's Gull	NE	CONF	38	8	0.57	0.0064	6
Ring-billed Gull	X	OBS	3	7	0.5	0.0074	4
Herring Gull	NY	CONF	34		0.5	0.0071	4
Common Tern Black Tern	NE	CONF	6 5	1	0.07	0.0028	1
Rock Pigeon	AE P	CONF PROB	4				
	FY	CONF	15	5	0.35	0.0035	3
Mourning Dove Black-billed Cuckoo	S	POSS	1	1	0.33	0.0035	1
Black/Yellow-billed Cuckoo	S	POSS	2	I	0.07	0.0007	1
Great Horned Owl	FY	CONF	15	1	0.07	0.0007	1
Northern Hawk Owl	NY	CONF	26	12	0.85	0.0142	4
Great Gray Owl	FY	CONF	27	3	0.21	0.0021	3
Long-eared Owl	S	POSS	3		0.21	0.0021	
Short-eared Owl	CF	CONF	5	1	0.07	0.0007	1
Boreal Owl	S	POSS	18	1	0.07	0.0007	1
Northern Saw-whet Owl	S	POSS	8	-	0.01	0.000.	
Common Nighthawk	A	PROB	26	6	0.43	0.0043	4
Whip-poor-will	S	POSS	1	1	0.07	0.0007	1
Chimney Swift	Н	POSS	1	1	0.07	0.0007	1
Ruby-throated							
Hummingbird	NY	CONF	15	6	0.43	0.0043	5
Belted Kingfisher	CF	CONF	42	7	0.5	0.0050	6
Yellow-bellied Sapsucker	NY	CONF	69	106	7.52	0.0908	39
Downy Woodpecker	NY	CONF	43	33	2.34	0.0256	20
Hairy Woodpecker	NY	CONF	63	53	3.76	0.0397	27
American Three-toed							
Woodpecker	Н	POSS	4	5	0.35	0.0035	4
Black-backed Woodpecker	FY	CONF	18	9	0.64	0.0064	5
Northern Flicker	NY	CONF	107	177	12.6	0.1455	54
Pileated Woodpecker	NY	CONF	45	37	2.63	0.0284	19
Olive-sided Flycatcher	AE	CONF	41	55	3.9	0.0476	24
Eastern Wood-Pewee	S	POSS	3	4	0.28	0.0028	2
Yellow-bellied Flycatcher	NY	CONF	88	228	16.2	0.2143	54

	Bree	eding Evide	ence		Poi	nt Counts	
Species	Max			450			40
	BE	Category	#Sq	#PC	%PC	Abundance	#Sq
Alder Flycatcher	NE	CONF	99	337	23.9	0.3903	56
Least Flycatcher	NE	CONF	86	161	11.4	0.1654	44
Eastern Phoebe	S	POSS	2	1	0.07	0.0014	1
Great Crested Flycatcher	S	POSS	2				
Eastern Kingbird	CF	CONF	20	7	0.5	0.0050	6
Blue-headed Vireo	NY	CONF	64	77	5.46	0.0575	31
Warbling Vireo	Α	PROB	2				
Philadelphia Vireo	CF	CONF	44	59	4.19	0.0525	24
Red-eyed Vireo	CF	CONF	133	528	37.5	0.6409	61
Gray Jay	FY	CONF	83	93	6.6	0.1057	37
Blue Jay	CF	CONF	36	28	1.99	0.0206	16
American Crow	CF	CONF	90	137	9.72	0.1412	37
Common Raven	NY	CONF	105	126	8.94	0.1327	36
Tree Swallow	NY	CONF	62	29	2.06	0.0341	17
Bank Swallow	AE	CONF	7				
Cliff Swallow	NY	CONF	21	4	0.28	0.0170	2
Barn Swallow	NY	CONF	23	3	0.21	0.0057	2
Black-capped Chickadee	NY	CONF	78	88	6.25	0.0916	39
Boreal Chickadee	FY	CONF	43	33	2.34	0.0305	19
Red-breasted Nuthatch	CF	CONF	76	115	8.16	0.0894	42
White-breasted Nuthatch	Н	POSS	1				
