

# **Appendix B**

Biological Inventory and Assessment of the Proposed Tailings Management Area Expansion at Bissett, Manitoba (Green Spaces Environmental Consulting)

# Biological Inventory and Assessment of the Proposed Tailings Management Area Expansion at Bisset, Manitoba

for

# AECOM 99 Commerce Drive Winnipeg, MB R3P 0Y7

by

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#### Introduction

The project area is located primarily on the north side of Manitoba Hwy #304. The community of Bisset is located to the southwest. On the western extremity of the project area is the most eastern portion of the tailings pond for the San Gold Mine.

At N51° 01.598 and W95° 39.569 is the location on Hwy #304 where a road crosses the highway and extends north to the tailings pond while a second road extends southward. This location has willow and sedge lowlands extending to the west and to the east is a transition zone from the sedge-willow community into the more wooded communities.

At N51° 01.888 and W95° 36.620 is the eastern extremity of the project area along Hwy #304. This site is approximately 127 kms east, along Hwy #304, from the northern edge of the bridge over the Winnipeg River at Powerview.

Green Spaces Environmental Consulting, under contract to AECOM, did a biological inventory of the project area, with the field work commencing in late May and concluding at the end of September, 2008. The area experienced far above normal rainfall during the time of the study which resulted in field work having to be extended over a number of days. The twenty-five days spent in the project area were:

- ✤ May 28–30
- June 10, 11
- June 18–20
- ✤ June 26–28
- ✤ July 10, 11
- ✤ July 16, 17
- ✤ July 24, 25
- August 5–7
- August 27–29
- September 16, 17

This is very challenging terrain because in many place the vegetation is extremely thick and the actual terrain varies from rock outcroppings to bogs. The study team crisscrossed all of the project area in an effort to walk as much of it as possible. This meant systematically doing north-south transects across the property and then doing east-west transects. Because of the rocky terrain and, in other cases, swampy areas that were too boggy to walk, some liberties had to be employed in undertaking the transects. The purpose of walking all of the area was to try to record as many plant and wildlife species as possible and to determine their status. Particularly in the case of birds, this often meant stopping to spend periods of time listening to bird sounds.

The study team spent time in the project area ranging from an hour prior to sunrise, during entire daylight hours plus periodic trips during the night. This technique was imperative because it permitted the team to hear bird calls from species that have particular times of calling and could be missed if one worked only in daylight hours. This technique also allowed the team to hear all the species of frogs calling at their peak and to record such species as bats which can normally only be spotted at dusk.

The following is a description of all of the species that were detected. The names utilized and the ranking given follow the standard set by the Manitoba Conservation Data Centre. In the Appendix is a section dealing with the Conservation Data Centre ranking and is taken verbatim from their introduction.

#### Plants

A total of 251 plant species were identified within the project area. The project area is a tremendous mosaic of plant communities with the most prominent communities being:

- Balsam Fir
- Black Spruce
- Tamarack
- Jack Pine
- Mixed woods–deciduous and coniferous
- Balsam Poplar
- Aspen Poplar
- Sedge-Willow

The topography in the project area shows great diversity and that results in the occurrence of a rich mosaic of plant communities. The project area is located in the Precambrian Shield and consequently there are major outcrops of bare rock, particularly on the north and northeast sides of the study area. The lower lying areas have places where there are small creeks, bogs and even pockets of sand. In addition to this there is a waste disposal site that has been heavily impacted by human activity. Near the southeast area there are several borrow pits where sand and/or gravel has been extracted.

Even though there are several species that are on the edge of their documented range in Manitoba, there are no species that are listed specifically as "rare" under the provincial or federal governments' rare species legislation.

Some of the species that are of particular interest are given special attention below.

Smooth Sumac (Rhus glabra) was highly localized but always found on rock outcroppings.

Showy Milkweed (Asclepias speciosa) was often encountered in open patches where the species received a lot of sunlight. This was particularly true in places, such as cut lines, which had been cleared in previous years and had grown back.

Pearly Everlasting (Anaphalis margaritacea) was often found around rock outcroppings or in clearings adjacent to Hwy #304.

Swamp Fleabane (Erigeron elatus) was particularly localized and growing in wet areas often in association with a wide variety of other plant species. It most frequently was found adjacent to small streams or springs.

Many-flowered Aster (Sympyotrichum eritoides), although classed as "S4", was common in the areas in which it was encountered.

New England Aster (Sympyotrichum novae-angliae) was almost invariably closely associated with water whether it was growing in clumps of higher ground in swamps or along the edge of streams.

False Mayweed (Tripleurospermum maritimum) was not common but when encountered was in association with wet or damp areas.

Red Elderberry (Sambucus racemosa) was a very scarce species and only located in one place where there were several plants growing on sandy soil.

Nannyberry (Viburnum lentago) is a tall shrub that occurred in a variety of habitats ranging from mixed woods to the sides of rock outcroppings.

Round-leaved Dogwood (Cornus rugosa) was frequently encountered in quite a diversity of habitats including mixed woods, Aspen Poplar woods and the periphery of Jack Pine stands interspersed with rock outcroppings.

Inland Sedge (Carex interior) is probably easily overlooked but was growing in the sedgewillow community.

Thin-leaved Cotton-grass (Eriophorum viridicarinatum) was not common anywhere but was found in a variety of habitats because it likes wet sites. It was recorded in the sedge-willow community, Tamarac community and mixed woods community in places that had springs, streams or simply wet ground.

Fragrant Shield Fern (Dryopteris fragrans) was found around and on the rock outcroppings, which were frequently associated with stands of Jack Pine (Pinus Banksiana). The outcroppings were a treasure-house for fern species.

Blue Flag (Iris versicolor) was only found three times and always adjacent to running water. Twice it was encountered in mixed woods and once in a sedge-willow community.

Wood Lilly (Lilium philadelphicum) was found on a cut line in a very sandy area that was reverting to a natural state. The habitat around it was mixed woods.

Fairybells (Prosartes trachycarpa) was regularly encountered in mixed woods and on the very edge of Balsam Fir and Black Spruce communities.

Black Ash (Fraxinus negra) was always associated with mixed woods and, in one case, was in a low lying area in a transition zone between mixed woods and a Tamarac community.

Calypso (Calypso bulbosa) and Ram's Head Lady's-slipper (Cypripedium arietinum) were both found growing along the lower portion of rock outcroppings. In the case of the former, they were growing primarily in a mixed woods situation where Aspen Poplar (Populus tremuloides) predominated but where Jack Pine was within ten meters. In the case of the latter, the lady's-slippers were growing on a much higher elevation of rock outcroppings where Jack Pine was the sole dominant species.

Stemless Lady's-slipper (Cypripedium acaule) is a common plant on rock outcroppings where Jack Pine predominates. It, however, in the project area, utilizes a variety of habitats. Provided there are little glades, where it can get sunlight during parts of the day, it was also found in mixed woods, on the edge of transitions between mixed woods and willow communities, plus in a semi-open mature White Spruce (Picea glauca) community.

Yellow Lady's-slipper (Cypripedium parviflorum) and Large Yellow Lady's-slipper (Cypripedium parviflorum var. pubescens) were both found on old cut lines where the vegetation was reverting to a natural state. Both species were growing in sunny glades along these cut lines, often in areas that were surrounded by heavy tree cover. Both species also occurred along the edge of Hwy #304 where the vegetation had recently been cut back or bulldozed. It showed that these two species have the ability to take advantage of suitable habitat in situations even when other members of their species do not appear to be growing nearby to provide a seed source.

Showy Lady's-slipper (Cypripedium reginea) is a species that needs sunlight and was found both in mixed wood and in sedge-willow communities. It was recorded only in five locations with a total of eighteen flower-stems.

Scratch Grass (Muhlenbergia asperifolia) was regularly encountered in both sedge-willow communities and on some cut lines.

Prince's-pine (Chimaphila umbellata) was regularly encountered on rock outcroppings where Jack Pine was the prominent species.

Agrimony (Agrimonia striata) was found blooming in only two locations and both times in rejuvenated vegetation on cut lines in mixed woods.

Mountain Ash (Sorbus decora) is highly localized in the project area but where it is found there were often a number of individuals. In one location it was thriving at the base of a rock outcrop and in five places it was located in mixed woods where there was a predominance of shrubs.

Grass of Parnassus (Parnassia palustris) commonly occurred where it gets enough sunlight and was found in many damp areas of the project area.

Narrow-leaved Cattail (Typha angustifolia) was growing sporadically in some natural wet locations and revegetating some borrow pits.

American Elm (Ulnus americana) had not been touched by Dutch Elm disease in this area and, although it is not a common species locally, it was seen in several places with a wide range from very young to mature trees present.

All of the plants recorded are given in Tables #1a and #1b below. Table #1a lists the species by family name in alphabetical order and Table 1b lists the species by genus in alphabetical order. The second column gives the scientific name; the third column gives the common name.

The last column gives the provincial status rank for each species and that status ranking is detailed in the appendix.

#### Mammals

Detailed mammal surveys, that involved small mammal trapping, were not undertaken. Consequently, this mammal list is by no means complete for small species. Fleeting looks at shrews were obtained but not enough details were ever observed to identify any of them. Tracks of many species were observed and species such as Mink were only included in Table #2 because the study team identified their tracks. The late evening skies in the project area are characterized by the presence of many bats but only the Little Brown Myotis (Bat) and the Big Brown Bat were positively identified.

The project area is characterized by a tremendously diverse mosaic of plant communities and consequently supports a very diverse wildlife population. Species like Red Squirrels and Eastern Chipmunks lend themselves to being easy to observe, partly because they are so trusting by nature, but also because their habits bring them into the open with more frequency. Because the vegetation was so dense however, large species like Moose, White-tailed Deer and Black Bear were viewed on only a few occasions. These species can readily detect a study team member moving through the vegetation and simply move out of sight long before a person can see them. There were eighteen mammalian species recorded.

The Grey Wolf (Canis lupus) could possibly occur in this area but the study team never heard any nor saw their tracks during the study. There were many dog tracks because a lot of people take their dogs out for runs. Local residents with whom we spoke said it is unusual to ever see or hear a wolf near Bisset, although many inexperienced visitors often reported "wolves".

Table #2 lists all of the mammalian species recorded in the project area. In all of the tables the species are not listed in taxonomic order but rather are listed in the format utilized by the Manitoba Conservation Data Centre. Consequently, the first column on the left lists the families that occur in the project area in alphabetical order. The second column gives the scientific name and these are listed in alphabetical order with respect to the families in which they occur. The third column lists the common name for that species. The final column gives the provincial status rank for each species and that ranking system is detailed in the appendix.

