

SWAMP Phase 3

Slocan Wetland Assessment and Monitoring Project



Prepared for:

Slocan Solutions Society, Slocan Lake Stewardship Society,
BC Wildlife Federation, & Slocan River Streamkeepers

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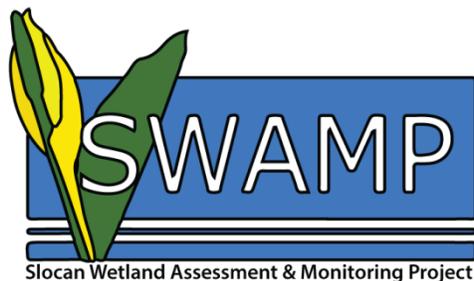


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Glossary

The following is a list of terms and acronyms that are commonly used throughout this document.

ArcGIS	A Geographic Information System software package used for making and viewing digital maps.
BEC	Biogeoclimatic Ecosystem Classification. A provincial system of defining ecosystem types at a variety of scales, from landscape level to site specific.
Ecosystems-at-risk	Provincial system that tracks the status of ecosystems and uses a variety of rank factors to determine which are at risk.
Edaphic	Nature of soils based on texture, drainage, or chemical properties.
Edatopic Grid	A two-dimensional table using the soil nutrient regime and soil moisture regime for ecosystem classification to the site series level.
Ericaceous	The heather family; also vascular plants that are tolerant of acidic growing conditions.
Hydrodynamic Index	Five categories that describe the magnitude of vertical and lateral water movement in wet soils.
Hydrophytic	Plants adapted to growing in a partial or entire aquatic environment.
Gleysol	Soils of the Gleysolic order have properties that indicate prolonged periods of intermittent or continuous saturation with water and reducing conditions during their genesis.
Organic	Soil type that is comprised of plant and animal residues at various states of decomposition. Generally greater than 40cm in depth to be called an organic soil.
Regosol	Young soils with little or no horizon development.
Peat	Accumulation of partially decayed organic material.

Orthophoto	A series of digital airphotos that have been geometrically corrected and combined into a seamless image.
RISC	Resources Information Standards Committee. Provincial program that creates standardized procedures and methodologies for data collection, analysis and presentation.
SMR	Soil Moisture Regime. The average amount of soil water available for evapotranspiration by vascular plants.
SNR	Soil Nutrient Regime. The amount of essential soil nutrients available to vascular plants.
SWAMP	Slocan Wetlands Assessment and Monitoring Project
TRIM	Terrain Resource Inventory Mapping. Digital base mapping developed by the provincial government.

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1.0 Introduction

The Slocan Wetlands Assessment and Monitoring Project (SWAMP) is a collaboration of three societies, Slocan Solutions, Slocan River Streamkeepers and Slocan Lake Stewardship, working with the BC Wildlife Federation, the Fish and Wildlife Compensation Program, Selkirk College, BC Ministry of Forests, and the Regional District of Central Kootenay, to provide an integrated watershed approach to wetland understanding and management. Slocan Solutions Society is the fiscal manager of the program.

The long term goal of SWAMP is to utilize existing mapping and inventory data as base layers and to develop a detailed and comprehensive habitat assessment of flora and fauna of the watershed. SWAMP is a multi-year initiative to establish a community based monitoring program to assess the abundance, distribution, and ecological integrity/function of wetlands and riparian habitat throughout the Slocan watershed.

Phase 1 of the project (completed during the winter of 2013) involved collecting all existing information as to the type and extent of wetlands in the Slocan Valley, and developing an assessment method that was applicable for multiple levels of experience and education. Phase 2 (completed during the summer and fall of 2014) involved the assessment of 50 wetland plots from four wetland complexes and several other smaller wetlands. The assessments utilized a multi-disciplinary approach to classify each wetland and assess habitat suitability for mammals, birds, reptiles and amphibians. A separate, but integrated, assessment of invertebrate diversity to determine ecosystem health was also completed. In addition, two volunteer training workshops were held and numerous community outreach events were attended.

The focus of Phase 3 was to perform detailed assessments on additional wetlands and present the results to the communities, with a focus on wetland mapping and characterization. This report contains the results of the Phase 3 mapping and inventory.

1.1 Study Area

The study area includes the full Slocan River watershed, from the Kootenay River at the south, to the watershed divide north of Summit Lake, including the villages of Slocan, New Denver, Winlaw and Silverton, and the numerous unincorporated communities in between such as Passmore, Slocan Park and Krestova (Fig. 1).

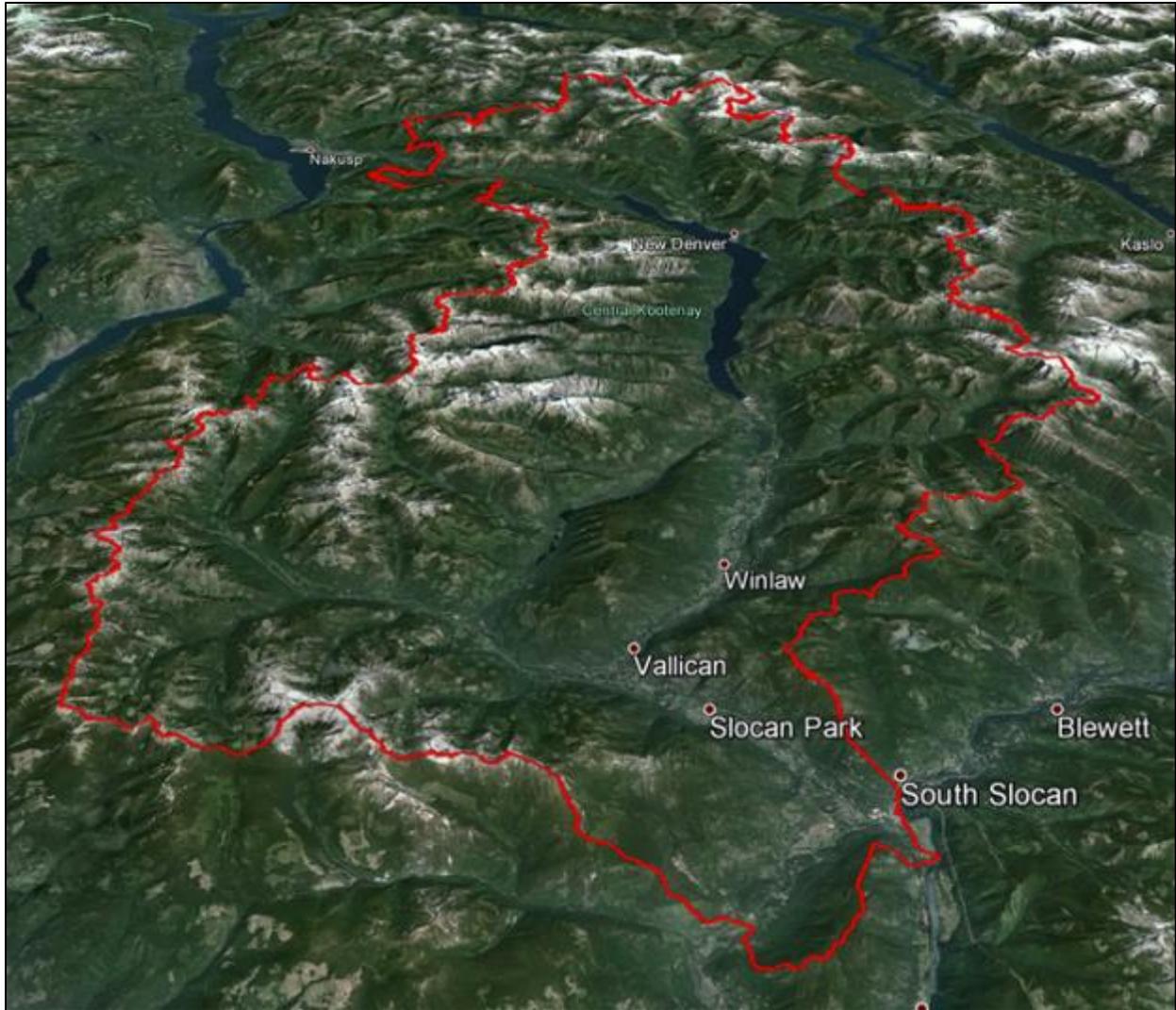


Figure 1. SWAMP Study Area (adapted from Google Earth).

2.0 Introduction to Wetlands

A wetland is defined as: *land that is saturated with water long enough to promote wetland or aquatic processes as indicated by poorly drained soils, hydrophytic vegetation and various kinds of biological activity which are adapted to a wet environment* (National Wetlands Working Group 1988). (Canadian System of Wetland Classification 1997)

Wetland ecosystems are found where soils are saturated by water for enough time that the excess water and resulting low oxygen levels influence the vegetation and soil. The water influence can be either seasonal or year-round and occurs either at or above the soil surface or within the root zone of plants. Wetlands can be found in depressions, or areas of flat or undulating terrain. There are two broad

categories of wetlands as described by the Canadian System of Wetland Classification (National Wetlands Working Group 1997):

“Organic wetlands:

- Organic wetlands are more simply referred to as peatlands (Fig. 2). Peatlands contain more than 40 cm of peat accumulation on which organic soils (excluding Folisols¹) develop. This depth limit is consistent with soil classification standards established by the Canada Soil Survey Committee (1978).

Mineral wetlands:

- Mineral wetlands are found in areas where an excess of water collects on the surface and which for geomorphic, hydrologic, biotic, edaphic (factors related to soil), or climatic reasons produce little or no organic matter or peat. Gleysolic² soils or peaty phases of these soils are characteristics of these wetlands (Fig. 3).
- Mineral wetlands are found in mineral soil areas associated with shallow water, which is generally less than 2 m deep. In some of these wetlands, vegetation is lacking and soils are poorly developed as a result of frequent and drastic fluctuations of water levels, wave action, water flow, turbidity, or a high concentration of salts or other toxic substances in the water or in the soil.
- Mineral wetlands include mineral soil areas that are modified by water control structures (e.g. dams) or that are tilled and planted but if allowed to revert to their original state, become saturated for long periods and are then associated with wet soils (e.g. Gleysols) and hydrophytic vegetation.”

The development of wetlands is a dynamic function of climate, hydrology, chemistry, geomorphology, and biology (National Wetlands Working Group 1997). Wetlands are not generally stable ecosystems, rather they are constantly evolving over time (hundreds or thousands of years) as soils develop and water regimes change, resulting in communities that often contain aspects of different wetland types, as well as transitional areas where they are indeterminate between one class or association and another. Therefore, multiple characteristics of wetlands, due to the interaction of various environmental factors, are required to place them in specific classes and associations.

¹ Soils of the Folisolic order are composed of upland organic (folic) materials, generally of forest origin, that are either 40 cm or more in thickness, or are at least 10 cm thick if overlying bedrock or fragmental material (Agriculture and Agri-Food Canada 2014a).

² Soils of the Gleysolic order have properties that indicate prolonged periods of intermittent or continuous saturation with water and reducing conditions during their genesis. Saturation with water may result from either a high groundwater table or temporary accumulation of water above a relatively impermeable layer, or both (Agriculture and Agri-Food Canada 2014b).



Figure 2. Example fibric peat over mesic peat in a high elevation fen (left). Figure 3. Example of a rich mineral soil from a valley bottom forested swamp (right).

Wetlands in Canada are classified based on the Canadian System of Wetland Classification using five classes: bog, fen, marsh, swamp, and shallow open water (National Wetlands Working Group 1997), and further refined into associations based on the Wetlands of British Columbia (MacKenzie & Moran 2004). Environmental conditions that have affected wetland development are used to classify wetlands (National Wetlands Working Group 1997), including:

- Morphology – surface forms, pattern, elevation
- Water source
- Water chemistry (nutrients, base saturation, pH)
- Basin depth and shape
- Plant communities and their structure
- Peat and sediment characteristics
- Soil type (organic, gleysol, etc.)

Fig. 4 (adapted from the Wetlands of British Columbia) provides an overview of the main environmental features for each wetland class (also known as Site Class), as well as the typical vegetation cover and species groups. Fig. 5 (adapted from the Wetlands of British Columbia) depicts the edatopic grid that shows the range of soil moisture, soil nutrients, pH, and hydrodynamic index (water flow and permanence) that each wetland class typically occurs within. Note that shallow open waters do not fit the conceptual model presented in the edatopic grid, and are not included (MacKenzie & Moran 2003).

Wetland classification was completed as per provincial methodology, mainly the Field Manual for Describing Terrestrial Ecosystems; Second Edition (BC MOF 2010). Additional information was collected to classify ecosystems to the site association level as per Wetlands of BC; A Guide to Identification

(MacKenzie & Moran 2004). For wetlands that could not be classified to a site association or site series level, generic federal wetland classes were used.

Site Realm/ Group	Site Class	Environmental features	Cover types	Species groups
Wetland Realm	Bogs	Wet or Very Wet SMR +/- ombrotrophic pH < 5.5 > 40 cm fibric/mesic peat	Conifer treed or low shrub	Sphagnum mosses, ericaceous shrubs, and conifers
	Fens	Groundwater-fed pH > 5.0 > 40 cm fibric/mesic peat	Graminoid or low shrub	Deciduous shrubs, sedges, and brown mosses
	Marshes	Mineral soils or well-humified peat Protracted shallow flooding (0.1–2.0 m)	Graminoid or forb	Large emergent sedge, grass, forb, or horse- tail species
	Swamps	Mineral soils or well-humified peat Temporary shallow flooding (0.1–1.0 m) Significant water flow	Tall shrub or forested	Conifers, willows, alders, forbs, grasses leafy mosses
	Shallow waters	Permanent deep flooding (0.5–2 m)	Aquatic	Aquatic species Emergent vegetation < 10% cover

Figure 4. Summary of characteristics for wetland classes (adapted from Wetlands of British Columbia).

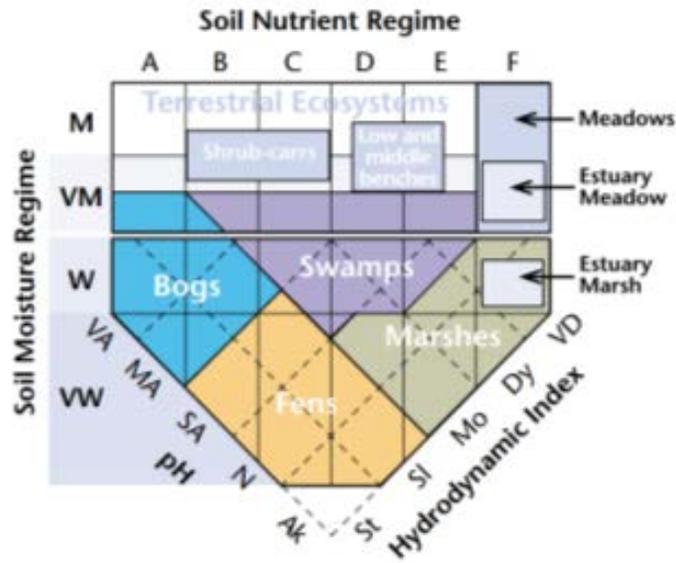


Figure 5. Site Class distribution on the modified edatopic grid (adapted from Wetlands of British Columbia). The grid indicates the typical range of soil moisture, soil nutrients, pH, and water movement for each wetland class.

3.0 Wetlands of the Slocan River Watershed

The following sections describe the main wetlands that occur in the Slocan River Watershed. Where possible, wetlands were identified to the site series (also known as a wetland association) level primarily based on the Wetlands of British Columbia (MacKenzie & Moran 2003). For all wetland types except bogs, numerous unclassified wetlands were found. These wetlands could be easily classified as a bog, swamp, etc., but they either contained a unique vegetation community that does not fit into the provincial classification system, or past disturbances have significantly modified the wetland making classification uncertain. These data have been provided to the local Ministry of Forests Research Ecologist and may result in future additions or local variations to known wetland associations. In addition to the five classes of wetlands, floodplains and shrub-carrs were also sampled and are described below. A total of 150 wetlands were inventoried in the watershed from 2013 to 2015 (Fig. 6). Detailed information regarding the site conditions present at each sampled wetland, as well as lists of identified vegetation are contained in the Appendices.

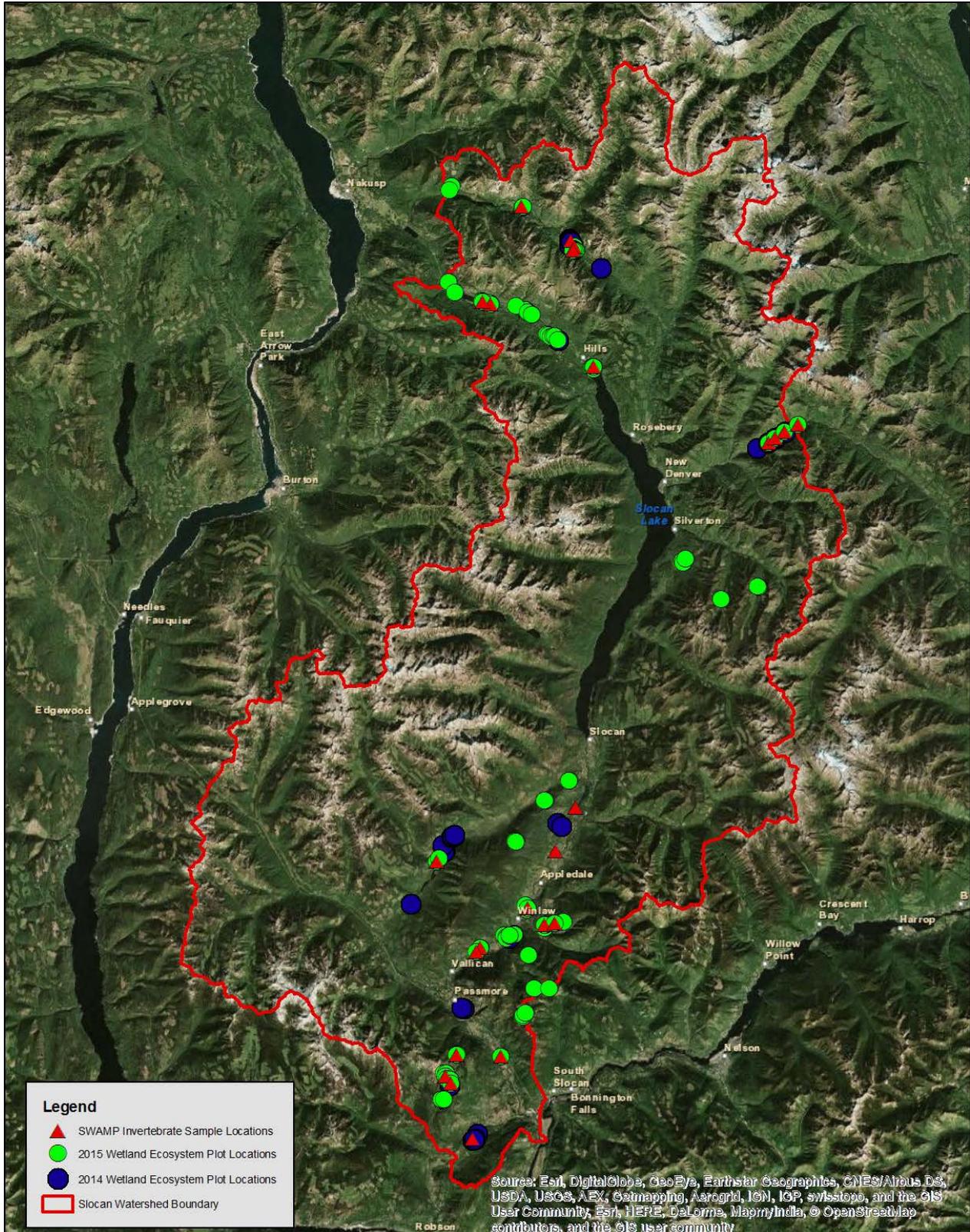


Figure 6. SWAMP wetland sample locations and invertibrate assessment locations (adapted from ESRI base maps).

3.1 Bog Site Associations

A bog is a nutrient-poor, *Sphagnum*-dominated peatland ecosystem in which the rooting zone is isolated from mineral-enriched groundwater, soils are acidic, and few minerotrophic plant species occur (MacKenzie & Moran 2003). Bogs may or may not contain a cover of slow growing woody, ericaceous shrubs or small stunted trees, generally occurring on hummocks or raised domes. A thick cover of *Sphagnum* (peat moss) is dominant, while other species that are tolerant of acidic, low nutrient conditions also occur. Bogs are typically located in closed basins (where precipitation is the primary water source), on the edges of larger peatlands, or as raised domes (normally within fens). Soils are deep peat deposits, generally with poorly decomposed upper layers, that remain saturated throughout the year. While some groundwater flow may occur, it is generally limited, resulting in little input of nutrients. (MacKenzie & Moran 2003)

Only one bog-like wetland was inventoried in the Study area. It occurred on the edges of Bog Lake on Perry Ridge at an elevation of 1,143 metres (Fig. 7). The bog consisted of a floating peat mat on the edge of the lake. It had a substrate of fibric peat greater than 160cm in depth. The water pH was 4.7 and conductivity was 10us indicating a poor nutrient regime and just meeting the criteria for a bog. Vegetation was abnormally diverse, given the substrate and low pH, but still limited to 13 species. Trees and shrubs did not occur in the wetland. Herbaceous cover was estimated at 85%, with Chamisso's cottongrass the dominant species in the wetland, along with slender sedge, broad-leaved starflower and round-leaved sundew. Mosses had a cover of 80 percent, consisting entirely of peat moss, mainly *Sphagnum capillifolium*.



Figure 7. Floating bog on the edge of Bog Lake, Perry Ridge.

3.2 Fen Site Associations

A fen is a nutrient-medium peatland ecosystem dominated by sedges, cottongrass (Fig. 8) and brown mosses, where mineral-bearing groundwater is within the rooting zone and minerotrophic plant species are common (MacKenzie & Moran 2003). Fens rely on steady groundwater inflow that provides relatively high nutrient contents, and maintains the watertable near the peat surface for most of the growing season, resulting in soils with richer nutrient regimes. They develop on a variety on landscape positions, including basins, lake and river margins, and seepage slopes. These sites are characterized by non-ericaceous shrubs, sedges, grasses, reeds, and brown mosses (MacKenzie & Moran 2003), while tall shrubs and trees are absent. Fens are the most commonly occurring wetland type in BC, occurring in all but the warmest regions. (MacKenzie & Moran 2003)

Fens were sampled 34 times in the study area and included six classified wetland associations (Table 1). The other 13 fens sampled could not be classified with provincial wetland associations or site series. While there was some repetition among the unclassified fens, they either did not fit into recognized fen associations, or they are recovering from significant disturbance.