Brown Creeper	CF	CONF	33	28	1.99	0.0213	18
House Wren	S	POSS	5	3	0.21	0.0021	3
Winter Wren	CF	CONF	123	606	43	0.5458	69
Golden-crowned Kinglet	CF	CONF	104	184	13.1	0.1682	55
Ruby-crowned Kinglet	NY	CONF	116	410	29.1	0.4422	67
Eastern Bluebird	NY	CONF	10	2	0.14	0.0014	2
Veery	NE	CONF	48	108	7.67	0.1157	24
Swainson's Thrush	CF	CONF	120	520	36.9	0.5749	63
Hermit Thrush	NE	CONF	102	402	28.5	0.4251	64
Wood Thrush	S	POSS	2	222	00.0		
American Robin	NE	CONF	143	398	28.3	0.4088	77
Gray Catbird	S	POSS	1	4	0.07	2 2227	4
Brown Thrasher	S	POSS	2	1	0.07	0.0007	1
European Starling	NY	CONF	42	13	0.92	0.0546	4
Bohemian Waxwing	Н	POSS	1	407	7.50	0.4000	4.5
Cedar Waxwing	CF	CONF	93	107	7.59	0.1306	45
Tennessee Warbler	CF	CONF	91	146	10.4	0.1292	43
Orange-crowned Warbler	S	POSS	5	10	0.71	0.0092	3
Nashville Warbler	CF	CONF	132	634	45	0.7445	74
Northern Parula	S	POSS	20	14	0.99	0.0106	5
Yellow Warbler	CF	CONF	36	21	1.49	0.0149	13
Chestnut-sided Warbler	CF	CONF	89	118	8.37	0.1036	38
Magnolia Warbler	NY	CONF	121	652	46.3	0.6742	75

	Bree	ding Evide	ence		Point Counts				
Species	Max BE	Category	#Sq	#PC	%PC	Abundance	#Sq		
Cape May Warbler	FY	CONF	28	29	2.06	0.0220	17		
Black-throated Blue	_	5565	4.0	1		0.0400			
Warbler	Р	PROB	19	17	1.21	0.0128	10		
Yellow-rumped Warbler Black-throated Green	CF	CONF	118	354	25.1	0.3279	66		
Warbler	CF	CONF	43	43	3.05	0.0348	16		
Blackburnian Warbler	CF	CONF	44	47	3.34	0.0419	19		
Pine Warbler	S	POSS	6	5	0.35	0.0043	4		
Palm Warbler	NY	CONF	39	109	7.74	0.1171	29		
Bay-breasted Warbler	CF	CONF	85	142	10.1	0.1150	45		
Blackpoll Warbler	S	POSS	2	1	0.07	0.0007	1		
Black-and-white Warbler	CF	CONF	100	166	11.8	0.1263	55		
American Redstart	NY	CONF	106	258	18.3	0.2598	50		
Ovenbird	CF	CONF	97	315	22.4	0.3109	54		
Northern Waterthrush	CF	CONF	57	101	7.17	0.0866	31		
Connecticut Warbler	T	PROB	12	12	0.85	0.0099	9		
Mourning Warbler Common Yellowthroat	CF CF	CONF CONF	94 102	229 378	16.3 26.8	0.2300 0.4344	48 58		
Wilson's Warbler	NY	CONF	46	91	6.46	0.4344	32		
Canada Warbler	FY	CONF	53	50	3.55	0.0412	28		
Scarlet Tanager	S	POSS	1	1	0.07	0.0007	1		
Chipping Sparrow	NY	CONF	102	162	11.5	0.1604	43		
Clay-colored Sparrow	Α	PROB	5	8	0.57	0.0071	3		
Field Sparrow	S	POSS	1	1	0.07	0.0007	1		
Vesper Sparrow	S	POSS	3	11	0.78	0.0121	1		
Savannah Sparrow	CF	CONF	36	48	3.41	0.0646	9		