#### Birds

A total of 130 bird species were recorded in the project area and are listed in Table #3. The format of this Table follows that described under the section dealing with mammals, with one exception. There is an extra column in the bird table. This column is termed REMARKS and gives five different symbols with respect to the various species. These symbols are explained as follows:

All of the species listed were recorded on or over the project area during the 2008 survey.

B - there was evidence that this species did breed in the project area during our study. Either an actual nest was found, parents were seen feeding young and/or they were recorded on territory.

PB - symbolizes the species that possibly breed on the project area some years. All were seen during the study but there was no evidence to substantiate that it was

breeding on the property in 2008. It is a species however that does breed in the Bisset area.

BL - this species definitely breeds in the Bisset area and was seen on or over the project area but there was no evidence to prove that it actually bred in the project area in 2008.

M - this species was recorded on spring and/or fall migration.

T - this species was recorded on or over the project area but there was no evidence to indicate that it may be breeding on the property. For example, on more than one occasion during the nesting season, Common Terns flew over the project area but there was no suitable habitat in the project area or in the immediate vicinity for them to breed so they were classed as transients.

The number of species recorded is impressive but it definitely is not the total number of species that one would find if the project was visited on a number of years. For example, a few species of warblers were never detected. There are a couple of explanations for this. They either never breed in the project area or they were missed during the spring and fall migration. The study team was not in the project area every week and consequently it is easy to miss the major part of a species' migration through the area if the team is absent when the vast majority pass through.

If one examines closely the species' list, it gives a fair amount of information but a few additional comments are necessary.

During late May, June and early July a Red-tailed Hawk was seen and/or heard over the project area on a regular basis. This bird was always recorded near the northwest edge and probably simply used the edge of the property as a feeding area because no nest was ever detected and the bird always seemed to come and go from the north east.

A pair of Broad-winged Hawks definitely utilized the project area on a regular basis. They preyed heavily on Red-sided Garter Snakes and on four different dates one was seen to perch in the same Aspen tree and feed on its snake prey. This bird never acted territorially and it is probable that it was feeding along the road, where we actually saw it catch a snake, and was nesting some distance away.

Wood Ducks, American Wigeon and Blue-winged Teal were classed as "transient" because they were frequently seen flying over the project area but were never recorded on the ground.

At least nine pairs of Canada Geese had broods on the two tailing ponds along the west side of the project area.

Both Whip-poor-will and Common Nighthawks were heard in goodly numbers after dark in the project area. The peak night-count was on June 16, when at least three Common Nighthawks and five Whip-poor-wills could be heard calling as the project team slowly drove the length of the road skirting the project area. None of these birds heard by the project team were necessarily breeding in, but could be heard from, the project area. One Common Nighthawk nest was located on an extensive rock outcropping on July 8 when a study team member nearly stepped on the bird before it flushed off its next containing two eggs. The bare rock outcrop had a few Common Juniper growing on it and some debris spread amongst the sparse vegetation. This nest was 2.5 meters from a juniper and extremely conspicuous once one knew where it was as there very little vegetation around it. A Black-billed Cuckoo called often from the property on June 26 and 27 but was never recorded again so its status is uncertain. One pair of Baltimore Orioles nested in a clump of Balsam Poplar adjacent to the road in a mixed-wood area. One normally does not encounter this species nesting in such habitat in eastern Manitoba. It is a species that prefers farm growth, towns and rows of trees rather than an extensive tract of native woods such as the project area.

Magnolia Warblers were particularly common in the project area and two nests, both on the ground, were discovered on June 18<sup>th</sup> and 19<sup>th</sup>. Both nests were in mixed coniferous/deciduous woods in mossy vegetation.

Ruffed Grouse did not appear to be particularly common in the early part of the season but had spectacular success during the breeding season and on September 17<sup>th</sup> seven covies were encountered.

A surprising number of members of the wader or shorebird family were observed during August feeding along the edge of the tailing pond. These are species that normally would not use the project area. However, the shoreline of the tailings pond was attractive to them. These same tailings ponds had Lesser Yellowlegs at them throughout June, July and August. These birds were either non-breeders or birds nesting the general vicinity.

Northern Saw-whet Owls were nesting on the property and on June 10 the nightly survey recorded four birds on territory within the project area. Great Grey Owls were heard regularly in the early part of the nesting season in Tamarack swamps but no nest was located.

Great Grey Owls were heard on the property and possibly nested in the Tamarac lowlands, which is the habitat they prefer as nesting sites in this part of the province. Placing of manmade nesting platforms in Tamaracs has proved very successful in providing this species with a secure nesting site in the general area surrounding Bisset and the Winnipeg River.

#### Amphibians

The general area bounded by the Winnipeg River to the south and Wallace Lake-Bisset-Wanipigow is very rich biologically and this is particularly true for amphibians. Seven species were recorded in the project area and are listed in Table #4. The species are listed in alphabetical order under the family names with the first column being the family name, the second column being the scientific name, the third the common name and the final column being the species ranking within the province of Manitoba. Seven species of amphibians were recorded in the project area.

The Blue-spotted Salamander was only recorded once in the project area but it is very easy to be overlooked. The species is very small and secretive. The one observed was found when a small, moss-covered log was moved at the edge of a boggy area. The habitat in this immediate area was a transition zone between deciduous-coniferous woods on sandy soil bordering the edge of a rock outcropping on one side and a sedge/alder-filled area on the other side. The species at Bisset is probably close to the northern extremity of its known range in Manitoba.

Grey Tree Frogs and Boreal Chorus Frogs were present in the project area in such large numbers that no estimate can be given because they were singing in one huge chorus. Of course, the Boreal Chorus Frogs were singing much earlier in the season than the Grey Tree Frogs although the two species did overlap. The Grey Tree Frogs also were found primarily in wooded areas while the Boreal Chorus Frog were found in all types of wet habitat but particularly in sedge and grass areas that were temporarily benefiting from spring runoff or rain.

Wood Frogs were regularly heard throughout the area and called from May even to the end of September. They are relatively conspicuous because they can often be seen crossing roads or moving through the vegetation when they are disturbed. Northern Leopard Frogs were not near as frequently seen but were well-distributed in wet areas and, like the Wood Frog, were often encountered along the highway traversing the southern edge of the project area.

The highlight of the amphibian portion of the study was encountering a Mink Frog crossing the highway at 1:20 a.m. in a light rain on July 22. Members of the study team had been hearing frog noises the identity of which they were not certain. Consequently they drove back and forth along the road catching frogs attempting to cross it. The vast majority of the ones caught were Wood Frogs and, to a lesser extent, Leopard Frogs. Then suddenly, they were rewarded in securing a Mink Frog. This species at Bisset is definitely at the northern extremity of its documented range in Manitoba.

#### Reptiles

Only two species of reptiles were recorded in the project area and both of these are in listed in Table #5 using the same format as described for the Amphibian Table.

Red-sided Garter Snakes occur in good numbers in the project area and were seen on a daily basis. Although they definitely were observed more frequently around wet areas they were also recorded on and around rock outcroppings.

Western Painted Turtles were frequently observed sunning themselves on floating logs located in the two sediment ponds located closest to the western extremity of the project area.

#### **Conclusion and Recommendations**

The Bisset project area contains a wide array of plant, mammal, bird, amphibian and reptile species. This statement, however, can be made for the entire general area bordering Manitoba Hwy #304 between the bridge, over the Winnipeg River at Powerview to the west, and Wallace Lake to the east. The project area is a small segment of this area. None of the species identified in this project area are termed "rare" provincially. One of the species, the Northern Leopard Frog (Rana pipiens), is listed under federal legislation as a species of "special concern".

A number of these species, however, represent species on the edge of their known documented range. For example, this study provided excellent enhancement of the provincial knowledge of the distribution of the Blue-spotted Salamander (Ambystoma laterale) and the Mink Frog (Rana septemtronalis) in Manitoba.

If parts of this area are to be developed as a tailings pond it is important that the low-lying areas be utilized. This would protect many of the orchid species which were frequently growing at higher elevations and often in association with rock outcroppings.

If the trees were cut in these low-lying areas the wood could be utilized for commercial and personal use and would prevent wastage.

#### **APPENDICES**

#### **MB CDC Species of Conservation Concern**

The term "species of conservation concern" includes species that are rare, disjunct, or at risk throughout their range or in Manitoba and in need of further research. The term also encompasses species that are listed under the Manitoba Endangered Species Act (<u>MBESA</u>), or that have a special designation by the Committee on the Status of Endangered Wildlife in Canada (<u>COSEWIC</u>).

#### **Conservation Data Centre Ranks (Global and Provincial)**

Species are evaluated and ranked by the Conservation Data Centre on the basis of their range-wide (global - G) status, and their province-wide (subnational - S) status according to a standardized procedure used by all Conservation Data Centres and Natural Heritage Programs. These ranks are used to determine protection and data collection priorities, and are revised as new information becomes available.

For each level of distribution—global and provincial—species are assigned a numeric rank ranging from 1 (very rare) to 5 (demonstrably secure). This reflects the species' relative endangerment and is based primarily on the number of occurrences of that species globally or within the province. However, other information, such as date of collection, degree of habitat threat, geographic distribution patterns and population size and trends, is considered when assigning a rank. The numbers of occurrences listed below are suggestions, not absolute criteria.