Table 1. Summary of fen wetlands found in the study area.

Site Series	Scientific Name	Common Name	Number Sampled
Wf00	Unclassified		15
Wf01	<i>Carex utriculata</i> - <i>Carex aquatilis</i>	beaked sedge - water sedge	5
Wf04	<i>Salix barclayi</i> / <i>Carex aquatilis</i> / <i>Aulacomnium palustre</i>	Barclay's willow / water sedge / glow moss	2
Wf05	<i>Carex lasiocarpa</i> / <i>Drepanocladus</i> <i>aduncus</i>	slender sedge / common hook- moss	3
Wf12	<i>Eriophorum angustifolium</i> - <i>Caltha</i> <i>leptosepala</i>	narrow-leaved cotton-grass - white mountain marsh-marigold	1
Wf13	<i>Eriophorum angustifolium</i> - <i>Carex</i> <i>limosa</i>	narrow-leaved cotton-grass - shore sedge	7
Wf52	<i>Myrica gale</i> / <i>Carex sitchensis</i>	sweet gale / Sitka sedge	1
Total			34



Figure 8. Close-up of cottongrass (*Eriophorum* spp.) flowers and seeds. Cottongrass is found in most fens and is often a dominant species.

Unclassified fens were common throughout the study area. They ranged from sedge and cottongrass communities that were somewhat similar to other fen associations, but not close enough to classify any particular way (such as Fig. 9 which occurred between Hills and Summit Lake), to a floating peat moss fen in Bonanza Marsh that had characteristics of a bog (Fig. 10), but contained alkaline tolerant species (namely beaked spike-rush – *Eleocharis rostellata*, a blue-listed species that was only previously known from alkaline wetlands in the Okanagan and East Kootenays) and had a neutral water pH.



Figure 9. Example of an unclassified (Wf00) fen between Hills and Summit Lake.



Figure 10. Example of an unclassified (Wf00) in Bonanza Marsh.

Beaked sedge - water sedge fens (Wf01) are the most common and widespread fen in the province (MacKenzie & Moran 2004). It was mapped five times in the study area (and observed many more times) at elevations from 655 to 1487 metres. It typically occurred as component of a larger complex, and often near the edges of lakes and ponds in level plains or slight depressions (Fig. 11). The Wf01 is closely related to the Wm01, and occurs in similar landscape positions, but it contains organic soils where the Wm01 contains mineral soils. The sampled Wf01 fens had poorly to very poorly drained fibric to mesic soils that ranged from 13 to 150cm in depth. Soil moisture was wet to very wet with the water table at or near the surface year round. Water pH levels were acidic (less than 5) and conductivity was 90us.

Tree cover was absent, while shrubs ranged from 0-5% and included traces of hardhack, mountain alder and Engelmann spruce. Herb cover was high (80- 100% cover), but limited to a few dominant species, with water sedge, beaked sedge and Sitka sedge comprising most of the cover, with lesser amounts of shore sedge and cottongrass. No mosses were observed in any of the Wf01 fens.

The Wf01 fens ranged from excellent condition (generally the higher elevation ones) to fair condition (lower elevation sites near railways, roads and other human developments). The main disturbances were ATV tracks and modifications to drainage (from ditches and roads).



Figure 11. Beaked sedge - water sedge (Wf01) fen near Cooley Lake.

Barclay's willow / water sedge / glow moss fens (Wf04) were sampled in two locations (Fig. 12) at elevations over 1,500m. These fens occurred on the outer edges of large, level wetland complexes with Wf12 and shrub-carrs (Sc03). They are likely common in higher elevation areas in the study area, particularly above Pass Creek. The Wf04 had very poorly drained, poor to medium, mesic to fibric organic soils that were 60 to 90cm in depth. These sites have high water tables typically fed by continuous snow melt. Water pH levels were acidic (5.5) and conductivity was less than 20us.

The fens did not contain and trees. Shrub cover ranged from 20 to 50% of generally low growing, patchy Barclay's willow and sporadic subalpine fir. Herbaceous cover was high, ranging from 85 to 100% and included Canby's loveage, narrow-leaved cottongrass, shore sedge, and red top, along with a variety of other species with less than 5% cover. Moss cover was variable, ranging from 10 to 50% and contained glow moss, common hook moss and peat mosses (including *Sphagnum squarrosum* and *S. warnstorffii*).

The Wf04 fens were in excellent condition, with minor ATV tracks in places. No other significant disturbance was observed.



Figure 12. Barclay's willow / water sedge / glow moss (Wf04) fen above Pass Creek.

Slender sedge / common hook-moss fen (Wf05) was sampled in three locations, and was widespread in complexes such as Beaver Lake (Fig. 13). It occurred at an elevation ranging from 870 to 1,103 metres in lower slope and level positions. It always occurred in complex with other wetland types, normally along fluvial plains. Soils were poorly drained, poor to rich organic soils with a mesic texture. Soil depth ranged from 10 to 200cm with a water table that was at or near the surface year round. pH levels were generally neutral (6.2 – 7.9) and conductivity was 15 to 250us.

The fens lacked trees and had less than 1% shrub cover. Herbaceous cover ranged from 50 to 90% and typically had simplistic communities that are dominated by slender sedge, shore sedge and cottongrass. Moss cover ranged from 30 to 80% and was always dominated by common hook moss.

As with most other fens, the Wf04 wetlands were generally in excellent condition with no apparent disturbances.



Figure 13. Slender sedge / common hook-moss (Wf05) fen in the Beaver Lake complex.

Narrow-leaved cotton-grass - white mountain marsh-marigold fen (Wf12) was mapped in one location (Slocan Mountain). It occurred in a small level area complexed with Wf13 wetlands at an elevation of 1,947 metres (Fig. 14). The pH leve was neutral (7.4) and conductivity was low (8us).

The wetland did not contain and trees or shrubs. The herb layer was continuous with 75% cover and dominated by narrow-leaved cottongrass along with a variety of other herbaceous species. Due to the time of year (early summer) in which it was surveyed the number and percent cover of species observed did not reflect the true composition. Moss cover was 40% and included at least three species of peat moss (including *Sphagnum compactum* and *S. squarrosum*).

The Wf12 was in excellent condition with no recent or historic disturbances. Based on airphotos of the study area, it is expected that this wetland type is relatively common in small closed depressions and seepage slopes in the upper elevations. It is assumed to typically occur with Wf13 fens and cannot be reliably differentiated from it on air photos.



Figure 14. Narrow-leaved cotton-grass - white mountain marsh-marigold (Wf12) fen on Slocan Mountain.

Narrow-leaved cotton-grass - shore sedge fen (Wf13) is a high elevation (1,529-1,936m) wetland that was typically found in large complexes in level areas (Fig. 15). Soils were very poorly drained, poor to medium organic soils with a mesic texture. Soil depth ranged from 25 to 150cm over a variety of sandy to silty mineral soils with a water table that was at or near the surface year round. pH levels were slightly acidic to neutral (5.5 to 7.3) and conductivity was 8 to 55us.

Tree were absent, while shrubs ranged from 0-3% and generally consisted of sporadic small subalpine fir or willows. Herbs were generally thick and diverse with 65- 90% cover and dominated by narrow-leaved cottongrass, shore sedge, slender sedge, Kellogg's sedge, along with a variety of other herbaceous species. Moss cover ranged from 10 to 30% and included glow moss, peat mosses, and hook moss.

These high elevation fens were generally in excellent condition, with disturbances limited to minor logging around the edges and ATV tracks. The lack of harvestable trees and presence of standing water for much of the year, likely contributed to the general lack of disturbance.



Figure 15. Narrow-leaved cotton-grass - shore sedge (Wf13) fen above Pass Creek.

Sweet gale / Sitka sedge (Wf52) was mapped in one located at the north end of the study area at an elevation of 774 metres (Fig. 16). While it was classified as a Wf52, it is a poor fit to the provincial description, well outside of the normal range of the ecosystem type, and did not contain sweet gale. It occurred as a narrow fringe around a large Wf01 fen located in a depression. The fen occurred on very poorly drained, poor fibric soils with a sandy loam mineral soil at a depth of 60cm and a water table that was near the surface year round. Water pH and conductivity were not measured due to a lack of standing water during the survey.

Tree cover was absent, while shrubs had a 60% cover, with 55% hardhack and the remainder white pine and western hemlock. Herbaceous cover was 70%, with small-flowered bulrush accounting for the majority, along with cottongrass and water sedge. Moss cover was 50% and composed of peat mosses (including *Sphagnum squarrosum* and *S. warnstorffii*) and red-stemmed feathermoss.

The fen was completed with Wf01 and was in excellent condition. There were no obvious new or old disturbances within the complex. An old railway ran along the northwest edge of the complex, and may have altered hydrological process in the past.



Figure 16. Sweet gale / Sitka sedge (Wf52) fen north of Summit Lake.

3.3 Marsh Site Associations

A marsh is a permanently to seasonally flooded mineral wetland dominated by emergent grass-like vegetation (MacKenzie & Moran 2003). Marshes typically contain simplistic vegetation communities that are dominated by a small number of species, often in response to specific water regimes or other favourable conditions (Fig. 17). Shrubs, trees and bryophytes (moss) are generally absent or very sparse, while aquatic plants often occur. Marshes occur in dynamic hydrological systems, where there are significant fluctuations in water levels through the year. They are generally nutrient rich and more frequently occur in warmer climates. Marshes occur in a variety of landscape positions, but most often as pond and lake margins and river backwaters as a component of a larger wetland complex. Peat accumulation is generally limited due to the occurrence in warmer climates and the dynamic water levels, both of which promote decomposition of organic material, resulting in most marshes being comprised mainly of mineral soils. Marshes are generally flooded in the spring, while drier months may see a persistent high water table, or substantial drying and substrate exposure.

Marshes were sampled 26 times in the study area, including five classified wetland associations (Table 2). They generally occurred at lower elevations, with only one sampled above 1,000 metres, in association with lakes and ponds. The majority of the marshes occurred at Little Slokan Lakes, Bonanza Marsh, Beaver Lake, Summit Lake, and in old side channels and oxbows along the Slokan River.

Table 2. Summary of marsh wetlands found in the study area.

Site Series	Scientific Name	Common Name	Number Sampled
Wm00	Unclassified		5
Wm00	<i>Phalaris arundinacea</i>	reed canarygrass	2
Wm01	<i>Carex utriculata</i> - <i>Carex aquatilis</i>	beaked sedge - water sedge	9
Wm02	<i>Equisetum fluviatile</i> - <i>Carex utriculata</i>	swamp horsetail - beaked sedge	5
Wm05	<i>Typha latifolia</i> Marsh	common cattail Marsh	4
Wm06	<i>Schoenoplectus acutus</i> Deep Marsh	hard-stemmed bulrush Deep Marsh	1
Total			26



Figure 17. Three sedges found in Slocan wetlands, from left to right, *Carex retrosa*, *C. lasiocarpa*, and *C. exsiccate*.

Reed canarygrass marshes (Wm00) are not formally described wetland associations. Reed canarygrass is an introduced, invasive grass that is common in wetlands and riparian areas throughout southern BC. It grows in a variety of condition and is capable of surviving prolonged flooding. These marshes are common throughout the study area, particularly in low elevations areas along the Slocan River. They occur in a variety of landscape positions and site conditions and displace natural marshes and highly impact many swamps and floodplains. They range from near monocultures of reed canarygrass (Fig. 18), particularly on old flooded fields, to more patchy occurrences that still contain remnants of natural vegetation. These marshes provide limited wildlife habitat and are exceedingly difficult to restore to natural ecosystems.



Figure 18. Reed canarygrass (Wm00) marsh near Pedro Creek.

Beaked sedge - water sedge (Wm01) marsh was sampled nine times in the study area. The Wm01 is the most common and widespread marsh in the province. It typically occurs on lake and pond margins and other waterbodies that experience low-energy flood waters and some late-season drawdown (MacKenzie & Moran 2004). Wm01 fens occurred from 650 to 1,047 metres elevation in the study area, mainly in level plains beside ponds and occasionally rivers (Fig. 19). They occurred on medium to rich silty loam and sandy loam soils that were poorly drained and wet for most of the year. Water pH was neutral, ranging from 7.1 to 7.6, and conductivity was 43 to 167us.

Trees were absent from the Wm01, and shrubs generally had less than 1% cover. The wetlands were dominated by a continuous thick cover of herbaceous vegetation, always dominated by beaked sedge and water sedge, with variable covers of common horsetail, rushes, red top, and a variety of other sedges and grasses. Moss cover ranged from 0 to 5% and included glow moss, giant water moss, and golden star moss.

Most Wm01 marshes were in good to excellent condition, but it was dependent on the location. More remote wetlands and those associated with lakes such as Little Slokan Lakes and Beaver Lakes, tended to have no disturbance and be in excellent condition. Wetlands that occurred in the lower valley were more likely to have human disturbances and contain invasive species and many of the mapped reed canarygrass marshes were likely Wm01 marshes before being replaced by invasive species.



Figure 19. Beaked sedge - water sedge (Wm01) marsh near Bonanza Creek.

Swamp horsetail - beaked sedge (Wm02) marsh was sampled five times in the study area. The Wm02 occurs in permanently flooded margins of lakes and ponds, mainly at Beaver Lake, Little Wilson Lake and Little Slovan Lakes at elevations less than 1,000 metres (Fig. 20). These communities typically occur between open water and other marsh communities, mainly Wm01 and Wm04.

Wm02 occurred in medium to rich sandy loam soils in areas that experience seasonally variable water depths. Water pH was neutral (7.5) and conductivity 100us or greater. These marshes lacked any tree, shrub or moss layers. Herbaceous cover was variable, ranging from 35 to 85%, and simplistic. Dominant species included swamp horsetail and beaked sedge, with variable occurrences of common spikerush and other sedges.

All of the Wm02 sites that were surveyed were in excellent condition, with the exception of minor disturbances in Little Slovan Lakes for a boat launch.



Figure 20. Swamp horsetail - beaked sedge (Wm02) marsh in the Beaver Lake Complex.

Common cattail (Wm05) marshes were sampled four times in the study area and observed in several other locations. Cattail marshes can be deceptive, as the dominant species, common cattail, is an adaptive species that is often found growing in ditches and disturbed wet areas. Wm05 marshes ranged from small to large wetlands, including one near Appledale that covered several hectares. They typically form near monocultures with dense growth and a thick layer of decaying leaves and stocks in standing water that limits the growth of other emergent vegetation. Most cattail wetlands contain standing water year round, and often have shallow open water or ponds in deeper areas (Fig. 21).

Cattail marshes were found in lower elevations (under 600 metres) in the study area, normally in large levels areas along the inactive Slocan River floodplain. They occurred on rich silty substrates, often with thin mesic or fibric organic layers on the surface. Water levels were considered to be dynamic, with significant vertical fluctuations during the growing season, with all but the outer edges remaining wet year round. Water pH was alkaline (7.3 to 8.0) and conductivity ranged from 150 to 180us.

Vegetation in these communities is simplistic, with 75 to 100% cover of herbaceous species dominated by common cattail and little else. Aquatic species such as duck weed, bladderwort and bur-reed are also common but variable in cover.

Most of the inventoried Wm05 wetlands were in good condition. The edges of the communities often occurred in old fields or other disturbed areas. These wetlands contain considerable wildlife habitat potential, particularly for birds such as the re-wing blackbird.



Figure 21. Common cattail (Wm05) marsh near Appledale.

Hard-stemmed bulrush (Wm06) deep marsh was sampled in one location (Summit Lake) and observed sporadically in sheltered bays in Summit Lake and Bonanza Marsh. It occurred on the lake edge of Summit Lake at an elevation of 754 metres (Fig. 22). The Wm06 occurred in a rich, sandy substrate that is permanently flooded. Water pH was alkaline (8) with a conductivity of 100us. Vegetation was sparse and limited to a 20% herbaceous cover of hard-stemmed bulrush. No other species were observed.

All of the Wm06 observed in the study area were in excellent condition. All of the occurrence so this marsh type in Summit Lake contained hundreds of western toadlets.



Figure 22. Hard-stemmed bulrush (Wm06) deep marsh in Summit Lake.

3.4 Swamp Site Associations

A swamp is a nutrient-rich wetland ecosystem where significant groundwater inflow, periodic surface aeration, and/or elevated microsites allow for growth of large trees or tall shrubs under subhydric conditions (MacKenzie & Moran 2003). Swamps are dominated by conifer or broadleaf trees (often on mounded microsites), or tall shrubs. Herbaceous species are variable, and can range from thick to sparse covers, while bryophytes are generally limited. Tree dominated swamps typically occur as transitional areas between water or other wetlands and upland terrestrial communities, while shrub dominated swamps occur in a wide variety of conditions. Swamps range from moderate to rich communities that have significant groundwater flow and water tables that remain near or above the surface throughout the growing season. They typically occur on mineral soils that have a surface layer of well decomposed organic material. (MacKenzie & Moran 2003)

Swamps were sampled 60 times in the study area (Table 3). The majority of sample swamps could not be classified, mainly due to historic disturbances. The five swamps that were classified to the site series level, were common in the landscape, even if they were only sampled once (for instance Ws08 is a common wetland type in high elevation forests, but was only sampled one time). Swamps found in the watershed included both shrub (willow, alder, hardhack, red osier dogwood, or young conifers) and treed (western red cedar, western hemlock, spruce, subalpine fir). Herbaceous vegetation can be varied and diverse as swamps typically have rich mineral soils and fluctuating water tables. Common species include skunk cabbage, small-flowered bulrush, horsetails, sedges, introduced and native grasses, and numerous others (Fig. 23).

Due to past disturbances, many swamps that should be dominated by a conifer forest (mainly Ws10) often contained a younger seral stage that included a variety of shrubs and trees. With time, these recovering sites are expected to become conifer dominated.

Table 3. Summary of swamp wetlands found in the study area.

Site Series	Scientific Name	Common Name	Number Sampled
Ws00	Unclassified		29
Ws01	<i>Alnus incana</i> / <i>Lysichiton americanus</i> - <i>Athyrium filix-femina</i>	mountain alder / skunk cabbage - lady fern	6
Ws02	<i>Alnus incana</i> / <i>Spiraea douglasii</i> / <i>Carex sitchensis</i>	mountain alder / hardhack / Sitka sedge	4
Ws06	<i>Salix sitchensis</i> / <i>Carex sitchensis</i>	Sitka willow / Sitka sedge	5
Ws08	<i>Abies lasiocarpa</i> – <i>Valerina sitchensis</i> – <i>Equisetum arvense</i>	subalpine fir – Sitka valerian – common horsetail	1
Ws10	<i>Thuja plicata</i> – <i>Picea X</i> – <i>Lysichiton americanus</i>	western redcedar – spruce – skunk cabbage	15
Total			60



Figure 23. Skunk cabbage (*Lysichiton americanus*) leaf on left and close up of seed head with a small snail (*Oxyloma* sp.) on it.

Mountain alder / skunk cabbage - lady fern swamps (Ws01) were common and widespread in the study area, particularly in lower elevation areas near river, lands, and outer edges of wetland complexes around ponds and lakes (Fig. 24). Ws01 swamps occurred between 521 and 949m elevation in level areas or the toe of wet slopes. Soils were imperfectly to very poorly drained, rich to very rich silty loams to sandy loams, with a water table that was at or near the surface year round. pH levels were slightly acidic (6.9) and conductivity was 108 to 290us.

Tree cover was absent to less than 10%, while shrubs ranged from 25-50% and was dominated by mountain alder, with minor components of red osier dogwood, black hawthorn, black twinberry, cottonwood, Engelmann spruce, western red cedar, and elderberry. Herbs were generally thick and diverse with 50- 90% cover, with a large percent comprised of skunk cabbage, lady fern, small-flowered bulrush, horsetails, numerous sedges species, introduced and native grasses, and often dozens of other species with low covers. Moss was generally sparse (less than 5%) to rarely abundant (50% cover), and included leafy mosses and glow moss.



Figure 24. Mountain alder / skunk cabbage - lady fern (Ws01) swamp in the Bonanza Marsh Complex.

Mountain alder / hardhack / Sitka sedge (Ws02) swamps uncommon throughout the study area, but typically occupied large areas. It was sampled four times, normally in peripheral areas of lakes, ponds, beaver ponds, and low gradient creeks that experience early and prolonged flooding and some late season drawdown (Fig. 25). They occurred in lower elevation areas (655-758 metres) mainly around Summit Lake, Little Slocan Lakes, and in railway created depressions along the Slocan River. The Ws02 typically occurred on poorly drained medium to rich lacustrine or fluvial sandy loams, occasionally with a layer of mesic organic material on the surface. Water pH was neutral to slightly acidic (6.2 – 7.4) and conductivity ranged from 70 to 152us.

The Ws02 lacked tree cover and contained moderate to high (20 to 75%) shrub cover of mountain alder, hardhack and willows. Herbaceous cover was generally high (30 to 85%) and included water sedge, bluejoint, shore sedge, common spike-rush, Sitka sedge, and common horsetails. Mosses were always absent.

These swamps were generally in good condition, although most had (or were the result of) human or beaver modifications that altered water flow to create deeper, standing water.



Figure 25. Mountain alder / hardhack / Sitka sedge (Ws02) swamp near Summit Lake.

Sitka willow / Sitka sedge (Ws06) swamps were sampled five times in the study area and observed several more times, particularly along the Slocan River. They typically occurred in lower elevations (503 to 906 metres) on creek edges and old side channels that experience early season flooding and remain saturated throughout the year (Fig. 26). The Ws06 occurred on imperfectly to poorly drained medium to rich silty loams and sandy loams, often with a layer of mesic organics on top. Water pH ranged from 7.8 to 8.2 and conductivity ranged from 43 to 120 us.

The Ws06 lacked tree cover and was dominated by a thick (60 to 90%) of Sitka willow, mountain alder and lesser amounts of other willow species. Herbaceous cover was varied (5-80% cover) with some swamps contains such thick shrub cover that little else was able to grow. Herbaceous species included reed canarygrass, bluejoint, redtop, bulrush, horsetails, and traces of lady fern, sedges, rushes, skunk cabbage. Mosses were generally absent (0-10% cover) and included palm tree moss and leafy mosses.

These swamps were generally in fair to poor condition. Most of the ones that occurred along the Slocan River had a high cover of reed canarygrass, and some were observed that were completely choked out with it.



Figure 26. Sitka willow / Sitka sedge (Ws06) swamp in the Bonanza Marsh Complex.