Grasshopper Sparrow	X	OBS	2		0.10				
Le Conte's Sparrow	T	PROB	5	6	0.43	0.0057	3		
Fox Sparrow	FY CF	CONF	11 61	25 54	1.77 3.83	0.0192	9 17		
Song Sparrow Lincoln's Sparrow	CF	CONF CONF	77	303	21.5	0.0476 0.3456	50		
Swamp Sparrow	NE	CONF	78	84	5.96	0.0745	43		
White-throated Sparrow	NY	CONF	150	1118	79.4	2.0774	79		
Dark-eyed Junco	NE	CONF	74	132	9.37	0.1214	46		
Northern Cardinal	S	POSS	1						
Rose-breasted Grosbeak	Р	PROB	12	5	0.35	0.0035	4		
Indigo Bunting	S	POSS	4	1	0.07	0.0007	1		
Bobolink	S	POSS	3	1	0.07	0.0014	1		
Red-winged Blackbird	NY	CONF	37	22	1.56	0.0263	11		
Rusty Blackbird	CF	CONF	16	10	0.71	0.0092	6		
Common Grackle	NY	CONF	73	40	2.84	0.0440	18		
Brown-headed Cowbird	Р	PROB	4	 					
Baltimore Oriole	S	POSS	1	16	1 1 1	0.0125	6		
Pine Grosbeak	FY	CONF	8	16	1.14	0.0135	6		

	Bree	ding Evide	ence	Point Counts				
Species	Max BE	Category	#Sq	#PC	%PC	Abundance	#Sq	
Purple Finch	CF	CONF	64	73	5.18	0.0575	35	
Red Crossbill	Р	PROB	3	2	0.14	0.0121	2	
White-winged Crossbill	FY	CONF	68	182	12.9	0.3151	42	
Common Redpoll	Х	OBS	3					
Pine Siskin	FY	CONF	60	37	2.63	0.0490	25	
American Goldfinch	NY	CONF	48	52	3.69	0.0468	19	
Evening Grosbeak	FY	CONF	19	7	0.5	0.0128	2	
House Sparrow	CF	CONF	9	2	0.14	0.0121	1	

Appendix G

Plant List

Attachment G – Bird Spe		ding Evide				nt Counts	
Species	Max BE	Category	#Sq	#PC	%PC	Abundance	#Sq
Common Loon	NY	CONF	76	46	3.26	0.0383	21
Pied-billed Grebe	S	POSS	2	1	0.07	0.0007	1
Red-necked Grebe	AE	CONF	6				
Double-crested Cormorant	NY	CONF	12				
American Bittern	FY	CONF	18	4	0.28	0.0028	3
Great Blue Heron	NY	CONF	38				
Turkey Vulture	Н	POSS	1				
Snow Goose	X	OBS	1		0.57	0.0040	4
Canada Goose	FY	CONF	36	8	0.57	0.0213	4
Trumpeter Swan	Н	POSS	1				
Wood Duck	NU FY	CONF	8				
American Wigeon American Black Duck	FY	CONF CONF	13 29				
Mallard	FY	CONF	39	2	0.14	0.0021	2
Blue-winged Teal	Р	PROB	12		0.14	0.0021	
Northern Shoveler	P	PROB	7				
Green-winged Teal	FY	CONF	20				
Redhead	P	PROB	1				
Ring-necked Duck	FY	CONF	31				
Lesser Scaup	FY	CONF	8	1	0.07	0.0028	1
White-winged Scoter	X	OBS	1				-
Long-tailed Duck	Х	OBS	1				
Bufflehead	FY	CONF	3	1	0.07	0.0007	1
Common Goldeneye	FY	CONF	71	5	0.35	0.0142	5
Hooded Merganser	FY	CONF	29				
Common Merganser	FY	CONF	33	8	0.57	0.0064	5
Red-breasted Merganser	FY	CONF	4	1	0.07	0.0007	1
Ruddy Duck	D	PROB	5				
Osprey	NY	CONF	22				
