

1991-060-00 - Pend Oreille Wetlands Wildlife Mitigation Project – Kalispel

**Sponsor:** Kalispel Tribe

**Province:** Intermountain      **Subbasin:** Pend Oreille

**Budgets:** FY07: \$112,967    FY08: \$118,445    FY09: \$124,000

**Short description:** The Pend Oreille Wetlands project is a 600-acre property to partially mitigate for wildlife habitat losses due to the construction and inundation at Albeni Falls Dam.

**ISRP Review:** Response requested

AND

1992-061-00 - Albeni Falls Wildlife Mitigation

**Sponsor:** Albeni Falls Interagency Work Group (Idaho Dept. of Fish and Game, Coeur d'Alene Tribe, Kalispel Tribe, and Kootenai Tribe)

**Province:** Intermountain      **Subbasin:** Pend Oreille

**Budgets:** FY07: \$7,949,297    FY08: \$8,103,022    FY09: \$8,342,004

**Short description:** Protect, restore, enhance, and maintain wetland and wildlife habitat in Pend Oreille, Coeur d'Alene, and Kootenai Subbasins as ongoing mitigation for impacts associated with the construction and inundation of the Albeni Falls hydroelectric project.

**ISRP Review:** Response requested

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The Albeni Falls Interagency Work Group (Work Group) would like to take this opportunity to respond to Independent Scientific Review Panel (ISRP) comments regarding proposals submitted for project numbers 1991-060-00 (Pend Oreille Wetlands) and 1992-061-00 (Albeni Falls Wildlife Mitigation). The Pend Oreille Wetlands project was implemented prior to the establishment of a contract to implement the Albeni Falls Wildlife Mitigation project and its sponsorship by the Work Group. Because the Pend Oreille Wetlands project partially mitigates wildlife losses associated with the Albeni Falls project, the Kalispel Tribe recently elected to combine the operations and maintenance (O&M) budget for the Pend Oreille Wetlands project with the Albeni Falls Wildlife Mitigation project to reduce costs and increase contracting and budget efficiency. In keeping with that spirit, the Kalispel Tribe's and Work Group's response to ISRP comments will include both the Albeni Falls Wildlife Mitigation project and Pend Oreille Wetlands project proposals.

While the Work Group agrees that these proposals do not provide an historic evaluation of the projects from a scientific perspective, we must point out that implementation of the *Monitoring and Evaluation Plan for the Albeni Falls Wildlife Mitigation Project* (Plan) (AFIWG 2001) has been underway since 2001. In that year, the Kalispel Tribe began to select habitat cover type reference sites, collect baseline information on those sites, and initiate data collection on permanent sample sites. After four years, the Kalispel Tribe is now able to compare data sets and present meaningful information regarding habitat protection and restoration efforts and their relationship to wildlife populations. The Idaho Department of Fish and Game (IDFG) and the Coeur d'Alene Tribe also began implementation of the Plan in 2002 and 2006, respectively.

A Work Group response is detailed below for two ISRP requests for additional information. The third request requiring additional information regarding monitoring and evaluation necessitates a response from each Work Group member and is detailed further below.

The Work Group's detailed response to the ISRP comments follow:

- 1) ISRP Request:  
*"...justify the basis for purchase of land"*

Response:

The purchase of land a) provides land managers with the full bundle of property rights, b) provides for the perpetual ability to restore, enhance, and manage habitat, and c) is one of the most cost effective conservation tools to permanently safeguard the protection of fish and wildlife habitat and habitat units. Tribes and agencies are more likely to pursue the acquisition of property rights either by purchase or donation as a more efficient means of land management. Often times, it is less costly to negotiate a land purchase than that of a conservation easement, for example, due to the increased complexity of an easement transaction and the long-term cost to monitor and enforce an easement. Because the core project area (Pend Oreille County, Washington and Bonner County, Idaho) is rural, sparsely populated, and lacks active land trust organizations that (can be) instrumental in educating the public about the potential benefits of charitable land and easement donation, landowners require more education as to the variety of conservation options available to them and, as a result, are more inclined to pursue the outright sale of land. Fully aware of these facts, however, the members of the Work Group have actively worked to sow the appropriate conservation seeds in those areas in which it has targeted its mitigation implementation efforts by educating landowners and providing them with information about conservation options such as land and easement donation, estate planning, charitable gift annuities, and bargain sales. The Kalispel Tribe also partners with the Inland Northwest Land Trust to work with landowners interested in land and/or easement donations. To date, the economic demographics of the project area (Pend Oreille County, Washington and Bonner County, Idaho) have been such that landowners are land rich and cash poor, which tend to yield very little tax incentive for the outright donation of land or easements. However, as wealthier individuals continue to relocate in the project area, the Work Group anticipates an increase in the opportunity to work with landowners willing to donate land and/or easement rights for the purpose of wildlife mitigation.

Once Work Group members identify a potential mitigation project, the project undergoes careful consideration by the Work Group by way of a process established, in part, by the Northwest Power and Conservation Council (NPCC) and by the Work Group itself. The Work Group meets at least each quarter to consider new projects. Members must submit a project proposal (see [Appendix A](#) for an example) for deliberation and ranking by the Work Group to determine whether it meets a) the NPCC requirements established as part of the 2000 Columbia Basin Fish and Wildlife Program, and b) the minimum score established by the Work Group ([Appendix A](#)). Once a project is determined to be an appropriate mitigation action, the project is further developed through processes established by BPA Real Property Services, KEC Environmental, and BPA Communications. Once these processes are completed, perpetual land management rights are secured through either conservation easement or fee-title purchase.

- 2) ISRP Request:  
“...provide a rationale for particular management approaches (e.g., blasting)”

Response:

An increase in habitat units (HUs) and life history requirements for specific target species provides the overarching rationale for all management and enhancement actions that take place on a wildlife mitigation site. The site-specific management plan developed for each wildlife mitigation project identifies an array of alternatives that might be used to accomplish the desired outcome (e.g., an increase in HUs, hydrologic connectivity, etc.). If it is determined, for example, that HUs for mallard could be increased by improving the quantity and quality of seasonally available wetlands, possible enhancement actions to achieve this goal are identified (i.e., excavation using heavy equipment, blasting, development of water control structures, etc.). Blasting, for instance, can be used to enhance or restore wetlands in areas where heavy equipment might be detrimental to the site or precluded from use due to particular site conditions (e.g., trees may surround a site and prevent adequate entry with heavy equipment). Further, a baseline HEP might also indicate that mallard HUs could be significantly increased by improving nesting habitat. An increase in nesting habitat might include increasing scrub-shrub vegetation by planting shrub cuttings which, in turn, may also benefit yellow warbler and other neotropical migratory songbirds. The ultimate decision as to which activities or combination of activities are finally used is determined by a) the cost effectiveness of an action relative to the number of target species benefited, b) site-specific conditions such as soil type, topography, vegetation type, and hydrology, c) equipment and personnel availability, d) field survey results, and d) permit approvals and time schedules. Each management or enhancement action is specified for a treatment that best suits on-site conditions and site potential.

The following ISRP request requires individual Work Group member response as each member began its M&E Program at different times and is fulfilling its M&E obligation differently.

3) ISRP Request:

1992-061-00: "...include a summary description of M&E especially reporting of results from past review"; and

1991-060-00: "...Monitoring has been conducted in recent years, e.g., Breeding Bird Surveys conducted in 1999, 2002, 2003, 2004 and 2005. It appears that bank stabilization, water management and other enhancement activities have taken place. Thus, there should be some positive findings, but "no data" is provided. After five years of Breeding Bird Surveys some meaningful information should be generated, or at least a good base" and "...Community Similarity metrics need to be reported to determine if project goals are being met and maintained. The ISRP requests that the response include data from the bird surveys completed and a better description of data evaluation processes" and "...the ISRP needs to see an evaluation of biological objectives."

Kalispel Tribe Response:

In 2001, the Kalispel Tribe began a full array of data collection in direct connection to the *Monitoring and Evaluation Plan for the Albeni Falls Wildlife Mitigation Project* (Plan) (AFIWG 2001). The Kalispel Tribe is relatively early in the Plan's implementation and fully expects to see increasing results within the next three years. Data collected by the Kalispel Tribe includes vegetation, small mammals, amphibians and breeding bird surveys. Waterfowl pair counts are also collected to track trends in waterfowl use at each project site. The Kalispel Tribe has been on the forefront of implementation to avoid duplication of effort as well as to refine data collection methods ([Appendix B](#)) and analyses. The use of Probabilistic Jaccard (Chao) similarity measures will increase the Tribe's ability to detect movement of restoration actions toward the reference condition as it takes into account the fact that the data collection effort is not extensive. The Kalispel Tribe did not include in its response copies of the monitoring reports for 2002-2005. Instead, the Tribe urges the ISRP to review the reports online at the Kalispel Tribe website (<http://www.kalispeltribe.com/default.aspx?page=80>). Please refer to [Appendix C](#) for a copy of the Kalispel Tribe/Eastern Washington University presentation of its monitoring program at the Conservation Biology conference. Summary monitoring data is included in [Appendix D](#) and can also be seen at <http://atlas.knrd.org>. This web based data center is currently being developed to provide the most recent data available for the properties being managed under this project by the Kalsipel Tribe. It is our intention to expand this database to include all datasets and information relating to these projects sites. The Kalispel Tribe encourages the ISRP to visit the terrestrial section of this site and review the data with respect to sample location, association with each wildlife mitigation site, related reference sites, and community similarity to related reference site conditions. At this time reference site data does not exist for non-target habitat types such as coniferous forest habitat. Please make note of community similarity measures for the sample points on the Pend Oreille Wetlands (Flying Goose Ranch) project (project number 1991-060-00) as those indices represent the project's evaluation of meeting the biological objective of providing replacement habitat for those lost due to the construction and inundation of Albeni Falls Dam.

References

AFIWG. (Albeni Falls Interagency Work Group). 2001. *Monitoring and Evaluation Plan for the Albeni Falls Wildlife Mitigation Project*. 27 pp.

- 3) ISRP Request:  
1992-061-00: "...include a summary description of M&E especially reporting of results from past review".

Idaho Department of Fish and Game Response:

Aside from conducting baseline and 5-year Habitat Evaluation Procedures (HEP) for all mitigation properties, IDFG is also following a monitoring and evaluation plan detailed in Unnasch *et al.* (2003). The IDFG monitoring and evaluation program attempts to balance broad-scale, extensive monitoring with site-specific, intensive monitoring needs by identifying groups of long-term monitoring sites. The IDFG is currently in the process of completing the collection of baseline information at each of the permanent monitoring sites and identifying reference sites. Information is being organized so it can eventually compare with the information collected on wildlife mitigation parcels managed by other Work Group members. These efforts satisfy the objectives<sup>1</sup> of the *Monitoring and Evaluation Plan for the Albeni Falls Wildlife Mitigation Project* (Plan) (AFIWG 2001).

The IDFG is also complementing the monitoring effort by mapping the vegetative structure and composition on all mitigation parcels. This information is being organized in a hierarchical classification system developed by the Northwest Habitat Institute (NHI) (Johnson and O'Neil 2001; O'Neil *et al.* 2001). The IDFG is using this information to identify and prioritize habitats and to describe the ecological interactions of organisms within these habitats. Organisms are not only dependent upon certain habitat characteristics for survival, but they also have the capability to change their environment by their behavior. This data collection and analysis is expected to yield information on how management activities influence ecosystem processes, and how such ecosystem processes and disturbance regimes affect environments for wildlife habitat, species and functions. This monitoring effort satisfies the second and third objectives of the Plan.

*Vegetation Monitoring*

Vegetation sampling was completed for all IDFG mitigation properties in 2004, and will be completed every five years at each sample point. Vegetation cover mapping for all mitigation properties was completed in 2005, and will be repeated in conjunction with HEP assessments. Over the course of the 2004 data collection period, 98 samples were completed with 22,918 points surveyed (Antonelli 2005). A total of 365 different vascular plant species were encountered and recorded with percent cover by location.

Information presented in [Table 1](#) and [Table 2](#)<sup>2</sup> show the most common plant species identified in the two wildlife management areas (WMAs) surveyed. The species observed between the early seral stage communities (grass/forb dominated areas) showed different species assemblages between the two WMAs. This difference was also reflected in the noxious weeds observed among the two WMAs ([Table 3](#) and [Table 4](#)). Later seral stage communities (shrublands and forests) were much more similar ([Table 13](#) and [Table 14](#)). When comparing

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<sup>1</sup> The objectives of the *Monitoring and Evaluation Plan for the Albeni Falls Wildlife Mitigation Project* (AFIWG 2001) are: 1) track progress toward full mitigation of the 28,587 HUs identified in the Albeni Falls Dam loss assessment; 2) evaluate the success or failure of mitigation management activities; and 3) adopt standardized monitoring methodologies that are compatible with monitoring at larger scales and the scientific literature.

<sup>2</sup> All tables mentioned in this section are presented at the end of this section.

Boundary Creek WMA to the Pend Oreille Combined Lands WMA, early seral vegetation showed 42% similarity between habitat cover types, whereas late seral vegetation showed 80% similarity between habitat cover types. The data also suggest that the habitat cover types are very bimodal at Boundary Creek. Continued vegetation monitoring will be important for ensuring the vegetation communities evolve in the desired direction.

A minimum of three reference sites for each cover type described in the Albeni Falls Loss Assessment (Martin *et al.* 1988) will be identified. The IDFG is in the process of collaborating with the Kalispel Tribe to compare reference site characteristics.

### *Avian Monitoring*

The IDFG conducts avian sampling every three years, but this sampling regime will be completed every five years after the first 12 years. Waterfowl sampling and the monitoring of bald eagle nesting is conducted annually. Waterfowl monitoring consists of duck breeding pair and brood counts ([Table 5](#)), Canada goose nest counts and Canada goose brood counts ([Table 6](#)), wood duck nest box use surveys, and cooperation with the U.S. Fish and Wildlife Service national bird-banding laboratory and mid-winter winter waterfowl surveys. Bald eagle nest information is obtained through nest inspections during pre-egg laying (March 1-15), incubation (March 15-May 1), nesting (May 1-June 20), and fledgling (June 20-July 20) periods ([Table 7](#)).

A total of 544 observations of 64 species of lands birds were made in 2004 at 11 sites on the Pend Oreille Combined Lands WMA ([Table 8](#)). At the Boundary Creek WMA, a total of 512 observations of 59 species were made in 2004 at 11 sites ([Table 9](#)). Mean species richness was 19.4 species per point (range 14-28 species) for the Pend Oreille sites and 18.9 species per point (range 10-28 species) for the Boundary Creek sites. Chao-Jaccard Index of Similarity provides better estimates of similarity under these conditions ([Table 10](#) and [Table 11](#)). Similarity calculated for each point at the Pend Oreille WMA using the 2004 bird counts averaged 28% (range = 8 to 59%), whereas the similarity calculated for each point at Boundary Creek averaged 31.5% (range = 9 to 75%). There appears to be a very weak correlation between the habitat vegetation cover types ([Table 13](#) and [Table 14](#)) and the abundance of bird species ([Table 10](#) and [Table 11](#)), however, there is no clear pattern.

### *Monitoring Wildlife-Habitat Relationships*

Since 2005, IDFG has collaborated with researchers from the Northwest Habitat Institute (NHI) utilizing a hierarchical classification system to prioritize habitats and to describe the ecological interactions of organisms within these habitats (Johnson and O'Neil 2001; O'Neil *et al.* 2001). Key ecological functions (KEFs)<sup>3</sup> and key environmental correlates (KECs)<sup>4</sup> are used to describe and compare wildlife species and their associations with each other and their environment. Understanding ecological roles of wildlife and plant species is important for also understanding the consequences of changes and management actions on ecosystems. This monitoring effort is in addition to monitoring as prescribed in Unasch *et al.* (2003).

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<sup>3</sup> The KEFs of species refer to the major ecological roles that species play in their ecosystem and that influence the diversity, productivity, and eventually sustainability of resource use and production.

<sup>4</sup> KECs refer to environmental influences on the distribution and abundance of organisms. KECs are also denoted for each species using a standard classification system that includes categories for vegetation habitat elements, nonvegetation terrestrial elements, aquatic bodies and substrates and anthropogenic structures.

Also, maps of KEF and KEC patterns can be viewed as management hypotheses. These maps can be used to guide critical decisions on land management (e.g., land acquisition, management allocations, and decisions on conservation, preservation, or restoration activities) specific KEF patterns can be verified in the field through applied research studies. Several main hypotheses can be listed pertaining to functional assessments, including the following (from Marcot and Vander Heyden 2001):

- Functional redundancy<sup>5</sup> imparts resilience to perturbations. Greater functional redundancy may be desirable in that it imparts a greater resilience of the ecosystem to adverse perturbations and disturbances (Naeem 1998; Rosenfeld 2002).
- Functional redundancy provides for greater levels of sustainability.
- Total functional diversity<sup>6</sup> imparts greater productivity and biological diversity. High total functional richness and functional diversity imply the presence of many ecological functions, even levels of redundancy across functions, and functionally resilient ecological communities

Field work comprises identifying and mapping habitat types, environmental structural conditions and habitat elements. Invasive species are also identified and mapped. Once this information is collected, then a weighted value for each KEF is calculated (the product of the number of species and the percentage of total acreage). For each habitat type, a sum of weighted values is divided by the number of KEFs to yield a Discrete Weighted Area Average Value (DWAAV). The DWAAV for each habitat type is corrected for the presence of invasive weeds to yield baseline habitat values ([Figure 5](#)).

To date, IDFG has mapped the wildlife habitat types, structural elements and habitat elements on all wildlife mitigation properties and has completed the analysis of KECs on one wildlife mitigation habitat segment, namely Denton Slough. The remaining habitat segments will be surveyed to determine their KECs by the end of this field season. It is expected that IDFG will complete its analysis of this data collection effort in 2007. In the following section, we present an example of the type information this approach can generate.

#### *Monitoring Wildlife-Habitat Relationship: Denton Slough Habitat Segment Example*

The IDFG purchased the 16.8-acre Denton Slough property in December 1997. The property is located at the north end of Denton Slough, an arm of Lake Pend Oreille, approximately three miles southeast of Hope, Idaho. A portion of the property is flooded each year from June through September when Lake Pend Oreille is at a full pool elevation of 2,062.5 feet. Ground water from the surrounding area surfaces on the property and flows into the slough. Over half of the property is wet and boggy during spring and summer partially drying out near the end of August.

Using habitat types defined under the NHI's Interactive Biodiversity Information System (IBIS), four wildlife habitat types are found for Denton Slough ([Table 14](#); [Figure 1](#)). [Figure 2](#) shows the habitat structural conditions on the property. All wildlife habitat types, structural conditions and habitat elements are defined under the classification system. This information is mapped using the Global Positioning System (GPS) and software mapping programs (ArcView). [Figure 3](#) shows the number of KEC for each habitat type. Forested areas have higher KEC counts

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<sup>5</sup> Functional redundancy is the number of wildlife species performing a specific KEF.

<sup>6</sup> Total functional diversity is the functional richness weighted by functional redundancy (Brown 1995). Total functional richness is the number of KEF categories performed by all wildlife species in a habitat and area.

primarily because these vegetation communities are more complex and tend to have more structural conditions (i.e., downed vegetation and snags). A preliminary evaluation of the different classes of wildlife species performing certain functions in the different habitat types on Denton Slough is presented in [Figure 4](#).

## *References*

- AFIWG. (Albeni Falls Interagency Work Group). 2001. Monitoring and Evaluation Plan for the Albeni Falls Wildlife Mitigation Project. 27 pp.
- Antonelli, D.S. 2005. 2004 Vegetation Monitoring and Evaluation Study: Boundary Creek and Pend Oreille Wildlife Management Areas, Albeni Falls Wildlife Mitigation Project. Idaho Department of Fish and Game. 56 pp + Appendices.
- Brown, J. H. 1995. Macroecology. The University of Chicago Press, Chicago IL. 269 pp.
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- Marcot, B. G., and M. Vander Heyden. 2001. Key ecological functions of wildlife species. Pp. 168-186 *in*: D. H. Johnson and T. A. O'Neil, eds. Wildlife-habitat relationships in Oregon and Washington. Oregon State University Press, Corvallis O
- Martin, R. C., H. J. Hansen, and G. A. Meuleman. 1988. Albeni Falls wildlife protection, mitigation, and enhancement plan. Project 87-43. Bonneville Power Administration. Portland, OR.
- Naeem, S. 1998. Species redundancy and ecosystem reliability. *Cons. Biol.* 12(1):39-45.
- O'Neil, T. A., D. H. Johnson, C. Barrett, M. Trevithick, K. A. Bettinger, C. Kiilsgaard, M. Vander Heyden, E. L. Greda, D. Stinson, B. G. Marcot, P. J. Doran, S. Tank, and L. Wunder. 2001. Matrixes for wildlife-habitat relationships in Oregon and Washington. CD-ROM. *in*: D. H. Johnson and T. A. O'Neil, eds. Wildlife-habitat relationships in Oregon and Washington. Oregon State University Press, Corvallis OR.
- Rosenfeld, J. S. 2002. Functional redundancy in ecology and conservation. *Oikos* 98(1):156-162.
- Unnasch, R. S., S. K. Rust, D. Leptich, R. C. Martin, E. Bottum, G. Servheen and M. Terra-Burns. 2003. Monitoring and evaluation plan for Idaho wildlife mitigation projects. Idaho Conservation Data Center, Idaho Department of Fish and Game. Boise, ID. 35 pp.

IDFG Figures and Tables  
Can be found on the Following Pages

Figure 1. Map of IBIS wildlife-habitat cover types on the Denton Slough Habitat Segment.

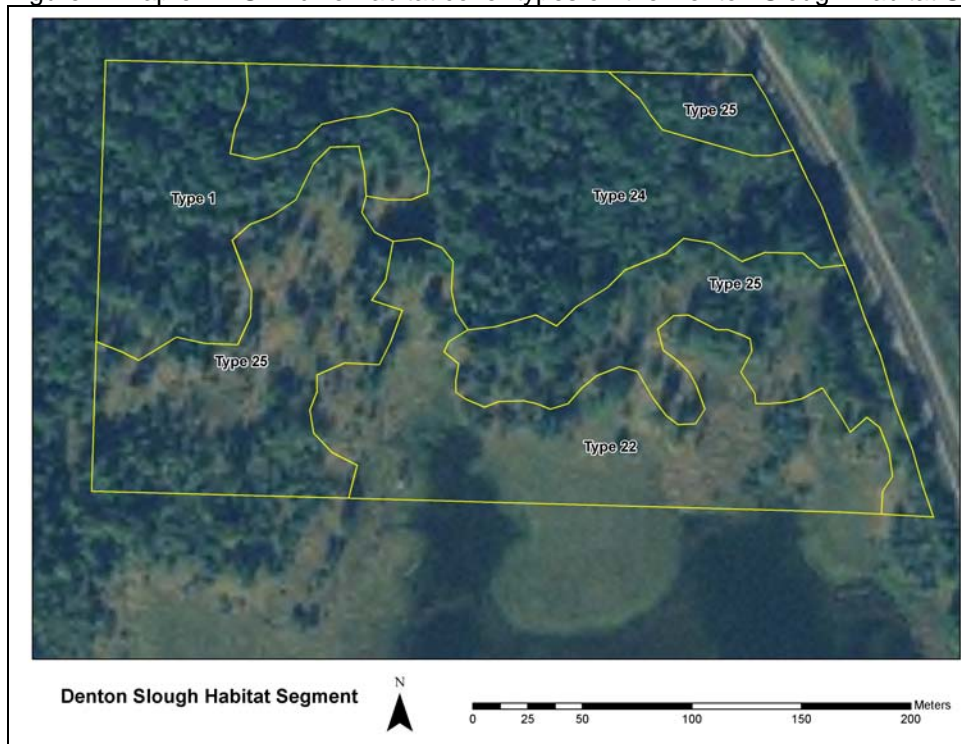


Figure 2. Map of habitat structural conditions found on the Denton Slough Habitat Segment.

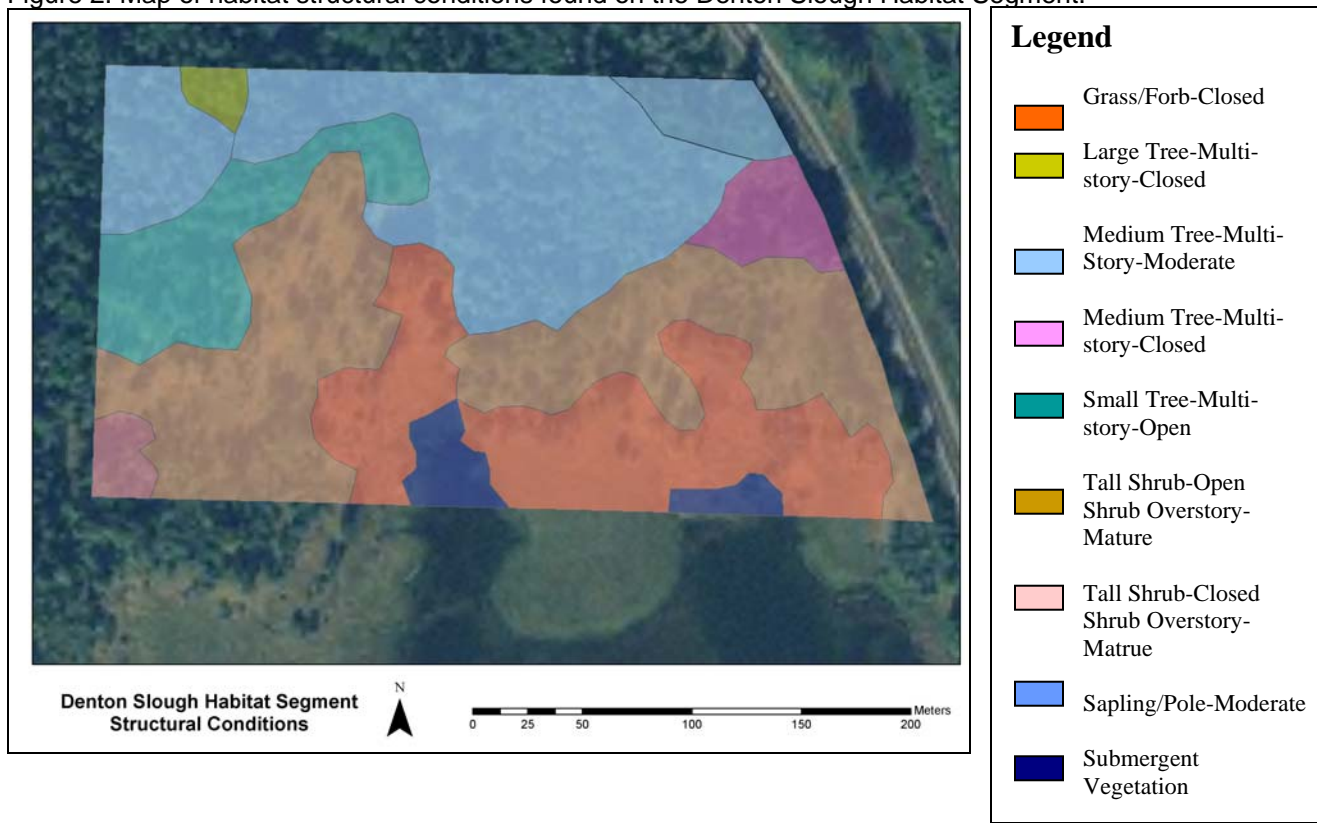


Figure 3. Map showing the number of KECs present for each of the wildlife habitat cover types found on Denton Slough.

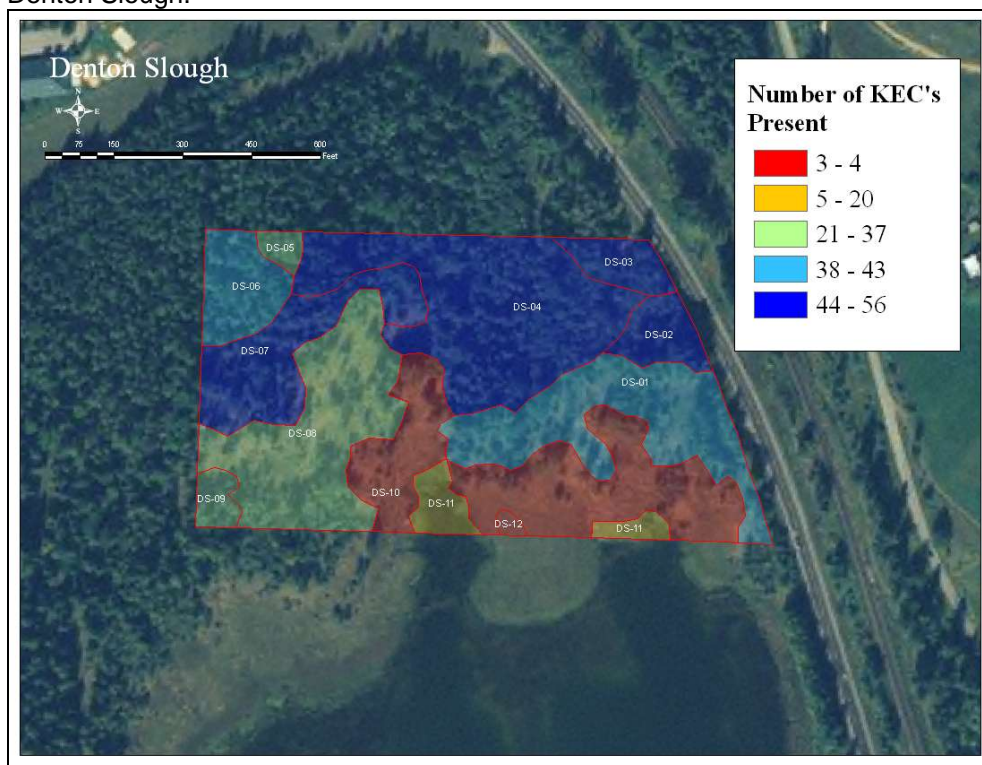


Figure 4. Chart showing the number of species for eight KEF for each animal classification on Denton Slough.

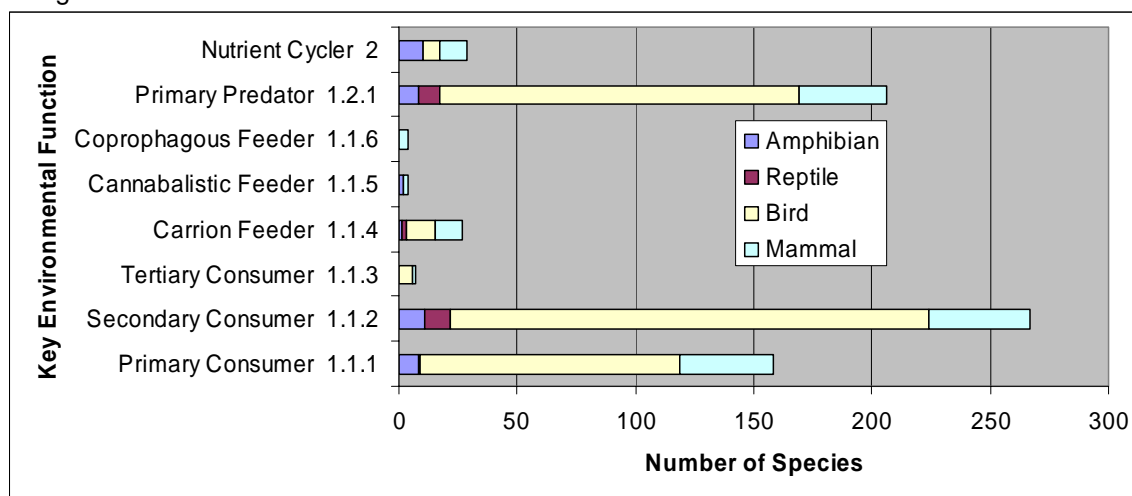


Figure 5. Map showing the baseline habitat values for Denton Slough Habitat Segment.

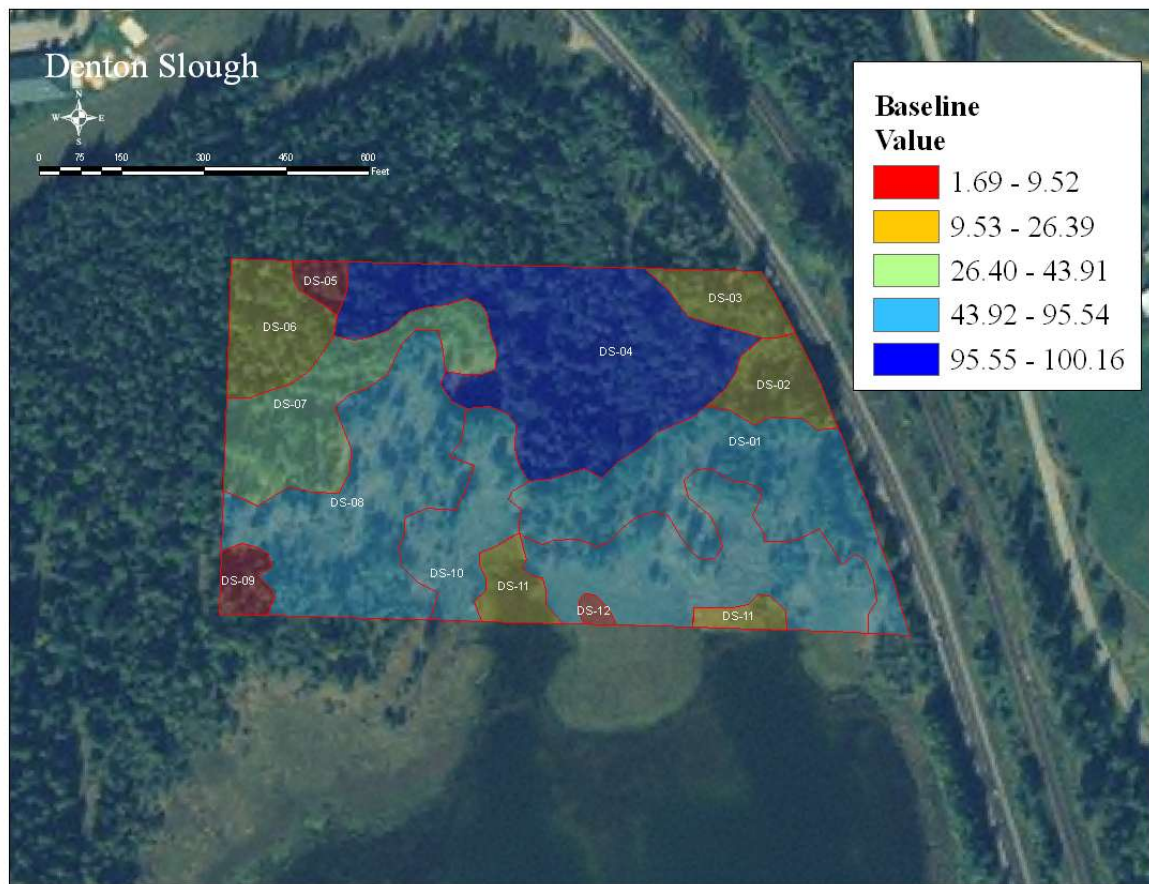


Table 1. Total acreage for each IBIS wildlife-habitat type for Denton Slough Habitat Segment.

<b>Wildlife-Habitat Type</b>	<b>Code</b>	<b>Explanation</b>	<b>Acres</b>
Lowland Conifer-Hardwood Forest	Type 1	Lowland Conifer-Hardwood Forest. Lowland forests and forests in areas transitional to uplands that are co-dominated by conifer and deciduous trees. Western red cedar, Engelmann spruce, western hemlock, birch, and black cottonwood are common dominate species. Upland stands dominated by paper birch were included here.	2.6
Herbaceous Wetland	Type 22	Herbaceous Wetland. Meadows, marshes, and aquatic beds are included here.	3.9
Montane Coniferous Wetland	Type 24	Montane Coniferous Wetland. This includes the forested wetlands dominated conifer (primarily western red cedar and western hemlock). Herbaceous component must have definite hydrophytic character. Key herbaceous species include skunk cabbage and/or devil's club	4.3
Interior Riparian Wetland	Type 25	Interior Riparian Wetland. This type includes deciduous wetland forests normally dominated by black cottonwood and scrub-shrub wetlands often dominated by alders, willows, black hawthorn, and/or rose spirea.	6.0

Table 2. Species with coverage greater than two percent – Boundary Creek WMA 2004 results.

<b>Technical name</b>	<b>Common name</b>	<b>Observed hits</b>	<b>Estimated coverage</b>
<i>Agrostis stolonifera</i>	creeping bentgrass	1537	12.90
<i>Dactylis glomerata</i>	Orchardgrass	1481	12.43
<i>Elymus repens</i>	Quackgrass	1237	10.38
<i>Thinopyrum intermedium</i>	intermediate wheatgrass	996	8.36
<i>Cirsium arvense</i>	Canada thistle	985	8.26
<i>Thuja plicata</i>	western red cedar	740	6.21
<i>Rubus parviflorus</i>	Thimbleberry	615	5.16
<i>Lactuca serriola</i>	prickly lettuce	608	5.10
<i>Pseudotsuga menziesii</i>	common snowberry	475	3.99
<i>Typha latifolia</i>	broadleaf cattail	452	3.79
<i>Acer glabrum</i>	Rocky Mountain maple	432	3.62
<i>Betula papyrifera</i>	paper birch	393	3.30
<i>Stuckenia pectinatus</i>	sago pondweed	335	2.81
<i>Holodiscus discolor</i>	Oceanspray	334	2.80
<i>Symphoricarpos albus</i>	common snowberry	305	2.56
<i>Phalaris arundinacea</i>	reed canarygrass	255	2.14

Table 3. Species with coverage greater than two percent – Pend Oreille Combined Lands WMA 2004 results.

Technical name	Common name	Observed hits	Estimated coverage
<i>Festuca rubra</i>	red fescue	1,230	11.18
<i>Phalaris arundinacea</i>	reed canarygrass	1,129	10.26
<i>Alopecurus pratensis</i>	meadow foxtail	919	8.35
<i>Abies grandis</i>	grand fir	902	8.20
<i>Elymus repens</i>	quackgrass	769	6.99
<i>Symphoricarpos albus</i>	common snowberry	739	6.72
<i>Betula papyrifera</i>	paper birch	678	6.16
<i>Thuja plicata</i>	western red cedar	605	5.50
<i>Populus balsamifera trichocarpa</i>	black cottonwood	563	5.12
<i>Poa pratensis</i>	Kentucky bluegrass	519	4.72
<i>Spiraea douglasii</i>	rose spirea	485	4.41
<i>Acer glabrum</i>	Rocky Mountain maple	420	3.82
<i>Pseudotsuga menziesii</i>	Douglas-fir	413	3.75
<i>Poa compressa</i>	Canada bluegrass	381	3.46
<i>Alnus viridis sinuata</i>	Sitka alder	376	3.42
<i>Lysichiton americanus</i>	American skunkcabbage	310	2.82
<i>Maianthemum stellatum</i>	starry false lily of the valley	233	2.12
<i>Aralia nudicaulis</i>	wild sarsaparilla	229	2.08
<i>Holodiscus discolor</i>	oceanspray	228	2.07

Table 4. Noxious weeds observed – Boundary Creek WMA 2004 observations.

Technical name	Common name	Observed hits	Estimated coverage
<i>Cirsium arvense</i>	Canada thistle	985	8.26
<i>Sonchus arvensis</i>	field sowthistle	27	0.23
<i>Leucanthemum vulgare</i>	oxeye daisy	14	0.12
<i>Hypericum perforatum</i>	common St Johnswort	4	0.03
<i>Cynoglossum officinale</i>	gypsyflower or hound's tongue	0	0.00

Table 5. Noxious weeds observed – Pend Oreille Combined Lands WMA 2004 observations.

Technical name	Common name	Observed hits	Estimated coverage
<i>Tanacetum vulgare</i>	common tansy	151	1.37
<i>Centaurea biebersteinii</i>	spotted knapweed	19	0.17
<i>Hypericum perforatum</i>	common St Johnswort	16	0.15
<i>Cirsium arvense</i>	Canada thistle	13	0.12
<i>Equisetum hyemale</i>	scouring rush horsetail	11	0.10
<i>Hieracium aurantiacum</i>	orange hawkweed	2	0.02

Table 6. Total Waterfowl breeding pairs counted at the Pend Oreille Combined Lands WMA.

<b>Species</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>
Mallard	29	15	61	34	26	34
Common Teal	3	2	17	3	1	3
BW Teal	0	0	3	1	2	0
GW Teal	1	5	12	6	1	2
Gadwall	0	0	0	1	1	1
Pintail	0	0	0	0	0	0
Shoveler	2	0	3	0	0	0
Widgeon	3	1	6	3	1	0
Wood Duck	16	12	26	11	8	7
Bufflehead	1	2	1	0	0	0
Canvasback	0	0	0	0	0	0
Common Goldeneye	4	0	10	5	1	2
Common Merganser	3	0	2	0	2	1
H Merganser	2	4	14	10	0	0
Redhead	0	0	0	5	0	0
RN Duck	2	1	3	1	0	3
Ruddy Duck	0	0	1	0	0	0
Scaup	3	2	0	2	0	0
<b>Total</b>	<b>69</b>	<b>44</b>	<b>159</b>	<b>74</b>	<b>43</b>	<b>53</b>

Table 7. Average goslings/brood observed on wildlife mitigation parcels.

<b>Year</b>	<b>Albeni Cove</b>	<b>Cocolalla Lake</b>	<b>Denton Slough</b>	<b>Derr Creek</b>	<b>Lower Pack River</b>	<b>Rapid Lightning Creek</b>	<b>Trout Creek</b>	<b>Westmond Lake</b>	<b>Total</b>
2000	5.00	n/a	n/a	1.00	n/a	n/a	0.00	5.00	4.60
2001	0.00	0.00	1.00	0.00	3.00	0.00	0.00	3.57	3.22
2002	6.00	0.00	8.00	7.00	0.00	0.00	7.00	4.60	6.50
2003	4.60	0.00	5.00	0.00	0.00	0.00	4.00	5.22	4.97
2004	5.00	0.00	6.50	0.00	0.00	6.00	7.00	4.83	5.58
2005	6.50	0.00	7.14	0.00	0.00	0.00	0.00	2.00	5.68

Table 8. Bald eagle nesting at Boundary Creek WMA and four habitat segments of the Pend Oreille Combined Lands WMA from 1998 to present.

Year	Boundary Creek		Albeni Cove		Carter's Island		Cocolalla Lake		Trout Creek	
	Nest Success	Eaglets	Nest Success	Eaglets	Nest Success	Eaglets	Nest Success	Eaglets	Nest Success	Eaglets
1998	Yes	1					Yes	1		
1999	Yes	1					Yes	2		
2000	Yes	2					Yes	1		
2001	Yes	2	No	0	Yes	1	Yes	1		
2002	Yes	1	No	0	N/A	0	Yes	2	Yes*	Yes
2003	Yes	2	Yes	1	Yes	1	Yes	1	No	N/A
2004	Yes	1	Yes	1	Yes	1	Yes	1	No	N/A
2005	Yes	2	Yes	1	Yes	2	No	0	No	N/A

Table 9. Counts of all bird species observed in 2003 (in order of abundance) on 11 study sites of the Pend Oreille Wildlife Management Area.

Species	Species Code	Albeni Cove	Carters Island	Cocolalla Lake	Denton Slough	Derr Cr Lower	Derr Cr Upper	Lower Pack R	Rapid Lightning	Trout Cr Field	Trout Cr Forest	Westmond Lake	Species Totals
Yellow Warbler	YWAR	9	3	1	3	4	1	4	8	5			38
American Robin	AMRO	7		4	4	1	5	1	2	9	1	2	36
Song Sparrow	SOSP	3	1	2	6	2	1	6	4	6			31
Red-winged Blackbird	RWBB	8				9			5			7	29
Violet-green Swallow	VGSW	9			5	1			2	7		4	28
Black Tern	BLTE											21	21
Red-breasted Nuthatch	RBNU	2	2	2	1	1		5	1	1	5		20
Common Snipe	COSN	4		1					4			10	19
Brown-headed Cowbird	BHCO	2	1	3	1	2	2	3	1	4			19
Townsend's Warbler	TOWA		6	3							8		17
Orange-crowned Warbler	OCWA	1		1	1	3		2	3		1	4	16
Chipping Sparrow	CHSP	2		2		4	5			2	1		16
Black-capped Chickadee	BCCH	1		3		1		6	1	2			14
Tree Swallow	TRSW					1	7	1	1			3	13
Yellow-	YRWA	1	4	3		1		2			2		13

Species	Species Code	Albeni Cove	Carters Island	Cocolalla Lake	Denton Slough	Derr Cr Lower	Derr Cr Upper	Lower Pack R	Rapid Lightning	Trout Cr Field	Trout Cr Forest	Westmond Lake	Species Totals
rumped Warbler													
Hammond's Flycatcher	HAFL		4	3	1	1		3					12
Savannah Sparrow	SASP						5					5	10
Northern Flicker	NOFL			1	3	2	2		1			1	10
Sora	SORA	2				7						1	10
Common Yellowthroat	COYE	1				8							9
Barn Swallow	BASW								3	2		3	8
Common Raven	CORA		2			1	2	1				2	8
Nashville Warbler	NAWA		1			2		1	3		1		8
Warbling Vireo	WAVI	1		1				1	2	3			8
Black-headed Grosbeak	BHGR	2		1			1	2	2				8
Brewer's Blackbird	BRBB											7	7
Cassin's Vireo	CAVI				1			1	2	1	1	1	7
Eastern Kingbird	EAKI						4		3				7
Dark-eyed Junco	DEJU		1	1				1			1	2	6
Dusky Flycatcher	DUFL				2	1				1	1	1	6
Golden-	GCKI		3					2	1				6

Species	Species Code	Albeni Cove	Carters Island	Cocolalla Lake	Denton Slough	Derr Cr Lower	Derr Cr Upper	Lower Pack R	Rapid Lightning	Trout Cr Field	Trout Cr Forest	Westmond Lake	Species Totals
crowned Kinglet													
Spotted Sandpiper	SPSA		1		2			3					6
Western Tanager	WETA	1				1					3		5
Swainson's Thrush	SWTH		2			1					2		5
Willow Flycatcher	WIFL	1							2	2			5
Gray Catbird	GRCA							2	2	1			5
Bald Eagle	BAEA	2		1					2				5
Yellow-headed Blackbird	YHBB					5							5
Great Blue Heron	GTBH				1					1		1	3
Killdeer	KILL				2							1	3
Downy Woodpecker	DOWO								3				3
Western Wood Peewee	WWPE								3				3
Mourning Dove	MODO	1							2				3
Red-naped Sapsucker	RNSA			2				1					3
European Starling	EUST	2					1						3
Pine Siskin	PISI									1	1		2
Evening Grosbeak	EVGR						1				1		2
American	AMRE								1	1			2

Species	Species Code	Albeni Cove	Carters Island	Cocolalla Lake	Denton Slough	Derr Cr Lower	Derr Cr Upper	Lower Pack R	Rapid Lightning	Trout Cr Field	Trout Cr Forest	Westmond Lake	Species Totals
Redstart													
Ruby-crowned Kinglet	RCKI							2					2
Brown Creeper	BRCR					1		1					2
Northern (Bullock's) Oriole	NOOR						2						2
Western Bluebird	WEBL						2						2
American Crow	AMCR			2									2
Wild Turkey	WITU									1			1
Belted Kingfisher	BEKI								1				1
Hairy Woodpecker	HAWO								1				1
Chestnut-backed Chickadee	CBCH							1					1
Golden Eagle	GOEA						1						1
Pileated Woodpecker	PIWO					1							1
Red Tailed Hawk	RTHA					1							1
Osprey	OSPR		1										1
Winter Wren	WIWR		1										1
House Finch	HOFI	1											1
Mountain Chickadee	MTCH	1											1
<b>Total</b>		64	33	37	33	62	42	52	66	50	29	76	544

Table 10. Counts of all bird species observed in 2003 (in order of abundance) on 11 study sites of the Boundary Creek WMA.

Common Name	Species Code	Site 1	Site 2	Site 3	Site 4	Site 6	Site 7	Site 10	Site 11	Site 12	Site 13	Site 14	Species Totals
Yellow-headed Blackbird	YHBB	2	4	4	2	2	6	23	6	1	3	9	62
Barn Swallow	BASW	0	0	20	0	0	7	10	8	1	0	2	48
Bank Swallow	BKSW	0	0	0	0	0	0	40	0	2	0	4	46
Red-winged Blackbird	RWBB	5	1	0	0	0	4	4	1	7	2	5	29
Killdeer	KILL	4	0	2	1	1	4	2	1	1	0	6	22
Savannah Sparrow	SASP	0	2	0	3	0	5	0	0	5	0	6	21
Yellow Warbler	YWAR	4	0	2	0	2	3	2	1	1	3	1	19
Song Sparrow	SOSP	3	1	4	0	3	1	1	0	1	2	1	17
Tree Swallow	TRSW	2	0	2	1	1	7	2	0	0	0	0	15
American Robin	AMRO	1	1	2	0	0	2	2	2	0	1	2	13
Brown-headed Cowbird	BHCO	1	0	2	0	2	0	0	3	1	2	0	11
Spotted Sandpiper	SPSA	1	0	8	0	1	1	0	0	0	0	0	11
Western Wood Peewee	WWPE	2	0	2	0	2	0	0	1	0	2	1	10
Common Yellowthroat	COYE	2	0	0	1	2	1	0	2	2	0	0	10
Common Snipe	COSN	0	1	1	0	1	0	2	0	0	1	2	8
Great Blue Heron	GTBH	1	0	2	1	0	0	3	0	0	0	1	8
Chestnut-backed Chickadee	CBCH	0	0	0	0	5	0	0	0	0	3	0	8
Western Tanager	WETA	0	0	0	0	3	0	1	1	0	1	1	7
Black-headed Grosbeak	BHGR	0	0	0	0	3	1	2	0	0	0	1	7
Red-breasted Nuthatch	RBNU	0	0	0	0	1	1	0	0	0	5	0	7
Dark-eyed Junco	DEJU	0	0	0	0	0	0	0	3	0	4	0	7
Hammond's Flycatcher	HAFL	0	0	0	0	2	0	0	2	0	3	0	7
Cassin's Vireo	CAVI	0	0	0	0	0	2	1	1	0	1	1	6

Common Name	Species Code	Site 1	Site 2	Site 3	Site 4	Site 6	Site 7	Site 10	Site 11	Site 12	Site 13	Site 14	Species Totals
Black Tern	BLTE	0	0	1	1	0	3	0	0	0	0	1	6
Swainson's Thrush	SWTH	0	0	0	0	1	0	0	3	0	2	0	6
Warbling Vireo	WAVI	0	0	0	0	1	0	0	3	0	2	0	6
Belted Kingfisher	BEKI	0	0	1	1	0	2	1	0	0	1	0	6
Sora	SORA	2	0	0	0	0	0	0	0	1	1	1	5
Yellow-rumped Warbler	YRWA	1	0	0	0	0	0	0	0	0	4	0	5
Northern Flicker	NOFL	1	0	0	0	0	0	0	2	0	2	0	5
Common Raven	CORA	1	0	0	1	0	1	0	0	0	2	0	5
Orange-crowned Warbler	OCWA	0	0	0	0	1	0	1	3	0	0	0	5
Ring-necked Pheasant	RNPH	2	0	1	0	1	1	0	0	0	0	0	5
Northern Harrier	NOHA	0	0	0	0	0	0	1	0	1	0	2	4
Bald Eagle	BAEA	0	0	0	0	0	0	3	0	0	0	1	4
Violet-green Swallow	VGSW	1	0	2	0	0	0	0	0	0	0	1	4
Black-capped Chickadee	BCCH	0	0	0	0	0	0	0	2	0	2	0	4
MacGillivray's Warbler	MGWA	0	0	0	0	1	0	0	2	0	1	0	4
Chipping Sparrow	CHSP	0	0	0	0	3	0	1	0	0	0	0	4
Golden-crowned Kinglet	GCKI	0	0	0	0	0	0	0	2	0	1	0	3
Red-naped Sapsucker	RNSA	0	0	0	0	1	0	0	1	0	1	0	3
Pine Siskin	PISI	0	0	0	0	3	0	0	0	0	0	0	3
Gray Catbird	GRCA	2	0	0	0	1	0	0	0	0	0	0	3
Red Tailed Hawk	RTHA	1	0	0	0	0	0	0	0	0	0	1	2
Vesper Sparrow	VESP	1	0	0	0	0	0	0	0	0	1	0	2
Western Meadowlark	WEME	0	0	0	0	0	0	0	0	2	0	0	2
Cedar Waxwing	CEWA	0	0	0	0	0	0	0	2	0	0	0	2
Spotted Towhee	SPTO	0	0	0	0	0	0	0	2	0	0	0	2
Willow Flycatcher	WIFL	0	0	0	0	2	0	0	0	0	0	0	2
Osprey	OSPR	0	1	0	1	0	0	0	0	0	0	0	2

Common Name	Species Code	Site 1	Site 2	Site 3	Site 4	Site 6	Site 7	Site 10	Site 11	Site 12	Site 13	Site 14	Species Totals
American Crow	AMCR	0	0	0	0	0	0	0	0	0	1	0	1
Townsend's Warbler	TOWA	0	0	0	0	0	0	0	0	0	1	0	1
European Starling	EUST	0	0	0	0	0	0	0	0	1	0	0	1
Mourning Dove	MODO	0	0	0	0	0	0	0	1	0	0	0	1
Olive-sided Flycatcher	OSFL	0	0	0	0	0	1	0	0	0	0	0	1
Nashville Warbler	NAWA	0	0	0	0	1	0	0	0	0	0	0	1
Winter Wren	WIWR	0	0	0	0	1	0	0	0	0	0	0	1
Western Bluebird	WEBL	0	0	1	0	0	0	0	0	0	0	0	1
Black-billed Magpie	BBMA	1	0	0	0	0	0	0	0	0	0	0	1
<b>Grand Total</b>		<b>41</b>	<b>11</b>	<b>57</b>	<b>13</b>	<b>48</b>	<b>53</b>	<b>102</b>	<b>55</b>	<b>27</b>	<b>55</b>	<b>50</b>	<b>512</b>

Table 11. Similarities in bird species composition between all pairs of sampling points within Pend Oreille WMA in 2003. Values are based on the relative abundance of the 64 species observed at all sampling points.

	<b>Carters Island</b>	<b>Cocolalla Lake</b>	<b>Denton Slough</b>	<b>Derr Cr Lower</b>	<b>Derr Cr Upper</b>	<b>Lower Pack R</b>	<b>Rapid Lightning</b>	<b>Trout Cr Field</b>	<b>Trout Cr Forest</b>	<b>Westmond Lake</b>
Albeni Cove	17	45	40	59	25	35	55	51	17	26
Carters Island		39	24	21	9	47	18	15	39	3
Cocolalla Lake			35	30	24	56	35	38	35	13
Denton Slough				27	21	40	33	55	17	17
Derr Cr Lower					23	29	31	25	21	23
Derr Cr Upper						24	26	25	8	15
Lower Pack R							42	42	18	8
Rapid Lightning								44	12	25
Trout Cr Field									19	13
Trout Cr Forest										8

Table 12. Similarities in bird species composition between all pairs of sampling points within Boundary Creek WMA in 2003. Values are based on the relative abundance of the 59 species observed at all 11 sampling points.

	<b>Site 2</b>	<b>Site 3</b>	<b>Site 4</b>	<b>Site 6</b>	<b>Site 7</b>	<b>Site 10</b>	<b>Site 11</b>	<b>Site 12</b>	<b>Site 13</b>	<b>Site 14</b>
Site 1	23	41	23	30	45	29	27	39	34	43
Site 2	-	17	37	11	32	28	14	43	15	48
Site 3	-	-	18	25	61	39	31	19	17	45
Site 4	-	-	-	10	50	22	12	26	9	36
Site 6	-	-	-	-	26	24	31	15	39	24
Site 7	-	-	-	-	-	42	30	47	24	55
Site 10	-	-	-	-	-	-	28	49	18	75
Site 11	-	-	-	-	-	-	-	29	46	30
Site 12	-	-	-	-	-	-	-	-	18	61
Site 13	-	-	-	-	-	-	-	-	-	23

Table 13. Similarities in plant species composition between all pairs of sampling points within Pend Oreille WMA in 2004. Values are based on the relative abundance of the 292 species observed at all sampling points.