The Subalpine fir – Sitka valerian – common horsetail (Ws08) swamp was sampled once in the study area and observed several other times. It occurs in high elevations (1,500 metres) along the margins of creeks or on the toe of seepage slopes where continual, nutrient rich ground water flows through the wetland. The Ws08 is a treed swamp that typically has a patchy appearance with clumps of trees and open areas containing herbs and shrubs (Fig. 27). The one sampled Ws08 had a 35 cm layer of mesic organic material over a poorly drained silty clay mineral soil. The water pH was 8.3 and conductivity could not be measured.

The tree layer contained a 25% cover of mature Engelmann spruce and subalpine fir. The shrub layer was patchy, but dense, with a 55% cover of Barclay’s willow, and small amounts of subalpine fir, Engelmann spruce, and white rhododendron. Herbaceous cover was continuous and diverse with 18 species and 90% total cover. Dominant herbs included Kellogg’s sedge, beaked sedge, common horsetail, red top, and several other species of sedges and orchids. The Moss layer was also continuous (95% cover) with common hook moss comprising the majority of it, along with red stemmed feather moss, leafy mosses and peat mosses (*Sphagnum squarrosum* and *S. warnstorffii*).

The sampled and observed Ws08 were in excellent condition. Most sites had evidence of historic logging around the wetland edges and occasionally into the wetland, but the deep, wet soils likely limited human disturbance.



Figure 27. Subalpine fir – Sitka valerian – common horsetail (Ws08) swamp near Cooley Lake.

Western redcedar – spruce – skunk cabbage (Ws10) swamps were abundant throughout the study area and sampled 15 times at elevations ranging from 539 to 1,266 metres. These forested swamps occurred on level plains on the edges of large wetland complexes and toes of seepage slopes. They ranged from mature and old growth stands with little evidence of disturbance, to young seral stands recovering from heavy logging. The Ws10 occurred on rich to very rich sites that had a mesic or humic organic layer of 20 to 120cm over silty loams and silty clay loams. They were poorly to very poorly drained with trees occurring on slight mounds, while wet depressions often contained standing water or mud (Fig. 28). Water pH ranged from 6.6 to 8.4 and conductivity was 62 to 176 μ S.

Sites ranged from open irregular canopies to closed forests. Tree cover was 5 to 60% (with the lower end representing more recent natural or human disturbances) with western red cedar, western hemlock and Engelmann spruce comprising the majority of the canopy. Cottonwood and paper birch occasional occurred as minor components. The shrub layer was moderate (15 to 40%) and mostly composed of the same tree species, along with minor amounts of red huckleberry, devil's club, mountain alder, mountain ash and red osier dogwood. Herbaceous cover ranged from 35 to 90% with skunk cabbage, lady's fern and small-flowered bulrush, common horsetail, and water sedge along with a wide diversity of other herbs. Moss cover varied with the ratio of dryer mounds to wet depressions (5 to 80%) and included palm tree moss, leafy mosses, red stemmed feathermoss, step moss and occasional peat mosses.

The Ws10 ranged from poor to excellent condition. As this wetland type often contained large, high value trees, it was (and in areas remains) sought after for logging. With the exception of some stands near Beave Lake and in the Hills to Summit Lake corridor, all occurrences of Ws10 had evidence of past logging. Recent (less than a year old) logging of Ws10 swamps was observed in the Hills to Summit Lake corridor, and other areas contained swamps in various stages of regeneration. It is thought that this wetland type was once much more abundant on the landscape, but logging and development (as it occurs in prime building and farm areas) and reduced it to small patches.



Figure 28. Western redcedar – spruce – skunk cabbage (Ws10) swamp along Bonanza Creek.

3.5 Shallow Open Water Wetlands

Shallow open water wetlands are aquatic wetlands permanently flooded by still or slow-moving water and dominated by rooted submerged and floating-leaved aquatic plants (MacKenzie & Moran 2003). These aquatic wetlands are simplistic communities that typically have less than 10% cover of emergent species. Shallow open water wetlands occur as a component of still or slowly moving waterbodies, and are normally a small component of a larger wetland or aquatic complexes. They occur in water that is less than two metres deep (deeper water limits light penetration and the ability for most rooted emergent species to grow). There are currently not any formal wetland associations or site series for shallow open water ecosystems.

Shallow Open Water wetlands were sampled 12 times in the study area. While we are not able to classify them in any comprehensive way at this time, two distinct communities were observed. The most common type is one that is dominated by a sparse to moderate cover of yellow pond lily with varying amounts of the full aquatic bladderwort (Fig. 29 and 30). The second type was rarely observed and consisted of a near continuous layer of narrow-leaved bur-reed (Fig. 29 and 31). Other shallow open water community included a mix of species including yellow pond lily, bur-reed, water buttercup, quillwort, and pondweed.



Fig. 29. Bur-reed flower (*Sparganium angustifolium*) on left, bladderwort (*Utricularia macrohiza*) flower and submerged bladders on right.



Figure 30. Yellow pond lily shallow open water wetland in the Beaver Lake Complex.



Figure 31. Bur-reed shallow open water wetland above Pass Creek.

3.6 Flood Site Associations

Flood associations are non-wetland ecosystems that occur in riparian areas that are regularly flooded or have seasonally high water tables. They range from low-bench floodplains (Fig. 32) that flood annually, either accumulates or loose sediment (scoured), and support a low diversity of flood tolerant shrubs (willow, alder, or young cottonwood). Mid-bench floodplains (Fig. 33) occupy a slightly higher elevation in fluvial floodplains, where they are flooded on an annual basis, but the flood waters are generally slow gradient and do not persist for as long as the low-bench floodplains. As result, the mid-bench flood associations' support forested communities that often have a lush and diverse assemblage of species.

In the Slocan Valley, the mid-bench floodplains are typified by the cottonwood stands that are widespread throughout the lower valley. Low-bench floodplains are common, but generally small and occupy old side channels and sheltered bays along the river and small floodplains of creeks and streams in other areas of the watershed. High-bench flood associations support terrestrial forests that evolved from the active floodplains. These areas only flood during large events and for short durations, although they often have seasonally high water tables. They support a wider variety of coniferous species than the mid-bench communities and are typically captured in the normal terrestrial BCG site series classifications. The Sensitive Ecosystems Inventory (SEI) mapping completed by the Slocan River Streamkeepers (Durand 2013) mapped over 350 hectares of mid-bench, 75 hectares of low-bench, and 28 hectares of high-bench floodplains along the Slocan River.

Two flood associations were identified in the study area, along with several unclassified mid-bench and high-bench associations (Table 4).

Table 4. Summary of floodplains found in the study area.

Site Series	Scientific Name	Common Name	Number Sampled
Fl01	<i>Alnus incana</i> / <i>Equisetum arvense</i>	mountain alder / common horsetail	2
Fm		mid-bench floodplain	4
Fm02	<i>Populus</i> spp. (<i>balsamifera</i> , <i>trichocarpa</i>) – <i>Picea</i> spp. / <i>Cornus stolonifera</i>	(balsam poplar, black cottonwood) - spruces / red-osier dogwood	2
Fh		high-bench floodplain	1
Total			9



Figure 32. Mountain alder / common horsetail (FI01) low-bench floodplain along Seaton Creek.



Figure 33. Balsam poplar, black cottonwood - spruces / red-osier dogwood (Fm02) mid-bench floodplain on the banks of the Slocan River near Pedro Creek.

3.7 Shrub-Carr Site Associations

Shrub-carrs are typically high elevation transitional communities that resemble wetlands. They occur in areas that experience cold air drainage resulting in frequent frost during the growing season, frequently between wetlands and forested ecosystems. The cold air, in combination with moist soils, preclude tree growth and result in communities that contain a high cover of low growing shrubs and typically a diverse assemblage of herbaceous species. Soils are mineral based and never flooded, imperfectly drained and remain cold year round. They are distinguished from wetlands by a low percent of obligate hydrophytes (species that only grown in wetlands).

One shrub-carr, Barclay's willow – arrow-leaved groundsel (Sc03), was observed but not sampled, in the mountains above Pass Creek (Fig. 34).



Figure 34. Barclay's willow – arrow-leaved groundsel (Sc03) shrub-carr above Pass Creek.

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5.0 Appendix 1: Site Data

Plot	Date	Name	Zone	Northing	Easting	Location	Crew	Ownership	Aspect	Elevation	Slope	Soil Moisture Regime
2015-01	22-May-15	Pedro Creek	11	5494031	457905	South	RD TE RM	Crown	999	520	0	4
2015-02	22-May-15	Pedro Creek	11	5493876	458125	South	RD TE RM	Crown	999	519	0	5+
2015-03	22-May-15	Pedro Creek	11	5493718	458081	South	RD TE RM	Crown	999	510	0	W
2015-04	1-Jun-15	Spanky	11	5494101	458876	South	RD TE RM GL DQ	Private	999	515	0	VW
2015-05	1-Jun-15	Spanky	11	5494119	458870	South	RD TE RM GL DQ	Private	999	514	0	VW
2015-06	1-Jun-15	Spanky	11	5494092	458819	South	RD TE RM DQ	Private	999	512	0	W
2015-07	1-Jun-15	Spanky	11	5494045	458853	South	RD TE RM DQ	?	999	531	1	W
2015-08	1-Jun-15	Pedro Creek	11	5493890	458391	South	RD TE RM DQ	Private	999	513	0	VW
2015-09	1-Jun-15	Pedro Creek	11	5494003	458378	South	RD TE RM DQ	Private	999	503	0	VW
2015-10	12-Jun-15	Goose Creek	11	5477955	451857	South	RD	Crown	999	1468	0	W
2015-100	17-Jun-15	Rockslide Lake	11	5488891	462225	South	TE RM	Crown	999	1577	0	7 8
2015-11	12-Jun-15	Goose Creek	11	5478040	451799	South	RD	Crown	999	1487	0	VM
2015-12	12-Jun-15	Goose Creek	11	5478136	451777	South	RD	Crown	999	1478	0	W
2015-13	12-Jun-15	Goose Creek	11	5478089	452021	South	RD	Crown	210	1487	4	W
2015-14	15-Jun-15	Slocan Mtn.	11	5486128	459718	South	RD TE RM	Crown	320	1947	3	W
2015-15	15-Jun-15	Slocan Mtn.	11	5486287	459695	South	RD TE RM	Crown	999	1936	0	VW
2015-16	15-Jun-15	Slocan Mtn.	11	5486492	459907	South	RD TE RM	Crown	999	1966	0	VW
2015-17	15-Jun-15	Slocan Mtn.	11	5488891	460811	South	RD TE RM	Crown	240	1623	3	7
2015-18	16-Jun-15	Winlaw Woodlot	11	5494723	461883	South	RD TE RM	Crown	999	972	0	W
2015-19	16-Jun-15	Winlaw Woodlot	11	5494723	461771	South	RD TE RM	Crown	999	972	0	VW
2015-20	16-Jun-15	Winlaw Woodlot	11	5494984	461843	South	RD TE RM	Crown	999	980	0	W
2015-21	16-Jun-15	Winlaw Woodlot	11	5495318	463602	South	RD TE RM	Crown	999	1266	0	W
2015-22	16-Jun-15	Winlaw Woodlot	11	5495138	462736	South	RD TE RM	Crown	999	1048	0	W
2015-23	17-Jun-15	Bonanza Creek	11	5552181	462005	North	RD MM	Crown	999	663	0	M
2015-24	17-Jun-15	Bonanza Creek	11	5552098	462147	North	RD MM	Crown	999	670	0	M
2015-25	17-Jun-15	Bonanza Creek	11	5551931	462407	North	RD MM	Crown	999	655	0	W
2015-26	17-Jun-15	Bonanza Creek	11	5552000	462616	North	RD MM	Crown	999	669	0	VM

Plot	Date	Name	Zone	Northing	Easting	Location	Crew	Ownership	Aspect	Elevation	Slope	Soil Moisture Regime
2015-27	17-Jun-15	Bonanza Creek	11	5551960	462748	North	RD MM	Crown	999	681	0	W
2015-28	17-Jun-15	Bonanza Creek	11	5551583	463083	North	RD MM	Crown	999	633	0	VW
2015-29	19-Jun-15	Bonanza Marsh	11	5548935	466340	North	RD MM TE RM DQ	Private	999	539	0	W
2015-30	19-Jun-15	Bonanza Marsh	11	5548969	466401	North	RD MM TE RM DQ	Private	999	554	0	W
2015-31	19-Jun-15	Bonanza Marsh	11	5548998	466453	North	RD MM TE RM DQ	Private	999	542	0	VW
2015-32	19-Jun-15	Bonanza Marsh	11	5548774	466518	North	RD MM TE RM DQ	Private	999	546	0	W
2015-33	22-Jun-15	Fominoff	11	5492049	460239	South	RD RM TE GL	Private	999	515	0	VW
2015-34	22-Jun-15	Fominoff	11	5496900	459948	South	RD RM TE GL	Private	999	523	0	VM
2015-35	22-Jun-15	Fominoff	11	5496477	460071	South	RD RM TE GL	Private	999	521	0	W
2015-36	22-Jun-15	Fominoff	11	5496629	460183	South	RD RM TE GL	Private	999	534	0	VW
2015-37	24-Jun-15	Hills to Summit Lake	11	5554309	459938	North	RD MM	Crown	999	757	0	VW
2015-38	24-Jun-15	Hills to Summit Lake	11	5554402	459966	North	RD MM	Crown	140	763	1	W
2015-39	24-Jun-15	Hills to Summit Lake	11	5554457	459971	North	RD MM	Crown	140	766	1	VM
2015-40	24-Jun-15	Hills to Summit Lake	11	5554525	459927	North	RD MM	Crown	150	772	4	M
2015-41	24-Jun-15	Hills to Summit Lake	11	5554874	459056	North	RD MM	Crown	999	769	0	VW
2015-42	9-Jul-15	Goose Creek	11	5480666	452042	South	RD TE	Crown	999	1597	1	VM
2015-43	9-Jul-15	Goose Creek	11	5480642	452243	South	RD TE	Crown	999	1597	1	W
2015-44	9-Jul-15	Goose Creek	11	5480380	452203	South	RD TE	Crown	999	1596	0	W
2015-45	9-Jul-15	Goose Creek	11	5480369	452213	South	RD TE	Crown	999	1596	0	VW
2015-46	9-Jul-15	Goose Creek	11	5480118	452345	South	RD TE	Crown	999	1586	0	VM
2015-47	9-Jul-15	Goose Creek	11	5480015	452643	South	RD TE	Crown	999	1584	0	VW
2015-48	9-Jul-15	Goose Creek	11	5479637	452715	South	RD TE	Crown	999	1585	0	VW
2015-49	9-Jul-15	Goose Creek	11	5482482	453365	South	RD TE	Crown	999	1529	0	VW
2015-50	9-Jul-15	Goose Creek	11	5482407	453242	South	RD TE	Crown	999	1533	0	VW
2015-51	15-Jul-15	Little Slovan Lakes	11	5501106	451351	South	RD MM TE RM DQ	Crown	999	650	0	VW
2015-52	15-Jul-15	Little Slovan Lakes	11	5501133	451341	South	RD MM TE RM DQ	Crown	999	653	0	VW
2015-53	15-Jul-15	Little Slovan Lakes	11	5501467	451610	South	RD MM TE RM DQ	Crown	999	676	0	6+
2015-54	17-Jul-15	Perry Ridge	11	5508993	464145	South	RD RM TE	Crown	999	825	0	VW

Plot	Date	Name	Zone	Northing	Easting	Location	Crew	Ownership	Aspect	Elevation	Slope	Soil Moisture Regime
2015-55	17-Jul-15	Perry Ridge	11	5507032	461837	South	RD RM TE	Crown	999	1143	0	VW
2015-56	17-Jul-15	Perry Ridge	11	5507032	461773	South	RD RM TE	Crown	999	1140	0	6+
2015-57	17-Jul-15	Perry Ridge	11	5503160	458982	South	RD RM TE	Crown	999	1585	0	VW
2015-58	17-Jul-15	Perry Ridge	11	5503041	459040	South	RD RM TE	Crown	999	1578	0	VW
2015-59	20-Jul-15	Summit Lake	11	5557210	452465	North	RD MM	Crown	999	766	0	VW
2015-60	20-Jul-15	Summit Lake	11	5557172	452541	North	RD MM	Crown	999	774	0	W
2015-61	20-Jul-15	Summit Lake	11	5556212	453143	North	RD MM	Crown	999	771	0	VW
2015-62	20-Jul-15	Summit Lake	11	5555387	455745	North	RD MM	Crown	999	754	0	VW
2015-63	20-Jul-15	Summit Lake	11	5555269	455870	North	RD MM	Crown	999	758	0	W
2015-64	20-Jul-15	Summit Lake	11	5555308	455898	North	RD MM	Crown	999	771	0	VM
2015-65	20-Jul-15	Summit Lake	11	5555229	456408	North	RD MM	Edge of Private land	999	758	0	W
2015-66	20-Jul-15	Summit Lake	11	5555043	456574	North	RD MM	?	999	751	0	VW
2015-67	28-Jul-15	Drainge west of Fennel Creek	11	5526520	478866	North	RD TE RM MM	Crown	999	1499	0	W
2015-68	28-Jul-15	Fennel Creek	11	5527683	482500	North	RD TE RM MM	Crown	999	1478	0	W
2015-69	28-Jul-15	Fennel Creek	11	5527776	482442	North	RD TE RM MM	Crown	999	1453	0	7
2015-70	28-Jul-15	Fennel Creek	11	5564443	459616	North	RD TE RM MM	Crown	999	902	0	VW
2015-71	29-Jul-15	Little Wilson Lake	11	5564488	459685	North	RD MM	Crown	999	905	0	7
2015-72	29-Jul-15	Little Wilson Lake	11	5560624	464699	North	RD MM TE RM DQ	Crown	999	873	0	VW
2015-73	29-Jul-15	Beaver Lake	11	5560461	464641	North	RD MM TE	Crown	999	870	0	VW
2015-74	29-Jul-15	Beaver Lake	11	5560320	464630	North	RD MM	Crown	999	876	0	VW
2015-75	29-Jul-15	Beaver Lake	11	5560169	464806	North	RD MM	Crown	999	896	0	VW
2015-76	29-Jul-15	Beaver Lake	11	5560251	464869	North	RD MM	Crown	999	906	0	M
2015-77	30-Jul-15	Horseshoe Lake	11	5566455	452829	North	RD MM	Crown	999	1047	0	VW
2015-78	30-Jul-15	Horseshoe Lake	11	5566137	452587	North	RD MM	Crown	999	1048	0	/M
2015-79	30-Jul-15	Hills to Summit Lake	11	5554261	460149	North	RD MM	Crown	999	762	0	VM
2015-80	30-Jul-15	Hills to Summit Lake	11	5554024	460588	North	RD MM	Crown	999	777	0	VW
2015-81	10-Sep-15	Red Mtn. Road	11	5530180	475137	North	RD MM	Crown	999	925	0	6/M

Plot	Date	Name	Zone	Northing	Easting	Location	Crew	Ownership	Aspect	Elevation	Slope	Soil Moisture Regime
2015-82	10-Sep-15	Red Mtn. Road	11	5530084	475218	North	RD MM	Crown	999	949	0	7
2015-83	10-Sep-15	Red Mtn. Road	11	5530429	475457	North	RD MM	Crown	999	922	0	7/W
2015-84	17-Jun-15	Rockslide Lake	11	5488891	462225	South	TE RM	Crown				
2015-85	10-Jul-15	Cunningham swamp	11	5482263	457573	South	TE RM DQ	Private				
2015-86	10-Jul-15	Ehlers Wetland	11	5492796	455562	South	TE RM DQ	Crown				
2015-87	10-Jul-15	Ehlers Wetland	11	5492796	455562	South	TE RM DQ	Crown				
2015-88	10-Jul-15	Frank Zalewski oxbow	11	5492379	455226	South	TE RM DQ	Private				
2015-202	21-Jul-15	Bonanza	11	5549023	466568	North	TE RM DQ	Private				
BL-002	29-Jul-15	Beaver Lake	11	5560293	464692	North	TE RM DQ	Crown				
BL-003	29-Jul-15	Beaver Lake	11	5560293	464563	North	TE RM DQ	Crown				
BON001	21-Jul-15	Bonanza	11	5549023	466568	North	TE RM DQ	Crown	999	540	0	8/VW
BON002	14-Jul-15	Seaton/3 forks	11	5542680	485047	North	TE RM DQ	Crown				
BON003	14-Jul-15	Seaton/3 forks	11	5543400	486333	North	TE RM DQ	Crown				
SEAT002	6-Aug-15	Seaton/3 forks	11	5541625	483503	North	TE RM DQ	Crown				
SEAT003	6-Aug-15	Seaton/3 forks	11	5542111	484088	North	TE RM DQ	Crown				
SUM001	21-Jul-15	Summit Lake	11	5555073	456568	North	TE RM DQ	Crown				
SUM002	21-Jul-15	Summit Lake	11	5555285	455800	North	TE RM DQ	Crown				
WIN001	30-Jun-15	Winlaw Woodlot	11	5494984	461819	South	TE RM DQ	Crown				
WIN002	30-Jun-15	Winlaw Woodlot	11	5495155	462757	South	TE RM DQ	Crown				
JAPC015	7/14/2014	Pass Creek	11	455322	5474745				999	575	0	7
JD-002	9/17/2014	Beaver Lakes	11	464276	5561276				999	889	0	8
JD-003	9/17/2014	Beaver Lakes	11	464234	5561078				999	889	0	8
JD-004	9/17/2014	Beaver Lakes	11	464299	5560893				999	881	0	8
MM-004	7/15/20104	Beaver Lakes	11	464276	5561276				999	889	0	
MM-009	7/16/2014	Seaton Creek	11	485210	5542739				999	1049	0	
MM-010	7/16/2014	Seaton Creek	11	484084	5542049				999	1008	0	
MM-011	7/16/2014	Seaton Creek	11	484095	5542038				999	1008	0	