Bald Eagle	NY	CONF	16				
Northern Harrier	DD	CONF	54	7	0.5	0.0050	4
Sharp-shinned Hawk	CF	CONF	16				
Northern Goshawk	Н	POSS	3		0.40	0.0040	
Broad-winged Hawk	CF	CONF	33	6	0.43	0.0043	6
Red-tailed Hawk	AE	CONF	29	6	0.43	0.0057	3
Rough-legged Hawk	X	OBS	2				
Golden Eagle	X	OBS	2	0.4			4.6
American Kestrel	NY	CONF	83	24	1.7	0.0213	16
Merlin Duffed Crouse	A	PROB	19	4	0.28	0.0043	3
Ruffed Grouse	FY	CONF	58	51	3.62	0.0390	18
Spruce Grouse	FY	CONF	27	7	0.5	0.0085	6
Sharp-tailed Grouse	FY	CONF	20	2	0.14	0.0050	2
Virginia Rail	S	POSS	7	1	0.07	0.0007	1
Sora	<u> </u>	POSS	/	1	0.07	0.0007	1

Attachment G – Bird Spe		ding Evide				nt Counts	
Species	Max			#DC	%PC		40
	BE	Category	#Sq	#PC	%PC	Abundance	#Sq
American Coot	Р	PROB	4				
Sandhill Crane	NE	CONF	36	29	2.06	0.0532	15
Killdeer	NE	CONF	29	9	0.64	0.0071	6
Greater Yellowlegs	DD	CONF	30	29	2.06	0.0248	14
Lesser Yellowlegs	X	OBS	3				
Solitary Sandpiper	FY	CONF	21	5	0.35	0.0035	4
Spotted Sandpiper	NY	CONF	55	5	0.35	0.0057	5
Least Sandpiper	X	OBS	1				
Wilson's Snipe	FY	CONF	62	34	2.41	0.0383	19
American Woodcock	D	PROB	25	1	0.07	0.0007	1
Wilson's Phalarope	Р	PROB	1				
Bonaparte's Gull	NE	CONF	38	8	0.57	0.0064	6
Ring-billed Gull	Х	OBS	3				
Herring Gull	NY	CONF	34	7	0.5	0.0071	4
Common Tern	NE	CONF	6	1	0.07	0.0028	1
Black Tern	AE	CONF	5				
Rock Pigeon	Р	PROB	4				
Mourning Dove	FY	CONF	15	5	0.35	0.0035	3
Black-billed Cuckoo	S	POSS	1	1	0.07	0.0007	1
Black/Yellow-billed Cuckoo	S	POSS	2				
Great Horned Owl	FY	CONF	15	1	0.07	0.0007	1
Northern Hawk Owl	NY	CONF	26	12	0.85	0.0142	4
Great Gray Owl	FY	CONF	27	3	0.21	0.0021	3
Long-eared Owl	S	POSS	3				
Short-eared Owl	CF	CONF	5	1	0.07	0.0007	1
Boreal Owl	S	POSS	18	1	0.07	0.0007	1
Northern Saw-whet Owl	S	POSS	8				
Common Nighthawk	Α	PROB	26	6	0.43	0.0043	4
Whip-poor-will	S	POSS	1	1	0.07	0.0007	1
Chimney Swift	Н	POSS	1	1	0.07	0.0007	1
Ruby-throated							
Hummingbird	NY	CONF	15	6	0.43	0.0043	5
Belted Kingfisher	CF	CONF	42	7	0.5	0.0050	6
Yellow-bellied Sapsucker	NY	CONF	69	106	7.52	0.0908	39
Downy Woodpecker	NY	CONF	43	33	2.34	0.0256	20
Hairy Woodpecker	NY	CONF	63	53	3.76	0.0397	27
American Three-toed							
Woodpecker	Н	POSS	4	5	0.35	0.0035	4
Black-backed Woodpecker	FY	CONF	18	9	0.64	0.0064	5
Northern Flicker	NY	CONF	107	177	12.6	0.1455	54
Pileated Woodpecker	NY	CONF	45	37	2.63	0.0284	19