	<b>Carters Island</b>	<b>Cocolalla Lake</b>	<b>Denton Slough</b>	<b>Derr Cr Lower</b>	<b>Derr Cr Upper</b>	<b>Lower Pack Rv</b>	<b>Rapid Lightning</b>	<b>Trout Cr Field</b>	<b>Trout Cr Forest</b>	<b>Westmond Lake</b>
Albeni Cove	31	16	35	49	3	24	27	17	5	48
Carters Island		35	14	1	6	64	35	10	37	1
Cocolalla Lake			30	9	17	39	35	29	44	12
Denton Slough				17	2	15	13	18	5	20
Derr Cr Lower					50	7	10	77	0	69
Derr Cr Upper						12	27	61	5	39
Lower Pack Rv							46	18	39	6
Rapid Lightning								77	11	11
Trout Cr Field									3	65
Trout Cr Forest										1

Table 14. Similarities in plant species composition between selected pairs of sampling points within Boundary Creek WMA in 2004. Values are based on the relative abundance of the 194 species observed at the 11 selected sampling points.

	<b>Site 2</b>	<b>Site 3</b>	<b>Site 4</b>	<b>Site 6</b>	<b>Site 7</b>	<b>Site 10</b>	<b>Site 11</b>	<b>Site 12</b>	<b>Site 13</b>	<b>Site 14</b>
Site 1	57	64	82	2	66	64	2	88	15	71
Site 2	-	76	85	2	88	90	3	55	14	85
Site 3	-	-	55	0	69	58	2	55	10	62
Site 4	-	-	-	2	75	84	3	86	16	92
Site 6	-	-	-	-	2	2	86	2	85	2
Site 7	-	-	-	-	-	93	1	51	8	73
Site 10	-	-	-	-	-	-	2	65	14	75
Site 11	-	-	-	-	-	-	-	3	88	3
Site 12	-	-	-	-	-	-	-	-	15	78
Site 13	-	-	-	-	-	-	-	-	-	17

ISRP Request:

1992-061-00: "...include a summary description of M&E especially reporting of results from past review".

Coeur d'Alene Tribe Response:

Monitoring and evaluation was initiated on Goosehaven and Benewah Wildlife Mitigation Units (WMUs) in May, 2006. For each WMU, a subsample of 10 points was randomly chosen from the universe of sample points falling within each WMU. The universe of sampling points was obtained from a 200 x 200 m grid covering northern Idaho. Points falling in mountainous areas of the properties were excluded from consideration, and such areas will be sampled separately in the future. The main goal of this year's monitoring and evaluation effort was to collect baseline data for future comparisons and evaluation of management actions on the floodplain.

Three sets of ten-minute avian point counts were conducted on each management area from late May through the end of June. The floodplain portion of Goosehaven WMU has been managed as a hay pasture for decades, and the most common species within 50 m of plot center were savannah sparrow (*Passerculus sandwichensis*) and song sparrow (*Melospiza melodia*). Goosehaven Lake provides wetland habitat, where osprey (*Pandion haliaetus*, common yellowthroat (*Geothlypis trichas*), yellow-headed blackbird (*Xanthocephalus xanthocephalus*), red-winged blackbird (*Agelaius phoeniceus*), mallard (*Anas platyrhynchos*), and great blue heron (*Ardea herodias*) are the most common species. We plan to increase the area and number of wetlands and convert other portions of the 400 acre floodplain from hay pasture to cottonwood forests and scrub/shrub habitats. Overtime, wetland species and species that inhabit forests and scrub/shrub, such as yellow warbler (*Dendroica petechia*), back-capped chickadee (*Poecile atricapilla*), MacGillivray's warbler (*Oporornis tolmiei*), and willow flycatcher (*Empidonax traillii*) should increase on the floodplain, and the monitoring and evaluation program should document these increases.

At Benewah WMU, point counts show avian species occurring frequently in riparian meadows and wetlands include: yellow warbler, MacGillivray's warbler, willow flycatcher, song sparrow, chipping sparrow (*Spizella pallida*), savannah sparrow, common snipe (*Gallinago gallinago*), house wren (*Troglodytes aedon*), brown-headed cowbird (*Molothrus ater*), red-winged blackbird, mallard, American robin (*Turdus migratorius*), Swainson's thrush (*Catharus ustulatus*), tree swallow (*Tachycineta bicolor*), Northern rough-winged swallow (*Stelgidopteryx serripennis*), violet-green swallow (*Tachycineta thalassina*), barn swallow (*Hirundo rustica*), and belted kingfisher (*Ceryle torquata*). Management actions recently initiated at Benewah should result in re-forestation of much of the floodplain. As a consequence, forest species, such as back-capped chickadee (*Poecile atricapilla*), western tanager (*Piranga ludoviciana*), western wood-pewee (*Contopus sordidulus*), dark-eyed junco (*Junco hyemalis*), Northern flicker (*Colaptes auratus*), and gray jay (*Perisoreus canadensis*) should increase on the floodplain.

We adopted and are currently implementing the vegetation sampling protocol developed at Eastern Washington University by J. G. Hallet and M. A. O'Connell. At each management area, each of the ten sampling locations will be visited, and ground vegetation, shrubs, trees, and snags described. Additionally, a timed plant species inventory and 100 m transect documenting changes in vegetation types will be added to the protocol. A photographic record of all sampling locations will be made in 2006.

Additional monitoring has included waterfowl surveys and development of species lists for plants, birds, amphibians and mammals. Supplies have been ordered to initiate the

development of a herbarium for the Tribe's wildlife program, and minnow traps and nets ordered for future amphibian surveys.

The same set of 10 points at each WMU will be sampled for the next two years, after which they will be visited every three years. Workload and resources permitting, additional sample points will be randomly chosen from the universe and sampled during off-years to add to the data. A monitoring and evaluation plan will be written for Goosehaven and Benewah WMU's, and for each new property, such as the recently purchased Cougar Creek WMU.

Appendix A:  
CBFWA Criteria  
Score Sheet  
Project Proposal Example

## **CBFWA Criteria**

Program Consistency - Threshold Questions:  
(Requires a positive response to each question)

- A. Is the project based on and supported by the best scientific knowledge?  
(Response must be supported by answers to questions 3, 4, 5, 6, 7, and 8.)
- B. Is the project biologically possible?  
(Response by answers to questions 3, 4, 5, 6, 7, and 8.)
- C. Are there any state, federal, or local laws, ordinances, executive orders that would prevent this project from coming to fruition?
- D. Does this project impose on Bonneville the funding responsibilities of others, as prohibited by the Northwest Power Act?
- E. Is the proposed project consistent with, or does it complement the activities of the region's state and federal wildlife agencies and Indian tribe(s)? Identify agency/tribe affected)
- F. Does the project have measurable objectives, such as Habitat Units and/or species response to actions planned?

### Ranking Criteria:

1. Be the least costly way to achieve the biological objective  
Project presentation must identify and separate costs for pre-planning, acquisition, enhancement, and operation and maintenance for a five-year period. Project presentation should also discuss enhancement plans and site potential.  
  
Points:           0 = Less cost-effective  
                      1 = Comparable costs  
                      2 = More cost-effective
2. Provide riparian or other habitat that may benefit both fish and wildlife (for resident and anadromous fish)  
  
Points:           0 = No benefits to fish  
                      1 = Incidental benefits to fish  
                      2 = Substantive benefits to fish
3. Immediacy of threat  
The extent to which evidence (documented) shows that acquisition of this site is necessary to protect the site from an identified threat. Documentation is defined as, but not limited to: a letter, a picture, or a news article, which clearly shows the property is on the market for sale, rezoning or regulations are pending, property is being subdivided, or timber/mineral rights are for sale.  
  
Points:           0 = No evidence presented or minimal threat; target feature(s) appear to be in no immediate danger of loss in quality. e.g., could be partially protected by zoning, regulation or voluntary measures  
                      1 = Actions are under consideration which *could* result in the target feature(s) losing quality
4. Mitigate losses in-place, in-kind where practical  
Out-of-kind mitigation is not acceptable for impacts to habitat for: endangered, threatened, sensitive or candidate species. When out-of-kind mitigation is being proposed, the sponsor must identify the proposed species of habitat type substitution. Project must also identify the target species and which hydroelectric facility(ies) will be credited with mitigation. Air miles (from anywhere on the pool) are used to calculate distances.  
  
Points:           0 = Off-site (more than 100 miles) and out-of-kind  
                      1.0 = Off-site (more than 100 miles) and in-kind  
                      1.5 = Off-site (50 - 100 miles) and in-kind  
                      2.0 = On-site (within 50 miles) and in-kind  
                      2.5 = On-site (must be adjacent to impact area) and in-kind

5. Address achieving the Council's mitigation priorities

The purpose of this question is to determine how closely the proposed project matches the NPPC's mitigation priorities. To score the project, use the following example.

The proposed project has:    45% High priority habitat       = 4.5  
   25% Medium priority habitat    = 2.5  
   30% Low priority habitat       = 3.0

Points:            High = .3  
                         Med = .2  
                         Low = .1

Scoring:	High priority habitat	= (4.5)(.3)	= 1.35
	Med priority habitat	= (2.5)(.2)	= .50
	Low priority habitat	= (3.0)(.1)	= <u>.30</u>
	Total score		2.15

6. Protect endangered, threatened, and sensitive species

The extent to which evidence presented supports *significant* occurrence of threatened, endangered, and/or sensitive fish and wildlife species. Sponsor must demonstrate the relationship of the proposed project to key life history attribute of the species; e.g., breeding, wintering, feeding, resting, and migration. The site exhibits *significant* occurrence if:

Points:            0 = No species listed in state or federal policy, or listed  
                         species is an occasional visitor  
                         1 = One species listed threatened or sensitive in state or federal policy  
                         2 = One species listed endangered in state or federal policy  
                         3 = More than one species listed threatened, endangered or sensitive

7. Protect high quality, native or other habitat  
The extent to which evidence presented establishes that the area is among the best representatives of this type for the target species. The intent of this question is to determine the quality of habitat of a site compared to other sites of the same type. Consider quality and extent of cover, key structural elements, species composition, water, food sources, human disturbance, etc.
- Points:
- 0 = Marginal quality. High number of vegetative intrusions and/or degradation present, compared to others of same type. This site exhibits low quality and will require restoration. OR Land to be managed to support vegetation or habitat not existing there naturally (i.e., planting of ornamental vegetation, creation of artificial impoundments, water control structures).
  - 1 = Moderate quality. Vegetative intrusions and/or degradation are present. Will require some restoration (i.e., the majority of the property was intensively used). Property is degraded but has moderate potential for rehabilitation.
  - 2 = Average quality. Property is degraded but has high potential for rehabilitation.
  - 3 = Good quality. No significant vegetative intrusions found. Site is among the best regional representatives of this type (i.e., existing habitat is near optimum stage and exhibits signs of past disturbance). May require some restoration.
  - 4 = Excellent quality. No significant vegetative intrusions found. Site is among the best state representatives of this type.
8. Connectivity  
The extent to which evidence presented establishes that acquisition or management of this site will benefit or be benefited by other protected lands. *Protected* is defined as public/tribal land owned and managed exclusively for, and accessible to, wildlife OR land which, through zoning, regulation or voluntary measures, is not in danger of a loss in habitat quality and is accessible to wildlife.
- Points:
- 0 = No or marginal connectivity. Generally, the area does not relate to existing protected area/protected watershed.
  - 1 = Moderate connectivity. The site will modestly enhance an existing protected area/protected watershed.
  - 2 = Good connectivity. The site provides an important ecological corridor to at least one other protected area/watershed.
  - 3 = Excellent connectivity. The site is an important ecological corridor to an especially important protected area/watershed (Consider total size if multiple sites are involved).

9. Long-term management potential

The extent to which evidence presented shows the overall site (core and key buffer tracts) can be managed over the long term and still protect the target species. Consider the site size, location and buffers (to withstand surrounding human activities and invader species). A buffer increases protection of adjacent core site values by screening it from outside impacts and improving site manageability. Target features surrounded by numerous protected and undeveloped acres tend to resist most threatening forces than features surrounded by developed acres.

Points:

- 1 = Marginal protection. On a long-term basis, core and/or bufer areas are probably too small/poorly located to withstand existing or future incompatible activities on neighboring lands, e.g., timber harvesting, high density developments, etc.
- 2 = Average protection. Buffers/size/location are probably large neighboring lands.
- 3 = Excellent protection. Buffers/size/location will definitely foil significant incompatible outside influences.

## Score Sheet

### SOCIAL / ECONOMIC:

1.	Least cost	0	1	2		
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### BIOLOGICAL MERIT:

2.	Provides riparian benefits for fish	0	1	2		
4.	In-place, in-kind	0	1	1.5	2	2.5
5.	NPPC mitigation priorities	0	1	2	3	
6.	Protect T, E, and S species	0	1	2	3	
7.	Protect high quality habitat	0	1	2	3	4
8.	Connectivity	0	1	2	3	

### LOGISTICS:

3.	Immediacy of threat	0	1			
9.	Long-term management potential	0	1	2	3	

TOTAL POSSIBLE PROJECT SCORE:	23.5 (minimum 12)
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The Following Questions Will be Used to Evaluate and Prioritize New Project Proposals (Use these questions to develop project summary):

1. Describe enhancement plans and site potential. Identify and separate costs for pre-planning, acquisition, enhancement, operation and maintenance for a five-year period.
2. Beyond general community support, describe the extent to which the project will make use of matching funds, volunteers, donations, signed cooperative agreements, or signed memoranda of understanding (includes tribal lands if dedicated in perpetuity for wildlife mitigation and if credit is given to BPA for enhancements).
3. Identify the extent to which this project supports the occurrence of threatened, endangered, and/or sensitive fish and wildlife species. Sponsor must demonstrate the relationship of the proposed project to key life history attributes of the species, e.g., breeding, wintering, feeding, resting and migration.
4. Does the project protect high quality, native or other habitat at the project site? Identify the extent to which this project is among the best representatives of this type for the target species. The intent of this question is to determine the site's habitat quality compared to other sites of the same type. Consider quality and extent of cover, key structural elements, species composition, water, food sources, human disturbance, etc.
5. Identify the extent to which this project is unique. This can be based on the rarity (few sites of its kind are protected) of the site's key elements, the project size (i.e., the whole drainage or an "ecosystem"), or distribution and status of its key elements.
6. Identify the number and types of habitat found on the project site.
7. Does the project provide riparian or other habitat that may benefit both fish (resident and anadromous) and wildlife?
8. How will the proposed acquisition or management of this site benefit or be benefited by other protected lands? *Protected* is defined as public/tribal land owned and managed exclusively for, and accessible to, wildlife OR land which, through zoning, regulation or voluntary measures, is not in danger of a loss in habitat quality and is accessible to wildlife.
9. Describe how the overall site (core and key buffer tracts) can be managed over the long term and still protect the target species. Consider the site size, location and buffers (to withstand surrounding human activities and invader species). A buffer increases protection of adjacent core site values by screening it from outside impacts and improving site manageability. Target features surrounded by numerous protected and undeveloped acres tend to resist most threatening forces than features surrounded by developed acres.

10. Discuss how this project addresses concerns over additions to public land ownership and impacts on local communities, such as reduction or loss of local government tax base, special district tax base, the local economic base, and consistency with local government or tribal governments' comprehensive plans.
11. Identify the extent to which documented evidence shows that acquisition of this site is necessary to protect the site from an identified threat. Documentation is defined as, but not limited to, a letter, a picture, or an article which clearly shows the property is on the market for sale, rezoning or regulations are pending, property is being subdivided, or timber/mineral rights are for sale.
12. Does this project use publicly owned land or management agreements on private or tribal land for mitigation, while providing permanent protection or enhancement of wildlife habitat?
13. Does this project mitigate losses in-place, in-kind? Out-of-kind mitigation is not acceptable for impacts to habitat for endangered, threatened, sensitive, or candidate species. When out-of-kind mitigation is being proposed, the sponsor must identify the proposed species or habitat types substituted. Project must identify the target species, distance from impacting hydroelectric facility and which facility will be credited with mitigation. Air miles from anywhere on the pool are used to calculate distances.
14. Does this project address special wildlife losses in areas that formerly had salmon and steelhead runs eliminated by hydroelectric projects? For example, societal and tribal wildlife losses.
15. Chapter eleven of the NPCC's Wildlife Program describes subbasin habitat priorities. Identify the estimated number of acres and the corresponding percentages of the habitat types represented within the project proposal.

**Albeni Falls Wildlife Mitigation Project Proposal  
Riverbend Project**

Program Consistency - Threshold Questions:  
(Requires a positive response to each question)

- A. Is the project based on and supported by the best scientific knowledge? (Response must be supported by answers to questions 3, 4, 5, 6, 7, and 8)

Yes

- B. Is the project biologically possible?  
(Response by answers to questions 3, 4, 5, 6, 7, and 8)

Yes

- C. Are there any state, federal, or local laws, ordinances, executive orders that would prevent this project from coming to fruition?

None

- D. Does this project impose on Bonneville the funding responsibilities of others, as prohibited by the Northwest Power Act?

No

- E. Is the proposed project consistent with, or does it complement the activities of the region's state and federal wildlife agencies and Indian tribe(s)?

It complements proposed activities by state agencies and Indian tribes.

- F. Does the project have measurable objectives, such as Habitat Units and/or species response to actions planned?

Yes

## Project Summary

Riverbend is a 177-acre project to protect, enhance and maintain wet meadow habitat within the Pend Oreille River floodplain north of Cusick, Washington. The project is located in Sections 5-8 of Township 34 North, Range 44 E.W.M., Pend Oreille County, Washington.

The Riverbend project is located less than ½ mile north of the Flying Goose Ranch and the Kalispel Indian Reservation. Management efficiency and ecological connectivity will be moderately enhanced with the protection of the Riverbend parcel.

Prior land use activity on the Riverbend project site includes livestock grazing and hay production. The successful acquisition of the project by the Tribe will eliminate grazing. The project will require enhancement measures, including noxious weed control and water level management. The Tribe will plant wetland shrubs and cottonwoods to create intermittent screening near the community of Riverbend and full screening adjacent to the road. Water level management will include elevational control and the creation of ephemeral ponds to isolate wetlands from the drainage system.

The Riverbend project supports the occurrence of several state and federal threatened, endangered and special status species. Two active bald eagle nests and one alternate nest are located within 2 miles of the project. Other species include an active great blue heron rookery, osprey, and Columbia spotted frog. Target species benefits include Canada goose, mallard, and muskrat. An estimated 125 Habitat Units will be provided with the protection of the parcel.

The Tribe will acquire the Riverbend parcel with BPA funds. The use of volunteers and matching funds may be used in long-term project management. The Tribe will continue to pay property taxes upon completion of the purchase of the Riverbend parcel.

## Riverbend - 177 Acres



Figure 6. Riverbend project, Cusick, WA.

## Riverbend - 177 Acres



Figure 7. Riverbend project vicinity, Cusick, WA.

# MAP UNIT HYDRIC RATING RATING FOR PEND OREILLE COUNTY AREA, WASHINGTON



## MAP LEGEND

### Map Unit Hydric Rating

{Absence/Presence, <}

- All Hydric
- Partially Hydric
- Not Hydric
- Unknown Hydric
- Not rated or not available
- Soil Map Units
- Cities
- Detailed Counties
- Detailed States
- Interstate Highways
- Roads
- Rails
- Water
- Hydrography
- Oceans

## MAP INFORMATION

Source of Map: Natural Resources Conservation Service  
Web Soil Survey URL: <http://websoilsurvey.nrcs.usda.gov>

Coordinate System: UTM Zone 11

Soil Survey Area: Pend Oreille County Area, Washington

Spatial Version of Data: 1

Soil Map Compilation Scale: 1:24000

## Tables - Map Unit Hydric Rating

### Summary by Map Unit - Pend Oreille County Area, Washington

Soil Survey Area Map Unit Symbol	Map Unit Name	Rating	Total Acres in AOI	Percent of AOI
38	Cusick silty clay loam	Partially Hydric	187.7	99.5
39	Dalkena fine sandy loam, 0 to 7 percent slopes	Not Hydric	1.0	0.5

## Description - Map Unit Hydric Rating

This rating provides an indication of the proportion of the map unit that meets criteria for hydric soils. Map units that are dominantly made up of hydric soils may have small areas, or inclusions, of nonhydric soils in the higher positions on the landform, and map units dominantly made up of nonhydric soils may have inclusions of hydric soils in the lower positions on the landform.

Hydric soils are defined by the National Technical Committee for Hydric Soils (NTCHS) as soils that formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the upper part (Federal Register, 1994). These soils, under natural conditions, are either saturated or inundated long enough during the growing season to support the growth and reproduction of hydrophytic vegetation.

The NTCHS definition identifies general soil properties that are associated with wetness. In order to determine whether a specific soil is a hydric soil or nonhydric soil, however, more specific information, such as information about the depth and duration of the water table, is needed. Thus, criteria that identify those estimated soil properties unique to hydric soils have been established (Federal Register, 2002). These criteria are used to identify map unit components that normally are associated with wetlands. The criteria used are selected estimated soil properties that are described in "Soil Taxonomy" (Soil Survey Staff, 1999) and "Keys to Soil Taxonomy" (Soil Survey Staff, 2003) and in the "Soil Survey Manual" (Soil Survey Division Staff, 1993).

If soils are wet enough for a long enough period of time to be considered hydric, they should exhibit certain properties that can be easily observed in the field. These visible properties are indicators of hydric soils. The indicators used to make onsite determinations of hydric soils are specified in "Field Indicators of Hydric Soils in the United States" (Hurt and others, 2002).

## RANKING CRITERIA:

### 1. Be the least costly way to achieve the biological objective

Project presentation must identify and separate costs for pre-planning, acquisition, enhancement, and operation and maintenance for a five-year period. Project presentation should also discuss enhancement plans and site potential.

Points:                      0 = Less cost-effective  
                                    1.0 = Comparable costs  
                                    2.0 = More cost-effective

The Riverbend project is comprised of open water and wet meadow habitat and is hydrologically connected to the Pend Oreille River. Enhancement activities on the Riverbend project include noxious weed control, water level management to enhance waterfowl and aquatic furbearer foraging habitat, and native wetland shrub planting to increase visual screening from the nearby road and enhance neotropical migratory songbird cover.

#### Estimated Project Costs:

a)	Pre-acquisition	\$	8,000
b)	Acquisition	\$	350,000
c)	Enhancements	\$	125,000
d)	O&M	\$	10,000

### 2. Provide riparian or other habitat that may benefit both fish and wildlife (for resident and anadromous fish)

Points:                      0 = No benefits to fish  
                                    1.0 = Incidental benefits to fish  
                                    2.0 = Substantive benefits to fish

The Riverbend project will protect 177 acres of wet meadow and open water habitat of Lake Pend Oreille floodplain. Site protection of these habitat types will increase the amount of invertebrates available for waterfowl and other avian species and will contribute to increased water quality for fish species. As livestock are removed, wetland vegetation is restored, and water levels are better managed, there will be incidental benefits in the way of overwintering fish habitat, increased shading and thermal cover.

### 3. Immediacy of threat

The extent to which evidence (documented) shows that acquisition of this site is necessary to protect the site from an identified threat. Documentation is defined as, but not limited to, a letter, a picture, or a news article, which clearly shows the property is on the market for sale, rezoning or regulations are pending, property is being subdivided, or timber/mineral rights are for sale.

Points:                      0 = No evidence presented or minimal threat; target feature(s) appear to be in no immediate danger of loss in quality. e.g., could be partially protected by zoning, regulation or voluntary measures  
                                    1.0 = Actions are under consideration which *could* result in the target feature(s) losing quality

The Riverbend property is not currently listed for sale. However, the owner is considering selling the parcel and has approached the Tribe first. If the appraised value is not acceptable, the owner may list the property on the open market.

### 4. Mitigate losses in-place, in-kind where practical

Out-of-kind mitigation is not acceptable for impacts to habitat for: endangered, threatened, sensitive or candidate species. When out-of-kind mitigation is being proposed, the sponsor must identify the proposed species of habitat type substitution. Project must also identify the target species and which hydroelectric facility(ies) will be credited with mitigation. Air miles (from anywhere on the pool) are used to calculate distances.

Points:                      0 = Off-site (more than 100 miles) and out-of-kind  
                                    1.0 = Off-site (more than 100 miles) and in-kind  
                                    1.5 = Off-site (50 - 100 miles) and in-kind  
                                    2.0 = On-site (within 50 miles) and in-kind  
                                    2.5 = On-site (must be adjacent to impact area) and in-kind

The Riverbend project is on-site and in-kind. One hundred percent (177 acres) of the property consists of open water/wetland habitat. The Riverbend parcel is located on the Pend Oreille River, approximately 25 miles downstream of Albeni Falls Dam.

5. Address achieving the Council's mitigation priorities

The purpose of this question is to determine how closely the proposed project matches the NPCC's mitigation priorities. To score the project, use the following example.

For example, If the proposed project has:

45% High priority habitat	= 4.5
25% Medium priority habitat	= 2.5
30% Low priority habitat	= 3.0

Points:

High = 0.30
Med = 0.20
Low = 0.10

Example Scoring:

High priority habitat	= (4.5)(0.30)	= 1.35
Med priority habitat	= (2.5)(0.20)	= 0.50
Low priority habitat	= (3.0)(0.10)	= <u>0.30</u>
Total score		2.15

The Riverbend project consists of 100% high priority habitat. Therefore, the score for this criterion is  $(10.0)(0.30) = 3.0$ .

6. Protect endangered, threatened, and sensitive species

The extent to which evidence presented supports *significant* occurrence of threatened, endangered, and/or sensitive fish and wildlife species. Sponsor must demonstrate the relationship of the proposed project to key life history attributes of the species; e.g., breeding, wintering, feeding, resting, and migration. The site exhibits *significant* occurrence if:

Points:	0 = No species listed in state or federal policy, or listed species is an occasional visitor
	1.0 = One species listed threatened or sensitive in state or federal policy
	2.0 = One species listed endangered in state or federal policy
	3.0 = More than one species listed threatened, endangered or sensitive.

The Riverbend project will protect habitats important to TE&S species and habitats impacted by Albeni Falls Dam. Two active bald eagle nests and one alternate nest are located within 4 miles of the property. Columbia spotted frog also occurs on site. There is potential for northern leopard frog occurrence as well.

7. Protect high quality, native or other habitat

The extent to which evidence presented establishes that the area is among the best representatives of this type for the target species. The intent of this question is to determine the quality of habitat of a site compared to other sites of the same type. Consider quality and extent of cover, key structural elements, species composition, water, food sources, human disturbance, etc.

Points:

0 = Marginal quality. High number of vegetative intrusions and/or degradation present, compared to others of same type. This site exhibits low quality and will require restoration. OR Land to be managed to support vegetation or habitat not existing there naturally (i.e., planting of ornamental vegetation, creation of artificial impoundments, water control structures).

1.0 = Moderate quality. Vegetative intrusions and/or degradation are present. Will require some restoration (i.e., the majority of the property was intensively used). Property is degraded but has moderate potential for rehabilitation.

2.0 = Average quality. Property is degraded but has high potential for rehabilitation.

3.0 = Good quality. No significant vegetative intrusions found. Site is among the best regional representatives of this type (i.e., existing habitat is near optimum stage and exhibits signs of past disturbance). May require some restoration.

4.0 = Excellent quality. No significant vegetative intrusions found. Site is among the best state representatives of this type.

The Riverbend project is comprised of 177 acres of open water and wet meadow habitat. Noxious weeds are present within the wet meadow, and livestock grazing does occur. The property is degraded but has high potential for restoration. The Riverbend project consists of 100% Cusick silty clay loam (poorly drained soils) and is identified as farmlands of statewide importance. This soil type has low seepage potential and is generally unfavorable for septic tank absorption fields and single family dwellings.

## 8. Connectivity

The extent to which evidence presented establishes that acquisition or management of this site will benefit or be benefited by other protected lands. *Protected* is defined as public/tribal land owned and managed exclusively for, and accessible to, wildlife OR land which, through zoning, regulation or voluntary measures, is not in danger of a loss in habitat quality and is accessible to wildlife.

- Points:
- 0 = No or marginal connectivity. Generally, the area does not relate to existing protected area/protected watershed.
  - 1.0 = Moderate connectivity. The site will modestly enhance an existing protected area/protected watershed.
  - 2.0 = Good connectivity. The site provides an important ecological corridor to at least one other protected area/watershed.
  - 3.0 = Excellent connectivity. The site is an important ecological corridor to an especially important protected area/watershed (Consider total size if multiple sites are involved).

The Riverbend project protects 177 acres of Pend Oreille River floodplain habitat located less than ½ mile from tribally owned and managed wildlife mitigation lands. USFS lands are located ¼ mile northeast and across the river from the Riverbend property. The Riverbend parcel is bordered by private property. This acquisition will moderately enhance connectivity among protected lands within the watershed.

## 9. Long-term management potential

The extent to which evidence presented shows the overall site (core and key buffer tracts) can be managed over the long term and still protect the target species. Consider the site size, location and buffers (to withstand surrounding human activities and invader species). A buffer increases protection of adjacent core site values by screening it from outside impacts and improving site manageability. Target features surrounded by numerous protected and undeveloped acres tend to resist most threatening forces than features surrounded by developed acres.

- Points:
- 1.0 = Marginal protection. On a long-term basis, core and/or buffer areas are probably too small/poorly located to withstand existing or future incompatible activities on neighboring lands, e.g., timber harvesting, high density developments, etc.
  - 2.0 = Average protection. Buffers/size/location are probably large neighboring lands.
  - 3.0 = Excellent protection. Buffers/size/location will definitely foil significant incompatible outside influences.

The Riverbend project provides average long-term management potential due to its adjacency to lands already owned and managed by the Tribe.

## POINT DISTRIBUTION

### SOCIAL / ECONOMIC:

1.	Least cost	0	<b><u>1</u></b>	2	
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### BIOLOGICAL MERIT:

2.	Provides riparian benefits for fish	0	<b><u>1</u></b>	2	
4.	In-place, in-kind	0	<b><u>1</u></b>	1.5	<b><u>2</u></b> 2.5
5.	NPPC mitigation priorities	0	<b><u>1</u></b>	2	<b><u>3</u></b>
6.	Protect T, E, and S species	0	<b><u>1</u></b>	2	<b><u>3</u></b>
7.	Protect high quality habitat	0	<b><u>1</u></b>	<b><u>2</u></b>	3 4
8.	Connectivity	0	<b><u>1</u></b>	<b><u>2</u></b>	3

### LOGISTICS:

3.	Immediacy of threat	0	<b><u>0.5</u></b>	1	
9.	Long-term management potential			1	<b><u>2</u></b> 3

TOTAL POSSIBLE PROJECT SCORE: 23.5 (minimum 12)

Riverbend Project: **16.5**

Appendix B:

Kalispel Tribe Monitoring Methodology

## **Monitoring Vertebrate Populations and Their Habitat**

James G. Hallett and Margaret A. O'Connell  
Biology Department  
Eastern Washington University

### **Methods**

#### ***Vegetation Sampling***

##### Field Protocol

The goal of vegetation sampling is to collect comparative information on the vegetation. On all sites, sampling plots are located on predetermined coordinates for reference and permanent points.

Ground vegetation and substrate are measured within 20 × 50-cm metal plot frames placed at the center of each plot and on alternating sides of the transect at 4, 8, 12, and 16 m for a total of 9 samples for each plot. Plot frames are placed with the long (50 cm) side of the plot frame perpendicular to the measuring tape. Species of herbaceous vegetation are recorded and assigned to 1 of 6 cover categories (1 - < 5%; 2 – 6 to 25 %; 3 – 26 to 50%; 4 – 51 to 75%; 5 – 76 to 95 %; 6 - > 95% (Daubenmire 1959). The percent cover of bare ground, litter, or rock is measured in the same way. The height (to nearest cm) of the tallest vegetation is measured at three points along the midline of the plot frame. In tall marsh vegetation, the plot frame used is 3-sided (open on 1 of the 50-cm sides) to be able to slide the plot into the vegetation rather than placing over the vegetation. Instead of cover class, the number of stems of cattails and bulrushes are recorded. Height of vegetation is measured as above.

Shrubs are measured along 2-m wide belt transects radiating from the center of the plot. The species of each shrub is recorded, being careful not to double count shrubs near the center of the plot. To determine the size of each shrub the following measurements are taken: 1) as each shrub is encountered along the transect, the start point (to nearest cm) and end point (to nearest cm) along the transect is recorded (this gave the length of the shrub), 2) the width of the shrub is measured perpendicular to the transect, and 3) the height of the shrub is assigned to 1 of 4 categories (1 – below knee; 2- knee to waist; 3 – waist to shoulder; 4 – above shoulder).

Within each 16 × 16-m plot, the number of trees in each plot is recorded by species and diameter at breast height (dbh) size class. Size classes are: 1) 4-10 cm; 2) 11-25 cm; 3) 26-50 cm; 4) 51-75 cm; 5) 76-100 cm; 6) > 100 cm. The number of standing dead trees (i.e., snags) is recorded by species, size class, and stage of decay. The three classes are (1) recently dead, little decay, retention of bark, branches, and top, (2) evidence of decay, loss of some bark and branches and possibly part of the top, and (3) extensive decay, missing bark and most branches, and broken top. This classification scheme is easier to apply consistently in the field than other schemes that include as many as nine classes (e.g., Thomas et al. 1979).

### **Materials**

Measuring tapes  
Compass  
Flagging  
Plot frames – metal and open plastic frames  
Plant guides such as Hitchcock  
DBH tapes

## ***Bird Sampling***

### Field Protocol

Bird populations are sampled by the point-count method. Each permanent or reference point is the center of a point-count station. The focal survey area consists of a 50-m radius circle around each birding station. Birds observed outside the point-count circle are recorded for presence/absence data.

Bird surveys are conducted during May and June 2004 beginning at approximately 0500 hours. A single observer spends 8-min at each birding station. To the extent possible, the order of visits to the point-count stations is reversed for each entry. This increases the probability of observing both early and late morning singers across the point count stations. All stations are visited a minimum of 5 times during the breeding season. To maximize the probability of recording all bird species present on a site regardless of variable arrival and breeding times, surveys are scheduled so that each site is visited at regular intervals throughout the breeding season. Sufficient numbers and variety of birds have arrived in northeastern Washington and begun singing by the second week in May. A period of extensive singing occurs during the mate selection period, but bird song begins to decline once nest building and egg laying start.

Weather conditions can have a great influence on the effectiveness of a survey. Because most birds are observed by sound, wind or rain can mask songs or call notes enough that they are not discernible to the observer. High wind and heavy rain can also force high canopy foragers to take shelter or generally decrease the morning activity of most birds. Surveys are not conducted, or are discontinued, if these weather conditions exist.

## **Materials**

Binoculars

Trained observers

Measuring tape and flags

CD's of bird calls

## ***Small-mammal Sampling***

### Field Collection

Coordinates for permanent and reference points are used to establish grids for sampling of small-mammal populations by snap-trapping. Although snap traps do not effectively capture all small-mammal species, they are effective for most of the terrestrial, above-ground rodent species in the region.

Pairs of traps are placed at 12-m intervals on 5 × 9 grids. Typically the grid is centered on the sampling point, but this is not always possible. Trapping effort is standardized by trap night.

Traps are baited with a mixture of oats and peanut butter. They are set in the evening and checked the following morning for 3 nights per site. Trapping is conducted from late July until early September.

Upon capture, specimens are weighed (to nearest 0.1 gram), examined for sex, and measured (length of total body, tail, hindfoot, and ear). Specimens are frozen and later autopsied to examine reproductive condition. For females, length and width of ovaries, number of placental scars (indicative of past pregnancies), number and length of any embryos are measured. Testes length and width and length of the seminal vesicles are measured for males. Skulls are labeled

and cleaned for positive species identification and some specimens are prepared as study skins.

### **Materials**

Measuring tape  
Flags and flagging  
Museum special snap-traps (Woodstream Corp.). 90 traps required per grid.  
Plastic bags  
Self-adhesive labels  
Sharpies  
Scale  
Rulers  
Freezer  
Dissecting equipment  
Microscope

### ***Amphibian Sampling***

#### Field Collection

Larval trapping is a sampling method well-suited for amphibians (Heyer et al. 1994). Larval traps are collapsible minnow traps modified to make the openings smaller. Transects of traps are established in marshes and bends of streams near the permanent or reference points. One trap is attached to a rebar post. Five traps are placed at each location. Traps are set for 5 days at each site during each of two trapping periods, one in early summer (mid-June through mid-July) and late summer (August-mid-September). Salamander or frog larvae are identified (using keys in Nussbaum et al. 1983), measured for snout-vent length, and examined for larval stage. Fish are also identified and counted.

### **Materials**

Collapsible minnow traps  
Keys to frogs and fish  
Buckets  
Rulers  
Clipboards

Appendix C:

Conservation Biology Conference:  
Kalispel Tribe/Eastern Washington University Monitoring Presentation



Appendix D:  
Kalispel Tribe Summary Monitoring Data

Table 1. Amphibian data summary table for Kalispel Tribal monitoring and evaluation sites and reference sites.

Location	Habitat	Scientific Name	Common Name	Captures per 50 trapnights <sup>1</sup>	Minimum Captures per Year	Maximum Captures per Year	Years Sampled
CCR1	Slough	<i>Rana catesbeiana</i>	bullfrog	0.33	0	1	3
CCR3	Slough	<i>Rana catesbeiana</i>	bullfrog	301.33	0	841	3
CCR4	Wet sedge meadow	<i>Ambystoma macrodactylum</i>	long-toed salamander	38.00	0	63	3
CCR4	Wet sedge meadow	<i>Pseudacris regilla</i>	Pacific chorus frog	92.33	0	187	3
CCR4	Wet sedge meadow	<i>Rana catesbeiana</i>	bullfrog	1.67	0	5	3
CCR8	Cattail marsh	<i>Ambystoma macrodactylum</i>	long-toed salamander	14.33	6	24	3
CCR8	Cattail marsh	<i>Pseudacris regilla</i>	Pacific chorus frog	33.00	14	59	3
CCR8	Cattail marsh	<i>Rana catesbeiana</i>	bullfrog	0.33	0	1	3
FGP3	Wetland	<i>Ambystoma macrodactylum</i>	long-toed salamander	2.00	0	4	2
FGP6	Sedge marsh	<i>Ambystoma macrodactylum</i>	long-toed salamander	1.50	0	3	2
FGP6	Sedge marsh	<i>Pseudacris regilla</i>	Pacific chorus frog	1.00	0	2	2
FGP7	Marsh	<i>Ambystoma macrodactylum</i>	long-toed salamander	14.50	0	29	2
FGP7	Marsh	<i>Pseudacris regilla</i>	Pacific chorus frog	2.00	0	4	2
FGP8	Sedge marsh	<i>Ambystoma macrodactylum</i>	long-toed salamander	14.00	0	28	2
FGP8	Sedge marsh	<i>Pseudacris regilla</i>	Pacific chorus frog	4.50	0	9	2
FGR10	Slough	<i>Ambystoma macrodactylum</i>	long-toed salamander	1.00	0	2	2
FGR10	Slough	<i>Rana catesbeiana</i>	bullfrog	84.50	13	156	2
FGR11	Creek	No amphibian captures					3
FGR2	Slough	No amphibian captures					3
FGR9	Pond/marsh	<i>Ambystoma macrodactylum</i>	long-toed salamander	11.67	10	15	3
FGR9	Pond/marsh	<i>Pseudacris regilla</i>	Pacific chorus frog	0.67	0	2	3
PRP1	Creek	No amphibian captures					1
PRP2	Creek	<i>Rana catesbeiana</i>	bullfrog	1.00	1	1	1
SPP1	Cattail marsh	<i>Ambystoma macrodactylum</i>	long-toed salamander	5.00	5	5	1

Location	Habitat	Scientific Name	Common Name	Captures per 50 trapnights <sup>1</sup>	Minimum Captures per Year	Maximum Captures per Year	Years Sampled
SPP1	Cattail marsh	<i>Rana catesbeiana</i>	bullfrog	14.00	14	14	1
SPP4	Marsh	<i>Ambystoma macrodactylum</i>	long-toed salamander	10.00	10	10	1
SPP4	Marsh	<i>Pseudacris regilla</i>	Pacific chorus frog	2.00	2	2	1
SPP4	Marsh	<i>Rana catesbeiana</i>	bullfrog	245.00	245	245	1
SPP5	Marsh	<i>Rana catesbeiana</i>	bullfrog	6.00	6	6	1
TAP3	Marsh	<i>Ambystoma macrodactylum</i>	long-toed salamander	35.00	35	35	1
TAP3	Marsh	<i>Pseudacris regilla</i>	Pacific chorus frog	3.00	3	3	1
TAP4	Slough	<i>Pseudacris regilla</i>	Pacific chorus frog	1.00	1	1	1
TAP4	Slough	<i>Rana catesbeiana</i>	bullfrog	2.00	2	2	1
TAP5	Slough	<i>Ambystoma macrodactylum</i>	long-toed salamander	2.00	2	2	1
TAP5	Slough	<i>Pseudacris regilla</i>	Pacific chorus frog	1.00	1	1	1
TAP5	Slough	<i>Rana catesbeiana</i>	bullfrog	4.00	4	4	1
TAP6	Slough	No amphibian captures					1
TAP7	Aspen pond/swamp	<i>Ambystoma macrodactylum</i>	long-toed salamander	26.00	26	26	1
TAP7	Aspen pond/swamp	<i>Rana catesbeiana</i>	bullfrog	2.00	2	2	1
TAP8	Slough	No amphibian captures					1
TAP9	Slough	<i>Rana catesbeiana</i>	bullfrog	5.00	5	5	1
TRP12	Slough	No amphibian captures					1
WRR12	Wetland/open marsh	<i>Ambystoma macrodactylum</i>	long-toed salamander	5.67	3	10	3
WRR12	Wetland/open marsh	<i>Pseudacris regilla</i>	Pacific chorus frog	61.00	27	93	3
WRR12	Wetland/open marsh	<i>Rana catesbeiana</i>	bullfrog	156.33	0	463	3
WRR6	Slough	No amphibian captures					3
WRR7	Shoreline	<i>Pseudacris regilla</i>	Pacific chorus frog	0.67	0	2	3

<sup>1</sup> Larval amphibians were captured in funnel traps or in minnow traps. A trap set consisted of either four funnel traps or a single minnow trap, and we placed five trap sets per site. The catch at each trap set was comparable, and trapnights were calculated on the basis of each trap set. Trapping was conducted for 5 days both in early June and in late August or early September. *Ambystoma macrodactylum* and *Pseudacris regilla* were captured most frequently in early summer and *Rana catesbeiana* was mostly captured in late summer.

Table 2. Herbaceous vegetation data summary table for Kalispel Tribal monitoring and evaluation sites and reference sites.

Location	Type <sup>1</sup>	Scientific Name	Common Name	Probability of Encounter <sup>2</sup>	Minimum Probability	Maximum Probability	Years Observed
CCR1	Grasses, sedges, rushes	<i>Agropyron repens</i>	Quack Grass	0.06	0.06	0.06	1
CCR1	Grasses, sedges, rushes	<i>Carex</i> species	Unknown Sedge	0.35	0.35	0.35	1
CCR1	Grasses, sedges, rushes	<i>Carex</i> species	Unknown Sedge	0.29	0.29	0.29	1
CCR1	Grasses, sedges, rushes	<i>Carex vulpinoidea</i>	Sedge	0.18	0.18	0.18	1
CCR1	Grasses, sedges, rushes	<i>Phleum pratense</i>	Timothy Grass	0.12	0.06	0.24	3
CCR1	Herb	<i>Fragaria virginiana</i>	Wild Strawberry	0.24	0.18	0.35	3
CCR1	Herb	<i>Galium boreale</i>	Northern Bedstraw	0.44	0.35	0.53	2
CCR1	Herb	<i>Galium trifidum</i>	Small bedstraw	0.76	0.76	0.76	1
CCR1	Herb	<i>Lupinus</i> species	Unknown Lupine	0.24	0.24	0.24	1
CCR1	Herb	<i>Lupinus sulphureus</i>	Sulfer Lupine	0.35	0.12	0.59	2
CCR1	Herb	<i>Lysimachia ciliata</i>	Fringed Loosestrife	0.09	0.06	0.12	2
CCR1	Herb	<i>Osmorhiza chilensis</i>	Mt. Sweet-cicely	0.35	0.24	0.47	2
CCR1	Herb	<i>Prunella vulgaris</i>	Heal-all	0.06	0.06	0.06	1
CCR1	Herb	<i>Smilacina stellata</i>	Starry Solomon-plume	0.25	0.12	0.35	3
CCR1	Herb	<i>Taraxacum officinale</i>	Common Dandelion	0.10	0.06	0.12	3
CCR1	Herb	<i>Trifolium</i> species	Clover	0.06	0.06	0.06	1
CCR1	Herb	<i>Vicia americana</i>	Vetch	0.09	0.06	0.12	2
CCR3	Grasses, sedges, rushes	<i>Agrostis alba</i>	Red-top Grass	0.26	0.18	0.35	2
CCR3	Grasses, sedges, rushes	<i>Phleum pratense</i>	Timothy Grass	0.06	0.06	0.06	1
CCR3	Grasses, sedges, rushes	Unknown <i>Agropyron</i>	Unknown <i>Agropyron</i>	0.50	0.47	0.53	2
CCR3	Herb	<i>Centaurya species</i>	Knapweed	0.06	0.06	0.06	2
CCR3	Herb	<i>Cerastium arvense</i>	Field chickweed	0.06	0.06	0.06	1
CCR3	Herb	<i>Cirseum arvense</i>	Canada thistle	0.06	0.06	0.06	1
CCR3	Herb	<i>Galium boreale</i>	Northern Bedstraw	0.79	0.76	0.82	2

Location	Type <sup>1</sup>	Scientific Name	Common Name	Probability of Encounter <sup>2</sup>	Minimum Probability	Maximum Probability	Years Observed
CCR3	Herb	<i>Galium trifidum</i>	Small bedstraw	0.76	0.76	0.76	1
CCR3	Herb	<i>Impatiens aurella</i>	Orange Balsam	0.12	0.12	0.12	1
CCR3	Herb	<i>Lysimachia ciliata</i>	Fringed Loosestrife	0.06	0.06	0.06	1
CCR3	Herb	<i>Myosotis laxa</i>	Forget-me-not	0.06	0.06	0.06	1
CCR3	Herb	<i>Osmorhiza chilensis</i>	Mt. Sweet-cicely	0.71	0.65	0.76	2
CCR3	Herb	<i>Poa pratensis</i>	Kentucky Bluegrass	0.06	0.06	0.06	1
CCR3	Herb	<i>Polemoniaceae</i> spp.	Phlox	0.06	0.06	0.06	1
CCR3	Herb	<i>Smilacina stellata</i>	Starry Solomon-plume	0.06	0.06	0.06	1
CCR3	Herb	<i>Taraxacum officinale</i>	Common Dandelion	0.12	0.12	0.12	2
CCR3	Herb	<i>Vicia americana</i>	Vetch	0.09	0.06	0.12	2
CCR4	Grasses, sedges, rushes	<i>Agrostis alba</i>	Red-top Grass	0.29	0.12	0.47	2
CCR4	Grasses, sedges, rushes	<i>Carex</i> species	Unknown Sedge	0.76	0.76	0.76	1
CCR4	Grasses, sedges, rushes	<i>Carex</i> species	Unknown Sedge	0.06	0.06	0.06	1
CCR4	Grasses, sedges, rushes	<i>Carex</i> species	Unknown Sedge	0.56	0.35	0.76	2
CCR4	Grasses, sedges, rushes	<i>Eleocharus palustris</i>	Creeping Spike-rush	0.06	0.06	0.06	1
CCR4	Grasses, sedges, rushes	<i>Phleum pratense</i>	Timothy Grass	0.96	0.94	1.00	3
CCR4	Grasses, sedges, rushes	<i>Poa bulbosa</i>	Bulbous Bluegrass	0.06	0.06	0.06	1
CCR4	Herb	<i>Achillea millefolium</i>	Yarrow	0.43	0.29	0.59	3
CCR4	Herb	<i>Camassia quamash</i>	Camas	0.26	0.24	0.29	2
CCR4	Herb	<i>Collomia linearis</i>	Narrow lvd colomb	0.24	0.24	0.24	1
CCR4	Herb	<i>Fragaria virginiana</i>	Wild Strawberry	0.18	0.18	0.18	1
CCR4	Herb	<i>Lotus purshiana</i>	Lotus	0.73	0.24	1.00	3
CCR4	Herb	<i>Lupinus polyphyllus</i>	Biglf Lupine	0.06	0.06	0.06	1
CCR4	Herb	<i>Microsteris gracilis</i>	Chickweed	0.29	0.29	0.29	1
CCR4	Herb	<i>Potentilla gracilis</i>	Cinquefoil	0.73	0.65	0.76	3
CCR4	Herb	<i>Ranunculus verecundus</i>	ModestButtercup	0.06	0.06	0.06	1

Location	Type <sup>1</sup>	Scientific Name	Common Name	Probability of Encounter <sup>2</sup>	Minimum Probability	Maximum Probability	Years Observed
CCR4	Herb	<i>Rumex crispus</i>	Curly Dock	0.12	0.12	0.12	1
CCR4	Herb	<i>Taraxacum officinale</i>	Common Dandelion	0.26	0.12	0.41	2
CCR5	Grasses, sedges, rushes	<i>Agrostis alba</i>	Red-top Grass	0.21	0.12	0.29	2
CCR5	Grasses, sedges, rushes	<i>Carex</i> species	Unknown Sedge	0.35	0.35	0.35	1
CCR5	Grasses, sedges, rushes	<i>Carex</i> species	Unknown Sedge	0.45	0.24	0.65	3
CCR5	Grasses, sedges, rushes	<i>Phleum pratense</i>	Timothy Grass	1.00	1.00	1.00	3
CCR5	Grasses, sedges, rushes	<i>Poa bulbosa</i>	Bulbous Bluegrass	0.18	0.18	0.18	1
CCR5	Herb	<i>Achillea millefolium</i>	Yarrow	0.65	0.53	0.82	3
CCR5	Herb	<i>Camassia quamash</i>	Camas	0.41	0.24	0.59	2
CCR5	Herb	<i>Centaury species</i>	Knapweed	0.06	0.06	0.06	1
CCR5	Herb	<i>Collomia linearis</i>	Narrow lvd colomb	0.71	0.71	0.71	1
CCR5	Herb	<i>Dianthus armeria</i>	Deptford Pink	0.14	0.06	0.24	3
CCR5	Herb	<i>Fragaria virginiana</i>	Wild Strawberry	0.12	0.06	0.18	2
CCR5	Herb	<i>Lotus purshiana</i>	Lotus	0.59	0.29	0.88	2
CCR5	Herb	<i>Lupinus polyphyllus</i>	Biglf Lupine	0.24	0.06	0.41	2
CCR5	Herb	<i>Microsteris gracilis</i>	Chickweed	0.24	0.24	0.24	1
CCR5	Herb	<i>Myosotis laxa</i>	Forget-me-not	0.35	0.35	0.35	1
CCR5	Herb	<i>Potentilla gracilis</i>	Cinquefoil	0.65	0.41	0.88	3
CCR5	Herb	<i>Ranunculus verecundus</i>	ModestButtercup	0.18	0.18	0.18	1
CCR5	Herb	<i>Rumex crispus</i>	Curly Dock	0.35	0.35	0.35	1
CCR5	Herb	<i>Taraxacum officinale</i>	Common Dandelion	0.45	0.29	0.53	3
CCR5	Herb	<i>Trifolium</i> species	Clover	1.00	1.00	1.00	1
CCR8	Grasses, sedges, rushes	<i>Carex</i> species	Unknown Sedge	0.29	0.29	0.29	1
CCR8	Grasses, sedges, rushes	<i>Carex</i> species	Unknown Sedge	0.50	0.41	0.59	2
CCR8	Herb	<i>Equisetum pratense</i>	Shady horsetail	0.06	0.06	0.06	1
CCR8	Herb	<i>Equisetum</i> species	Horsetail	0.06	0.06	0.06	1
CCR8	Herb	<i>Polygonum amphibium</i>	Water Smart Weed	0.12	0.06	0.18	2

Location	Type <sup>1</sup>	Scientific Name	Common Name	Probability of Encounter <sup>2</sup>	Minimum Probability	Maximum Probability	Years Observed
CCR8	Herb	<i>Scirpus validus</i>	Bulrush	0.47	0.41	0.53	3
CCR8	Herb	<i>Typha latifolia</i>	Cat-tail	0.86	0.76	0.94	3
FGP1	Grasses, sedges, rushes	<i>Agrostis alba</i>	Red-top Grass	0.44	0.41	0.47	2
FGP1	Grasses, sedges, rushes	<i>Alopecurus pratensis</i>	Meadow Foxtail	0.21	0.12	0.29	2
FGP1	Grasses, sedges, rushes	<i>Carex</i> species	Unknown Sedge	0.24	0.24	0.24	1
FGP1	Grasses, sedges, rushes	<i>Carex</i> species	Unknown Sedge	0.29	0.06	0.53	2
FGP1	Grasses, sedges, rushes	<i>Carex vulpinoidea</i>	Sedge	0.71	0.47	0.94	2
FGP1	Grasses, sedges, rushes	<i>Equisetum hyemale</i>	Horsetail; Common Srush	0.53	0.53	0.53	1
FGP1	Grasses, sedges, rushes	<i>Juncus ensifolius</i>	Daggerleaf rush	0.18	0.18	0.18	1
FGP1	Grasses, sedges, rushes	<i>Phalaris arundinacea</i>	Reed Canary-grass	0.91	0.88	0.94	2
FGP1	Grasses, sedges, rushes	<i>Phleum pratense</i>	Timothy Grass	0.41	0.41	0.41	2
FGP1	Herb	<i>Equisetum</i> species	Horsetail	0.35	0.35	0.35	1
FGP1	Herb	<i>Luzula campestris</i>	Rush; Sweep's brush	0.29	0.29	0.29	1
FGP1	Herb	<i>Mentha arvensis</i>	Field Mint	0.06	0.06	0.06	1
FGP1	Herb	<i>Prunella vulgaris</i>	Heal-all	0.56	0.47	0.65	2
FGP1	Herb	<i>Taraxacum officinale</i>	Common Dandelion	0.71	0.59	0.82	2
FGP1	Herb	<i>Trifolium hybridum</i>	Alsike Clover	0.41	0.41	0.41	1
FGP2	Grasses, sedges, rushes	<i>Agrostis alba</i>	Red-top Grass	0.53	0.47	0.59	2
FGP2	Grasses, sedges, rushes	<i>Alopecurus pratensis</i>	Meadow Foxtail	0.47	0.35	0.59	2
FGP2	Grasses, sedges, rushes	<i>Carex</i> species	Unknown Sedge	0.94	0.94	0.94	1
FGP2	Grasses, sedges, rushes	<i>Carex</i> species	Unknown Sedge	0.65	0.65	0.65	1
FGP2	Grasses, sedges,	<i>Eleocharus palustris</i>	Creeping Spike-rush	0.53	0.53	0.53	1