Plot	Date	Name	Zone	Northing	Easting	Location	Crew	Ownership	Aspect	Elevation	Slope	Soil Moisture Regime
MM-012	7/16/2014	Seaton Creek	11	482437	5541121				999	901	0	
MM-013	7/16/2014	Seaton Creek	11	483456	5541655				999	945	0	
NVT-01	7/12/2014	Hunter Siding	11	463152	5551502				999	655	0	8
RD-01	6/6/2014	Seaton Creek	11	484150	5542031				999	1003	0	7
RD-02	6/6/2014	Seaton Creek	11	483480	5541657				999	949	0	8
RD-03	6/7/2014	Wright Bowles	11	454027	5486841				999	499	0	5
RD-04	6/7/2014	Wright Bowles	11	453781	5486902				999	488	0	5
RD-05	6/24/2014	Beaver Lakes	11	464231	5561307				999	883	0	8
RD-06	6/24/2014	Beaver Lakes	11	464322	5560878				999	877	0	8
RD-07	6/24/2014	Beaver Lakes	11	464278	5560764				999	880	0	7
RD-08	6/24/2014	Beaver Lakes	11	464534	5560767				999	885	0	8
RD-09	6/24/2014	Beaver Lakes	11	467308	5558491				999	859	0	8
RD-10	7/17/2014	Pass Creek	11	455023	5474224				999	576	0	8
RD-11	7/10/2014	Pass Creek	11	455116	5474249				999	575	0	8
RD-12	7/10/2014	Pass Creek	11	455115	5474207				999	580	0	6
RD-13	7/10/2014	Pass Creek	11	454616	5474448				999	573	0	8
RD-14	7/10/2014	Pass Creek	11	454895	5474149				999	570	0	8
RD-15	9/11/2013	Little Slocan Lakes	11	452836	5503410				999	648	0	8
RD-16	9/11/2013	Little Slocan Lakes	11	452976	5503603				999	651	0	8
RD-17	9/13/2013	Little Slocan Lakes	11	452902	5503511				999	659	0	8
RD-18	6/20/2014	Mtn. above Pass Creek	11	452667	5479459				999	1586	3	8
RD-19	8/9/2014	Little Slocan Lakes	11	453150	5503590				999	654	0	8
RD-20	8/9/2014	Little Slocan Lakes	11	453150	5503686				999	654	0	8
RD-21	8/9/2014	Little Slocan Lakes	11	448903	5496968				999	652	0	8
RD-22	9/23/2013	Slocan Island	11	463113	5504795				999	541	0	4
RD-23	7/10/2014	Pass Creek	11	455069	5474203				999		0	8
RD-24	9/23/2013	Slocan Island	11	463502	5504474				999	525	0	5+
SW-001	7/6/2014	Pedro Creek	11	458417	5493678				999	508	0	8

Plot	Date	Name	Zone	Northing	Easting	Location	Crew	Ownership	Aspect	Elevation	Slope	Soil Moisture Regime
TE101	8/14/2014	Little Slokan Lakes	11	453152	5503592				999		0	
TE102	8/14/2014	Little Slokan Lakes	11	452973	5503609				999		0	
TE103	8/14/2014	Little Slokan Lakes	11	452903	5503513				999		0	
TE104	8/14/2014	Little Slokan Lakes	11	452838	5503406				999		0	
TE105	8/14/2014	Little Slokan Lakes	11	452168	5502227				999	657	0	
TE106	8/14/2014	Little Slokan Lakes	11	452106	5502088				999		0	
TE107	8/14/2014	Little Slokan Lakes	11	451945	5502658				999	662	0	
TE3FK01	9/12/2014	Seaton Creek	11	483513	5541614				999		0	
TE3FK02	9/12/2014	Seaton Creek	11	484164	5542063				999		0	
TE3FK03	9/12/2014	Seaton Creek	11	485115	5542606				999		0	
TEBL01	9/13/2014	Beaver Lakes	11	464224	5561314				999		0	
TEBL03	9/13/2014	Beaver Lakes	11	464334	5561161				999		0	
TEBL04	9/13/2014	Beaver Lakes	11	464368	5561059				999		0	

Plot	Hydrodynamic Index	Soil Nutrient Regime	Meso Slope Position	Hydrogeomorphic Position	Moisture Subclass Organic Soil	Organic Soil Texture	Organic Horizon Thickness	Von Post	Humus Form	Mineral Soil Texture	Drainage	BGC
2015-01		B	LV	Fluvial						SL	Well	ICHdw1
2015-02		D	LV	Fluvial						SL	Imperfectly	ICHdw1
2015-03	SI	C	LV	Fluvial	Peraquic	Mesic		6		LS	Poorly	ICHdw1
2015-04	Mo	D	DP	Basins and Hollows	Peraquic	Mesic	100cm+	7			VP	ICHdw1
2015-05	Mo	D	LV	Fluvial	Aquic	Mesic	3			SiL	VP	ICHdw1
2015-06	Mo	D	DP	Basins and Hollows	Aquic	Mesic				SiL	Poorly	ICHdw1
2015-07	SI	E	Toe	Seepage Slopes	Peraquic	Humic	80+	8			VP	ICHdw1
2015-08	Mo	D	DP	Ponds and Potholes	Aqueous	Mesic	14	7		SiL	VP	ICHdw1
2015-09	Mo	D	LV	Fluvial	Peraquic	Mesic	60+	6		SiL	Poorly	ICHdw1
2015-10	SI	B	Mid	Seepage Slopes	Peraquic	Mesic	36	6		SiL	VP	ICHmw2
2015-100			LV	Seepage Slopes		Fibric	>60					ESSFwc1
2015-11	SI	C(B)	DP	Seepage Slopes	Peraquic	Mesic	13	6		SiCL	VP	ICHmw2
2015-12	SI	C(B)	LV	Seepage Slopes	Aqueous	Mesic	150+	6			VP	ICHmw2
2015-13	SI	C(B)	Mid	Seepage Slopes	Peraquic	Mesic	60	6			VP	ICHmw2
2015-14	SI	B (C)	Lower	Seepage Slopes	Peraquic	Fibric	40+	3			VP	ESSFwc4
2015-15	SI	B	LV	Seepage Slopes	Peraquic	Fibric	60+	3			VP	ESSFwc4
2015-16	SI		DP	Ponds and Potholes	Aqueous						VP	ESSFwc4
2015-17	Mo	D-C	Toe	Seepage Slopes	Aquic	Fibric	20	3		SL	Imperfectly	ESSFwc1
2015-18	Mo	D	LV	Basins and Hollows	Peraquic	Mesic	25	6		SiCL	VP	ICHdw1
2015-19	St	C	DP	Basins and Hollows	Peraquic					SiL	VP	ICHdw1
2015-20	Mo	C-D	DP	Basins and Hollows	Aqueous	Mesic	20	5+		SiCL	VP	ICHdw1
2015-21	Mo	D	DP	Basins and Hollows	Aquic	Humic	60	8		SiCL	Poorly	ICHmw2
2015-22	Mo	D-E	LV	Basins and Hollows	Aqueous	Humic	15	8		SiCL	VP	ICHdw1
2015-23	Mo	D	LV	Fluvial	Subaquic				Mor	SL	Well	ICHmw2
2015-24	Mo	D	LV	Seepage Slopes	Aquic	Mesic	15	6	Om	L	Poorly	ICHmw2
2015-25	SI	C	LV	Fluvial	Peraquic	Mesic	43	6			VP	ICHmw2
2015-26	Mo	D	LV	Fluvial	Aquic					SiL	Imperfectly	ICHmw2

Plot	Hydrodynamic Index	Soil Nutrient Regime	Meso Slope Position	Hydrogeomorphic Position	Moisture Subclass Organic Soil	Organic Soil Texture	Organic Horizon Thickness	Von Post	Humus Form	Mineral Soil Texture	Drainage	BGC
2015-27	Mo	D	LV	Fluvial	Peraquic	Mesic	8	6		SiL	Imperfectly	ICHmw2
2015-28	St	C	DP	Ponds and Potholes	Aqueous	Humic	5	8		SL	VP	ICHmw2
2015-29	Mo	D	LV	Lacustrine	Peraquic				Mull	SiL	Poorly	ICHdw1
2015-30	Mo	E	LV	Lacustrine	Aqueous					SiL	VP	ICHdw1
2015-31	Mo	C	LV	Lacustrine	Aqueous					SL	VP	ICHdw1
2015-32	Mo	C	LV	Lacustrine	Aquic				Mull	SiL	Imperfectly	ICHdw1
2015-33	Mo	B	DP	Ponds and Potholes	Aqueous	Mesic	20	6		Si	VP	ICHmw2
2015-34	Mo	C	LV	Fluvial	Subaquic				Mull	SiL	Imperfectly	ICHdw1
2015-35	Mo	E	Toe	Seepage Slopes	Peraquic	Mesic	140+	6 to 8			VP	ICHdw1
2015-36	St	B	DP	Ponds and Potholes	Aqueous					SiL	VP	ICHdw1
2015-37	SI	C	LV	Seepage Slopes	Peraquic	Fibric	140	3			VP	ICHmw2
2015-38	SI	B	LV	Seepage Slopes	Peraquic	Fibric	140+	3			VP	ICHmw2
2015-39	Mo	D+	LV	Seepage Slopes	Peraquic	Fibric	60	3	Oh	SiL	Poorly	ICHmw2
2015-40	Mo	E	LV	Seepage Slopes	Peraquic	Fibric	70	3		SiL	Poorly	ICHmw2
2015-41	SI	D	LV	Lacustrine	Peraquic				Mull	Si	VP	ICHmw2
2015-42	SI	B	LV	Seepage Slopes	Peraquic	Mesic	60	2		S	VP	ICHmw2
2015-43	SI	B/C	LV	Seepage Slopes	Peraquic	Mesic	45	7		FSL	Poorly	ICHmw2
2015-44	SI	C/B	LV	Seepage Slopes	Peraquic	Mesic	25	7		L	VP	ICHmw2
2015-45	St	C	DP	Ponds and Potholes	Aqueous	Humic	40	8 to 9			VP	ICHmw2
2015-46	SI	C	LV	Seepage Slopes	Peraquic	Fibric	90	3			VP	ICHmw2
2015-47	SI	C-	LV	Seepage Slopes	Peraquic	Mesic	150	7		FSL	VP	ICHmw2
2015-48	St	B	DP	Ponds and Potholes	Aqueous	Fibric	10	3		SiL	VP	ICHmw2
2015-49	Mo	C	LV	Lacustrine	Peraquic	Mesic	140	7			VP	ICHmw2
2015-50	St	C	LV	Lacustrine	Aqueous	Mesic	40+	7			VP	ICHmw2
2015-51	Mo	C	LV	Lacustrine	Aqueous		0			SiL	VP	ICHdw1
2015-52	SI	C	LV	Lacustrine	Peraquic					SiL	VP	ICHdw1
2015-53	Mo	D	LV		Aquic					SiL	Poorly	ICHdw1
2015-54	Mo	D	DP	Basins & Hollows	Aqueous	Humic	140	8			VP	ICHdw1

Plot	Hydrodynamic Index	Soil Nutrient Regime	Meso Slope Position	Hydrogeomorphic Position	Moisture Subclass Organic Soil	Organic Soil Texture	Organic Horizon Thickness	Von Post	Humus Form	Mineral Soil Texture	Drainage	BGC
2015-55	St	B	DP	Ponds and Potholes	Aqueous	Fibric	160	2			VP	ICHmw2
2015-56	Mo	D	LV	Seepage Slopes	Aquic		35+			SiL	Poorly	ICHmw2
2015-57	St	C	LV	Seepage Slopes	Aqueous	Mesic	150+	7			VP	ESSFwc1
2015-58	St	C	LV	Basins & Hollows	Aqueous	Mesic	140+	8			VP	ESSFwc1
2015-59	SI	B	DP	Basins & Hollows	Aqueous	Fibric	150+	2			VP	ICHmw2
2015-60	Mo	B	DP	Basins & Hollows	Peraquic	Fibric	60	3		SL	VP	ICHmw2
2015-61	Mo	C	LV	Lacustrine	Aqueous					LS	Poorly	ICHmw2
2015-62	Dy	D	LV	Lacustrine	Aqueous					S	VP	ICHmw2
2015-63	Mo	C+	LV	Lacustrine	Aqueous	Mesic	140	6		SiL	VP	ICHmw2
2015-64	Mo	D+	LV	Seepage Slopes	Peraquic	Humic	50	8		Si	VP	ICHmw2
2015-65	Mo	C+	LV	Lacustrine	Aqueous					SL	Poorly	ICHmw2
2015-66	Mo	D	LV	Lacustrine	Aqueous					SiL	VP	ICHmw2
2015-67	Mo	D	LV	Seepage Slopes	Peraquic	Mesic	35	5		SiC	Poorly	ESSFwc1
2015-68	SI	B/C	LV	Basins & Hollows	Aqueous	Fibric	130+	3-			VP	ICHmw2
2015-69	SI	C	LV	Fluvial	Peraquic					LS	Poorly	ICHmw2
2015-70	Mo	B	LV	Lacustrine	Aqueous						Imperfectly	ICHmw2
2015-71	Mo	D	LV	Lacustrine	Peraquic				Mull	SL		ICHmw2
2015-72	Mo	B	LV	Basins & Hollows	Aqueous					LS	Poorly	ICHmw2
2015-73	Mo	B	LV	Basins & Hollows	Aqueous	Mesic	140+	6 to 7			VP	ICHmw2
2015-74	St	C+	DP	Ponds and Potholes	Aqueous					SiL	VP	ICHmw2
2015-75	St	C	DP	Ponds and Potholes	Aqueous					SiL	VP	ICHmw2
2015-76	Mo	B/C	LV	Seepage Slopes	Peraquic					S	Mod. Well	ICHmw2
2015-77	Mo	C+	LV	Ponds and Potholes	Aqueous					SL	Poorly	ICHmw2
2015-78	Mo	D	Toe	Basins & Hollows	Aquic	Mesic	20+	7			Poorly	ICHmw2
2015-79	Mo	E	Toe	Seepage Slopes	Aquic	Mesic	120+	7+			Poorly	ICHmw2
2015-80	SI	D	DP	Basins & Hollows	Aqueous	Mesic	120+	7			VP	ICHmw2
2015-81	Mo	D/C	LV	Basins & Hollows	Aquic					L	Imperfectly	ICHmw2
2015-82	Mo	D+	Toe	Basins & Hollows	Peraquic	Mesic	25	6 to 7		LS	Poorly	ICHmw2

Plot	Hydrodynamic Index	Soil Nutrient Regime	Meso Slope Position	Hydrogeomorphic Position	Moisture Subclass Organic Soil	Organic Soil Texture	Organic Horizon Thickness	Von Post	Humus Form	Mineral Soil Texture	Drainage	BGC
2015-83	Mo	D	LV	Basins & Hollows	Peraquic	Mesic	200+	6			Poorly	ICHmw2
2015-84												ESSFwc1
2015-85												ICHdw1
2015-86												ICHdw1
2015-87												ICHdw1
2015-88												ICHdw1
2015-202												ICHdw1
BL-002												ICHmw2
BL-003												ICHmw2
BON001	SI	B	LV	Lacustrine	Aqueous	Fibric	150+	3			VP	ICHdw1
BON002												ICHmw2
BON003												ICHmw2
SEAT002												ICHmw2
SEAT003												ICHmw2
SUM001												ICHmw2
SUM002												ICHmw2
WIN001												ICHdw1
WIN002												ICHdw1
JAPC015	Mo	D	L	Fluvial	Aqueous							
JD-002	SI		L		Aqueous							
JD-003	SI		L		Aqueous							
JD-004	SI		L		Aqueous							
MM-004			L									
MM-009	Mo		L	Fluvial								
MM-010	Mo		L	Fluvial								
MM-011				Fluvial								
MM-012			L	Fluvial								

Plot	Hydrodynamic Index	Soil Nutrient Regime	Meso Slope Position	Hydrogeomorphic Position	Moisture Subclass Organic Soil	Organic Soil Texture	Organic Horizon Thickness	Von Post	Humus Form	Mineral Soil Texture	Drainage	BGC
MM-013	Mo		L	Fluvial								
NVT-01	SI	D	L	Fluvial								
RD-01	Mo	C	L	Lacustrine	Aquic	Mesic	10	5		Loamy	Imperfectly	
RD-02	Mo	D	L	Fluvial	Peraquic					Silty	Poorly	
RD-03		D	L	Fluvial	Perhumid					Silty	Well	
RD-04		C	L	Fluvial	Perhumid					Sandy	Rapidly	
RD-05	SI	D	L		Aqueous	Humic	40+	8				
RD-06	Mo	D	L	Fluvial	Aqueous	Mesic	200+	5				
RD-07	Mo	D	L	Fluvial						Silty	Poorly	
RD-08	Mo	M	L	Fluvial	Aqueous	Mesic	5			Silty	Poorly	
RD-09	Mo	D	L	Fluvial						Silty	Very Poorly	
RD-10	SI	D	L	Fluvial	Aqueous							
RD-11	SI	D	L	Fluvial	Aqueous							
RD-12	SI	D	L	Fluvial	Peraquic							
RD-13	Mo	D	L	Fluvial	Aqueous	Mesic	40+	6				
RD-14	SI		L	Fluvial	Aqueous							
RD-15	Mo	D	D	Lacustrine	Humid	Humic	5	9		Loamy	Very Poorly	
RD-16	Mo	D	L	Lacustrine	Perhumid	Humic	200+	9				
RD-17	Mo	D	L	Lacustrine	Perhumid	Humic	150+	9				
RD-18	SI	B	L	Seepage Slopes	Aqueous	Fibric	40+	3				
RD-19	SI	D	L	Lacustrine	Peraquic	Mesic	110	7				
RD-20	SI	D	L	Lacustrine	Aqueous	Mesic	100+	6				
RD-21	SI	D	L	Fluvial	Peraquic	Humic	120+	8				
RD-22		C	L	Fluvial						Sandy	Well	
RD-23	Mo	D	L	Fluvial	Aqueous	Humic	40	9				
RD-24		C	L	Fluvial						Sandy	Mod. Well	
SW-001	Mo	B	L	Fluvial						Silty	Poorly	

Plot	Hydrodynamic Index	Soil Nutrient Regime	Meso Slope Position	Hydrogeomorphic Position	Moisture Subclass Organic Soil	Organic Soil Texture	Organic Horizon Thickness	Von Post	Humus Form	Mineral Soil Texture	Drainage	BGC
TE101			L		Aqueous							
TE102			L		Aqueous							
TE103			L		Aqueous							
TE104			L									
TE105			L									
TE106			L									
TE107			L									
TE3FK01			L									
TE3FK02			L									
TE3FK03			L									
TEBL01			L									
TEBL03			L									
TEBL04			L									

Plot	Site Series	Structural Stage	Wetland Class	Water Colour	pH	Conductivity	Percent Open Water	Tree Cover	Shrub Cover	Herb Cover	Moss Lichen Cover
2015-01	Fh??	5oM	Floodplain					20	40	25	15
2015-02	Fm02	5tB	Floodplain					35	65	67	0.1
2015-03	Ws06	3b	Swamp		8.2	43		0	65	50	0
2015-04	Wm00	2b	Marsh		7.7			0	0	90	0
2015-05	Wm00 - PHALARU	2b	Marsh	Blue-Green Clear	7.9	82	90	0	0	90	0
2015-06	Wm00 - PHALARU	2b	Marsh					0	0	99	0
2015-07	Ws01	5oB	Swamp					5	25	90	5
2015-08	Wm05	2b	Marsh	Yellow-Deep Brown Turbid	7.3	184	75	0	0	75	0
2015-09	Ws06	3b	Swamp				10	0	65	50	5
2015-10	Wf	2b	Fen		5.1	22	5	0	10	80	30
2015-100	Wf			Tea Coloured				5	5	95	30
2015-11	Wf01	2b	Fen		4.6	17	90	0	5	80	0
2015-12	Wf	2b	Fen	Green-Brown Clear	5.1	8	20	0	5	65	15
2015-13	Wf	2b	Fen								
2015-14	Wf12	2b	Fen	Blue-Green Clear	7.4	8.1	10	0	0	75	40
2015-15	Wf13	2b	Fen	Blue-Green Clear	7.1	10.3	40	0	0.1	90	50
2015-16	OW		Open Water					0	0	0	0
2015-17	Ws10?	5oC	Swamp	Green-Brown Clear	8.4	18.5	5	10	30	75	80
2015-18	Ws10?	5oM	Treed Swamp	Green-Brown Clear	8.2	100	50	15	40	30	30
2015-19	OW	2b	Pond	Green-Brown Clear	7.2	100	100	0	5	20	20
2015-20	Ws	3b	Swamp	Green-Brown Clear	7.8	120	80	5	25	40	20
2015-21	Ws10 (YS)	2b	Swamp	Green-Brown Clear	7.6	62	10	5	35	90	35
2015-22	Ws	3b/2b	Swamp	Green-Brown Clear	7.8	84	35	5	15	80	15
2015-23	Ws01	3b	Swamp					0	50	80	0
2015-24	Ws10	6mC	Treed Swamp					35	30	70	40
2015-25	Wf01	2b	Fen					0	0.1	100	0
2015-26	Ws10	6oC	Treed Swamp					20	40	80	5

Plot	Site Series	Structural Stage	Wetland Class	Water Colour	pH	Conductivity	Percent Open Water	Tree Cover	Shrub Cover	Herb Cover	Moss Lichen Cover
2015-27	Ws06	3b	Swamp	Green-Brown Clear	7.9	82	50	0	60	80	10
2015-28	OW	2c	Open Water	Green-Brown Clear	8.1	120	100	0	0	65	0
2015-29	Ws10	6mM	Treed Swamp					35	20	90	0.1
2015-30	Ws01	3b	Swamp	Green-Brown Clear	6.8	108	70	10	40	50	3
2015-31	Wm00	2b	Marsh	Green-Brown Clear	7.8	68	50	0	15	65	0
2015-32	Ws06	3b	Swamp	Green-Brown Turbid	7.8	120	10	0	90	5	5
2015-33	Wm05	2b	Marsh	Green-Brown Turbid	8		10	0	0	90	0
2015-34	Ws	3b	Swamp					0.1	35	90	0
2015-35	Ws01	3b	Swamp					0	40	90	5
2015-36	OW	2c	Open Water	Green-Brown Turbid	8.3	440	100	0	0	20	0
2015-37	Wf00	2b	Fen	Blue-Green Clear	8.3	46	5	0	5	90	80
2015-38	Wf00	2b/3b	Fen	Blue-Green Clear	7.6	45	5	1	15	90	80
2015-39	Ws10	6mC	Treed Swamp		7.1			50	15	65	15
2015-40	Ws10	6tC	Treed Swamp		7.2	100	5	45	25	80	30
2015-41	Wm00	2b	Marsh	Blue-Green Clear	7.1	62	10	0	5	90	0.1
2015-42	Wf04	3a	Fen	Green-Brown Clear	5.5	12.9	5	0	50	85	50
2015-43	Wf13	2b	Fen		5.5	8.5	2	0	3	80	10
2015-44	Wf13	2b	Fen		6.5	16.5	15	0	0	90	15
2015-45	OW	2a	Open Water	Green-Brown Clear	6.5	17	100	0	0	40	0
2015-46	Wf04?	2b	Fen		5.5	17.4	20	0	20	100	10
2015-47	Wf13	2b	Fen		5.5		0	0	0	65	10
2015-48	OW	2a	Open Water	Green-Brown Clear	6.5	15	100	0	0	60	0
2015-49	Wf13??	2b	Fen					0	0.1	90	20
2015-50	OW		Open Water	Green-Brown Clear	6.1	18	100	0	0	15	0
2015-51	Wm02	2b	Marsh	Green-Brown Clear	7.9	40	65	0	0	35	0
2015-52	Wm01	2b	Marsh					0	0.1	90	0
2015-53	Ws10	7mC	Treed Swamp					60	20	50	25
2015-54	Ws00	3b	Swamp		7.4		0	5	40	60	10