Olive-sided Flycatcher	AE	CONF	41	55	3.9	0.0476	24
Eastern Wood-Pewee	S	POSS	3	4	0.28	0.0028	2
Yellow-bellied Flycatcher	NY	CONF	88	228	16.2	0.2143	54
Alder Flycatcher	NE	CONF	99	337	23.9	0.3903	56

Breeding Evidence			Point Counts					
Species	May							
Сросиос	BE	Category	#Sq	#PC	%PC	Abundance	#Sq	
Least Flycatcher	NE	CONF	86	161	11.4	0.1654	44	
Eastern Phoebe	S	POSS	2	1	0.07	0.0014	1	
Great Crested Flycatcher	S	POSS	2					
Eastern Kingbird	CF	CONF	20	7	0.5	0.0050	6	
Blue-headed Vireo	NY	CONF	64	77	5.46	0.0575	31	
Warbling Vireo	Α	PROB	2					
Philadelphia Vireo	CF	CONF	44	59	4.19	0.0525	24	
Red-eyed Vireo	CF	CONF	133	528	37.5	0.6409	61	
Gray Jay	FY	CONF	83	93	6.6	0.1057	37	
Blue Jay	CF	CONF	36	28	1.99	0.0206	16	
American Crow	CF	CONF	90	137	9.72	0.1412	37	
Common Raven	NY	CONF	105	126	8.94	0.1327	36	
Tree Swallow	NY	CONF	62	29	2.06	0.0341	17	
Bank Swallow	AE	CONF	7					
Cliff Swallow	NY	CONF	21	4	0.28	0.0170	2	
Barn Swallow	NY	CONF	23	3	0.21	0.0057	2	
Black-capped Chickadee	NY	CONF	78	88	6.25	0.0916	39	
Boreal Chickadee	FY	CONF	43	33	2.34	0.0305	19	
Red-breasted Nuthatch	CF	CONF	76	115	8.16	0.0894	42	
White-breasted Nuthatch	Н	POSS	1					
Brown Creeper	CF	CONF	33	28	1.99	0.0213	18	
House Wren	S	POSS	5	3	0.21	0.0021	3	
Winter Wren	CF	CONF	123	606	43	0.5458	69	
Golden-crowned Kinglet	CF	CONF	104	184	13.1	0.1682	55	
Ruby-crowned Kinglet	NY	CONF	116	410	29.1	0.4422	67	
Eastern Bluebird	NY	CONF	10	2	0.14	0.0014	2	
Veery Cyclingen's Thrush	NE CF	CONF	48 120	108	7.67	0.1157	63	
Swainson's Thrush Hermit Thrush	NE	CONF CONF	102	520 402	36.9 28.5	0.5749	64	
Wood Thrush	S		2	402	20.3	0.4251	04	
		POSS		200	20.2	0.4000	77	
American Robin Gray Catbird	NE S	POSS	143	398	28.3	0.4088	77	
Brown Thrasher	S	POSS	2	1	0.07	0.0007	1	
European Starling	NY	CONF	42	13	0.07	0.0546	4	
Bohemian Waxwing	H	POSS	1	13	0.92	0.0540	4	
Cedar Waxwing	CF	CONF	93	107	7.59	0.1306	45	
Tennessee Warbler	CF	CONF	91	146	10.4	0.1292	43	
Orange-crowned Warbler	S	POSS	5	10	0.71	0.0092	3	
Nashville Warbler	CF	CONF	132	634	45	0.7445	74	
Northern Parula	S	POSS	20	14	0.99	0.0106	5	
Yellow Warbler	CF	CONF	36	21	1.49	0.0149	13	
Chestnut-sided Warbler	CF	CONF	89	118	8.37	0.1036	38	
Magnolia Warbler	NY	CONF	121	652	46.3	0.6742	75	
Cape May Warbler	FY	CONF	28	29	2.06	0.0220	17	
Cape May Warbici	_ ' '	COIVI	20	20	2.00	0.0220	<u>'''</u>	

	Breeding Evidence			Point Counts			