For example, the Green Frog (*Rana clamitans*) is ranked G5, S2. That is, globally the species is abundant and secure, while in Manitoba it is rare and may be vulnerable to extirpation.

| Rank | Definition   |
|------|--|
| 1    | Very rare throughout its range or in the province (5 or fewer occurrences, or very few remaining individuals). May be especially vulnerable to extirpation.              |
| 2    | Rare throughout its range or in the province (6 to 20 occurrences). May be vulnerable to extirpation.  |
| 3    | Uncommon throughout its range or in the province (21 to 100 occurrences).  |
| 4    | Widespread, abundant, and apparently secure throughout its range or in the province, with many occurrences, but the element is of long-term concern (> 100 occurrences). |
| 5    | Demonstrably widespread, abundant, and secure throughout its range or in the province, and essentially eradicable under present conditions.                              |
| U    | Possibly in peril, but status uncertain; more information needed.  |
| н    | Historically known; may be rediscovered.   |

| X   | Believed to be extinct; historical records only, continue search.                        |
|-----|--|
| SNR | A species not ranked. A rank has not yet assigned or the species has not been evaluated. |
| SNA | A conservation status rank is not applicable to the element.                             |

# **Other Heritage Codes**

| Code         | Definition  |
|--------------|---|
| G#G#<br>S#S# | Numeric range rank: A range between two of the numeric ranks. Denotes range of uncertainty about the exact rarity of the species. |

#### Subrank

| Code | Definition  |
|------|---|
| т    | Rank for subspecific taxon (subspecies, variety, or population); appended to the global rank for the full species, e.g. G4T3. |

### Qualifiers

| Code | Definition   |
|------|--|
| В    | Breeding status of a migratory species. Example: S1B,SZN - breeding occurrences for the species are ranked S1 (critically imperilled) in the province, nonbreeding occurrences are not ranked in the province.     |
|      |  |
| N    | Non-breeding status of a migratory species. Example: S1B,SZN - breeding occurrences for the species are ranked S1 (critically imperilled) in the province, nonbreeding occurrences are not ranked in the province. |
| Q    | Taxonomic questions or problems involved, more information needed; appended to the global rank.  |
| т    | Rank for subspecific taxon (subspecies, variety, or population); appended to the global rank for the full species.   |
| #    | A modifier to SX or SH; the species has been reintroduced but the population is not yet established.   |
| ?    | Inexact or uncertain; for numeric ranks, denotes inexactness.  |

# Table #1a

# Plants of the Bisset Project Area

(alphabetical by family name)

| FAMILY         | SCIENTIFIC NAME           | COMMON NAME             | RANK |
|----------------|---------------------------|-------------------------|------|
| Aceraceae      | Acer negundo              | Manitoba Maple          | S5   |
| Aceraceae      | Acer spicatum             | Mountain Maple          | S5   |
| Alismataceae   | Alisma triviale           | Common Water-plantain   | S5   |
| Alismataceae   | Sagittaria cuneata        | Arum-leaved Arrowhead   | S5   |
| Anacardiaceae  | Rhus glabra               | Smooth Sumac            | S4   |
| Apiaceae       | Cicuta maculata           | Water-hemlock           | S5   |
| Apiaceae       | Heracleum maximum         | Cow-parsnip             | S5   |
| Apiaceae       | Sanicula marilandica      | Snakeroot               | S5   |
| Apiaceae       | Sium suave                | Water-parsnip           | S5   |
| Apiaceae       | Zizia aptera              | Heart-leaved Alexanders | S5   |
| Apocynaceae    | Apocynum androsaemifolium | Spreading Dogbane       | S5   |
| Araceae        | Calla palustris           | Water-arum              | S5   |
| Araliaceae     | Aralia nudicaulis         | Wild Sarsaparilla       | S5   |
| Asclepiadaceae | Asclepias speciosa        | Showy Milkweed          | S4   |
| Asteraceae     | Achillea millefolium      | Common Yarrow           | S5   |
| Asteraceae     | Achillea sibirica         | Many-flowered Yarrow    | S5   |
| Asteraceae     | Anaphalis margaritacea    | Pearly Everlasting      | S4   |
| Asteraceae     | Bidens cernua             | Stick-tight             | S5   |
| Asteraceae     | Cirsium arvense           | Canada Thistle          | SNA  |
| Asteraceae     | Conyza canadensis         | Horse-weed              | S5   |
| Asteraceae     | Doellingeria umbellata    | Flat-topped White Aster | S5   |
| Asteraceae     | Erigeron elatus           | Swamp Fleabane          | S4   |
| Asteraceae     | Eupatorium maculatum      | Spotted Joepyeweed      | S5   |

| Asteraceae    | Helianthus maximiliani             | Narrow-leaved Sunflower      | S5   |
|---------------|------------------------------------|------------------------------|------|
| Asteraceae    | Lactuca tatarica                   | Wild Lettuce                 | S5   |
| Asteraceae    | Matricaria discoidea               | Pineappleweed                | SNA  |
| Asteraceae    | Petasites frigidus var. palmatus   | Palmate-leaved Colt's-foot   | S5   |
| Asteraceae    | Petasites frigidus var. sagittatus | Arrow-leaved Colt's-foot     | S5   |
| Asteraceae    | Senecio congestus                  | Marsh-fleabane               | S5   |
| Asteraceae    | Senecio vulgaris                   | Common Groundsel             | SNA  |
| Asteraceae    | Solidago canadensis                | Canada Goldenrod             | S5   |
| Asteraceae    | Solidago rigida                    | Stiff Goldenrod              | S5   |
| Asteraceae    | Sonchus oleraceus                  | Common Sow-thistle           | SNA  |
| Asteraceae    | Symphyotrichum boreale             | Northern Bog Aster           | S5   |
| Asteraceae    | Symphyotrichum ciliolatum          | Lindley's Aster              | S5   |
| Asteraceae    | Symphyotrichum ericoides           | Heath or Many-flowered Aster | S4   |
| Asteraceae    | Symphyotrichum laeve               | Smooth Aster                 | S5   |
| Asteraceae    | Symphyotrichum lanceolatum         | Panicles Aster               | S5   |
| Asteraceae    | Symphyotrichum novae-angliae       | New England Aster            | S4   |
| Asteraceae    | Taraxacum officinale               | Common Dandelion             | S5   |
| Asteraceae    | Tragopogon dubius                  | Goat's-beard                 | SNA  |
| Asteraceae    | Tripleurospermum maritimum         | False Mayweed                | S3   |
| Balsaminaceae | Impatiens capensis                 | Spotted Touch-me-not         | S5   |
| Betulaceae    | Alnus incana ssp. rugosa           | Speckled Alder               | S5   |
| Betulaceae    | Betula glandulosa                  | Dwarf Birch                  | S5   |
| Betulaceae    | Betula occidentalis                | River Birch                  | S4S5 |
| Betulaceae    | Betula papyrifera                  | White Birch                  | S5   |
| Betulaceae    | Corylus cornuta                    | Beaked Hazelnut              | S5   |
| Boraginaceae  | Mertensia paniculata               | Tall Lungwort                | S5   |
| Brassicaceae  | Arabis divaricarpa                 | Purple Rock Cress            | S5   |
| Brassicaceae  | Arabis holboellii var. retrofracta | Holboell's Rock Cress        | S5   |
|               |                                    |                              |      |

| Brassicaceae    | Lepidium densiflorum        | Common Pepper-grass           | S5  |
|-----------------|-----------------------------|-------------------------------|-----|
| Brassicaceae    | Rorippa palustris           | Bog Yellowcress               | S5  |
| Brassicaceae    | Thlaspi arvense             | Field Pennycress              | SNA |
| Campanulaceae   | Campanula rotundifolia      | Bluebell                      | S5  |
| Campanulaceae   | Lobelia kalmii              | Kalm's Lobelia                | S5  |
| Caprifoliaceae  | Diervilla lonicera          | Bush-honeysuckle              | S5  |
| Caprifoliaceae  | Linnaea borealis            | Twinflower                    | S5  |
| Caprifoliaceae  | Lonicera dioica             | Limber or Twining Honeysuckle | S5  |
| Caprifoliaceae  | Lonicera villosa            | Mountain-fly-honeysuckle      | S5  |
| Caprifoliaceae  | Sambucus racemosa           | Red Elderberry                | S4  |
| Caprifoliaceae  | Symphoricarpos albus        | Snowberry                     | S5  |
| Caprifoliaceae  | Symphoricarpos occidentalis | Western Snowberry             | S5  |
| Caprifoliaceae  | Viburnum edule              | Lowbush-cranberry             | S5  |
| Caprifoliaceae  | Viburnum lentago            | Nannyberry                    | S4  |
| Caprifoliaceae  | Viburnum opulus             | Highbush-cranberry            | S5  |
| Caryophyllaceae | Cerastium arvense           | Field Chickweed               | S5  |
| Caryophyllaceae | Silene csereii              | Smooth Catchfly               | SNA |
| Caryophyllaceae | Stellaria longifolia        | Long-leaved Stitchwort        | S5  |
| Caryophyllaceae | Stellaria longipes          | Long-stalked Stitchwort       | S5  |
| Chenopodiaceae  | Chenopodium album           | Lamb's-quarters               | SNA |
| Cornaceae       | Cornus canadensis           | Bunchberry                    | S5  |
| Cornaceae       | Cornus rugosa               | Round-leaved Dogwood          | S3  |
| Cornaceae       | Cornus sericea              | Red Osier Dogwood             | S5  |
| Cupressaceae    | Juniperus communis          | Common Juniper                | S5  |
| Cyperaceae      | Carex aquatilis             | Water Sedge                   | S5  |
| Cyperaceae      | Carex atherodes             | Awned Sedge                   | S5  |
| Cyperaceae      | Carex bebbii                | Bebb's Sedge                  | S5  |
|                 |                             |                               |     |

|                  |                                | Heir like Sedae          | S.E. |
|------------------|--------------------------------|--------------------------|------|
| Cyperaceae       | Carex capillaris               | Hair-like Sedge          | S5   |
| Cyperaceae       | Carex deweyana                 | Dewey's Sedge            | S5   |
| Cyperaceae       | Carex disperma                 | Two-seeded Sedge         | S5   |
| Cyperaceae       | Carex interior                 | Inland Sedge             | S4?  |
| Cyperaceae       | Carex lacustris                | Lakeshore Sedge          | S5   |
| Cyperaceae       | Carex magellanica              | Bog Sedge                | S5   |
| Cyperaceae       | Carex utriculata               | Beaked Sedge             | S5   |
| Cyperaceae       | Eleocharis palustris           | Creeping Spike-rush      | S5   |
| Cyperaceae       | Eriophorum angustifolium       | Tall Cotton-grass        | S5   |
| Cyperaceae       | Eriophorum viridicarinatum     | Thin-leaved Cotton-grass | S4   |
| Cyperaceae       | Schoenoplectus tabernaemontani | Soft-stem Bulrush        | S5   |
| Cyperaceae       | Scirpus microcarpus            | Small Fruited-bulrush    | S5   |
| Dennstaedtiaceae | Pteridium aquilinum            | Bracken Fern             | S4S5 |
| Droseraceae      | Drosera rotundifolia           | Round-leaved Sundew      | S5   |
| Dryopteridaceae  | Dryopteris carthusiana         | Spinulose Wood Fern      | S5   |
| Dryopteridaceae  | Dryopteris fragrans            | Fragrant Shield Fern     | S3S4 |
| Dryopteridaceae  | Matteuccia struthiopteris      | Ostrich Fern             | S5   |
| Dryopteridaceae  | Woodsia ilvensis               | Rusty Woodsia            | S5   |
| Empetraceae      | Empetrum nigrum                | Black Crowberry          | S5   |
| Equisetaceae     | Equisetum arvense              | Common Horsetail         | S5   |
| Equisetaceae     | Equisetum fluviatile           | Swamp Horsetail          | S5   |
| Ericaceae        | Chamaedaphne calyculata        | Leather-leaf             | S5   |
| Ericaceae        | Gaultheria hispidula           | Creeping Snowberry       | S5   |
| Ericaceae        | Kalmia polifolia               | Bog-laurel               | S5   |
| Ericaceae        | Ledum groenlandicum            | Labrador-tea             | S5   |
| Ericaceae        | Vaccinium myrtilloides         | Velvet-leaf Blueberry    | S5   |
| Ericaceae        | Vaccinium oxycoccos            | Small Cranberry          | S5   |
|                  |                                |                          |      |