Plot	Site Series	Structural Stage	Wetland Class	Water Colour	pH	Conductivity	Percent Open Water	Tree Cover	Shrub Cover	Herb Cover	Moss Lichen Cover
2015-55	Wb	2b	Bog	Blue-Green Clear	4.7	10	10	0	0	75	80
2015-56	Ws10	6mC	Treed Swamp								
2015-57	Wf13	2b	Fen	Green-Brown Clear	7.3	11	30	0	0.1	80	35
2015-58	Wf13	2b	Fen		6.3	55	0	0	0.1	80	35
2015-59	Wf01	2b	Fen		4.9		0	0	0.1	90	0
2015-60	Wf52 - poor fit	3a	Fen				0	0	60	70	50
2015-61	Ws02	3a	Swamp/Fen?	Green-Brown Clear	6.2	152	100	0	20	60	0
2015-62	Wm06	2b	Marsh	Green-Brown Clear	8	153	100	0	0	20	0
2015-63	Wf00 - Spirea - Slender Sedge	2b	Fen	Green-Brown Clear	6.9	115	10	0	15	80	30
2015-64	Ws10	6tC	Treed Swamp		6.6	84	5	30	20	75	15
2015-65	Ws02	3a	Swamp	Green-Brown Clear	7.3	70	80	0	75	30	0
2015-66	Wm01	2b	Marsh	Green-Brown Clear	7.3	167	100	0	10	90	0
2015-67	Ws08	6sC	Swamp		8.3		<5	0			
2015-68	Wf04	2b/3b	Fen	Green-Brown Clear	7.8	67	<5	0	30	80	80
2015-69	Ws00	5oC	Swamp	Green-Brown Clear	6.9	87	25	10	50	90	40
2015-70	Wm01	2b	Marsh	Green-Brown Turbid	7.6	56	15	0	0	75	0
2015-71	Ws	6mC	Swamp	Green-Brown Turbid	6.3	72	5	35	50	50	10
2015-72	Wm02	2b	Marsh	Green-Brown Clear	7.5	61	100	0	0	85	0
2015-73	Wf05 - best fit	2b	Fen		6.2	40	<5	0	0	90	
2015-74	OW	2a	OW	Green-Brown Clear	7.4	42	100	0	0		
2015-75	OW	2a	OW	Green-Brown Clear	7.3	74	100				
2015-76	Ws06	3b	Swamp					0	90	10	0
2015-77	Wm01	2b	Marsh	Green-Brown Clear	7.7	43	10	0	0.1	80	5
2015-78	Ws10 - YS	5sC	Swamp								
2015-79	Ws10	6mC	Swamp				0	30	35	50	40
2015-80	Wf00	2b	Fen		7.3	141	5	0	0.1	90	5
2015-81	Ws01	3b	Swamp					0	25	90	50

Plot	Site Series	Structural Stage	Wetland Class	Water Colour	pH	Conductivity	Percent Open Water	Tree Cover	Shrub Cover	Herb Cover	Moss Lichen Cover
2015-82	Ws10	6tC	Swamp					40	30	35	35
2015-83	Wf01 - best fit	2b	Fen					0	10	90	0
2015-84	Wf00		Fen								
2015-85	Wm05		Marsh								
2015-86	FI01		Floodplain								
2015-87	FI01		OW								
2015-88	OW		OW								
2015-202	Wf		Fen/Bog								
BL-002	Wm02		Marsh								
BL-003	OW		SW50Marsh50								
BON001	Wf00	2b	Fen	Green-Brown Clear	7.4	500	20	0	0.1	90	90
BON002											
BON003											
SEAT002	OW		SW70Wm30								
SEAT003	Wm02		Marsh								
SUM001					6.9	560	20				
SUM002											
WIN001											
WIN002											
JAPC015	WN:sp	3b	Swamp								
JD-002	Wm01	2b	Marsh					0	0	95	0
JD-003	Wm01	2b	Marsh					0	0	60	0
JD-004	WN:fn	2b	Fen					0	0	80	1
MM-004	WN:sp										
MM-009	WN:sp	3b	Swamp		7.6			0	45	50	5
MM-010	WN:sp	3b	Swamp					0	80	70	0.1
MM-011	WN:sp	3b	Swamp					0	25	35	0

Plot	Site Series	Structural Stage	Wetland Class	Water Colour	pH	Conductivity	Percent Open Water	Tree Cover	Shrub Cover	Herb Cover	Moss Lichen Cover
MM-012	FW:pd		Pond		7.8						
MM-013	WN:sp	3b	Swamp				10	0	75	95	0
NVT-01	Ws02	3b	Swamp				10	0	40	80	0
RD-01	Wf05	2b	Fen	Green-Brown Clear	7.9	250	5	0	1	50	80
RD-02	Ws01	3b	Swamp	Green-Brown Clear	6.9	290	40	0	40	80	5
RD-03	Fm02	6oM	Floodplain					15	50	60	0.1
RD-04	Fm	6tM	Floodplain					30	10	20	0.1
RD-05	Ws10	7mC	Swamp	Green-Blue Turbid	6.6	176	15	15	15	50	15
RD-06	Wf05	2b	Fen	Green-Blue Clear	7.4	15	60	0	0.1	50	30
RD-07	Rl:fm	7mC	Floodplain		6.1	26	5	16	70	40	15
RD-08	WN:sp	3b	Swamp	Green-Blue Clear	6.6	19	85	0	70	30	0
RD-09	Wm01	2b	Marsh	Green-Blue Clear	7.1	78	45	0	0	55	0
RD-10	WN:sp	3b	Swamp								
RD-11	WN:ms	2b	Marsh								
RD-12	WN:sp	6mC	Swamp								
RD-13	WN:sp	3b	Swamp	Blue-Green Clear	7.2	68	30	0	65	50	0.1
RD-14	FW:pd		Pond								
RD-15	Wm02	2b	Marsh	Green-Brown Clear	7.8	65	50	0	0	50	0
RD-16	Ws	3b	Swamp				0	0	70	65	10
RD-17	Wm01	2b	Marsh	Green-Brown Clear	7.6	72	15	0	0.1	90	0.1
RD-18	Wf	2b	Fen	Green-Brown Clear	7.2	13	5	0	0.1	80	60
RD-19	Ws	3a	Swamp	Green-Brown Clear	7.1	98	10	0	70	70	0
RD-20	Ws02	3b	Swamp	Green-Brown Clear	7.4		10	0	50	85	0
RD-21	Wmo1	2b	Marsh		7.5			0	0	90	0
RD-22	Fm	6tM	Floodplain					20	35	40	15
RD-23	Ws	3b	Swamp	Green-Brown Clear	7.6	95	30	0	40	65	5
RD-24	Fm	5tC	Floodplain					25	40	40	20
SW-001	WN:sp	3b	Swamp				5	0	50	70	0

Plot	Site Series	Structural Stage	Wetland Class	Water Colour	pH	Conductivity	Percent Open Water	Tree Cover	Shrub Cover	Herb Cover	Moss Lichen Cover
TE101	WN:sp	3b	Swamp								
TE102	Wm05	2b	Marsh					0	30	100	0
TE103	WN:fn	2b	Fen								
TE104	WN:ms	2b	Marsh								
TE105	WN:sp	5C	Swamp					15	30	80	7
TE106	WN:sp	5C	Swamp								
TE107	WN:sp	5C	Swamp					30	60	60	80
TE3FK01	WN:sp	3b	Swamp					0.1	10	30	10
TE3FK02	WN:sp	3b	Swamp				10	0	30	80	5
TE3FK03	WN:sp	3b	Swamp				5	4	35	70	5
TEBL01	WN:sp		Swamp								
TEBL03	WN:fn	2b	Fen				15	2	15	65	50
TEBL04	WN:sp	7mC	Swamp					30	40	80	70

6.0 Appendix 2: Vegetation Data

Plot	Layer	Scientific Name	Percent Cover
2015-01	C	<i>Agrostis sp</i>	10
2015-01	C	<i>Carex laeviculmis</i>	1
2015-01	C	<i>Cerastium arvense</i>	0.1
2015-01	D	<i>Climacium dendroides</i>	1
2015-01	B2	<i>Corylus cornuta</i>	10
2015-01	C	<i>Equisetum hyemale</i>	1
2015-01	C	<i>Hieracium sp.</i>	3
2015-01	A2	<i>Larix occidentalis</i>	1
2015-01	B2	<i>Mahonia aquifolium</i>	15
2015-01	C	<i>Maianthemum stellatum</i>	3
2015-01	A2	<i>Picea engelmannii</i>	1
2015-01	A3	<i>Picea engelmannii</i>	3
2015-01	A3	<i>Pinus monticola</i>	1
2015-01	B2	<i>Pinus monticola</i>	0.1
2015-01	C	<i>Plantago lanceolata</i>	0.1
2015-01	D	<i>Pleurozium schreberi</i>	7
2015-01	A2	<i>Populus balsamifera</i>	0.1
2015-01	B2	<i>Populus balsamifera</i>	0.1
2015-01	A2	<i>Pseudotsuga menziesii</i>	1
2015-01	A3	<i>Pseudotsuga menziesii</i>	2
2015-01	C	<i>Ranunculus sp.</i>	2
2015-01	D	<i>Rhytidiadelphus triquetrus</i>	7
2015-01	B2	<i>Sorbus sitchensis</i>	0.1
2015-01	B2	<i>Symphoricarpos albus</i>	15
2015-01	A2	<i>Thuja plicata</i>	5
2015-01	A3	<i>Thuja plicata</i>	7
2015-01	C	<i>Viola sp.</i>	0.1
2015-02	A3	<i>Acer glabrum</i>	2
2015-02	C	<i>Adenocaulon bicolo</i>	0.1
2015-02	C	<i>Agrostis gigantea</i>	5
2015-02	B1	<i>Alnus incana</i>	0.1
2015-02	B1	<i>Amelanchier alnifolia</i>	0.1
2015-02	C	<i>Athyrium filix-femina</i>	5
2015-02	A2	<i>Betula papyrifera</i>	10
2015-02	A3	<i>Betula papyrifera</i>	5
2015-02	C	<i>Carex laeviculmis</i>	25
2015-02	C	<i>Circaea alpina</i>	15
2015-02	C	<i>Cornus canadensis</i>	2
2015-02	B1	<i>Corylus cornuta</i>	20
2015-02	B2	<i>Crataegus douglasii</i>	0.1
2015-02	C	<i>Dryopteris expansa</i>	0.1
2015-02	C	<i>Equisetum arvense</i>	15

2015-02	C	<i>Galium sp.</i>	0.1
2015-02	B2	<i>Lonicera involucrata</i>	0.1
2015-02	B2	<i>Mahonia aquifolium</i>	10
2015-02	C	<i>Osmorhiza berteroi</i>	0.1
2015-02	C	<i>Phalaris arundinacea</i>	1
2015-02	A2	<i>Picea engelmannii x</i>	3
2015-02	A2	<i>Populus balsamifera</i>	20
2015-02	C	<i>Pteridium aquilinum</i>	1
2015-02	C	<i>Pyrola asarifolia</i>	0.1
2015-02	C	<i>Ranunculus sp.</i>	0.1
2015-02	B2	<i>Rhamnus purshiana</i>	0.1
2015-02	B2	<i>Rubus idaeus</i>	0.1
2015-02	B2	<i>Rubus parviflorus</i>	3
2015-02	B2	<i>Symphoricarpos albus</i>	32
2015-03	B1	<i>Alnus incana</i>	5
2015-03	B2	<i>Alnus incana</i>	5
2015-03	C	<i>Carex aquatilis</i>	2
2015-03	C	<i>Carex canescens ssp. disjuncta</i>	0.1
2015-03	C	<i>Carex lenticularis var lipocarpa (syn. C. kelloggii)</i>	0.1
2015-03	C	<i>Carex utriculata</i>	3
2015-03	C	<i>Equisetum arvense</i>	2
2015-03	C	<i>Equisetum fluviatile</i>	3
2015-03	C	<i>Juncus effusus</i>	0.1
2015-03	C	<i>Lysichiton americanus</i>	5
2015-03	C	<i>Phalaris arundinacea</i>	25
2015-03	B1	<i>Salix sitchensis</i>	0.1
2015-03	B2	<i>Salix sitchensis</i>	55
2015-03	C	<i>Scirpus microcarpus</i>	5
2015-04	C	<i>Athyrium filix-femina</i>	50
2015-04	C	<i>Equisetum arvense</i>	0.1
2015-04	C	<i>Equisetum sylvaticum</i>	2
2015-04	C	<i>Lysichiton americanus</i>	6
2015-04	C	<i>Phalaris arundinacea</i>	3
2015-04	C	<i>Scirpus microcarpus</i>	4
2015-04	C	<i>Typha latifolia</i>	30
2015-05	C	<i>Carex canescens ssp. disjuncta</i>	3
2015-05	C	<i>Equisetum arvense</i>	1
2015-05	C	<i>Galium palustre</i>	0.1
2015-05	C	<i>Juncus effusus</i>	0.1
2015-05	C	<i>Juncus ensifolius var. ensifolius</i>	0.1
2015-05	C	<i>Lysichiton americanus</i>	0.1
2015-05	C	<i>Phalaris arundinacea</i>	85
2015-06	C	<i>Carex canescens ssp. disjuncta</i>	30

2015-06	C	<i>Carex sp.</i>	0.1
2015-06	C	<i>Epilobium angustifolium</i>	0.1
2015-06	C	<i>Equisetum arvense</i>	1
2015-06	C	<i>Galium sp.</i>	0.1
2015-06	C	<i>Geum rivale</i>	0.1
2015-06	C	<i>Juncus effusus</i>	10
2015-06	C	<i>Juncus spp.</i>	0.1
2015-06	C	<i>Phalaris arundinacea</i>	50
2015-06	B2	<i>Populus balsamifera</i>	0.1
2015-06	C	<i>Rumex sp</i>	0.1
2015-06	B2	<i>Salix sp.</i>	1
2015-07	B1	<i>Alnus incana</i>	20
2015-07	C	<i>Athyrium filix-femina</i>	40
2015-07	D	<i>Aulacomnium palustre</i>	5
2015-07	A3	<i>Betula papyrifera</i>	3
2015-07	C	<i>Carex laeviculmis</i>	1
2015-07	C	<i>Circaea alpina</i>	1
2015-07	B1	<i>Corylus cornuta</i>	2
2015-07	C	<i>Equisetum arvense</i>	2
2015-07	C	<i>Equisetum sylvaticum</i>	2
2015-07	C	<i>Lysichiton americanus</i>	40
2015-07	C	<i>Phalaris arundinacea</i>	3
2015-07	B1	<i>Sambucus racemosa</i>	0.1
2015-07	A2	<i>Thuja plicata</i>	1
2015-07	C	<i>Veronica beccabunga</i>	1
2015-08	C	<i>Eleocharis mamillata</i>	1
2015-08	C	<i>Lemna minor</i>	3
2015-08	C	<i>Typha latifolia</i>	70
2015-09	C	<i>Athyrium filix-femina</i>	5
2015-09	C	<i>Carex canescens ssp. disjuncta</i>	1
2015-09	C	<i>Carex sp.</i>	0.1
2015-09	C	<i>Equisetum arvense</i>	2
2015-09	C	<i>Equisetum sylvaticum</i>	2
2015-09	C	<i>Juncus sp.</i>	0.1
2015-09	D	<i>Leucolepis acanthoneuron</i>	5
2015-09	C	<i>Phalaris arundinacea</i>	40
2015-09	B1	<i>Salix sitchensis</i>	65
2015-10	D	<i>Aulacomnium palustre</i>	10
2015-10	C	<i>Carex lenticularis var lipocarpa (syn. C. kelloggii)</i>	30
2015-10	C	<i>Carex limosa</i>	1
2015-10	C	<i>Carex sp.</i>	1
2015-10	C	<i>Carex utriculata</i>	20
2015-10	C	<i>Comarum palustre</i>	1

2015-10	C	<i>Equisetum arvense</i>	5
2015-10	C	<i>Eriophorum angustifolium</i>	1
2015-10	C	grass	3
2015-10	C	<i>Ligusticum canbyi</i>	10
2015-10	B2	<i>Picea engelmannii</i>	5
2015-10	C	<i>Platanthera dilatata</i>	1
2015-10	B2	<i>Salix glauca</i>	5
2015-10	C	<i>Senecio triangularis</i>	5
2015-10	D	<i>Sphagnum sp.</i>	5
2015-10	B2	<i>Vaccinium membranaceum</i>	0.1
2015-10	C	<i>Veratrum viride</i>	1
2015-10	C	<i>Viola macloskeyi</i>	5
2015-100	A	<i>Abies lasiocarpa</i>	3
2015-100	C	<i>Aconitum columbianum</i>	0.1
2015-100	D	<i>Aulacomnium palustre</i>	5
2015-100	C	<i>Calamagrostis canadensis</i>	40
2015-100	C	<i>Carex canescens ssp. disjuncta</i>	0.1
2015-100	C	<i>Carex lenticularis var lipocarpa (syn. C. kelloggii)</i>	0.1
2015-100	C	<i>Comarum palustre</i>	0.1
2015-100	C	<i>Equisetum arvense</i>	5
2015-100	C	<i>Eriophorum sp.</i>	40
2015-100	C	<i>Kalmia microphylla</i>	1
2015-100	C	<i>Leptarrhena pyrolifolia</i>	0.1
2015-100	C	<i>Ligusticum canbyi</i>	3
2015-100	B2	<i>Menziesia ferruginea</i>	3
2015-100	A	<i>Picea englmannii</i>	3
2015-100	C	<i>Platanthera dilatata</i>	0.1
2015-100	C	<i>Pyrola sp.</i>	0.1
2015-100	B1	<i>Salix sp.</i>	5
2015-100	C	<i>Scirpus microcarpus</i>	5
2015-100	C	<i>Senecio triangularis</i>	1
2015-100	D	<i>Sphagnum sp.</i>	40
2015-100	C	<i>Symphoricarpos albus</i>	0.1
2015-100	A	<i>Thuja plicata</i>	1
2015-100	C	<i>Veronica sp.</i>	2
2015-11	C	<i>Carex utriculata</i>	80
2015-11	B2	<i>Salix glauca</i>	5
2015-12	C	<i>Agrostis sp</i>	0.1
2015-12	D	<i>Aulacomnium palustre</i>	5
2015-12	C	<i>Carex canescens ssp. disjuncta</i>	0.1
2015-12	C	<i>Carex illota</i>	0.1
2015-12	C	<i>Carex lenticularis var lipocarpa (syn. C. kelloggii)</i>	25
2015-12	C	<i>Carex limosa</i>	10

2015-12	C	<i>Carex utriculata</i>	15
2015-12	D	<i>Drepanocladus aduncus</i>	0.1
2015-12	C	<i>Equisetum arvense</i>	0.1
2015-12	C	<i>Eriophorum angustifolium</i>	10
2015-12	C	<i>Juncus sp.</i>	0.1
2015-12	C	<i>Kalmia microphylla</i>	2
2015-12	C	<i>Ligusticum canbyi</i>	0.1
2015-12	B2	<i>Picea engelmannii</i>	5
2015-12	D	<i>Sphagnum spp.</i>	10
2015-12	C	<i>Trientalis latifolia</i>	2
2015-12	C	<i>Viola sp.</i>	1
2015-14	C	<i>Andromeda polifolia</i>	5
2015-14	C	<i>Carex nigricans</i>	10
2015-14	C	<i>Carex utriculata</i>	15
2015-14	C	<i>Equisetum arvense</i>	0.1
2015-14	C	<i>Eriophorum angustifolium</i>	40
2015-14	C	<i>Juncus effusus</i>	0.1
2015-14	C	<i>Leptarrhena pyrolifolia</i>	1
2015-14	D	moss	5
2015-14	C	<i>pedicularis sp</i>	0.1
2015-14	C	<i>Senecio triangularis</i>	2
2015-14	D	<i>Sphagnum compactum</i>	10
2015-14	D	<i>Sphagnum spp.</i>	15
2015-14	D	<i>Sphagnum squarrosum</i>	10
2015-14	C	<i>Trollius albiflorus</i>	2
2015-14	C	<i>Veratrum viride</i>	0.1
2015-15	C	<i>Carex limosa</i>	25
2015-15	C	<i>Carex nigricans</i>	5
2015-15	C	<i>Carex utriculata</i>	10
2015-15	D	<i>Drepanocladus aduncus</i>	10
2015-15	C	<i>Equisetum arvense</i>	5
2015-15	C	<i>Eriophorum angustifolium</i>	40
2015-15	C	<i>Kalmia microphylla</i>	5
2015-15	D	<i>Sphagnum compactum</i>	15
2015-15	D	<i>Sphagnum spp.</i>	20
2015-15	D	<i>Sphagnum squarrosum</i>	15
2015-15	C	<i>Viola sp.</i>	0.1
2015-17	B1	<i>Abies lasiocarpa</i>	2
2015-17	C	<i>Athyrium filix-femina</i>	3
2015-17	D	<i>Aulacomnium palustre</i>	20
2015-17	C	<i>Calamagrostis canadensis</i>	15
2015-17	C	<i>Carex canescens ssp. disjuncta</i>	10
2015-17	C	<i>Carex disperma</i>	10