Location	Type <sup>1</sup>	Scientific Name	Common Name	Probability of Encounter <sup>2</sup>	Minimum Probability	Maximum Probability	Years Observed
	rushes						
FGP2	Grasses, sedges, rushes	<i>Phleum pratense</i>	Timothy Grass	0.41	0.35	0.47	2
FGP2	Herb	<i>Achillea millefolium</i>	Yarrow	0.18	0.18	0.18	1
FGP2	Herb	<i>Galium boreale</i>	Northern Bedstraw	0.26	0.18	0.35	2
FGP2	Herb	<i>Luzula campestris</i>	Rush; Sweep's brush	0.12	0.12	0.12	1
FGP2	Herb	<i>Lysimachia ciliata</i>	Fringed Loosestrife	0.12	0.12	0.12	1
FGP2	Herb	<i>Potentilla gracilis</i>	Cinquefoil	0.12	0.12	0.12	1
FGP2	Herb	<i>Prunella vulgaris</i>	Heal-all	0.18	0.18	0.18	1
FGP2	Herb	<i>Taraxacum officinale</i>	Common Dandelion	0.76	0.71	0.82	2
FGP2	Herb	<i>Trifolium hybridum</i>	Alsike Clover	0.12	0.12	0.12	1
FGP2	Herb	<i>Trifolium</i> species	Clover	0.12	0.12	0.12	1
FGP3	Grasses, sedges, rushes	<i>Agropyron repens</i>	Quack Grass	0.18	0.12	0.24	2
FGP3	Grasses, sedges, rushes	<i>Agrostis alba</i>	Red-top Grass	0.12	0.12	0.12	1
FGP3	Grasses, sedges, rushes	<i>Alopecurus pratensis</i>	Meadow Foxtail	0.68	0.65	0.71	2
FGP3	Grasses, sedges, rushes	<i>Carex</i> species	Unknown Sedge	0.12	0.12	0.12	1
FGP3	Grasses, sedges, rushes	<i>Phalaris arundinacea</i>	Reed Canary-grass	0.35	0.35	0.35	1
FGP3	Grasses, sedges, rushes	<i>Phleum pratense</i>	Timothy Grass	0.06	0.06	0.06	1
FGP3	Herb	<i>Lupinus polyphyllus</i>	Biglf Lupine	0.41	0.41	0.41	1
FGP3	Herb	<i>Polemoniaceae</i> spp.	Phlox	0.06	0.06	0.06	1
FGP3	Herb	<i>Solanum dulcamara</i>	Climbing Nightshade	0.06	0.06	0.06	1
FGP3	Herb	<i>Spirodela polyrhiza</i>	Great Duckweed	0.06	0.06	0.06	1
FGP3	Herb	<i>Taraxacum officinale</i>	Common Dandelion	0.24	0.24	0.24	1
FGP3	Herb	<i>Trifolium</i> species	Clover	0.12	0.12	0.12	1
FGP3	Herb	<i>Vicia americana</i>	Vetch	0.06	0.06	0.06	2
FGP3	Herb	<i>Vicia villosa</i>	Hairy Vetch	0.06	0.06	0.06	1
FGP4	Grasses, sedges, rushes	<i>Agropyron repens</i>	Quack Grass	0.21	0.18	0.24	2

Location	Type <sup>1</sup>	Scientific Name	Common Name	Probability of Encounter <sup>2</sup>	Minimum Probability	Maximum Probability	Years Observed
FGP4	Grasses, sedges, rushes	<i>Agrostis alba</i>	Red-top Grass	0.26	0.06	0.47	2
FGP4	Grasses, sedges, rushes	<i>Alopecurus pratensis</i>	Meadow Foxtail	0.15	0.06	0.24	2
FGP4	Grasses, sedges, rushes	<i>Bromus tectorum</i>	Cheatgrass	0.06	0.06	0.06	1
FGP4	Grasses, sedges, rushes	<i>Carex</i> species	Unknown Sedge	0.18	0.18	0.18	1
FGP4	Grasses, sedges, rushes	<i>Carex</i> species	Unknown Sedge	0.65	0.65	0.65	1
FGP4	Grasses, sedges, rushes	<i>Eleocharus palustris</i>	Creeping Spike-rush	0.06	0.06	0.06	1
FGP4	Grasses, sedges, rushes	<i>Equisetum hyemale</i>	Horsetail;Common Srush	0.29	0.29	0.29	1
FGP4	Grasses, sedges, rushes	<i>Equisetum laevigatum</i>	Smooth Scouring-rush	0.82	0.82	0.82	1
FGP4	Grasses, sedges, rushes	<i>Phalaris arundinacea</i>	Reed Canary-grass	0.18	0.06	0.29	2
FGP4	Grasses, sedges, rushes	<i>Phleum pratense</i>	Timothy Grass	0.15	0.12	0.18	2
FGP4	Herb	<i>Centaurya species</i>	Knapweed	0.06	0.06	0.06	1
FGP4	Herb	<i>Equisetum arvense</i>	Common horsetail	0.06	0.06	0.06	1
FGP4	Herb	<i>Equisetum</i> species	Horsetail	0.65	0.65	0.65	1
FGP4	Herb	<i>Galium aparine</i>	Cleavers	0.12	0.12	0.12	1
FGP4	Herb	<i>Galium boreale</i>	Northern Bedstraw	0.18	0.18	0.18	1
FGP4	Herb	<i>Impatiens aurella</i>	Orange Balsam	0.06	0.06	0.06	1
FGP4	Herb	Labiatae species	Unknown Mint	0.12	0.12	0.12	1
FGP4	Herb	<i>Lemna minor</i>	Duckweed	0.35	0.35	0.35	1
FGP4	Herb	<i>Medicago lupulina</i>	Hop Clover	0.26	0.18	0.35	2
FGP4	Herb	<i>Myosotis laxa</i>	Forget-me-not	0.06	0.06	0.06	1
FGP4	Herb	<i>Plantago eriopoda</i>	Alkali Plantain	0.24	0.24	0.24	1
FGP4	Herb	<i>Plantago lanceolata</i>	Buckhorn Plantain	0.06	0.06	0.06	1
FGP4	Herb	<i>Solanum dulcamara</i>	Climbing Nightshade	0.06	0.06	0.06	1
FGP4	Herb	<i>Spirodela polyrhiza</i>	Great Duckweed	0.06	0.06	0.06	1

Location	Type <sup>1</sup>	Scientific Name	Common Name	Probability of Encounter <sup>2</sup>	Minimum Probability	Maximum Probability	Years Observed
FGP4	Herb	<i>Taraxacum officinale</i>	Common Dandelion	0.15	0.12	0.18	2
FGP4	Herb	<i>Trifolium</i> species	Clover	0.06	0.06	0.06	1
FGP4	Herb	<i>Typha latifolia</i>	Cat-tail	0.29	0.29	0.29	2
FGP4	Herb	<i>Vicia americana</i>	Vetch	0.18	0.12	0.24	2
FGP5	Grasses, sedges, rushes	<i>Agropyron repens</i>	Quack Grass	0.56	0.47	0.65	2
FGP5	Grasses, sedges, rushes	<i>Agrostis alba</i>	Red-top Grass	0.26	0.12	0.41	2
FGP5	Grasses, sedges, rushes	<i>Alopecurus pratensis</i>	Meadow Foxtail	0.32	0.24	0.41	2
FGP5	Grasses, sedges, rushes	<i>Bromus japonica</i>	Japanese Cheat	0.06	0.06	0.06	1
FGP5	Grasses, sedges, rushes	<i>Bromus species</i>		0.12	0.12	0.12	1
FGP5	Grasses, sedges, rushes	<i>Bromus tectorum</i>	Cheatgrass	0.12	0.12	0.12	2
FGP5	Grasses, sedges, rushes	<i>Carex</i> species	Unknown Sedge	0.12	0.12	0.12	1
FGP5	Grasses, sedges, rushes	<i>Phleum pratense</i>	Timothy Grass	0.24	0.24	0.24	1
FGP5	Grasses, sedges, rushes	<i>Poa bulbosa</i>	Bulbous Bluegrass	0.18	0.18	0.18	1
FGP5	Herb	<i>Centaurea cyanus</i>	Bachelor Button	0.06	0.06	0.06	1
FGP5	Herb	<i>Dactylus glomerata</i>	Orchard Grass	0.15	0.06	0.24	2
FGP5	Herb	<i>Montia perfoliata</i>	Miner's lettuce	0.18	0.18	0.18	1
FGP5	Herb	<i>Taraxacum officinale</i>	Common Dandelion	0.12	0.12	0.12	1
FGP5	Herb	<i>Unknown Epilobium</i>	Unknown Epilobium	0.18	0.18	0.18	1
FGP5	Herb	<i>Veronica serpyllifolia</i>	Speedwell	0.18	0.18	0.18	1
FGP5	Herb	<i>Vicia americana</i>	Vetch	0.06	0.06	0.06	1
FGP6	Grasses, sedges, rushes	<i>Agrostis alba</i>	Red-top Grass	0.06	0.06	0.06	1
FGP6	Grasses, sedges, rushes	<i>Bromus species</i>		0.06	0.06	0.06	1
FGP6	Herb	<i>Achillea millefolium</i>	Yarrow	0.06	0.06	0.06	1
FGP6	Herb	<i>Adenocaulon bicolor</i>	Pathfinder	0.06	0.06	0.06	1

Location	Type <sup>1</sup>	Scientific Name	Common Name	Probability of Encounter <sup>2</sup>	Minimum Probability	Maximum Probability	Years Observed
FGP6	Herb	<i>Clintonia uniflora</i>	Queen's Cup	0.15	0.12	0.18	2
FGP6	Herb	<i>Dactylus glomerata</i>	Orchard Grass	0.35	0.35	0.35	1
FGP6	Herb	<i>Fragaria vesca</i>	Woods strawberry	0.35	0.35	0.35	1
FGP6	Herb	<i>Fragaria virginiana</i>	Wild Strawberry	0.12	0.12	0.12	1
FGP6	Herb	<i>Galium boreale</i>	Northern Bedstraw	0.15	0.12	0.18	2
FGP6	Herb	<i>Galium species</i>	Bedstraw	0.18	0.18	0.18	1
FGP6	Herb	<i>Hieracium aurantiacum</i>	Orange Hawkweed	0.12	0.12	0.12	1
FGP6	Herb	<i>Lomatium species</i>	Lomatium	0.12	0.12	0.12	1
FGP6	Herb	<i>Lonicera ciliosa</i>	Orange Honeysuckle	0.06	0.06	0.06	1
FGP6	Herb	<i>Medicago lupulina</i>	Hop Clover	0.06	0.06	0.06	1
FGP6	Herb	<i>Osmorhiza chilensis</i>	Mt. Sweet-cicely	0.56	0.41	0.71	2
FGP6	Herb	<i>Polemoniaceae</i> spp.	Phlox	0.29	0.29	0.29	1
FGP6	Herb	<i>Prunella vulgaris</i>	Heal-all	0.15	0.06	0.24	2
FGP6	Herb	<i>Smilacina racemosa</i>	False Solomon's Seal	0.12	0.12	0.12	1
FGP6	Herb	<i>Smilacina stellata</i>	Starry Solomon-plume	0.09	0.06	0.12	2
FGP6	Herb	<i>Taraxacum officinale</i>	Common Dandelion	0.26	0.06	0.47	2
FGP6	Herb	<i>Trifolium hybridum</i>	Alsike Clover	0.12	0.12	0.12	1
FGP7	Grasses, sedges, rushes	<i>Agropyron repens</i>	Quack Grass	0.29	0.29	0.29	1
FGP7	Grasses, sedges, rushes	<i>Alopecurus pratensis</i>	Meadow Foxtail	0.97	0.94	1.00	2
FGP7	Grasses, sedges, rushes	<i>Phleum pratense</i>	Timothy Grass	0.06	0.06	0.06	1
FGP7	Herb	<i>Descurainia richardsonii</i>	Mtn. Tansy-mustard	0.06	0.06	0.06	1
FGP7	Herb	<i>Medicago lupulina</i>	Hop Clover	0.35	0.35	0.35	1
FGP7	Herb	<i>Rumex crispus</i>	Curly Dock	0.06	0.06	0.06	1
FGP7	Herb	<i>Trifolium species</i>	Clover	0.12	0.12	0.12	1
FGP7	Herb	<i>Vicia americana</i>	Vetch	0.06	0.06	0.06	1
FGP7	Herb	<i>Vicia villosa</i>	Hairy Vetch	0.06	0.06	0.06	1
FGP8	Grasses, sedges, rushes	<i>Agropyron repens</i>	Quack Grass	0.35	0.29	0.41	2
FGP8	Grasses, sedges, rushes	<i>Agrostis alba</i>	Red-top Grass	0.12	0.12	0.12	1

Location	Type <sup>1</sup>	Scientific Name	Common Name	Probability of Encounter <sup>2</sup>	Minimum Probability	Maximum Probability	Years Observed
FGP8	Grasses, sedges, rushes	<i>Alopecurus pratensis</i>	Meadow Foxtail	0.94	0.88	1.00	2
FGP8	Grasses, sedges, rushes	<i>Phleum pratense</i>	Timothy Grass	0.06	0.06	0.06	1
FGP8	Herb	<i>Medicago lupulina</i>	Hop Clover	0.35	0.35	0.35	1
FGP8	Herb	<i>Trifolium hybridum</i>	Alsike Clover	0.06	0.06	0.06	1
FGP8	Herb	<i>Trifolium</i> species	Clover	0.12	0.12	0.12	2
FGP8	Herb	<i>Vicia americana</i>	Vetch	0.29	0.12	0.47	2
FGR10	Grasses, sedges, rushes	<i>Agrostis alba</i>	Red-top Grass	0.12	0.12	0.12	1
FGR10	Grasses, sedges, rushes	<i>Carex</i> species	Unknown Sedge	0.09	0.06	0.12	2
FGR10	Grasses, sedges, rushes	<i>Equisetum laevigatum</i>	Smooth Scouring-rush	0.59	0.59	0.59	1
FGR10	Grasses, sedges, rushes	<i>Phalaris arundinacea</i>	Reed Canary-grass	0.24	0.24	0.24	1
FGR10	Herb	<i>Cirsium</i> species	Thistle	0.12	0.12	0.12	2
FGR10	Herb	<i>Dryopteris austriaca</i>	Spreading Wood-fern	0.16	0.12	0.24	3
FGR10	Herb	<i>Elodea nuttalli</i>	Nuttall's Waterweed	0.38	0.18	0.59	2
FGR10	Herb	<i>Equisetum arvense</i>	Common horsetail	0.06	0.06	0.06	1
FGR10	Herb	<i>Equisetum pratense</i>	Shady horsetail	0.53	0.41	0.65	2
FGR10	Herb	<i>Galium boreale</i>	Northern Bedstraw	0.12	0.12	0.12	1
FGR10	Herb	<i>Galium</i> species	Bedstraw	0.12	0.12	0.12	1
FGR10	Herb	<i>Impatiens aurella</i>	Orange Balsam	0.65	0.53	0.76	3
FGR10	Herb	Labiatae species	Unknown Mint	0.06	0.06	0.06	1
FGR10	Herb	<i>Lemna minor</i>	Duckweed	0.20	0.06	0.35	3
FGR10	Herb	<i>Lysichitum americanum</i>	Skunk cabbage	0.69	0.59	0.76	3
FGR10	Herb	<i>Myosotis laxa</i>	Forget-me-not	0.22	0.12	0.41	3
FGR10	Herb	<i>Solanum dulcamara</i>	Climbing Nightshade	0.33	0.29	0.41	3
FGR10	Herb	<i>Solanum</i> species	Nightshade	0.12	0.12	0.12	2
FGR10	Herb	<i>Veronica americana</i>	Speedwell	0.12	0.12	0.12	1
FGR10	Herb	<i>Vicia americana</i>	Vetch	0.06	0.06	0.06	1
FGR2	Grasses, sedges, rushes	<i>Phalaris arundinacea</i>	Reed Canary-grass	0.06	0.06	0.06	1

Location	Type <sup>1</sup>	Scientific Name	Common Name	Probability of Encounter <sup>2</sup>	Minimum Probability	Maximum Probability	Years Observed
FGR2	Herb	<i>Galium aparine</i>	Cleavers	0.29	0.29	0.29	2
FGR2	Herb	<i>Galium trifidum</i>	Small bedstraw	0.12	0.12	0.12	1
FGR2	Herb	<i>Osmorhiza chilensis</i>	Mt. Sweet-cicely	0.24	0.24	0.24	1
FGR2	Herb	<i>Smilacina racemosa</i>	False Solomon's Seal	0.06	0.06	0.06	1
FGR2	Herb	<i>Smilacina stellata</i>	Starry Solomon-plume	0.20	0.06	0.29	3
FGR2	Herb	<i>Urtica dioica</i>	Stinging Nettle	0.10	0.06	0.12	3
FGR9	Herb	<i>Lemna minor</i>	Duckweed	0.76	0.76	0.76	1
FGR9	Herb	<i>Typha latifolia</i>	Cat-tail	0.96	0.88	1.00	3
PRP1	Grasses, sedges, rushes	<i>Agrostis alba</i>	Red-top Grass	0.24	0.24	0.24	1
PRP1	Grasses, sedges, rushes	<i>Carex</i> species	Unknown Sedge	0.35	0.35	0.35	1
PRP1	Grasses, sedges, rushes	<i>Phleum pratense</i>	Timothy Grass	0.12	0.12	0.12	1
PRP1	Grasses, sedges, rushes	<i>Unknown Agropyron</i>	Unknown Agropyron	0.24	0.24	0.24	1
PRP1	Herb	<i>Cirseum arvense</i>	Canada thistle	0.29	0.29	0.29	1
PRP1	Herb	<i>Eleocharus</i> species	Spike-rush	0.06	0.06	0.06	1
PRP1	Herb	<i>Equisetum pratense</i>	Shady horsetail	0.06	0.06	0.06	1
PRP1	Herb	<i>Galium species</i>	Bedstraw	0.12	0.12	0.12	1
PRP1	Herb	<i>Galium trifidum</i>	Small bedstraw	0.06	0.06	0.06	1
PRP1	Herb	<i>Mertensia campanulata</i>	Tall bluebells	0.06	0.06	0.06	1
PRP1	Herb	<i>Montia sibirica</i>	Western springbeauty	0.18	0.18	0.18	1
PRP1	Herb	<i>Osmorhiza chilensis</i>	Mt. Sweet-cicely	0.06	0.06	0.06	1
PRP1	Herb	<i>Smilacina stellata</i>	Starry Solomon-plume	0.12	0.12	0.12	1
PRP1	Herb	<i>Solanum dulcamara</i>	Climbing Nightshade	0.18	0.18	0.18	1
PRP1	Herb	<i>Tanacetum vulgare</i>	Common tansy	0.24	0.24	0.24	1
PRP1	Herb	<i>Taraxacum officinale</i>	Common Dandelion	0.12	0.12	0.12	1
PRP1	Herb	<i>Veronica officinalis</i>	Common Speedwell	0.06	0.06	0.06	1
PRP1	Herb	<i>Viola orbiculata</i>	Round-leaved violet	0.06	0.06	0.06	1
PRP2	Grasses, sedges,	<i>Agropyron repens</i>	Quack Grass	0.12	0.12	0.12	1

Location	Type <sup>1</sup>	Scientific Name	Common Name	Probability of Encounter <sup>2</sup>	Minimum Probability	Maximum Probability	Years Observed
	rushes						
PRP2	Grasses, sedges, rushes	<i>Agrostis alba</i>	Red-top Grass	0.35	0.35	0.35	1
PRP2	Grasses, sedges, rushes	<i>Alopecurus pratensis</i>	Meadow Foxtail	0.24	0.24	0.24	1
PRP2	Grasses, sedges, rushes	<i>Equisetum laevigatum</i>	Smooth Scouring-rush	0.12	0.12	0.12	1
PRP2	Grasses, sedges, rushes	<i>Phalaris arundinacea</i>	Reed Canary-grass	0.12	0.12	0.12	1
PRP2	Grasses, sedges, rushes	<i>Phleum pratense</i>	Timothy Grass	0.06	0.06	0.06	1
PRP2	Grasses, sedges, rushes	<i>Unknown Agropyron</i>	Unknown Agropyron	0.12	0.12	0.12	1
PRP2	Grasses, sedges, rushes	<i>Unknown Agropyron</i>	Unknown Agropyron	0.06	0.06	0.06	1
PRP2	Grasses, sedges, rushes	Unknown fescue	Unknown fescue	0.71	0.71	0.71	1
PRP2	Grasses, sedges, rushes	Unknown fescue	Unknown fescue	0.12	0.12	0.12	1
PRP2	Grasses, sedges, rushes	Unknown fescue	Unknown fescue	0.35	0.35	0.35	1
PRP2	Herb	<i>Achillea millefolium</i>	Yarrow	0.24	0.24	0.24	1
PRP2	Herb	<i>Chrysanthemum leucanthemum</i>	Oxeye daisy	0.06	0.06	0.06	1
PRP2	Herb	<i>Dactylus glomerata</i>	Orchard Grass	0.18	0.18	0.18	1
PRP2	Herb	<i>Plantago lanceolata</i>	Buckhorn Plantain	0.06	0.06	0.06	1
PRP2	Herb	<i>Taraxacum officinale</i>	Common Dandelion	0.47	0.47	0.47	1
PRP2	Herb	<i>Trifolium</i> species	Clover	0.06	0.06	0.06	1
SPP1	Grasses, sedges, rushes	<i>Phalaris arundinacea</i>	Reed Canary-grass	0.94	0.94	0.94	1
SPP1	Herb	<i>Galium</i> species	Bedstraw	0.06	0.06	0.06	1
SPP1	Herb	<i>Impatiens aurella</i>	Orange Balsam	0.12	0.12	0.12	1
SPP1	Herb	<i>Typha latifolia</i>	Cat-tail	0.82	0.82	0.82	1
SPP2	Herb	<i>Adenocaulon bicolor</i>	Pathfinder	0.53	0.53	0.53	1
SPP2	Herb	<i>Clintonia uniflora</i>	Queen's Cup	0.53	0.53	0.53	1

Location	Type <sup>1</sup>	Scientific Name	Common Name	Probability of Encounter <sup>2</sup>	Minimum Probability	Maximum Probability	Years Observed
SPP2	Herb	<i>Fragaria vesca</i>	Woods strawberry	0.06	0.06	0.06	1
SPP2	Herb	<i>Galium species</i>	Bedstraw	0.41	0.41	0.41	1
SPP2	Herb	<i>Hieracium albiflorum</i>	White-flowered hawkweed	0.35	0.35	0.35	1
SPP2	Herb	<i>Holodiscus discolor</i>	Creambush Oceanspray	0.06	0.06	0.06	1
SPP2	Herb	<i>Linnaea borealis</i>	Twinflower	0.06	0.06	0.06	1
SPP2	Herb	<i>Osmorhiza chilensis</i>	Mt. Sweet-cicely	0.06	0.06	0.06	1
SPP2	Herb	<i>Satureja douglasii</i>	Yerba buena	0.41	0.41	0.41	1
SPP2	Herb	<i>Viola orbiculata</i>	Round-leaved violet	0.53	0.53	0.53	1
SPP3	Grasses, sedges, rushes	<i>Agrostis alba</i>	Red-top Grass	0.41	0.41	0.41	1
SPP3	Grasses, sedges, rushes	<i>Bromus species</i>		0.12	0.12	0.12	1
SPP3	Grasses, sedges, rushes	<i>Bromus tectorum</i>	Cheatgrass	0.06	0.06	0.06	1
SPP3	Grasses, sedges, rushes	<i>Carex species</i>	Unknown Sedge	0.12	0.12	0.12	1
SPP3	Grasses, sedges, rushes	<i>Phleum pratense</i>	Timothy Grass	0.06	0.06	0.06	1
SPP3	Grasses, sedges, rushes	<i>Unknown Juncus</i>	Unknown Juncus	0.12	0.12	0.12	1
SPP3	Herb	<i>Actaea rubra</i>	Baneberry	0.12	0.12	0.12	1
SPP3	Herb	<i>Centaureum umbellatum</i>	Common centaurium	0.18	0.18	0.18	1
SPP3	Herb	<i>Cerastium arvense</i>	Field chickweed	0.18	0.18	0.18	1
SPP3	Herb	<i>Chrysanthemum leucanthemum</i>	Oxeye daisy	0.24	0.24	0.24	1
SPP3	Herb	<i>Dactylus glomerata</i>	Orchard Grass	0.06	0.06	0.06	1
SPP3	Herb	<i>Dianthus armeria</i>	Deptford Pink	0.24	0.24	0.24	1
SPP3	Herb	<i>Dryopteris austriaca</i>	Spreading Wood-fern	0.06	0.06	0.06	1
SPP3	Herb	<i>Fragaria vesca</i>	Woods strawberry	0.06	0.06	0.06	1
SPP3	Herb	<i>Fragaria virginiana</i>	Wild Strawberry	0.12	0.12	0.12	1
SPP3	Herb	<i>Hieracium albiflorum</i>	White-flowered hawkweed	0.06	0.06	0.06	1

Location	Type <sup>1</sup>	Scientific Name	Common Name	Probability of Encounter <sup>2</sup>	Minimum Probability	Maximum Probability	Years Observed
SPP3	Herb	<i>Hypericum perforatum</i>	Common St. John's-wort	0.29	0.29	0.29	1
SPP3	Herb	<i>Lotus purshiana</i>	Lotus	0.29	0.29	0.29	1
SPP3	Herb	<i>Medicago lupulina</i>	Hop Clover	0.18	0.18	0.18	1
SPP3	Herb	<i>Plantago lanceolata</i>	Buckhorn Plantain	0.06	0.06	0.06	1
SPP3	Herb	<i>Polemoniaceae</i> spp.	Phlox	0.24	0.24	0.24	1
SPP3	Herb	<i>Potentilla gracilis</i>	Cinquefoil	0.12	0.12	0.12	1
SPP3	Herb	<i>Prunella vulgaris</i>	Heal-all	0.35	0.35	0.35	1
SPP3	Herb	<i>Satureja douglasii</i>	Yerba buena	0.06	0.06	0.06	1
SPP3	Herb	<i>Smilacina racemosa</i>	False Solomon's Seal	0.06	0.06	0.06	1
SPP3	Herb	<i>Taraxacum officinale</i>	Common Dandelion	0.06	0.06	0.06	1
SPP3	Herb	<i>Trifolium</i> species	Clover	0.12	0.12	0.12	1
SPP3	Herb	<i>Veronica officinalis</i>	Common Speedwell	0.06	0.06	0.06	1
SPP3	Herb	<i>Vicia americana</i>	Vetch	0.47	0.47	0.47	1
SPP4	Grasses, sedges, rushes	<i>Agrostis alba</i>	Red-top Grass	0.06	0.06	0.06	1
SPP4	Grasses, sedges, rushes	<i>Carex</i> species	Unknown Sedge	0.41	0.41	0.41	1
SPP4	Grasses, sedges, rushes	<i>Phalaris arundinacea</i>	Reed Canary-grass	0.76	0.76	0.76	1
SPP4	Herb	<i>Achillea millefolium</i>	Yarrow	0.12	0.12	0.12	1
SPP4	Herb	<i>Cirsium arvense</i>	Canada thistle	0.12	0.12	0.12	1
SPP4	Herb	<i>Eleocharus</i> species	Spike-rush	0.12	0.12	0.12	1
SPP4	Herb	<i>Equisetum arvense</i>	Common horsetail	0.12	0.12	0.12	1
SPP4	Herb	<i>Galium</i> species	Bedstraw	0.12	0.12	0.12	1
SPP4	Herb	<i>Lonicera ciliosa</i>	Orange Honeysuckle	0.06	0.06	0.06	1
SPP4	Herb	<i>Lysimachia thyrsiflora</i>	Loosestrife, primrose	0.12	0.12	0.12	1
SPP4	Herb	<i>Osmorhiza chilensis</i>	Mt. Sweet-cicely	0.12	0.12	0.12	1
SPP4	Herb	<i>Satureja douglasii</i>	Yerba buena	0.06	0.06	0.06	1
SPP4	Herb	<i>Smilacina racemosa</i>	False Solomon's Seal	0.06	0.06	0.06	1
SPP4	Herb	<i>Sparganium eurycarpum</i>	Bur-reed	0.12	0.12	0.12	1
SPP5	Grasses, sedges, rushes	<i>Agrostis alba</i>	Red-top Grass	0.29	0.29	0.29	1

Location	Type <sup>1</sup>	Scientific Name	Common Name	Probability of Encounter <sup>2</sup>	Minimum Probability	Maximum Probability	Years Observed
SPP5	Grasses, sedges, rushes	<i>Carex</i> species	Unknown Sedge	0.24	0.24	0.24	1
SPP5	Grasses, sedges, rushes	<i>Phalaris arundinacea</i>	Reed Canary-grass	0.12	0.12	0.12	1
SPP5	Herb	<i>Adenocaulon bicolor</i>	Pathfinder	0.06	0.06	0.06	1
SPP5	Herb	<i>Chrysanthemum leucanthemum</i>	Oxeye daisy	0.12	0.12	0.12	1
SPP5	Herb	<i>Dactylus glomerata</i>	Orchard Grass	0.06	0.06	0.06	1
SPP5	Herb	<i>Equisetum pratense</i>	Shady horsetail	0.18	0.18	0.18	1
SPP5	Herb	<i>Fragaria vesca</i>	Woods strawberry	0.18	0.18	0.18	1
SPP5	Herb	<i>Galium species</i>	Bedstraw	0.12	0.12	0.12	1
SPP5	Herb	<i>Hieracium albiflorum</i>	White-flowered hawkweed	0.18	0.18	0.18	1
SPP5	Herb	<i>Lupinus species</i>	Unknown Lupine	0.06	0.06	0.06	1
SPP5	Herb	<i>Montia perfoliata</i>	Miner's lettuce	0.06	0.06	0.06	1
SPP5	Herb	<i>Osmorhiza chilensis</i>	Mt. Sweet-cicely	0.24	0.24	0.24	1
SPP5	Herb	<i>Prunella vulgaris</i>	Heal-all	0.12	0.12	0.12	1
SPP5	Herb	<i>Satureja douglasii</i>	Yerba buena	0.24	0.24	0.24	1
SPP5	Herb	<i>Scutellaria galericulata</i>	Marsh Skullcap	0.06	0.06	0.06	1
SPP5	Herb	<i>Smilacina stellata</i>	Starry Solomon-plume	0.24	0.24	0.24	1
SPP5	Herb	<i>Taraxacum officinale</i>	Common Dandelion	0.06	0.06	0.06	1
SPP5	Herb	<i>Trifolium</i> species	Clover	0.18	0.18	0.18	1
SPP5	Herb	<i>Typha latifolia</i>	Cat-tail	0.12	0.12	0.12	1
SPP5	Herb	<i>Unknown Epilobium</i>	Unknown Epilobium	0.06	0.06	0.06	1
SPP5	Herb	<i>Veronica officinalis</i>	Common Speedwell	0.06	0.06	0.06	1
TAP1	Grasses, sedges, rushes	<i>Agropyron repens</i>	Quack Grass	0.06	0.06	0.06	1
TAP1	Grasses, sedges, rushes	<i>Agrostis alba</i>	Red-top Grass	0.06	0.06	0.06	1
TAP1	Grasses, sedges, rushes	<i>Alopecurus pratensis</i>	Meadow Foxtail	0.47	0.47	0.47	1
TAP1	Grasses, sedges, rushes	<i>Carex</i> species	Unknown Sedge	0.65	0.65	0.65	1

Location	Type <sup>1</sup>	Scientific Name	Common Name	Probability of Encounter <sup>2</sup>	Minimum Probability	Maximum Probability	Years Observed
TAP1	Grasses, sedges, rushes	<i>Equisetum laevigatum</i>	Smooth Scouring-rush	0.12	0.12	0.12	1
TAP1	Grasses, sedges, rushes	<i>Phleum pratense</i>	Timothy Grass	0.94	0.94	0.94	1
TAP1	Herb	<i>Achillea millefolium</i>	Yarrow	0.18	0.18	0.18	1
TAP1	Herb	<i>Chrysanthemum leucanthemum</i>	Oxeye daisy	0.12	0.12	0.12	1
TAP1	Herb	<i>Lotus purshiana</i>	Lotus	0.35	0.35	0.35	1
TAP1	Herb	<i>Poa pratensis</i>	Kentucky Bluegrass	0.47	0.47	0.47	1
TAP1	Herb	<i>Potentilla gracilis</i>	Cinquefoil	0.41	0.41	0.41	1
TAP1	Herb	<i>Taraxacum officinale</i>	Common Dandelion	0.41	0.41	0.41	1
TAP1	Herb	<i>Trifolium</i> species	Clover	0.06	0.06	0.06	1
TAP2	Grasses, sedges, rushes	<i>Agrostis alba</i>	Red-top Grass	0.53	0.53	0.53	1
TAP2	Grasses, sedges, rushes	<i>Carex</i> species	Unknown Sedge	0.94	0.94	0.94	1
TAP2	Grasses, sedges, rushes	<i>Phleum pratense</i>	Timothy Grass	0.76	0.76	0.76	1
TAP2	Herb	<i>Achillea millefolium</i>	Yarrow	0.18	0.18	0.18	1
TAP2	Herb	<i>Dianthus armeria</i>	Deptford Pink	0.06	0.06	0.06	1
TAP2	Herb	<i>Fragaria virginiana</i>	Wild Strawberry	0.06	0.06	0.06	1
TAP2	Herb	<i>Galium species</i>	Bedstraw	0.06	0.06	0.06	1
TAP2	Herb	<i>Hypericum perforatum</i>	Common St. John's-wort	0.06	0.06	0.06	1
TAP2	Herb	<i>Lotus purshiana</i>	Lotus	0.24	0.24	0.24	1
TAP2	Herb	<i>Luzula campestris</i>	Rush; Sweep's brush	0.06	0.06	0.06	1
TAP2	Herb	<i>Plantago lanceolata</i>	Buckhorn Plantain	0.24	0.24	0.24	1
TAP2	Herb	<i>Poa pratensis</i>	Kentucky Bluegrass	0.06	0.06	0.06	1
TAP2	Herb	<i>Polemoniaceae</i> spp.	Phlox	0.06	0.06	0.06	1
TAP2	Herb	<i>Prunella vulgaris</i>	Heal-all	0.35	0.35	0.35	1
TAP2	Herb	<i>Rumex acetosella</i>	Sour Weed	0.12	0.12	0.12	1
TAP2	Herb	<i>Smilacina stellata</i>	Starry Solomon-plume	0.12	0.12	0.12	1
TAP2	Herb	<i>Taraxacum officinale</i>	Common Dandelion	0.88	0.88	0.88	1

Location	Type <sup>1</sup>	Scientific Name	Common Name	Probability of Encounter <sup>2</sup>	Minimum Probability	Maximum Probability	Years Observed
TAP2	Herb	<i>Trifolium species</i>	Clover	0.18	0.18	0.18	1
TAP3	Grasses, sedges, rushes	<i>Agrostis alba</i>	Red-top Grass	0.12	0.12	0.12	1
TAP3	Grasses, sedges, rushes	<i>Phleum pratense</i>	Timothy Grass	0.94	0.94	0.94	1
TAP3	Herb	<i>Achillea millefolium</i>	Yarrow	0.12	0.12	0.12	1
TAP3	Herb	<i>Hieracium aurantiacum</i>	Orange Hawkweed	0.06	0.06	0.06	1
TAP3	Herb	<i>Poa pratensis</i>	Kentucky Bluegrass	0.06	0.06	0.06	1
TAP3	Herb	<i>Taraxacum officinale</i>	Common Dandelion	0.18	0.18	0.18	1
TAP4	Grasses, sedges, rushes	<i>Agrostis alba</i>	Red-top Grass	0.06	0.06	0.06	1
TAP4	Grasses, sedges, rushes	<i>Carex species</i>	Unknown Sedge	1.00	1.00	1.00	1
TAP4	Grasses, sedges, rushes	<i>Phleum pratense</i>	Timothy Grass	0.29	0.29	0.29	1
TAP4	Herb	<i>Achillea millefolium</i>	Yarrow	0.24	0.24	0.24	1
TAP4	Herb	<i>Fragaria virginiana</i>	Wild Strawberry	0.12	0.12	0.12	1
TAP4	Herb	<i>Galium species</i>	Bedstraw	0.06	0.06	0.06	1
TAP4	Herb	<i>Lotus purshiana</i>	Lotus	0.65	0.65	0.65	1
TAP4	Herb	<i>Lupinus species</i>	Unknown Lupine	1.00	1.00	1.00	1
TAP4	Herb	<i>Potentilla gracilis</i>	Cinquefoil	0.29	0.29	0.29	1
TAP4	Herb	<i>Rumex crispus</i>	Curly Dock	0.65	0.65	0.65	1
TAP4	Herb	<i>Taraxacum officinale</i>	Common Dandelion	0.29	0.29	0.29	1
TAR11	Grasses, sedges, rushes	<i>Equisetum laevigatum</i>	Smooth Scouring-rush	0.18	0.18	0.18	1
TAR11	Grasses, sedges, rushes	<i>Phalaris arundinacea</i>	Reed Canary-grass	0.06	0.06	0.06	2
TAR11	Grasses, sedges, rushes	<i>Unknown Agropyron</i>	Unknown Agropyron	0.06	0.06	0.06	1
TAR11	Herb	<i>Cirseum arvense</i>	Canada thistle	0.12	0.12	0.12	1
TAR11	Herb	<i>Dryopteris austriaca</i>	Spreading Wood-fern	0.25	0.18	0.35	3
TAR11	Herb	<i>Equisetum arvense</i>	Common horsetail	0.12	0.12	0.12	1
TAR11	Herb	<i>Equisetum pratense</i>	Shady horsetail	0.18	0.18	0.18	1
TAR11	Herb	<i>Equisetum species</i>	Horsetail	0.06	0.06	0.06	1

Location	Type <sup>1</sup>	Scientific Name	Common Name	Probability of Encounter <sup>2</sup>	Minimum Probability	Maximum Probability	Years Observed
TAR11	Herb	<i>Galium trifidum</i>	Small bedstraw	0.06	0.06	0.06	1
TAR11	Herb	<i>Impatiens aurella</i>	Orange Balsam	0.43	0.24	0.59	3
TAR11	Herb	<i>Lemna minor</i>	Duckweed	0.06	0.06	0.06	1
TAR11	Herb	<i>Lysichitum americanum</i>	Skunk cabbage	0.10	0.06	0.18	3
TAR11	Herb	<i>Myosotis laxa</i>	Forget-me-not	0.18	0.12	0.24	2
TAR11	Herb	<i>Solanum dulcamara</i>	Climbing Nightshade	0.15	0.12	0.18	2
TRP10	Grasses, sedges, rushes	<i>Alopecurus pratensis</i>	Meadow Foxtail	0.41	0.41	0.41	1
TRP10	Grasses, sedges, rushes	<i>Bromus japonica</i>	Japanese Cheat	0.06	0.06	0.06	1
TRP10	Grasses, sedges, rushes	<i>Equisetum laevigatum</i>	Smooth Scouring-rush	0.65	0.65	0.65	1
TRP10	Grasses, sedges, rushes	<i>Phleum pratense</i>	Timothy Grass	0.71	0.71	0.71	1
TRP10	Herb	<i>Achillea millefolium</i>	Yarrow	0.35	0.35	0.35	1
TRP10	Herb	<i>Cirseum arvense</i>	Canada thistle	0.06	0.06	0.06	1
TRP10	Herb	<i>Lotus purshiana</i>	Lotus	0.76	0.76	0.76	1
TRP10	Herb	<i>Microsteris gracilis</i>	Chickweed	0.12	0.12	0.12	1
TRP10	Herb	<i>Poa pratensis</i>	Kentucky Bluegrass	0.18	0.18	0.18	1
TRP10	Herb	<i>Potentilla gracilis</i>	Cinquefoil	0.41	0.41	0.41	1
TRP10	Herb	<i>Taraxacum officinale</i>	Common Dandelion	0.12	0.12	0.12	1
TRP11	Grasses, sedges, rushes	<i>Agropyron repens</i>	Quack Grass	0.47	0.47	0.47	1
TRP11	Grasses, sedges, rushes	<i>Agrostis alba</i>	Red-top Grass	0.06	0.06	0.06	1
TRP11	Grasses, sedges, rushes	<i>Alopecurus pratensis</i>	Meadow Foxtail	0.18	0.18	0.18	1
TRP11	Grasses, sedges, rushes	<i>Carex</i> species	Unknown Sedge	0.18	0.18	0.18	1
TRP11	Grasses, sedges, rushes	<i>Phalaris arundinacea</i>	Reed Canary-grass	0.24	0.24	0.24	1
TRP11	Grasses, sedges, rushes	<i>Phleum pratense</i>	Timothy Grass	0.47	0.47	0.47	1
TRP11	Herb	<i>Achillea millefolium</i>	Yarrow	0.65	0.65	0.65	1

Location	Type <sup>1</sup>	Scientific Name	Common Name	Probability of Encounter <sup>2</sup>	Minimum Probability	Maximum Probability	Years Observed
TRP11	Herb	<i>Myosotis laxa</i>	Forget-me-not	0.06	0.06	0.06	1
TRP11	Herb	<i>Poa pratensis</i>	Kentucky Bluegrass	0.12	0.12	0.12	1
TRP11	Herb	<i>Potentilla gracilis</i>	Cinquefoil	0.47	0.47	0.47	1
TRP11	Herb	<i>Taraxacum officinale</i>	Common Dandelion	0.29	0.29	0.29	1
TRP11	Herb	<i>Trifolium</i> species	Clover	0.06	0.06	0.06	1
TRP11	Herb	<i>Unknown Epilobium</i>	Unknown Epilobium	0.06	0.06	0.06	1
TRP12	Grasses, sedges, rushes	<i>Agropyron repens</i>	Quack Grass	0.65	0.65	0.65	1
TRP12	Grasses, sedges, rushes	<i>Agrostis alba</i>	Red-top Grass	0.88	0.88	0.88	1
TRP12	Grasses, sedges, rushes	<i>Alopecurus pratensis</i>	Meadow Foxtail	0.29	0.29	0.29	1
TRP12	Grasses, sedges, rushes	<i>Carex</i> species	Unknown Sedge	0.47	0.47	0.47	1
TRP12	Grasses, sedges, rushes	<i>Phalaris arundinacea</i>	Reed Canary-grass	0.88	0.88	0.88	1
TRP12	Grasses, sedges, rushes	<i>Phleum pratense</i>	Timothy Grass	0.29	0.29	0.29	1
TRP12	Herb	<i>Achillea millefolium</i>	Yarrow	0.47	0.47	0.47	1
TRP12	Herb	<i>Cerastium arvense</i>	Field chickweed	0.24	0.24	0.24	1
TRP12	Herb	<i>Cirseum arvense</i>	Canada thistle	0.12	0.12	0.12	1
TRP12	Herb	<i>Lupinus</i> species	Unknown Lupine	0.29	0.29	0.29	1
TRP12	Herb	<i>Poa pratensis</i>	Kentucky Bluegrass	0.53	0.53	0.53	1
TRP12	Herb	<i>Taraxacum officinale</i>	Common Dandelion	0.29	0.29	0.29	1
TRP12	Herb	<i>Trifolium</i> species	Clover	0.53	0.53	0.53	1
TRP5	Grasses, sedges, rushes	<i>Agropyron repens</i>	Quack Grass	0.12	0.12	0.12	1
TRP5	Grasses, sedges, rushes	<i>Alopecurus pratensis</i>	Meadow Foxtail	0.06	0.06	0.06	1
TRP5	Grasses, sedges, rushes	<i>Carex</i> species	Unknown Sedge	0.18	0.18	0.18	1
TRP5	Grasses, sedges, rushes	<i>Phalaris arundinacea</i>	Reed Canary-grass	0.18	0.18	0.18	1
TRP5	Grasses, sedges, rushes	<i>Phleum pratense</i>	Timothy Grass	0.35	0.35	0.35	1

Location	Type <sup>1</sup>	Scientific Name	Common Name	Probability of Encounter <sup>2</sup>	Minimum Probability	Maximum Probability	Years Observed
TRP5	Herb	<i>Achillea millefolium</i>	Yarrow	0.35	0.35	0.35	1
TRP5	Herb	<i>Cirseum arvense</i>	Canada thistle	0.24	0.24	0.24	1
TRP5	Herb	<i>Fragaria virginiana</i>	Wild Strawberry	0.06	0.06	0.06	1
TRP5	Herb	<i>Galium aparine</i>	Cleavers	0.06	0.06	0.06	1
TRP5	Herb	<i>Hypericum perforatum</i>	Common St. John's-wort	0.18	0.18	0.18	1
TRP5	Herb	<i>Lupinus species</i>	Unknown Lupine	0.41	0.41	0.41	1
TRP5	Herb	<i>Poa pratensis</i>	Kentucky Bluegrass	0.18	0.18	0.18	1
TRP5	Herb	<i>Polemoniaceae spp.</i>	Phlox	0.06	0.06	0.06	1
TRP5	Herb	<i>Potentilla gracilis</i>	Cinquefoil	0.12	0.12	0.12	1
TRP5	Herb	<i>Rumex acetosella</i>	Sour Weed	0.06	0.06	0.06	1
TRP5	Herb	<i>Taraxacum officinale</i>	Common Dandelion	0.06	0.06	0.06	1
TRP7	Grasses, sedges, rushes	<i>Agropyron repens</i>	Quack Grass	0.41	0.41	0.41	1
TRP7	Grasses, sedges, rushes	<i>Alopecurus pratensis</i>	Meadow Foxtail	0.41	0.41	0.41	1
TRP7	Grasses, sedges, rushes	<i>Carex species</i>	Unknown Sedge	0.06	0.06	0.06	1
TRP7	Grasses, sedges, rushes	<i>Phleum pratense</i>	Timothy Grass	1.00	1.00	1.00	1
TRP7	Herb	<i>Achillea millefolium</i>	Yarrow	0.29	0.29	0.29	1
TRP7	Herb	<i>Microsteris gracilis</i>	Chickweed	0.24	0.24	0.24	1
TRP7	Herb	<i>Taraxacum officinale</i>	Common Dandelion	0.24	0.24	0.24	1
TRP8	Grasses, sedges, rushes	<i>Agropyron repens</i>	Quack Grass	0.82	0.82	0.82	1
TRP8	Grasses, sedges, rushes	<i>Alopecurus pratensis</i>	Meadow Foxtail	0.06	0.06	0.06	1
TRP8	Grasses, sedges, rushes	<i>Carex species</i>	Unknown Sedge	0.94	0.94	0.94	1
TRP8	Grasses, sedges, rushes	<i>Phalaris arundinacea</i>	Reed Canary-grass	0.12	0.12	0.12	1
TRP8	Herb	<i>Polygonum hydropiperoides</i>	Waterpepper	0.12	0.12	0.12	1
TRP8	Herb	<i>Vicia americana</i>	Vetch	0.12	0.12	0.12	1

Location	Type <sup>1</sup>	Scientific Name	Common Name	Probability of Encounter <sup>2</sup>	Minimum Probability	Maximum Probability	Years Observed
TRP9	Grasses, sedges, rushes	<i>Agrostis alba</i>	Red-top Grass	0.12	0.12	0.12	1
TRP9	Grasses, sedges, rushes	<i>Carex</i> species	Unknown Sedge	0.82	0.82	0.82	1
TRP9	Grasses, sedges, rushes	<i>Eleocharus palustris</i>	Creeping Spike-rush	0.06	0.06	0.06	1
TRP9	Grasses, sedges, rushes	<i>Phalaris arundinacea</i>	Reed Canary-grass	0.06	0.06	0.06	1
TRP9	Grasses, sedges, rushes	<i>Phleum pratense</i>	Timothy Grass	0.59	0.59	0.59	1
TRP9	Herb	<i>Achillea millefolium</i>	Yarrow	0.12	0.12	0.12	1
TRP9	Herb	<i>Centaurea</i> species	Knapweed	0.06	0.06	0.06	1
TRP9	Herb	<i>Cirsium arvense</i>	Canada thistle	0.06	0.06	0.06	1
TRP9	Herb	<i>Equisetum</i> species	Horsetail	0.06	0.06	0.06	1
TRP9	Herb	<i>Fragaria virginiana</i>	Wild Strawberry	0.29	0.29	0.29	1
TRP9	Herb	<i>Galium boreale</i>	Northern Bedstraw	0.71	0.71	0.71	1
TRP9	Herb	<i>Lilium columbianum</i>	Tiger-lily	0.12	0.12	0.12	1
TRP9	Herb	<i>Lotus purshiana</i>	Lotus	0.24	0.24	0.24	1
TRP9	Herb	<i>Lupinus</i> species	Unknown Lupine	0.53	0.53	0.53	1
TRP9	Herb	<i>Polemoniaceae</i> spp.	Phlox	0.82	0.82	0.82	1
TRP9	Herb	<i>Potentilla gracilis</i>	Cinquefoil	0.12	0.12	0.12	1
TRP9	Herb	<i>Prunella vulgaris</i>	Heal-all	0.12	0.12	0.12	1
TRP9	Herb	<i>Smilacina stellata</i>	Starry Solomon-plume	0.47	0.47	0.47	1
TRP9	Herb	<i>Solidage canadensis</i>	Meadow Goldenrod	0.47	0.47	0.47	1
TRP9	Herb	<i>Taraxacum officinale</i>	Common Dandelion	0.12	0.12	0.12	1
TRP9	Herb	<i>Vicia americana</i>	Vetch	0.29	0.29	0.29	1
WRR12	Grasses, sedges, rushes	<i>Agropyron repens</i>	Quack Grass	0.06	0.06	0.06	1
WRR12	Grasses, sedges, rushes	<i>Agrostis alba</i>	Red-top Grass	0.21	0.18	0.24	2
WRR12	Grasses, sedges, rushes	<i>Alopecurus pratensis</i>	Meadow Foxtail	0.06	0.06	0.06	2
WRR12	Grasses, sedges,	<i>Carex</i> species	Unknown Sedge	0.35	0.06	0.65	2

Location	Type <sup>1</sup>	Scientific Name	Common Name	Probability of Encounter <sup>2</sup>	Minimum Probability	Maximum Probability	Years Observed
	rushes						
WRR12	Grasses, sedges, rushes	<i>Carex</i> species	Unknown Sedge	0.68	0.41	0.94	2
WRR12	Grasses, sedges, rushes	<i>Carex</i> species	Unknown Sedge	0.88	0.88	0.88	1
WRR12	Grasses, sedges, rushes	<i>Eleocharus palustris</i>	Creeping Spike-rush	0.67	0.47	0.94	3
WRR12	Grasses, sedges, rushes	<i>Equisetum laevigatum</i>	Smooth Scouring-rush	0.24	0.24	0.24	1
WRR12	Grasses, sedges, rushes	<i>Phalaris arundinacea</i>	Reed Canary-grass	0.12	0.06	0.18	3
WRR12	Herb	<i>Cirseum arvense</i>	Canada thistle	0.06	0.06	0.06	1
WRR12	Herb	<i>Equisetum arvense</i>	Common horsetail	0.53	0.53	0.53	1
WRR12	Herb	<i>Equisetum</i> species	Horsetail	0.12	0.12	0.12	1
WRR12	Herb	<i>Galium</i> species	Bedstraw	0.15	0.06	0.24	2
WRR12	Herb	<i>Lysimachia ciliata</i>	Fringed Loosestrife	0.06	0.06	0.06	1
WRR12	Herb	<i>Mentha arvensis</i>	Field Mint	0.32	0.18	0.47	2
WRR12	Herb	<i>Poa pratensis</i>	Kentucky Bluegrass	0.12	0.12	0.12	1
WRR12	Herb	<i>Polygonum hydropiperoides</i>	Waterpepper	0.12	0.12	0.12	1
WRR12	Herb	<i>Scutellaria galericulata</i>	Marsh Skullcap	0.14	0.06	0.29	3
WRR12	Herb	<i>Stachys rigida</i>	Rigid Hedge-nettle	0.18	0.18	0.18	1
WRR12	Herb	<i>Taraxacum officinale</i>	Common Dandelion	0.06	0.06	0.06	1
WRR6	Grasses, sedges, rushes	<i>Agropyron repens</i>	Quack Grass	0.06	0.06	0.06	1
WRR6	Grasses, sedges, rushes	<i>Agrostis alba</i>	Red-top Grass	0.35	0.24	0.59	3
WRR6	Grasses, sedges, rushes	<i>Alopecurus pratensis</i>	Meadow Foxtail	0.12	0.12	0.12	1
WRR6	Grasses, sedges, rushes	<i>Carex</i> species	Unknown Sedge	0.94	0.94	0.94	1
WRR6	Grasses, sedges, rushes	<i>Carex</i> species	Unknown Sedge	0.29	0.29	0.29	1
WRR6	Grasses, sedges, rushes	<i>Carex</i> species	Unknown Sedge	0.94	0.94	0.94	2

Location	Type <sup>1</sup>	Scientific Name	Common Name	Probability of Encounter <sup>2</sup>	Minimum Probability	Maximum Probability	Years Observed
WRR6	Grasses, sedges, rushes	<i>Carex vulpinoidea</i>	Sedge	0.06	0.06	0.06	2
WRR6	Grasses, sedges, rushes	<i>Eleocharus palustris</i>	Creeping Spike-rush	0.57	0.29	0.82	3
WRR6	Grasses, sedges, rushes	<i>Phalaris arundinacea</i>	Reed Canary-grass	0.14	0.12	0.18	3
WRR6	Herb	<i>Descurainia richardsonii</i>	Mtn.Tansy-mustard	0.06	0.06	0.06	1
WRR6	Herb	<i>Galium aparine</i>	Cleavers	0.06	0.06	0.06	1
WRR6	Herb	<i>Galium boreale</i>	Northern Bedstraw	0.18	0.18	0.18	1
WRR6	Herb	<i>Lysimachia ciliata</i>	Fringed Loosestrife	0.12	0.12	0.12	1
WRR6	Herb	<i>Mentha arvensis</i>	Field Mint	0.06	0.06	0.06	1
WRR6	Herb	<i>Myosotis laxa</i>	Forget-me-not	0.31	0.12	0.59	3
WRR6	Herb	<i>Polygonum amphibium</i>	Water Smart Weed	0.41	0.41	0.41	1
WRR6	Herb	<i>Polygonum hydropiperoides</i>	Waterpepper	0.24	0.24	0.24	1
WRR6	Herb	<i>Rumex crispus</i>	Curly Dock	0.09	0.06	0.12	2
WRR6	Herb	<i>Stachys rigida</i>	Rigid Hedge-nettle	0.06	0.06	0.06	1
WRR6	Herb	<i>Taraxacum officinale</i>	Common Dandelion	0.06	0.06	0.06	1
WRR7	Grasses, sedges, rushes	<i>Agropyron repens</i>	Quack Grass	0.09	0.06	0.12	2
WRR7	Grasses, sedges, rushes	<i>Agrostis alba</i>	Red-top Grass	0.22	0.06	0.29	3
WRR7	Grasses, sedges, rushes	<i>Alopecurus pratensis</i>	Meadow Foxtail	0.76	0.65	0.88	3
WRR7	Grasses, sedges, rushes	<i>Carex</i> species	Unknown Sedge	0.47	0.47	0.47	1
WRR7	Grasses, sedges, rushes	<i>Carex</i> species	Unknown Sedge	1.00	1.00	1.00	1
WRR7	Grasses, sedges, rushes	<i>Carex</i> species	Unknown Sedge	0.85	0.76	0.94	2
WRR7	Grasses, sedges, rushes	<i>Eleocharus palustris</i>	Creeping Spike-rush	0.47	0.47	0.47	1
WRR7	Herb	<i>Luzula campestris</i>	Rush; Sweep's brush	0.06	0.06	0.06	1
WRR7	Herb	<i>Mentha arvensis</i>	Field Mint	0.06	0.06	0.06	1
WRR7	Herb	<i>Polygonum amphibium</i>	Water Smart Weed	0.18	0.18	0.18	1

Location	Type <sup>1</sup>	Scientific Name	Common Name	Probability of Encounter <sup>2</sup>	Minimum Probability	Maximum Probability	Years Observed
WRR7	Herb	<i>Polygonum hydropiperoides</i>	Waterpepper	0.24	0.24	0.24	1
WRR7	Herb	<i>Potentilla gracilis</i>	Cinquefoil	0.06	0.06	0.06	1
<sup>1</sup> A general code to separate grasses etc. and herbs. This can be used to make separate tables or it can be deleted and the results combined. <sup>2</sup> Plant cover was examined on 17 plots (20 X 50 cm) within a 16 X 16-m square centered on the sampling location. Probability of encounter was calculated as the number of plots where the plant species was present divided by the total number of plots. This value was averaged over all sampling years for each location.							

Table 3. Shrub data summary table for Kalispel Tribal monitoring and evaluation sites and reference sites.