Species	Max						
	BE	Category	#Sq	#PC	%PC	Abundance	#Sq
Black-throated Blue							
Warbler	Р	PROB	19	17	1.21	0.0128	10
Yellow-rumped Warbler	CF	CONF	118	354	25.1	0.3279	66
Black-throated Green							
Warbler	CF	CONF	43	43	3.05	0.0348	16
Blackburnian Warbler	CF	CONF	44	47	3.34	0.0419	19
Pine Warbler	S	POSS	6	5	0.35	0.0043	4
Palm Warbler	NY	CONF	39	109	7.74	0.1171	29
Bay-breasted Warbler	CF	CONF	85	142	10.1	0.1150	45
Blackpoll Warbler	S	POSS	2	1	0.07	0.0007	1
Black-and-white Warbler	CF	CONF	100	166	11.8	0.1263	55
American Redstart	NY	CONF	106	258	18.3	0.2598	50
Ovenbird	CF	CONF	97	315	22.4	0.3109	54
Northern Waterthrush	CF	CONF	57	101	7.17	0.0866	31
Connecticut Warbler	Т	PROB	12	12	0.85	0.0099	9
Mourning Warbler	CF	CONF	94	229	16.3	0.2300	48
Common Yellowthroat	CF	CONF	102	378	26.8	0.4344	58
Wilson's Warbler	NY	CONF	46	91	6.46	0.0759	32
Canada Warbler	FY	CONF	53	50	3.55	0.0412	28
Scarlet Tanager	S	POSS	1	1	0.07	0.0007	1
Chipping Sparrow	NY	CONF	102	162	11.5	0.1604	43
Clay-colored Sparrow	Α	PROB	5	8	0.57	0.0071	3
Field Sparrow	S	POSS	1	1	0.07	0.0007	1
Vesper Sparrow	S	POSS	3	11	0.78	0.0121	1
Savannah Sparrow	CF	CONF	36	48	3.41	0.0646	9
Grasshopper Sparrow	X	OBS	2				
Le Conte's Sparrow	Т	PROB	5	6	0.43	0.0057	3
Fox Sparrow	FY	CONF	11	25	1.77	0.0192	9
Song Sparrow	CF	CONF	61	54	3.83	0.0476	17
Lincoln's Sparrow	CF	CONF	77	303	21.5	0.3456	50
Swamp Sparrow	NE	CONF	78	84	5.96	0.0745	43
White-throated Sparrow	NY	CONF	150	1118	79.4	2.0774	79
Dark-eyed Junco	NE	CONF	74	132	9.37	0.1214	46
Northern Cardinal	S	POSS	1				
Rose-breasted Grosbeak	Р	PROB	12	5	0.35	0.0035	4
Indigo Bunting	S	POSS	4	1	0.07	0.0007	1
Bobolink	S	POSS	3	1	0.07	0.0014	1
Red-winged Blackbird	NY	CONF	37	22	1.56	0.0263	11
Rusty Blackbird	CF	CONF	16	10	0.71	0.0092	6
Common Grackle	NY	CONF	73	40	2.84	0.0440	18
Brown-headed Cowbird	P	PROB	4			2.01.0	. •
Baltimore Oriole	S	POSS	1				
Pine Grosbeak	FY	CONF	8	16	1.14	0.0135	6
Purple Finch	CF	CONF	64	73	5.18	0.0575	35
Red Crossbill	P	PROB	3	2	0.14	0.0121	2

	Breeding Evidence			Point Counts			
Species	Max BE	Category	#Sq	#PC	%PC	Abundance	#Sq
White-winged Crossbill	FY	CONF	68	182	12.9	0.3151	42
Common Redpoll	X	OBS	3				
Pine Siskin	FY	CONF	60	37	2.63	0.0490	25
American Goldfinch	NY	CONF	48	52	3.69	0.0468	19
Evening Grosbeak	FY	CONF	19	7	0.5	0.0128	2
House Sparrow	CF	CONF	9	2	0.14	0.0121	1