2015-17	C	<i>Carex limosa</i>	10
2015-17	C	<i>Equisetum arvense</i>	7
2015-17	C	<i>Gymnocarpium dryopteris</i>	0.1
2015-17	C	<i>Juncus spp.</i>	10
2015-17	C	<i>Leptarrhena pyrolifolia</i>	2
2015-17	C	<i>Ligusticum canbyi</i>	5
2015-17	B1	<i>Lonicera involucrata</i>	0.1
2015-17	D	<i>Marchantia sp.</i>	20
2015-17	A2	<i>Picea engelmannii x</i>	6
2015-17	B1	<i>Picea engelmannii x</i>	10
2015-17	B1	<i>Pinus albicaulis</i>	0.1
2015-17	C	<i>Platanthera dilatata</i>	1
2015-17	D	<i>Rhizomnium glabrescens</i>	20
2015-17	B1	<i>Rhododendron albiflorum</i>	7
2015-17	B1	<i>Ribes lacustre</i>	0.1
2015-17	C	<i>Rubus pedatus</i>	0.1
2015-17	B1	<i>Salix sp.</i>	15
2015-17	D	<i>Sphagnum sp.</i>	10
2015-17	D	<i>Sphagnum squarrosum</i>	10
2015-17	C	<i>Streptopus amplexifolius</i>	1
2015-17	A2	<i>Thuja plicata</i>	3
2015-17	B1	<i>Thuja plicata</i>	2
2015-17	B1	<i>Vaccinium membranaceum</i>	3
2015-17	C	<i>Veratrum viride</i>	1
2015-18	A3	<i>Alnus incana</i>	2
2015-18	B1	<i>Alnus incana</i>	5
2015-18	C	<i>Aralia nudicaulis</i>	2
2015-18	C	<i>Callitriche sp.</i>	0.1
2015-18	C	<i>Cardamome sp</i>	2
2015-18	C	<i>Carex canescens ssp. disjuncta</i>	1
2015-18	C	<i>Carex disperma</i>	3
2015-18	C	<i>Carex laeviculmis</i>	1
2015-18	C	<i>Carex utriculata</i>	2
2015-18	B2	<i>Cornus stolonifera</i>	2
2015-18	C	<i>Dryopteris expansa</i>	1
2015-18	A3	<i>Epilobium angustifolium</i>	3
2015-18	C	<i>Epilobium sp.</i>	1
2015-18	C	<i>Equisetum arvense</i>	0.1
2015-18	C	<i>Galium palustre</i>	1
2015-18	B2	<i>Lonicera involucrata</i>	1
2015-18	D	<i>Mnium sp.</i>	10
2015-18	B1	<i>Picea engelmannii x</i>	3
2015-18	B2	<i>Picea engelmannii x</i>	2

2015-18	D	<i>Plagiomnium medium</i>	10
2015-18	C	<i>Poa palustris</i>	7
2015-18	C	<i>Pyrola asarifolia</i>	0.1
2015-18	C	<i>Ranunculus aquatilis</i>	2
2015-18	D	<i>Rhizomnium glabrescens</i>	10
2015-18	B2	<i>Rosa nutkana</i>	0.1
2015-18	B2	<i>Salix sp.</i>	1
2015-18	C	<i>Scutellaria galericulata</i>	3
2015-18	C	<i>Sparganium angustifolium</i>	4
2015-18	A2	<i>Thuja plicata</i>	10
2015-18	B2	<i>Vaccinium membranaceum</i>	0.1
2015-19	B1	<i>Alnus incana</i>	4
2015-19	D	<i>Calliergon giganteum</i>	20
2015-19	C	<i>Carex canescens ssp. disjuncta</i>	10
2015-19	C	<i>Carex sp.</i>	5
2015-19	B1	<i>Cornus stolonifera</i>	1
2015-19	C	<i>Equisetum sylvaticum</i>	0.1
2015-19	D	<i>Fontinalis antipyretica</i>	5
2015-19	C	<i>Poa palustris</i>	5
2015-20	B1	<i>Alnus incana</i>	30
2015-20	C	<i>Athyrium filix-femina</i>	3
2015-20	C	<i>Carex canescens ssp. disjuncta</i>	5
2015-20	C	<i>Carex cusickii</i>	5
2015-20	C	<i>Carex disperma</i>	5
2015-20	B2	<i>Cornus stolonifera</i>	3
2015-20	C	<i>Eleocharis palustris</i>	0.1
2015-20	C	<i>Equisetum sylvaticum</i>	3
2015-20	C	<i>Galium sp.</i>	0.1
2015-20	C	<i>Galium trifidum</i>	0.1
2015-20	C	<i>Lemna minor</i>	5
2015-20	D	<i>Mnium sp.</i>	10
2015-20	D	<i>Plagiomnium medium</i>	5
2015-20	C	<i>Poa palustris</i>	5
2015-20	A2	<i>Populus tremuloides</i>	2
2015-20	D	<i>Rhizomnium sp.</i>	5
2015-20	B2	<i>Rosa nutkana</i>	2
2015-20	C	<i>Scutellaria galericulata</i>	5
2015-20	C	<i>Sium suave</i>	1
2015-20	C	<i>Sparganium angustifolium</i>	1
2015-20	A2	<i>Thuja plicata</i>	3
2015-21	B1	<i>Alnus incana</i>	20
2015-21	C	<i>Athyrium filix-femina</i>	20
2015-21	C	<i>Botrychium multifidum</i>	0.1

2015-21	D	<i>Bryum sp.</i>	1
2015-21	C	<i>Carex tenuiflora</i>	5
2015-21	C	<i>Cornus canadensis</i>	0.1
2015-21	B1	<i>Cornus stolonifera</i>	10
2015-21	C	<i>Dryopteris expansa</i>	0.1
2015-21	C	<i>Epilobium sp.</i>	0.1
2015-21	C	<i>Equisetum arvense</i>	5
2015-21	C	<i>Equisetum sylvaticum</i>	110
2015-21	C	<i>Galium trifidum</i>	0.1
2015-21	C	<i>Gymnocarpium dryopteris</i>	0.1
2015-21	C	<i>Listera convallarioides</i>	0.1
2015-21	B2	<i>Lonicera involucrata</i>	5
2015-21	D	<i>Mnium sp.</i>	10
2015-21	A2	<i>Picea engelmannii x</i>	2
2015-21	D	<i>Plagiomnium ellipticum</i>	15
2015-21	C	<i>Platanthera dilatata</i>	1
2015-21	C	<i>Poa palustris</i>	30
2015-21	C	<i>Pteridium aquilinum</i>	0.1
2015-21	D	<i>Rhizomnium sp.</i>	10
2015-21	C	<i>Senecio triangularis</i>	5
2015-21	C	<i>Sparganium angustifolium</i>	2
2015-21	C	<i>Symphyotrichum sp.</i>	5
2015-21	A2	<i>Thuja plicata</i>	3
2015-21	C	<i>Viola canadensis</i>	2
2015-22	B1	<i>Alnus incana</i>	13
2015-22	C	<i>Athyrium filix-femina</i>	4
2015-22	C	<i>Callitriche sp.</i>	2
2015-22	C	<i>Carex canescens ssp. disjuncta</i>	5
2015-22	C	<i>Carex cusickii</i>	25
2015-22	C	<i>Carex disperma</i>	2
2015-22	C	<i>Carex vesicaria</i>	25
2015-22	C	<i>Dryopteris expansa</i>	0.1
2015-22	C	<i>Epilobium sp.</i>	1
2015-22	D	<i>Mnium sp.</i>	10
2015-22	A2	<i>Picea engelmannii x</i>	2
2015-22	B2	<i>Pinus monticola</i>	1
2015-22	D	<i>Plagiomnium medium</i>	5
2015-22	C	<i>Poa palustris</i>	7
2015-22	A2	<i>Populus tremuloides</i>	1
2015-22	C	<i>Scutellaria galericulata</i>	3
2015-22	C	<i>Sium suave</i>	3
2015-22	C	<i>Sparganium angustifolium</i>	5
2015-22	A2	<i>Thuja plicata</i>	2

2015-22	B1	<i>Tsuga heterophylla</i>	1
2015-23	B1	<i>Alnus incana</i>	20
2015-23	C	<i>Athyrium filix-femina</i>	20
2015-23	C	<i>Circaea alpina</i>	15
2015-23	C	<i>Circaea alpina</i>	2
2015-23	C	<i>Equisetum arvense</i>	15
2015-23	C	<i>Equisetum hyemale</i>	0.1
2015-23	C	<i>Galium trifidum</i>	0.1
2015-23	C	<i>Heracleum maximum</i>	5
2015-23	B2	<i>Lonicera involucrata</i>	15
2015-23	C	<i>Mitella nuda</i>	0.1
2015-23	C	<i>Myosotis scorpioides</i>	0.1
2015-23	B2	<i>Physocarpus malvaceus</i>	2
2015-23	C	<i>Poa palustris</i>	10
2015-23	C	<i>Ranunculus acris</i>	0.1
2015-23	B2	<i>Salix sp.</i>	5
2015-23	B2	<i>Sambucus cerulea</i>	5
2015-23	C	<i>Scirpus microcarpus</i>	3
2015-23	C	<i>Stachys mexicana</i>	10
2015-23	B2	<i>Symphoricarpos albus</i>	3
2015-23	C	<i>Urtica dioica</i>	5
2015-23	C	<i>Veronica scutellata</i>	0.1
2015-24	B2	<i>Alnus viridis</i>	1
2015-24	C	<i>Athyrium filix-femina</i>	15
2015-24	C	<i>Carex disperma</i>	0.1
2015-24	C	<i>Cornus canadensis</i>	3
2015-24	C	<i>Equisetum arvense</i>	3
2015-24	C	<i>Equisetum sylvaticum</i>	2
2015-24	C	<i>Gymnocarpium dryopteris</i>	1
2015-24	D	<i>Hylocomium splendens</i>	5
2015-24	C	<i>Linnaea borealis</i>	0.1
2015-24	C	<i>Lysichiton americanus</i>	20
2015-24	D	<i>Mnium sp.</i>	5
2015-24	B2	<i>Oplopanax horridus</i>	2
2015-24	A2	<i>Picea engelmannii x</i>	2
2015-24	D	<i>Plagiomnium medium</i>	5
2015-24	D	<i>Pleurozium schreberi</i>	10
2015-24	C	<i>Pteridium aquilinum</i>	0.1
2015-24	D	<i>Rhizomnium sp.</i>	5
2015-24	D	<i>Rhytidiadelphus sp.</i>	10
2015-24	C	<i>Scirpus microcarpus</i>	15
2015-24	C	<i>Streptopus amplexifolius</i>	0.1
2015-24	B2	<i>Symphoricarpos albus</i>	0.1

2015-24	A1	<i>Thuja plicata</i>	3
2015-24	A2	<i>Thuja plicata</i>	7
2015-24	A3	<i>Thuja plicata</i>	3
2015-24	B2	<i>Thuja plicata</i>	2
2015-24	C	<i>Tiarella unifoliata</i>	1
2015-24	A2	<i>Tsuga heterophylla</i>	10
2015-24	A3	<i>Tsuga heterophylla</i>	10
2015-24	B1	<i>Tsuga heterophylla</i>	10
2015-24	B2	<i>Tsuga heterophylla</i>	15
2015-25	C	<i>Athyrium filix-femina</i>	15
2015-25	C	<i>Carex aquatilis</i>	80
2015-25	C	<i>Equisetum arvense</i>	3
2015-25	C	<i>Equisetum sylvaticum</i>	1
2015-25	B2	<i>Lonicera involucrata</i>	0.1
2015-25	C	<i>Stachys mexicana</i>	1
2015-26	B1	<i>Alnus incana</i>	30
2015-26	C	<i>Athyrium filix-femina</i>	20
2015-26	C	<i>Carex canescens ssp. disjuncta</i>	3
2015-26	C	<i>Circaea alpina</i>	5
2015-26	C	<i>Cornus canadensis</i>	2
2015-26	C	<i>Geum macrophyllum</i>	0.1
2015-26	B1	<i>Lonicera involucrata</i>	7
2015-26	C	<i>Lysichiton americanus</i>	25
2015-26	D	<i>Mnium sp.</i>	2
2015-26	B2	<i>Oplopanax horridus</i>	2
2015-26	A1	<i>Picea engelmannii x</i>	2
2015-26	A2	<i>Picea engelmannii x</i>	1
2015-26	D	<i>Plagiomnium medium</i>	3
2015-26	C	<i>Scirpus microcarpus</i>	20
2015-26	A1	<i>Thuja plicata</i>	2
2015-26	A2	<i>Thuja plicata</i>	10
2015-26	A3	<i>Thuja plicata</i>	5
2015-26	A3	<i>Tsuga heterophylla</i>	15
2015-26	A3	<i>Tsuga heterophylla</i>	5
2015-26	B1	<i>Tsuga heterophylla</i>	1
2015-27	B2	<i>Alnus incana</i>	20
2015-27	C	<i>Athyrium filix-femina</i>	5
2015-27	C	<i>Calamagrostis canadensis</i>	20
2015-27	C	<i>Carex crawfordii</i>	5
2015-27	C	<i>Carex disperma</i>	5
2015-27	C	<i>Carex interior</i>	5
2015-27	C	<i>Carex lenticularis var lipocarpa (syn. C. kelloggii)</i>	5
2015-27	C	<i>Carex stipata</i>	5

2015-27	C	<i>Equisetum arvense</i>	5
2015-27	C	<i>Juncus sp.</i>	2
2015-27	B2	<i>Lonicera involucrata</i>	3
2015-27	C	<i>Lysichiton americanus</i>	5
2015-27	C	<i>Myosotis scorpioides</i>	2
2015-27	B1	<i>Picea engelmannii x</i>	1
2015-27	C	<i>Poa palustris</i>	5
2015-27	C	<i>Ranunculus gmelinii</i>	2
2015-27	B1	<i>Salix bebbiana</i>	15
2015-27	B1	<i>Salix sitchensis</i>	15
2015-27	C	<i>Scirpus microcarpus</i>	10
2015-27	C	<i>Sparganium angustifolium</i>	3
2015-27	B1	<i>Thuja plicata</i>	1
2015-27	C	<i>Veronica scutellata</i>	1
2015-28	C	<i>Carex canescens ssp. disjuncta</i>	0.1
2015-28	C	<i>Carex stipata</i>	0.1
2015-28	C	<i>Equisetum arvense</i>	5
2015-28	C	<i>Juncus sp.</i>	1
2015-28	C	<i>Ranunculus gmelinii</i>	50
2015-28	C	<i>Scirpus microcarpus</i>	2
2015-28	C	<i>Sparganium angustifolium</i>	7
2015-28	C	<i>Veronica scutellata</i>	0.1
2015-29	C	<i>Actaea rubra</i>	0.1
2015-29	C	<i>Agrostis gigantea</i>	3
2015-29	B1	<i>Alnus incana</i>	7
2015-29	B2	<i>Alnus incana</i>	3
2015-29	C	<i>Athyrium filix-femina</i>	70
2015-29	A2	<i>Betula papyrifera</i>	5
2015-29	A3	<i>Betula papyrifera</i>	5
2015-29	C	<i>Carex canescens ssp. disjuncta</i>	0.1
2015-29	C	<i>Carex interior</i>	0.1
2015-29	C	<i>Circaea alpina</i>	5
2015-29	D	<i>Climacium dendroides</i>	0.1
2015-29	B1	<i>Cornus canadensis</i>	5
2015-29	B1	<i>Cornus stolonifera</i>	3
2015-29	B2	<i>Corylus cornuta</i>	1
2015-29	B1	<i>Crataegus douglasii</i>	5
2015-29	C	<i>Dryopteris expansa</i>	2
2015-29	C	<i>Equisetum arvense</i>	10
2015-29	C	<i>Gymnocarpium dryopteris</i>	1
2015-29	D	<i>Isoetes sp.</i>	0.1
2015-29	C	<i>Lemna minor</i>	0.1
2015-29	C	<i>Lysichiton americanus</i>	15

2015-29	C	<i>Myriophyllum sp.</i>	0.1
2015-29	B2	<i>Physocarpus malvaceus</i>	4
2015-29	D	<i>Plagiomnium medium</i>	0.1
2015-29	C	<i>Poa palustris</i>	1
2015-29	A2	<i>Populus balsamifera</i>	5
2015-29	C	<i>Ranunculus acris</i>	0.1
2015-29	B2	<i>Ribes lacustre</i>	0.1
2015-29	C	<i>Scirpus microcarpus</i>	4
2015-29	B2	<i>Sorbus sitchensis</i>	1
2015-29	A2	<i>Thuja plicata</i>	25
2015-29	A3	<i>Thuja plicata</i>	15
2015-29	B1	<i>Thuja plicata</i>	5
2015-29	B2	<i>Thuja plicata</i>	2
2015-29	A3	<i>Tsuga heterophylla</i>	3
2015-29	B2	<i>Tsuga heterophylla</i>	2
2015-29	C	<i>Urtica dioica</i>	0.1
2015-30	B1	<i>Acer glabrum</i>	0.1
2015-30	C	<i>Agrostis gigantea</i>	1
2015-30	B1	<i>Alnus incana</i>	10
2015-30	C	<i>Athyrium filix-femina</i>	5
2015-30	C	<i>Carex bebbii</i>	1
2015-30	C	<i>Carex cusickii</i>	8
2015-30	C	<i>Carex diandra</i>	1
2015-30	C	<i>Cicuta douglasii</i>	0.1
2015-30	C	<i>Circaea alpina</i>	0.1
2015-30	C	<i>Comarum palustre</i>	0.1
2015-30	B1	<i>Cornus stolonifera</i>	0.1
2015-30	B1	<i>Crataegus douglasii</i>	0.1
2015-30	C	<i>Dryopteris expansa</i>	0.1
2015-30	C	<i>Epilobium sp.</i>	0.1
2015-30	C	<i>Equisetum arvense</i>	2
2015-30	C	<i>Galium palustre</i>	0.1
2015-30	C	<i>Geum macrophyllum</i>	0.1
2015-30	B2	<i>Lonicera involucrata</i>	0.1
2015-30	C	<i>Lysichiton americanus</i>	30
2015-30	B2	<i>Picea engelmannii x</i>	1
2015-30	C	<i>Poa palustris</i>	1
2015-30	A2	<i>Populus balsamifera</i>	1
2015-30	B2	<i>Populus tremuloides</i>	0.1
2015-30	C	<i>Scirpus microcarpus</i>	3
2015-30	C	<i>Scutellaria galericulata</i>	0.1
2015-30	B1	<i>Sorbus sitchensis</i>	0.1
2015-30	C	<i>Sparganium angustifolium</i>	1

2015-30	A2	<i>Thuja plicata</i>	9
2015-30	C	<i>Viola sp.</i>	0.1
2015-31	B2	<i>Alnus incana</i>	0.1
2015-31	C	<i>Cardamine sp.</i>	0.1
2015-31	C	<i>Carex amplifolia</i>	0.1
2015-31	C	<i>Carex cusickii</i>	40
2015-31	C	<i>Carex viridula</i>	0.1
2015-31	C	<i>Comarum palustre</i>	5
2015-31	C	<i>Lysichiton americanus</i>	2
2015-31	B2	<i>Picea engelmannii x</i>	0.1
2015-31	C	<i>Potamogeton alpinus</i>	0.1
2015-31	B1	<i>Salix sitchensis</i>	5
2015-31	C	<i>Schoenoplectus tabernaemontani ?</i>	3
2015-31	B2	<i>Spiraea douglasii</i>	10
2015-31	C	<i>Typha latifolia</i>	15
2015-32	C	<i>Agrostis gigantea</i>	0.1
2015-32	C	<i>Calamagrostis canadensis</i>	1
2015-32	C	<i>Carex lenticularis var lipocarpa (syn. C. kelloggii)</i>	0.1
2015-32	C	<i>Carex sp.</i>	2
2015-32	C	<i>Carex stipata</i>	0.1
2015-32	C	<i>Carex viridula</i>	0.1
2015-32	C	<i>Eleocharis palustris</i>	0.1
2015-32	C	<i>Equisetum arvense</i>	2
2015-32	C	<i>Galium trifidum</i>	0.1
2015-32	C	<i>Juncus spp.</i>	0.1
2015-32	B1	<i>Salix lucida</i>	10
2015-32	B1	<i>Salix sitchensis</i>	70
2015-32	B1	<i>Salix sp.</i>	10
2015-33	C	<i>Lemna minor</i>	0.1
2015-33	C	<i>Ranunculus gmelinii</i>	0.1
2015-33	C	<i>Typha latifolia</i>	90
2015-33	C	<i>Utricularia minor</i>	0.1
2015-34	C	<i>Agrostis gigantea</i>	3
2015-34	C	<i>Carex aperta</i>	80
2015-34	C	<i>Carex utriculata</i>	3
2015-34	C	<i>Epilobium sp.</i>	0.1
2015-34	C	<i>Equisetum arvense</i>	1
2015-34	C	<i>Mentha arvensis</i>	0.1
2015-34	C	<i>Phalaris arundinacea</i>	3
2015-34	A3	<i>Populus balsamifera</i>	0.1
2015-34	B1	<i>Salix sitchensis</i>	10
2015-34	B1	<i>Salix sp.</i>	25
2015-34	C	<i>Veronica scutellata</i>	0.1

2015-35	C	<i>Agrostis gigantea</i>	2
2015-35	B1	<i>Alnus incana</i>	38
2015-35	C	<i>Athyrium filix-femina</i>	2
2015-35	B1	<i>Betula papyrifera</i>	2
2015-35	C	<i>Carex 1</i>	35
2015-35	C	<i>Carex amplifolia</i>	0.1
2015-35	C	<i>Carex bebbii</i>	0.1
2015-35	C	<i>Carex exsiccata</i>	1
2015-35	C	<i>Carex sp.</i>	1
2015-35	C	<i>Carex stipata</i>	1
2015-35	C	<i>Carex utriculata</i>	1
2015-35	C	<i>Circaea alpina</i>	0.1
2015-35	C	<i>Equisetum arvense</i>	4
2015-35	C	<i>Galium sp.</i>	0.1
2015-35	C	<i>Geum macrophyllum</i>	0.1
2015-35	C	<i>Impatiens sp.</i>	5
2015-35	D	<i>leafy mosses</i>	5
2015-35	C	<i>Lysichiton americanus</i>	25
2015-35	C	<i>Mitella sp.</i>	0.1
2015-35	C	<i>Myosotis sp.</i>	0.1
2015-35	C	<i>Poa palustris</i>	4
2015-35	C	<i>Ranunculus sp.</i>	0.1
2015-35	C	<i>Scutellaria galericulata</i>	0.1
2015-35	C	<i>Solanum sp.</i>	2
2015-35	C	<i>Typha latifolia</i>	10
2015-36	C	<i>Calamagrostis canadensis</i>	3
2015-36	C	<i>Callitriche heterophylla ssp heterophylla</i>	1
2015-36	C	<i>Callitriche sp.</i>	5
2015-36	C	<i>Lemna minor</i>	3
2015-36	C	<i>Potamogeton sp.</i>	1
2015-36	C	<i>Ranunculus gmelinii</i>	7
2015-36	C	<i>Sium suave</i>	1
2015-37	B2	<i>Alnus viridis</i>	0.1
2015-37	C	<i>Athyrium filix-femina</i>	3
2015-37	D	<i>Aulacomnium palustre</i>	5
2015-37	D	<i>Calliergon stramineum</i>	3
2015-37	C	<i>Carex interior</i>	2
2015-37	C	<i>Carex lasiocarpa</i>	10
2015-37	C	<i>Carex limosa</i>	3
2015-37	C	<i>Carex sp.</i>	5
2015-37	C	<i>Carex tenera</i>	2
2015-37	C	<i>Cicuta douglasii</i>	0.1
2015-37	C	<i>Comarum palustre</i>	3