Location	Scientific Name	Common Name	Area (m <sup>2</sup> ) <sup>1</sup>	Number <sup>2</sup>
CCR1	<i>Amelanchier alnifolia</i>	Serviceberry	22.856	15
CCR1	<i>Cornus stolonifera</i>	Red-osier Dogwood	0.48	2
CCR1	<i>Corylus cornuta</i>	Hazelnut	0.744	1
CCR1	<i>Crataegus douglasii</i>	Hawthorn	203.225	3
CCR1	<i>Populus balsamifera</i>	Cottonwood	4.163	1
CCR1	<i>Populus tremuloides</i>	Quaking Aspen	0.599	1
CCR1	<i>Rhamnus purshiana</i>	Buckthorn	0.011	1
CCR1	<i>Rosa gymnocarpa</i>	Baldhip Rose	2.618	6
CCR1	<i>Rosa nutkana</i>	Nootka Rose	2.928	4
CCR1	<i>Rosa woodsii</i>	Wood's Rose	8.453	10
CCR1	<i>Spiraea douglasii</i>	Spiraea	78.758	7
CCR1	<i>Symphoricarpos albus</i>	Snowberry	68.485	11
CCR3	<i>Amelanchier alnifolia</i>	Serviceberry	0.014	1
CCR3	<i>Cornus stolonifera</i>	Red-osier Dogwood	29.362	6
CCR3	<i>Crataegus douglasii</i>	Hawthorn	35.649	9
CCR3	<i>Populus balsamifera</i>	Cottonwood	3.734	18
CCR3	<i>Populus tremuloides</i>	Quaking Aspen	9.866	84
CCR3	<i>Rosa gymnocarpa</i>	Baldhip Rose	10.687	68
CCR3	<i>Rosa nutkana</i>	Nootka Rose	2.76	1
CCR3	<i>Rosa woodsii</i>	Wood's Rose	12.581	6
CCR3	<i>Salix species</i>	Willow	0.96	1
CCR3	<i>Spiraea douglasii</i>	Spiraea	69.475	389
CCR3	<i>Symphoricarpos albus</i>	Snowberry	154.389	462
CCR4	<i>Crataegus douglasii</i>	Hawthorn	0.303	1
CCR4	<i>Rosa woodsii</i>	Wood's Rose	1.935	1
CCR4	<i>Symphoricarpos albus</i>	Snowberry	0.036	1
CCR5	<i>Amelanchier alnifolia</i>	Serviceberry	0.04	1
CCR5	<i>Crataegus douglasii</i>	Hawthorn	2.392	5
CCR5	<i>Rosa species</i>	Rose	0.256	6
CCR5	<i>Spiraea douglasii</i>	Spiraea	0.451	9
FGP1	<i>Crataegus douglasii</i>	Hawthorn	0.008	1
FGP2	<i>Crataegus douglasii</i>	Hawthorn	0.019	2
FGP3	<i>Crataegus douglasii</i>	Hawthorn	59.412	1
FGP3	<i>Rosa species</i>	Rose	0.027	2
FGP4	<i>Crataegus douglasii</i>	Hawthorn	0.012	1
FGP6	<i>Abies grandis</i>	Grand Fir	35.906	54
FGP6	<i>Amelanchier alnifolia</i>	Serviceberry	22.75	4
FGP6	<i>Berberis repens</i>	Creeping Oregongrape	2.207	2
FGP6	<i>Corylus cornuta</i>	Hazelnut	204.365	11
FGP6	<i>Crataegus douglasii</i>	Hawthorn	46.47	11
FGP6	<i>Lonicera ciliosa</i>	Orange Honeysuckle	0.919	65
FGP6	<i>Lonicera utahensis</i>	Utah Honeysuckle	0.5	9
FGP6	<i>Physocarpus malvaceus</i>	Mallow Ninebark	0.548	2
FGP6	<i>Pseudotsuga menzeisii</i>	Douglas Fir	0.036	1
FGP6	<i>Rosa gymnocarpa</i>	Baldhip Rose	2.465	9
FGP6	<i>Rosa species</i>	Rose	0.147	5

Location	Scientific Name	Common Name	Area (m <sup>2</sup> ) <sup>1</sup>	Number <sup>2</sup>
FGP6	<i>Rosa woodsii</i>	Wood's Rose	2.918	4
FGP6	<i>Spiraea douglasii</i>	Spiraea	0.041	4
FGP6	<i>Symphoricarpos albus</i>	Snowberry	51.729	178
FGP6	<i>Tsuga douglassii</i>	Western Hemlock	0.14	1
FGP8	<i>Crataegus douglasii</i>	Hawthorn	0.01	1
FGP8	<i>Rosa woodsii</i>	Wood's Rose	0.028	1
FGR10	<i>Alnus rubra</i>	Red alder	10.95	5
FGR10	<i>Alnus sinuata</i>	Sitka Alder	134.19	6
FGR10	<i>Amelanchier alnifolia</i>	Serviceberry	0.066	2
FGR10	<i>Cornus stolonifera</i>	Red-osier Dogwood	55.017	9
FGR10	<i>Crataegus douglasii</i>	Hawthorn	0.116	1
FGR10	<i>Rosa woodsii</i>	Wood's Rose	0.89	2
FGR10	<i>Salix species</i>	Willow	20.547	3
FGR10	<i>Solanum dulcamara</i>	Climbing Nightshade	2.011	2
FGR10	<i>Spiraea douglasii</i>	Spiraea	4.774	4
FGR10	<i>Symphoricarpos albus</i>	Snowberry	0.556	2
FGR2	<i>Cornus stolonifera</i>	Red-osier Dogwood	28.043	16
FGR2	<i>Crataegus douglasii</i>	Hawthorn	215.926	8
FGR2	<i>Populus balsamifera</i>	Cottonwood	1.064	5
FGR2	<i>Rosa gymnocarpa</i>	Baldhip Rose	12.582	6
FGR2	<i>Rosa nutkana</i>	Nootka Rose	5.625	6
FGR2	<i>Rosa woodsii</i>	Wood's Rose	8.841	12
FGR2	<i>Solanum dulcamara</i>	Climbing Nightshade	3.8	1
FGR2	<i>Spiraea douglasii</i>	Spiraea	4.41	7
FGR2	<i>Symphoricarpos albus</i>	Snowberry	215.43	348
PRP1	<i>Alnus sinuata</i>	Sitka Alder	10.81	45
PRP1	<i>Amelanchier alnifolia</i>	Serviceberry	2.567	24
PRP1	<i>Cornus stolonifera</i>	Red-osier Dogwood	12.045	20
PRP1	<i>Crataegus douglasii</i>	Hawthorn	0.057	2
PRP1	<i>Rosa gymnocarpa</i>	Baldhip Rose	0.888	7
PRP1	<i>Rosa species</i>	Rose	1.425	1
PRP1	<i>Rosa woodsii</i>	Wood's Rose	0.904	10
PRP1	<i>Spiraea douglasii</i>	Spiraea	4.302	43
PRP1	<i>Symphoricarpos albus</i>	Snowberry	3.766	19
SPP2	<i>Abies grandis</i>	Grand Fir	14.1661	126
SPP2	<i>Acer glabrum</i>	Douglas' maple	0.593	33
SPP2	<i>Acer spp.</i>	Unknown maple	0.135	7
SPP2	<i>Alnus rubra</i>	Red alder	0.072	1
SPP2	<i>Amelanchier alnifolia</i>	Serviceberry	0.057	5
SPP2	<i>Holodiscus discolor</i>	Creambush Oceanspray	0.269	7
SPP2	<i>Pinus monticola</i>	White pine	0.044	3
SPP2	<i>Pseudotsuga menzeisii</i>	Douglas Fir	0.677	18
SPP2	<i>Rosa gymnocarpa</i>	Baldhip Rose	1.605	25
SPP2	<i>Spiraea betulifolia</i>	Shiny-leaf spirea	0.038	1
SPP2	<i>Symphoricarpos albus</i>	Snowberry	0.082	4
SPP2	<i>Thuja plicata</i>	Western redcedar	0.967	18
SPP2	<i>Tsuga heterophylla</i>	Western hemlock	7.754	31

Location	Scientific Name	Common Name	Area (m <sup>2</sup> ) <sup>1</sup>	Number <sup>2</sup>
SPP3	<i>Abies grandis</i>	Grand Fir	1.644	8
SPP3	<i>Acer glabrum</i>	Douglas' maple	6.21	4
SPP3	<i>Alnus rubra</i>	Red alder	12.289	8
SPP3	<i>Betula papyrifera</i>	Paper birch	3.6	1
SPP3	<i>Ceanothus sanguinus</i>	Redstem ceanothus	0.482	11
SPP3	<i>Holodiscus discolor</i>	Creambush Oceanspray	0.558	1
SPP3	<i>Pseudotsuga menzeisii</i>	Douglas Fir	0.097	3
SPP3	<i>Rosa woodsii</i>	Wood's Rose	16.124	1
SPP3	<i>Rubus idaeus</i>	Red raspberry	12.75	30
SPP3	<i>Rubus parviflorus</i>	Thimbleberry	12.828	53
SPP3	<i>Rumex species</i>	Curly Dock unknown	150.156	1
SPP3	<i>Symphoricarpos albus</i>	Snowberry	0.124	3
SPP3	<i>Thuja plicata</i>	Western redcedar	9.66	3
SPP4	<i>Acer glabrum</i>	Douglas' maple	0.059	4
SPP4	<i>Alnus sinuata</i>	Sitka Alder	17.29	7
SPP4	<i>Rubus idaeus</i>	Red raspberry	1.481	17
SPP4	<i>Spiraea douglasii</i>	Spiraea	0.253	20
SPP4	<i>Symphoricarpos albus</i>	Snowberry	0.048	2
SPP5	<i>Abies grandis</i>	Grand Fir	0.122	2
SPP5	<i>Acer glabrum</i>	Douglas' maple	24.155	7
SPP5	<i>Alnus rubra</i>	Red alder	3.179	76
SPP5	<i>Amelanchier alnifolia</i>	Serviceberry	0.026	1
SPP5	<i>Apocynum androsaemifolium</i>	Spreading dogbane	134.328	12
SPP5	<i>Berberis repens</i>	Creeping Oregongrape	19.431	39
SPP5	<i>Crataegus douglasii</i>	Hawthorn	0.081	1
SPP5	<i>Holodiscus discolor</i>	Creambush Oceanspray	0.252	1
SPP5	<i>Lonicera ciliosa</i>	Orange Honeysuckle	0.334	6
SPP5	<i>Pseudotsuga menzeisii</i>	Douglas Fir	0.143	4
SPP5	<i>Rosa gymnocarpa</i>	Baldhip Rose	3.215	15
SPP5	<i>Rubus idaeus</i>	Red raspberry	33.386	218
SPP5	<i>Rumex species</i>	Curly Dock unknown	0.264	1
SPP5	<i>Spiraea douglasii</i>	Spiraea	2.735	6
SPP5	<i>Symphoricarpos albus</i>	Snowberry	5.523	53
SPP5	<i>Tsuga heterophylla</i>	Western hemlock	0.013	1
TAP2	<i>Amelanchier alnifolia</i>	Serviceberry	1.884	4
TAP2	<i>Cornus stolonifera</i>	Red-osier Dogwood	0.119	5
TAP2	<i>Crataegus douglasii</i>	Hawthorn	74.329	82
TAP2	<i>Populus tremuloides</i>	Quaking Aspen	0.266	17
TAP2	<i>Rosa gymnocarpa</i>	Baldhip Rose	2.1	7
TAP2	<i>Spiraea douglasii</i>	Spiraea	24.736	30
TAP2	<i>Symphoricarpos albus</i>	Snowberry	2.473	18
TAP3	<i>Amelanchier alnifolia</i>	Serviceberry	1.682	23
TAP3	<i>Crataegus douglasii</i>	Hawthorn	34.563	13
TAP3	<i>Rosa woodsii</i>	Wood's Rose	0.018	1
TAP3	<i>Symphoricarpos albus</i>	Snowberry	2.633	27
TAP4	<i>Crataegus douglasii</i>	Hawthorn	40.37	52
TAP4	<i>Rosa gymnocarpa</i>	Baldhip Rose	0.575	26

Location	Scientific Name	Common Name	Area (m <sup>2</sup> ) <sup>1</sup>	Number <sup>2</sup>
TAP4	<i>Rosa woodsii</i>	Wood's Rose	0.253	15
TAP4	<i>Spiraea douglasii</i>	Spiraea	0.216	1
TAP4	<i>Symphoricarpos albus</i>	Snowberry	0.826	11
TAR11	<i>Alnus rubra</i>	Red alder	226.715	37
TAR11	<i>Alnus sinuata</i>	Sitka Alder	237.04	10
TAR11	<i>Amelanchier alnifolia</i>	Serviceberry	0.03	1
TAR11	<i>Berberis repens</i>	Creeping Oregongrape	0.834	4
TAR11	<i>Cornus stolonifera</i>	Red-osier Dogwood	6.019	3
TAR11	<i>Rhamnus purshiana</i>	Buckthorn	0.188	11
TAR11	<i>Rosa gymnocarpa</i>	Baldhip Rose	0.408	1
TAR11	<i>Rosa woodsii</i>	Wood's Rose	0.6	1
TAR11	<i>Rubus idaeus</i>	Red raspberry	4.975	6
TAR11	<i>Spiraea douglasii</i>	Spiraea	283.86	9
TAR11	<i>Symphoricarpos albus</i>	Snowberry	5.187	1
TRP5	<i>Amelanchier alnifolia</i>	Serviceberry	80.82	41
TRP5	<i>Cornus stolonifera</i>	Red-osier Dogwood	0.175	1
TRP5	<i>Crataegus douglasii</i>	Hawthorn	32.314	51
TRP5	<i>Rosa gymnocarpa</i>	Baldhip Rose	0.306	2
TRP5	<i>Rosa woodsii</i>	Wood's Rose	2.589	15
TRP5	<i>Spiraea douglasii</i>	Spiraea	97.319	5
TRP5	<i>Symphoricarpos albus</i>	Snowberry	29.664	53
TRP8	<i>Rosa gymnocarpa</i>	Baldhip Rose	0.066	2
TRP8	<i>Rosa woodsii</i>	Wood's Rose	0.162	3
TRP8	<i>Symphoricarpos albus</i>	Snowberry	0.379	7
TRP9	<i>Amelanchier alnifolia</i>	Serviceberry	44.176	41
TRP9	<i>Berberis repens</i>	Creeping Oregongrape	2.693	36
TRP9	<i>Crataegus douglasii</i>	Hawthorn	68.135	23
TRP9	<i>Rosa gymnocarpa</i>	Baldhip Rose	0.052	2
TRP9	<i>Rosa nutkana</i>	Nootka Rose	0.479	2
TRP9	<i>Rosa woodsii</i>	Wood's Rose	2.962	20
TRP9	<i>Symphoricarpos albus</i>	Snowberry	47.078	334
WRR12	<i>Crataegus douglasii</i>	Hawthorn	6.853	20
WRR12	<i>Rosa species</i>	Rose	0.03	1
WRR12	<i>Rosa woodsii</i>	Wood's Rose	12.157	4
WRR12	<i>Salix species</i>	Willow	26.508	9
WRR12	<i>Symphoricarpos albus</i>	Snowberry	0.283	3
WRR6	<i>Rosa gymnocarpa</i>	Baldhip Rose	0.317	2
WRR6	<i>Rosa species</i>	Rose	0.304	9

<sup>1</sup> The length and width of each shrub encountered along two perpendicular 16-m transects centered on the sampling location was determined. An approximate area was calculated for each shrub and the results summed for each species.

<sup>2</sup> The approximate number of individual shrubs encountered on the two perpendicular 16-m transects centered on the sampling location.

Table 4. Waterfowl pair count data summary table for Kalispel Tribal monitoring and evaluation sites and reference sites.

Location	Species	Scientific Name	Early <sup>1</sup>	Middle <sup>2</sup>	Late <sup>3</sup>
Beaver Lake	American Coot	<i>Fulica americana</i>	0.0	4.0	1.0
Beaver Lake	Blue-winged Teal	<i>Anas discors</i>	0.0	1.0	1.0
Beaver Lake	Bufflehead	<i>Bucephala albeola</i>	0.0	4.0	0.0
Beaver Lake	Canada Goose	<i>Branta canadensis</i>	10.7	6.3	0.0
Beaver Lake	Cinnamon Teal	<i>Anas cyanoptera</i>	0.0	4.5	3.7
Beaver Lake	Goldeneye (Common)	<i>Bucephala clangula</i>	0.0	5.5	6.0
Beaver Lake	Green-winged Teal	<i>Anas crecca</i>	0.0	0.0	2.0
Beaver Lake	Mallard	<i>Anas platyrhynchos</i>	0.0	8.3	6.5
Beaver Lake	Northern Shoveler	<i>Anas clypeata</i>	0.0	2.0	0.0
Beaver Lake	Ring-necked Duck	<i>Aythya collaris</i>	0.0	11.0	9.0
Beaver Lake	Wood Duck	<i>Aix sponsa</i>	0.0	3.7	1.7
Calispel Creek	American Wigeon	<i>Anas americana</i>	0.0	1.0	4.0
Calispel Creek	Blue-winged Teal	<i>Anas discors</i>	0.0	0.0	4.0
Calispel Creek	Canada Goose	<i>Branta canadensis</i>	0.0	2.0	0.0
Calispel Creek	Cinnamon Teal	<i>Anas cyanoptera</i>	0.0	1.0	6.0
Calispel Creek	Gadwall	<i>Anas strepera</i>	0.0	11.0	3.0
Calispel Creek	Green-winged Teal	<i>Anas crecca</i>	0.0	5.0	2.0
Calispel Creek	Mallard	<i>Anas platyrhynchos</i>	0.0	5.0	5.0
Calispel Creek	Northern Shoveler	<i>Anas clypeata</i>	0.0	1.0	1.0
Calispel Creek	Ruddy Duck	<i>Oxyura jamaicensis</i>	0.0	4.0	0.0
Calispel Creek	Wood Duck	<i>Aix sponsa</i>	0.0	10.0	8.0
Carey Creek	American Wigeon	<i>Anas americana</i>	0.0	2.5	3.0
Carey Creek	Canada Goose	<i>Branta canadensis</i>	7.0	3.3	0.0
Carey Creek	Goldeneye (Common)	<i>Bucephala clangula</i>	0.0	0.0	4.0
Carey Creek	Green-winged Teal	<i>Anas crecca</i>	0.0	1.0	4.0
Carey Creek	Mallard	<i>Anas platyrhynchos</i>	0.0	2.8	1.0
Carey Creek	Northern Shoveler	<i>Anas clypeata</i>	0.0	1.0	1.0
Flying Goose	American Coot	<i>Fulica americana</i>	0.0	15.0	16.0
Flying Goose	American Wigeon	<i>Anas americana</i>	0.0	4.5	2.0
Flying Goose	Bald Eagle	<i>Haliaeetus leucocephalus</i>	0.0	4.0	0.0
Flying Goose	Black-necked Stilt	<i>Himantopus mexicanus</i>	0.0	3.0	0.0
Flying Goose	Blue-winged Teal	<i>Anas discors</i>	0.0	4.5	7.0
Flying Goose	Bufflehead	<i>Bucephala albeola</i>	0.0	1.0	1.0
Flying Goose	Canada Goose	<i>Branta canadensis</i>	129.0	104.0	75.0
Flying Goose	Cinnamon Teal	<i>Anas cyanoptera</i>	0.0	22.7	24.7
Flying Goose	CITE x BWTE hybrid		0.0	0.0	1.0
Flying Goose	Common Snipe	<i>Gallinago gallinago</i>	0.0	2.0	0.0
Flying Goose	Double-crested Cormorant	<i>Phalacrocorax auritus</i>	0.0	4.0	0.0
Flying Goose	Duck species		0.0	0.0	29.0
Flying Goose	Gadwall	<i>Anas strepera</i>	0.0	8.0	8.3
Flying Goose	Goldeneye (Common)	<i>Bucephala clangula</i>	0.0	4.0	3.0
Flying Goose	Green-winged Teal	<i>Anas crecca</i>	0.0	3.0	5.3
Flying Goose	Mallard	<i>Anas platyrhynchos</i>	0.0	41.3	35.7
Flying Goose	Northern Pintail	<i>Anas acuta</i>	0.0	0.0	2.0
Flying Goose	Northern Shoveler	<i>Anas clypeata</i>	0.0	5.3	5.7

Location	Species	Scientific Name	Early <sup>1</sup>	Middle <sup>2</sup>	Late <sup>3</sup>
Flying Goose	Pied-billed Grebe	<i>Podilymbus podiceps</i>	0.0	4.0	0.0
Flying Goose	Redhead	<i>Aythya americana</i>	0.0	3.0	3.0
Flying Goose	Ring-necked Duck	<i>Aythya collaris</i>	0.0	2.0	1.0
Flying Goose	Sora	<i>Porzana carolina</i>	0.0	12.0	0.0
Flying Goose	Virginia Rail	<i>Rallus limicola</i>	0.0	6.0	0.0
Flying Goose	Wood Duck	<i>Aix sponsa</i>	0.0	11.7	9.0
Gamlin Lake	American Coot	<i>Fulica americana</i>	0.0	1.0	1.0
Gamlin Lake	American Wigeon	<i>Anas americana</i>	0.0	2.0	1.0
Gamlin Lake	Blue-winged Teal	<i>Anas discors</i>	0.0	1.0	1.0
Gamlin Lake	Canada Goose	<i>Branta canadensis</i>	7.0	18.7	0.0
Gamlin Lake	Cinnamon Teal	<i>Anas cyanoptera</i>	0.0	1.7	2.0
Gamlin Lake	Green-winged Teal	<i>Anas crecca</i>	0.0	2.5	0.0
Gamlin Lake	Mallard	<i>Anas platyrhynchos</i>	0.0	4.7	3.5
Gamlin Lake	Northern Shoveler	<i>Anas clypeata</i>	0.0	1.0	0.0
Gamlin Lake	Wood Duck	<i>Aix sponsa</i>	0.0	2.7	2.0
Lower Trimble	American Coot	<i>Fulica americana</i>	0.0	0.0	2.0
Lower Trimble	American Wigeon	<i>Anas americana</i>	0.0	6.5	3.8
Lower Trimble	Blue-winged Teal	<i>Anas discors</i>	0.0	4.5	3.0
Lower Trimble	Bufflehead	<i>Bucephala albeola</i>	0.0	3.7	1.0
Lower Trimble	Canada Goose	<i>Branta canadensis</i>	7.3	1.7	13.0
Lower Trimble	Cinnamon Teal	<i>Anas cyanoptera</i>	0.0	5.3	5.3
Lower Trimble	Common Merganser	<i>Mergus merganser</i>	0.0	1.0	0.0
Lower Trimble	Double-crested Cormorant	<i>Phalacrocorax auritus</i>	0.0	1.0	3.0
Lower Trimble	Gadwall	<i>Anas strepera</i>	0.0	5.5	5.3
Lower Trimble	Goldeneye (Common)	<i>Bucephala clangula</i>	0.0	2.0	1.0
Lower Trimble	Green-winged Teal	<i>Anas crecca</i>	0.0	1.3	0.0
Lower Trimble	Hooded Merganser	<i>Lophodytes cucullatus</i>	0.0	0.0	2.0
Lower Trimble	Horned Grebe	<i>Podiceps auritus</i>	0.0	0.0	1.0
Lower Trimble	Mallard	<i>Anas platyrhynchos</i>	0.0	15.7	6.7
Lower Trimble	Northern Shoveler	<i>Anas clypeata</i>	0.0	3.7	2.3
Lower Trimble	Redhead	<i>Aythya americana</i>	0.0	0.0	1.0
Lower Trimble	Ring-necked Duck	<i>Aythya collaris</i>	0.0	0.0	1.0
Lower Trimble	Wood Duck	<i>Aix sponsa</i>	0.0	6.7	2.8
Tacoma	American Coot	<i>Fulica americana</i>	0.0	3.0	2.0
Tacoma	American Wigeon	<i>Anas americana</i>	0.0	4.0	2.0
Tacoma	Blue-winged Teal	<i>Anas discors</i>	0.0	3.0	3.3
Tacoma	Bufflehead	<i>Bucephala albeola</i>	0.0	2.0	0.0
Tacoma	Canada Goose	<i>Branta canadensis</i>	3.3	8.0	130.0
Tacoma	Cinnamon Teal	<i>Anas cyanoptera</i>	0.0	2.7	4.3
Tacoma	Common Merganser	<i>Mergus merganser</i>	0.0	0.0	1.0
Tacoma	Double-crested Cormorant	<i>Phalacrocorax auritus</i>	0.0	0.0	2.0
Tacoma	Duck species		0.0	0.0	13.0
Tacoma	Gadwall	<i>Anas strepera</i>	0.0	3.0	1.0
Tacoma	Goldeneye (Common)	<i>Bucephala clangula</i>	0.0	1.5	4.5
Tacoma	Green-winged Teal	<i>Anas crecca</i>	0.0	1.0	0.0
Tacoma	Hooded Merganser	<i>Lophodytes cucullatus</i>	0.0	0.0	1.0

Location	Species	Scientific Name	Early <sup>1</sup>	Middle <sup>2</sup>	Late <sup>3</sup>
Tacoma	Mallard	<i>Anas platyrhynchos</i>	0.0	7.3	7.8
Tacoma	Northern Shoveler	<i>Anas clypeata</i>	0.0	1.0	1.7
Tacoma	Redhead	<i>Aythya americana</i>	0.0	1.0	4.0
Tacoma	Ring-necked Duck	<i>Aythya collaris</i>	0.0	1.0	3.0
Tacoma	Wood Duck	<i>Aix sponsa</i>	0.0	3.3	2.0
Upper Trimble	American Coot	<i>Fulica americana</i>	0.0	30.0	12.0
Upper Trimble	American Wigeon	<i>Anas americana</i>	0.0	10.7	17.5
Upper Trimble	Blue-winged Teal	<i>Anas discors</i>	0.0	2.0	2.3
Upper Trimble	Bufflehead	<i>Bucephala albeola</i>	0.0	1.0	0.0
Upper Trimble	Canada Goose	<i>Branta canadensis</i>	3.8	9.5	3.0
Upper Trimble	Cinnamon Teal	<i>Anas cyanoptera</i>	0.0	16.0	11.0
Upper Trimble	Double-crested Cormorant	<i>Phalacrocorax auritus</i>	0.0	1.0	0.0
Upper Trimble	Duck species		0.0	0.0	5.0
Upper Trimble	Gadwall	<i>Anas strepera</i>	0.0	13.7	23.0
Upper Trimble	Goldeneye (Barrow's)	<i>Bucephala islandica</i>	0.0	1.0	0.0
Upper Trimble	Goldeneye (Common)	<i>Bucephala clangula</i>	0.0	0.0	1.0
Upper Trimble	Green-winged Teal	<i>Anas crecca</i>	0.0	3.3	1.7
Upper Trimble	Hooded Merganser	<i>Lophodytes cucullatus</i>	0.0	2.0	0.0
Upper Trimble	Mallard	<i>Anas platyrhynchos</i>	0.0	9.3	8.3
Upper Trimble	Northern Shoveler	<i>Anas clypeata</i>	0.0	5.3	6.3
Upper Trimble	Redhead	<i>Aythya americana</i>	0.0	1.5	0.0
Upper Trimble	Ring-necked Duck	<i>Aythya collaris</i>	0.0	3.0	0.0
Upper Trimble	Sora	<i>Porzana carolina</i>	0.0	1.0	0.0
Upper Trimble	Wood Duck	<i>Aix sponsa</i>	0.0	0.0	1.0
W Branch Priest	Mallard	<i>Anas platyrhynchos</i>	0.0	0.0	1.0
<sup>1</sup> Average number of individuals observed during surveys in April.					
<sup>2</sup> Average number of individuals observed during surveys between 1 and 14 May.					
<sup>3</sup> Average number of individuals observed during surveys from 15 May to early June.					

Table 5. Avian data summary table for Kalispel Tribal monitoring and evaluation sites and reference sites.

Location	ID	Family	Common Name	Scientific Name	Detection Probability <sup>1</sup>	Years Observed <sup>2</sup>
CCR1	1	Grebes (Family Podicipedidae)	Pied-billed Grebe	<i>Podilymbus podiceps</i>	14%	3 of 3
CCR1	3	Hérons (Family Ardeidae)	Great-blue Heron	<i>Ardea herodias</i>	15%	2 of 3
CCR1	5	Swans, Geese, & Ducks (Family Anatidae)	Canada Goose	<i>Branta canadensis</i>	19%	3 of 3
CCR1	5	Swans, Geese, & Ducks (Family Anatidae)	Gadwall	<i>Anas strepera</i>	13%	1 of 3
CCR1	5	Swans, Geese, & Ducks (Family Anatidae)	Mallard	<i>Anas platyrhynchos</i>	17%	1 of 3
CCR1	5	Swans, Geese, & Ducks (Family Anatidae)	Northern Shoveler	<i>Anas clypeata</i>	17%	1 of 3
CCR1	6	Eagles, Kites & Hawks (Family Accipitridae)	Osprey	<i>Pandion haliaetus</i>	17%	1 of 3
CCR1	7	Falcons (Family Falconidae)	American Kestrel	<i>Falco sparverius</i>	38%	2 of 3
CCR1	8	Grouse (Family Phasianidae)	Ring-necked Pheasant	<i>Phasianus colchicus</i>	17%	1 of 3
CCR1	8	Grouse (Family Phasianidae)	Ruffed Grouse	<i>Bonasa umbellus</i>	23%	3 of 3
CCR1	10	Rails (Family Rallidae)	American Coot	<i>Fulica americana</i>	14%	1 of 3
CCR1	10	Rails (Family Rallidae)	Sora	<i>Porzana carolina</i>	24%	2 of 3
CCR1	11	Plovers (Family Charadriidae)	Killdeer	<i>Charadrius vociferus</i>	13%	1 of 3
CCR1	13	Sandpipers (Family Scolopacidae)	Common Snipe	<i>Gallinago delicata</i>	92%	3 of 3
CCR1	13	Sandpipers (Family Scolopacidae)	Red-necked Phalarope	<i>Phalaropus lobatus</i>	17%	1 of 3
CCR1	14	Jaegers, Gulls & Terns (Family Laridae)	Ring-billed Gull	<i>Larus delawarensis</i>	13%	1 of 3
CCR1	15	Doves (Family Columbidae)	Mourning Dove	<i>Zenaida macroura</i>	25%	3 of 3
CCR1	20	Kingfishers (Family Alcedinidae)	Belted Kingfisher	<i>Ceryle alcyon</i>	17%	1 of 3
CCR1	21	Woodpeckers (Family Picidae)	Downy Woodpecker	<i>Picoides pubescens</i>	28%	3 of 3
CCR1	21	Woodpeckers (Family Picidae)	Northern Flicker	<i>Colaptes auratus</i>	42%	3 of 3
CCR1	21	Woodpeckers (Family Picidae)	Pileated Woodpecker	<i>Dryocopus pileatus</i>	14%	1 of 3
CCR1	21	Woodpeckers (Family Picidae)	Red-naped Sapsucker	<i>Sphyrapicus nuchalis</i>	56%	3 of 3
CCR1	22	Flycatchers (Family Tyrannidae)	Dusky Flycatcher	<i>Empidonax oberholseri</i>	21%	2 of 3
CCR1	22	Flycatchers (Family Tyrannidae)	Eastern Kingbird	<i>Tyrannus tyrannus</i>	29%	2 of 3
CCR1	22	Flycatchers (Family Tyrannidae)	Western Wood-pewee	<i>Contopus sordidulus</i>	33%	1 of 3
CCR1	22	Flycatchers (Family Tyrannidae)	Willow Flycatcher	<i>Empidonax traillii</i>	29%	1 of 3
CCR1	23	Vireos (Family Vireonidae)	Red-eyed Vireo	<i>Vireo olivaceus</i>	63%	3 of 3
CCR1	23	Vireos (Family Vireonidae)	Warbling Vireo	<i>Vireo gilvus</i>	14%	3 of 3

Location	ID	Family	Common Name	Scientific Name	Detection Probability <sup>1</sup>	Years Observed <sup>2</sup>
CCR1	24	Jays & Crows (Family Corvidae)	American Crow	<i>Corvus brachyrhynchos</i>	33%	3 of 3
CCR1	24	Jays & Crows (Family Corvidae)	Black-billed Magpie	<i>Pica pica</i>	29%	3 of 3
CCR1	24	Jays & Crows (Family Corvidae)	Common Raven	<i>Corvus corax</i>	24%	3 of 3
CCR1	25	Swallows (Family Hirundinidae)	Tree Swallow	<i>Tachycineta bicolor</i>	38%	3 of 3
CCR1	26	Chickadees & Titmice (Family Paridae)	Black-capped Chickadee	<i>Poecile atricapillus</i>	57%	3 of 3
CCR1	27	Nuthatches (Family Sittidae)	Red-breasted Nuthatch	<i>Sitta canadensis</i>	47%	3 of 3
CCR1	29	Wrens (Family Troglodytidae)	Bewick's Wren	<i>Thryomanes bewickii</i>	13%	1 of 3
CCR1	31	Thrushes (Family Turdidae)	American Robin	<i>Turdus migratorius</i>	32%	3 of 3
CCR1	31	Thrushes (Family Turdidae)	Veery	<i>Catharus fuscescens</i>	14%	1 of 3
CCR1	32	Mockingbirds & Thrashers (Family Mimidae)	Gray Catbird	<i>Dumetella carolinensis</i>	28%	3 of 3
CCR1	33	Starling (Family Sturnidae)	European Starling	<i>Sturnus vulgaris</i>	21%	2 of 3
CCR1	34	Waxwings (Family Bombycillidae)	Cedar Waxwing	<i>Bombycilla cedrorum</i>	29%	3 of 3
CCR1	35	Warblers (Family Parulidae)	American Redstart	<i>Setophaga ruticilla</i>	34%	3 of 3
CCR1	35	Warblers (Family Parulidae)	Common Yellowthroat	<i>Geothlypis trichas</i>	19%	3 of 3
CCR1	35	Warblers (Family Parulidae)	MacGillvery's Warbler	<i>Oporornis tolmiei</i>	19%	3 of 3
CCR1	35	Warblers (Family Parulidae)	Nashville Warbler	<i>Vermivora ruficapilla</i>	35%	2 of 3
CCR1	35	Warblers (Family Parulidae)	Northern Waterthrush	<i>Seiurus noveboracensis</i>	17%	1 of 3
CCR1	35	Warblers (Family Parulidae)	Orange-crowned Warbler	<i>Vermivora celata</i>	35%	2 of 3
CCR1	35	Warblers (Family Parulidae)	Wilson's Warbler	<i>Wilsonia pusilla</i>	14%	1 of 3
CCR1	35	Warblers (Family Parulidae)	Yellow Warbler	<i>Dendroica petechia</i>	52%	3 of 3
CCR1	36	Tanagers (Family Thraupidae)	Western Tanager	<i>Piranga ludoviciana</i>	23%	2 of 3
CCR1	37	Towhees & Sparrows (Family Emberizidae)	Fox Sparrow	<i>Passerella iliaca</i>	13%	1 of 3
CCR1	37	Towhees & Sparrows (Family Emberizidae)	Lincoln's Sparrow	<i>Melospiza lincolni</i>	13%	1 of 3
CCR1	37	Towhees & Sparrows (Family Emberizidae)	Savannah Sparrow	<i>Passerculus sandwichensis</i>	13%	1 of 3
CCR1	37	Towhees & Sparrows (Family Emberizidae)	Song Sparrow	<i>Melospiza melodia</i>	85%	3 of 3
CCR1	38	Grosbeaks & Buntings (Family Cardinalidae)	Black-headed Grosbeak	<i>Pheucticus melanocephalus</i>	23%	3 of 3
CCR1	39	Blackbirds & Orioles (Family Icteridae)	Brown-headed Cowbird	<i>Molothrus ater</i>	34%	3 of 3
CCR1	39	Blackbirds & Orioles (Family Icteridae)	Bullock's Oriole	<i>Icterus bullockii</i>	27%	2 of 3

Location	ID	Family	Common Name	Scientific Name	Detection Probability <sup>1</sup>	Years Observed <sup>2</sup>
CCR1	39	Blackbirds & Orioles (Family Icteridae)	Red-winged Blackbird	<i>Agelaius phoeniceus</i>	59%	3 of 3
CCR1	39	Blackbirds & Orioles (Family Icteridae)	Western Meadowlark	<i>Sturnella neglecta</i>	44%	3 of 3
CCR1	40	Finches (Family Fringillidae)	American Goldfinch	<i>Carduelis tristis</i>	17%	1 of 3
CCR1	40	Finches (Family Fringillidae)	Evening Grosbeak	<i>Coccothraustes vespertinus</i>	25%	1 of 3
CCR3	1	Grebes (Family Podicipedidae)	Pied-billed Grebe	<i>Podilymbus podiceps</i>	32%	2 of 3
CCR3	3	Herons (Family Ardeidae)	Great-blue Heron	<i>Ardea herodias</i>	28%	3 of 3
CCR3	5	Swans, Geese, & Ducks (Family Anatidae)	American Wigeon	<i>Anas americana</i>	15%	2 of 3
CCR3	5	Swans, Geese, & Ducks (Family Anatidae)	Canada Goose	<i>Branta canadensis</i>	22%	3 of 3
CCR3	5	Swans, Geese, & Ducks (Family Anatidae)	Common Goldeneye	<i>Bucephala clangula</i>	14%	1 of 3
CCR3	5	Swans, Geese, & Ducks (Family Anatidae)	Mallard	<i>Anas platyrhynchos</i>	14%	1 of 3
CCR3	5	Swans, Geese, & Ducks (Family Anatidae)	Wood Duck	<i>Aix sponsa</i>	33%	1 of 3
CCR3	8	Grouse (Family Phasianidae)	Ring-necked Pheasant	<i>Phasianus colchicus</i>	17%	1 of 3
CCR3	8	Grouse (Family Phasianidae)	Ruffed Grouse	<i>Bonasa umbellus</i>	49%	2 of 3
CCR3	10	Rails (Family Rallidae)	Sora	<i>Porzana carolina</i>	33%	1 of 3
CCR3	13	Sandpipers (Family Scolopacidae)	Common Snipe	<i>Gallinago delicata</i>	85%	3 of 3
CCR3	13	Sandpipers (Family Scolopacidae)	Red-necked Phalarope	<i>Phalaropus lobatus</i>	17%	1 of 3
CCR3	13	Sandpipers (Family Scolopacidae)	Spotted Sandpiper	<i>Actitis macularia</i>	17%	1 of 3
CCR3	15	Doves (Family Columbidae)	Mourning Dove	<i>Zenaida macroura</i>	79%	2 of 3
CCR3	21	Woodpeckers (Family Picidae)	Downy Woodpecker	<i>Picoides pubescens</i>	45%	2 of 3
CCR3	21	Woodpeckers (Family Picidae)	Northern Flicker	<i>Colaptes auratus</i>	55%	3 of 3
CCR3	21	Woodpeckers (Family Picidae)	Pileated Woodpecker	<i>Dryocopus pileatus</i>	57%	1 of 3
CCR3	21	Woodpeckers (Family Picidae)	Red-naped Sapsucker	<i>Sphyrapicus nuchalis</i>	28%	3 of 3
CCR3	22	Flycatchers (Family Tyrannidae)	Dusky Flycatcher	<i>Empidonax oberholseri</i>	17%	1 of 3
CCR3	22	Flycatchers (Family Tyrannidae)	Eastern Kingbird	<i>Tyrannus tyrannus</i>	17%	1 of 3
CCR3	22	Flycatchers (Family Tyrannidae)	Hammond's Flycatcher	<i>Empidonax hammondi</i>	20%	1 of 3
CCR3	22	Flycatchers (Family Tyrannidae)	Least Flycatcher	<i>Empidonax minimus</i>	83%	1 of 3
CCR3	22	Flycatchers (Family Tyrannidae)	Western Wood-pewee	<i>Contopus sordidulus</i>	38%	3 of 3
CCR3	23	Vireos (Family Vireonidae)	Red-eyed Vireo	<i>Vireo olivaceus</i>	58%	3 of 3

Location	ID	Family	Common Name	Scientific Name	Detection Probability <sup>1</sup>	Years Observed <sup>2</sup>
CCR3	23	Vireos (Family Vireonidae)	Warbling Vireo	<i>Vireo gilvus</i>	15%	2 of 3
CCR3	24	Jays & Crows (Family Corvidae)	American Crow	<i>Corvus brachyrhynchos</i>	17%	3 of 3
CCR3	24	Jays & Crows (Family Corvidae)	Black-billed Magpie	<i>Pica pica</i>	28%	3 of 3
CCR3	24	Jays & Crows (Family Corvidae)	Common Raven	<i>Corvus corax</i>	24%	3 of 3
CCR3	25	Swallows (Family Hirundinidae)	Tree Swallow	<i>Tachycineta bicolor</i>	45%	3 of 3
CCR3	25	Swallows (Family Hirundinidae)	Violet-green Swallow	<i>Tachycineta thalassina</i>	20%	1 of 3
CCR3	26	Chickadees & Titmice (Family Paridae)	Black-capped Chickadee	<i>Poecile atricapillus</i>	60%	3 of 3
CCR3	26	Chickadees & Titmice (Family Paridae)	Mountain Chickadee	<i>Poecile gambeli</i>	17%	1 of 3
CCR3	27	Nuthatches (Family Sittidae)	Red-breasted Nuthatch	<i>Sitta canadensis</i>	80%	1 of 3
CCR3	29	Wrens (Family Troglodytidae)	Bewick's Wren	<i>Thryomanes bewickii</i>	40%	1 of 3
CCR3	31	Thrushes (Family Turdidae)	American Robin	<i>Turdus migratorius</i>	51%	3 of 3
CCR3	32	Mockingbirds & Thrashers (Family Mimidae)	Gray Catbird	<i>Dumetella carolinensis</i>	38%	3 of 3
CCR3	33	Starling (Family Sturnidae)	European Starling	<i>Sturnus vulgaris</i>	24%	2 of 3
CCR3	34	Waxwings (Family Bombycillidae)	Cedar Waxwing	<i>Bombycilla cedrorum</i>	43%	1 of 3
CCR3	35	Warblers (Family Parulidae)	American Redstart	<i>Setophaga ruticilla</i>	33%	3 of 3
CCR3	35	Warblers (Family Parulidae)	Common Yellowthroat	<i>Geothlypis trichas</i>	20%	1 of 3
CCR3	35	Warblers (Family Parulidae)	MacGillivray's Warbler	<i>Oporornis tolmiei</i>	15%	2 of 3
CCR3	35	Warblers (Family Parulidae)	Nashville Warbler	<i>Vermivora ruficapilla</i>	27%	3 of 3
CCR3	35	Warblers (Family Parulidae)	Orange-crowned Warbler	<i>Vermivora celata</i>	17%	1 of 3
CCR3	35	Warblers (Family Parulidae)	Wilson's Warbler	<i>Wilsonia pusilla</i>	17%	1 of 3
CCR3	35	Warblers (Family Parulidae)	Yellow Warbler	<i>Dendroica petechia</i>	83%	3 of 3
CCR3	35	Warblers (Family Parulidae)	Yellow-rumped Warbler	<i>Dendroica coronata</i>	17%	2 of 3
CCR3	36	Tanagers (Family Thraupidae)	Western Tanager	<i>Piranga ludoviciana</i>	14%	1 of 3
CCR3	37	Towhees & Sparrows (Family Emberizidae)	Chipping Sparrow	<i>Spizella passerina</i>	20%	1 of 3
CCR3	37	Towhees & Sparrows (Family Emberizidae)	Song Sparrow	<i>Melospiza melodia</i>	57%	3 of 3
CCR3	37	Towhees & Sparrows (Family Emberizidae)	Spotted Towhee	<i>Pipilo maculatus</i>	28%	2 of 3
CCR3	38	Grosbeaks & Buntings (Family Cardinalidae)	Black-headed Grosbeak	<i>Pheucticus melanocephalus</i>	44%	3 of 3
CCR3	39	Blackbirds & Orioles (Family Icteridae)	Bobolink	<i>Dolichonyx oryzivorus</i>	20%	1 of 3
CCR3	39	Blackbirds & Orioles (Family Icteridae)	Brown-headed Cowbird	<i>Molothrus ater</i>	48%	3 of 3

Location	ID	Family	Common Name	Scientific Name	Detection Probability <sup>1</sup>	Years Observed <sup>2</sup>
CCR3	39	Blackbirds & Orioles (Family Icteridae)	Bullock's Oriole	<i>Icterus bullockii</i>	51%	3 of 3
CCR3	39	Blackbirds & Orioles (Family Icteridae)	Red-winged Blackbird	<i>Agelaius phoeniceus</i>	28%	2 of 3
CCR3	40	Finches (Family Fringillidae)	Red Crossbill	<i>Loxia curvirostra</i>	17%	2 of 3
CCR4	1	Grebes (Family Podicipedidae)	Pied-billed Grebe	<i>Podilymbus podiceps</i>	36%	2 of 3
CCR4	2	Cormorants (Family Phalacrocoracidae)	Double-crested Cormorant	<i>Phalacrocorax auritus</i>	21%	2 of 3
CCR4	3	Hérons (Family Ardeidae)	Great-blue Heron	<i>Ardea herodias</i>	14%	1 of 3
CCR4	5	Swans, Geese, & Ducks (Family Anatidae)	American Wigeon	<i>Anas americana</i>	14%	1 of 3
CCR4	5	Swans, Geese, & Ducks (Family Anatidae)	Canada Goose	<i>Branta canadensis</i>	20%	2 of 3
CCR4	5	Swans, Geese, & Ducks (Family Anatidae)	Common Goldeneye	<i>Bucephala clangula</i>	14%	1 of 3
CCR4	5	Swans, Geese, & Ducks (Family Anatidae)	Gadwall	<i>Anas strepera</i>	13%	2 of 3
CCR4	5	Swans, Geese, & Ducks (Family Anatidae)	Mallard	<i>Anas platyrhynchos</i>	27%	2 of 3
CCR4	5	Swans, Geese, & Ducks (Family Anatidae)	Northern Shoveler	<i>Anas clypeata</i>	14%	1 of 3
CCR4	6	Eagles, Kites & Hawks (Family Accipitridae)	Northern Harrier	<i>Circus cyaneus</i>	14%	1 of 3
CCR4	6	Eagles, Kites & Hawks (Family Accipitridae)	Osprey	<i>Pandion haliaetus</i>	23%	3 of 3
CCR4	6	Eagles, Kites & Hawks (Family Accipitridae)	Red-tailed Hawk	<i>Buteo jamaicensis</i>	13%	1 of 3
CCR4	7	Falcons (Family Falconidae)	American Kestrel	<i>Falco sparverius</i>	21%	2 of 3
CCR4	8	Grouse (Family Phasianidae)	Ring-necked Pheasant	<i>Phasianus colchicus</i>	14%	1 of 3
CCR4	8	Grouse (Family Phasianidae)	Ruffed Grouse	<i>Bonasa umbellus</i>	13%	1 of 3
CCR4	9	Quail (Family Odontophoridae)	California Quail	<i>Callipepla californica</i>	21%	2 of 3
CCR4	10	Rails (Family Rallidae)	American Coot	<i>Fulica americana</i>	14%	1 of 3
CCR4	10	Rails (Family Rallidae)	Sora	<i>Porzana carolina</i>	27%	2 of 3
CCR4	11	Plovers (Family Charadriidae)	Killdeer	<i>Charadrius vociferus</i>	18%	3 of 3
CCR4	13	Sandpipers (Family Scolopacidae)	Common Snipe	<i>Gallinago delicata</i>	92%	3 of 3
CCR4	13	Sandpipers (Family Scolopacidae)	Red-necked Phalarope	<i>Phalaropus lobatus</i>	14%	1 of 3
CCR4	15	Doves (Family Columbidae)	Mourning Dove	<i>Zenaida macroura</i>	47%	3 of 3
CCR4	19	Hummingbirds (Family Trochilidae)	Calliope Hummingbird	<i>Stellula calliope</i>	14%	1 of 3

Location	ID	Family	Common Name	Scientific Name	Detection Probability <sup>1</sup>	Years Observed <sup>2</sup>
CCR4	20	Kingfishers (Family Alcedinidae)	Belted Kingfisher	<i>Ceryle alcyon</i>	13%	1 of 3
CCR4	21	Woodpeckers (Family Picidae)	Downy Woodpecker	<i>Picoides pubescens</i>	25%	1 of 3
CCR4	21	Woodpeckers (Family Picidae)	Hairy Woodpecker	<i>Picoides villosus</i>	14%	1 of 3
CCR4	21	Woodpeckers (Family Picidae)	Northern Flicker	<i>Colaptes auratus</i>	36%	3 of 3
CCR4	21	Woodpeckers (Family Picidae)	Pileated Woodpecker	<i>Dryocopus pileatus</i>	29%	2 of 3
CCR4	21	Woodpeckers (Family Picidae)	Red-naped Sapsucker	<i>Sphyrapicus nuchalis</i>	32%	3 of 3
CCR4	22	Flycatchers (Family Tyrannidae)	Dusky Flycatcher	<i>Empidonax oberholseri</i>	14%	3 of 3
CCR4	22	Flycatchers (Family Tyrannidae)	Eastern Kingbird	<i>Tyrannus tyrannus</i>	49%	3 of 3
CCR4	22	Flycatchers (Family Tyrannidae)	Hammond's Flycatcher	<i>Empidonax hammondi</i>	13%	1 of 3
CCR4	22	Flycatchers (Family Tyrannidae)	Western Wood-pewee	<i>Contopus sordidulus</i>	36%	3 of 3
CCR4	22	Flycatchers (Family Tyrannidae)	Willow Flycatcher	<i>Empidonax traillii</i>	25%	1 of 3
CCR4	23	Vireos (Family Vireonidae)	Red-eyed Vireo	<i>Vireo olivaceus</i>	64%	3 of 3
CCR4	23	Vireos (Family Vireonidae)	Warbling Vireo	<i>Vireo gilvus</i>	14%	1 of 3
CCR4	24	Jays & Crows (Family Corvidae)	American Crow	<i>Corvus brachyrhynchos</i>	64%	3 of 3
CCR4	24	Jays & Crows (Family Corvidae)	Black-billed Magpie	<i>Pica pica</i>	14%	3 of 3
CCR4	24	Jays & Crows (Family Corvidae)	Common Raven	<i>Corvus corax</i>	14%	1 of 3
CCR4	24	Jays & Crows (Family Corvidae)	Stellar's Jay	<i>Cyanocitta stelleri</i>	13%	1 of 3
CCR4	25	Swallows (Family Hirundinidae)	Cliff Swallow	<i>Petrochelidon pyrrhonota</i>	14%	1 of 3
CCR4	25	Swallows (Family Hirundinidae)	Tree Swallow	<i>Tachycineta bicolor</i>	42%	3 of 3
CCR4	25	Swallows (Family Hirundinidae)	Violet-green Swallow	<i>Tachycineta thalassina</i>	20%	2 of 3
CCR4	26	Chickadees & Titmice (Family Paridae)	Black-capped Chickadee	<i>Poecile atricapillus</i>	36%	3 of 3
CCR4	27	Nuthatches (Family Sittidae)	Red-breasted Nuthatch	<i>Sitta canadensis</i>	20%	2 of 3
CCR4	29	Wrens (Family Troglodytidae)	House Wren	<i>Troglodytes aedon</i>	14%	1 of 3
CCR4	31	Thrushes (Family Turdidae)	American Robin	<i>Turdus migratorius</i>	64%	3 of 3
CCR4	31	Thrushes (Family Turdidae)	Swainson's Thrush	<i>Catharus ustulatus</i>	21%	2 of 3
CCR4	32	Mockingbirds & Thrashers (Family Mimidae)	Gray Catbird	<i>Dumetella carolinensis</i>	29%	1 of 3
CCR4	33	Starling (Family Sturnidae)	European Starling	<i>Sturnus vulgaris</i>	34%	2 of 3
CCR4	34	Waxwings (Family Bombycillidae)	Cedar Waxwing	<i>Bombycilla cedrorum</i>	21%	2 of 3
CCR4	35	Warblers (Family Parulidae)	American Redstart	<i>Setophaga ruticilla</i>	14%	1 of 3
CCR4	35	Warblers (Family Parulidae)	Common Yellowthroat	<i>Geothlypis trichas</i>	37%	3 of 3
CCR4	35	Warblers (Family Parulidae)	MacGillivray's Warbler	<i>Oporornis tolmiei</i>	14%	1 of 3
CCR4	35	Warblers (Family Parulidae)	Nashville Warbler	<i>Vermivora ruficapilla</i>	25%	1 of 3

Location	ID	Family	Common Name	Scientific Name	Detection Probability <sup>1</sup>	Years Observed <sup>2</sup>
CCR4	35	Warblers (Family Parulidae)	Orange-crowned Warbler	<i>Vermivora celata</i>	25%	1 of 3
CCR4	35	Warblers (Family Parulidae)	Wilson's Warbler	<i>Wilsonia pusilla</i>	29%	1 of 3
CCR4	35	Warblers (Family Parulidae)	Yellow Warbler	<i>Dendroica petechia</i>	54%	3 of 3
CCR4	35	Warblers (Family Parulidae)	Yellow-rumped Warbler	<i>Dendroica coronata</i>	13%	1 of 3
CCR4	36	Tanagers (Family Thraupidae)	Western Tanager	<i>Piranga ludoviciana</i>	21%	2 of 3
CCR4	37	Towhees & Sparrows (Family Emberizidae)	Chipping Sparrow	<i>Spizella passerina</i>	27%	3 of 3
CCR4	37	Towhees & Sparrows (Family Emberizidae)	Dark-eyed Junco	<i>Junco hyemalis</i>	13%	1 of 3
CCR4	37	Towhees & Sparrows (Family Emberizidae)	Lincoln's Sparrow	<i>Melospiza lincolnii</i>	13%	1 of 3
CCR4	37	Towhees & Sparrows (Family Emberizidae)	Savannah Sparrow	<i>Passerculus sandwichensis</i>	95%	3 of 3
CCR4	37	Towhees & Sparrows (Family Emberizidae)	Song Sparrow	<i>Melospiza melodia</i>	78%	3 of 3
CCR4	37	Towhees & Sparrows (Family Emberizidae)	Spotted Towhee	<i>Pipilo maculatus</i>	25%	1 of 3
CCR4	38	Grosbeaks & Buntings (Family Cardinalidae)	Black-headed Grosbeak	<i>Pheucticus melanocephalus</i>	18%	3 of 3
CCR4	39	Blackbirds & Orioles (Family Icteridae)	Bobolink	<i>Dolichonyx oryzivorus</i>	13%	2 of 3
CCR4	39	Blackbirds & Orioles (Family Icteridae)	Brown-headed Cowbird	<i>Molothrus ater</i>	23%	3 of 3
CCR4	39	Blackbirds & Orioles (Family Icteridae)	Bullock's Oriole	<i>Icterus bullockii</i>	14%	1 of 3
CCR4	39	Blackbirds & Orioles (Family Icteridae)	Red-winged Blackbird	<i>Agelaius phoeniceus</i>	69%	3 of 3
CCR4	39	Blackbirds & Orioles (Family Icteridae)	Western Meadowlark	<i>Sturnella neglecta</i>	79%	3 of 3
CCR4	40	Finches (Family Fringillidae)	American Goldfinch	<i>Carduelis tristis</i>	13%	1 of 3
CCR4	40	Finches (Family Fringillidae)	Pine Siskin	<i>Carduelis pinus</i>	20%	2 of 3
CCR5	1	Grebes (Family Podicipedidae)	Pied-billed Grebe	<i>Podilymbus podiceps</i>	50%	2 of 3
CCR5	3	Hérons (Family Ardeidae)	Great-blue Heron	<i>Ardea herodias</i>	26%	2 of 3
CCR5	5	Swans, Geese, & Ducks (Family Anatidae)	American Wigeon	<i>Anas americana</i>	14%	1 of 3
CCR5	5	Swans, Geese, & Ducks (Family Anatidae)	Canada Goose	<i>Branta canadensis</i>	23%	3 of 3
CCR5	5	Swans, Geese, & Ducks (Family Anatidae)	Gadwall	<i>Anas strepera</i>	13%	1 of 3
CCR5	5	Swans, Geese, & Ducks (Family Anatidae)	Mallard	<i>Anas platyrhynchos</i>	33%	2 of 3