| Ericaceae       | Vaccinium uliginosum   | Bog Whortleberry            | S5   |
|-----------------|------------------------|-----------------------------|------|
| Fabaceae        | Lathyrus ochroleucus   | Pale Vetchling              | S4S5 |
| Fabaceae        | Lathyrus venosus       | Wild Peavine                | S5   |
| Fabaceae        | Medicago lupulina      | Black Medick                | SNA  |
| Fabaceae        | Medicago sativa        | Alfalfa                     | SNA  |
| Fabaceae        | Melilotus albus        | White Sweet Clover          | SNA  |
| Fabaceae        | Melilotus officinalis  | Yellow Sweet Clover         | SNA  |
| Fabaceae        | Vicia americana        | Common Vetch                | S5   |
| Fagaceae        | Quercus macrocarpa     | Bur Oak                     | S5   |
| Fumariaceae     | Corydalis aurea        | Golden Corydalis            | S5   |
| Fumariaceae     | Corydalis sempervirens | Pink Corydalis              | S5   |
| Gentianaceae    | Halenia deflexa        | Spurred Gentian             | S5   |
| Geraniaceae     | Geranium bicknellii    | Bicknell's Geranium         | S5   |
| Grossulariaceae | Ribes americanum       | Wild Black Currant          | S5   |
| Grossulariaceae | Ribes glandulosum      | Skunk Currant               | S5   |
| Grossulariaceae | Ribes hudsonianum      | Northern Wild Black Currant | S5   |
| Grossulariaceae | Ribes oxyacanthoides   | Bristly Wild Gooseberry     | S5   |
| Grossulariaceae | Ribes triste           | Wild Red Currant            | S5   |
| Haloragaceae    | Myriophyllum sibiricum | Spiked Water-milfoil        | S5   |
| Hippuridaceae   | Hippuris vulgaris      | Mare's-tail                 | S5   |
| Iridaceae       | Iris versicolor        | Blue Flag                   | S4   |
| Iridaceae       | Sisyrinchium montanum  | Common Blue-eyed Grass      | S5   |
| Juncaceae       | Juncus nodosus         | Knotted Rush                | S5   |
| Juncaginaceae   | Triglochin maritima    | Seaside Arrow-grass         | S5   |
| Lamiaceae       | Agastache foeniculum   | Blue Giant Hyssop           | S5   |
| Lamiaceae       | Lycopus uniflorus      | Northern Bugle-weed         | S5   |
| Lamiaceae       | Mentha arvensis        | Common Mint                 | S5   |
|                 |                        |                             |      |

| Lamiaceae        | Stachys palustris                          | Marsh Hedge-nettle           | S5  |
|------------------|--|------------------------------|-----|
| Lemnaceae        | Lemna minor                                | Lesser Duckweed              | SNA |
| Lentibulariaceae | Pinguicula vulgaris                        | Common Butterwort            | S5  |
| Lentibulariaceae | Utricularia macrorhiza                     | Greater bladderwort          | S5  |
| Liliaceae        | Lilium philadelphicum                      | Wood Lily                    | S4  |
| Liliaceae        | Maianthemum canadense                      | Two-leaved Solomon's-seal    | S5  |
| Liliaceae        | Maianthemum stellatum                      | Star-flowered Solomon's-seal | S5  |
| Liliaceae        | Maianthemum trifolium                      | Three-leaved Solomon's-seal  | S5  |
| Liliaceae        | Prosartes trachycarpa                      | Fairybells                   | S4  |
| Liliaceae        | Triantha glutinosa                         | Sticky False Asphodel        | S5  |
| Nymphaeaceae     | Nuphar variegata                           | Yellow Pond-lily             | S5  |
| Oleaceae         | Fraxinus nigra                             | Black Ash                    | S3  |
| Oleaceae         | Fraxinus pennsylvanica                     | Green Ash                    | S5  |
| Onagraceae       | Chamerion angustifolium                    | Fireweed                     | S5  |
| Onagraceae       | Epilobium angustifolium ssp. angustifolium | Fireweed                     | S5? |
| Onagraceae       | Epilobium ciliatum ssp. glandulosum        | Willow-herb                  | S5  |
| Onagraceae       | Oenothera biennis                          | Evening-primrose             | S5  |
| Ophioglossaceae  | Botrychium virginianum                     | Rattlesnake Fern             | S5  |
| Orchidaceae      | Amerorchis rotundifolia                    | Small or Round-leaved Orchis | S5  |
| Orchidaceae      | Calypso bulbosa                            | Calypso                      | S4  |
| Orchidaceae      | Coeloglossum viride                        | Frog-orchis                  | S5  |
| Orchidaceae      | Corallorhiza trifida                       | Early Coralroot              | S5  |
| Orchidaceae      | Cypripedium acaule                         | Stemless Lady's-slipper      | S4  |
| Orchidaceae      | Cypripedium arietinum                      | Ram's Head Lady's-slipper    | S2? |
| Orchidaceae      | Cypripedium parviflorum                    | Yellow Lady's-slipper        | S5? |
| Orchidaceae      | Cypripedium parviflorum var. pubescens     | Large Yellow Lady's-slipper  | S5? |
| Orchidaceae      | Cypripedium reginae                        | Showy Lady's-slipper         | S3  |
|                  |  |                              |     |

| Orchidaceae    | Platanthera hyperborea               | Northern Green Orchid     | SNA |
|----------------|--------------------------------------|---------------------------|-----|
| Orchidaceae    | Platanthera obtusata                 | Small Northern Bog Orchid | S5  |
| Orchidaceae    | Spiranthes romanzoffiana             | Hooded Ladies'-tresses    | S5  |
| Pinaceae       | Abies balsamea                       | Balsam Fir                | S5  |
| Pinaceae       | Larix laricina                       | Tamarack                  | S5  |
| Pinaceae       | Picea glauca                         | White Spruce              | S5  |
| Pinaceae       | Picea mariana                        | Black Spruce              | S5  |
| Pinaceae       | Pinus banksiana                      | Jack Pine                 | S5  |
| Plantaginaceae | Plantago major                       | Common Plantain           | SNA |
| Poaceae        | Agrostis stolonifera                 | Creeping Bent Grass       | SNA |
| Poaceae        | Beckmannia syzigachne                | Slough Grass              | S5  |
| Poaceae        | Bromus ciliatus                      | Fringed Brome             | S5  |
| Poaceae        | Bromus inermis                       | Smooth Brome              | SNA |
| Poaceae        | Calamagrostis canadensis             | Marsh Reed Grass          | S5  |
| Poaceae        | Calamagrostis stricta ssp. inexpansa | Northern Reed Grass       | S5  |
| Poaceae        | Glyceria grandis                     | Tall Manna Grass          | S5  |
| Poaceae        | Hordeum jubatum                      | Wild Barley               | S5  |
| Poaceae        | Koeleria macrantha                   | June Grass                | S5  |
| Poaceae        | Muhlenbergia asperifolia             | Scratch Grass             | S4  |
| Poaceae        | Phalaris arundinacea                 | Reed Canary Grass         | S5  |
| Poaceae        | Phleum pratense                      | Common Timothy            | SNA |
| Poaceae        | Phragmites australis                 | Common Reed               | S5  |
| Poaceae        | Piptatherum pungens                  | Northern Rice Grass       | S5  |
| Poaceae        | Poa pratensis                        | Kentucky Blue Grass       | S5  |
| Poaceae        | Spartina pectinata                   | Slough Grass              | S5  |
| Polygonaceae   | Persicaria amphibia                  | Water Smartweed           | S5  |
| Polygonaceae   | Persicaria maculosa                  | Spotted Lady's-thumb      | SNA |
|                |                                      |                           |     |

| Polygonaceae  | Polygonum amphibium    | Water Smartweed               | S5   |
|---------------|------------------------|-------------------------------|------|
| Polygonaceae  | Rumex occidentalis     | Western Dock                  | S5   |
| Polypodiaceae | Polypodium virginianum | Rock Polypody                 | S5   |
| Primulaceae   | Lysimachia ciliata     | Fringed Loosestrife           | S5   |
| Primulaceae   | Lysimachia thyrsiflora | Tufted Loosestrife            | S5   |
| Primulaceae   | Trientalis borealis    | Northern Starflower           | S5   |
| Pyrolaceae    | Chimaphila umbellata   | Prince's-pine                 | S4S5 |
| Pyrolaceae    | Moneses uniflora       | One-flowered Pyrola           | S5   |
| Pyrolaceae    | Orthilia secunda       | One-sided Pyrola              | S5   |
| Pyrolaceae    | Pyrola asarifolia      | Pink Pyrola                   | S5   |
| Pyrolaceae    | Pyrola chlorantha      | Greenish-flowered Wintergreen | S5   |
| Ranunculaceae | Actaea rubra           | Red Baneberry                 | S5   |
| Ranunculaceae | Anemone canadensis     | Canada Anemone                | S5   |
| Ranunculaceae | Anemone quinquefolia   | Wood Anemone                  | S5   |
| Ranunculaceae | Aquilegia canadensis   | Wild Columbine                | S5   |
| Ranunculaceae | Caltha palustris       | Marsh Marigold                | S5   |
| Ranunculaceae | Ranunculus aquatilis   | White Water Crowfoot          | S5   |
| Ranunculaceae | Ranunculus gmelinii    | Small Yellow Water Buttercup  | S5   |
| Ranunculaceae | Ranunculus sceleratus  | Cursed Crowfoot               | S5   |
| Ranunculaceae | Thalictrum dasycarpum  | Tall or Purple Meadow-rue     | S5   |
| Rhamnaceae    | Rhamnus alnifolia      | Alder-leaved Buckthorn        | S5   |
| Rosaceae      | Agrimonia striata      | Agrimony                      | S4   |
| Rosaceae      | Amelanchier alnifolia  | Saskatoon                     | S5   |
| Rosaceae      | Argentina anserina     | Silverweed                    | S5   |
| Rosaceae      | Comarum palustre       | Marsh Five-finger             | S5   |
| Rosaceae      | Crataegus succulenta   | Long-spined Hawthorn          | S4   |
| Rosaceae      | Dasiphora fruticosa    | Shrubby Cinquefoil            | S5   |
|               |                        |                               |      |