2015-37	C	<i>Cornus canadensis</i>	0.1
2015-37	D	<i>Drepanocladus aduncus</i>	50
2015-37	C	<i>Drosera rotundifolia</i>	5
2015-37	C	<i>Dulichium arundinaceum</i>	10
2015-37	C	<i>Eleocharis obtusa</i>	15
2015-37	C	<i>Epilobium sp.</i>	0.1
2015-37	C	<i>Eriophorum angustifolium</i>	7
2015-37	C	<i>Eriophorum chamissonis</i>	5
2015-37	C	<i>Galium sp.</i>	0.1
2015-37	C	<i>Juncus ensifolius var. ensifolius</i>	0.1
2015-37	C	<i>Lysichiton americanus</i>	5
2015-37	C	<i>Menyanthes trifoliata</i>	5
2015-37	B2	<i>Menziesia ferruginea</i>	0.1
2015-37	A3	<i>Picea mariana</i>	1
2015-37	B2	<i>Pinus monticola</i>	0.1
2015-37	C	<i>Platanthera dilatata</i>	1
2015-37	C	<i>Rhynchospora alba</i>	1
2015-37	C	<i>Senecio triangularis</i>	1
2015-37	B2	<i>Sorbus sitchensis</i>	0.1
2015-37	D	<i>Sphagnum compactum</i>	5
2015-37	D	<i>Sphagnum sp.</i>	10
2015-37	D	<i>Sphagnum squarrosum</i>	10
2015-37	B1	<i>Thuja plicata</i>	2
2015-37	C	<i>Trientalis latifolia</i>	3
2015-37	A3	<i>Tsuga heterophylla</i>	1
2015-37	B1	<i>Tsuga heterophylla</i>	1
2015-38	B2	<i>Alnus viridis</i>	0.1
2015-38	C	<i>Athyrium filix-femina</i>	2
2015-38	C	<i>Carex lasiocarpa</i>	5
2015-38	C	<i>Carex limosa</i>	5
2015-38	C	<i>Cicuta douglasii</i>	1
2015-38	C	<i>Comarum palustre</i>	5
2015-38	C	<i>Cornus canadensis</i>	0.1
2015-38	D	<i>Drepanocladus aduncus</i>	60
2015-38	C	<i>Drosera rotundifolia</i>	10
2015-38	C	<i>Dulichium arundinaceum</i>	5
2015-38	C	<i>Eleocharis obtusa</i>	15
2015-38	C	<i>Epilobium sp.</i>	1
2015-38	C	<i>Equisetum arvense</i>	5
2015-38	C	<i>Eriophorum angustifolium</i>	10
2015-38	C	<i>Eriophorum chamissonis</i>	5
2015-38	C	<i>Lysichiton americanus</i>	10
2015-38	C	<i>Menyanthes trifoliata</i>	10

2015-38	B2	<i>Menziesia ferruginea</i>	0.1
2015-38	C	<i>Mimulus guttatus</i>	0.1
2015-38	B1	<i>Picea mariana</i>	3
2015-38	B2	<i>Pinus monticola</i>	1
2015-38	C	<i>Platanthera dilatata</i>	3
2015-38	C	<i>Rhynchospora alba</i>	3
2015-38	C	<i>Senecio triangularis</i>	3
2015-38	D	<i>Sphagnum capillifolium</i>	10
2015-38	D	<i>Sphagnum warnstorffii</i>	10
2015-38	A3	<i>Thuja plicata</i>	0.1
2015-38	B2	<i>Thuja plicata</i>	5
2015-38	C	<i>Trientalis latifolia</i>	1
2015-38	A3	<i>Tsuga heterophylla</i>	1
2015-38	B1	<i>Tsuga heterophylla</i>	3
2015-38	B2	<i>Tsuga heterophylla</i>	2
2015-39	C	<i>Athyrium filix-femina</i>	3
2015-39	A2	<i>Betula papyrifera</i>	2
2015-39	C	<i>Cornus canadensis</i>	2
2015-39	C	<i>Dryopteris expansa</i>	30
2015-39	C	<i>Equisetum arvense</i>	0.1
2015-39	C	<i>Gymnocarpium dryopteris</i>	0.1
2015-39	D	<i>Hylocomium splendens</i>	5
2015-39	C	<i>Lysichiton americanus</i>	30
2015-39	D	<i>Mnium sp.</i>	1
2015-39	D	<i>moss</i>	4
2015-39	B2	<i>Oplopanax horridus</i>	2
2015-39	A1	<i>Picea engelmannii x</i>	5
2015-39	A2	<i>Picea engelmannii x</i>	3
2015-39	C	<i>Plagiomnium medium</i>	3
2015-39	D	<i>Rhizomnium sp.</i>	2
2015-39	D	<i>Rhytidiadelphus triquetrus</i>	0.1
2015-39	B2	<i>Taxus brevifolia</i>	1
2015-39	A2	<i>Thuja plicata</i>	15
2015-39	A3	<i>Thuja plicata</i>	5
2015-39	B1	<i>Thuja plicata</i>	3
2015-39	B2	<i>Thuja plicata</i>	5
2015-39	A2	<i>Tsuga heterophylla</i>	15
2015-39	A3	<i>Tsuga heterophylla</i>	5
2015-39	B1	<i>Tsuga heterophylla</i>	3
2015-39	B2	<i>Tsuga heterophylla</i>	1
2015-39	B2	<i>Vaccinium membranaceum</i>	1
2015-40	A3	<i>Abies lasiocarpa</i>	2
2015-40	B2	<i>Alnus viridis</i>	5

2015-40	C	<i>Athyrium filix-femina</i>	5
2015-40	A3	<i>Betula papyrifera</i>	2
2015-40	C	<i>Carex deweyana</i>	5
2015-40	C	<i>Cornus canadensis</i>	5
2015-40	C	<i>Dryopteris expansa</i>	20
2015-40	C	<i>Equisetum arvense</i>	3
2015-40	C	<i>Lysichiton americanus</i>	30
2015-40	D	<i>Mnium sp.</i>	5
2015-40	A2	<i>Picea engelmannii x</i>	5
2015-40	B2	<i>Picea engelmannii x</i>	0.1
2015-40	D	<i>Plagiomnium medium</i>	15
2015-40	D	<i>Rhizomnium sp.</i>	5
2015-40	C	<i>Scirpus microcarpus</i>	15
2015-40	B2	<i>Taxus brevifolia</i>	0.1
2015-40	A2	<i>Thuja plicata</i>	15
2015-40	A3	<i>Thuja plicata</i>	10
2015-40	B2	<i>Thuja plicata</i>	5
2015-40	A2	<i>Tsuga heterophylla</i>	5
2015-40	A3	<i>Tsuga heterophylla</i>	5
2015-40	B1	<i>Tsuga heterophylla</i>	5
2015-40	B2	<i>Tsuga heterophylla</i>	5
2015-40	B2	<i>Vaccinium ovalifolium</i>	5
2015-41	B2	<i>Alnus viridis</i>	5
2015-41	C	<i>Calamagrostis canadensis</i>	10
2015-41	C	<i>Callitriche palustris</i>	0.1
2015-41	C	<i>Carex amplifolia</i>	5
2015-41	C	<i>Carex bebbii</i>	5
2015-41	C	<i>Carex canescens ssp. disjuncta</i>	0.1
2015-41	C	<i>Carex lenticularis var lipocarpa (syn. C. kelloggii)</i>	20
2015-41	C	<i>Carex sp.</i>	0.1
2015-41	C	<i>Carex stipata</i>	0.1
2015-41	D	<i>Drepanocladus aduncus</i>	1
2015-41	C	<i>Eleocharis obtusa</i>	10
2015-41	C	<i>Eleocharis palustris</i>	5
2015-41	C	<i>Eleocharis suksdorfiana</i>	5
2015-41	C	<i>Epilobium ciliatum</i>	2
2015-41	C	<i>Equisetum arvense</i>	20
2015-41	C	<i>Geum macrophyllum</i>	2
2015-41	C	<i>Juncus ensifolius var. ensifolius</i>	15
2015-41	C	<i>Juncus sp.</i>	5
2015-41	C	<i>Mentha sp.</i>	0.1
2015-41	C	<i>Myosotis sp.</i>	2
2015-41	C	<i>Nuphar polysepala</i>	3

2015-41	C	<i>Poa palustris</i>	10
2015-41	B2	<i>Salix sp.</i>	0.1
2015-41	C	<i>Viola glabella</i>	15
2015-42	B2	<i>Abies lasiocarpa</i>	5
2015-42	C	<i>Agrostis sp</i>	5
2015-42	D	<i>Aulacomnium palustre</i>	5
2015-42	C	<i>Carex lenticularis var lipocarpa (syn. C. kelloggii)</i>	5
2015-42	C	<i>Carex limosa</i>	20
2015-42	D	<i>Drepanocladus aduncus</i>	5
2015-42	C	<i>Eleocharis suksdorfiana</i>	0.1
2015-42	C	<i>Equisetum arvense</i>	0.1
2015-42	C	<i>Eriophorum angustifolium</i>	40
2015-42	C	<i>Ligusticum canbyi</i>	7
2015-42	C	<i>Pedicularis groenlandica</i>	7
2015-42	C	<i>Platanthera dilatata</i>	0.1
2015-42	C	<i>Potentilla drummondii</i>	1
2015-42	B2	<i>Salix barclayi</i>	45
2015-42	D	<i>Sphagnum sp.</i>	30
2015-42	D	<i>Sphagnum squarrosum</i>	10
2015-42	C	<i>Viola sp.</i>	0.1
2015-43	B2	<i>Abies lasiocarpa</i>	3
2015-43	D	<i>Aulacomnium palustre</i>	5
2015-43	C	<i>Calamagrostis canadensis</i>	3
2015-43	C	<i>Carex lasiocarpa</i>	30
2015-43	C	<i>Carex limosa</i>	10
2015-43	C	<i>Carex nigricans</i>	2
2015-43	C	<i>Eriophorum angustifolium</i>	30
2015-43	C	<i>Juncus sp.</i>	0.1
2015-43	C	<i>Kalmia microphylla</i>	0.1
2015-43	C	<i>Ligusticum canbyi</i>	2
2015-43	C	<i>Pedicularis groenlandica</i>	3
2015-43	C	<i>Platanthera dilatata</i>	0.1
2015-43	C	<i>Potentilla drummondii</i>	0.1
2015-43	D	<i>Sphagnum sp.</i>	5
2015-44	D	<i>Aulacomnium palustre</i>	5
2015-44	C	<i>Calamagrostis canadensis</i>	3
2015-44	C	<i>Carex lasiocarpa</i>	10
2015-44	C	<i>Carex lenticularis var lipocarpa (syn. C. kelloggii)</i>	15
2015-44	C	<i>Carex limosa</i>	15
2015-44	C	<i>Carex nigricans</i>	5
2015-44	C	<i>Eleocharis suksdorfiana</i>	7
2015-44	C	<i>Equisetum hyemale</i>	0.1
2015-44	C	<i>Eriophorum angustifolium</i>	30

2015-44	C	<i>Kalmia microphylla</i>	0.1
2015-44	C	<i>Ligusticum canbyi</i>	5
2015-44	C	<i>Pedicularis groenlandica</i>	0.1
2015-44	D	<i>Sphagnum sp.</i>	10
2015-45	C	<i>Carex sp.</i>	4
2015-45	C	<i>Equisetum hyemale</i>	1
2015-45	C	<i>Isoetes sp.</i>	10
2015-45	C	<i>Nuphar polysepala</i>	4
2015-45	C	<i>Polygonum sp.</i>	20
2015-45	C	<i>Potamogeton sp.</i>	0.1
2015-46	C	<i>Agrostis gigantea</i>	10
2015-46	C	<i>Calamagrostis canadensis</i>	3
2015-46	C	<i>Carex amplifolia</i>	3
2015-46	C	<i>Carex lenticularis var lipocarpa (syn. C. kelloggii)</i>	2
2015-46	C	<i>Carex limosa</i>	1
2015-46	C	<i>Carex utriculata</i>	0.1
2015-46	C	<i>Equisetum hyemale</i>	1
2015-46	C	<i>Eriophorum angustifolium</i>	35
2015-46	C	<i>Hypericum sp.</i>	3
2015-46	C	<i>Ligusticum canbyi</i>	40
2015-46	C	<i>Pedicularis groenlandica</i>	2
2015-46	C	<i>Platanthera dilatata</i>	0.1
2015-46	B2	<i>Salix barclayi</i>	20
2015-46	D	<i>Sphagnum squarrosum</i>	10
2015-46	C	<i>Viola sp.</i>	5
2015-47	C	<i>Calamagrostis canadensis</i>	3
2015-47	C	<i>Carex lasiocarpa</i>	5
2015-47	C	<i>Carex limosa</i>	10
2015-47	C	<i>Carex sp.</i>	2
2015-47	C	<i>Eleocharis suksdorfiana</i>	5
2015-47	C	<i>Equisetum arvense</i>	0.1
2015-47	C	<i>Eriophorum angustifolium</i>	40
2015-47	D	<i>Sphagnum compactum</i>	3
2015-47	D	<i>Sphagnum sp.</i>	4
2015-47	D	<i>Sphagnum squarrosum</i>	3
2015-48	C	<i>Carex canescens ssp. disjuncta</i>	10
2015-48	C	<i>Carex limosa</i>	10
2015-48	C	<i>Eleocharis palustris</i>	0.1
2015-48	C	<i>Eriophorum angustifolium</i>	0.1
2015-48	C	<i>Nuphar polysepala</i>	5
2015-48	C	<i>Sparganium sp.</i>	35
2015-49	B2	<i>Abies lasiocarpa</i>	0.1
2015-49	C	<i>Calamagrostis canadensis</i>	5

2015-49	C	<i>Carex lasiocarpa</i>	30
2015-49	C	<i>Carex lenticularis</i> var <i>lipocarpa</i> (syn. <i>C. kelloggii</i>)	5
2015-49	C	<i>Carex limosa</i>	10
2015-49	C	<i>Carex utriculata</i>	10
2015-49	D	<i>Drepanocladus aduncus</i>	20
2015-49	C	<i>Eriophorum angustifolium</i>	30
2015-50	C	<i>Carex lasiocarpa</i>	1
2015-50	C	<i>Carex lenticularis</i> var <i>lipocarpa</i> (syn. <i>C. kelloggii</i>)	1
2015-50	C	<i>Carex utriculata</i>	5
2015-50	C	<i>Equisetum hyemale</i>	1
2015-50	C	<i>Nuphar polysepala</i>	7
2015-51	C	<i>Carex utriculata</i>	3
2015-51	C	<i>Eleocharis palustris</i>	1
2015-51	C	<i>Equisetum fluviatile</i>	30
2015-51	C	<i>Isoetes</i> sp.	0.1
2015-51	C	<i>Nuphar polysepala</i>	0.1
2015-51	C	<i>Potamogetan</i> sp.	1
2015-52	C	<i>Agrostis gigantea</i>	0.1
2015-52	C	<i>Calamagrostis canadensis</i>	2
2015-52	C	<i>Carex amplifolia</i>	2
2015-52	C	<i>Carex exsiccata</i>	1
2015-52	C	<i>Carex flava</i>	0.1
2015-52	C	<i>Carex interior</i>	0.1
2015-52	C	<i>Carex lenticularis</i> var <i>lenticularis</i>	5
2015-52	C	<i>Carex utriculata</i>	45
2015-52	C	<i>Carex viridula</i>	1
2015-52	C	<i>Eleocharis palustris</i>	2
2015-52	C	<i>Epilobium</i> sp.	0.1
2015-52	C	<i>Equisetum fluviatile</i>	2
2015-52	C	<i>Juncus</i> sp.	0.1
2015-52	C	<i>Metha arvensis</i>	20
2015-52	C	<i>Physocarpus malvaceus</i>	10
2015-52	B2	<i>Salix lucida</i>	0.1
2015-52	C	<i>Sium suave</i>	2
2015-53	C	<i>Aralia nudicaulis</i>	5
2015-53	C	<i>Asarum caudatum</i>	1
2015-53	C	<i>Athyrium filix-femina</i>	1
2015-53	B1	<i>Corylus cornuta</i>	1
2015-53	C	<i>Dryopteris expansa</i>	25
2015-53	C	<i>Galium trifidum</i>	0.1
2015-53	C	<i>Gymnocarpium dryopteris</i>	15
2015-53	C	<i>Lysichiton americanus</i>	1
2015-53	D	<i>Mnium</i> sp.	5

2015-53	D	<i>Moss</i>	10
2015-53	B1	<i>Oplopanax horridus</i>	10
2015-53	A1	<i>Picea engelmannii</i> x	10
2015-53	D	<i>Plagiomnium medium</i>	5
2015-53	D	<i>Rhizomnium sp.</i>	5
2015-53	C	<i>Streptopus amplexifolius</i>	0.1
2015-53	B1	<i>Taxus brevifolia</i>	2
2015-53	A1	<i>Thuja plicata</i>	10
2015-53	A2	<i>Thuja plicata</i>	20
2015-53	A3	<i>Thuja plicata</i>	5
2015-53	B2	<i>Thuja plicata</i>	7
2015-53	C	<i>Tiarella trifoliata</i>	3
2015-53	A2	<i>Tsuga heterophylla</i>	10
2015-53	A3	<i>Tsuga heterophylla</i>	5
2015-54	B1	<i>Alnus incana</i>	17
2015-54	C	<i>Calliergon giganteum</i>	5
2015-54	C	<i>Carex amplifolia</i>	5
2015-54	C	<i>Carex canescens ssp. disjuncta</i>	2
2015-54	C	<i>Carex inflated</i>	15
2015-54	C	<i>Carex interior</i>	1
2015-54	C	<i>Carex stipata</i>	0.1
2015-54	C	<i>Circaea alpina</i>	5
2015-54	C	<i>Epilobium ciliatum</i>	0.1
2015-54	C	<i>Equisetum arvense</i>	0.1
2015-54	C	<i>Galium palustre</i>	0.1
2015-54	C	<i>Lemna minor</i>	0.01
2015-54	C	<i>Metha arvensis</i>	0.1
2015-54	C	<i>Mnium sp.</i>	1
2015-54	C	<i>Nuphar polysepala</i>	0.1
2015-54	A3	<i>Pinus contorta</i>	3
2015-54	C	<i>Plagiomnium medium</i>	2
2015-54	C	<i>Poa palustris</i>	15
2015-54	C	<i>Ranunculus gmelinii</i>	2
2015-54	C	<i>Rhizomnium sp.</i>	2
2015-54	B1	<i>Salix sp.</i>	20
2015-54	C	<i>Scirpus microcarpus</i>	5
2015-54	C	<i>Scolochloa festucacea</i>	5
2015-54	C	<i>Sparganium sp.</i>	5
2015-54	A3	<i>Thuja plicata</i>	1
2015-54	B1	<i>Thuja plicata</i>	3
2015-54	B1	<i>Tsuga heterophylla</i>	1
2015-55	C	<i>Carex exsiccata</i>	0.1
2015-55	C	<i>Carex lasiocarpa</i>	10

2015-55	C	<i>Carex sp.</i>	5
2015-55	C	<i>Comarum palustre</i>	0.1
2015-55	C	<i>Drosera anglica</i>	10
2015-55	C	<i>Drosera rotundifolia</i>	5
2015-55	C	<i>Eriophorum chamissonis ?</i>	25
2015-55	C	<i>Kalmia microphylla</i>	5
2015-55	C	<i>Schoenoplectus tabernaemontani</i>	15
2015-55	D	<i>Sphagnum capillifolium</i>	30
2015-55	D	<i>Sphagnum sp.</i>	50
2015-55	C	<i>Spiranthes romanzoffiana</i>	0.1
2015-55	C	<i>Trientalis latifolia</i>	10
2015-57	C	<i>Calamagrostis canadensis</i>	5
2015-57	C	<i>Carex exsiccata</i>	5
2015-57	C	<i>Carex lenticularis var lipocarpa (syn. C. kelloggii)</i>	5
2015-57	C	<i>Carex limosa</i>	25
2015-57	C	<i>Carex utriculata</i>	5
2015-57	D	<i>Drepanocladus aduncus</i>	20
2015-57	C	<i>Eriophorum angustifolium</i>	25
2015-57	C	<i>Kalmia microphylla</i>	15
2015-57	C	<i>Nuphar polysepala</i>	0.1
2015-57	B2	<i>Picea engelmannii</i>	0.1
2015-57	D	<i>Sphagnum capillifolium</i>	10
2015-57	D	<i>Sphagnum sp.</i>	5
2015-57	C	<i>Spiranthes romanzoffiana</i>	0.1
2015-58	C	<i>Carex exsiccata</i>	5
2015-58	C	<i>Carex limosa</i>	20
2015-58	D	<i>Drepanocladus aduncus</i>	10
2015-58	C	<i>Eriophorum angustifolium</i>	50
2015-58	C	<i>Kalmia microphylla</i>	5
2015-58	D	<i>Polytrichum sp.</i>	5
2015-58	D	<i>Sphagnum capillifolium</i>	10
2015-58	D	<i>Sphagnum sp.</i>	10
2015-58	C	<i>Spiranthes romanzoffiana</i>	0.1
2015-59	C	<i>Carex aquatilis</i>	30
2015-59	C	<i>Carex limosa</i>	30
2015-59	C	<i>Eriophorum chamissonis ?</i>	20
2015-59	C	<i>Menyanthes trifoliata</i>	10
2015-59	B2	<i>Spirea douglasii</i>	0.1
2015-60	C	<i>Carex aquatilis</i>	0.1
2015-60	C	<i>Eriophorum chamissonis ?</i>	10
2015-60	B2	<i>Pinus monticola</i>	0.1
2015-60	D	<i>Pleurozium schreberi</i>	5
2015-60	C	<i>Scirpus microcarpus</i>	60