Location	ID	Family	Common Name	Scientific Name	Detection Probability <sup>1</sup>	Years Observed <sup>2</sup>
CCR5	6	Eagles, Kites & Hawks (Family Accipitridae)	Bald Eagle	<i>Haliaeetus leucocephalus</i>	14%	1 of 3
CCR5	6	Eagles, Kites & Hawks (Family Accipitridae)	Osprey	<i>Pandion haliaetus</i>	14%	1 of 3
CCR5	8	Grouse (Family Phasianidae)	Ring-necked Pheasant	<i>Phasianus colchicus</i>	23%	3 of 3
CCR5	8	Grouse (Family Phasianidae)	Ruffed Grouse	<i>Bonasa umbellus</i>	13%	1 of 3
CCR5	8	Grouse (Family Phasianidae)	Wild Turkey	<i>Meleagris gallopavo</i>	13%	1 of 3
CCR5	9	Quail (Family Odontophoridae)	California Quail	<i>Callipepla californica</i>	14%	1 of 3
CCR5	10	Rails (Family Rallidae)	Sora	<i>Porzana carolina</i>	68%	2 of 3
CCR5	10	Rails (Family Rallidae)	Virginia Rail	<i>Rallus limicola</i>	14%	1 of 3
CCR5	11	Plovers (Family Charadriidae)	Killdeer	<i>Charadrius vociferus</i>	27%	2 of 3
CCR5	13	Sandpipers (Family Scolopacidae)	Common Snipe	<i>Gallinago delicata</i>	86%	3 of 3
CCR5	13	Sandpipers (Family Scolopacidae)	Red-necked Phalarope	<i>Phalaropus lobatus</i>	23%	3 of 3
CCR5	14	Jaegers, Gulls & Terns (Family Laridae)	Ring-billed Gull	<i>Larus delawarensis</i>	13%	1 of 3
CCR5	15	Doves (Family Columbidae)	Mourning Dove	<i>Zenaida macroura</i>	73%	3 of 3
CCR5	19	Hummingbirds (Family Trochilidae)	Calliope Hummingbird	<i>Stellula calliope</i>	23%	3 of 3
CCR5	21	Woodpeckers (Family Picidae)	Northern Flicker	<i>Colaptes auratus</i>	50%	3 of 3
CCR5	21	Woodpeckers (Family Picidae)	Pileated Woodpecker	<i>Dryocopus pileatus</i>	29%	1 of 3
CCR5	21	Woodpeckers (Family Picidae)	Red-naped Sapsucker	<i>Sphyrapicus nuchalis</i>	37%	3 of 3
CCR5	22	Flycatchers (Family Tyrannidae)	Dusky Flycatcher	<i>Empidonax oberholseri</i>	63%	3 of 3
CCR5	22	Flycatchers (Family Tyrannidae)	Eastern Kingbird	<i>Tyrannus tyrannus</i>	23%	3 of 3
CCR5	22	Flycatchers (Family Tyrannidae)	Western Wood-pewee	<i>Contopus sordidulus</i>	51%	3 of 3
CCR5	22	Flycatchers (Family Tyrannidae)	Willow Flycatcher	<i>Empidonax traillii</i>	13%	1 of 3
CCR5	23	Vireos (Family Vireonidae)	Cassin's Vireo	<i>Vireo cassinii</i>	46%	2 of 3
CCR5	23	Vireos (Family Vireonidae)	Red-eyed Vireo	<i>Vireo olivaceus</i>	34%	2 of 3
CCR5	23	Vireos (Family Vireonidae)	Warbling Vireo	<i>Vireo gilvus</i>	42%	3 of 3
CCR5	24	Jays & Crows (Family Corvidae)	American Crow	<i>Corvus brachyrhynchos</i>	45%	3 of 3
CCR5	24	Jays & Crows (Family Corvidae)	Black-billed Magpie	<i>Pica pica</i>	27%	2 of 3
CCR5	24	Jays & Crows (Family Corvidae)	Common Raven	<i>Corvus corax</i>	46%	3 of 3
CCR5	24	Jays & Crows (Family Corvidae)	Stellar's Jay	<i>Cyanocitta stelleri</i>	13%	1 of 3
CCR5	25	Swallows (Family Hirundinidae)	Tree Swallow	<i>Tachycineta bicolor</i>	40%	3 of 3
CCR5	25	Swallows (Family Hirundinidae)	Violet-green Swallow	<i>Tachycineta thalassina</i>	13%	2 of 3
CCR5	26	Chickadees & Titmice (Family Paridae)	Black-capped Chickadee	<i>Poecile atricapillus</i>	27%	2 of 3

Location	ID	Family	Common Name	Scientific Name	Detection Probability <sup>1</sup>	Years Observed <sup>2</sup>
CCR5	26	Chickadees & Titmice (Family Paridae)	Mountain Chickadee	<i>Poecile gambeli</i>	13%	1 of 3
CCR5	27	Nuthatches (Family Sittidae)	Red-breasted Nuthatch	<i>Sitta canadensis</i>	21%	2 of 3
CCR5	31	Thrushes (Family Turdidae)	American Robin	<i>Turdus migratorius</i>	82%	3 of 3
CCR5	31	Thrushes (Family Turdidae)	Swainson's Thrush	<i>Catharus ustulatus</i>	21%	2 of 3
CCR5	32	Mockingbirds & Thrashers (Family Mimidae)	Gray Catbird	<i>Dumetella carolinensis</i>	28%	2 of 3
CCR5	33	Starling (Family Sturnidae)	European Starling	<i>Sturnus vulgaris</i>	13%	1 of 3
CCR5	34	Waxwings (Family Bombycillidae)	Cedar Waxwing	<i>Bombycilla cedrorum</i>	14%	1 of 3
CCR5	35	Warblers (Family Parulidae)	Common Yellowthroat	<i>Geothlypis trichas</i>	51%	3 of 3
CCR5	35	Warblers (Family Parulidae)	MacGillvery's Warbler	<i>Oporornis tolmiei</i>	14%	1 of 3
CCR5	35	Warblers (Family Parulidae)	Nashville Warbler	<i>Vermivora ruficapilla</i>	21%	2 of 3
CCR5	35	Warblers (Family Parulidae)	Northern Waterthrush	<i>Seiurus noveboracensis</i>	13%	1 of 3
CCR5	35	Warblers (Family Parulidae)	Orange-crowned Warbler	<i>Vermivora celata</i>	61%	2 of 3
CCR5	35	Warblers (Family Parulidae)	Yellow Warbler	<i>Dendroica petechia</i>	27%	3 of 3
CCR5	35	Warblers (Family Parulidae)	Yellow-rumped Warbler	<i>Dendroica coronata</i>	20%	2 of 3
CCR5	36	Tanagers (Family Thraupidae)	Western Tanager	<i>Piranga ludoviciana</i>	23%	3 of 3
CCR5	37	Towhees & Sparrows (Family Emberizidae)	Chipping Sparrow	<i>Spizella passerina</i>	54%	3 of 3
CCR5	37	Towhees & Sparrows (Family Emberizidae)	Dark-eyed Junco	<i>Junco hyemalis</i>	14%	1 of 3
CCR5	37	Towhees & Sparrows (Family Emberizidae)	Lazuli Bunting	<i>Passerina amoena</i>	13%	1 of 3
CCR5	37	Towhees & Sparrows (Family Emberizidae)	Lincoln's Sparrow	<i>Melospiza lincolnii</i>	25%	1 of 3
CCR5	37	Towhees & Sparrows (Family Emberizidae)	Savannah Sparrow	<i>Passerculus sandwichensis</i>	77%	3 of 3
CCR5	37	Towhees & Sparrows (Family Emberizidae)	Song Sparrow	<i>Melospiza melodia</i>	78%	3 of 3
CCR5	37	Towhees & Sparrows (Family Emberizidae)	Spotted Towhee	<i>Pipilo maculatus</i>	55%	3 of 3
CCR5	38	Grosbeaks & Buntings (Family Cardinalidae)	Black-headed Grosbeak	<i>Pheucticus melanocephalus</i>	20%	2 of 3
CCR5	39	Blackbirds & Orioles (Family Icteridae)	Bobolink	<i>Dolichonyx oryzivorus</i>	13%	1 of 3
CCR5	39	Blackbirds & Orioles (Family Icteridae)	Brewer's Blackbird	<i>Euphagus cyanocephalus</i>	13%	1 of 3
CCR5	39	Blackbirds & Orioles (Family Icteridae)	Brown-headed Cowbird	<i>Molothrus ater</i>	14%	3 of 3

Location	ID	Family	Common Name	Scientific Name	Detection Probability <sup>1</sup>	Years Observed <sup>2</sup>
CCR5	39	Blackbirds & Orioles (Family Icteridae)	Bullock's Oriole	<i>Icterus bullockii</i>	13%	1 of 3
CCR5	39	Blackbirds & Orioles (Family Icteridae)	Red-winged Blackbird	<i>Agelaius phoeniceus</i>	73%	3 of 3
CCR5	39	Blackbirds & Orioles (Family Icteridae)	Western Meadowlark	<i>Sturnella neglecta</i>	56%	3 of 3
CCR5	40	Finches (Family Fringillidae)	American Goldfinch	<i>Carduelis tristis</i>	14%	1 of 3
CCR5	40	Finches (Family Fringillidae)	Pine Siskin	<i>Carduelis pinus</i>	14%	1 of 3
CCR5	40	Finches (Family Fringillidae)	Red Crossbill	<i>Loxia curvirostra</i>	14%	1 of 3
CCR8	1	Grebes (Family Podicipedidae)	Pied-billed Grebe	<i>Podilymbus podiceps</i>	21%	2 of 3
CCR8	3	Herons (Family Ardeidae)	Great-blue Heron	<i>Ardea herodias</i>	43%	1 of 3
CCR8	5	Swans, Geese, & Ducks (Family Anatidae)	Canada Goose	<i>Branta canadensis</i>	20%	2 of 3
CCR8	5	Swans, Geese, & Ducks (Family Anatidae)	Gadwall	<i>Anas strepera</i>	14%	2 of 3
CCR8	5	Swans, Geese, & Ducks (Family Anatidae)	Mallard	<i>Anas platyrhynchos</i>	21%	2 of 3
CCR8	6	Eagles, Kites & Hawks (Family Accipitridae)	Northern Harrier	<i>Circus cyaneus</i>	14%	1 of 3
CCR8	6	Eagles, Kites & Hawks (Family Accipitridae)	Osprey	<i>Pandion haliaetus</i>	58%	3 of 3
CCR8	8	Grouse (Family Phasianidae)	Ring-necked Pheasant	<i>Phasianus colchicus</i>	14%	1 of 3
CCR8	8	Grouse (Family Phasianidae)	Ruffed Grouse	<i>Bonasa umbellus</i>	36%	3 of 3
CCR8	10	Rails (Family Rallidae)	American Coot	<i>Fulica americana</i>	14%	1 of 3
CCR8	10	Rails (Family Rallidae)	Sora	<i>Porzana carolina</i>	81%	3 of 3
CCR8	10	Rails (Family Rallidae)	Virginia Rail	<i>Rallus limicola</i>	18%	3 of 3
CCR8	13	Sandpipers (Family Scolopacidae)	Common Snipe	<i>Gallinago delicata</i>	92%	3 of 3
CCR8	13	Sandpipers (Family Scolopacidae)	Red-necked Phalarope	<i>Phalaropus lobatus</i>	14%	1 of 3
CCR8	15	Doves (Family Columbidae)	Mourning Dove	<i>Zenaida macroura</i>	46%	3 of 3
CCR8	19	Hummingbirds (Family Trochilidae)	Calliope Hummingbird	<i>Stellula calliope</i>	14%	1 of 3
CCR8	21	Woodpeckers (Family Picidae)	Downy Woodpecker	<i>Picoides pubescens</i>	29%	1 of 3
CCR8	21	Woodpeckers (Family Picidae)	Northern Flicker	<i>Colaptes auratus</i>	43%	2 of 3
CCR8	21	Woodpeckers (Family Picidae)	Pileated Woodpecker	<i>Dryocopus pileatus</i>	14%	1 of 3
CCR8	21	Woodpeckers (Family Picidae)	Red-naped Sapsucker	<i>Sphyrapicus nuchalis</i>	28%	2 of 3
CCR8	22	Flycatchers (Family Tyrannidae)	Eastern Kingbird	<i>Tyrannus tyrannus</i>	14%	1 of 3
CCR8	22	Flycatchers (Family Tyrannidae)	Hammond's Flycatcher	<i>Empidonax hammondi</i>	13%	1 of 3
CCR8	22	Flycatchers (Family Tyrannidae)	Western Wood-pewee	<i>Contopus sordidulus</i>	29%	2 of 3

Location	ID	Family	Common Name	Scientific Name	Detection Probability <sup>1</sup>	Years Observed <sup>2</sup>
CCR8	22	Flycatchers (Family Tyrannidae)	Willow Flycatcher	<i>Empidonax traillii</i>	46%	3 of 3
CCR8	23	Vireos (Family Vireonidae)	Red-eyed Vireo	<i>Vireo olivaceus</i>	38%	3 of 3
CCR8	23	Vireos (Family Vireonidae)	Warbling Vireo	<i>Vireo gilvus</i>	31%	3 of 3
CCR8	24	Jays & Crows (Family Corvidae)	American Crow	<i>Corvus brachyrhynchos</i>	23%	3 of 3
CCR8	24	Jays & Crows (Family Corvidae)	Black-billed Magpie	<i>Pica pica</i>	21%	2 of 3
CCR8	24	Jays & Crows (Family Corvidae)	Common Raven	<i>Corvus corax</i>	50%	2 of 3
CCR8	24	Jays & Crows (Family Corvidae)	Stellar's Jay	<i>Cyanocitta stelleri</i>	13%	1 of 3
CCR8	25	Swallows (Family Hirundinidae)	Tree Swallow	<i>Tachycineta bicolor</i>	39%	2 of 3
CCR8	25	Swallows (Family Hirundinidae)	Violet-green Swallow	<i>Tachycineta thalassina</i>	14%	1 of 3
CCR8	26	Chickadees & Titmice (Family Paridae)	Black-capped Chickadee	<i>Poecile atricapillus</i>	46%	2 of 3
CCR8	27	Nuthatches (Family Sittidae)	Red-breasted Nuthatch	<i>Sitta canadensis</i>	21%	2 of 3
CCR8	29	Wrens (Family Troglodytidae)	House Wren	<i>Troglodytes aedon</i>	14%	1 of 3
CCR8	29	Wrens (Family Troglodytidae)	Marsh Wren	<i>Cistothorus palustris</i>	14%	1 of 3
CCR8	31	Thrushes (Family Turdidae)	American Robin	<i>Turdus migratorius</i>	27%	3 of 3
CCR8	31	Thrushes (Family Turdidae)	Swainson's Thrush	<i>Catharus ustulatus</i>	32%	3 of 3
CCR8	32	Mockingbirds & Thrashers (Family Mimidae)	Gray Catbird	<i>Dumetella carolinensis</i>	34%	2 of 3
CCR8	34	Waxwings (Family Bombycillidae)	Cedar Waxwing	<i>Bombycilla cedrorum</i>	28%	3 of 3
CCR8	35	Warblers (Family Parulidae)	American Redstart	<i>Setophaga ruticilla</i>	43%	2 of 3
CCR8	35	Warblers (Family Parulidae)	Common Yellowthroat	<i>Geothlypis trichas</i>	96%	3 of 3
CCR8	35	Warblers (Family Parulidae)	Nashville Warbler	<i>Vermivora ruficapilla</i>	14%	1 of 3
CCR8	35	Warblers (Family Parulidae)	Orange-crowned Warbler	<i>Vermivora celata</i>	13%	2 of 3
CCR8	35	Warblers (Family Parulidae)	Yellow Warbler	<i>Dendroica petechia</i>	81%	3 of 3
CCR8	35	Warblers (Family Parulidae)	Yellow-rumped Warbler	<i>Dendroica coronata</i>	14%	1 of 3
CCR8	36	Tanagers (Family Thraupidae)	Western Tanager	<i>Piranga ludoviciana</i>	29%	1 of 3
CCR8	37	Towhees & Sparrows (Family Emberizidae)	Song Sparrow	<i>Melospiza melodia</i>	64%	3 of 3
CCR8	37	Towhees & Sparrows (Family Emberizidae)	Spotted Towhee	<i>Pipilo maculatus</i>	29%	1 of 3
CCR8	38	Grosbeaks & Buntings (Family Cardinalidae)	Black-headed Grosbeak	<i>Pheucticus melanocephalus</i>	46%	3 of 3
CCR8	39	Blackbirds & Orioles (Family Icteridae)	Brown-headed Cowbird	<i>Molothrus ater</i>	32%	3 of 3
CCR8	39	Blackbirds & Orioles (Family Icteridae)	Red-winged Blackbird	<i>Agelaius phoeniceus</i>	100%	3 of 3
CCR8	39	Blackbirds & Orioles (Family Icteridae)	Yellow-headed Blackbird	<i>Xanthocephalus</i>	13%	1 of 3

Location	ID	Family	Common Name	Scientific Name	Detection Probability <sup>1</sup>	Years Observed <sup>2</sup>
				<i>xanthocephalus</i>		
CCR8	40	Finches (Family Fringillidae)	Pine Siskin	<i>Carduelis pinus</i>	14%	1 of 3
CCR8	40	Finches (Family Fringillidae)	Red Crossbill	<i>Loxia curvirostra</i>	13%	2 of 3
FGP1	1	Grebes (Family Podicipedidae)	Pied-billed Grebe	<i>Podilymbus podiceps</i>	25%	1 of 2
FGP1	2	Cormorants (Family Phalacrocoracidae)	Double-crested Cormorant	<i>Phalacrocorax auritus</i>	50%	1 of 2
FGP1	3	Hérons (Family Ardeidae)	Great-blue Heron	<i>Ardea herodias</i>	56%	2 of 2
FGP1	5	Swans, Geese, & Ducks (Family Anatidae)	American Wigeon	<i>Anas americana</i>	38%	1 of 2
FGP1	5	Swans, Geese, & Ducks (Family Anatidae)	Canada Goose	<i>Branta canadensis</i>	38%	2 of 2
FGP1	5	Swans, Geese, & Ducks (Family Anatidae)	Gadwall	<i>Anas strepera</i>	13%	2 of 2
FGP1	5	Swans, Geese, & Ducks (Family Anatidae)	Mallard	<i>Anas platyrhynchos</i>	25%	1 of 2
FGP1	5	Swans, Geese, & Ducks (Family Anatidae)	Wood Duck	<i>Aix sponsa</i>	13%	1 of 2
FGP1	6	Eagles, Kites & Hawks (Family Accipitridae)	Osprey	<i>Pandion haliaetus</i>	31%	2 of 2
FGP1	6	Eagles, Kites & Hawks (Family Accipitridae)	Red-tailed Hawk	<i>Buteo jamaicensis</i>	19%	2 of 2
FGP1	7	Falcons (Family Falconidae)	American Kestrel	<i>Falco sparverius</i>	13%	1 of 2
FGP1	8	Grouse (Family Phasianidae)	Ruffed Grouse	<i>Bonasa umbellus</i>	25%	2 of 2
FGP1	8	Grouse (Family Phasianidae)	Wild Turkey	<i>Meleagris gallopavo</i>	25%	1 of 2
FGP1	9	Quail (Family Odontophoridae)	California Quail	<i>Callipepla californica</i>	13%	1 of 2
FGP1	11	Plovers (Family Charadriidae)	Killdeer	<i>Charadrius vociferus</i>	13%	1 of 2
FGP1	13	Sandpipers (Family Scolopacidae)	Common Snipe	<i>Gallinago delicata</i>	88%	2 of 2
FGP1	15	Doves (Family Columbidae)	Mourning Dove	<i>Zenaida macroura</i>	13%	2 of 2
FGP1	21	Woodpeckers (Family Picidae)	Downy Woodpecker	<i>Picoides pubescens</i>	13%	1 of 2
FGP1	21	Woodpeckers (Family Picidae)	Northern Flicker	<i>Colaptes auratus</i>	44%	2 of 2
FGP1	21	Woodpeckers (Family Picidae)	Pileated Woodpecker	<i>Dryocopus pileatus</i>	13%	2 of 2
FGP1	21	Woodpeckers (Family Picidae)	Red-naped Sapsucker	<i>Sphyrapicus nuchalis</i>	31%	2 of 2
FGP1	22	Flycatchers (Family Tyrannidae)	Eastern Kingbird	<i>Tyrannus tyrannus</i>	13%	1 of 2
FGP1	22	Flycatchers (Family Tyrannidae)	Hammond's Flycatcher	<i>Empidonax hammondi</i>	13%	1 of 2
FGP1	22	Flycatchers (Family Tyrannidae)	Western Wood-pewee	<i>Contopus sordidulus</i>	25%	1 of 2
FGP1	22	Flycatchers (Family Tyrannidae)	Willow Flycatcher	<i>Empidonax traillii</i>	13%	1 of 2

Location	ID	Family	Common Name	Scientific Name	Detection Probability <sup>1</sup>	Years Observed <sup>2</sup>
FGP1	23	Vireos (Family Vireonidae)	Cassin's Vireo	<i>Vireo cassinii</i>	25%	1 of 2
FGP1	23	Vireos (Family Vireonidae)	Red-eyed Vireo	<i>Vireo olivaceus</i>	38%	2 of 2
FGP1	23	Vireos (Family Vireonidae)	Warbling Vireo	<i>Vireo gilvus</i>	25%	2 of 2
FGP1	24	Jays & Crows (Family Corvidae)	American Crow	<i>Corvus brachyrhynchos</i>	25%	2 of 2
FGP1	24	Jays & Crows (Family Corvidae)	Black-billed Magpie	<i>Pica pica</i>	50%	2 of 2
FGP1	24	Jays & Crows (Family Corvidae)	Common Raven	<i>Corvus corax</i>	25%	1 of 2
FGP1	25	Swallows (Family Hirundinidae)	Northern Rough-winged Swallow	<i>Stelgidopteryx serripennis</i>	13%	1 of 2
FGP1	25	Swallows (Family Hirundinidae)	Tree Swallow	<i>Tachycineta bicolor</i>	81%	2 of 2
FGP1	25	Swallows (Family Hirundinidae)	Violet-green Swallow	<i>Tachycineta thalassina</i>	25%	1 of 2
FGP1	26	Chickadees & Titmice (Family Paridae)	Black-capped Chickadee	<i>Poecile atricapillus</i>	50%	2 of 2
FGP1	26	Chickadees & Titmice (Family Paridae)	Mountain Chickadee	<i>Poecile gambeli</i>	13%	1 of 2
FGP1	27	Nuthatches (Family Sittidae)	Red-breasted Nuthatch	<i>Sitta canadensis</i>	13%	2 of 2
FGP1	31	Thrushes (Family Turdidae)	American Robin	<i>Turdus migratorius</i>	63%	2 of 2
FGP1	31	Thrushes (Family Turdidae)	Swainson's Thrush	<i>Catharus ustulatus</i>	13%	1 of 2
FGP1	33	Starling (Family Sturnidae)	European Starling	<i>Sturnus vulgaris</i>	50%	2 of 2
FGP1	35	Warblers (Family Parulidae)	Common Yellowthroat	<i>Geothlypis trichas</i>	13%	1 of 2
FGP1	35	Warblers (Family Parulidae)	Orange-crowned Warbler	<i>Vermivora celata</i>	38%	1 of 2
FGP1	35	Warblers (Family Parulidae)	Townsend's Warbler	<i>Dendroica townsendii</i>	13%	1 of 2
FGP1	35	Warblers (Family Parulidae)	Yellow Warbler	<i>Dendroica petechia</i>	25%	1 of 2
FGP1	35	Warblers (Family Parulidae)	Yellow-rumped Warbler	<i>Dendroica coronata</i>	13%	1 of 2
FGP1	36	Tanagers (Family Thraupidae)	Western Tanager	<i>Piranga ludoviciana</i>	13%	2 of 2
FGP1	37	Towhees & Sparrows (Family Emberizidae)	Chipping Sparrow	<i>Spizella passerina</i>	13%	1 of 2
FGP1	37	Towhees & Sparrows (Family Emberizidae)	Savannah Sparrow	<i>Passerculus sandwichensis</i>	44%	2 of 2
FGP1	37	Towhees & Sparrows (Family Emberizidae)	Song Sparrow	<i>Melospiza melodia</i>	56%	2 of 2
FGP1	39	Blackbirds & Orioles (Family Icteridae)	Brewer's Blackbird	<i>Euphagus cyanocephalus</i>	19%	2 of 2
FGP1	39	Blackbirds & Orioles (Family Icteridae)	Brown-headed Cowbird	<i>Molothrus ater</i>	13%	1 of 2
FGP1	39	Blackbirds & Orioles (Family Icteridae)	Red-winged Blackbird	<i>Agelaius phoeniceus</i>	38%	1 of 2
FGP1	39	Blackbirds & Orioles (Family Icteridae)	Western Meadowlark	<i>Sturnella neglecta</i>	25%	1 of 2
FGP1	39	Blackbirds & Orioles (Family Icteridae)	Yellow-headed Blackbird	<i>Xanthocephalus xanthocephalus</i>	31%	2 of 2

Location	ID	Family	Common Name	Scientific Name	Detection Probability <sup>1</sup>	Years Observed <sup>2</sup>
FGP1	40	Finches (Family Fringillidae)	Pine Siskin	<i>Carduelis pinus</i>	13%	1 of 2
FGP1	40	Finches (Family Fringillidae)	Red Crossbill	<i>Loxia curvirostra</i>	13%	1 of 2
FGP2	1	Grebes (Family Podicipedidae)	Pied-billed Grebe	<i>Podilymbus podiceps</i>	25%	2 of 2
FGP2	2	Cormorants (Family Phalacrocoracidae)	Double-crested Cormorant	<i>Phalacrocorax auritus</i>	13%	1 of 2
FGP2	3	Hérons (Family Ardeidae)	Great-blue Heron	<i>Ardea herodias</i>	81%	2 of 2
FGP2	5	Swans, Geese, & Ducks (Family Anatidae)	American Wigeon	<i>Anas americana</i>	38%	1 of 2
FGP2	5	Swans, Geese, & Ducks (Family Anatidae)	Canada Goose	<i>Branta canadensis</i>	56%	2 of 2
FGP2	5	Swans, Geese, & Ducks (Family Anatidae)	Cinnamon Teal	<i>Anas cyanoptera</i>	25%	1 of 2
FGP2	5	Swans, Geese, & Ducks (Family Anatidae)	Gadwall	<i>Anas strepera</i>	19%	2 of 2
FGP2	5	Swans, Geese, & Ducks (Family Anatidae)	Mallard	<i>Anas platyrhynchos</i>	25%	2 of 2
FGP2	5	Swans, Geese, & Ducks (Family Anatidae)	Northern Shoveler	<i>Anas clypeata</i>	13%	1 of 2
FGP2	5	Swans, Geese, & Ducks (Family Anatidae)	Redhead	<i>Aythya americana</i>	13%	1 of 2
FGP2	5	Swans, Geese, & Ducks (Family Anatidae)	Wood Duck	<i>Aix sponsa</i>	13%	1 of 2
FGP2	6	Eagles, Kites & Hawks (Family Accipitridae)	Osprey	<i>Pandion haliaetus</i>	50%	2 of 2
FGP2	6	Eagles, Kites & Hawks (Family Accipitridae)	Red-tailed Hawk	<i>Buteo jamaicensis</i>	13%	1 of 2
FGP2	7	Falcons (Family Falconidae)	American Kestrel	<i>Falco sparverius</i>	13%	1 of 2
FGP2	8	Grouse (Family Phasianidae)	Ring-necked Pheasant	<i>Phasianus colchicus</i>	13%	1 of 2
FGP2	8	Grouse (Family Phasianidae)	Ruffed Grouse	<i>Bonasa umbellus</i>	25%	2 of 2
FGP2	11	Plovers (Family Charadriidae)	Killdeer	<i>Charadrius vociferus</i>	25%	1 of 2
FGP2	13	Sandpipers (Family Scolopacidae)	Common Snipe	<i>Gallinago delicata</i>	88%	2 of 2
FGP2	13	Sandpipers (Family Scolopacidae)	Red-necked Phalarope	<i>Phalaropus lobatus</i>	13%	1 of 2
FGP2	13	Sandpipers (Family Scolopacidae)	Wilson's Phalarope	<i>Phalaropus tricolor</i>	25%	1 of 2
FGP2	14	Jaegers, Gulls & Terns (Family Laridae)	Black Tern	<i>Chlidonias niger</i>	13%	1 of 2
FGP2	15	Doves (Family Columbidae)	Mourning Dove	<i>Zenaida macroura</i>	13%	1 of 2
FGP2	21	Woodpeckers (Family Picidae)	Downy Woodpecker	<i>Picoides pubescens</i>	25%	1 of 2

Location	ID	Family	Common Name	Scientific Name	Detection Probability <sup>1</sup>	Years Observed <sup>2</sup>
FGP2	21	Woodpeckers (Family Picidae)	Northern Flicker	<i>Colaptes auratus</i>	38%	2 of 2
FGP2	21	Woodpeckers (Family Picidae)	Pileated Woodpecker	<i>Dryocopus pileatus</i>	31%	2 of 2
FGP2	21	Woodpeckers (Family Picidae)	Red-naped Sapsucker	<i>Sphyrapicus nuchalis</i>	19%	2 of 2
FGP2	22	Flycatchers (Family Tyrannidae)	Dusky Flycatcher	<i>Empidonax oberholseri</i>	25%	1 of 2
FGP2	22	Flycatchers (Family Tyrannidae)	Eastern Kingbird	<i>Tyrannus tyrannus</i>	13%	1 of 2
FGP2	22	Flycatchers (Family Tyrannidae)	Western Kingbird	<i>Tyrannus verticalis</i>	13%	1 of 2
FGP2	22	Flycatchers (Family Tyrannidae)	Western Wood-pewee	<i>Contopus sordidulus</i>	19%	2 of 2
FGP2	23	Vireos (Family Vireonidae)	Cassin's Vireo	<i>Vireo cassinii</i>	25%	1 of 2
FGP2	23	Vireos (Family Vireonidae)	Red-eyed Vireo	<i>Vireo olivaceus</i>	19%	2 of 2
FGP2	23	Vireos (Family Vireonidae)	Warbling Vireo	<i>Vireo gilvus</i>	13%	1 of 2
FGP2	24	Jays & Crows (Family Corvidae)	Black-billed Magpie	<i>Pica pica</i>	38%	2 of 2
FGP2	24	Jays & Crows (Family Corvidae)	Common Raven	<i>Corvus corax</i>	38%	1 of 2
FGP2	25	Swallows (Family Hirundinidae)	Bank Swallow	<i>Riparia riparia</i>	13%	1 of 2
FGP2	25	Swallows (Family Hirundinidae)	Cliff Swallow	<i>Petrochelidon pyrrhonota</i>	13%	1 of 2
FGP2	25	Swallows (Family Hirundinidae)	Tree Swallow	<i>Tachycineta bicolor</i>	50%	2 of 2
FGP2	25	Swallows (Family Hirundinidae)	Violet-green Swallow	<i>Tachycineta thalassina</i>	13%	1 of 2
FGP2	26	Chickadees & Titmice (Family Paridae)	Black-capped Chickadee	<i>Poecile atricapillus</i>	19%	2 of 2
FGP2	27	Nuthatches (Family Sittidae)	Red-breasted Nuthatch	<i>Sitta canadensis</i>	13%	1 of 2
FGP2	31	Thrushes (Family Turdidae)	American Robin	<i>Turdus migratorius</i>	38%	2 of 2
FGP2	33	Starling (Family Sturnidae)	European Starling	<i>Sturnus vulgaris</i>	50%	2 of 2
FGP2	35	Warblers (Family Parulidae)	Common Yellowthroat	<i>Geothlypis trichas</i>	19%	2 of 2
FGP2	35	Warblers (Family Parulidae)	Northern Waterthrush	<i>Seiurus noveboracensis</i>	38%	1 of 2
FGP2	35	Warblers (Family Parulidae)	Orange-crowned Warbler	<i>Vermivora celata</i>	13%	1 of 2
FGP2	35	Warblers (Family Parulidae)	Yellow Warbler	<i>Dendroica petechia</i>	38%	2 of 2
FGP2	37	Towhees & Sparrows (Family Emberizidae)	Fox Sparrow	<i>Passerella iliaca</i>	13%	1 of 2
FGP2	37	Towhees & Sparrows (Family Emberizidae)	Savannah Sparrow	<i>Passerculus sandwichensis</i>	88%	2 of 2
FGP2	37	Towhees & Sparrows (Family Emberizidae)	Song Sparrow	<i>Melospiza melodia</i>	69%	2 of 2
FGP2	38	Grosbeaks & Buntings (Family Cardinalidae)	Black-headed Grosbeak	<i>Pheucticus melanocephalus</i>	13%	1 of 2
FGP2	39	Blackbirds & Orioles (Family Icteridae)	Bobolink	<i>Dolichonyx oryzivorus</i>	13%	1 of 2
FGP2	39	Blackbirds & Orioles (Family Icteridae)	Brown-headed Cowbird	<i>Molothrus ater</i>	25%	1 of 2

Location	ID	Family	Common Name	Scientific Name	Detection Probability <sup>1</sup>	Years Observed <sup>2</sup>
FGP2	39	Blackbirds & Orioles (Family Icteridae)	Bullock's Oriole	<i>Icterus bullockii</i>	13%	1 of 2
FGP2	39	Blackbirds & Orioles (Family Icteridae)	Red-winged Blackbird	<i>Agelaius phoeniceus</i>	50%	2 of 2
FGP2	39	Blackbirds & Orioles (Family Icteridae)	Western Meadowlark	<i>Sturnella neglecta</i>	13%	1 of 2
FGP2	39	Blackbirds & Orioles (Family Icteridae)	Yellow-headed Blackbird	<i>Xanthocephalus xanthocephalus</i>	38%	2 of 2
FGP3	1	Grebes (Family Podicipedidae)	Pied-billed Grebe	<i>Podilymbus podiceps</i>	25%	2 of 2
FGP3	2	Cormorants (Family Phalacrocoracidae)	Double-crested Cormorant	<i>Phalacrocorax auritus</i>	13%	1 of 2
FGP3	3	Herons (Family Ardeidae)	American Bittern	<i>Botaurus lentiginosus</i>	25%	1 of 2
FGP3	3	Herons (Family Ardeidae)	Great-blue Heron	<i>Ardea herodias</i>	69%	2 of 2
FGP3	5	Swans, Geese, & Ducks (Family Anatidae)	American Wigeon	<i>Anas americana</i>	25%	1 of 2
FGP3	5	Swans, Geese, & Ducks (Family Anatidae)	Blue-winged Teal	<i>Anas discors</i>	38%	2 of 2
FGP3	5	Swans, Geese, & Ducks (Family Anatidae)	Canada Goose	<i>Branta canadensis</i>	38%	2 of 2
FGP3	5	Swans, Geese, & Ducks (Family Anatidae)	Cinnamon Teal	<i>Anas cyanoptera</i>	38%	2 of 2
FGP3	5	Swans, Geese, & Ducks (Family Anatidae)	Common Goldeneye	<i>Bucephala clangula</i>	38%	1 of 2
FGP3	5	Swans, Geese, & Ducks (Family Anatidae)	Gadwall	<i>Anas strepera</i>	25%	2 of 2
FGP3	5	Swans, Geese, & Ducks (Family Anatidae)	Green-winged Teal	<i>Anas crecca</i>	13%	1 of 2
FGP3	5	Swans, Geese, & Ducks (Family Anatidae)	Mallard	<i>Anas platyrhynchos</i>	38%	2 of 2
FGP3	5	Swans, Geese, & Ducks (Family Anatidae)	Northern Shoveler	<i>Anas clypeata</i>	25%	1 of 2
FGP3	5	Swans, Geese, & Ducks (Family Anatidae)	Ring-necked Duck	<i>Aythya collaris</i>	25%	1 of 2
FGP3	5	Swans, Geese, & Ducks (Family Anatidae)	Wood Duck	<i>Aix sponsa</i>	25%	1 of 2
FGP3	6	Eagles, Kites & Hawks (Family Accipitridae)	Bald Eagle	<i>Haliaeetus leucocephalus</i>	19%	2 of 2
FGP3	6	Eagles, Kites & Hawks (Family Accipitridae)	Osprey	<i>Pandion haliaetus</i>	19%	2 of 2
FGP3	10	Rails (Family Rallidae)	American Coot	<i>Fulica americana</i>	88%	1 of 2

Location	ID	Family	Common Name	Scientific Name	Detection Probability <sup>1</sup>	Years Observed <sup>2</sup>
FGP3	10	Rails (Family Rallidae)	Sora	<i>Porzana carolina</i>	38%	2 of 2
FGP3	10	Rails (Family Rallidae)	Virginia Rail	<i>Rallus limicola</i>	13%	1 of 2
FGP3	11	Plovers (Family Charadriidae)	Killdeer	<i>Charadrius vociferus</i>	63%	1 of 2
FGP3	12	Stilt & Avocet (Family Recurviro)	Black-necked Stilt	<i>Himantopus mexicanus</i>	75%	1 of 2
FGP3	13	Sandpipers (Family Scolopacidae)	Common Snipe	<i>Gallinago delicata</i>	69%	2 of 2
FGP3	13	Sandpipers (Family Scolopacidae)	Wilson's Phalarope	<i>Phalaropus tricolor</i>	19%	2 of 2
FGP3	14	Jaegers, Gulls & Terns (Family Laridae)	Black Tern	<i>Chlidonias niger</i>	50%	1 of 2
FGP3	18	Swifts (Family Apodidae)	Vaux's Swift	<i>Chaetura vauxi</i>	13%	2 of 2
FGP3	21	Woodpeckers (Family Picidae)	Northern Flicker	<i>Colaptes auratus</i>	13%	1 of 2
FGP3	21	Woodpeckers (Family Picidae)	Pileated Woodpecker	<i>Dryocopus pileatus</i>	13%	1 of 2
FGP3	21	Woodpeckers (Family Picidae)	Red-naped Sapsucker	<i>Sphyrapicus nuchalis</i>	19%	2 of 2
FGP3	22	Flycatchers (Family Tyrannidae)	Western Wood-pewee	<i>Contopus sordidulus</i>	13%	2 of 2
FGP3	23	Vireos (Family Vireonidae)	Red-eyed Vireo	<i>Vireo olivaceus</i>	13%	1 of 2
FGP3	24	Jays & Crows (Family Corvidae)	American Crow	<i>Corvus brachyrhynchos</i>	19%	2 of 2
FGP3	24	Jays & Crows (Family Corvidae)	Black-billed Magpie	<i>Pica pica</i>	31%	2 of 2
FGP3	24	Jays & Crows (Family Corvidae)	Common Raven	<i>Corvus corax</i>	25%	1 of 2
FGP3	25	Swallows (Family Hirundinidae)	Bank Swallow	<i>Riparia riparia</i>	13%	1 of 2
FGP3	25	Swallows (Family Hirundinidae)	Barn Swallow	<i>Hirundo rustica</i>	13%	1 of 2
FGP3	25	Swallows (Family Hirundinidae)	Tree Swallow	<i>Tachycineta bicolor</i>	56%	2 of 2
FGP3	25	Swallows (Family Hirundinidae)	Violet-green Swallow	<i>Tachycineta thalassina</i>	25%	1 of 2
FGP3	26	Chickadees & Titmice (Family Paridae)	Black-capped Chickadee	<i>Poecile atricapillus</i>	13%	2 of 2
FGP3	26	Chickadees & Titmice (Family Paridae)	Mountain Chickadee	<i>Poecile gambeli</i>	13%	1 of 2
FGP3	29	Wrens (Family Troglodytidae)	Marsh Wren	<i>Cistothorus palustris</i>	75%	2 of 2
FGP3	31	Thrushes (Family Turdidae)	American Robin	<i>Turdus migratorius</i>	19%	2 of 2
FGP3	33	Starling (Family Sturnidae)	European Starling	<i>Sturnus vulgaris</i>	19%	2 of 2
FGP3	34	Waxwings (Family Bombycillidae)	Cedar Waxwing	<i>Bombycilla cedrorum</i>	25%	1 of 2
FGP3	35	Warblers (Family Parulidae)	Common Yellowthroat	<i>Geothlypis trichas</i>	69%	2 of 2
FGP3	35	Warblers (Family Parulidae)	Wilson's Warbler	<i>Wilsonia pusilla</i>	13%	1 of 2
FGP3	35	Warblers (Family Parulidae)	Yellow Warbler	<i>Dendroica petechia</i>	38%	1 of 2
FGP3	35	Warblers (Family Parulidae)	Yellow-rumped Warbler	<i>Dendroica coronata</i>	13%	1 of 2
FGP3	37	Towhees & Sparrows (Family Emberizidae)	Savannah Sparrow	<i>Passerculus sandwichensis</i>	31%	2 of 2
FGP3	37	Towhees & Sparrows (Family	Song Sparrow	<i>Melospiza melodia</i>	63%	2 of 2

Location	ID	Family	Common Name	Scientific Name	Detection Probability <sup>1</sup>	Years Observed <sup>2</sup>
		Emberizidae)				
FGP3	39	Blackbirds & Orioles (Family Icteridae)	Brown-headed Cowbird	<i>Molothrus ater</i>	38%	1 of 2
FGP3	39	Blackbirds & Orioles (Family Icteridae)	Red-winged Blackbird	<i>Agelaius phoeniceus</i>	94%	2 of 2
FGP3	39	Blackbirds & Orioles (Family Icteridae)	Yellow-headed Blackbird	<i>Xanthocephalus xanthocephalus</i>	56%	2 of 2
FGP3	40	Finches (Family Fringillidae)	Pine Siskin	<i>Carduelis pinus</i>	13%	2 of 2
FGP4	1	Grebes (Family Podicipedidae)	Pied-billed Grebe	<i>Podilymbus podiceps</i>	13%	2 of 2
FGP4	2	Cormorants (Family Phalacrocoracidae)	Double-crested Cormorant	<i>Phalacrocorax auritus</i>	13%	1 of 2
FGP4	3	Herons (Family Ardeidae)	Great-blue Heron	<i>Ardea herodias</i>	38%	2 of 2
FGP4	4	New World Vultures (Family Cathartidae)	Turkey Vulture	<i>Cathartes aura</i>	13%	1 of 2
FGP4	5	Swans, Geese, & Ducks (Family Anatidae)	Blue-winged Teal	<i>Anas discors</i>	38%	1 of 2
FGP4	5	Swans, Geese, & Ducks (Family Anatidae)	Canada Goose	<i>Branta canadensis</i>	56%	2 of 2
FGP4	5	Swans, Geese, & Ducks (Family Anatidae)	Cinnamon Teal	<i>Anas cyanoptera</i>	25%	1 of 2
FGP4	5	Swans, Geese, & Ducks (Family Anatidae)	Gadwall	<i>Anas strepera</i>	25%	1 of 2
FGP4	5	Swans, Geese, & Ducks (Family Anatidae)	Mallard	<i>Anas platyrhynchos</i>	25%	2 of 2
FGP4	5	Swans, Geese, & Ducks (Family Anatidae)	Wood Duck	<i>Aix sponsa</i>	25%	1 of 2
FGP4	6	Eagles, Kites & Hawks (Family Accipitridae)	Bald Eagle	<i>Haliaeetus leucocephalus</i>	13%	1 of 2
FGP4	6	Eagles, Kites & Hawks (Family Accipitridae)	Osprey	<i>Pandion haliaetus</i>	25%	2 of 2
FGP4	8	Grouse (Family Phasianidae)	Ruffed Grouse	<i>Bonasa umbellus</i>	31%	2 of 2
FGP4	10	Rails (Family Rallidae)	American Coot	<i>Fulica americana</i>	50%	1 of 2
FGP4	10	Rails (Family Rallidae)	Sora	<i>Porzana carolina</i>	75%	2 of 2
FGP4	10	Rails (Family Rallidae)	Virginia Rail	<i>Rallus limicola</i>	31%	2 of 2
FGP4	11	Plovers (Family Charadriidae)	Killdeer	<i>Charadrius vociferus</i>	50%	2 of 2
FGP4	12	Stilt & Avocet (Family Recurviro)	Black-necked Stilt	<i>Himantopus mexicanus</i>	13%	1 of 2
FGP4	13	Sandpipers (Family Scolopacidae)	Common Snipe	<i>Gallinago delicata</i>	88%	2 of 2
FGP4	13	Sandpipers (Family Scolopacidae)	Wilson's Phalarope	<i>Phalaropus tricolor</i>	13%	1 of 2
FGP4	18	Swifts (Family Apodidae)	Vaux's Swift	<i>Chaetura vauxi</i>	13%	2 of 2

Location	ID	Family	Common Name	Scientific Name	Detection Probability <sup>1</sup>	Years Observed <sup>2</sup>
FGP4	21	Woodpeckers (Family Picidae)	Downy Woodpecker	<i>Picoides pubescens</i>	25%	1 of 2
FGP4	21	Woodpeckers (Family Picidae)	Hairy Woodpecker	<i>Picoides villosus</i>	13%	1 of 2
FGP4	21	Woodpeckers (Family Picidae)	Northern Flicker	<i>Colaptes auratus</i>	44%	2 of 2
FGP4	21	Woodpeckers (Family Picidae)	Red-naped Sapsucker	<i>Sphyrapicus nuchalis</i>	25%	2 of 2
FGP4	22	Flycatchers (Family Tyrannidae)	Eastern Kingbird	<i>Tyrannus tyrannus</i>	13%	2 of 2
FGP4	22	Flycatchers (Family Tyrannidae)	Western Wood-pewee	<i>Contopus sordidulus</i>	38%	1 of 2
FGP4	22	Flycatchers (Family Tyrannidae)	Willow Flycatcher	<i>Empidonax traillii</i>	19%	2 of 2
FGP4	23	Vireos (Family Vireonidae)	Cassin's Vireo	<i>Vireo cassinii</i>	13%	1 of 2
FGP4	23	Vireos (Family Vireonidae)	Red-eyed Vireo	<i>Vireo olivaceus</i>	38%	1 of 2
FGP4	24	Jays & Crows (Family Corvidae)	Common Raven	<i>Corvus corax</i>	19%	2 of 2
FGP4	24	Jays & Crows (Family Corvidae)	Stellar's Jay	<i>Cyanocitta stelleri</i>	13%	1 of 2
FGP4	25	Swallows (Family Hirundinidae)	Barn Swallow	<i>Hirundo rustica</i>	13%	1 of 2
FGP4	25	Swallows (Family Hirundinidae)	Northern Rough-winged Swallow	<i>Stelgidopteryx serripennis</i>	13%	1 of 2
FGP4	25	Swallows (Family Hirundinidae)	Tree Swallow	<i>Tachycineta bicolor</i>	56%	2 of 2
FGP4	25	Swallows (Family Hirundinidae)	Violet-green Swallow	<i>Tachycineta thalassina</i>	13%	1 of 2
FGP4	26	Chickadees & Titmice (Family Paridae)	Black-capped Chickadee	<i>Poecile atricapillus</i>	25%	1 of 2
FGP4	26	Chickadees & Titmice (Family Paridae)	Chestnut-backed Chickadee	<i>Poecile rufescens</i>	13%	1 of 2
FGP4	27	Nuthatches (Family Sittidae)	Red-breasted Nuthatch	<i>Sitta canadensis</i>	13%	2 of 2
FGP4	29	Wrens (Family Troglodytidae)	Marsh Wren	<i>Cistothorus palustris</i>	100%	2 of 2
FGP4	31	Thrushes (Family Turdidae)	American Robin	<i>Turdus migratorius</i>	38%	2 of 2
FGP4	31	Thrushes (Family Turdidae)	Swainson's Thrush	<i>Catharus ustulatus</i>	19%	2 of 2
FGP4	32	Mockingbirds & Thrashers (Family Mimidae)	Gray Catbird	<i>Dumetella carolinensis</i>	13%	1 of 2
FGP4	33	Starling (Family Sturnidae)	European Starling	<i>Sturnus vulgaris</i>	25%	2 of 2
FGP4	34	Waxwings (Family Bombycillidae)	Cedar Waxwing	<i>Bombycilla cedrorum</i>	13%	1 of 2
FGP4	35	Warblers (Family Parulidae)	American Redstart	<i>Setophaga ruticilla</i>	13%	1 of 2
FGP4	35	Warblers (Family Parulidae)	Common Yellowthroat	<i>Geothlypis trichas</i>	63%	2 of 2
FGP4	35	Warblers (Family Parulidae)	Northern Waterthrush	<i>Seiurus noveboracensis</i>	38%	1 of 2
FGP4	35	Warblers (Family Parulidae)	Yellow Warbler	<i>Dendroica petechia</i>	50%	2 of 2
FGP4	35	Warblers (Family Parulidae)	Yellow-rumped Warbler	<i>Dendroica coronata</i>	13%	1 of 2
FGP4	37	Towhees & Sparrows (Family Emberizidae)	Song Sparrow	<i>Melospiza melodia</i>	63%	2 of 2
FGP4	37	Towhees & Sparrows (Family	Spotted Towhee	<i>Pipilo maculatus</i>	13%	1 of 2

Location	ID	Family	Common Name	Scientific Name	Detection Probability <sup>1</sup>	Years Observed <sup>2</sup>
		Emberizidae)				
FGP4	38	Grosbeaks & Buntings (Family Cardinalidae)	Black-headed Grosbeak	<i>Pheucticus melanocephalus</i>	13%	1 of 2
FGP4	39	Blackbirds & Orioles (Family Icteridae)	Brown-headed Cowbird	<i>Molothrus ater</i>	25%	1 of 2
FGP4	39	Blackbirds & Orioles (Family Icteridae)	Bullock's Oriole	<i>Icterus bullockii</i>	13%	1 of 2
FGP4	39	Blackbirds & Orioles (Family Icteridae)	Red-winged Blackbird	<i>Agelaius phoeniceus</i>	94%	2 of 2
FGP4	39	Blackbirds & Orioles (Family Icteridae)	Yellow-headed Blackbird	<i>Xanthocephalus xanthocephalus</i>	44%	2 of 2
FGP4	40	Finches (Family Fringillidae)	Evening Grosbeak	<i>Coccothraustes vespertinus</i>	13%	1 of 2
FGP4	40	Finches (Family Fringillidae)	Pine Siskin	<i>Carduelis pinus</i>	13%	1 of 2
FGP5	1	Grebes (Family Podicipedidae)	Pied-billed Grebe	<i>Podilymbus podiceps</i>	19%	2 of 2
FGP5	2	Cormorants (Family Phalacrocoracidae)	Double-crested Cormorant	<i>Phalacrocorax auritus</i>	25%	1 of 2
FGP5	3	Herons (Family Ardeidae)	Great-blue Heron	<i>Ardea herodias</i>	13%	2 of 2
FGP5	4	New World Vultures (Family Cathartidae)	Turkey Vulture	<i>Cathartes aura</i>	13%	1 of 2
FGP5	5	Swans, Geese, & Ducks (Family Anatidae)	Canada Goose	<i>Branta canadensis</i>	38%	2 of 2
FGP5	5	Swans, Geese, & Ducks (Family Anatidae)	Mallard	<i>Anas platyrhynchos</i>	13%	1 of 2
FGP5	6	Eagles, Kites & Hawks (Family Accipitridae)	Bald Eagle	<i>Haliaeetus leucocephalus</i>	13%	1 of 2
FGP5	6	Eagles, Kites & Hawks (Family Accipitridae)	Osprey	<i>Pandion haliaetus</i>	13%	2 of 2
FGP5	6	Eagles, Kites & Hawks (Family Accipitridae)	Red-tailed Hawk	<i>Buteo jamaicensis</i>	13%	1 of 2
FGP5	7	Falcons (Family Falconidae)	American Kestrel	<i>Falco sparverius</i>	13%	1 of 2
FGP5	8	Grouse (Family Phasianidae)	Ring-necked Pheasant	<i>Phasianus colchicus</i>	13%	1 of 2
FGP5	9	Quail (Family Odontophoridae)	California Quail	<i>Callipepla californica</i>	13%	1 of 2
FGP5	10	Rails (Family Rallidae)	Sora	<i>Porzana carolina</i>	38%	2 of 2
FGP5	11	Plovers (Family Charadriidae)	Killdeer	<i>Charadrius vociferus</i>	56%	2 of 2
FGP5	12	Stilt & Avocet (Family Recurviro)	Black-necked Stilt	<i>Himantopus mexicanus</i>	38%	1 of 2
FGP5	13	Sandpipers (Family Scolopacidae)	Common Snipe	<i>Gallinago delicata</i>	88%	2 of 2
FGP5	13	Sandpipers (Family Scolopacidae)	Red-necked Phalarope	<i>Phalaropus lobatus</i>	13%	1 of 2
FGP5	13	Sandpipers (Family Scolopacidae)	Wilson's Phalarope	<i>Phalaropus tricolor</i>	13%	1 of 2
FGP5	15	Doves (Family Columbidae)	Mourning Dove	<i>Zenaida macroura</i>	25%	1 of 2

Location	ID	Family	Common Name	Scientific Name	Detection Probability <sup>1</sup>	Years Observed <sup>2</sup>
FGP5	21	Woodpeckers (Family Picidae)	Hairy Woodpecker	<i>Picoides villosus</i>	13%	1 of 2
FGP5	21	Woodpeckers (Family Picidae)	Northern Flicker	<i>Colaptes auratus</i>	56%	2 of 2
FGP5	21	Woodpeckers (Family Picidae)	Pileated Woodpecker	<i>Dryocopus pileatus</i>	25%	2 of 2
FGP5	21	Woodpeckers (Family Picidae)	Red-naped Sapsucker	<i>Sphyrapicus nuchalis</i>	19%	2 of 2
FGP5	22	Flycatchers (Family Tyrannidae)	Eastern Kingbird	<i>Tyrannus tyrannus</i>	13%	1 of 2
FGP5	22	Flycatchers (Family Tyrannidae)	Hammond's Flycatcher	<i>Empidonax hammondi</i>	13%	1 of 2
FGP5	22	Flycatchers (Family Tyrannidae)	Western Wood-pewee	<i>Contopus sordidulus</i>	25%	1 of 2
FGP5	23	Vireos (Family Vireonidae)	Cassin's Vireo	<i>Vireo cassinii</i>	19%	2 of 2
FGP5	24	Jays & Crows (Family Corvidae)	Common Raven	<i>Corvus corax</i>	31%	2 of 2
FGP5	25	Swallows (Family Hirundinidae)	Barn Swallow	<i>Hirundo rustica</i>	13%	2 of 2
FGP5	25	Swallows (Family Hirundinidae)	Cliff Swallow	<i>Petrochelidon pyrrhonota</i>	38%	2 of 2
FGP5	25	Swallows (Family Hirundinidae)	Tree Swallow	<i>Tachycineta bicolor</i>	25%	2 of 2
FGP5	25	Swallows (Family Hirundinidae)	Violet-green Swallow	<i>Tachycineta thalassina</i>	13%	1 of 2
FGP5	26	Chickadees & Titmice (Family Paridae)	Black-capped Chickadee	<i>Poecile atricapillus</i>	13%	1 of 2
FGP5	26	Chickadees & Titmice (Family Paridae)	Chestnut-backed Chickadee	<i>Poecile rufescens</i>	13%	1 of 2
FGP5	26	Chickadees & Titmice (Family Paridae)	Mountain Chickadee	<i>Poecile gambeli</i>	25%	1 of 2
FGP5	27	Nuthatches (Family Sittidae)	Red-breasted Nuthatch	<i>Sitta canadensis</i>	50%	2 of 2
FGP5	29	Wrens (Family Troglodytidae)	House Wren	<i>Troglodytes aedon</i>	13%	1 of 2
FGP5	29	Wrens (Family Troglodytidae)	Marsh Wren	<i>Cistothorus palustris</i>	56%	2 of 2
FGP5	30	Kinglets (Family Regulidae)	Golden-crowned Kinglet	<i>Regulus satrapa</i>	38%	1 of 2
FGP5	31	Thrushes (Family Turdidae)	American Robin	<i>Turdus migratorius</i>	44%	2 of 2
FGP5	31	Thrushes (Family Turdidae)	Swainson's Thrush	<i>Catharus ustulatus</i>	19%	2 of 2
FGP5	34	Waxwings (Family Bombycillidae)	Cedar Waxwing	<i>Bombycilla cedrorum</i>	13%	1 of 2
FGP5	35	Warblers (Family Parulidae)	Common Yellowthroat	<i>Geothlypis trichas</i>	63%	2 of 2
FGP5	35	Warblers (Family Parulidae)	MacGillivray's Warbler	<i>Oporornis tolmiei</i>	19%	2 of 2
FGP5	35	Warblers (Family Parulidae)	Orange-crowned Warbler	<i>Vermivora celata</i>	25%	1 of 2
FGP5	35	Warblers (Family Parulidae)	Yellow Warbler	<i>Dendroica petechia</i>	38%	1 of 2
FGP5	35	Warblers (Family Parulidae)	Yellow-rumped Warbler	<i>Dendroica coronata</i>	56%	2 of 2
FGP5	36	Tanagers (Family Thraupidae)	Western Tanager	<i>Piranga ludoviciana</i>	25%	1 of 2
FGP5	37	Towhees & Sparrows (Family Emberizidae)	Chipping Sparrow	<i>Spizella passerina</i>	31%	2 of 2
FGP5	37	Towhees & Sparrows (Family Emberizidae)	Dark-eyed Junco	<i>Junco hyemalis</i>	63%	1 of 2