| _             |                          |                          | <b>.</b> |
|---------------|--------------------------|--------------------------|----------|
| Rosaceae      | Fragaria virginiana      | Smooth Wild Strawberry   | S5       |
| Rosaceae      | Geum aleppicum           | Yellow Avens             | S5       |
| Rosaceae      | Potentilla norvegica     | Rough Cinquefoil         | S5       |
| Rosaceae      | Prunus pensylvanica      | Pin Cherry               | S5       |
| Rosaceae      | Prunus virginiana        | Choke Cherry             | S5       |
| Rosaceae      | Rosa acicularis          | Prickly Rose             | S5       |
| Rosaceae      | Rosa woodsii             | Wood's Rose              | S4       |
| Rosaceae      | Rubus idaeus             | Wild Red Raspberry       | S5       |
| Rosaceae      | Rubus pubescens          | Dewberry                 | S5       |
| Rosaceae      | Sibbaldiopsis tridentata | Three-toothed Cinquefoil | S5       |
| Rosaceae      | Sorbus decora            | Mountain-ash             | S4       |
| Rosaceae      | Spiraea alba             | Meadowsweet              | S5       |
| Rubiaceae     | Galium boreale           | Northern Bedstraw        | S5       |
| Rubiaceae     | Galium triflorum         | Sweet-scented Bedstraw   | S5       |
| Salicaceae    | Populus balsamifera      | Balsam Poplar            | S5       |
| Salicaceae    | Populus tremuloides      | Trembling Aspen          | S5       |
| Salicaceae    | Salix amygdaloides       | Peach-leaved Willow      | S4       |
| Salicaceae    | Salix bebbiana           | Bebb's or Beaked Willow  | S5       |
| Salicaceae    | Salix discolor           | Pussy Willow             | S5       |
| Salicaceae    | Salix exigua             | Sandbar Willow           | S5       |
| Salicaceae    | Salix fragilis           | Brittle Willow           | SNA      |
| Salicaceae    | Salix petiolaris         | Basket Willow            | S4       |
| Salicaceae    | Salix pseudomonticola    | False Mountain Willow    | S4S5     |
| Salicaceae    | Salix pyrifolia          | Balsam Willow            | S5       |
| Santalaceae   | Geocaulon lividum        | Northern Comandra        | S5       |
| Saxifragaceae | Heuchera richardsonii    | Alumroot                 | S5       |
| Saxifragaceae | Mitella nuda             | Mitrewort                | S5       |
|               |                          |                          |          |

| Saxifragaceae    | Parnassia palustris                  | Grass of parnassus     | S4 |
|------------------|--------------------------------------|------------------------|----|
| Scrophulariaceae | Melampyrum lineare                   | Cow-wheat              | S5 |
| Sparganiaceae    | Sparganium angustifolium             | Narrow-leaved Bur-reed | S5 |
| Typhaceae        | Typha angustifolia                   | Narrow-leaved Cat-tail | S4 |
| Typhaceae        | Typha latifolia                      | Common Cat-tail        | S5 |
| Ulmaceae         | Ulmus americana                      | American Elm           | S4 |
| Urticaceae       | Urtica dioica                        | Stinging Nettle        | S5 |
| Violaceae        | Viola adunca                         | Early Blue Violet      | S5 |
| Violaceae        | Viola canadensis var. rugulosa       | Canada Violet          | S5 |
| Violaceae        | Viola nephrophylla var. nephrophylla | Northern Bog Violet    | S5 |
| Violaceae        | Viola renifolia                      | Kidney-shaped Violet   | S5 |

### Table #1b

### Plants of the Bisset Project Area

(alphabetical by first scientific name)

FAMILY SCIENTIFIC NAME **COMMON NAME** RANK Pinaceae Abies balsamea Balsam Fir S5 S5 Aceraceae Manitoba Maple Acer negundo S5 Aceraceae Acer spicatum Mountain Maple S5 Asteraceae Achillea millefolium Common Yarrow Asteraceae Achillea sibirica Many-flowered Yarrow S5 Ranunculaceae Actaea rubra **Red Baneberry** S5 Lamiaceae Agastache foeniculum Blue Giant Hyssop S5 Rosaceae Agrimonia striata Agrimony S4 Poaceae **Creeping Bent Grass** SNA Agrostis stolonifera S5 Alismataceae Alisma triviale Common Water-plantain Speckled Alder S5 Betulaceae Alnus incana ssp. rugosa Rosaceae Amelanchier alnifolia Saskatoon S5 Orchidaceae Amerorchis rotundifolia Small or Round-leaved Orchis S5 Asteraceae Anaphalis margaritacea Pearly Everlasting S4 Ranunculaceae Anemone canadensis Canada Anemone S5 Ranunculaceae Anemone guinguefolia Wood Anemone S5 S5 Apocynaceae Apocynum androsaemifolium Spreading Dogbane Ranunculaceae Wild Columbine S5 Aquilegia canadensis Brassicaceae S5 Arabis divaricarpa Purple Rock Cress Brassicaceae Arabis holboellii var. retrofracta Holboell's Rock Cress S5 S5 Araliaceae Aralia nudicaulis Wild Sarsaparilla S5 Rosaceae Argentina anserina Silverweed S4 Asclepiadaceae Asclepias speciosa Showy Milkweed S5 Poaceae Beckmannia syzigachne Slough Grass Dwarf Birch S5 Betulaceae Betula glandulosa Betulaceae Betula occidentalis **River Birch** S4S5 S5 Betulaceae Betula papyrifera White Birch Asteraceae Bidens cernua Stick-tight S5 Ophioglossaceae Botrychium virginianum Rattlesnake Fern S5 S5 Poaceae Bromus ciliatus Fringed Brome Poaceae Bromus inermis Smooth Brome SNA Poaceae Calamagrostis canadensis Marsh Reed Grass S5 Poaceae Northern Reed Grass S5 Calamagrostis stricta ssp. inexpansa S5 Araceae Calla palustris Water-arum Ranunculaceae S5 Caltha palustris Marsh Marigold Orchidaceae Calypso bulbosa Calypso S4

| Campanulaceae   | Campanula rotundifolia                 | Bluebell                    | S5   |
|-----------------|--|-----------------------------|------|
| Cyperaceae      | Carex aquatilis                        | Water Sedge                 | S5   |
| Cyperaceae      | Carex atherodes                        | Awned Sedge                 | S5   |
| Cyperaceae      | Carex bebbii                           | Bebb's Sedge                | S5   |
| Cyperaceae      | Carex capillaris                       | Hair-like Sedge             | S5   |
| Cyperaceae      | Carex deweyana                         | Dewey's Sedge               | S5   |
| Cyperaceae      | Carex disperma                         | Two-seeded Sedge            | S5   |
| Cyperaceae      | Carex interior                         | Inland Sedge                | S4?  |
| Cyperaceae      | Carex lacustris                        | Lakeshore Sedge             | S5   |
| Cyperaceae      | Carex magellanica                      | Bog Sedge                   | S5   |
| Cyperaceae      | Carex utriculata                       | Beaked Sedge                | S5   |
| Caryophyllaceae | Cerastium arvense                      | Field Chickweed             | S5   |
| Ericaceae       | Chamaedaphne calyculata                | Leather-leaf                | S5   |
| Onagraceae      | Chamerion angustifolium                | Fireweed                    | S5   |
| Chenopodiaceae  | Chenopodium album                      | Lamb's-quarters             | SNA  |
| Pyrolaceae      | Chimaphila umbellata                   | Prince's-pine               | S4S5 |
| Apiaceae        | Cicuta maculata                        | Water-hemlock               | S5   |
| Asteraceae      | Cirsium arvense                        | Canada Thistle              | SNA  |
| Orchidaceae     | Coeloglossum viride                    | Frog-orchis                 | S5   |
| Rosaceae        | Comarum palustre                       | Marsh Five-finger           | S5   |
| Asteraceae      | Conyza canadensis                      | Horse-weed                  | S5   |
| Orchidaceae     | Corallorhiza trifida                   | Early Coralroot             | S5   |
| Cornaceae       | Cornus canadensis                      | Bunchberry                  | S5   |
| Cornaceae       | Cornus rugosa                          | Round-leaved Dogwood        | S3   |
| Cornaceae       | Cornus sericea                         | Red Osier Dogwood           | S5   |
| Fumariaceae     | Corydalis aurea                        | Golden Corydalis            | S5   |
| Fumariaceae     | Corydalis sempervirens                 | Pink Corydalis              | S5   |
| Betulaceae      | Corylus cornuta                        | Beaked Hazelnut             | S5   |
| Rosaceae        | Crataegus succulenta                   | Long-spined Hawthorn        | S4   |
| Orchidaceae     | Cypripedium acaule                     | Stemless Lady's-slipper     | S4   |
| Orchidaceae     | Cypripedium arietinum                  | Ram's Head Lady's-slipper   | S2?  |
| Orchidaceae     | Cypripedium parviflorum                | Yellow Lady's-slipper       | S5?  |
| Orchidaceae     | Cypripedium parviflorum var. pubescens | Large Yellow Lady's-slipper | S5?  |
| Orchidaceae     | Cypripedium reginae                    | Showy Lady's-slipper        | S3   |
| Rosaceae        | Dasiphora fruticosa                    | Shrubby Cinquefoil          | S5   |
| Caprifoliaceae  | Diervilla Ionicera                     | Bush-honeysuckle            | S5   |
| Asteraceae      | Doellingeria umbellata                 | Flat-topped White Aster     | S5   |
| Droseraceae     | Drosera rotundifolia                   | Round-leaved Sundew         | S5   |
| Dryopteridaceae | Dryopteris carthusiana                 | Spinulose Wood Fern         | S5   |
| Dryopteridaceae | Dryopteris fragrans                    | Fragrant Shield Fern        | S3S4 |
|                 |  |                             |      |