2015-60	D	<i>Sphagnum sp.</i>	25
2015-60	D	<i>Sphagnum squarrosum</i>	10
2015-60	D	<i>Sphagnum warnstorffii</i>	10
2015-60	B2	<i>Spirea douglasii</i>	55
2015-60	B2	<i>Tsuga heterophylla</i>	5
2015-61	B1	<i>Alnus incana</i>	3
2015-61	B1	<i>Alnus viridis</i>	2
2015-61	C	<i>Carex lasiocarpa</i>	30
2015-61	C	<i>Comarum palustre</i>	5
2015-61	B1	<i>Cornus stolonifera</i>	1
2015-61	C	<i>Eleocharis palustris</i>	15
2015-61	C	<i>Juncus articulatus</i>	0.1
2015-61	C	<i>Potamogetan alpinus</i>	10
2015-61	B1	<i>Salix sitchensis</i>	12
2015-61	B1	<i>Salix sp.</i>	0.1
2015-61	B2	<i>Spirea douglasii</i>	2
2015-62	C	<i>Schoenoplectus tabernaemontani</i>	20
2015-63	B1	<i>Alnus viridis</i>	5
2015-63	C	<i>Carex lasiocarpa</i>	30
2015-63	D	<i>Climacium dendroides</i>	30
2015-63	C	<i>Comarum palustre</i>	10
2015-63	C	<i>Menyanthes trifoliata</i>	5
2015-63	C	<i>Perasites sagittatus</i>	15
2015-63	C	<i>Schoenoplectus tabernaemontani</i>	10
2015-63	B2	<i>Spirea douglasii</i>	10
2015-63	C	<i>Viola sp.</i>	5
2015-64	B1	<i>Alnus incana</i>	4
2015-64	C	<i>Athyrium filix-femina</i>	25
2015-64	A2	<i>Betula papyrifera</i>	3
2015-64	C	<i>Circaea alpina</i>	3
2015-64	C	<i>Epilobium ciliatum</i>	0.1
2015-64	C	<i>Equisetum arvense</i>	10
2015-64	C	<i>Lysichiton americanus</i>	5
2015-64	D	<i>Marchantia sp.</i>	5
2015-64	A2	<i>Picea engelmannii x</i>	2
2015-64	B2	<i>Picea engelmannii x</i>	1
2015-64	D	<i>Plagiomnium ellipticum</i>	1
2015-64	C	<i>Poa palustris</i>	5
2015-64	C	<i>Scirpus microcarpus</i>	25
2015-64	C	<i>Senecio triangularis</i>	2
2015-64	A2	<i>Thuja plicata</i>	10
2015-64	B1	<i>Thuja plicata</i>	3
2015-64	B2	<i>Thuja plicata</i>	2

2015-64	C	<i>Tiarella unifoliata</i>	0.1
2015-64	A2	<i>Tsuga heterophylla</i>	5
2015-64	A2	<i>Tsuga heterophylla</i>	15
2015-64	B1	<i>Tsuga heterophylla</i>	3
2015-64	B2	<i>Tsuga heterophylla</i>	7
2015-65	B1	<i>Alnus incana</i>	10
2015-65	C	<i>Calamagrostis canadensis</i>	5
2015-65	C	<i>Carex aquatilis</i>	15
2015-65	C	<i>Comarum palustre</i>	1
2015-65	C	<i>Eleocharis palustris</i>	1
2015-65	C	<i>Epilobium ciliatum</i>	0.1
2015-65	C	<i>Equisetum arvense</i>	5
2015-65	C	<i>Lysichiton americanus</i>	0.1
2015-65	B2	<i>Salix sp.</i>	15
2015-65	C	<i>Scirpus microcarpus</i>	2
2015-65	C	<i>Sparganium sp.</i>	1
2015-65	B2	<i>Spirea douglasii</i>	50
2015-66	C	<i>Calamagrostis canadensis</i>	7
2015-66	C	<i>Carex aquatilis</i>	75
2015-66	C	<i>Equisetum arvense</i>	3
2015-66	C	<i>Lemna minor</i>	5
2015-66	B1	<i>Salix lucida</i>	3
2015-66	B2	<i>Spirea douglasii</i>	7
2015-66	C	<i>Typha latifolia</i>	5
2015-67	A3	<i>Abies lasiocarpa</i>	2
2015-67	B1	<i>Abies lasiocarpa</i>	2
2015-67	C	<i>Aconitum columbianum</i>	0.1
2015-67	C	<i>Agrostis stolonifera</i>	5
2015-67	C	<i>Athyrium filix-femina</i>	3
2015-67	C	<i>Bistorta vivipara</i>	0.1
2015-67	D	<i>Campylium stellatum</i>	5
2015-67	C	<i>Carex canescens ssp. disjuncta</i>	2
2015-67	C	<i>Carex deweyana</i>	2
2015-67	C	<i>Carex lenticularis var lipocarpa (syn. C. kelloggii)</i>	10
2015-67	C	<i>Carex utriculata</i>	10
2015-67	D	<i>Conocephalum conicum</i>	5
2015-67	D	<i>Drepanocladus aduncus</i>	50
2015-67	C	<i>Epilobium ciliatum</i>	0.1
2015-67	C	<i>Equisetum arvense</i>	40
2015-67	C	<i>Leptarrhena pyrolifolia</i>	5
2015-67	C	<i>Ligusticum canbyi</i>	2
2015-67	D	<i>Mnium sp.</i>	15
2015-67	A3	<i>Picea engelmannii</i>	3

2015-67	B1	<i>Picea engelmannii</i>	3
2015-67	A2	<i>Picea engelmannii</i>	10
2015-67	C	<i>Platanthera aquilonis</i>	1
2015-67	D	<i>Pleurozium schreberi</i>	5
2015-67	C	<i>Poa palustris</i>	5
2015-67	C	<i>Ranunculus sp.</i>	0.1
2015-67	D	<i>Rhizomnium magnifolium</i>	5
2015-67	B2	<i>Rhododendron albiflorum</i>	7
2015-67	C	<i>Rubus pedatus</i>	0.1
2015-67	B2	<i>Salix barclayi</i>	35
2015-67	C	<i>Senecio triangularis</i>	3
2015-67	D	<i>Sphagnum squarrosum</i>	5
2015-67	D	<i>Sphagnum warnstorffii</i>	5
2015-67	B2	<i>Vaccinium ovalifolium</i>	3
2015-67	C	<i>Veratrum viride</i>	0.1
2015-68	C	<i>Agrostis stolonifera</i>	5
2015-68	D	<i>Aulacomnium palustre</i>	10
2015-68	C	<i>Bistorta vivipara</i>	5
2015-68	C	<i>Calamagrostis canadensis</i>	10
2015-68	D	<i>Calliergon giganteum</i>	5
2015-68	C	<i>Carex amplifolia</i>	1
2015-68	C	<i>Carex lenticularis var lipocarpa (syn. C. kelloggii)</i>	1
2015-68	C	<i>Carex limosa</i>	5
2015-68	C	<i>Carex rostrata</i>	10
2015-68	C	<i>Carex utriculata</i>	30
2015-68	D	<i>Conocephalum conicum</i>	1
2015-68	D	<i>Drepanocladus aduncus</i>	30
2015-68	C	<i>Equisetum fluviatile</i>	10
2015-68	C	<i>Eriophorum scheuchzeri</i>	25
2015-68	C	<i>Galium palustre</i>	1
2015-68	C	<i>Galium trifidum</i>	1
2015-68	C	<i>Juncus ensifolius var. ensifolius</i>	0.1
2015-68	C	<i>Leptarrhena pyrolifolia</i>	3
2015-68	C	<i>Ligusticum canbyi</i>	1
2015-68	B2	<i>Picea engelmannii</i>	5
2015-68	B1	<i>Picea engelmannii</i>	5
2015-68	D	<i>Plagiomnium ellipticum</i>	10
2015-68	C	<i>Platanthera aquilonis</i>	0.1
2015-68	C	<i>Pyrola asarifolia</i>	0.1
2015-68	B2	<i>Salix barclayi</i>	20
2015-68	D	<i>Sphagnum capillifolium</i>	15
2015-68	D	<i>Sphagnum warnstorffii</i>	10
2015-68	C	<i>Viola sp.</i>	5

2015-69	B1	<i>Abies lasiocarpa</i>	2
2015-69	C	<i>Agrostis stolonifera</i>	5
2015-69	B1	<i>Alnus incana</i>	5
2015-69	C	<i>Calamagrostis canadensis</i>	20
2015-69	C	<i>Carex amplifolia</i>	5
2015-69	C	<i>Carex lenticularis var lipocarpa (syn. C. kelloggii)</i>	15
2015-69	C	<i>Carex rostrata</i>	10
2015-69	C	<i>Carex utriculata</i>	10
2015-69	D	<i>Drepanocladus aduncus</i>	20
2015-69	C	<i>Epilobium ciliatum</i>	0.1
2015-69	C	<i>Equisetum fluviatile</i>	15
2015-69	C	<i>Geum macrophyllum</i>	0.1
2015-69	C	<i>Gymnocarpium dryopteris</i>	0.1
2015-69	C	<i>Heracleum maximum</i>	0.1
2015-69	C	<i>Juncus ensifolius var. ensifolius</i>	1
2015-69	C	<i>Lycopodium clavatum</i>	0.01
2015-69	C	<i>Mimulus sp.</i>	0.1
2015-69	A2	<i>Picea engelmannii</i>	7
2015-69	A3	<i>Picea engelmannii</i>	3
2015-69	B1	<i>Picea engelmannii</i>	3
2015-69	D	<i>Plagiomnium ellipticum</i>	10
2015-69	C	<i>Platanthera aquilonis</i>	0.1
2015-69	D	<i>Pleurozium schreberi</i>	0.1
2015-69	C	<i>Poa palustris</i>	20
2015-69	C	<i>Rubus pedatus</i>	0.1
2015-69	B1	<i>Salix sitchensis</i>	40
2015-69	C	<i>Senecio triangularis</i>	5
2015-69	D	<i>Sphagnum capillifolium</i>	0.1
2015-69	D	<i>Sphagnum warnstorffii</i>	3
2015-69	B2	<i>Vaccinium membranaceum</i>	0.1
2015-69	C	<i>Veronica beccabunga</i>	0.1
2015-69	C	<i>Viola sp.</i>	5
2015-70	C	<i>Carex amplifolia</i>	5
2015-70	C	<i>Carex utriculata</i>	40
2015-70	C	<i>Equisetum arvense</i>	30
2015-70	C	<i>Juncus ensifolius var. ensifolius</i>	0.1
2015-71	B1	<i>Alnus incana</i>	35
2015-71	C	<i>Athyrium filix-femina</i>	10
2015-71	C	<i>Carex deweyana</i>	5
2015-71	C	<i>Cornus canadensis</i>	2
2015-71	C	<i>Equisetum sylvaticum</i>	5
2015-71	C	<i>Galium triflorum</i>	0.1
2015-71	C	<i>Grass</i>	2

2015-71	C	<i>Gymnocarpium dryopteris</i>	1
2015-71	C	<i>Lysichiton americanus</i>	1
2015-71	B2	<i>Oplopanax horridus</i>	3
2015-71	A2	<i>Picea engelmannii</i> x	5
2015-71	A3	<i>Picea engelmannii</i> x	10
2015-71	B2	<i>Picea engelmannii</i> x	5
2015-71	D	<i>Pleurozium schreberi</i>	7
2015-71	C	<i>Rubus pedatus</i>	2
2015-71	C	<i>Scirpus microcarpus</i>	20
2015-71	C	<i>Senecio triangularis</i>	1
2015-71	D	<i>Sphagnum squarrosum</i>	3
2015-71	A1	<i>Thuja plicata</i>	3
2015-71	A2	<i>Thuja plicata</i>	10
2015-71	A3	<i>Thuja plicata</i>	5
2015-71	A3	<i>Tsuga heterophylla</i>	5
2015-71	B2	<i>Tsuga heterophylla</i>	5
2015-71	B2	<i>Vaccinium ovalifolium</i>	5
2015-71	C	<i>Viola canadensis</i>	5
2015-72	C	<i>Calamagrostis canadensis</i>	5
2015-72	C	<i>Carex utriculata</i>	25
2015-72	C	<i>Comarum palustre</i>	0.1
2015-72	C	<i>Eleocharis palustris</i>	15
2015-72	C	<i>Equisetum sylvaticum</i>	40
2015-72	C	<i>Scolochloa festucacea</i>	0.1
2015-72	C	<i>Sparganium</i> sp.	5
2015-73	C	<i>Carex lasiocarpa</i>	40
2015-73	C	<i>Carex limosa</i>	20
2015-73	C	<i>Carex vesicaria</i>	7
2015-73	C	<i>Eriophorum scheuchzeri</i>	20
2015-73	C	<i>Juncus filiformis</i>	2
2015-73	C	<i>Menyanthes trifoliata</i>	3
2015-74	C	<i>Carex lasiocarpa</i>	10
2015-74	C	<i>Nuphar polysepala</i>	20
2015-74	C	<i>Potamogeton</i> sp.	10
2015-74	C	<i>Sparganium angustifolium</i> ssp. <i>emersum</i>	10
2015-75	C	<i>Carex utriculata</i>	10
2015-75	C	<i>Eleocharis palustris</i>	40
2015-75	C	<i>Nuphar polysepala</i>	10
2015-76	C	<i>Calamagrostis canadensis</i>	1
2015-76	C	<i>Carex amplifolia</i>	1
2015-76	C	<i>Equisetum arvense</i>	2
2015-76	B1	<i>Salix sitchensis</i>	80
2015-76	B1	<i>Salix</i> sp.	10

2015-76	C	<i>Scirpus microcarpus</i>	6
2015-77	D	<i>Aulacomnium palustre</i>	2
2015-77	C	<i>Calamagrostis canadensis</i>	5
2015-77	D	<i>Calliergon giganteum</i>	1
2015-77	D	<i>Campylium stellatum</i>	2
2015-77	C	<i>Carex amplifolia</i>	0.1
2015-77	C	<i>Carex lenticularis var. lenticularis</i>	1
2015-77	C	<i>Carex limosa</i>	20
2015-77	C	<i>Carex utriculata</i>	35
2015-77	C	<i>Carex vesicaria</i>	5
2015-77	C	<i>Carex vesicaria</i>	0.1
2015-77	C	<i>Juncus articulatus</i>	0.1
2015-77	C	<i>Juncus filiformis</i>	0.1
2015-77	B2	<i>Lonicera involucrata</i>	0.1
2015-77	C	<i>Ranunculus aquatilis</i>	15
2015-77	C	<i>Ranunculus flammula</i>	1
2015-77	C	<i>Scirpus microcarpus</i>	2
2015-79	B1	<i>Alnus incana</i>	15
2015-79	C	<i>Aralia nudicaulis</i>	0.1
2015-79	C	<i>Athyrium filix-femina</i>	15
2015-79	C	<i>Carex deweyana</i>	0.1
2015-79	C	<i>Cornus canadensis</i>	5
2015-79	C	<i>Equisetum sylvaticum</i>	5
2015-79	C	<i>Gymnocarpium dryopteris</i>	5
2015-79	D	<i>Hylocomium splendens</i>	20
2015-79	C	<i>Lysichiton americanus</i>	15
2015-79	B2	<i>Oplopanax horridus</i>	7
2015-79	A2	<i>Picea engelmannii x</i>	2
2015-79	A3	<i>Picea engelmannii x</i>	2
2015-79	D	<i>Plagiomnium ellipticum</i>	5
2015-79	D	<i>Pleurozium schreberi</i>	10
2015-79	D	<i>Ryhtidiadelphus triquetrus.</i>	5
2015-79	C	<i>Scirpus microcarpus</i>	10
2015-79	A1	<i>Thuja plicata</i>	3
2015-79	A2	<i>Thuja plicata</i>	10
2015-79	A3	<i>Thuja plicata</i>	3
2015-79	B1	<i>Thuja plicata</i>	3
2015-79	B2	<i>Thuja plicata</i>	1
2015-79	A2	<i>Tsuga heterophylla</i>	5
2015-79	A3	<i>Tsuga heterophylla</i>	5
2015-79	B1	<i>Tsuga heterophylla</i>	2
2015-79	B2	<i>Tsuga heterophylla</i>	2
2015-79	B2	<i>Vaccinium ovalifolium</i>	5

2015-80	B2	<i>Alnus incana</i>	0.1
2015-80	C	<i>Athyrium filix-femina</i>	2
2015-80	C	<i>Carex amplifolia</i>	3
2015-80	C	<i>Carex diandra</i>	1
2015-80	C	<i>Carex lenticularis var lipocarpa (syn. C. kelloggii)</i>	30
2015-80	C	<i>Carex retrorsa</i>	5
2015-80	C	<i>Carex utriculata</i>	20
2015-80	C	<i>Carex vesicaria</i>	2
2015-80	C	<i>Circaea alpina</i>	0.1
2015-80	C	<i>Eleocharis palustris</i>	4
2015-80	C	<i>Eleocharis sp.</i>	1
2015-80	C	<i>Epilobium ciliatum</i>	0.1
2015-80	C	<i>Equisetum arvense</i>	20
2015-80	C	<i>Galium palustre</i>	0.1
2015-80	C	<i>Juncus ensifolius var. ensifolius</i>	0.1
2015-80	C	<i>Lemna minor</i>	0.1
2015-80	C	<i>Metha arvensis</i>	1
2015-80	D	<i>Plagiomnium ellipticum</i>	5
2015-80	C	<i>Scirpus microcarpus</i>	10
2015-80	C	<i>Sparganium angustifolium ssp. Emersum</i>	3
2015-80	B2	<i>Thuja plicata</i>	0.1
2015-80	B2	<i>Tsuga heterophylla</i>	0.1
2015-81	B1	<i>Alnus incana</i>	25
2015-81	C	<i>Athyrium filix-femina</i>	5
2015-81	D	<i>Aulacomnium palustre</i>	5
2015-81	C	<i>Calamagrostis canadensis</i>	40
2015-81	C	<i>Dryopteris expansa</i>	10
2015-81	C	<i>Grass</i>	10
2015-81	C	<i>Heracleum maximum</i>	4
2015-81	D	<i>Leafy Mosses</i>	25
2015-81	D	<i>Plagiomnium ellipticum</i>	10
2015-81	B2	<i>Rubus pubescens</i>	1
2015-81	C	<i>Scirpus microcarpus</i>	5
2015-81	C	<i>Symphoricarpos albus</i>	0.1
2015-81	C	<i>Urtica dioica</i>	0.1
2015-81	C	<i>Veratrum viride</i>	5
2015-81	C	<i>Viola sp.</i>	5
2015-82	B2	<i>Alnus incana</i>	5
2015-82	B2	<i>Amelanchier alnifolia</i>	
2015-82	C	<i>Athyrium filix-femina</i>	
2015-82	C	<i>Clintonia uniflora</i>	
2015-82	C	<i>Cornus canadensis</i>	
2015-82	C	<i>Dryopteris expansa</i>	

2015-82	C	<i>Equisetum arvense</i>	
2015-82	C	<i>Gymnocarpium dryopteris</i>	
2015-82	C	<i>Listera convallarioides</i>	
2015-82	C	<i>Lycopodium annotinum</i>	
2015-82	C	<i>Lysichiton americanus</i>	
2015-82	B1	<i>Oplopanax horridus</i>	3
2015-82	A2	<i>Picea engelmannii x</i>	2
2015-82	B2	<i>Picea engelmannii x</i>	2
2015-82	D	<i>Plagiomnium ellipticum</i>	20
2015-82	C	<i>Platanthera aquilonis</i>	
2015-82	D	<i>Pleurozium schreberi</i>	5
2015-82	D	<i>Polytrichum juniperinum</i>	0.1
2015-82	C	<i>Pyrola asarifolia</i>	
2015-82	D	<i>Rhizomnium magnifolium</i>	5
2015-82	D	<i>Ryhtidiadelphus triquetrus.</i>	0.1
2015-82	C	<i>Scirpus microcarpus</i>	
2015-82	B2	<i>Sorbus sitchensis</i>	
2015-82	D	<i>Tetraphis geniculata</i>	2
2015-82	A2	<i>Thuja plicata</i>	20
2015-82	A3	<i>Thuja plicata</i>	10
2015-82	B1	<i>Thuja plicata</i>	5
2015-82	B2	<i>Thuja plicata</i>	5
2015-82	B1	<i>Tsuga heterophylla</i>	8
2015-82	B2	<i>Tsuga heterophylla</i>	7
2015-82	B2	<i>Tsuga heterophylla</i>	3
2015-82	B2	<i>Vaccinium membranaceum</i>	0.1
2015-82	C	<i>Viola canadensis</i>	
2015-83	B1	<i>Alnus incana</i>	9
2015-83	C	<i>Cares sitchensis</i>	25
2015-83	C	<i>Carex aquatilis</i>	5
2015-83	C	<i>Carex utriculata</i>	30
2015-83	C	<i>Cicuta douglasii</i>	5
2015-83	C	<i>Epilobium ciliatum</i>	0.1
2015-83	C	<i>Equisetum pratense</i>	5
2015-83	C	<i>Grass</i>	15
2015-83	B1	<i>Picea engelmannii x</i>	1
2015-83	C	<i>Scirpus microcarpus</i>	0.1
2015-83	C	<i>Stachys mexicana</i>	5
BON-001	D	<i>Calliergon giganteum</i>	5
BON-001	D	<i>Campylium stellatum</i>	5
BON-001	C	<i>Carex crawfordii</i>	0.1
BON-001	C	<i>Carex cusickii</i>	5
BON-001	C	<i>Carex lasiocarpa</i>	5

BON-001	C	<i>Carex sitchensis?</i>	1
BON-001	C	<i>Carex tenuiflora</i>	2
BON-001	Algae	<i>Chara sp.</i>	0.1
BON-001	D	<i>Drepanocladus aduncus</i>	50
BON-001	C	<i>Drosera anglica</i>	5
BON-001	C	<i>Drosera rotundifolia</i>	5
BON-001	C	<i>Eleocharis rostellata</i>	50
BON-001	C	<i>Epipactis gigantea</i>	7
BON-001	C	<i>Juncus articulatus</i>	3
BON-001	C	<i>Juncus nodosus</i>	3
BON-001	C	<i>Lobelia kalmii</i>	10
BON-001	C	<i>Menyanthes trifoliata</i>	7
BON-001	C	<i>Mimulus guttatus</i>	5
BON-001	C	<i>Packera paupercula</i>	1
BON-001	C	<i>Parnassia fimbriata</i>	2
BON-001	C	<i>Perasites sagittatus</i>	0.1
BON-001	C	<i>Platanthera dilatata</i>	0.1
BON-001	C	<i>Schoenoplectus sp.</i>	10
BON-001	D	<i>Sphagnum spp.</i>	20
BON-001	C	<i>Spiranthes romanzoffiana</i>	0.1
BON-001	C	<i>Stellaria longifolia</i>	1
BON-001	C	<i>Symphyotrichum subspicatum</i>	1
BON-001	B2	<i>Thuja plicata</i>	0.01
BON-001	D	<i>Tomentypnum nitens</i>	10
BON-001	C	<i>Typha latifolia</i>	2
BON-001	C	<i>Utricularia macrohiza</i>	5
BON-001	C	<i>Viola sp.</i>	2