Location	ID	Family	Common Name	Scientific Name	Detection Probability <sup>1</sup>	Years Observed <sup>2</sup>
FGP5	37	Towhees & Sparrows (Family Emberizidae)	Savannah Sparrow	<i>Passerculus sandwichensis</i>	13%	1 of 2
FGP5	37	Towhees & Sparrows (Family Emberizidae)	Song Sparrow	<i>Melospiza melodia</i>	56%	2 of 2
FGP5	37	Towhees & Sparrows (Family Emberizidae)	Spotted Towhee	<i>Pipilo maculatus</i>	13%	2 of 2
FGP5	38	Grosbeaks & Buntings (Family Cardinalidae)	Black-headed Grosbeak	<i>Pheucticus melanocephalus</i>	13%	1 of 2
FGP5	39	Blackbirds & Orioles (Family Icteridae)	Brewer's Blackbird	<i>Euphagus cyanocephalus</i>	13%	1 of 2
FGP5	39	Blackbirds & Orioles (Family Icteridae)	Bullock's Oriole	<i>Icterus bullockii</i>	13%	1 of 2
FGP5	39	Blackbirds & Orioles (Family Icteridae)	Red-winged Blackbird	<i>Agelaius phoeniceus</i>	81%	2 of 2
FGP5	39	Blackbirds & Orioles (Family Icteridae)	Yellow-headed Blackbird	<i>Xanthocephalus xanthocephalus</i>	50%	2 of 2
FGP5	40	Finches (Family Fringillidae)	Evening Grosbeak	<i>Coccothraustes vespertinus</i>	13%	1 of 2
FGP5	40	Finches (Family Fringillidae)	Pine Siskin	<i>Carduelis pinus</i>	13%	1 of 2
FGP5	40	Finches (Family Fringillidae)	Red Crossbill	<i>Loxia curvirostra</i>	13%	2 of 2
FGP6	1	Grebes (Family Podicipedidae)	Pied-billed Grebe	<i>Podilymbus podiceps</i>	50%	1 of 2
FGP6	3	Herons (Family Ardeidae)	American Bittern	<i>Botaurus lentiginosus</i>	25%	1 of 2
FGP6	3	Herons (Family Ardeidae)	Great-blue Heron	<i>Ardea herodias</i>	19%	2 of 2
FGP6	5	Swans, Geese, & Ducks (Family Anatidae)	Canada Goose	<i>Branta canadensis</i>	44%	2 of 2
FGP6	5	Swans, Geese, & Ducks (Family Anatidae)	Gadwall	<i>Anas strepera</i>	25%	1 of 2
FGP6	6	Eagles, Kites & Hawks (Family Accipitridae)	Osprey	<i>Pandion haliaetus</i>	13%	1 of 2
FGP6	8	Grouse (Family Phasianidae)	Ruffed Grouse	<i>Bonasa umbellus</i>	50%	1 of 2
FGP6	10	Rails (Family Rallidae)	American Coot	<i>Fulica americana</i>	38%	2 of 2
FGP6	10	Rails (Family Rallidae)	Sora	<i>Porzana carolina</i>	69%	2 of 2
FGP6	11	Plovers (Family Charadriidae)	Killdeer	<i>Charadrius vociferus</i>	13%	1 of 2
FGP6	13	Sandpipers (Family Scolopacidae)	Common Snipe	<i>Gallinago delicata</i>	88%	2 of 2
FGP6	13	Sandpipers (Family Scolopacidae)	Wilson's Phalarope	<i>Phalaropus tricolor</i>	13%	1 of 2
FGP6	15	Doves (Family Columbidae)	Mourning Dove	<i>Zenaida macroura</i>	13%	2 of 2
FGP6	19	Hummingbirds (Family Trochilidae)	Rufous Hummingbird	<i>Selasphorus rufus</i>	13%	1 of 2
FGP6	21	Woodpeckers (Family Picidae)	Downy Woodpecker	<i>Picoides pubescens</i>	13%	1 of 2

Location	ID	Family	Common Name	Scientific Name	Detection Probability <sup>1</sup>	Years Observed <sup>2</sup>
FGP6	21	Woodpeckers (Family Picidae)	Northern Flicker	<i>Colaptes auratus</i>	13%	2 of 2
FGP6	21	Woodpeckers (Family Picidae)	Pileated Woodpecker	<i>Dryocopus pileatus</i>	13%	1 of 2
FGP6	21	Woodpeckers (Family Picidae)	Red-naped Sapsucker	<i>Sphyrapicus nuchalis</i>	19%	2 of 2
FGP6	22	Flycatchers (Family Tyrannidae)	Dusky Flycatcher	<i>Empidonax oberholseri</i>	13%	1 of 2
FGP6	22	Flycatchers (Family Tyrannidae)	Western Wood-pewee	<i>Contopus sordidulus</i>	38%	1 of 2
FGP6	23	Vireos (Family Vireonidae)	Cassin's Vireo	<i>Vireo cassinii</i>	25%	1 of 2
FGP6	23	Vireos (Family Vireonidae)	Red-eyed Vireo	<i>Vireo olivaceus</i>	13%	1 of 2
FGP6	23	Vireos (Family Vireonidae)	Warbling Vireo	<i>Vireo gilvus</i>	13%	1 of 2
FGP6	24	Jays & Crows (Family Corvidae)	American Crow	<i>Corvus brachyrhynchos</i>	13%	1 of 2
FGP6	24	Jays & Crows (Family Corvidae)	Common Raven	<i>Corvus corax</i>	25%	2 of 2
FGP6	25	Swallows (Family Hirundinidae)	Tree Swallow	<i>Tachycineta bicolor</i>	13%	1 of 2
FGP6	25	Swallows (Family Hirundinidae)	Violet-green Swallow	<i>Tachycineta thalassina</i>	13%	1 of 2
FGP6	26	Chickadees & Titmice (Family Paridae)	Black-capped Chickadee	<i>Poecile atricapillus</i>	25%	2 of 2
FGP6	27	Nuthatches (Family Sittidae)	Red-breasted Nuthatch	<i>Sitta canadensis</i>	50%	2 of 2
FGP6	29	Wrens (Family Troglodytidae)	Marsh Wren	<i>Cistothorus palustris</i>	81%	2 of 2
FGP6	30	Kinglets (Family Regulidae)	Golden-crowned Kinglet	<i>Regulus satrapa</i>	38%	2 of 2
FGP6	31	Thrushes (Family Turdidae)	American Robin	<i>Turdus migratorius</i>	56%	2 of 2
FGP6	31	Thrushes (Family Turdidae)	Swainson's Thrush	<i>Catharus ustulatus</i>	25%	2 of 2
FGP6	35	Warblers (Family Parulidae)	Common Yellowthroat	<i>Geothlypis trichas</i>	56%	2 of 2
FGP6	35	Warblers (Family Parulidae)	MacGillvery's Warbler	<i>Oporornis tolmiei</i>	13%	1 of 2
FGP6	35	Warblers (Family Parulidae)	Nashville Warbler	<i>Vermivora ruficapilla</i>	25%	1 of 2
FGP6	35	Warblers (Family Parulidae)	Orange-crowned Warbler	<i>Vermivora celata</i>	25%	2 of 2
FGP6	35	Warblers (Family Parulidae)	Townsend's Warbler	<i>Dendroica townsendii</i>	38%	2 of 2
FGP6	35	Warblers (Family Parulidae)	Wilson's Warbler	<i>Wilsonia pusilla</i>	13%	1 of 2
FGP6	35	Warblers (Family Parulidae)	Yellow Warbler	<i>Dendroica petechia</i>	19%	2 of 2
FGP6	35	Warblers (Family Parulidae)	Yellow-rumped Warbler	<i>Dendroica coronata</i>	44%	2 of 2
FGP6	36	Tanagers (Family Thraupidae)	Western Tanager	<i>Piranga ludoviciana</i>	31%	2 of 2
FGP6	37	Towhees & Sparrows (Family Emberizidae)	Chipping Sparrow	<i>Spizella passerina</i>	19%	2 of 2
FGP6	37	Towhees & Sparrows (Family Emberizidae)	Dark-eyed Junco	<i>Junco hyemalis</i>	38%	1 of 2
FGP6	37	Towhees & Sparrows (Family Emberizidae)	Song Sparrow	<i>Melospiza melodia</i>	50%	2 of 2
FGP6	37	Towhees & Sparrows (Family	Spotted Towhee	<i>Pipilo maculatus</i>	38%	1 of 2

Location	ID	Family	Common Name	Scientific Name	Detection Probability <sup>1</sup>	Years Observed <sup>2</sup>
		Emberizidae)				
FGP6	38	Grosbeaks & Buntings (Family Cardinalidae)	Black-headed Grosbeak	<i>Pheucticus melanocephalus</i>	19%	2 of 2
FGP6	39	Blackbirds & Orioles (Family Icteridae)	Brown-headed Cowbird	<i>Molothrus ater</i>	44%	2 of 2
FGP6	39	Blackbirds & Orioles (Family Icteridae)	Red-winged Blackbird	<i>Agelaius phoeniceus</i>	56%	2 of 2
FGP6	39	Blackbirds & Orioles (Family Icteridae)	Western Meadowlark	<i>Sturnella neglecta</i>	25%	1 of 2
FGP6	39	Blackbirds & Orioles (Family Icteridae)	Yellow-headed Blackbird	<i>Xanthocephalus xanthocephalus</i>	69%	2 of 2
FGP6	40	Finches (Family Fringillidae)	American Goldfinch	<i>Carduelis tristis</i>	13%	1 of 2
FGP6	40	Finches (Family Fringillidae)	Evening Grosbeak	<i>Coccothraustes vespertinus</i>	38%	1 of 2
FGP6	40	Finches (Family Fringillidae)	Pine Siskin	<i>Carduelis pinus</i>	13%	1 of 2
FGP6	40	Finches (Family Fringillidae)	Red Crossbill	<i>Loxia curvirostra</i>	13%	1 of 2
FGP7	1	Grebes (Family Podicipedidae)	Pied-billed Grebe	<i>Podilymbus podiceps</i>	13%	1 of 2
FGP7	2	Cormorants (Family Phalacrocoracidae)	Double-crested Cormorant	<i>Phalacrocorax auritus</i>	19%	2 of 2
FGP7	3	Herons (Family Ardeidae)	Great-blue Heron	<i>Ardea herodias</i>	25%	1 of 2
FGP7	5	Swans, Geese, & Ducks (Family Anatidae)	Blue-winged Teal	<i>Anas discors</i>	75%	1 of 2
FGP7	5	Swans, Geese, & Ducks (Family Anatidae)	Canada Goose	<i>Branta canadensis</i>	56%	2 of 2
FGP7	5	Swans, Geese, & Ducks (Family Anatidae)	Cinnamon Teal	<i>Anas cyanoptera</i>	25%	1 of 2
FGP7	5	Swans, Geese, & Ducks (Family Anatidae)	Gadwall	<i>Anas strepera</i>	38%	1 of 2
FGP7	5	Swans, Geese, & Ducks (Family Anatidae)	Green-winged Teal	<i>Anas crecca</i>	13%	1 of 2
FGP7	5	Swans, Geese, & Ducks (Family Anatidae)	Mallard	<i>Anas platyrhynchos</i>	38%	2 of 2
FGP7	5	Swans, Geese, & Ducks (Family Anatidae)	Northern Shoveler	<i>Anas clypeata</i>	25%	1 of 2
FGP7	6	Eagles, Kites & Hawks (Family Accipitridae)	Osprey	<i>Pandion haliaetus</i>	63%	2 of 2
FGP7	7	Falcons (Family Falconidae)	American Kestrel	<i>Falco sparverius</i>	13%	1 of 2
FGP7	9	Quail (Family Odontophoridae)	California Quail	<i>Callipepla californica</i>	75%	1 of 2
FGP7	10	Rails (Family Rallidae)	American Coot	<i>Fulica americana</i>	19%	2 of 2
FGP7	10	Rails (Family Rallidae)	Sora	<i>Porzana carolina</i>	19%	2 of 2

Location	ID	Family	Common Name	Scientific Name	Detection Probability <sup>1</sup>	Years Observed <sup>2</sup>
FGP7	10	Rails (Family Rallidae)	Virginia Rail	<i>Rallus limicola</i>	13%	1 of 2
FGP7	11	Plovers (Family Charadriidae)	Killdeer	<i>Charadrius vociferus</i>	25%	2 of 2
FGP7	13	Sandpipers (Family Scolopacidae)	Common Snipe	<i>Gallinago delicata</i>	69%	2 of 2
FGP7	13	Sandpipers (Family Scolopacidae)	Wilson's Phalarope	<i>Phalaropus tricolor</i>	25%	1 of 2
FGP7	15	Doves (Family Columbidae)	Mourning Dove	<i>Zenaida macroura</i>	13%	2 of 2
FGP7	21	Woodpeckers (Family Picidae)	Northern Flicker	<i>Colaptes auratus</i>	25%	2 of 2
FGP7	21	Woodpeckers (Family Picidae)	Pileated Woodpecker	<i>Dryocopus pileatus</i>	13%	1 of 2
FGP7	22	Flycatchers (Family Tyrannidae)	Eastern Kingbird	<i>Tyrannus tyrannus</i>	38%	1 of 2
FGP7	22	Flycatchers (Family Tyrannidae)	Willow Flycatcher	<i>Empidonax traillii</i>	38%	1 of 2
FGP7	23	Vireos (Family Vireonidae)	Red-eyed Vireo	<i>Vireo olivaceus</i>	38%	1 of 2
FGP7	23	Vireos (Family Vireonidae)	Warbling Vireo	<i>Vireo gilvus</i>	13%	2 of 2
FGP7	24	Jays & Crows (Family Corvidae)	American Crow	<i>Corvus brachyrhynchos</i>	13%	1 of 2
FGP7	24	Jays & Crows (Family Corvidae)	Black-billed Magpie	<i>Pica pica</i>	13%	2 of 2
FGP7	24	Jays & Crows (Family Corvidae)	Common Raven	<i>Corvus corax</i>	13%	2 of 2
FGP7	25	Swallows (Family Hirundinidae)	Cliff Swallow	<i>Petrochelidon pyrrhonota</i>	38%	1 of 2
FGP7	25	Swallows (Family Hirundinidae)	Northern Rough-winged Swallow	<i>Stelgidopteryx serripennis</i>	13%	1 of 2
FGP7	25	Swallows (Family Hirundinidae)	Tree Swallow	<i>Tachycineta bicolor</i>	94%	2 of 2
FGP7	26	Chickadees & Titmice (Family Paridae)	Black-capped Chickadee	<i>Poecile atricapillus</i>	44%	2 of 2
FGP7	26	Chickadees & Titmice (Family Paridae)	Mountain Chickadee	<i>Poecile gambeli</i>	13%	1 of 2
FGP7	31	Thrushes (Family Turdidae)	American Robin	<i>Turdus migratorius</i>	50%	2 of 2
FGP7	32	Mockingbirds & Thrashers (Family Mimidae)	Gray Catbird	<i>Dumetella carolinensis</i>	25%	2 of 2
FGP7	33	Starling (Family Sturnidae)	European Starling	<i>Sturnus vulgaris</i>	75%	2 of 2
FGP7	34	Waxwings (Family Bombycillidae)	Cedar Waxwing	<i>Bombycilla cedrorum</i>	13%	1 of 2
FGP7	35	Warblers (Family Parulidae)	American Redstart	<i>Setophaga ruticilla</i>	13%	1 of 2
FGP7	35	Warblers (Family Parulidae)	Common Yellowthroat	<i>Geothlypis trichas</i>	31%	2 of 2
FGP7	35	Warblers (Family Parulidae)	Orange-crowned Warbler	<i>Vermivora celata</i>	13%	1 of 2
FGP7	35	Warblers (Family Parulidae)	Yellow Warbler	<i>Dendroica petechia</i>	88%	2 of 2
FGP7	35	Warblers (Family Parulidae)	Yellow-rumped Warbler	<i>Dendroica coronata</i>	25%	1 of 2
FGP7	37	Towhees & Sparrows (Family Emberizidae)	Savannah Sparrow	<i>Passerculus sandwichensis</i>	88%	2 of 2
FGP7	37	Towhees & Sparrows (Family Emberizidae)	Song Sparrow	<i>Melospiza melodia</i>	75%	2 of 2

Location	ID	Family	Common Name	Scientific Name	Detection Probability <sup>1</sup>	Years Observed <sup>2</sup>
FGP7	38	Grosbeaks & Buntings (Family Cardinalidae)	Black-headed Grosbeak	<i>Pheucticus melanocephalus</i>	25%	1 of 2
FGP7	39	Blackbirds & Orioles (Family Icteridae)	Bobolink	<i>Dolichonyx oryzivorus</i>	25%	1 of 2
FGP7	39	Blackbirds & Orioles (Family Icteridae)	Brewer's Blackbird	<i>Euphagus cyanocephalus</i>	25%	1 of 2
FGP7	39	Blackbirds & Orioles (Family Icteridae)	Brown-headed Cowbird	<i>Molothrus ater</i>	19%	2 of 2
FGP7	39	Blackbirds & Orioles (Family Icteridae)	Bullock's Oriole	<i>Icterus bullockii</i>	44%	2 of 2
FGP7	39	Blackbirds & Orioles (Family Icteridae)	Red-winged Blackbird	<i>Agelaius phoeniceus</i>	63%	2 of 2
FGP7	39	Blackbirds & Orioles (Family Icteridae)	Western Meadowlark	<i>Sturnella neglecta</i>	31%	2 of 2
FGP7	39	Blackbirds & Orioles (Family Icteridae)	Yellow-headed Blackbird	<i>Xanthocephalus xanthocephalus</i>	38%	2 of 2
FGP8	1	Grebes (Family Podicipedidae)	Pied-billed Grebe	<i>Podilymbus podiceps</i>	19%	2 of 2
FGP8	2	Cormorants (Family Phalacrocoracidae)	Double-crested Cormorant	<i>Phalacrocorax auritus</i>	25%	1 of 2
FGP8	3	Herons (Family Ardeidae)	Great-blue Heron	<i>Ardea herodias</i>	25%	2 of 2
FGP8	5	Swans, Geese, & Ducks (Family Anatidae)	American Wigeon	<i>Anas americana</i>	13%	1 of 2
FGP8	5	Swans, Geese, & Ducks (Family Anatidae)	Blue-winged Teal	<i>Anas discors</i>	13%	1 of 2
FGP8	5	Swans, Geese, & Ducks (Family Anatidae)	Canada Goose	<i>Branta canadensis</i>	38%	2 of 2
FGP8	5	Swans, Geese, & Ducks (Family Anatidae)	Gadwall	<i>Anas strepera</i>	13%	2 of 2
FGP8	5	Swans, Geese, & Ducks (Family Anatidae)	Mallard	<i>Anas platyrhynchos</i>	38%	1 of 2
FGP8	5	Swans, Geese, & Ducks (Family Anatidae)	Northern Shoveler	<i>Anas clypeata</i>	25%	1 of 2
FGP8	6	Eagles, Kites & Hawks (Family Accipitridae)	Bald Eagle	<i>Haliaeetus leucocephalus</i>	13%	1 of 2
FGP8	6	Eagles, Kites & Hawks (Family Accipitridae)	Osprey	<i>Pandion haliaetus</i>	13%	1 of 2
FGP8	6	Eagles, Kites & Hawks (Family Accipitridae)	Red-tailed Hawk	<i>Buteo jamaicensis</i>	13%	1 of 2
FGP8	8	Grouse (Family Phasianidae)	Ring-necked Pheasant	<i>Phasianus colchicus</i>	13%	1 of 2
FGP8	8	Grouse (Family Phasianidae)	Ruffed Grouse	<i>Bonasa umbellus</i>	19%	2 of 2
FGP8	9	Quail (Family Odontophoridae)	California Quail	<i>Callipepla californica</i>	13%	1 of 2
FGP8	10	Rails (Family Rallidae)	American Coot	<i>Fulica americana</i>	25%	2 of 2
FGP8	10	Rails (Family Rallidae)	Sora	<i>Porzana carolina</i>	69%	2 of 2

Location	ID	Family	Common Name	Scientific Name	Detection Probability <sup>1</sup>	Years Observed <sup>2</sup>
FGP8	11	Plovers (Family Charadriidae)	Killdeer	<i>Charadrius vociferus</i>	19%	2 of 2
FGP8	13	Sandpipers (Family Scolopacidae)	Common Snipe	<i>Gallinago delicata</i>	75%	2 of 2
FGP8	13	Sandpipers (Family Scolopacidae)	Red-necked Phalarope	<i>Phalaropus lobatus</i>	13%	1 of 2
FGP8	15	Doves (Family Columbidae)	Mourning Dove	<i>Zenaida macroura</i>	19%	2 of 2
FGP8	16	Nightjars (Family Caprimulgidae)	Common Nighthawk	<i>Chordeiles minor</i>	13%	1 of 2
FGP8	21	Woodpeckers (Family Picidae)	Northern Flicker	<i>Colaptes auratus</i>	25%	1 of 2
FGP8	22	Flycatchers (Family Tyrannidae)	Eastern Kingbird	<i>Tyrannus tyrannus</i>	25%	2 of 2
FGP8	22	Flycatchers (Family Tyrannidae)	Western Wood-pewee	<i>Contopus sordidulus</i>	13%	1 of 2
FGP8	23	Vireos (Family Vireonidae)	Red-eyed Vireo	<i>Vireo olivaceus</i>	25%	1 of 2
FGP8	24	Jays & Crows (Family Corvidae)	American Crow	<i>Corvus brachyrhynchos</i>	13%	1 of 2
FGP8	24	Jays & Crows (Family Corvidae)	Black-billed Magpie	<i>Pica pica</i>	13%	1 of 2
FGP8	24	Jays & Crows (Family Corvidae)	Common Raven	<i>Corvus corax</i>	13%	1 of 2
FGP8	25	Swallows (Family Hirundinidae)	Cliff Swallow	<i>Petrochelidon pyrrhonota</i>	13%	1 of 2
FGP8	25	Swallows (Family Hirundinidae)	Tree Swallow	<i>Tachycineta bicolor</i>	38%	2 of 2
FGP8	26	Chickadees & Titmice (Family Paridae)	Black-capped Chickadee	<i>Poecile atricapillus</i>	25%	1 of 2
FGP8	31	Thrushes (Family Turdidae)	American Robin	<i>Turdus migratorius</i>	25%	1 of 2
FGP8	31	Thrushes (Family Turdidae)	Swainson's Thrush	<i>Catharus ustulatus</i>	13%	1 of 2
FGP8	33	Starling (Family Sturnidae)	European Starling	<i>Sturnus vulgaris</i>	38%	1 of 2
FGP8	34	Waxwings (Family Bombycillidae)	Cedar Waxwing	<i>Bombycilla cedrorum</i>	38%	1 of 2
FGP8	35	Warblers (Family Parulidae)	Common Yellowthroat	<i>Geothlypis trichas</i>	50%	2 of 2
FGP8	35	Warblers (Family Parulidae)	Orange-crowned Warbler	<i>Vermivora celata</i>	13%	1 of 2
FGP8	35	Warblers (Family Parulidae)	Yellow Warbler	<i>Dendroica petechia</i>	25%	1 of 2
FGP8	37	Towhees & Sparrows (Family Emberizidae)	Chipping Sparrow	<i>Spizella passerina</i>	13%	1 of 2
FGP8	37	Towhees & Sparrows (Family Emberizidae)	Lincoln's Sparrow	<i>Melospiza lincolnii</i>	13%	1 of 2
FGP8	37	Towhees & Sparrows (Family Emberizidae)	Savannah Sparrow	<i>Passerculus sandwichensis</i>	88%	2 of 2
FGP8	37	Towhees & Sparrows (Family Emberizidae)	Song Sparrow	<i>Melospiza melodia</i>	50%	1 of 2
FGP8	39	Blackbirds & Orioles (Family Icteridae)	Bobolink	<i>Dolichonyx oryzivorus</i>	56%	2 of 2
FGP8	39	Blackbirds & Orioles (Family Icteridae)	Brown-headed Cowbird	<i>Molothrus ater</i>	13%	1 of 2
FGP8	39	Blackbirds & Orioles (Family Icteridae)	Bullock's Oriole	<i>Icterus bullockii</i>	13%	1 of 2
FGP8	39	Blackbirds & Orioles (Family Icteridae)	Red-winged Blackbird	<i>Agelaius phoeniceus</i>	94%	2 of 2

Location	ID	Family	Common Name	Scientific Name	Detection Probability <sup>1</sup>	Years Observed <sup>2</sup>
FGP8	39	Blackbirds & Orioles (Family Icteridae)	Western Meadowlark	<i>Sturnella neglecta</i>	63%	2 of 2
FGP8	39	Blackbirds & Orioles (Family Icteridae)	Yellow-headed Blackbird	<i>Xanthocephalus xanthocephalus</i>	50%	2 of 2
FGR10	1	Grebes (Family Podicipedidae)	Pied-billed Grebe	<i>Podilymbus podiceps</i>	37%	3 of 3
FGR10	3	Herons (Family Ardeidae)	Great-blue Heron	<i>Ardea herodias</i>	33%	3 of 3
FGR10	5	Swans, Geese, & Ducks (Family Anatidae)	Canada Goose	<i>Branta canadensis</i>	23%	3 of 3
FGR10	5	Swans, Geese, & Ducks (Family Anatidae)	Mallard	<i>Anas platyrhynchos</i>	13%	1 of 3
FGR10	8	Grouse (Family Phasianidae)	Ruffed Grouse	<i>Bonasa umbellus</i>	27%	2 of 3
FGR10	9	Quail (Family Odontophoridae)	California Quail	<i>Callipepla californica</i>	14%	1 of 3
FGR10	10	Rails (Family Rallidae)	Sora	<i>Porzana carolina</i>	33%	2 of 3
FGR10	10	Rails (Family Rallidae)	Virginia Rail	<i>Rallus limicola</i>	17%	1 of 3
FGR10	11	Plovers (Family Charadriidae)	Killdeer	<i>Charadrius vociferus</i>	25%	1 of 3
FGR10	13	Sandpipers (Family Scolopacidae)	Common Snipe	<i>Gallinago delicata</i>	88%	3 of 3
FGR10	13	Sandpipers (Family Scolopacidae)	Spotted Sandpiper	<i>Actitis macularia</i>	14%	1 of 3
FGR10	14	Jaegers, Gulls & Terns (Family Laridae)	Black Tern	<i>Chlidonias niger</i>	14%	1 of 3
FGR10	15	Doves (Family Columbidae)	Mourning Dove	<i>Zenaida macroura</i>	13%	1 of 3
FGR10	18	Swifts (Family Apodidae)	Vaux's Swift	<i>Chaetura vauxi</i>	13%	2 of 3
FGR10	19	Hummingbirds (Family Trochilidae)	Black-chinned Hummingbird	<i>Archilochus alexandri</i>	13%	1 of 3
FGR10	19	Hummingbirds (Family Trochilidae)	Calliope Hummingbird	<i>Stellula calliope</i>	13%	1 of 3
FGR10	21	Woodpeckers (Family Picidae)	Downy Woodpecker	<i>Picoides pubescens</i>	15%	2 of 3
FGR10	21	Woodpeckers (Family Picidae)	Northern Flicker	<i>Colaptes auratus</i>	21%	2 of 3
FGR10	21	Woodpeckers (Family Picidae)	Pileated Woodpecker	<i>Dryocopus pileatus</i>	15%	2 of 3
FGR10	21	Woodpeckers (Family Picidae)	Red-naped Sapsucker	<i>Sphyrapicus nuchalis</i>	48%	3 of 3
FGR10	22	Flycatchers (Family Tyrannidae)	Dusky Flycatcher	<i>Empidonax oberholseri</i>	14%	1 of 3
FGR10	22	Flycatchers (Family Tyrannidae)	Least Flycatcher	<i>Empidonax minimus</i>	13%	1 of 3
FGR10	22	Flycatchers (Family Tyrannidae)	Western Wood-pewee	<i>Contopus sordidulus</i>	23%	2 of 3
FGR10	22	Flycatchers (Family Tyrannidae)	Willow Flycatcher	<i>Empidonax traillii</i>	59%	3 of 3
FGR10	23	Vireos (Family Vireonidae)	Red-eyed Vireo	<i>Vireo olivaceus</i>	45%	3 of 3
FGR10	23	Vireos (Family Vireonidae)	Warbling Vireo	<i>Vireo gilvus</i>	42%	3 of 3
FGR10	24	Jays & Crows (Family Corvidae)	American Crow	<i>Corvus brachyrhynchos</i>	25%	1 of 3
FGR10	24	Jays & Crows (Family Corvidae)	Black-billed Magpie	<i>Pica pica</i>	13%	1 of 3
FGR10	24	Jays & Crows (Family Corvidae)	Common Raven	<i>Corvus corax</i>	67%	1 of 3

Location	ID	Family	Common Name	Scientific Name	Detection Probability <sup>1</sup>	Years Observed <sup>2</sup>
FGR10	25	Swallows (Family Hirundinidae)	Tree Swallow	<i>Tachycineta bicolor</i>	48%	3 of 3
FGR10	26	Chickadees & Titmice (Family Paridae)	Black-capped Chickadee	<i>Poecile atricapillus</i>	23%	3 of 3
FGR10	27	Nuthatches (Family Sittidae)	Red-breasted Nuthatch	<i>Sitta canadensis</i>	13%	1 of 3
FGR10	29	Wrens (Family Troglodytidae)	Marsh Wren	<i>Cistothorus palustris</i>	21%	2 of 3
FGR10	31	Thrushes (Family Turdidae)	American Robin	<i>Turdus migratorius</i>	68%	3 of 3
FGR10	31	Thrushes (Family Turdidae)	Swainson's Thrush	<i>Catharus ustulatus</i>	19%	3 of 3
FGR10	32	Mockingbirds & Thrashers (Family Mimidae)	Gray Catbird	<i>Dumetella carolinensis</i>	59%	3 of 3
FGR10	33	Starling (Family Sturnidae)	European Starling	<i>Sturnus vulgaris</i>	15%	2 of 3
FGR10	34	Waxwings (Family Bombycillidae)	Cedar Waxwing	<i>Bombycilla cedrorum</i>	43%	3 of 3
FGR10	35	Warblers (Family Parulidae)	American Redstart	<i>Setophaga ruticilla</i>	63%	3 of 3
FGR10	35	Warblers (Family Parulidae)	Common Yellowthroat	<i>Geothlypis trichas</i>	63%	3 of 3
FGR10	35	Warblers (Family Parulidae)	Northern Waterthrush	<i>Seiurus noveboracensis</i>	50%	3 of 3
FGR10	35	Warblers (Family Parulidae)	Wilson's Warbler	<i>Wilsonia pusilla</i>	13%	1 of 3
FGR10	35	Warblers (Family Parulidae)	Yellow Warbler	<i>Dendroica petechia</i>	90%	3 of 3
FGR10	35	Warblers (Family Parulidae)	Yellow-rumped Warbler	<i>Dendroica coronata</i>	43%	1 of 3
FGR10	37	Towhees & Sparrows (Family Emberizidae)	Chipping Sparrow	<i>Spizella passerina</i>	14%	1 of 3
FGR10	37	Towhees & Sparrows (Family Emberizidae)	Song Sparrow	<i>Melospiza melodia</i>	96%	3 of 3
FGR10	37	Towhees & Sparrows (Family Emberizidae)	Spotted Towhee	<i>Pipilo maculatus</i>	14%	1 of 3
FGR10	38	Grosbeaks & Buntings (Family Cardinalidae)	Black-headed Grosbeak	<i>Pheucticus melanocephalus</i>	19%	3 of 3
FGR10	39	Blackbirds & Orioles (Family Icteridae)	Brown-headed Cowbird	<i>Molothrus ater</i>	59%	3 of 3
FGR10	39	Blackbirds & Orioles (Family Icteridae)	Bullock's Oriole	<i>Icterus bullockii</i>	14%	1 of 3
FGR10	39	Blackbirds & Orioles (Family Icteridae)	Red-winged Blackbird	<i>Agelaius phoeniceus</i>	43%	3 of 3
FGR10	39	Blackbirds & Orioles (Family Icteridae)	Western Meadowlark	<i>Sturnella neglecta</i>	13%	2 of 3
FGR10	39	Blackbirds & Orioles (Family Icteridae)	Yellow-headed Blackbird	<i>Xanthocephalus xanthocephalus</i>	33%	3 of 3
FGR10	40	Finches (Family Fringillidae)	American Goldfinch	<i>Carduelis tristis</i>	14%	1 of 3
FGR10	40	Finches (Family Fringillidae)	Pine Siskin	<i>Carduelis pinus</i>	14%	1 of 3
FGR10	40	Finches (Family Fringillidae)	Red Crossbill	<i>Loxia curvirostra</i>	13%	2 of 3
FGR2	1	Grebes (Family Podicipedidae)	Pied-billed Grebe	<i>Podilymbus podiceps</i>	33%	2 of 3

Location	ID	Family	Common Name	Scientific Name	Detection Probability <sup>1</sup>	Years Observed <sup>2</sup>
FGR2	3	Herons (Family Ardeidae)	Great-blue Heron	<i>Ardea herodias</i>	100%	3 of 3
FGR2	5	Swans, Geese, & Ducks (Family Anatidae)	Canada Goose	<i>Branta canadensis</i>	27%	3 of 3
FGR2	5	Swans, Geese, & Ducks (Family Anatidae)	Mallard	<i>Anas platyrhynchos</i>	15%	2 of 3
FGR2	9	Quail (Family Odontophoridae)	California Quail	<i>Callipepla californica</i>	17%	1 of 3
FGR2	10	Rails (Family Rallidae)	Sora	<i>Porzana carolina</i>	29%	1 of 3
FGR2	13	Sandpipers (Family Scolopacidae)	Common Snipe	<i>Gallinago delicata</i>	42%	3 of 3
FGR2	13	Sandpipers (Family Scolopacidae)	Spotted Sandpiper	<i>Actitis macularia</i>	13%	1 of 3
FGR2	21	Woodpeckers (Family Picidae)	Downy Woodpecker	<i>Picoides pubescens</i>	39%	3 of 3
FGR2	21	Woodpeckers (Family Picidae)	Hairy Woodpecker	<i>Picoides villosus</i>	43%	1 of 3
FGR2	21	Woodpeckers (Family Picidae)	Northern Flicker	<i>Colaptes auratus</i>	21%	2 of 3
FGR2	21	Woodpeckers (Family Picidae)	Pileated Woodpecker	<i>Dryocopus pileatus</i>	20%	2 of 3
FGR2	21	Woodpeckers (Family Picidae)	Red-naped Sapsucker	<i>Sphyrapicus nuchalis</i>	21%	2 of 3
FGR2	22	Flycatchers (Family Tyrannidae)	Western Wood-pewee	<i>Contopus sordidulus</i>	50%	3 of 3
FGR2	23	Vireos (Family Vireonidae)	Red-eyed Vireo	<i>Vireo olivaceus</i>	39%	3 of 3
FGR2	23	Vireos (Family Vireonidae)	Warbling Vireo	<i>Vireo gilvus</i>	30%	3 of 3
FGR2	24	Jays & Crows (Family Corvidae)	American Crow	<i>Corvus brachyrhynchos</i>	13%	2 of 3
FGR2	24	Jays & Crows (Family Corvidae)	Black-billed Magpie	<i>Pica pica</i>	50%	1 of 3
FGR2	24	Jays & Crows (Family Corvidae)	Common Raven	<i>Corvus corax</i>	24%	2 of 3
FGR2	25	Swallows (Family Hirundinidae)	Tree Swallow	<i>Tachycineta bicolor</i>	95%	3 of 3
FGR2	26	Chickadees & Titmice (Family Paridae)	Black-capped Chickadee	<i>Poecile atricapillus</i>	23%	3 of 3
FGR2	27	Nuthatches (Family Sittidae)	Red-breasted Nuthatch	<i>Sitta canadensis</i>	15%	2 of 3
FGR2	29	Wrens (Family Troglodytidae)	Bewick's Wren	<i>Thryomanes bewickii</i>	14%	1 of 3
FGR2	31	Thrushes (Family Turdidae)	American Robin	<i>Turdus migratorius</i>	34%	3 of 3
FGR2	31	Thrushes (Family Turdidae)	Swainson's Thrush	<i>Catharus ustulatus</i>	33%	1 of 3
FGR2	32	Mockingbirds & Thrashers (Family Mimidae)	Gray Catbird	<i>Dumetella carolinensis</i>	17%	1 of 3
FGR2	33	Starling (Family Sturnidae)	European Starling	<i>Sturnus vulgaris</i>	100%	3 of 3
FGR2	34	Waxwings (Family Bombycillidae)	Cedar Waxwing	<i>Bombycilla cedrorum</i>	15%	2 of 3
FGR2	35	Warblers (Family Parulidae)	American Redstart	<i>Setophaga ruticilla</i>	34%	3 of 3
FGR2	35	Warblers (Family Parulidae)	Common Yellowthroat	<i>Geothlypis trichas</i>	17%	1 of 3
FGR2	35	Warblers (Family Parulidae)	Yellow Warbler	<i>Dendroica petechia</i>	96%	3 of 3
FGR2	35	Warblers (Family Parulidae)	Yellow-rumped Warbler	<i>Dendroica coronata</i>	14%	1 of 3

Location	ID	Family	Common Name	Scientific Name	Detection Probability <sup>1</sup>	Years Observed <sup>2</sup>
FGR2	37	Towhees & Sparrows (Family Emberizidae)	Song Sparrow	<i>Melospiza melodia</i>	57%	3 of 3
FGR2	38	Grosbeaks & Buntings (Family Cardinalidae)	Black-headed Grosbeak	<i>Pheucticus melanocephalus</i>	13%	1 of 3
FGR2	39	Blackbirds & Orioles (Family Icteridae)	Brown-headed Cowbird	<i>Molothrus ater</i>	19%	3 of 3
FGR2	39	Blackbirds & Orioles (Family Icteridae)	Bullock's Oriole	<i>Icterus bullockii</i>	72%	3 of 3
FGR2	40	Finches (Family Fringillidae)	Red Crossbill	<i>Loxia curvirostra</i>	15%	2 of 3
FGR9	1	Grebes (Family Podicipedidae)	Pied-billed Grebe	<i>Podilymbus podiceps</i>	43%	1 of 3
FGR9	3	Herons (Family Ardeidae)	American Bittern	<i>Botaurus lentiginosus</i>	43%	1 of 3
FGR9	3	Herons (Family Ardeidae)	Great-blue Heron	<i>Ardea herodias</i>	25%	1 of 3
FGR9	4	New World Vultures (Family Cathartidae)	Turkey Vulture	<i>Cathartes aura</i>	13%	1 of 3
FGR9	5	Swans, Geese, & Ducks (Family Anatidae)	American Wigeon	<i>Anas americana</i>	13%	1 of 3
FGR9	5	Swans, Geese, & Ducks (Family Anatidae)	Barrow's Goldeneye	<i>Bucephala islandica</i>	13%	1 of 3
FGR9	5	Swans, Geese, & Ducks (Family Anatidae)	Blue-winged Teal	<i>Anas discors</i>	19%	2 of 3
FGR9	5	Swans, Geese, & Ducks (Family Anatidae)	Canada Goose	<i>Branta canadensis</i>	25%	2 of 3
FGR9	5	Swans, Geese, & Ducks (Family Anatidae)	Cinnamon Teal	<i>Anas cyanoptera</i>	38%	3 of 3
FGR9	5	Swans, Geese, & Ducks (Family Anatidae)	Common Goldeneye	<i>Bucephala clangula</i>	13%	1 of 3
FGR9	5	Swans, Geese, & Ducks (Family Anatidae)	Gadwall	<i>Anas strepera</i>	19%	2 of 3
FGR9	5	Swans, Geese, & Ducks (Family Anatidae)	Green-winged Teal	<i>Anas crecca</i>	19%	2 of 3
FGR9	5	Swans, Geese, & Ducks (Family Anatidae)	Mallard	<i>Anas platyrhynchos</i>	21%	2 of 3
FGR9	5	Swans, Geese, & Ducks (Family Anatidae)	Northern Shoveler	<i>Anas clypeata</i>	17%	3 of 3
FGR9	5	Swans, Geese, & Ducks (Family Anatidae)	Redhead	<i>Aythya americana</i>	21%	2 of 3
FGR9	5	Swans, Geese, & Ducks (Family Anatidae)	Ring-necked Duck	<i>Aythya collaris</i>	13%	1 of 3
FGR9	6	Eagles, Kites & Hawks (Family	Osprey	<i>Pandion haliaetus</i>	13%	1 of 3

Location	ID	Family	Common Name	Scientific Name	Detection Probability <sup>1</sup>	Years Observed <sup>2</sup>
		Accipitridae)				
FGR9	8	Grouse (Family Phasianidae)	Ring-necked Pheasant	<i>Phasianus colchicus</i>	13%	2 of 3
FGR9	8	Grouse (Family Phasianidae)	Ruffed Grouse	<i>Bonasa umbellus</i>	13%	1 of 3
FGR9	9	Quail (Family Odontophoridae)	California Quail	<i>Callipepla californica</i>	13%	1 of 3
FGR9	10	Rails (Family Rallidae)	American Coot	<i>Fulica americana</i>	49%	2 of 3
FGR9	10	Rails (Family Rallidae)	Sora	<i>Porzana carolina</i>	83%	3 of 3
FGR9	10	Rails (Family Rallidae)	Virginia Rail	<i>Rallus limicola</i>	65%	3 of 3
FGR9	11	Plovers (Family Charadriidae)	Killdeer	<i>Charadrius vociferus</i>	13%	2 of 3
FGR9	13	Sandpipers (Family Scolopacidae)	Common Snipe	<i>Gallinago delicata</i>	92%	3 of 3
FGR9	13	Sandpipers (Family Scolopacidae)	Red-necked Phalarope	<i>Phalaropus lobatus</i>	13%	2 of 3
FGR9	13	Sandpipers (Family Scolopacidae)	Wilson's Phalarope	<i>Phalaropus tricolor</i>	26%	3 of 3
FGR9	14	Jaegers, Gulls & Terns (Family Laridae)	Black Tern	<i>Chlidonias niger</i>	13%	2 of 3
FGR9	18	Swifts (Family Apodidae)	Vaux's Swift	<i>Chaetura vauxi</i>	14%	1 of 3
FGR9	21	Woodpeckers (Family Picidae)	Northern Flicker	<i>Colaptes auratus</i>	13%	3 of 3
FGR9	22	Flycatchers (Family Tyrannidae)	Eastern Kingbird	<i>Tyrannus tyrannus</i>	20%	2 of 3
FGR9	22	Flycatchers (Family Tyrannidae)	Western Wood-pewee	<i>Contopus sordidulus</i>	13%	1 of 3
FGR9	23	Vireos (Family Vireonidae)	Red-eyed Vireo	<i>Vireo olivaceus</i>	13%	1 of 3
FGR9	23	Vireos (Family Vireonidae)	Warbling Vireo	<i>Vireo gilvus</i>	13%	1 of 3
FGR9	24	Jays & Crows (Family Corvidae)	American Crow	<i>Corvus brachyrhynchos</i>	14%	1 of 3
FGR9	24	Jays & Crows (Family Corvidae)	Common Raven	<i>Corvus corax</i>	25%	1 of 3
FGR9	25	Swallows (Family Hirundinidae)	Barn Swallow	<i>Hirundo rustica</i>	13%	2 of 3
FGR9	25	Swallows (Family Hirundinidae)	Cliff Swallow	<i>Petrochelidon pyrrhonota</i>	13%	1 of 3
FGR9	25	Swallows (Family Hirundinidae)	Tree Swallow	<i>Tachycineta bicolor</i>	61%	3 of 3
FGR9	25	Swallows (Family Hirundinidae)	Violet-green Swallow	<i>Tachycineta thalassina</i>	14%	1 of 3
FGR9	26	Chickadees & Titmice (Family Paridae)	Black-capped Chickadee	<i>Poecile atricapillus</i>	13%	2 of 3
FGR9	29	Wrens (Family Troglodytidae)	Marsh Wren	<i>Cistothorus palustris</i>	50%	2 of 3
FGR9	31	Thrushes (Family Turdidae)	American Robin	<i>Turdus migratorius</i>	27%	3 of 3
FGR9	33	Starling (Family Sturnidae)	European Starling	<i>Sturnus vulgaris</i>	19%	2 of 3
FGR9	34	Waxwings (Family Bombycillidae)	Cedar Waxwing	<i>Bombycilla cedrorum</i>	14%	1 of 3
FGR9	35	Warblers (Family Parulidae)	Common Yellowthroat	<i>Geothlypis trichas</i>	88%	3 of 3
FGR9	35	Warblers (Family Parulidae)	Yellow Warbler	<i>Dendroica petechia</i>	25%	2 of 3
FGR9	36	Tanagers (Family Thraupidae)	Western Tanager	<i>Piranga ludoviciana</i>	13%	1 of 3
FGR9	37	Towhees & Sparrows (Family	Savannah Sparrow	<i>Passerculus</i>	38%	1 of 3

Location	ID	Family	Common Name	Scientific Name	Detection Probability <sup>1</sup>	Years Observed <sup>2</sup>
		Emberizidae)		<i>sandwichensis</i>		
FGR9	37	Towhees & Sparrows (Family Emberizidae)	Song Sparrow	<i>Melospiza melodia</i>	31%	2 of 3
FGR9	38	Grosbeaks & Buntings (Family Cardinalidae)	Black-headed Grosbeak	<i>Pheucticus melanocephalus</i>	29%	1 of 3
FGR9	39	Blackbirds & Orioles (Family Icteridae)	Brown-headed Cowbird	<i>Molothrus ater</i>	13%	1 of 3
FGR9	39	Blackbirds & Orioles (Family Icteridae)	Red-winged Blackbird	<i>Agelaius phoeniceus</i>	100%	3 of 3
FGR9	39	Blackbirds & Orioles (Family Icteridae)	Western Meadowlark	<i>Sturnella neglecta</i>	13%	1 of 3
FGR9	39	Blackbirds & Orioles (Family Icteridae)	Yellow-headed Blackbird	<i>Xanthocephalus xanthocephalus</i>	58%	3 of 3
PRP1	5	Swans, Geese, & Ducks (Family Anatidae)	Mallard	<i>Anas platyrhynchos</i>	29%	1 of 1
PRP1	13	Sandpipers (Family Scolopacidae)	Common Snipe	<i>Gallinago delicata</i>	29%	1 of 1
PRP1	15	Doves (Family Columbidae)	Mourning Dove	<i>Zenaida macroura</i>	14%	1 of 1
PRP1	22	Flycatchers (Family Tyrannidae)	Dusky Flycatcher	<i>Empidonax oberholseri</i>	43%	1 of 1
PRP1	22	Flycatchers (Family Tyrannidae)	Least Flycatcher	<i>Empidonax minimus</i>	14%	1 of 1
PRP1	22	Flycatchers (Family Tyrannidae)	Willow Flycatcher	<i>Empidonax traillii</i>	57%	1 of 1
PRP1	23	Vireos (Family Vireonidae)	Red-eyed Vireo	<i>Vireo olivaceus</i>	43%	1 of 1
PRP1	23	Vireos (Family Vireonidae)	Warbling Vireo	<i>Vireo gilvus</i>	14%	1 of 1
PRP1	24	Jays & Crows (Family Corvidae)	Common Raven	<i>Corvus corax</i>	57%	1 of 1
PRP1	25	Swallows (Family Hirundinidae)	Northern Rough-winged Swallow	<i>Stelgidopteryx serripennis</i>	14%	1 of 1
PRP1	25	Swallows (Family Hirundinidae)	Violet-green Swallow	<i>Tachycineta thalassina</i>	29%	1 of 1
PRP1	26	Chickadees & Titmice (Family Paridae)	Black-capped Chickadee	<i>Poecile atricapillus</i>	43%	1 of 1
PRP1	27	Nuthatches (Family Sittidae)	Red-breasted Nuthatch	<i>Sitta canadensis</i>	14%	1 of 1
PRP1	29	Wrens (Family Troglodytidae)	Marsh Wren	<i>Cistothorus palustris</i>	14%	1 of 1
PRP1	31	Thrushes (Family Turdidae)	American Robin	<i>Turdus migratorius</i>	86%	1 of 1
PRP1	31	Thrushes (Family Turdidae)	Swainson's Thrush	<i>Catharus ustulatus</i>	29%	1 of 1
PRP1	31	Thrushes (Family Turdidae)	Veery	<i>Catharus fuscescens</i>	29%	1 of 1
PRP1	32	Mockingbirds & Thrashers (Family Mimidae)	Gray Catbird	<i>Dumetella carolinensis</i>	86%	1 of 1
PRP1	34	Waxwings (Family Bombycillidae)	Cedar Waxwing	<i>Bombycilla cedrorum</i>	29%	1 of 1
PRP1	35	Warblers (Family Parulidae)	American Redstart	<i>Setophaga ruticilla</i>	43%	1 of 1
PRP1	35	Warblers (Family Parulidae)	Common Yellowthroat	<i>Geothlypis trichas</i>	43%	1 of 1

Location	ID	Family	Common Name	Scientific Name	Detection Probability <sup>1</sup>	Years Observed <sup>2</sup>
PRP1	35	Warblers (Family Parulidae)	Yellow Warbler	<i>Dendroica petechia</i>	100%	1 of 1
PRP1	37	Towhees & Sparrows (Family Emberizidae)	Chipping Sparrow	<i>Spizella passerina</i>	43%	1 of 1
PRP1	37	Towhees & Sparrows (Family Emberizidae)	Dark-eyed Junco	<i>Junco hyemalis</i>	14%	1 of 1
PRP1	37	Towhees & Sparrows (Family Emberizidae)	Song Sparrow	<i>Melospiza melodia</i>	100%	1 of 1
PRP1	38	Grosbeaks & Buntings (Family Cardinalidae)	Black-headed Grosbeak	<i>Pheucticus melanocephalus</i>	57%	1 of 1
PRP1	39	Blackbirds & Orioles (Family Icteridae)	Brown-headed Cowbird	<i>Molothrus ater</i>	29%	1 of 1
PRP1	39	Blackbirds & Orioles (Family Icteridae)	Red-winged Blackbird	<i>Agelaius phoeniceus</i>	57%	1 of 1
PRP1	40	Finches (Family Fringillidae)	American Goldfinch	<i>Carduelis tristis</i>	29%	1 of 1
PRP1	40	Finches (Family Fringillidae)	Pine Siskin	<i>Carduelis pinus</i>	29%	1 of 1
PRP1	40	Finches (Family Fringillidae)	Red Crossbill	<i>Loxia curvirostra</i>	14%	1 of 1
PRP2	3	Hérons (Family Ardeidae)	Great-blue Heron	<i>Ardea herodias</i>	71%	1 of 1
PRP2	5	Swans, Geese, & Ducks (Family Anatidae)	American Wigeon	<i>Anas americana</i>	57%	1 of 1
PRP2	5	Swans, Geese, & Ducks (Family Anatidae)	Canada Goose	<i>Branta canadensis</i>	57%	1 of 1
PRP2	5	Swans, Geese, & Ducks (Family Anatidae)	Cinnamon Teal	<i>Anas cyanoptera</i>	29%	1 of 1
PRP2	5	Swans, Geese, & Ducks (Family Anatidae)	Green-winged Teal	<i>Anas crecca</i>	43%	1 of 1
PRP2	10	Rails (Family Rallidae)	Sora	<i>Porzana carolina</i>	14%	1 of 1
PRP2	11	Plovers (Family Charadriidae)	Killdeer	<i>Charadrius vociferus</i>	100%	1 of 1
PRP2	13	Sandpipers (Family Scolopacidae)	Common Snipe	<i>Gallinago delicata</i>	100%	1 of 1
PRP2	13	Sandpipers (Family Scolopacidae)	Spotted Sandpiper	<i>Actitis macularia</i>	86%	1 of 1
PRP2	15	Doves (Family Columbidae)	Mourning Dove	<i>Zenaidura macroura</i>	14%	1 of 1
PRP2	21	Woodpeckers (Family Picidae)	Northern Flicker	<i>Colaptes auratus</i>	29%	1 of 1
PRP2	22	Flycatchers (Family Tyrannidae)	Eastern Kingbird	<i>Tyrannus tyrannus</i>	57%	1 of 1
PRP2	22	Flycatchers (Family Tyrannidae)	Western Wood-pewee	<i>Contopus sordidulus</i>	14%	1 of 1
PRP2	22	Flycatchers (Family Tyrannidae)	Willow Flycatcher	<i>Empidonax traillii</i>	43%	1 of 1
PRP2	23	Vireos (Family Vireonidae)	Warbling Vireo	<i>Vireo gilvus</i>	14%	1 of 1
PRP2	24	Jays & Crows (Family Corvidae)	Black-billed Magpie	<i>Pica pica</i>	29%	1 of 1
PRP2	24	Jays & Crows (Family Corvidae)	Common Raven	<i>Corvus corax</i>	43%	1 of 1

Location	ID	Family	Common Name	Scientific Name	Detection Probability <sup>1</sup>	Years Observed <sup>2</sup>
PRP2	25	Swallows (Family Hirundinidae)	Barn Swallow	<i>Hirundo rustica</i>	57%	1 of 1
PRP2	25	Swallows (Family Hirundinidae)	Cliff Swallow	<i>Petrochelidon pyrrhonota</i>	14%	1 of 1
PRP2	25	Swallows (Family Hirundinidae)	Tree Swallow	<i>Tachycineta bicolor</i>	100%	1 of 1
PRP2	26	Chickadees & Titmice (Family Paridae)	Black-capped Chickadee	<i>Poecile atricapillus</i>	14%	1 of 1
PRP2	31	Thrushes (Family Turdidae)	American Robin	<i>Turdus migratorius</i>	86%	1 of 1
PRP2	31	Thrushes (Family Turdidae)	Swainson's Thrush	<i>Catharus ustulatus</i>	29%	1 of 1
PRP2	32	Mockingbirds & Thrashers (Family Mimidae)	Gray Catbird	<i>Dumetella carolinensis</i>	57%	1 of 1
PRP2	33	Starling (Family Sturnidae)	European Starling	<i>Sturnus vulgaris</i>	43%	1 of 1
PRP2	35	Warblers (Family Parulidae)	Common Yellowthroat	<i>Geothlypis trichas</i>	86%	1 of 1
PRP2	35	Warblers (Family Parulidae)	Yellow Warbler	<i>Dendroica petechia</i>	100%	1 of 1
PRP2	37	Towhees & Sparrows (Family Emberizidae)	Chipping Sparrow	<i>Spizella passerina</i>	14%	1 of 1
PRP2	37	Towhees & Sparrows (Family Emberizidae)	Lincoln's Sparrow	<i>Melospiza lincolnii</i>	14%	1 of 1
PRP2	37	Towhees & Sparrows (Family Emberizidae)	Savannah Sparrow	<i>Passerculus sandwichensis</i>	71%	1 of 1
PRP2	37	Towhees & Sparrows (Family Emberizidae)	Song Sparrow	<i>Melospiza melodia</i>	86%	1 of 1
PRP2	39	Blackbirds & Orioles (Family Icteridae)	Brown-headed Cowbird	<i>Molothrus ater</i>	14%	1 of 1
PRP2	39	Blackbirds & Orioles (Family Icteridae)	Bullock's Oriole	<i>Icterus bullockii</i>	29%	1 of 1
PRP2	39	Blackbirds & Orioles (Family Icteridae)	Red-winged Blackbird	<i>Agelaius phoeniceus</i>	100%	1 of 1
PRP2	39	Blackbirds & Orioles (Family Icteridae)	Western Meadowlark	<i>Sturnella neglecta</i>	14%	1 of 1
PRP2	39	Blackbirds & Orioles (Family Icteridae)	Yellow-headed Blackbird	<i>Xanthocephalus xanthocephalus</i>	14%	1 of 1
SPP1	1	Grebes (Family Podicipedidae)	Pied-billed Grebe	<i>Podilymbus podiceps</i>	14%	1 of 1
SPP1	3	Hérons (Family Ardeidae)	Great-blue Heron	<i>Ardea herodias</i>	14%	1 of 1
SPP1	4	New World Vultures (Family Cathartidae)	Turkey Vulture	<i>Cathartes aura</i>	14%	1 of 1
SPP1	5	Swans, Geese, & Ducks (Family Anatidae)	Mallard	<i>Anas platyrhynchos</i>	29%	1 of 1
SPP1	6	Eagles, Kites & Hawks (Family Accipitridae)	Osprey	<i>Pandion haliaetus</i>	14%	1 of 1
SPP1	6	Eagles, Kites & Hawks (Family Accipitridae)	Red-tailed Hawk	<i>Buteo jamaicensis</i>	14%	1 of 1
SPP1	8	Grouse (Family Phasianidae)	Wild Turkey	<i>Meleagris gallopavo</i>	43%	1 of 1