| Cyperaceae    | Eleocharis palustris                       | Creeping Spike-rush      | S5   |
|---------------|--|--------------------------|------|
| Empetraceae   | Empetrum nigrum                            | Black Crowberry          | S5   |
| Onagraceae    | Epilobium angustifolium ssp. angustifolium | Fireweed                 | S5?  |
| Onagraceae    | Epilobium ciliatum ssp. glandulosum        | Willow-herb              | S5   |
| Equisetaceae  | Equisetum arvense                          | Common Horsetail         | S5   |
| Equisetaceae  | Equisetum fluviatile                       | Swamp Horsetail          | S5   |
| Asteraceae    | Erigeron elatus                            | Swamp Fleabane           | S4   |
| Cyperaceae    | Eriophorum angustifolium                   | Tall Cotton-grass        | S5   |
| Cyperaceae    | Eriophorum viridicarinatum                 | Thin-leaved Cotton-grass | S4   |
| Asteraceae    | Eupatorium maculatum                       | Spotted Joepyeweed       | S5   |
| Rosaceae      | Fragaria virginiana                        | Smooth Wild Strawberry   | S5   |
| Oleaceae      | Fraxinus nigra                             | Black Ash                | S3   |
| Oleaceae      | Fraxinus pennsylvanica                     | Green Ash                | S5   |
| Rubiaceae     | Galium boreale                             | Northern Bedstraw        | S5   |
| Rubiaceae     | Galium triflorum                           | Sweet-scented Bedstraw   | S5   |
| Ericaceae     | Gaultheria hispidula                       | Creeping Snowberry       | S5   |
| Santalaceae   | Geocaulon lividum                          | Northern Comandra        | S5   |
| Geraniaceae   | Geranium bicknellii                        | Bicknell's Geranium      | S5   |
| Rosaceae      | Geum aleppicum                             | Yellow Avens             | S5   |
| Poaceae       | Glyceria grandis                           | Tall Manna Grass         | S5   |
| Gentianaceae  | Halenia deflexa                            | Spurred Gentian          | S5   |
| Asteraceae    | Helianthus maximiliani                     | Narrow-leaved Sunflower  | S5   |
| Apiaceae      | Heracleum maximum                          | Cow-parsnip              | S5   |
| Saxifragaceae | Heuchera richardsonii                      | Alumroot                 | S5   |
| Hippuridaceae | Hippuris vulgaris                          | Mare's-tail              | S5   |
| Poaceae       | Hordeum jubatum                            | Wild Barley              | S5   |
| Balsaminaceae | Impatiens capensis                         | Spotted Touch-me-not     | S5   |
| Iridaceae     | Iris versicolor                            | Blue Flag                | S4   |
| Juncaceae     | Juncus nodosus                             | Knotted Rush             | S5   |
| Cupressaceae  | Juniperus communis                         | Common Juniper           | S5   |
| Ericaceae     | Kalmia polifolia                           | Bog-laurel               | S5   |
| Poaceae       | Koeleria macrantha                         | June Grass               | S5   |
| Asteraceae    | Lactuca tatarica                           | Wild Lettuce             | S5   |
| Pinaceae      | Larix laricina                             | Tamarack                 | S5   |
| Fabaceae      | Lathyrus ochroleucus                       | Pale Vetchling           | S4S5 |
| Fabaceae      | Lathyrus venosus                           | Wild Peavine             | S5   |
| Ericaceae     | Ledum groenlandicum                        | Labrador-tea             | S5   |
| Lemnaceae     | Lemna minor                                | Lesser Duckweed          | SNA  |
| Brassicaceae  | Lepidium densiflorum                       | Common Pepper-grass      | S5   |
| Liliaceae     | Lilium philadelphicum                      | Wood Lily                | S4   |
|               |  |                          |      |

Caprifoliaceae Orchidaceae Campanulaceae Caprifoliaceae Caprifoliaceae Lamiaceae Primulaceae Primulaceae Liliaceae Liliaceae Liliaceae Asteraceae Dryopteridaceae Fabaceae Fabaceae Scrophulariaceae Fabaceae Fabaceae Lamiaceae Boraginaceae Saxifragaceae Pyrolaceae Poaceae Haloragaceae Nymphaeaceae Onagraceae Pyrolaceae Saxifragaceae Polygonaceae Polygonaceae Asteraceae Asteraceae Poaceae Poaceae Poaceae Pinaceae Pinaceae Lentibulariaceae Pinaceae Poaceae

Linnaea borealis Listera borealis Lobelia kalmii Lonicera dioica Lonicera villosa Lycopus uniflorus Lysimachia ciliata Lysimachia thyrsiflora Maianthemum canadense Maianthemum stellatum Maianthemum trifolium Matricaria discoidea Matteuccia struthiopteris Medicago lupulina Medicago sativa Melampyrum lineare Melilotus albus Melilotus officinalis Mentha arvensis Mertensia paniculata Mitella nuda Moneses uniflora Muhlenbergia asperifolia Myriophyllum sibiricum Nuphar variegata Oenothera biennis Orthilia secunda Parnassia palustris Persicaria amphibia Persicaria maculosa Petasites frigidus var. palmatus Petasites frigidus var. sagittatus Phalaris arundinacea Phleum pratense Phragmites australis Picea glauca Picea mariana Pinguicula vulgaris Pinus banksiana Piptatherum pungens

| Twinflower                    | S5  |
|-------------------------------|-----|
| Northern Twayblade            | S2  |
| Kalm's Lobelia                | S5  |
| Limber or Twining Honeysuckle | S5  |
| Mountain-fly-honeysuckle      | S5  |
| Northern Bugle-weed           | S5  |
| Fringed Loosestrife           | S5  |
| Tufted Loosestrife            | S5  |
| Two-leaved Solomon's-seal     | S5  |
| Star-flowered Solomon's-seal  | S5  |
| Three-leaved Solomon's-seal   | S5  |
| Pineappleweed                 | SNA |
| Ostrich Fern                  | S5  |
| Black Medick                  | SNA |
| Alfalfa                       | SNA |
| Cow-wheat                     | S5  |
| White Sweet Clover            | SNA |
| Yellow Sweet Clover           | SNA |
| Common Mint                   | S5  |
| Tall Lungwort                 | S5  |
| Mitrewort                     | S5  |
| One-flowered Pyrola           | S5  |
| Scratch Grass                 | S4  |
| Spiked Water-milfoil          | S5  |
| Yellow Pond-lily              | S5  |
| Evening-primrose              | S5  |
| One-sided Pyrola              | S5  |
| Grass of parnassus            | S4  |
| Water Smartweed               | S5  |
| Spotted Lady's-thumb          | SNA |
| Palmate-leaved Colt's-foot    | S5  |
| Arrow-leaved Colt's-foot      | S5  |
| Reed Canary Grass             | S5  |
| Common Timothy                | SNA |
| Common Reed                   | S5  |
| White Spruce                  | S5  |
| Black Spruce                  | S5  |
| Common Butterwort             | S5  |
| Jack Pine                     | S5  |
| Northern Rice Grass           | S5  |

Plantaginaceae Orchidaceae Orchidaceae Poaceae Polygonaceae Polypodiaceae Salicaceae Salicaceae Rosaceae Liliaceae Rosaceae Rosaceae Dennstaedtiaceae Pyrolaceae Pyrolaceae Fagaceae Ranunculaceae Ranunculaceae Ranunculaceae Rhamnaceae Anacardiaceae Grossulariaceae Grossulariaceae Grossulariaceae Grossulariaceae Grossulariaceae Brassicaceae Rosaceae Rosaceae Rosaceae Rosaceae Polygonaceae Alismataceae Salicaceae Salicaceae Salicaceae Salicaceae Salicaceae Salicaceae Salicaceae

Plantago major Platanthera hyperborea Platanthera obtusata Poa pratensis Polygonum amphibium Polypodium virginianum Populus balsamifera Populus tremuloides Potentilla norvegica Prosartes trachycarpa Prunus pensylvanica Prunus virginiana Pteridium aquilinum Pyrola asarifolia Pyrola chlorantha Quercus macrocarpa Ranunculus aquatilis Ranunculus gmelinii Ranunculus sceleratus Rhamnus alnifolia Rhus glabra Ribes americanum Ribes glandulosum Ribes hudsonianum Ribes oxyacanthoides Ribes triste Rorippa palustris Rosa acicularis Rosa woodsii Rubus idaeus Rubus pubescens Rumex occidentalis Sagittaria cuneata Salix amygdaloides Salix bebbiana Salix discolor Salix exigua Salix fragilis Salix petiolaris Salix pseudomonticola

| Common Plantain               | SNA  |
|-------------------------------|------|
| Northern Green Orchid         | SNA  |
| Small Northern Bog Orchid     | S5   |
| Kentucky Blue Grass           | S5   |
| Water Smartweed               | S5   |
| Rock Polypody                 | S5   |
| Balsam Poplar                 | S5   |
| Trembling Aspen               | S5   |
| Rough Cinquefoil              | S5   |
| Fairybells                    | S4   |
| Pin Cherry                    | S5   |
| Choke Cherry                  | S5   |
| Bracken Fern                  | S4S5 |
| Pink Pyrola                   | S5   |
| Greenish-flowered Wintergreen | S5   |
| Bur Oak                       | S5   |
| White Water Crowfoot          | S5   |
| Small Yellow Water Buttercup  | S5   |
| Cursed Crowfoot               | S5   |
| Alder-leaved Buckthorn        | S5   |
| Smooth Sumac                  | S4   |
| Wild Black Currant            | S5   |
| Skunk Currant                 | S5   |
| Northern Wild Black Currant   | S5   |
| Bristly Wild Gooseberry       | S5   |
| Wild Red Currant              | S5   |
| Bog Yellowcress               | S5   |
| Prickly Rose                  | S5   |
| Wood's Rose                   | S4   |
| Wild Red Raspberry            | S5   |
| Dewberry                      | S5   |
| Western Dock                  | S5   |
| Arum-leaved Arrowhead         | S5   |
| Peach-leaved Willow           | S4   |
| Bebb's or Beaked Willow       | S5   |
| Pussy Willow                  | S5   |
| Sandbar Willow                | S5   |
| Brittle Willow                | SNA  |
| Basket Willow                 | S4   |
| False Mountain Willow         | S4S5 |