Location	ID	Family	Common Name	Scientific Name	Detection Probability <sup>1</sup>	Years Observed <sup>2</sup>
SPP1	10	Rails (Family Rallidae)	Sora	<i>Porzana carolina</i>	71%	1 of 1
SPP1	10	Rails (Family Rallidae)	Virginia Rail	<i>Rallus limicola</i>	29%	1 of 1
SPP1	11	Plovers (Family Charadriidae)	Killdeer	<i>Charadrius vociferus</i>	14%	1 of 1
SPP1	13	Sandpipers (Family Scolopacidae)	Common Snipe	<i>Gallinago delicata</i>	100%	1 of 1
SPP1	21	Woodpeckers (Family Picidae)	Northern Flicker	<i>Colaptes auratus</i>	14%	1 of 1
SPP1	22	Flycatchers (Family Tyrannidae)	Hammond's Flycatcher	<i>Empidonax hammondi</i>	29%	1 of 1
SPP1	22	Flycatchers (Family Tyrannidae)	Pacific-slope Flycatcher	<i>Empidonax difficilis</i>	14%	1 of 1
SPP1	22	Flycatchers (Family Tyrannidae)	Western Wood-pewee	<i>Contopus sordidulus</i>	14%	1 of 1
SPP1	22	Flycatchers (Family Tyrannidae)	Willow Flycatcher	<i>Empidonax traillii</i>	86%	1 of 1
SPP1	23	Vireos (Family Vireonidae)	Red-eyed Vireo	<i>Vireo olivaceus</i>	14%	1 of 1
SPP1	23	Vireos (Family Vireonidae)	Warbling Vireo	<i>Vireo gilvus</i>	14%	1 of 1
SPP1	24	Jays & Crows (Family Corvidae)	Common Raven	<i>Corvus corax</i>	29%	1 of 1
SPP1	25	Swallows (Family Hirundinidae)	Barn Swallow	<i>Hirundo rustica</i>	57%	1 of 1
SPP1	25	Swallows (Family Hirundinidae)	Northern Rough-winged Swallow	<i>Stelgidopteryx serripennis</i>	14%	1 of 1
SPP1	25	Swallows (Family Hirundinidae)	Tree Swallow	<i>Tachycineta bicolor</i>	71%	1 of 1
SPP1	26	Chickadees & Titmice (Family Paridae)	Black-capped Chickadee	<i>Poecile atricapillus</i>	43%	1 of 1
SPP1	26	Chickadees & Titmice (Family Paridae)	Chestnut-backed Chickadee	<i>Poecile rufescens</i>	14%	1 of 1
SPP1	27	Nuthatches (Family Sittidae)	Red-breasted Nuthatch	<i>Sitta canadensis</i>	57%	1 of 1
SPP1	28	Creeper (Family Certhiidae)	Brown Creeper	<i>Certhia americana</i>	14%	1 of 1
SPP1	29	Wrens (Family Troglodytidae)	Marsh Wren	<i>Cistothorus palustris</i>	14%	1 of 1
SPP1	31	Thrushes (Family Turdidae)	American Robin	<i>Turdus migratorius</i>	57%	1 of 1
SPP1	31	Thrushes (Family Turdidae)	Swainson's Thrush	<i>Catharus ustulatus</i>	29%	1 of 1
SPP1	31	Thrushes (Family Turdidae)	Varied Thrush	<i>Ixoreus naevius</i>	29%	1 of 1
SPP1	34	Waxwings (Family Bombycillidae)	Cedar Waxwing	<i>Bombycilla cedrorum</i>	29%	1 of 1
SPP1	35	Warblers (Family Parulidae)	Common Yellowthroat	<i>Geothlypis trichas</i>	100%	1 of 1
SPP1	35	Warblers (Family Parulidae)	Yellow Warbler	<i>Dendroica petechia</i>	57%	1 of 1
SPP1	35	Warblers (Family Parulidae)	Yellow-rumped Warbler	<i>Dendroica coronata</i>	14%	1 of 1
SPP1	36	Tanagers (Family Thraupidae)	Western Tanager	<i>Piranga ludoviciana</i>	14%	1 of 1
SPP1	37	Towhees & Sparrows (Family Emberizidae)	Chipping Sparrow	<i>Spizella passerina</i>	14%	1 of 1
SPP1	37	Towhees & Sparrows (Family Emberizidae)	Song Sparrow	<i>Melospiza melodia</i>	100%	1 of 1
SPP1	38	Grosbeaks & Buntings (Family	Black-headed Grosbeak	<i>Pheucticus</i>	14%	1 of 1

Location	ID	Family	Common Name	Scientific Name	Detection Probability <sup>1</sup>	Years Observed <sup>2</sup>
		Cardinalidae)		<i>melanocephalus</i>		
SPP1	39	Blackbirds & Orioles (Family Icteridae)	Brown-headed Cowbird	<i>Molothrus ater</i>	57%	1 of 1
SPP1	39	Blackbirds & Orioles (Family Icteridae)	Red-winged Blackbird	<i>Agelaius phoeniceus</i>	100%	1 of 1
SPP1	39	Blackbirds & Orioles (Family Icteridae)	Yellow-headed Blackbird	<i>Xanthocephalus xanthocephalus</i>	29%	1 of 1
SPP1	40	Finches (Family Fringillidae)	Pine Siskin	<i>Carduelis pinus</i>	14%	1 of 1
SPP2	1	Grebes (Family Podicipedidae)	Pied-billed Grebe	<i>Podilymbus podiceps</i>	14%	1 of 1
SPP2	8	Grouse (Family Phasianidae)	Ruffed Grouse	<i>Bonasa umbellus</i>	14%	1 of 1
SPP2	8	Grouse (Family Phasianidae)	Wild Turkey	<i>Meleagris gallopavo</i>	29%	1 of 1
SPP2	13	Sandpipers (Family Scolopacidae)	Common Snipe	<i>Gallinago delicata</i>	57%	1 of 1
SPP2	21	Woodpeckers (Family Picidae)	Northern Flicker	<i>Colaptes auratus</i>	29%	1 of 1
SPP2	21	Woodpeckers (Family Picidae)	Pileated Woodpecker	<i>Dryocopus pileatus</i>	14%	1 of 1
SPP2	21	Woodpeckers (Family Picidae)	Red-naped Sapsucker	<i>Sphyrapicus nuchalis</i>	29%	1 of 1
SPP2	22	Flycatchers (Family Tyrannidae)	Hammond's Flycatcher	<i>Empidonax hammondi</i>	14%	1 of 1
SPP2	22	Flycatchers (Family Tyrannidae)	Pacific-slope Flycatcher	<i>Empidonax difficilis</i>	14%	1 of 1
SPP2	23	Vireos (Family Vireonidae)	Cassin's Vireo	<i>Vireo cassinii</i>	71%	1 of 1
SPP2	23	Vireos (Family Vireonidae)	Red-eyed Vireo	<i>Vireo olivaceus</i>	14%	1 of 1
SPP2	24	Jays & Crows (Family Corvidae)	Common Raven	<i>Corvus corax</i>	14%	1 of 1
SPP2	26	Chickadees & Titmice (Family Paridae)	Chestnut-backed Chickadee	<i>Poecile rufescens</i>	57%	1 of 1
SPP2	27	Nuthatches (Family Sittidae)	Red-breasted Nuthatch	<i>Sitta canadensis</i>	100%	1 of 1
SPP2	30	Kinglets (Family Regulidae)	Golden-crowned Kinglet	<i>Regulus satrapa</i>	43%	1 of 1
SPP2	31	Thrushes (Family Turdidae)	American Robin	<i>Turdus migratorius</i>	43%	1 of 1
SPP2	31	Thrushes (Family Turdidae)	Swainson's Thrush	<i>Catharus ustulatus</i>	100%	1 of 1
SPP2	31	Thrushes (Family Turdidae)	Varied Thrush	<i>Ixoreus naevius</i>	14%	1 of 1
SPP2	35	Warblers (Family Parulidae)	Townsend's Warbler	<i>Dendroica townsendii</i>	43%	1 of 1
SPP2	35	Warblers (Family Parulidae)	Yellow Warbler	<i>Dendroica petechia</i>	14%	1 of 1
SPP2	36	Tanagers (Family Thraupidae)	Western Tanager	<i>Piranga ludoviciana</i>	29%	1 of 1
SPP2	37	Towhees & Sparrows (Family Emberizidae)	Chipping Sparrow	<i>Spizella passerina</i>	14%	1 of 1
SPP2	37	Towhees & Sparrows (Family Emberizidae)	Dark-eyed Junco	<i>Junco hyemalis</i>	14%	1 of 1
SPP2	37	Towhees & Sparrows (Family Emberizidae)	Song Sparrow	<i>Melospiza melodia</i>	14%	1 of 1
SPP2	39	Blackbirds & Orioles (Family Icteridae)	Red-winged Blackbird	<i>Agelaius phoeniceus</i>	14%	1 of 1

Location	ID	Family	Common Name	Scientific Name	Detection Probability <sup>1</sup>	Years Observed <sup>2</sup>
SPP2	40	Finches (Family Fringillidae)	Pine Siskin	<i>Carduelis pinus</i>	14%	1 of 1
SPP2	40	Finches (Family Fringillidae)	Red Crossbill	<i>Loxia curvirostra</i>	29%	1 of 1
SPP3	1	Grebes (Family Podicipedidae)	Pied-billed Grebe	<i>Podilymbus podiceps</i>	14%	1 of 1
SPP3	4	New World Vultures (Family Cathartidae)	Turkey Vulture	<i>Cathartes aura</i>	29%	1 of 1
SPP3	6	Eagles, Kites & Hawks (Family Accipitridae)	Osprey	<i>Pandion haliaetus</i>	14%	1 of 1
SPP3	6	Eagles, Kites & Hawks (Family Accipitridae)	Red-tailed Hawk	<i>Buteo jamaicensis</i>	14%	1 of 1
SPP3	8	Grouse (Family Phasianidae)	Ruffed Grouse	<i>Bonasa umbellus</i>	14%	1 of 1
SPP3	13	Sandpipers (Family Scolopacidae)	Common Snipe	<i>Gallinago delicata</i>	71%	1 of 1
SPP3	15	Doves (Family Columbidae)	Mourning Dove	<i>Zenaida macroura</i>	14%	1 of 1
SPP3	19	Hummingbirds (Family Trochilidae)	Black-chinned Hummingbird	<i>Archilochus alexandri</i>	29%	1 of 1
SPP3	21	Woodpeckers (Family Picidae)	Downy Woodpecker	<i>Picoides pubescens</i>	14%	1 of 1
SPP3	21	Woodpeckers (Family Picidae)	Northern Flicker	<i>Colaptes auratus</i>	14%	1 of 1
SPP3	21	Woodpeckers (Family Picidae)	Pileated Woodpecker	<i>Dryocopus pileatus</i>	43%	1 of 1
SPP3	21	Woodpeckers (Family Picidae)	Red-naped Sapsucker	<i>Sphyrapicus nuchalis</i>	29%	1 of 1
SPP3	22	Flycatchers (Family Tyrannidae)	Western Wood-pewee	<i>Contopus sordidulus</i>	14%	1 of 1
SPP3	23	Vireos (Family Vireonidae)	Cassin's Vireo	<i>Vireo cassinii</i>	43%	1 of 1
SPP3	23	Vireos (Family Vireonidae)	Red-eyed Vireo	<i>Vireo olivaceus</i>	43%	1 of 1
SPP3	23	Vireos (Family Vireonidae)	Warbling Vireo	<i>Vireo gilvus</i>	57%	1 of 1
SPP3	24	Jays & Crows (Family Corvidae)	Black-billed Magpie	<i>Pica pica</i>	14%	1 of 1
SPP3	24	Jays & Crows (Family Corvidae)	Common Raven	<i>Corvus corax</i>	71%	1 of 1
SPP3	25	Swallows (Family Hirundinidae)	Violet-green Swallow	<i>Tachycineta thalassina</i>	14%	1 of 1
SPP3	26	Chickadees & Titmice (Family Paridae)	Black-capped Chickadee	<i>Poecile atricapillus</i>	43%	1 of 1
SPP3	27	Nuthatches (Family Sittidae)	Pygmy Nuthatch	<i>Sitta pygmaea</i>	14%	1 of 1
SPP3	27	Nuthatches (Family Sittidae)	Red-breasted Nuthatch	<i>Sitta canadensis</i>	71%	1 of 1
SPP3	29	Wrens (Family Troglodytidae)	Winter Wren	<i>Troglodytes troglodytes</i>	14%	1 of 1
SPP3	30	Kinglets (Family Regulidae)	Golden-crowned Kinglet	<i>Regulus satrapa</i>	29%	1 of 1
SPP3	31	Thrushes (Family Turdidae)	American Robin	<i>Turdus migratorius</i>	100%	1 of 1
SPP3	31	Thrushes (Family Turdidae)	Swainson's Thrush	<i>Catharus ustulatus</i>	100%	1 of 1
SPP3	34	Waxwings (Family Bombycillidae)	Cedar Waxwing	<i>Bombycilla cedrorum</i>	14%	1 of 1
SPP3	35	Warblers (Family Parulidae)	Northern Waterthrush	<i>Seiurus noveboracensis</i>	14%	1 of 1
SPP3	35	Warblers (Family Parulidae)	Orange-crowned Warbler	<i>Vermivora celata</i>	71%	1 of 1

Location	ID	Family	Common Name	Scientific Name	Detection Probability <sup>1</sup>	Years Observed <sup>2</sup>
SPP3	35	Warblers (Family Parulidae)	Yellow Warbler	<i>Dendroica petechia</i>	29%	1 of 1
SPP3	35	Warblers (Family Parulidae)	Yellow-rumped Warbler	<i>Dendroica coronata</i>	14%	1 of 1
SPP3	36	Tanagers (Family Thraupidae)	Western Tanager	<i>Piranga ludoviciana</i>	14%	1 of 1
SPP3	37	Towhees & Sparrows (Family Emberizidae)	Chipping Sparrow	<i>Spizella passerina</i>	57%	1 of 1
SPP3	37	Towhees & Sparrows (Family Emberizidae)	Dark-eyed Junco	<i>Junco hyemalis</i>	29%	1 of 1
SPP3	37	Towhees & Sparrows (Family Emberizidae)	Grasshopper Sparrow	<i>Ammodramus savannarum</i>	14%	1 of 1
SPP3	37	Towhees & Sparrows (Family Emberizidae)	Spotted Towhee	<i>Pipilo maculatus</i>	57%	1 of 1
SPP3	38	Grosbeaks & Buntings (Family Cardinalidae)	Black-headed Grosbeak	<i>Pheucticus melanocephalus</i>	86%	1 of 1
SPP3	39	Blackbirds & Orioles (Family Icteridae)	Brewer's Blackbird	<i>Euphagus cyanocephalus</i>	14%	1 of 1
SPP3	39	Blackbirds & Orioles (Family Icteridae)	Brown-headed Cowbird	<i>Molothrus ater</i>	29%	1 of 1
SPP3	39	Blackbirds & Orioles (Family Icteridae)	Red-winged Blackbird	<i>Agelaius phoeniceus</i>	29%	1 of 1
SPP3	40	Finches (Family Fringillidae)	Pine Siskin	<i>Carduelis pinus</i>	14%	1 of 1
SPP3	40	Finches (Family Fringillidae)	Red Crossbill	<i>Loxia curvirostra</i>	29%	1 of 1
SPP4	1	Grebes (Family Podicipedidae)	Pied-billed Grebe	<i>Podilymbus podiceps</i>	43%	1 of 1
SPP4	3	Herons (Family Ardeidae)	Great-blue Heron	<i>Ardea herodias</i>	14%	1 of 1
SPP4	4	New World Vultures (Family Cathartidae)	Turkey Vulture	<i>Cathartes aura</i>	14%	1 of 1
SPP4	5	Swans, Geese, & Ducks (Family Anatidae)	Blue-winged Teal	<i>Anas discors</i>	14%	1 of 1
SPP4	5	Swans, Geese, & Ducks (Family Anatidae)	Bufflehead	<i>Bucephala albeola</i>	14%	1 of 1
SPP4	5	Swans, Geese, & Ducks (Family Anatidae)	Cinnamon Teal	<i>Anas cyanoptera</i>	14%	1 of 1
SPP4	5	Swans, Geese, & Ducks (Family Anatidae)	Green-winged Teal	<i>Anas crecca</i>	14%	1 of 1
SPP4	5	Swans, Geese, & Ducks (Family Anatidae)	Hooded Merganser	<i>Lophodytes cucullatus</i>	14%	1 of 1
SPP4	5	Swans, Geese, & Ducks (Family Anatidae)	Mallard	<i>Anas platyrhynchos</i>	57%	1 of 1
SPP4	5	Swans, Geese, & Ducks (Family Anatidae)	Ring-necked Duck	<i>Aythya collaris</i>	43%	1 of 1
SPP4	5	Swans, Geese, & Ducks (Family Anatidae)	Wood Duck	<i>Aix sponsa</i>	29%	1 of 1

Location	ID	Family	Common Name	Scientific Name	Detection Probability <sup>1</sup>	Years Observed <sup>2</sup>
		Anatidae)				
SPP4	6	Eagles, Kites & Hawks (Family Accipitridae)	Bald Eagle	<i>Haliaeetus leucocephalus</i>	14%	1 of 1
SPP4	6	Eagles, Kites & Hawks (Family Accipitridae)	Cooper's Hawk	<i>Accipiter cooperii</i>	14%	1 of 1
SPP4	6	Eagles, Kites & Hawks (Family Accipitridae)	Osprey	<i>Pandion haliaetus</i>	29%	1 of 1
SPP4	10	Rails (Family Rallidae)	Sora	<i>Porzana carolina</i>	71%	1 of 1
SPP4	10	Rails (Family Rallidae)	Virginia Rail	<i>Rallus limicola</i>	14%	1 of 1
SPP4	11	Plovers (Family Charadriidae)	Killdeer	<i>Charadrius vociferus</i>	14%	1 of 1
SPP4	19	Hummingbirds (Family Trochilidae)	Calliope Hummingbird	<i>Stellula calliope</i>	14%	1 of 1
SPP4	21	Woodpeckers (Family Picidae)	Downy Woodpecker	<i>Picoides pubescens</i>	14%	1 of 1
SPP4	21	Woodpeckers (Family Picidae)	Northern Flicker	<i>Colaptes auratus</i>	57%	1 of 1
SPP4	21	Woodpeckers (Family Picidae)	Red-naped Sapsucker	<i>Sphyrapicus nuchalis</i>	71%	1 of 1
SPP4	22	Flycatchers (Family Tyrannidae)	Eastern Kingbird	<i>Tyrannus tyrannus</i>	43%	1 of 1
SPP4	22	Flycatchers (Family Tyrannidae)	Pacific-slope Flycatcher	<i>Empidonax difficilis</i>	29%	1 of 1
SPP4	23	Vireos (Family Vireonidae)	Red-eyed Vireo	<i>Vireo olivaceus</i>	86%	1 of 1
SPP4	23	Vireos (Family Vireonidae)	Warbling Vireo	<i>Vireo gilvus</i>	14%	1 of 1
SPP4	24	Jays & Crows (Family Corvidae)	Black-billed Magpie	<i>Pica pica</i>	14%	1 of 1
SPP4	24	Jays & Crows (Family Corvidae)	Common Raven	<i>Corvus corax</i>	57%	1 of 1
SPP4	24	Jays & Crows (Family Corvidae)	Stellar's Jay	<i>Cyanocitta stelleri</i>	14%	1 of 1
SPP4	25	Swallows (Family Hirundinidae)	Tree Swallow	<i>Tachycineta bicolor</i>	71%	1 of 1
SPP4	25	Swallows (Family Hirundinidae)	Violet-green Swallow	<i>Tachycineta thalassina</i>	14%	1 of 1
SPP4	26	Chickadees & Titmice (Family Paridae)	Black-capped Chickadee	<i>Poecile atricapillus</i>	43%	1 of 1
SPP4	26	Chickadees & Titmice (Family Paridae)	Chestnut-backed Chickadee	<i>Poecile rufescens</i>	29%	1 of 1
SPP4	27	Nuthatches (Family Sittidae)	Red-breasted Nuthatch	<i>Sitta canadensis</i>	71%	1 of 1
SPP4	31	Thrushes (Family Turdidae)	American Robin	<i>Turdus migratorius</i>	86%	1 of 1
SPP4	31	Thrushes (Family Turdidae)	Swainson's Thrush	<i>Catharus ustulatus</i>	57%	1 of 1
SPP4	33	Starling (Family Sturnidae)	European Starling	<i>Sturnus vulgaris</i>	29%	1 of 1
SPP4	34	Waxwings (Family Bombycillidae)	Cedar Waxwing	<i>Bombycilla cedrorum</i>	29%	1 of 1
SPP4	35	Warblers (Family Parulidae)	American Redstart	<i>Setophaga ruticilla</i>	14%	1 of 1
SPP4	35	Warblers (Family Parulidae)	Common Yellowthroat	<i>Geothlypis trichas</i>	14%	1 of 1
SPP4	35	Warblers (Family Parulidae)	Orange-crowned Warbler	<i>Vermivora celata</i>	29%	1 of 1
SPP4	35	Warblers (Family Parulidae)	Yellow Warbler	<i>Dendroica petechia</i>	14%	1 of 1

Location	ID	Family	Common Name	Scientific Name	Detection Probability <sup>1</sup>	Years Observed <sup>2</sup>
SPP4	37	Towhees & Sparrows (Family Emberizidae)	Chipping Sparrow	<i>Spizella passerina</i>	14%	1 of 1
SPP4	37	Towhees & Sparrows (Family Emberizidae)	Grasshopper Sparrow	<i>Ammodramus savannarum</i>	14%	1 of 1
SPP4	37	Towhees & Sparrows (Family Emberizidae)	Song Sparrow	<i>Melospiza melodia</i>	100%	1 of 1
SPP4	38	Grosbeaks & Buntings (Family Cardinalidae)	Black-headed Grosbeak	<i>Pheucticus melanocephalus</i>	43%	1 of 1
SPP4	39	Blackbirds & Orioles (Family Icteridae)	Red-winged Blackbird	<i>Agelaius phoeniceus</i>	100%	1 of 1
SPP4	40	Finches (Family Fringillidae)	Red Crossbill	<i>Loxia curvirostra</i>	14%	1 of 1
SPP5	1	Grebes (Family Podicipedidae)	Pied-billed Grebe	<i>Podilymbus podiceps</i>	43%	1 of 1
SPP5	3	Herons (Family Ardeidae)	Great-blue Heron	<i>Ardea herodias</i>	29%	1 of 1
SPP5	4	New World Vultures (Family Cathartidae)	Turkey Vulture	<i>Cathartes aura</i>	14%	1 of 1
SPP5	5	Swans, Geese, & Ducks (Family Anatidae)	Blue-winged Teal	<i>Anas discors</i>	29%	1 of 1
SPP5	5	Swans, Geese, & Ducks (Family Anatidae)	Cinnamon Teal	<i>Anas cyanoptera</i>	57%	1 of 1
SPP5	5	Swans, Geese, & Ducks (Family Anatidae)	Green-winged Teal	<i>Anas crecca</i>	14%	1 of 1
SPP5	5	Swans, Geese, & Ducks (Family Anatidae)	Mallard	<i>Anas platyrhynchos</i>	14%	1 of 1
SPP5	5	Swans, Geese, & Ducks (Family Anatidae)	Ring-necked Duck	<i>Aythya collaris</i>	29%	1 of 1
SPP5	5	Swans, Geese, & Ducks (Family Anatidae)	Wood Duck	<i>Aix sponsa</i>	29%	1 of 1
SPP5	6	Eagles, Kites & Hawks (Family Accipitridae)	Osprey	<i>Pandion haliaetus</i>	14%	1 of 1
SPP5	6	Eagles, Kites & Hawks (Family Accipitridae)	Red-tailed Hawk	<i>Buteo jamaicensis</i>	14%	1 of 1
SPP5	8	Grouse (Family Phasianidae)	Ruffed Grouse	<i>Bonasa umbellus</i>	14%	1 of 1
SPP5	10	Rails (Family Rallidae)	American Coot	<i>Fulica americana</i>	14%	1 of 1
SPP5	10	Rails (Family Rallidae)	Sora	<i>Porzana carolina</i>	43%	1 of 1
SPP5	10	Rails (Family Rallidae)	Virginia Rail	<i>Rallus limicola</i>	29%	1 of 1
SPP5	11	Plovers (Family Charadriidae)	Killdeer	<i>Charadrius vociferus</i>	100%	1 of 1
SPP5	13	Sandpipers (Family Scolopacidae)	Spotted Sandpiper	<i>Actitis macularia</i>	29%	1 of 1
SPP5	15	Doves (Family Columbidae)	Mourning Dove	<i>Zenaida macroura</i>	14%	1 of 1

Location	ID	Family	Common Name	Scientific Name	Detection Probability <sup>1</sup>	Years Observed <sup>2</sup>
SPP5	19	Hummingbirds (Family Trochilidae)	Calliope Hummingbird	<i>Stellula calliope</i>	14%	1 of 1
SPP5	21	Woodpeckers (Family Picidae)	Northern Flicker	<i>Colaptes auratus</i>	29%	1 of 1
SPP5	21	Woodpeckers (Family Picidae)	Pileated Woodpecker	<i>Dryocopus pileatus</i>	29%	1 of 1
SPP5	21	Woodpeckers (Family Picidae)	Red-naped Sapsucker	<i>Sphyrapicus nuchalis</i>	29%	1 of 1
SPP5	22	Flycatchers (Family Tyrannidae)	Pacific-slope Flycatcher	<i>Empidonax difficilis</i>	14%	1 of 1
SPP5	22	Flycatchers (Family Tyrannidae)	Willow Flycatcher	<i>Empidonax traillii</i>	43%	1 of 1
SPP5	23	Vireos (Family Vireonidae)	Red-eyed Vireo	<i>Vireo olivaceus</i>	43%	1 of 1
SPP5	24	Jays & Crows (Family Corvidae)	American Crow	<i>Corvus brachyrhynchos</i>	14%	1 of 1
SPP5	24	Jays & Crows (Family Corvidae)	Common Raven	<i>Corvus corax</i>	14%	1 of 1
SPP5	25	Swallows (Family Hirundinidae)	Northern Rough-winged Swallow	<i>Stelgidopteryx serripennis</i>	14%	1 of 1
SPP5	25	Swallows (Family Hirundinidae)	Tree Swallow	<i>Tachycineta bicolor</i>	86%	1 of 1
SPP5	26	Chickadees & Titmice (Family Paridae)	Black-capped Chickadee	<i>Poecile atricapillus</i>	43%	1 of 1
SPP5	26	Chickadees & Titmice (Family Paridae)	Chestnut-backed Chickadee	<i>Poecile rufescens</i>	29%	1 of 1
SPP5	27	Nuthatches (Family Sittidae)	Red-breasted Nuthatch	<i>Sitta canadensis</i>	71%	1 of 1
SPP5	29	Wrens (Family Troglodytidae)	Marsh Wren	<i>Cistothorus palustris</i>	14%	1 of 1
SPP5	31	Thrushes (Family Turdidae)	American Robin	<i>Turdus migratorius</i>	43%	1 of 1
SPP5	31	Thrushes (Family Turdidae)	Swainson's Thrush	<i>Catharus ustulatus</i>	86%	1 of 1
SPP5	31	Thrushes (Family Turdidae)	Varied Thrush	<i>Ixoreus naevius</i>	14%	1 of 1
SPP5	35	Warblers (Family Parulidae)	Common Yellowthroat	<i>Geothlypis trichas</i>	86%	1 of 1
SPP5	36	Tanagers (Family Thraupidae)	Western Tanager	<i>Piranga ludoviciana</i>	14%	1 of 1
SPP5	37	Towhees & Sparrows (Family Emberizidae)	Chipping Sparrow	<i>Spizella passerina</i>	14%	1 of 1
SPP5	37	Towhees & Sparrows (Family Emberizidae)	Song Sparrow	<i>Melospiza melodia</i>	100%	1 of 1
SPP5	38	Grosbeaks & Buntings (Family Cardinalidae)	Black-headed Grosbeak	<i>Pheucticus melanocephalus</i>	14%	1 of 1
SPP5	39	Blackbirds & Orioles (Family Icteridae)	Red-winged Blackbird	<i>Agelaius phoeniceus</i>	100%	1 of 1
SPP5	40	Finches (Family Fringillidae)	Evening Grosbeak	<i>Coccothraustes vespertinus</i>	14%	1 of 1
SPP5	40	Finches (Family Fringillidae)	Red Crossbill	<i>Loxia curvirostra</i>	29%	1 of 1
TAP1	1	Grebes (Family Podicipedidae)	Pied-billed Grebe	<i>Podilymbus podiceps</i>	38%	1 of 1
TAP1	2	Cormorants (Family Phalacrocoracidae)	Double-crested Cormorant	<i>Phalacrocorax auritus</i>	25%	1 of 1
TAP1	3	Hérons (Family Ardeidae)	Great-blue Heron	<i>Ardea herodias</i>	25%	1 of 1

Location	ID	Family	Common Name	Scientific Name	Detection Probability <sup>1</sup>	Years Observed <sup>2</sup>
TAP1	5	Swans, Geese, & Ducks (Family Anatidae)	Canada Goose	<i>Branta canadensis</i>	75%	1 of 1
TAP1	5	Swans, Geese, & Ducks (Family Anatidae)	Mallard	<i>Anas platyrhynchos</i>	13%	1 of 1
TAP1	8	Grouse (Family Phasianidae)	Ring-necked Pheasant	<i>Phasianus colchicus</i>	13%	1 of 1
TAP1	10	Rails (Family Rallidae)	American Coot	<i>Fulica americana</i>	13%	1 of 1
TAP1	11	Plovers (Family Charadriidae)	Killdeer	<i>Charadrius vociferus</i>	13%	1 of 1
TAP1	13	Sandpipers (Family Scolopacidae)	Common Snipe	<i>Gallinago delicata</i>	88%	1 of 1
TAP1	13	Sandpipers (Family Scolopacidae)	Red-necked Phalarope	<i>Phalaropus lobatus</i>	13%	1 of 1
TAP1	15	Doves (Family Columbidae)	Mourning Dove	<i>Zenaida macroura</i>	63%	1 of 1
TAP1	21	Woodpeckers (Family Picidae)	Northern Flicker	<i>Colaptes auratus</i>	13%	1 of 1
TAP1	21	Woodpeckers (Family Picidae)	Pileated Woodpecker	<i>Dryocopus pileatus</i>	25%	1 of 1
TAP1	21	Woodpeckers (Family Picidae)	Red-naped Sapsucker	<i>Sphyrapicus nuchalis</i>	25%	1 of 1
TAP1	22	Flycatchers (Family Tyrannidae)	Eastern Kingbird	<i>Tyrannus tyrannus</i>	25%	1 of 1
TAP1	22	Flycatchers (Family Tyrannidae)	Western Wood-pewee	<i>Contopus sordidulus</i>	25%	1 of 1
TAP1	23	Vireos (Family Vireonidae)	Cassin's Vireo	<i>Vireo cassinii</i>	13%	1 of 1
TAP1	23	Vireos (Family Vireonidae)	Warbling Vireo	<i>Vireo gilvus</i>	50%	1 of 1
TAP1	24	Jays & Crows (Family Corvidae)	American Crow	<i>Corvus brachyrhynchos</i>	25%	1 of 1
TAP1	24	Jays & Crows (Family Corvidae)	Common Raven	<i>Corvus corax</i>	13%	1 of 1
TAP1	25	Swallows (Family Hirundinidae)	Barn Swallow	<i>Hirundo rustica</i>	13%	1 of 1
TAP1	25	Swallows (Family Hirundinidae)	Cliff Swallow	<i>Petrochelidon pyrrhonota</i>	25%	1 of 1
TAP1	25	Swallows (Family Hirundinidae)	Tree Swallow	<i>Tachycineta bicolor</i>	25%	1 of 1
TAP1	27	Nuthatches (Family Sittidae)	Red-breasted Nuthatch	<i>Sitta canadensis</i>	13%	1 of 1
TAP1	31	Thrushes (Family Turdidae)	American Robin	<i>Turdus migratorius</i>	75%	1 of 1
TAP1	31	Thrushes (Family Turdidae)	Swainson's Thrush	<i>Catharus ustulatus</i>	13%	1 of 1
TAP1	33	Starling (Family Sturnidae)	European Starling	<i>Sturnus vulgaris</i>	13%	1 of 1
TAP1	35	Warblers (Family Parulidae)	Common Yellowthroat	<i>Geothlypis trichas</i>	38%	1 of 1
TAP1	35	Warblers (Family Parulidae)	MacGillvery's Warbler	<i>Oporornis tolmiei</i>	38%	1 of 1
TAP1	35	Warblers (Family Parulidae)	Nashville Warbler	<i>Vermivora ruficapilla</i>	13%	1 of 1
TAP1	35	Warblers (Family Parulidae)	Yellow Warbler	<i>Dendroica petechia</i>	38%	1 of 1
TAP1	35	Warblers (Family Parulidae)	Yellow-rumped Warbler	<i>Dendroica coronata</i>	13%	1 of 1
TAP1	36	Tanagers (Family Thraupidae)	Western Tanager	<i>Piranga ludoviciana</i>	25%	1 of 1
TAP1	37	Towhees & Sparrows (Family Emberizidae)	Chipping Sparrow	<i>Spizella passerina</i>	25%	1 of 1

Location	ID	Family	Common Name	Scientific Name	Detection Probability <sup>1</sup>	Years Observed <sup>2</sup>
TAP1	37	Towhees & Sparrows (Family Emberizidae)	Dark-eyed Junco	<i>Junco hyemalis</i>	13%	1 of 1
TAP1	37	Towhees & Sparrows (Family Emberizidae)	Savannah Sparrow	<i>Passerculus sandwichensis</i>	100%	1 of 1
TAP1	37	Towhees & Sparrows (Family Emberizidae)	Song Sparrow	<i>Melospiza melodia</i>	13%	1 of 1
TAP1	37	Towhees & Sparrows (Family Emberizidae)	Spotted Towhee	<i>Pipilo maculatus</i>	50%	1 of 1
TAP1	38	Grosbeaks & Buntings (Family Cardinalidae)	Black-headed Grosbeak	<i>Pheucticus melanocephalus</i>	63%	1 of 1
TAP1	39	Blackbirds & Orioles (Family Icteridae)	Bobolink	<i>Dolichonyx oryzivorus</i>	88%	1 of 1
TAP1	39	Blackbirds & Orioles (Family Icteridae)	Brewer's Blackbird	<i>Euphagus cyanocephalus</i>	13%	1 of 1
TAP1	39	Blackbirds & Orioles (Family Icteridae)	Brown-headed Cowbird	<i>Molothrus ater</i>	13%	1 of 1
TAP1	39	Blackbirds & Orioles (Family Icteridae)	Red-winged Blackbird	<i>Agelaius phoeniceus</i>	75%	1 of 1
TAP1	39	Blackbirds & Orioles (Family Icteridae)	Western Meadowlark	<i>Sturnella neglecta</i>	100%	1 of 1
TAP1	39	Blackbirds & Orioles (Family Icteridae)	Yellow-headed Blackbird	<i>Xanthocephalus xanthocephalus</i>	88%	1 of 1
TAP2	1	Grebes (Family Podicipedidae)	Pied-billed Grebe	<i>Podilymbus podiceps</i>	50%	1 of 1
TAP2	2	Cormorants (Family Phalacrocoracidae)	Double-crested Cormorant	<i>Phalacrocorax auritus</i>	25%	1 of 1
TAP2	5	Swans, Geese, & Ducks (Family Anatidae)	Canada Goose	<i>Branta canadensis</i>	25%	1 of 1
TAP2	5	Swans, Geese, & Ducks (Family Anatidae)	Gadwall	<i>Anas strepera</i>	13%	1 of 1
TAP2	6	Eagles, Kites & Hawks (Family Accipitridae)	Osprey	<i>Pandion haliaetus</i>	25%	1 of 1
TAP2	8	Grouse (Family Phasianidae)	Ruffed Grouse	<i>Bonasa umbellus</i>	25%	1 of 1
TAP2	11	Plovers (Family Charadriidae)	Killdeer	<i>Charadrius vociferus</i>	13%	1 of 1
TAP2	13	Sandpipers (Family Scolopacidae)	Common Snipe	<i>Gallinago delicata</i>	50%	1 of 1
TAP2	15	Doves (Family Columbidae)	Mourning Dove	<i>Zenaida macroura</i>	38%	1 of 1
TAP2	21	Woodpeckers (Family Picidae)	Northern Flicker	<i>Colaptes auratus</i>	38%	1 of 1
TAP2	21	Woodpeckers (Family Picidae)	Pileated Woodpecker	<i>Dryocopus pileatus</i>	63%	1 of 1
TAP2	21	Woodpeckers (Family Picidae)	Red-naped Sapsucker	<i>Sphyrapicus nuchalis</i>	38%	1 of 1
TAP2	22	Flycatchers (Family Tyrannidae)	Dusky Flycatcher	<i>Empidonax oberholseri</i>	13%	1 of 1
TAP2	22	Flycatchers (Family Tyrannidae)	Hammond's Flycatcher	<i>Empidonax hammondi</i>	38%	1 of 1
TAP2	22	Flycatchers (Family Tyrannidae)	Least Flycatcher	<i>Empidonax minimus</i>	38%	1 of 1

Location	ID	Family	Common Name	Scientific Name	Detection Probability <sup>1</sup>	Years Observed <sup>2</sup>
TAP2	22	Flycatchers (Family Tyrannidae)	Western Wood-pewee	<i>Contopus sordidulus</i>	75%	1 of 1
TAP2	22	Flycatchers (Family Tyrannidae)	Willow Flycatcher	<i>Empidonax traillii</i>	13%	1 of 1
TAP2	23	Vireos (Family Vireonidae)	Cassin's Vireo	<i>Vireo cassinii</i>	25%	1 of 1
TAP2	23	Vireos (Family Vireonidae)	Red-eyed Vireo	<i>Vireo olivaceus</i>	25%	1 of 1
TAP2	23	Vireos (Family Vireonidae)	Warbling Vireo	<i>Vireo gilvus</i>	100%	1 of 1
TAP2	24	Jays & Crows (Family Corvidae)	American Crow	<i>Corvus brachyrhynchos</i>	13%	1 of 1
TAP2	24	Jays & Crows (Family Corvidae)	Common Raven	<i>Corvus corax</i>	25%	1 of 1
TAP2	25	Swallows (Family Hirundinidae)	Tree Swallow	<i>Tachycineta bicolor</i>	25%	1 of 1
TAP2	25	Swallows (Family Hirundinidae)	Violet-green Swallow	<i>Tachycineta thalassina</i>	13%	1 of 1
TAP2	26	Chickadees & Titmice (Family Paridae)	Black-capped Chickadee	<i>Poecile atricapillus</i>	50%	1 of 1
TAP2	26	Chickadees & Titmice (Family Paridae)	Chestnut-backed Chickadee	<i>Poecile rufescens</i>	50%	1 of 1
TAP2	27	Nuthatches (Family Sittidae)	Red-breasted Nuthatch	<i>Sitta canadensis</i>	75%	1 of 1
TAP2	29	Wrens (Family Troglodytidae)	Winter Wren	<i>Troglodytes troglodytes</i>	38%	1 of 1
TAP2	30	Kinglets (Family Regulidae)	Golden-crowned Kinglet	<i>Regulus satrapa</i>	13%	1 of 1
TAP2	31	Thrushes (Family Turdidae)	American Robin	<i>Turdus migratorius</i>	63%	1 of 1
TAP2	31	Thrushes (Family Turdidae)	Swainson's Thrush	<i>Catharus ustulatus</i>	25%	1 of 1
TAP2	33	Starling (Family Sturnidae)	European Starling	<i>Sturnus vulgaris</i>	25%	1 of 1
TAP2	35	Warblers (Family Parulidae)	American Redstart	<i>Setophaga ruticilla</i>	13%	1 of 1
TAP2	35	Warblers (Family Parulidae)	MacGillivray's Warbler	<i>Oporornis tolmiei</i>	13%	1 of 1
TAP2	35	Warblers (Family Parulidae)	Nashville Warbler	<i>Vermivora ruficapilla</i>	25%	1 of 1
TAP2	35	Warblers (Family Parulidae)	Orange-crowned Warbler	<i>Vermivora celata</i>	25%	1 of 1
TAP2	35	Warblers (Family Parulidae)	Wilson's Warbler	<i>Wilsonia pusilla</i>	13%	1 of 1
TAP2	35	Warblers (Family Parulidae)	Yellow Warbler	<i>Dendroica petechia</i>	13%	1 of 1
TAP2	35	Warblers (Family Parulidae)	Yellow-rumped Warbler	<i>Dendroica coronata</i>	13%	1 of 1
TAP2	36	Tanagers (Family Thraupidae)	Western Tanager	<i>Piranga ludoviciana</i>	38%	1 of 1
TAP2	37	Towhees & Sparrows (Family Emberizidae)	Chipping Sparrow	<i>Spizella passerina</i>	25%	1 of 1
TAP2	37	Towhees & Sparrows (Family Emberizidae)	Dark-eyed Junco	<i>Junco hyemalis</i>	38%	1 of 1
TAP2	37	Towhees & Sparrows (Family Emberizidae)	Savannah Sparrow	<i>Passerculus sandwichensis</i>	13%	1 of 1
TAP2	37	Towhees & Sparrows (Family Emberizidae)	Song Sparrow	<i>Melospiza melodia</i>	50%	1 of 1
TAP2	37	Towhees & Sparrows (Family	Spotted Towhee	<i>Pipilo maculatus</i>	25%	1 of 1

Location	ID	Family	Common Name	Scientific Name	Detection Probability <sup>1</sup>	Years Observed <sup>2</sup>
		Emberizidae)				
TAP2	39	Blackbirds & Orioles (Family Icteridae)	Bobolink	<i>Dolichonyx oryzivorus</i>	13%	1 of 1
TAP2	39	Blackbirds & Orioles (Family Icteridae)	Brown-headed Cowbird	<i>Molothrus ater</i>	25%	1 of 1
TAP2	39	Blackbirds & Orioles (Family Icteridae)	Red-winged Blackbird	<i>Agelaius phoeniceus</i>	13%	1 of 1
TAP2	39	Blackbirds & Orioles (Family Icteridae)	Western Meadowlark	<i>Sturnella neglecta</i>	63%	1 of 1
TAP2	39	Blackbirds & Orioles (Family Icteridae)	Yellow-headed Blackbird	<i>Xanthocephalus xanthocephalus</i>	25%	1 of 1
TAP2	40	Finches (Family Fringillidae)	American Goldfinch	<i>Carduelis tristis</i>	13%	1 of 1
TAP2	40	Finches (Family Fringillidae)	Pine Siskin	<i>Carduelis pinus</i>	25%	1 of 1
TAP3	1	Grebes (Family Podicipedidae)	Pied-billed Grebe	<i>Podilymbus podiceps</i>	13%	1 of 1
TAP3	2	Cormorants (Family Phalacrocoracidae)	Double-crested Cormorant	<i>Phalacrocorax auritus</i>	25%	1 of 1
TAP3	3	Herons (Family Ardeidae)	Great-blue Heron	<i>Ardea herodias</i>	25%	1 of 1
TAP3	5	Swans, Geese, & Ducks (Family Anatidae)	Blue-winged Teal	<i>Anas discors</i>	13%	1 of 1
TAP3	5	Swans, Geese, & Ducks (Family Anatidae)	Canada Goose	<i>Branta canadensis</i>	25%	1 of 1
TAP3	5	Swans, Geese, & Ducks (Family Anatidae)	Cinnamon Teal	<i>Anas cyanoptera</i>	13%	1 of 1
TAP3	5	Swans, Geese, & Ducks (Family Anatidae)	Gadwall	<i>Anas strepera</i>	13%	1 of 1
TAP3	5	Swans, Geese, & Ducks (Family Anatidae)	Mallard	<i>Anas platyrhynchos</i>	25%	1 of 1
TAP3	6	Eagles, Kites & Hawks (Family Accipitridae)	Bald Eagle	<i>Haliaeetus leucocephalus</i>	13%	1 of 1
TAP3	6	Eagles, Kites & Hawks (Family Accipitridae)	Osprey	<i>Pandion haliaetus</i>	13%	1 of 1
TAP3	8	Grouse (Family Phasianidae)	Ring-necked Pheasant	<i>Phasianus colchicus</i>	13%	1 of 1
TAP3	8	Grouse (Family Phasianidae)	Ruffed Grouse	<i>Bonasa umbellus</i>	13%	1 of 1
TAP3	10	Rails (Family Rallidae)	American Coot	<i>Fulica americana</i>	50%	1 of 1
TAP3	10	Rails (Family Rallidae)	Sora	<i>Porzana carolina</i>	50%	1 of 1
TAP3	11	Plovers (Family Charadriidae)	Killdeer	<i>Charadrius vociferus</i>	38%	1 of 1
TAP3	13	Sandpipers (Family Scolopacidae)	Common Snipe	<i>Gallinago delicata</i>	88%	1 of 1
TAP3	13	Sandpipers (Family Scolopacidae)	Red-necked Phalarope	<i>Phalaropus lobatus</i>	13%	1 of 1
TAP3	13	Sandpipers (Family Scolopacidae)	Spotted Sandpiper	<i>Actitis macularia</i>	25%	1 of 1
TAP3	15	Doves (Family Columbidae)	Mourning Dove	<i>Zenaida macroura</i>	25%	1 of 1

Location	ID	Family	Common Name	Scientific Name	Detection Probability <sup>1</sup>	Years Observed <sup>2</sup>
TAP3	21	Woodpeckers (Family Picidae)	Downy Woodpecker	<i>Picoides pubescens</i>	38%	1 of 1
TAP3	21	Woodpeckers (Family Picidae)	Red-naped Sapsucker	<i>Sphyrapicus nuchalis</i>	13%	1 of 1
TAP3	22	Flycatchers (Family Tyrannidae)	Dusky Flycatcher	<i>Empidonax oberholseri</i>	13%	1 of 1
TAP3	22	Flycatchers (Family Tyrannidae)	Eastern Kingbird	<i>Tyrannus tyrannus</i>	38%	1 of 1
TAP3	22	Flycatchers (Family Tyrannidae)	Least Flycatcher	<i>Empidonax minimus</i>	13%	1 of 1
TAP3	22	Flycatchers (Family Tyrannidae)	Western Wood-pewee	<i>Contopus sordidulus</i>	75%	1 of 1
TAP3	23	Vireos (Family Vireonidae)	Red-eyed Vireo	<i>Vireo olivaceus</i>	75%	1 of 1
TAP3	24	Jays & Crows (Family Corvidae)	American Crow	<i>Corvus brachyrhynchos</i>	13%	1 of 1
TAP3	24	Jays & Crows (Family Corvidae)	Black-billed Magpie	<i>Pica pica</i>	38%	1 of 1
TAP3	25	Swallows (Family Hirundinidae)	Cliff Swallow	<i>Petrochelidon pyrrhonota</i>	13%	1 of 1
TAP3	25	Swallows (Family Hirundinidae)	Tree Swallow	<i>Tachycineta bicolor</i>	100%	1 of 1
TAP3	25	Swallows (Family Hirundinidae)	Violet-green Swallow	<i>Tachycineta thalassina</i>	25%	1 of 1
TAP3	26	Chickadees & Titmice (Family Paridae)	Black-capped Chickadee	<i>Poecile atricapillus</i>	38%	1 of 1
TAP3	27	Nuthatches (Family Sittidae)	Red-breasted Nuthatch	<i>Sitta canadensis</i>	25%	1 of 1
TAP3	31	Thrushes (Family Turdidae)	American Robin	<i>Turdus migratorius</i>	88%	1 of 1
TAP3	32	Mockingbirds & Thrashers (Family Mimidae)	Gray Catbird	<i>Dumetella carolinensis</i>	25%	1 of 1
TAP3	33	Starling (Family Sturnidae)	European Starling	<i>Sturnus vulgaris</i>	13%	1 of 1
TAP3	34	Waxwings (Family Bombycillidae)	Cedar Waxwing	<i>Bombycilla cedrorum</i>	38%	1 of 1
TAP3	35	Warblers (Family Parulidae)	American Redstart	<i>Setophaga ruticilla</i>	13%	1 of 1
TAP3	35	Warblers (Family Parulidae)	Common Yellowthroat	<i>Geothlypis trichas</i>	38%	1 of 1
TAP3	35	Warblers (Family Parulidae)	Orange-crowned Warbler	<i>Vermivora celata</i>	13%	1 of 1
TAP3	35	Warblers (Family Parulidae)	Yellow Warbler	<i>Dendroica petechia</i>	63%	1 of 1
TAP3	37	Towhees & Sparrows (Family Emberizidae)	Chipping Sparrow	<i>Spizella passerina</i>	38%	1 of 1
TAP3	37	Towhees & Sparrows (Family Emberizidae)	Savannah Sparrow	<i>Passerculus sandwichensis</i>	50%	1 of 1
TAP3	37	Towhees & Sparrows (Family Emberizidae)	Song Sparrow	<i>Melospiza melodia</i>	100%	1 of 1
TAP3	37	Towhees & Sparrows (Family Emberizidae)	Spotted Towhee	<i>Pipilo maculatus</i>	13%	1 of 1
TAP3	39	Blackbirds & Orioles (Family Icteridae)	Brown-headed Cowbird	<i>Molothrus ater</i>	50%	1 of 1
TAP3	39	Blackbirds & Orioles (Family Icteridae)	Bullock's Oriole	<i>Icterus bullockii</i>	38%	1 of 1
TAP3	39	Blackbirds & Orioles (Family Icteridae)	Red-winged Blackbird	<i>Agelaius phoeniceus</i>	75%	1 of 1

Location	ID	Family	Common Name	Scientific Name	Detection Probability <sup>1</sup>	Years Observed <sup>2</sup>
TAP3	39	Blackbirds & Orioles (Family Icteridae)	Western Meadowlark	<i>Sturnella neglecta</i>	75%	1 of 1
TAP3	39	Blackbirds & Orioles (Family Icteridae)	Yellow-headed Blackbird	<i>Xanthocephalus xanthocephalus</i>	100%	1 of 1
TAP3	40	Finches (Family Fringillidae)	American Goldfinch	<i>Carduelis tristis</i>	13%	1 of 1
TAP4	1	Grebes (Family Podicipedidae)	Pied-billed Grebe	<i>Podilymbus podiceps</i>	38%	1 of 1
TAP4	2	Cormorants (Family Phalacrocoracidae)	Double-crested Cormorant	<i>Phalacrocorax auritus</i>	25%	1 of 1
TAP4	3	Hérons (Family Ardeidae)	Great-blue Heron	<i>Ardea herodias</i>	63%	1 of 1
TAP4	5	Swans, Geese, & Ducks (Family Anatidae)	American Wigeon	<i>Anas americana</i>	13%	1 of 1
TAP4	5	Swans, Geese, & Ducks (Family Anatidae)	Canada Goose	<i>Branta canadensis</i>	38%	1 of 1
TAP4	5	Swans, Geese, & Ducks (Family Anatidae)	Cinnamon Teal	<i>Anas cyanoptera</i>	13%	1 of 1
TAP4	6	Eagles, Kites & Hawks (Family Accipitridae)	Bald Eagle	<i>Haliaeetus leucocephalus</i>	13%	1 of 1
TAP4	6	Eagles, Kites & Hawks (Family Accipitridae)	Northern Harrier	<i>Circus cyaneus</i>	13%	1 of 1
TAP4	8	Grouse (Family Phasianidae)	Ring-necked Pheasant	<i>Phasianus colchicus</i>	25%	1 of 1
TAP4	11	Plovers (Family Charadriidae)	Killdeer	<i>Charadrius vociferus</i>	38%	1 of 1
TAP4	13	Sandpipers (Family Scolopacidae)	Common Snipe	<i>Gallinago delicata</i>	88%	1 of 1
TAP4	13	Sandpipers (Family Scolopacidae)	Red-necked Phalarope	<i>Phalaropus lobatus</i>	25%	1 of 1
TAP4	13	Sandpipers (Family Scolopacidae)	Spotted Sandpiper	<i>Actitis macularia</i>	25%	1 of 1
TAP4	15	Doves (Family Columbidae)	Mourning Dove	<i>Zenaida macroura</i>	13%	1 of 1
TAP4	21	Woodpeckers (Family Picidae)	Downy Woodpecker	<i>Picoides pubescens</i>	13%	1 of 1
TAP4	21	Woodpeckers (Family Picidae)	Northern Flicker	<i>Colaptes auratus</i>	13%	1 of 1
TAP4	22	Flycatchers (Family Tyrannidae)	Eastern Kingbird	<i>Tyrannus tyrannus</i>	100%	1 of 1
TAP4	22	Flycatchers (Family Tyrannidae)	Western Wood-pewee	<i>Contopus sordidulus</i>	13%	1 of 1
TAP4	22	Flycatchers (Family Tyrannidae)	Willow Flycatcher	<i>Empidonax traillii</i>	13%	1 of 1
TAP4	23	Vireos (Family Vireonidae)	Red-eyed Vireo	<i>Vireo olivaceus</i>	38%	1 of 1
TAP4	24	Jays & Crows (Family Corvidae)	American Crow	<i>Corvus brachyrhynchos</i>	13%	1 of 1
TAP4	24	Jays & Crows (Family Corvidae)	Black-billed Magpie	<i>Pica pica</i>	25%	1 of 1
TAP4	24	Jays & Crows (Family Corvidae)	Common Raven	<i>Corvus corax</i>	25%	1 of 1
TAP4	25	Swallows (Family Hirundinidae)	Cliff Swallow	<i>Petrochelidon pyrrhonota</i>	13%	1 of 1
TAP4	25	Swallows (Family Hirundinidae)	Tree Swallow	<i>Tachycineta bicolor</i>	75%	1 of 1

Location	ID	Family	Common Name	Scientific Name	Detection Probability <sup>1</sup>	Years Observed <sup>2</sup>
TAP4	26	Chickadees & Titmice (Family Paridae)	Black-capped Chickadee	<i>Poecile atricapillus</i>	13%	1 of 1
TAP4	31	Thrushes (Family Turdidae)	American Robin	<i>Turdus migratorius</i>	38%	1 of 1
TAP4	32	Mockingbirds & Thrashers (Family Mimidae)	Gray Catbird	<i>Dumetella carolinensis</i>	50%	1 of 1
TAP4	33	Starling (Family Sturnidae)	European Starling	<i>Sturnus vulgaris</i>	25%	1 of 1
TAP4	34	Waxwings (Family Bombycillidae)	Cedar Waxwing	<i>Bombycilla cedrorum</i>	13%	1 of 1
TAP4	35	Warblers (Family Parulidae)	American Redstart	<i>Setophaga ruticilla</i>	13%	1 of 1
TAP4	35	Warblers (Family Parulidae)	Common Yellowthroat	<i>Geothlypis trichas</i>	13%	1 of 1
TAP4	35	Warblers (Family Parulidae)	Yellow Warbler	<i>Dendroica petechia</i>	88%	1 of 1
TAP4	35	Warblers (Family Parulidae)	Yellow-rumped Warbler	<i>Dendroica coronata</i>	13%	1 of 1
TAP4	37	Towhees & Sparrows (Family Emberizidae)	Chipping Sparrow	<i>Spizella passerina</i>	13%	1 of 1
TAP4	37	Towhees & Sparrows (Family Emberizidae)	Savannah Sparrow	<i>Passerculus sandwichensis</i>	75%	1 of 1
TAP4	37	Towhees & Sparrows (Family Emberizidae)	Song Sparrow	<i>Melospiza melodia</i>	75%	1 of 1
TAP4	39	Blackbirds & Orioles (Family Icteridae)	Bobolink	<i>Dolichonyx oryzivorus</i>	25%	1 of 1
TAP4	39	Blackbirds & Orioles (Family Icteridae)	Brown-headed Cowbird	<i>Molothrus ater</i>	38%	1 of 1
TAP4	39	Blackbirds & Orioles (Family Icteridae)	Bullock's Oriole	<i>Icterus bullockii</i>	75%	1 of 1
TAP4	39	Blackbirds & Orioles (Family Icteridae)	Red-winged Blackbird	<i>Agelaius phoeniceus</i>	13%	1 of 1
TAP4	39	Blackbirds & Orioles (Family Icteridae)	Western Meadowlark	<i>Sturnella neglecta</i>	75%	1 of 1
TAP4	39	Blackbirds & Orioles (Family Icteridae)	Yellow-headed Blackbird	<i>Xanthocephalus xanthocephalus</i>	63%	1 of 1
TAP4	40	Finches (Family Fringillidae)	American Goldfinch	<i>Carduelis tristis</i>	13%	1 of 1
TAP4	40	Finches (Family Fringillidae)	Red Crossbill	<i>Loxia curvirostra</i>	13%	1 of 1
TAR11	1	Grebes (Family Podicipedidae)	Pied-billed Grebe	<i>Podilymbus podiceps</i>	13%	1 of 3
TAR11	5	Swans, Geese, & Ducks (Family Anatidae)	Canada Goose	<i>Branta canadensis</i>	25%	1 of 3
TAR11	5	Swans, Geese, & Ducks (Family Anatidae)	Gadwall	<i>Anas strepera</i>	13%	1 of 3
TAR11	5	Swans, Geese, & Ducks (Family Anatidae)	Mallard	<i>Anas platyrhynchos</i>	13%	2 of 3
TAR11	8	Grouse (Family Phasianidae)	Ruffed Grouse	<i>Bonasa umbellus</i>	20%	2 of 3
TAR11	8	Grouse (Family Phasianidae)	Wild Turkey	<i>Meleagris gallopavo</i>	14%	1 of 3
TAR11	11	Plovers (Family Charadriidae)	Killdeer	<i>Charadrius vociferus</i>	14%	1 of 3