| Salicaceae      | Salix pyrifolia                | Balsam Willow                | S5  |
|-----------------|--------------------------------|------------------------------|-----|
| Caprifoliaceae  | Sambucus racemosa              | Red Elderberry               | S4  |
| Apiaceae        | Sanicula marilandica           | Snakeroot                    | S5  |
| Cyperaceae      | Schoenoplectus tabernaemontani | Soft-stem Bulrush            | S5  |
| Cyperaceae      | Scirpus microcarpus            | Small Fruited-bulrush        | S5  |
| Asteraceae      | Senecio congestus              | Marsh-fleabane               | S5  |
| Asteraceae      | Senecio vulgaris               | Common Groundsel             | SNA |
| Rosaceae        | Sibbaldiopsis tridentata       | Three-toothed Cinquefoil     | S5  |
| Caryophyllaceae | Silene csereii                 | Smooth Catchfly              | SNA |
| Iridaceae       | Sisyrinchium montanum          | Common Blue-eyed Grass       | S5  |
| Apiaceae        | Sium suave                     | Water-parsnip                | S5  |
| Asteraceae      | Solidago canadensis            | Canada Goldenrod             | S5  |
| Asteraceae      | Solidago rigida                | Stiff Goldenrod              | S5  |
| Asteraceae      | Sonchus oleraceus              | Common Sow-thistle           | SNA |
| Rosaceae        | Sorbus decora                  | Mountain-ash                 | S4  |
| Sparganiaceae   | Sparganium angustifolium       | Narrow-leaved Bur-reed       | S5  |
| Poaceae         | Spartina pectinata             | Slough Grass                 | S5  |
| Rosaceae        | Spiraea alba                   | Meadowsweet                  | S5  |
| Orchidaceae     | Spiranthes romanzoffiana       | Hooded Ladies'-tresses       | S5  |
| Lamiaceae       | Stachys palustris              | Marsh Hedge-nettle           | S5  |
| Caryophyllaceae | Stellaria longifolia           | Long-leaved Stitchwort       | S5  |
| Caryophyllaceae | Stellaria longipes             | Long-stalked Stitchwort      | S5  |
| Caprifoliaceae  | Symphoricarpos albus           | Snowberry                    | S5  |
| Caprifoliaceae  | Symphoricarpos occidentalis    | Western Snowberry            | S5  |
| Asteraceae      | Symphyotrichum boreale         | Northern Bog Aster           | S5  |
| Asteraceae      | Symphyotrichum ciliolatum      | Lindley's Aster              | S5  |
| Asteraceae      | Symphyotrichum ericoides       | Heath or Many-flowered Aster | S4  |
| Asteraceae      | Symphyotrichum laeve           | Smooth Aster                 | S5  |
| Asteraceae      | Symphyotrichum lanceolatum     | Panicles Aster               | S5  |
| Asteraceae      | Symphyotrichum novae-angliae   | New England Aster            | S4  |
| Asteraceae      | Taraxacum officinale           | Common Dandelion             | S5  |
| Ranunculaceae   | Thalictrum dasycarpum          | Tall or Purple Meadow-rue    | S5  |
| Brassicaceae    | Thlaspi arvense                | Field Pennycress             | SNA |
| Asteraceae      | Tragopogon dubius              | Goat's-beard                 | SNA |
| Liliaceae       | Triantha glutinosa             | Sticky False Asphodel        | S5  |
| Primulaceae     | Trientalis borealis            | Northern Starflower          | S5  |
| Juncaginaceae   | Triglochin maritima            | Seaside Arrow-grass          | S5  |
| Asteraceae      | Tripleurospermum maritimum     | False Mayweed                | S3  |
| Typhaceae       | Typha angustifolia             | Narrow-leaved Cat-tail       | S4  |
| Typhaceae       | Typha latifolia                | Common Cat-tail              | S5  |
|                 |                                |                              |     |

| Ulmaceae         | Ulmus americana                      | American Elm            | S4 |
|------------------|--------------------------------------|-------------------------|----|
| Urticaceae       | Urtica dioica                        | Stinging Nettle         | S5 |
| Lentibulariaceae | Utricularia macrorhiza               | Greater bladderwort     | S5 |
| Ericaceae        | Vaccinium myrtilloides               | Velvet-leaf Blueberry   | S5 |
| Ericaceae        | Vaccinium oxycoccos                  | Small Cranberry         | S5 |
| Ericaceae        | Vaccinium uliginosum                 | Bog Whortleberry        | S5 |
| Caprifoliaceae   | Viburnum edule                       | Lowbush-cranberry       | S5 |
| Caprifoliaceae   | Viburnum lentago                     | Nannyberry              | S4 |
| Caprifoliaceae   | Viburnum opulus                      | Highbush-cranberry      | S5 |
| Fabaceae         | Vicia americana                      | Common Vetch            | S5 |
| Violaceae        | Viola adunca                         | Early Blue Violet       | S5 |
| Violaceae        | Viola canadensis var. rugulosa       | Canada Violet           | S5 |
| Violaceae        | Viola nephrophylla var. nephrophylla | Northern Bog Violet     | S5 |
| Violaceae        | Viola renifolia                      | Kidney-shaped Violet    | S5 |
| Dryopteridaceae  | Woodsia ilvensis                     | Rusty Woodsia           | S5 |
| Apiaceae         | Zizia aptera                         | Heart-leaved Alexanders | S5 |

| Table #2         | #2 Mammals of the Bisset Project Area |                          |         |
|------------------|---------------------------------------|--------------------------|---------|
| Family           | Scientific Name                       | Common Name              | Rank    |
| Canidae          | Canis latrans                         | Coyote                   | S5      |
| Canidae          | Vulpes vulpes                         | Red Fox                  | S5      |
| Castoridae       | Castor canadensis                     | American Beaver          | S5      |
| Cervidae         | Alces alces                           | Moose                    | S5      |
| Cervidae         | Odocoileus virginianus                | White-tailed Deer        | S5      |
| Leporidae        | Lepus americanus                      | Snowshoe Hare            | S5      |
| Mephitidae       | Mephitis mephitis                     | Striped Skunk            | S5      |
| Muridae          | Clethrionomys gapperi                 | Southern Red-backed Vole | S5      |
| Muridae          | Microtus pennsylvanicus               | Meadow Vole              | S5      |
| Muridae          | Peromyscus maniculatus                | Deer Mouse               | S5      |
| Mustelidae       | Mustela erminea                       | Ermine                   | S5      |
| Mustelidae       | Mustela vison                         | Mink                     | S5      |
| Sciuridae        | Tamias striatus                       | Eastern Chipmunk         | S5      |
| Sciuridae        | Tamiasciurus hudsonicus               | Red Squirrel             | S5      |
| Talpidae         | Condylura cristata                    | Star-nosed Mole          | S3      |
| Ursidae          | Ursus americanus                      | Black Bear               | S5      |
| Vespertilionidae | Eptesicus fuscus                      | Big Brown Bat            | S4S5B   |
| Vespertilionidae | Myotis lucifugus                      | Little Brown Myotis      | S2N,S5B |
|                  |                                       |                          |         |

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## Table #3

# Birds of the Bisset Project Area

Family Accipitridae Accipitridae Accipitridae Accipitridae Accipitridae Accipitridae Accipitridae Alcedinidae Anatidae Ardeidae Bombycillidae Caprimulgidae Caprimulgidae Cardinalidae Cathartidae Certhiidae Charadriidae Corvidae Corvidae Corvidae Corvidae Cuculidae Emberizidae

| Scientific Name          |
|--------------------------|
| Accipiter cooperii       |
| Accipiter gentilis       |
| Accipiter striatus       |
| Buteo jamaicensis        |
| Buteo platypterus        |
| Circus cyaneus           |
| Pandion haliaetus        |
| Ceryle alcyon            |
| Aix sponsa               |
| Anas americana           |
| Anas crecca              |
| Anas discors             |
| Anas platyrhynchos       |
| Aythya affinis           |
| Aythya collaris          |
| Branta canadensis        |
| Bucephala clangula       |
| Chen caerulescens        |
| Lophodytes cucullatus    |
| Mergus merganser         |
| Ardea herodias           |
| Bombycilla cedrorum      |
| Caprimulgus vociferus    |
| Chordeiles minor         |
| Pheucticus Iudovicianus  |
| Cathartes aura           |
| Certhia americana        |
| Charadrius vociferus     |
| Corvus brachyrhynchos    |
| Corvus corax             |
| Cyanocitta cristata      |
| Perisoreus canadensis    |
| Coccyzus erythropthalmus |
| Calcarius lapponicus     |

| Common Name            | MB<br>Status | Remarks |
|------------------------|--------------|---------|
| Cooper's Hawk          | S4S5B        | PB      |
| Northern Goshawk       | S4           | М       |
| Sharp-shinned Hawk     | S5B          | М       |
| Red-tailed Hawk        | S5B          | PB      |
| Broad-winged Hawk      | S4S5B        | PB      |
| Northern Harrier       | S4B          | BL      |
| Osprey                 | S4S5B        | Μ, Τ    |
| Belted Kingfisher      | S4S5B        | Μ, Τ    |
| Wood Duck              | S5B          | Т       |
| American Wigeon        | S5B          | т       |
| Green-winged Teal      | S5B          | PB      |
| Blue-winged Teal       | S5B          | т       |
| Mallard                | S5B          | PB      |
| Lesser Scaup           | S4S5B        | М       |
| Ring-necked Duck       | S5B          | т       |
| Canada Goose           | S5B          | В       |
| Common Goldeneye       | S5B          | PB      |
| Snow Goose             | S5B          | М       |
| Hooded Merganser       | S5B          | т       |
| Common Merganser       | S5B          | M,T     |
| Great Blue Heron       | S4S5B        | т       |
| Cedar Waxwing          | S5B          | BL      |
| Whip-poor-will         | S4S5B        | BL      |
| Common Nighthawk       | S4B          | В       |
| Rose-breasted Grosbeak | S4S5B        | PB      |
| Turkey Vulture         | S4S5B        | BL      |
| Brown Creeper          | S5           | М       |
| Killdeer               | S5B          | В       |
| American Crow          | S5B          | BL      |
| Common Raven           | S5           | BL      |
| Blue Jay               | S5           | BL      |
| Gray Jay               | S5           | BL      |
| Black-billed Cuckoo    | S3S4B        | Т       |
| Lapland Longspur       | S4B          | М       |

| Emberizidae  | Junco hyemalis             | Dark-eyed Junco        | S5B   | PB |
|--------------|----------------------------|------------------------|-------|----|
| Emberizidae  | Melospiza georgiana        | Swamp Sparrow          | S5B   | В  |
| Emberizidae  | Melospiza lincolnii        | Lincoln's Sparrow      | S5B   | В  |
| Emberizidae  | Melospiza melodia          | Song Sparrow           | S5B   | В  |
| Emberizidae  | Passerculus sandwichensis  | Savannah Sparrow       | S5B   | В  |
| Emberizidae  | Plectrophenax nivalis      | Snow Bunting           | SNA   | М  |
| Emberizidae  | Spizella arborea           | American Tree Sparrow  | S5B   | М  |
| Emberizidae  | Spizella pallida           | Clay-colored Sparrow   | S4S5B | М  |
| Emberizidae  | Spizella passerina         | Chipping Sparrow       | S5B   | BL |
| Emberizidae  | Zonotrichia albicollis     | White-throated Sparrow | S5B   | В  |
| Emberizidae  | Zonotrichia leucophrys     | White-crowned Sparrow  | S5B   | М  |
| Emberizidae  | Zonotrichia querula        | Harris' Sparrow        | S4B   | М  |
| Falconidae   | Falco columbarius          | Merlin                 | S4S5  | BL |
| Falconidae   | Falco sparverius           | American Kestrel       | S4S5B | BL |
| Fringillidae | Carduelis flammea          | Common Redpoll         | S5    | М  |
| Fringillidae | Carduelis pinus            | Pine Siskin            | S5    | BL |
| Fringillidae | Carduelis tristis          | American Goldfinch     | S5B   | BL |
| Fringillidae | Carpodacus purpureus       | Purple Finch           | S5B   | М  |
| Fringillidae | Coccothraustes vespertinus | Evening Grosbeak       | S5    | PB |
| Fringillidae | Loxia leucoptera           | White-winged Crossbill | S5    | BL |
| Gaviidae     | Gavia immer                | Common Loon            | S4S5B | BL |
| Gruidae      | Grus canadensis            | Sandhill Crane         | S5B   | BL |
| Hirundinidae | Hirundo rustica            | Barn Swallow           | S5B   | BL |
| Hirundinidae | Riparia riparia            | Bank Swallow           | S5B   | BL |
| Hirundinidae | Tachycineta bicolor        | Tree Swallow           | S5B   | BL |
| Icteridae    | Agelaius phoeniceus        | Red-winged Blackbird   | S5B   | В  |
| Icteridae    | Euphagus carolinus         | Rusty Blackbird        | S3S4B | Μ  |
| Icteridae    | lcterus galbula            | Baltimore Oriole       | S5B   | BL |
| Icteridae    | Molothrus ater             | Brown-headed Cowbird   | S5B   | BL |
| Icteridae    | Quiscalus quiscula         | Common Grackle         | S5B   | BL |
| Laridae      | Larus argentatus           | Herring Gull           | S5B   | Т  |
| Laridae      | Larus delawarensis         | Ring-billed Gull       | S5B   | Т  |
| Laridae      | Larus philadelphia         | Bonaparte's Gull       | S5B   | BL |
| Laridae      | Sterna hirundo             | Common Tern            | S4S5B | Т  |
| Paridae      | Poecile atricapilla        | Black-capped Chickadee | S5    | В  |
| Paridae      | Poecile hudsonica          | Boreal Chickadee       | S4S5  | В  |
| Parulidae    | Dendroica coronata         | Yellow-rumped Warbler  | S5B   | В  |
| Parulidae    | Dendroica fusca            | Blackburnian Warbler   | S5B   | В  |
| Parulidae    | Dendroica magnolia         | Magnolia Warbler       | S5B   | В  |
| Parulidae    | Dendroica palmarum         | Palm Warbler           | S5B   | Μ  |
|              |                            |                        |       |    |

| Parulidae         | Dendroica pensylvanica    | Chestnut-sided Warbler                 | S5B   | В  |
|-------------------|---------------------------|--|-------|----|
| Parulidae         | Dendroica petechia        | Yellow Warbler<br>Black-throated Green | S5B   | В  |
| Parulidae         | Dendroica virens          | Warbler                                | S4S5B | В  |
| Parulidae         | Geothlypis trichas        | Common Yellowthroat                    | S5B   | В  |
| Parulidae         | Mniotilta varia           | Black-and-white Warbler                | S5B   | В  |
| Parulidae         | Oporornis agilis          | Connecticut Warbler                    | S4S5B | BL |
| Parulidae         | Oporornis philadelphia    | Mourning Warbler                       | S5B   | В  |
| Parulidae         | Seiurus aurocapillus      | Ovenbird                               | S5B   | В  |
| Parulidae         | Seiurus noveboracensis    | Northern Waterthrush                   | S5B   | М  |
| Parulidae         | Setophaga ruticilla       | American Redstart                      | S5B   | BL |
| Parulidae         | Vermivora celata          | Orange-crowned Warbler                 | S5B   | М  |
| Parulidae         | Vermivora peregrina       | Tennessee Warbler                      | S5B   | В  |
| Parulidae         | Vermivora ruficapilla     | Nashville Warbler                      | S5B   | В  |
| Pelecanidae       | Pelecanus erythrorhynchos | American White Pelican                 | S3S4B | Т  |
| Phalacrocoracidae | Phalacrocorax auritus     | Double-crested Cormorant               | S5B   | Т  |
| Phasianidae       | Bonasa umbellus           | Ruffed Grouse                          | S4S5  | В  |
| Phasianidae       | Falcipennis canadensis    | Spruce Grouse                          | S4S5  | В  |
| Picidae           | Colaptes auratus          | Northern Flicker                       | S5B   | В  |
| Picidae           | Dryocopus pileatus        | Pileated Woodpecker                    | S5    | В  |
| Picidae           | Picoides pubescens        | Downy Woodpecker                       | S5    | BL |
| Picidae           | Picoides villosus         | Hairy Woodpecker                       | S5    | В  |
| Picidae           | Sphyrapicus varius        | Yellow-bellied Sapsucker               | S5B   | BL |
| Podicipedidae     | Podiceps grisegena        | Red-necked Grebe                       | S4S5B | Т  |
| Podicipedidae     | Podilymbus podiceps       | Pied-billed Grebe                      | S4S5B | Т  |
| Rallidae          | Porzana carolina          | Sora                                   | S5B   | PB |
| Regulidae         | Regulus calendula         | Ruby-crowned Kinglet                   | S5B   | В  |
| Regulidae         | Regulus satrapa           | Golden-crowned Kinglet                 | S4S5B | М  |
| Scolopacidae      | Actitis macularia         | Spotted Sandpiper                      | S5B   | В  |
| Scolopacidae      | Calidris alpina           | Dunlin                                 | S4B   | Т  |
| Scolopacidae      | Calidris melanotos        | Pectoral Sandpiper                     | SNA   | Т  |
| Scolopacidae      | Calidris minutilla        | Least Sandpiper                        | S4S5B | Т  |
| Scolopacidae      | Calidris pusilla          | Semipalmated Sandpiper                 | S3B   | Т  |
| Scolopacidae      | Gallinago gallinago       | Common Snipe                           | S5B   | В  |
| Scolopacidae      | Tringa flavipes           | Lesser Yellowlegs                      | S5B   |    |
| Scolopacidae      | Tringa melanoleuca        | Greater Yellowlegs                     | S5B   | М  |
| Sittidae          | Sitta canadensis          | Red-breasted Nuthatch                  | S5    | В  |
| Strigidae         | Aegolius acadicus         | Northern Saw-whet Owl                  | S4S5B | В  |
| Strigidae         | Bubo virginianus          | Great Horned Owl                       | S5    | BL |
| Strigidae         | Strix nebulosa            | Great Gray Owl                         | S4    | BL |
| Sturnidae         | Sturnus vulgaris          | European Starling                      | SNA   | Т  |
|                   |                           | 32                                     |       |    |
|                   |                           |  |       |    |

| Trochilidae   | Archilochus colubris    | Ruby-throated Hummingbird | S5B   | BL |
|---------------|-------------------------|---------------------------|-------|----|
| Troglodytidae | Cistothorus platensis   | Sedge Wren                | S5B   | В  |
| Troglodytidae | Troglodytes aedon       | House Wren                | S5B   | BL |
| Troglodytidae | Troglodytes troglodytes | Winter Wren               | S5B   | В  |
| Turdidae      | Catharus fuscescens     | Veery                     | S4S5B | В  |
| Turdidae      | Catharus guttatus       | Hermit Thrush             | S5B   | PB |
| Turdidae      | Catharus ustulatus      | Swainson's Thrush         | S5B   | В  |
| Turdidae      | Turdus migratorius      | American Robin            | S5B   | В  |
| Tyrannidae    | Contopus cooperi        | Olive-sided Flycatcher    | S4B   | М  |
| Tyrannidae    | Empidonax alnorum       | Alder Flycatcher          | S5B   | PB |
| Tyrannidae    | Empidonax minimus       | Least Flycatcher          | S5B   | PB |
| Tyrannidae    | Myiarchus crinitus      | Great Crested Flycatcher  | S4S5B | PB |
| Tyrannidae    | Sayornis phoebe         | Eastern Phoebe            | S5B   | BL |
| Tyrannidae    | Tyrannus tyrannus       | Eastern Kingbird          | S5B   | BL |
| Vireonidae    | Vireo gilvus            | Warbling Vireo            | S5B   | В  |
| Vireonidae    | Vireo olivaceus         | Red-eyed Vireo            | S5B   | В  |

| Table #4       | Amphibians of the Bisset Project Area |                         |      |
|----------------|---------------------------------------|-------------------------|------|
| Family         | Scientific Name                       | Common Name             | Rank |
| Ambystomatidae | Ambystoma laterale                    | Blue-spotted Salamander | S3S4 |
| Hylidae        | Hyla versicolor                       | Gray Tree Frog          | S4   |
| Hylidae        | Pseudacris crucifer                   | Northern Spring Peeper  | S4   |
| Hylidae        | Pseudacris triseriata maculata        | Boreal Chorus Frog      | S5   |
| Ranidae        | Rana pipiens                          | Northern Leopard Frog   | S4   |
| Ranidae        | Rana septentrionalis                  | Mink Frog               | S3   |
| Ranidae        | Rana sylvatica                        | Wood Frog               | S5   |

# Table #5Reptiles of the Bisset Project Area

| Family     | Scientific Name        | Common Name            | Rank |
|------------|------------------------|------------------------|------|
| Colubridae | Thamnophis sirtalis    | Red-sided Garter Snake | S3S4 |
| Emydidae   | Chrysemys picta bellii | Western Painted Turtle | S4   |