Location	ID	Family	Common Name	Scientific Name	Detection Probability <sup>1</sup>	Years Observed <sup>2</sup>
TAR11	15	Doves (Family Columbidae)	Mourning Dove	<i>Zenaida macroura</i>	14%	3 of 3
TAR11	17	Owls (Family Strigidae)	Great Horned Owl	<i>Bubo virginianus</i>	14%	1 of 3
TAR11	18	Swifts (Family Apodidae)	Vaux's Swift	<i>Chaetura vauxi</i>	14%	1 of 3
TAR11	19	Hummingbirds (Family Trochilidae)	Black-chinned Hummingbird	<i>Archilochus alexandri</i>	13%	1 of 3
TAR11	20	Kingfishers (Family Alcedinidae)	Belted Kingfisher	<i>Ceryle alcyon</i>	13%	2 of 3
TAR11	21	Woodpeckers (Family Picidae)	Downy Woodpecker	<i>Picoides pubescens</i>	14%	1 of 3
TAR11	21	Woodpeckers (Family Picidae)	Northern Flicker	<i>Colaptes auratus</i>	32%	2 of 3
TAR11	21	Woodpeckers (Family Picidae)	Pileated Woodpecker	<i>Dryocopus pileatus</i>	23%	3 of 3
TAR11	21	Woodpeckers (Family Picidae)	Red-naped Sapsucker	<i>Sphyrapicus nuchalis</i>	18%	3 of 3
TAR11	22	Flycatchers (Family Tyrannidae)	Dusky Flycatcher	<i>Empidonax oberholseri</i>	13%	2 of 3
TAR11	22	Flycatchers (Family Tyrannidae)	Hammond's Flycatcher	<i>Empidonax hammondi</i>	25%	1 of 3
TAR11	22	Flycatchers (Family Tyrannidae)	Western Wood-pewee	<i>Contopus sordidulus</i>	14%	2 of 3
TAR11	22	Flycatchers (Family Tyrannidae)	Willow Flycatcher	<i>Empidonax traillii</i>	60%	3 of 3
TAR11	23	Vireos (Family Vireonidae)	Cassin's Vireo	<i>Vireo cassinii</i>	13%	1 of 3
TAR11	23	Vireos (Family Vireonidae)	Red-eyed Vireo	<i>Vireo olivaceus</i>	22%	3 of 3
TAR11	23	Vireos (Family Vireonidae)	Warbling Vireo	<i>Vireo gilvus</i>	33%	3 of 3
TAR11	24	Jays & Crows (Family Corvidae)	American Crow	<i>Corvus brachyrhynchos</i>	14%	3 of 3
TAR11	24	Jays & Crows (Family Corvidae)	Common Raven	<i>Corvus corax</i>	26%	2 of 3
TAR11	24	Jays & Crows (Family Corvidae)	Stellar's Jay	<i>Cyanocitta stelleri</i>	13%	1 of 3
TAR11	25	Swallows (Family Hirundinidae)	Tree Swallow	<i>Tachycineta bicolor</i>	27%	3 of 3
TAR11	25	Swallows (Family Hirundinidae)	Violet-green Swallow	<i>Tachycineta thalassina</i>	13%	2 of 3
TAR11	26	Chickadees & Titmice (Family Paridae)	Black-capped Chickadee	<i>Poecile atricapillus</i>	38%	3 of 3
TAR11	26	Chickadees & Titmice (Family Paridae)	Chestnut-backed Chickadee	<i>Poecile rufescens</i>	13%	2 of 3
TAR11	27	Nuthatches (Family Sittidae)	Red-breasted Nuthatch	<i>Sitta canadensis</i>	50%	3 of 3
TAR11	30	Kinglets (Family Regulidae)	Golden-crowned Kinglet	<i>Regulus satrapa</i>	25%	1 of 3
TAR11	31	Thrushes (Family Turdidae)	American Robin	<i>Turdus migratorius</i>	83%	3 of 3
TAR11	31	Thrushes (Family Turdidae)	Swainson's Thrush	<i>Catharus ustulatus</i>	49%	3 of 3
TAR11	32	Mockingbirds & Thrashers (Family Mimidae)	Gray Catbird	<i>Dumetella carolinensis</i>	69%	3 of 3
TAR11	34	Waxwings (Family Bombycillidae)	Cedar Waxwing	<i>Bombycilla cedrorum</i>	65%	3 of 3
TAR11	35	Warblers (Family Parulidae)	American Redstart	<i>Setophaga ruticilla</i>	50%	3 of 3
TAR11	35	Warblers (Family Parulidae)	Common Yellowthroat	<i>Geothlypis trichas</i>	21%	2 of 3
TAR11	35	Warblers (Family Parulidae)	MacGillivray's Warbler	<i>Oporornis tolmiei</i>	32%	2 of 3

Location	ID	Family	Common Name	Scientific Name	Detection Probability <sup>1</sup>	Years Observed <sup>2</sup>
TAR11	35	Warblers (Family Parulidae)	Northern Waterthrush	<i>Seiurus noveboracensis</i>	73%	3 of 3
TAR11	35	Warblers (Family Parulidae)	Orange-crowned Warbler	<i>Vermivora celata</i>	14%	3 of 3
TAR11	35	Warblers (Family Parulidae)	Townsend's Warbler	<i>Dendroica townsendii</i>	13%	2 of 3
TAR11	35	Warblers (Family Parulidae)	Wilson's Warbler	<i>Wilsonia pusilla</i>	29%	1 of 3
TAR11	35	Warblers (Family Parulidae)	Yellow Warbler	<i>Dendroica petechia</i>	95%	3 of 3
TAR11	35	Warblers (Family Parulidae)	Yellow-rumped Warbler	<i>Dendroica coronata</i>	21%	2 of 3
TAR11	36	Tanagers (Family Thraupidae)	Western Tanager	<i>Piranga ludoviciana</i>	14%	2 of 3
TAR11	37	Towhees & Sparrows (Family Emberizidae)	Chipping Sparrow	<i>Spizella passerina</i>	13%	1 of 3
TAR11	37	Towhees & Sparrows (Family Emberizidae)	Dark-eyed Junco	<i>Junco hyemalis</i>	14%	1 of 3
TAR11	37	Towhees & Sparrows (Family Emberizidae)	Fox Sparrow	<i>Passerella iliaca</i>	68%	3 of 3
TAR11	37	Towhees & Sparrows (Family Emberizidae)	Song Sparrow	<i>Melospiza melodia</i>	95%	3 of 3
TAR11	38	Grosbeaks & Buntings (Family Cardinalidae)	Black-headed Grosbeak	<i>Pheucticus melanocephalus</i>	37%	3 of 3
TAR11	39	Blackbirds & Orioles (Family Icteridae)	Brown-headed Cowbird	<i>Molothrus ater</i>	59%	3 of 3
TAR11	39	Blackbirds & Orioles (Family Icteridae)	Bullock's Oriole	<i>Icterus bullockii</i>	27%	2 of 3
TAR11	39	Blackbirds & Orioles (Family Icteridae)	Western Meadowlark	<i>Sturnella neglecta</i>	14%	1 of 3
TAR11	40	Finches (Family Fringillidae)	American Goldfinch	<i>Carduelis tristis</i>	14%	1 of 3
TAR11	40	Finches (Family Fringillidae)	Evening Grosbeak	<i>Coccothraustes vespertinus</i>	13%	1 of 3
TAR11	40	Finches (Family Fringillidae)	Pine Siskin	<i>Carduelis pinus</i>	18%	3 of 3
TAR11	40	Finches (Family Fringillidae)	Red Crossbill	<i>Loxia curvirostra</i>	13%	1 of 3
TRP10	3	Hérons (Family Ardeidae)	Great-blue Heron	<i>Ardea herodias</i>	13%	1 of 1
TRP10	5	Swans, Geese, & Ducks (Family Anatidae)	Canada Goose	<i>Branta canadensis</i>	13%	1 of 1
TRP10	7	Falcons (Family Falconidae)	American Kestrel	<i>Falco sparverius</i>	25%	1 of 1
TRP10	8	Grouse (Family Phasianidae)	Ring-necked Pheasant	<i>Phasianus colchicus</i>	13%	1 of 1
TRP10	11	Plovers (Family Charadriidae)	Killdeer	<i>Charadrius vociferus</i>	50%	1 of 1
TRP10	13	Sandpipers (Family Scolopacidae)	Common Snipe	<i>Gallinago delicata</i>	100%	1 of 1
TRP10	13	Sandpipers (Family Scolopacidae)	Red-necked Phalarope	<i>Phalaropus lobatus</i>	13%	1 of 1
TRP10	21	Woodpeckers (Family Picidae)	Pileated Woodpecker	<i>Dryocopus pileatus</i>	13%	1 of 1
TRP10	21	Woodpeckers (Family Picidae)	Red-naped Sapsucker	<i>Sphyrapicus nuchalis</i>	13%	1 of 1

Location	ID	Family	Common Name	Scientific Name	Detection Probability <sup>1</sup>	Years Observed <sup>2</sup>
TRP10	22	Flycatchers (Family Tyrannidae)	Eastern Kingbird	<i>Tyrannus tyrannus</i>	13%	1 of 1
TRP10	22	Flycatchers (Family Tyrannidae)	Western Wood-pewee	<i>Contopus sordidulus</i>	13%	1 of 1
TRP10	23	Vireos (Family Vireonidae)	Warbling Vireo	<i>Vireo gilvus</i>	25%	1 of 1
TRP10	24	Jays & Crows (Family Corvidae)	Black-billed Magpie	<i>Pica pica</i>	50%	1 of 1
TRP10	24	Jays & Crows (Family Corvidae)	Common Raven	<i>Corvus corax</i>	38%	1 of 1
TRP10	25	Swallows (Family Hirundinidae)	Cliff Swallow	<i>Petrochelidon pyrrhonota</i>	63%	1 of 1
TRP10	25	Swallows (Family Hirundinidae)	Tree Swallow	<i>Tachycineta bicolor</i>	38%	1 of 1
TRP10	25	Swallows (Family Hirundinidae)	Violet-green Swallow	<i>Tachycineta thalassina</i>	13%	1 of 1
TRP10	31	Thrushes (Family Turdidae)	American Robin	<i>Turdus migratorius</i>	38%	1 of 1
TRP10	33	Starling (Family Sturnidae)	European Starling	<i>Sturnus vulgaris</i>	13%	1 of 1
TRP10	35	Warblers (Family Parulidae)	Nashville Warbler	<i>Vermivora ruficapilla</i>	13%	1 of 1
TRP10	35	Warblers (Family Parulidae)	Yellow Warbler	<i>Dendroica petechia</i>	13%	1 of 1
TRP10	37	Towhees & Sparrows (Family Emberizidae)	Lazuli Bunting	<i>Passerina amoena</i>	13%	1 of 1
TRP10	37	Towhees & Sparrows (Family Emberizidae)	Lincoln's Sparrow	<i>Melospiza lincolnii</i>	13%	1 of 1
TRP10	37	Towhees & Sparrows (Family Emberizidae)	Savannah Sparrow	<i>Passerculus sandwichensis</i>	100%	1 of 1
TRP10	37	Towhees & Sparrows (Family Emberizidae)	Spotted Towhee	<i>Pipilo maculatus</i>	38%	1 of 1
TRP10	39	Blackbirds & Orioles (Family Icteridae)	Bobolink	<i>Dolichonyx oryzivorus</i>	25%	1 of 1
TRP10	39	Blackbirds & Orioles (Family Icteridae)	Western Meadowlark	<i>Sturnella neglecta</i>	100%	1 of 1
TRP11	3	Herons (Family Ardeidae)	Great-blue Heron	<i>Ardea herodias</i>	38%	1 of 1
TRP11	5	Swans, Geese, & Ducks (Family Anatidae)	Canada Goose	<i>Branta canadensis</i>	13%	1 of 1
TRP11	5	Swans, Geese, & Ducks (Family Anatidae)	Gadwall	<i>Anas strepera</i>	38%	1 of 1
TRP11	5	Swans, Geese, & Ducks (Family Anatidae)	Mallard	<i>Anas platyrhynchos</i>	13%	1 of 1
TRP11	5	Swans, Geese, & Ducks (Family Anatidae)	Northern Shoveler	<i>Anas clypeata</i>	13%	1 of 1
TRP11	6	Eagles, Kites & Hawks (Family Accipitridae)	Northern Harrier	<i>Circus cyaneus</i>	25%	1 of 1
TRP11	6	Eagles, Kites & Hawks (Family Accipitridae)	Osprey	<i>Pandion haliaetus</i>	38%	1 of 1

Location	ID	Family	Common Name	Scientific Name	Detection Probability <sup>1</sup>	Years Observed <sup>2</sup>
TRP11	10	Rails (Family Rallidae)	Sora	<i>Porzana carolina</i>	13%	1 of 1
TRP11	11	Plovers (Family Charadriidae)	Killdeer	<i>Charadrius vociferus</i>	38%	1 of 1
TRP11	13	Sandpipers (Family Scolopacidae)	Common Snipe	<i>Gallinago delicata</i>	88%	1 of 1
TRP11	13	Sandpipers (Family Scolopacidae)	Spotted Sandpiper	<i>Actitis macularia</i>	13%	1 of 1
TRP11	20	Kingfishers (Family Alcedinidae)	Belted Kingfisher	<i>Ceryle alcyon</i>	13%	1 of 1
TRP11	21	Woodpeckers (Family Picidae)	Northern Flicker	<i>Colaptes auratus</i>	13%	1 of 1
TRP11	24	Jays & Crows (Family Corvidae)	Black-billed Magpie	<i>Pica pica</i>	13%	1 of 1
TRP11	24	Jays & Crows (Family Corvidae)	Common Raven	<i>Corvus corax</i>	25%	1 of 1
TRP11	25	Swallows (Family Hirundinidae)	Barn Swallow	<i>Hirundo rustica</i>	13%	1 of 1
TRP11	25	Swallows (Family Hirundinidae)	Cliff Swallow	<i>Petrochelidon pyrrhonota</i>	63%	1 of 1
TRP11	25	Swallows (Family Hirundinidae)	Tree Swallow	<i>Tachycineta bicolor</i>	38%	1 of 1
TRP11	25	Swallows (Family Hirundinidae)	Violet-green Swallow	<i>Tachycineta thalassina</i>	25%	1 of 1
TRP11	35	Warblers (Family Parulidae)	Common Yellowthroat	<i>Geothlypis trichas</i>	63%	1 of 1
TRP11	37	Towhees & Sparrows (Family Emberizidae)	Savannah Sparrow	<i>Passerculus sandwichensis</i>	100%	1 of 1
TRP11	39	Blackbirds & Orioles (Family Icteridae)	Bobolink	<i>Dolichonyx oryzivorus</i>	88%	1 of 1
TRP11	39	Blackbirds & Orioles (Family Icteridae)	Western Meadowlark	<i>Sturnella neglecta</i>	88%	1 of 1
TRP12	3	Herons (Family Ardeidae)	Great-blue Heron	<i>Ardea herodias</i>	38%	1 of 1
TRP12	4	New World Vultures (Family Cathartidae)	Turkey Vulture	<i>Cathartes aura</i>	13%	1 of 1
TRP12	5	Swans, Geese, & Ducks (Family Anatidae)	American Wigeon	<i>Anas americana</i>	38%	1 of 1
TRP12	5	Swans, Geese, & Ducks (Family Anatidae)	Blue-winged Teal	<i>Anas discors</i>	13%	1 of 1
TRP12	5	Swans, Geese, & Ducks (Family Anatidae)	Canada Goose	<i>Branta canadensis</i>	25%	1 of 1
TRP12	5	Swans, Geese, & Ducks (Family Anatidae)	Cinnamon Teal	<i>Anas cyanoptera</i>	50%	1 of 1
TRP12	5	Swans, Geese, & Ducks (Family Anatidae)	Common Goldeneye	<i>Bucephala clangula</i>	13%	1 of 1
TRP12	5	Swans, Geese, & Ducks (Family Anatidae)	Gadwall	<i>Anas strepera</i>	38%	1 of 1
TRP12	5	Swans, Geese, & Ducks (Family Anatidae)	Mallard	<i>Anas platyrhynchos</i>	25%	1 of 1
TRP12	5	Swans, Geese, & Ducks (Family Anatidae)	Northern Shoveler	<i>Anas clypeata</i>	13%	1 of 1

Location	ID	Family	Common Name	Scientific Name	Detection Probability <sup>1</sup>	Years Observed <sup>2</sup>
TRP12	6	Eagles, Kites & Hawks (Family Accipitridae)	Osprey	<i>Pandion haliaetus</i>	25%	1 of 1
TRP12	11	Plovers (Family Charadriidae)	Killdeer	<i>Charadrius vociferus</i>	25%	1 of 1
TRP12	13	Sandpipers (Family Scolopacidae)	Common Snipe	<i>Gallinago delicata</i>	75%	1 of 1
TRP12	20	Kingfishers (Family Alcedinidae)	Belted Kingfisher	<i>Ceryle alcyon</i>	13%	1 of 1
TRP12	22	Flycatchers (Family Tyrannidae)	Eastern Kingbird	<i>Tyrannus tyrannus</i>	13%	1 of 1
TRP12	24	Jays & Crows (Family Corvidae)	Black-billed Magpie	<i>Pica pica</i>	13%	1 of 1
TRP12	24	Jays & Crows (Family Corvidae)	Common Raven	<i>Corvus corax</i>	13%	1 of 1
TRP12	25	Swallows (Family Hirundinidae)	Cliff Swallow	<i>Petrochelidon pyrrhonota</i>	63%	1 of 1
TRP12	25	Swallows (Family Hirundinidae)	Tree Swallow	<i>Tachycineta bicolor</i>	38%	1 of 1
TRP12	25	Swallows (Family Hirundinidae)	Violet-green Swallow	<i>Tachycineta thalassina</i>	25%	1 of 1
TRP12	35	Warblers (Family Parulidae)	Common Yellowthroat	<i>Geothlypis trichas</i>	13%	1 of 1
TRP12	37	Towhees & Sparrows (Family Emberizidae)	Savannah Sparrow	<i>Passerculus sandwichensis</i>	100%	1 of 1
TRP12	39	Blackbirds & Orioles (Family Icteridae)	Bobolink	<i>Dolichonyx oryzivorus</i>	100%	1 of 1
TRP12	39	Blackbirds & Orioles (Family Icteridae)	Red-winged Blackbird	<i>Agelaius phoeniceus</i>	13%	1 of 1
TRP12	39	Blackbirds & Orioles (Family Icteridae)	Western Meadowlark	<i>Sturnella neglecta</i>	75%	1 of 1
TRP5	2	Cormorants (Family Phalacrocoracidae)	Double-crested Cormorant	<i>Phalacrocorax auritus</i>	57%	1 of 1
TRP5	5	Swans, Geese, & Ducks (Family Anatidae)	American Wigeon	<i>Anas americana</i>	29%	1 of 1
TRP5	5	Swans, Geese, & Ducks (Family Anatidae)	Bufflehead	<i>Bucephala albeola</i>	14%	1 of 1
TRP5	5	Swans, Geese, & Ducks (Family Anatidae)	Canada Goose	<i>Branta canadensis</i>	29%	1 of 1
TRP5	5	Swans, Geese, & Ducks (Family Anatidae)	Cinnamon Teal	<i>Anas cyanoptera</i>	14%	1 of 1
TRP5	5	Swans, Geese, & Ducks (Family Anatidae)	Gadwall	<i>Anas strepera</i>	14%	1 of 1
TRP5	5	Swans, Geese, & Ducks (Family Anatidae)	Redhead	<i>Aythya americana</i>	14%	1 of 1
TRP5	5	Swans, Geese, & Ducks (Family Anatidae)	Wood Duck	<i>Aix sponsa</i>	14%	1 of 1
TRP5	6	Eagles, Kites & Hawks (Family Accipitridae)	Osprey	<i>Pandion haliaetus</i>	43%	1 of 1
TRP5	8	Grouse (Family Phasianidae)	Ring-necked Pheasant	<i>Phasianus colchicus</i>	43%	1 of 1

Location	ID	Family	Common Name	Scientific Name	Detection Probability <sup>1</sup>	Years Observed <sup>2</sup>
TRP5	13	Sandpipers (Family Scolopacidae)	Common Snipe	<i>Gallinago delicata</i>	71%	1 of 1
TRP5	13	Sandpipers (Family Scolopacidae)	Red-necked Phalarope	<i>Phalaropus lobatus</i>	43%	1 of 1
TRP5	15	Doves (Family Columbidae)	Mourning Dove	<i>Zenaida macroura</i>	29%	1 of 1
TRP5	19	Hummingbirds (Family Trochilidae)	Calliope Hummingbird	<i>Stellula calliope</i>	43%	1 of 1
TRP5	20	Kingfishers (Family Alcedinidae)	Belted Kingfisher	<i>Ceryle alcyon</i>	29%	1 of 1
TRP5	21	Woodpeckers (Family Picidae)	Northern Flicker	<i>Colaptes auratus</i>	29%	1 of 1
TRP5	22	Flycatchers (Family Tyrannidae)	Eastern Kingbird	<i>Tyrannus tyrannus</i>	43%	1 of 1
TRP5	24	Jays & Crows (Family Corvidae)	American Crow	<i>Corvus brachyrhynchos</i>	71%	1 of 1
TRP5	24	Jays & Crows (Family Corvidae)	Black-billed Magpie	<i>Pica pica</i>	100%	1 of 1
TRP5	24	Jays & Crows (Family Corvidae)	Common Raven	<i>Corvus corax</i>	43%	1 of 1
TRP5	25	Swallows (Family Hirundinidae)	Tree Swallow	<i>Tachycineta bicolor</i>	86%	1 of 1
TRP5	26	Chickadees & Titmice (Family Paridae)	Black-capped Chickadee	<i>Poecile atricapillus</i>	14%	1 of 1
TRP5	29	Wrens (Family Troglodytidae)	Bewick's Wren	<i>Thryomanes bewickii</i>	14%	1 of 1
TRP5	31	Thrushes (Family Turdidae)	American Robin	<i>Turdus migratorius</i>	14%	1 of 1
TRP5	32	Mockingbirds & Thrashers (Family Mimidae)	Gray Catbird	<i>Dumetella carolinensis</i>	43%	1 of 1
TRP5	34	Waxwings (Family Bombycillidae)	Cedar Waxwing	<i>Bombycilla cedrorum</i>	29%	1 of 1
TRP5	35	Warblers (Family Parulidae)	Common Yellowthroat	<i>Geothlypis trichas</i>	57%	1 of 1
TRP5	35	Warblers (Family Parulidae)	Yellow Warbler	<i>Dendroica petechia</i>	29%	1 of 1
TRP5	37	Towhees & Sparrows (Family Emberizidae)	Savannah Sparrow	<i>Passerculus sandwichensis</i>	57%	1 of 1
TRP5	37	Towhees & Sparrows (Family Emberizidae)	Song Sparrow	<i>Melospiza melodia</i>	100%	1 of 1
TRP5	39	Blackbirds & Orioles (Family Icteridae)	Bobolink	<i>Dolichonyx oryzivorus</i>	86%	1 of 1
TRP5	39	Blackbirds & Orioles (Family Icteridae)	Brown-headed Cowbird	<i>Molothrus ater</i>	57%	1 of 1
TRP5	39	Blackbirds & Orioles (Family Icteridae)	Bullock's Oriole	<i>Icterus bullockii</i>	43%	1 of 1
TRP5	39	Blackbirds & Orioles (Family Icteridae)	Red-winged Blackbird	<i>Agelaius phoeniceus</i>	43%	1 of 1
TRP5	39	Blackbirds & Orioles (Family Icteridae)	Western Meadowlark	<i>Sturnella neglecta</i>	86%	1 of 1
TRP6	2	Cormorants (Family Phalacrocoracidae)	Double-crested Cormorant	<i>Phalacrocorax auritus</i>	17%	1 of 1
TRP6	3	Herons (Family Ardeidae)	Great-blue Heron	<i>Ardea herodias</i>	17%	1 of 1
TRP6	5	Swans, Geese, & Ducks (Family Anatidae)	Canada Goose	<i>Branta canadensis</i>	50%	1 of 1
TRP6	5	Swans, Geese, & Ducks (Family Anatidae)	Mallard	<i>Anas platyrhynchos</i>	17%	1 of 1

Location	ID	Family	Common Name	Scientific Name	Detection Probability <sup>1</sup>	Years Observed <sup>2</sup>
TRP6	5	Swans, Geese, & Ducks (Family Anatidae)	Wood Duck	<i>Aix sponsa</i>	17%	1 of 1
TRP6	7	Falcons (Family Falconidae)	American Kestrel	<i>Falco sparverius</i>	17%	1 of 1
TRP6	8	Grouse (Family Phasianidae)	Ring-necked Pheasant	<i>Phasianus colchicus</i>	50%	1 of 1
TRP6	11	Plovers (Family Charadriidae)	Killdeer	<i>Charadrius vociferus</i>	17%	1 of 1
TRP6	13	Sandpipers (Family Scolopacidae)	Common Snipe	<i>Gallinago delicata</i>	100%	1 of 1
TRP6	13	Sandpipers (Family Scolopacidae)	Red-necked Phalarope	<i>Phalaropus lobatus</i>	50%	1 of 1
TRP6	19	Hummingbirds (Family Trochilidae)	Calliope Hummingbird	<i>Stellula calliope</i>	17%	1 of 1
TRP6	20	Kingfishers (Family Alcedinidae)	Belted Kingfisher	<i>Ceryle alcyon</i>	17%	1 of 1
TRP6	21	Woodpeckers (Family Picidae)	Northern Flicker	<i>Colaptes auratus</i>	17%	1 of 1
TRP6	21	Woodpeckers (Family Picidae)	Red-naped Sapsucker	<i>Sphyrapicus nuchalis</i>	17%	1 of 1
TRP6	22	Flycatchers (Family Tyrannidae)	Eastern Kingbird	<i>Tyrannus tyrannus</i>	67%	1 of 1
TRP6	24	Jays & Crows (Family Corvidae)	American Crow	<i>Corvus brachyrhynchos</i>	67%	1 of 1
TRP6	24	Jays & Crows (Family Corvidae)	Common Raven	<i>Corvus corax</i>	67%	1 of 1
TRP6	25	Swallows (Family Hirundinidae)	Cliff Swallow	<i>Petrochelidon pyrrhonota</i>	17%	1 of 1
TRP6	25	Swallows (Family Hirundinidae)	Tree Swallow	<i>Tachycineta bicolor</i>	83%	1 of 1
TRP6	26	Chickadees & Titmice (Family Paridae)	Black-capped Chickadee	<i>Poecile atricapillus</i>	17%	1 of 1
TRP6	32	Mockingbirds & Thrashers (Family Mimidae)	Gray Catbird	<i>Dumetella carolinensis</i>	67%	1 of 1
TRP6	33	Starling (Family Sturnidae)	European Starling	<i>Sturnus vulgaris</i>	33%	1 of 1
TRP6	34	Waxwings (Family Bombycillidae)	Cedar Waxwing	<i>Bombycilla cedrorum</i>	17%	1 of 1
TRP6	35	Warblers (Family Parulidae)	Common Yellowthroat	<i>Geothlypis trichas</i>	50%	1 of 1
TRP6	35	Warblers (Family Parulidae)	MacGillvery's Warbler	<i>Oporornis tolmiei</i>	17%	1 of 1
TRP6	35	Warblers (Family Parulidae)	Yellow Warbler	<i>Dendroica petechia</i>	67%	1 of 1
TRP6	37	Towhees & Sparrows (Family Emberizidae)	Savannah Sparrow	<i>Passerculus sandwichensis</i>	100%	1 of 1
TRP6	37	Towhees & Sparrows (Family Emberizidae)	Song Sparrow	<i>Melospiza melodia</i>	100%	1 of 1
TRP6	39	Blackbirds & Orioles (Family Icteridae)	Bobolink	<i>Dolichonyx oryzivorus</i>	100%	1 of 1
TRP6	39	Blackbirds & Orioles (Family Icteridae)	Brown-headed Cowbird	<i>Molothrus ater</i>	50%	1 of 1
TRP6	39	Blackbirds & Orioles (Family Icteridae)	Bullock's Oriole	<i>Icterus bullockii</i>	67%	1 of 1
TRP6	39	Blackbirds & Orioles (Family Icteridae)	Red-winged Blackbird	<i>Agelaius phoeniceus</i>	17%	1 of 1
TRP6	39	Blackbirds & Orioles (Family Icteridae)	Western Meadowlark	<i>Sturnella neglecta</i>	100%	1 of 1
TRP6	40	Finches (Family Fringillidae)	Pine Siskin	<i>Carduelis pinus</i>	17%	1 of 1

Location	ID	Family	Common Name	Scientific Name	Detection Probability <sup>1</sup>	Years Observed <sup>2</sup>
TRP7	2	Cormorants (Family Phalacrocoracidae)	Double-crested Cormorant	<i>Phalacrocorax auritus</i>	43%	1 of 1
TRP7	3	Herons (Family Ardeidae)	Great-blue Heron	<i>Ardea herodias</i>	29%	1 of 1
TRP7	5	Swans, Geese, & Ducks (Family Anatidae)	American Wigeon	<i>Anas americana</i>	14%	1 of 1
TRP7	5	Swans, Geese, & Ducks (Family Anatidae)	Blue-winged Teal	<i>Anas discors</i>	14%	1 of 1
TRP7	5	Swans, Geese, & Ducks (Family Anatidae)	Canada Goose	<i>Branta canadensis</i>	43%	1 of 1
TRP7	5	Swans, Geese, & Ducks (Family Anatidae)	Cinnamon Teal	<i>Anas cyanoptera</i>	14%	1 of 1
TRP7	5	Swans, Geese, & Ducks (Family Anatidae)	Gadwall	<i>Anas strepera</i>	14%	1 of 1
TRP7	5	Swans, Geese, & Ducks (Family Anatidae)	Mallard	<i>Anas platyrhynchos</i>	43%	1 of 1
TRP7	5	Swans, Geese, & Ducks (Family Anatidae)	Northern Shoveler	<i>Anas clypeata</i>	14%	1 of 1
TRP7	5	Swans, Geese, & Ducks (Family Anatidae)	Wood Duck	<i>Aix sponsa</i>	14%	1 of 1
TRP7	6	Eagles, Kites & Hawks (Family Accipitridae)	Bald Eagle	<i>Haliaeetus leucocephalus</i>	43%	1 of 1
TRP7	6	Eagles, Kites & Hawks (Family Accipitridae)	Osprey	<i>Pandion haliaetus</i>	14%	1 of 1
TRP7	8	Grouse (Family Phasianidae)	Ring-necked Pheasant	<i>Phasianus colchicus</i>	57%	1 of 1
TRP7	13	Sandpipers (Family Scolopacidae)	Common Snipe	<i>Gallinago delicata</i>	86%	1 of 1
TRP7	13	Sandpipers (Family Scolopacidae)	Red-necked Phalarope	<i>Phalaropus lobatus</i>	57%	1 of 1
TRP7	15	Doves (Family Columbidae)	Mourning Dove	<i>Zenaida macroura</i>	14%	1 of 1
TRP7	21	Woodpeckers (Family Picidae)	Northern Flicker	<i>Colaptes auratus</i>	29%	1 of 1
TRP7	22	Flycatchers (Family Tyrannidae)	Eastern Kingbird	<i>Tyrannus tyrannus</i>	71%	1 of 1
TRP7	22	Flycatchers (Family Tyrannidae)	Willow Flycatcher	<i>Empidonax traillii</i>	29%	1 of 1
TRP7	23	Vireos (Family Vireonidae)	Red-eyed Vireo	<i>Vireo olivaceus</i>	29%	1 of 1
TRP7	24	Jays & Crows (Family Corvidae)	American Crow	<i>Corvus brachyrhynchos</i>	57%	1 of 1
TRP7	24	Jays & Crows (Family Corvidae)	Black-billed Magpie	<i>Pica pica</i>	43%	1 of 1
TRP7	24	Jays & Crows (Family Corvidae)	Common Raven	<i>Corvus corax</i>	43%	1 of 1
TRP7	25	Swallows (Family Hirundinidae)	Tree Swallow	<i>Tachycineta bicolor</i>	71%	1 of 1
TRP7	25	Swallows (Family Hirundinidae)	Violet-green Swallow	<i>Tachycineta thalassina</i>	14%	1 of 1

Location	ID	Family	Common Name	Scientific Name	Detection Probability <sup>1</sup>	Years Observed <sup>2</sup>
TRP7	26	Chickadees & Titmice (Family Paridae)	Black-capped Chickadee	<i>Poecile atricapillus</i>	14%	1 of 1
TRP7	32	Mockingbirds & Thrashers (Family Mimidae)	Gray Catbird	<i>Dumetella carolinensis</i>	14%	1 of 1
TRP7	33	Starling (Family Sturnidae)	European Starling	<i>Sturnus vulgaris</i>	14%	1 of 1
TRP7	34	Waxwings (Family Bombycillidae)	Cedar Waxwing	<i>Bombycilla cedrorum</i>	29%	1 of 1
TRP7	35	Warblers (Family Parulidae)	Common Yellowthroat	<i>Geothlypis trichas</i>	71%	1 of 1
TRP7	35	Warblers (Family Parulidae)	Yellow Warbler	<i>Dendroica petechia</i>	71%	1 of 1
TRP7	37	Towhees & Sparrows (Family Emberizidae)	Savannah Sparrow	<i>Passerculus sandwichensis</i>	100%	1 of 1
TRP7	37	Towhees & Sparrows (Family Emberizidae)	Song Sparrow	<i>Melospiza melodia</i>	86%	1 of 1
TRP7	39	Blackbirds & Orioles (Family Icteridae)	Bobolink	<i>Dolichonyx oryzivorus</i>	100%	1 of 1
TRP7	39	Blackbirds & Orioles (Family Icteridae)	Brown-headed Cowbird	<i>Molothrus ater</i>	43%	1 of 1
TRP7	39	Blackbirds & Orioles (Family Icteridae)	Red-winged Blackbird	<i>Agelaius phoeniceus</i>	43%	1 of 1
TRP7	39	Blackbirds & Orioles (Family Icteridae)	Western Meadowlark	<i>Sturnella neglecta</i>	71%	1 of 1
TRP8	2	Cormorants (Family Phalacrocoracidae)	Double-crested Cormorant	<i>Phalacrocorax auritus</i>	71%	1 of 1
TRP8	3	Hérons (Family Ardeidae)	Great-blue Heron	<i>Ardea herodias</i>	29%	1 of 1
TRP8	4	New World Vultures (Family Cathartidae)	Turkey Vulture	<i>Cathartes aura</i>	14%	1 of 1
TRP8	5	Swans, Geese, & Ducks (Family Anatidae)	American Wigeon	<i>Anas americana</i>	29%	1 of 1
TRP8	5	Swans, Geese, & Ducks (Family Anatidae)	Blue-winged Teal	<i>Anas discors</i>	14%	1 of 1
TRP8	5	Swans, Geese, & Ducks (Family Anatidae)	Canada Goose	<i>Branta canadensis</i>	29%	1 of 1
TRP8	5	Swans, Geese, & Ducks (Family Anatidae)	Cinnamon Teal	<i>Anas cyanoptera</i>	43%	1 of 1
TRP8	5	Swans, Geese, & Ducks (Family Anatidae)	Gadwall	<i>Anas strepera</i>	14%	1 of 1
TRP8	5	Swans, Geese, & Ducks (Family Anatidae)	Mallard	<i>Anas platyrhynchos</i>	43%	1 of 1
TRP8	5	Swans, Geese, & Ducks (Family Anatidae)	Northern Shoveler	<i>Anas clypeata</i>	14%	1 of 1
TRP8	5	Swans, Geese, & Ducks (Family Anatidae)	Wood Duck	<i>Aix sponsa</i>	14%	1 of 1
TRP8	6	Eagles, Kites & Hawks (Family Accipitridae)	Bald Eagle	<i>Haliaeetus leucocephalus</i>	14%	1 of 1

Location	ID	Family	Common Name	Scientific Name	Detection Probability <sup>1</sup>	Years Observed <sup>2</sup>
TRP8	6	Eagles, Kites & Hawks (Family Accipitridae)	Osprey	<i>Pandion haliaetus</i>	57%	1 of 1
TRP8	8	Grouse (Family Phasianidae)	Ring-necked Pheasant	<i>Phasianus colchicus</i>	29%	1 of 1
TRP8	8	Grouse (Family Phasianidae)	Ruffed Grouse	<i>Bonasa umbellus</i>	14%	1 of 1
TRP8	13	Sandpipers (Family Scolopacidae)	Common Snipe	<i>Gallinago delicata</i>	100%	1 of 1
TRP8	13	Sandpipers (Family Scolopacidae)	Red-necked Phalarope	<i>Phalaropus lobatus</i>	29%	1 of 1
TRP8	15	Doves (Family Columbidae)	Mourning Dove	<i>Zenaida macroura</i>	71%	1 of 1
TRP8	20	Kingfishers (Family Alcedinidae)	Belted Kingfisher	<i>Ceryle alcyon</i>	29%	1 of 1
TRP8	21	Woodpeckers (Family Picidae)	Northern Flicker	<i>Colaptes auratus</i>	14%	1 of 1
TRP8	21	Woodpeckers (Family Picidae)	Red-naped Sapsucker	<i>Sphyrapicus nuchalis</i>	14%	1 of 1
TRP8	22	Flycatchers (Family Tyrannidae)	Eastern Kingbird	<i>Tyrannus tyrannus</i>	14%	1 of 1
TRP8	23	Vireos (Family Vireonidae)	Red-eyed Vireo	<i>Vireo olivaceus</i>	14%	1 of 1
TRP8	24	Jays & Crows (Family Corvidae)	American Crow	<i>Corvus brachyrhynchos</i>	86%	1 of 1
TRP8	24	Jays & Crows (Family Corvidae)	Common Raven	<i>Corvus corax</i>	29%	1 of 1
TRP8	25	Swallows (Family Hirundinidae)	Cliff Swallow	<i>Petrochelidon pyrrhonota</i>	14%	1 of 1
TRP8	25	Swallows (Family Hirundinidae)	Tree Swallow	<i>Tachycineta bicolor</i>	71%	1 of 1
TRP8	25	Swallows (Family Hirundinidae)	Violet-green Swallow	<i>Tachycineta thalassina</i>	29%	1 of 1
TRP8	26	Chickadees & Titmice (Family Paridae)	Black-capped Chickadee	<i>Poecile atricapillus</i>	29%	1 of 1
TRP8	32	Mockingbirds & Thrashers (Family Mimidae)	Gray Catbird	<i>Dumetella carolinensis</i>	29%	1 of 1
TRP8	33	Starling (Family Sturnidae)	European Starling	<i>Sturnus vulgaris</i>	14%	1 of 1
TRP8	34	Waxwings (Family Bombycillidae)	Cedar Waxwing	<i>Bombycilla cedrorum</i>	29%	1 of 1
TRP8	35	Warblers (Family Parulidae)	Common Yellowthroat	<i>Geothlypis trichas</i>	100%	1 of 1
TRP8	35	Warblers (Family Parulidae)	Yellow Warbler	<i>Dendroica petechia</i>	71%	1 of 1
TRP8	37	Towhees & Sparrows (Family Emberizidae)	Savannah Sparrow	<i>Passerculus sandwichensis</i>	100%	1 of 1
TRP8	37	Towhees & Sparrows (Family Emberizidae)	Song Sparrow	<i>Melospiza melodia</i>	43%	1 of 1
TRP8	38	Grosbeaks & Buntings (Family Cardinalidae)	Black-headed Grosbeak	<i>Pheucticus melanocephalus</i>	14%	1 of 1
TRP8	39	Blackbirds & Orioles (Family Icteridae)	Bobolink	<i>Dolichonyx oryzivorus</i>	100%	1 of 1
TRP8	39	Blackbirds & Orioles (Family Icteridae)	Brown-headed Cowbird	<i>Molothrus ater</i>	43%	1 of 1
TRP8	39	Blackbirds & Orioles (Family Icteridae)	Bullock's Oriole	<i>Icterus bullockii</i>	43%	1 of 1
TRP8	39	Blackbirds & Orioles (Family Icteridae)	Red-winged Blackbird	<i>Agelaius phoeniceus</i>	57%	1 of 1

Location	ID	Family	Common Name	Scientific Name	Detection Probability <sup>1</sup>	Years Observed <sup>2</sup>
TRP8	39	Blackbirds & Orioles (Family Icteridae)	Western Meadowlark	<i>Sturnella neglecta</i>	14%	1 of 1
TRP9	1	Grebes (Family Podicipedidae)	Pied-billed Grebe	<i>Podilymbus podiceps</i>	14%	1 of 1
TRP9	2	Cormorants (Family Phalacrocoracidae)	Double-crested Cormorant	<i>Phalacrocorax auritus</i>	57%	1 of 1
TRP9	3	Hérons (Family Ardeidae)	Great-blue Heron	<i>Ardea herodias</i>	14%	1 of 1
TRP9	5	Swans, Geese, & Ducks (Family Anatidae)	American Wigeon	<i>Anas americana</i>	14%	1 of 1
TRP9	5	Swans, Geese, & Ducks (Family Anatidae)	Canada Goose	<i>Branta canadensis</i>	14%	1 of 1
TRP9	5	Swans, Geese, & Ducks (Family Anatidae)	Gadwall	<i>Anas strepera</i>	14%	1 of 1
TRP9	6	Eagles, Kites & Hawks (Family Accipitridae)	Osprey	<i>Pandion haliaetus</i>	14%	1 of 1
TRP9	8	Grouse (Family Phasianidae)	Ring-necked Pheasant	<i>Phasianus colchicus</i>	29%	1 of 1
TRP9	8	Grouse (Family Phasianidae)	Ruffed Grouse	<i>Bonasa umbellus</i>	43%	1 of 1
TRP9	10	Rails (Family Rallidae)	Sora	<i>Porzana carolina</i>	14%	1 of 1
TRP9	13	Sandpipers (Family Scolopacidae)	Common Snipe	<i>Gallinago delicata</i>	43%	1 of 1
TRP9	13	Sandpipers (Family Scolopacidae)	Red-necked Phalarope	<i>Phalaropus lobatus</i>	29%	1 of 1
TRP9	15	Doves (Family Columbidae)	Mourning Dove	<i>Zenaida macroura</i>	43%	1 of 1
TRP9	19	Hummingbirds (Family Trochilidae)	Calliope Hummingbird	<i>Stellula calliope</i>	14%	1 of 1
TRP9	20	Kingfishers (Family Alcedinidae)	Belted Kingfisher	<i>Ceryle alcyon</i>	14%	1 of 1
TRP9	21	Woodpeckers (Family Picidae)	Red-naped Sapsucker	<i>Sphyrapicus nuchalis</i>	14%	1 of 1
TRP9	22	Flycatchers (Family Tyrannidae)	Eastern Kingbird	<i>Tyrannus tyrannus</i>	71%	1 of 1
TRP9	22	Flycatchers (Family Tyrannidae)	Western Wood-pewee	<i>Contopus sordidulus</i>	29%	1 of 1
TRP9	22	Flycatchers (Family Tyrannidae)	Willow Flycatcher	<i>Empidonax traillii</i>	43%	1 of 1
TRP9	23	Vireos (Family Vireonidae)	Red-eyed Vireo	<i>Vireo olivaceus</i>	71%	1 of 1
TRP9	24	Jays & Crows (Family Corvidae)	American Crow	<i>Corvus brachyrhynchos</i>	86%	1 of 1
TRP9	24	Jays & Crows (Family Corvidae)	Black-billed Magpie	<i>Pica pica</i>	29%	1 of 1
TRP9	24	Jays & Crows (Family Corvidae)	Common Raven	<i>Corvus corax</i>	29%	1 of 1
TRP9	25	Swallows (Family Hirundinidae)	Barn Swallow	<i>Hirundo rustica</i>	14%	1 of 1
TRP9	25	Swallows (Family Hirundinidae)	Tree Swallow	<i>Tachycineta bicolor</i>	29%	1 of 1
TRP9	25	Swallows (Family Hirundinidae)	Violet-green Swallow	<i>Tachycineta thalassina</i>	29%	1 of 1
TRP9	26	Chickadees & Titmice (Family Paridae)	Black-capped Chickadee	<i>Poecile atricapillus</i>	29%	1 of 1
TRP9	31	Thrushes (Family Turdidae)	American Robin	<i>Turdus migratorius</i>	29%	1 of 1
TRP9	31	Thrushes (Family Turdidae)	Swainson's Thrush	<i>Catharus ustulatus</i>	14%	1 of 1

Location	ID	Family	Common Name	Scientific Name	Detection Probability <sup>1</sup>	Years Observed <sup>2</sup>
TRP9	32	Mockingbirds & Thrashers (Family Mimidae)	Gray Catbird	<i>Dumetella carolinensis</i>	43%	1 of 1
TRP9	33	Starling (Family Sturnidae)	European Starling	<i>Sturnus vulgaris</i>	71%	1 of 1
TRP9	34	Waxwings (Family Bombycillidae)	Cedar Waxwing	<i>Bombycilla cedrorum</i>	43%	1 of 1
TRP9	35	Warblers (Family Parulidae)	American Redstart	<i>Setophaga ruticilla</i>	43%	1 of 1
TRP9	35	Warblers (Family Parulidae)	Common Yellowthroat	<i>Geothlypis trichas</i>	43%	1 of 1
TRP9	35	Warblers (Family Parulidae)	Yellow Warbler	<i>Dendroica petechia</i>	100%	1 of 1
TRP9	37	Towhees & Sparrows (Family Emberizidae)	Savannah Sparrow	<i>Passerculus sandwichensis</i>	29%	1 of 1
TRP9	37	Towhees & Sparrows (Family Emberizidae)	Song Sparrow	<i>Melospiza melodia</i>	86%	1 of 1
TRP9	38	Grosbeaks & Buntings (Family Cardinalidae)	Black-headed Grosbeak	<i>Pheucticus melanocephalus</i>	14%	1 of 1
TRP9	39	Blackbirds & Orioles (Family Icteridae)	Bobolink	<i>Dolichonyx oryzivorus</i>	71%	1 of 1
TRP9	39	Blackbirds & Orioles (Family Icteridae)	Brown-headed Cowbird	<i>Molothrus ater</i>	100%	1 of 1
TRP9	39	Blackbirds & Orioles (Family Icteridae)	Bullock's Oriole	<i>Icterus bullockii</i>	71%	1 of 1
TRP9	39	Blackbirds & Orioles (Family Icteridae)	Red-winged Blackbird	<i>Agelaius phoeniceus</i>	14%	1 of 1
TRP9	39	Blackbirds & Orioles (Family Icteridae)	Western Meadowlark	<i>Sturnella neglecta</i>	14%	1 of 1
WRR12	1	Grebes (Family Podicipedidae)	Pied-billed Grebe	<i>Podilymbus podiceps</i>	36%	3 of 3
WRR12	3	Hérons (Family Ardeidae)	Great-blue Heron	<i>Ardea herodias</i>	20%	2 of 3
WRR12	5	Swans, Geese, & Ducks (Family Anatidae)	Blue-winged Teal	<i>Anas discors</i>	21%	2 of 3
WRR12	5	Swans, Geese, & Ducks (Family Anatidae)	Canada Goose	<i>Branta canadensis</i>	13%	2 of 3
WRR12	5	Swans, Geese, & Ducks (Family Anatidae)	Cinnamon Teal	<i>Anas cyanoptera</i>	14%	1 of 3
WRR12	5	Swans, Geese, & Ducks (Family Anatidae)	Common Goldeneye	<i>Bucephala clangula</i>	14%	1 of 3
WRR12	5	Swans, Geese, & Ducks (Family Anatidae)	Gadwall	<i>Anas strepera</i>	14%	1 of 3
WRR12	5	Swans, Geese, & Ducks (Family Anatidae)	Green-winged Teal	<i>Anas crecca</i>	14%	1 of 3
WRR12	5	Swans, Geese, & Ducks (Family Anatidae)	Hooded Merganser	<i>Lophodytes cucullatus</i>	25%	1 of 3
WRR12	5	Swans, Geese, & Ducks (Family Anatidae)	Mallard	<i>Anas platyrhynchos</i>	33%	2 of 3

Location	ID	Family	Common Name	Scientific Name	Detection Probability <sup>1</sup>	Years Observed <sup>2</sup>
WRR12	5	Swans, Geese, & Ducks (Family Anatidae)	Redhead	<i>Aythya americana</i>	13%	1 of 3
WRR12	5	Swans, Geese, & Ducks (Family Anatidae)	Wood Duck	<i>Aix sponsa</i>	20%	2 of 3
WRR12	8	Grouse (Family Phasianidae)	Ring-necked Pheasant	<i>Phasianus colchicus</i>	14%	1 of 3
WRR12	8	Grouse (Family Phasianidae)	Ruffed Grouse	<i>Bonasa umbellus</i>	20%	2 of 3
WRR12	10	Rails (Family Rallidae)	American Coot	<i>Fulica americana</i>	75%	2 of 3
WRR12	10	Rails (Family Rallidae)	Sora	<i>Porzana carolina</i>	73%	3 of 3
WRR12	10	Rails (Family Rallidae)	Virginia Rail	<i>Rallus limicola</i>	14%	3 of 3
WRR12	11	Plovers (Family Charadriidae)	Killdeer	<i>Charadrius vociferus</i>	14%	1 of 3
WRR12	13	Sandpipers (Family Scolopacidae)	Common Snipe	<i>Gallinago delicata</i>	56%	3 of 3
WRR12	13	Sandpipers (Family Scolopacidae)	Red-necked Phalarope	<i>Phalaropus lobatus</i>	14%	1 of 3
WRR12	15	Doves (Family Columbidae)	Mourning Dove	<i>Zenaida macroura</i>	25%	1 of 3
WRR12	19	Hummingbirds (Family Trochilidae)	Calliope Hummingbird	<i>Stellula calliope</i>	28%	3 of 3
WRR12	21	Woodpeckers (Family Picidae)	Northern Flicker	<i>Colaptes auratus</i>	37%	3 of 3
WRR12	21	Woodpeckers (Family Picidae)	Pileated Woodpecker	<i>Dryocopus pileatus</i>	14%	3 of 3
WRR12	21	Woodpeckers (Family Picidae)	Red-naped Sapsucker	<i>Sphyrapicus nuchalis</i>	20%	2 of 3
WRR12	22	Flycatchers (Family Tyrannidae)	Dusky Flycatcher	<i>Empidonax oberholseri</i>	13%	1 of 3
WRR12	22	Flycatchers (Family Tyrannidae)	Least Flycatcher	<i>Empidonax minimus</i>	21%	2 of 3
WRR12	22	Flycatchers (Family Tyrannidae)	Western Wood-pewee	<i>Contopus sordidulus</i>	63%	3 of 3
WRR12	22	Flycatchers (Family Tyrannidae)	Willow Flycatcher	<i>Empidonax traillii</i>	34%	2 of 3
WRR12	23	Vireos (Family Vireonidae)	Cassin's Vireo	<i>Vireo cassinii</i>	13%	2 of 3
WRR12	23	Vireos (Family Vireonidae)	Red-eyed Vireo	<i>Vireo olivaceus</i>	68%	3 of 3
WRR12	23	Vireos (Family Vireonidae)	Warbling Vireo	<i>Vireo gilvus</i>	46%	3 of 3
WRR12	24	Jays & Crows (Family Corvidae)	American Crow	<i>Corvus brachyrhynchos</i>	18%	3 of 3
WRR12	24	Jays & Crows (Family Corvidae)	Black-billed Magpie	<i>Pica pica</i>	18%	3 of 3
WRR12	24	Jays & Crows (Family Corvidae)	Common Raven	<i>Corvus corax</i>	27%	3 of 3
WRR12	24	Jays & Crows (Family Corvidae)	Stellar's Jay	<i>Cyanocitta stelleri</i>	20%	2 of 3
WRR12	25	Swallows (Family Hirundinidae)	Cliff Swallow	<i>Petrochelidon pyrrhonota</i>	14%	1 of 3
WRR12	25	Swallows (Family Hirundinidae)	Tree Swallow	<i>Tachycineta bicolor</i>	55%	3 of 3
WRR12	25	Swallows (Family Hirundinidae)	Violet-green Swallow	<i>Tachycineta thalassina</i>	29%	1 of 3
WRR12	26	Chickadees & Titmice (Family Paridae)	Black-capped Chickadee	<i>Poecile atricapillus</i>	23%	3 of 3
WRR12	26	Chickadees & Titmice (Family Paridae)	Chestnut-backed Chickadee	<i>Poecile rufescens</i>	13%	1 of 3

Location	ID	Family	Common Name	Scientific Name	Detection Probability <sup>1</sup>	Years Observed <sup>2</sup>
WRR12	27	Nuthatches (Family Sittidae)	Red-breasted Nuthatch	<i>Sitta canadensis</i>	13%	2 of 3
WRR12	29	Wrens (Family Troglodytidae)	Marsh Wren	<i>Cistothorus palustris</i>	29%	1 of 3
WRR12	30	Kinglets (Family Regulidae)	Golden-crowned Kinglet	<i>Regulus satrapa</i>	13%	1 of 3
WRR12	31	Thrushes (Family Turdidae)	American Robin	<i>Turdus migratorius</i>	73%	3 of 3
WRR12	31	Thrushes (Family Turdidae)	Swainson's Thrush	<i>Catharus ustulatus</i>	23%	3 of 3
WRR12	32	Mockingbirds & Thrashers (Family Mimidae)	Gray Catbird	<i>Dumetella carolinensis</i>	60%	3 of 3
WRR12	34	Waxwings (Family Bombycillidae)	Cedar Waxwing	<i>Bombycilla cedrorum</i>	50%	2 of 3
WRR12	35	Warblers (Family Parulidae)	American Redstart	<i>Setophaga ruticilla</i>	37%	3 of 3
WRR12	35	Warblers (Family Parulidae)	Common Yellowthroat	<i>Geothlypis trichas</i>	32%	3 of 3
WRR12	35	Warblers (Family Parulidae)	MacGillivray's Warbler	<i>Oporornis tolmiei</i>	41%	2 of 3
WRR12	35	Warblers (Family Parulidae)	Nashville Warbler	<i>Vermivora ruficapilla</i>	25%	1 of 3
WRR12	35	Warblers (Family Parulidae)	Northern Waterthrush	<i>Seiurus noveboracensis</i>	14%	1 of 3
WRR12	35	Warblers (Family Parulidae)	Wilson's Warbler	<i>Wilsonia pusilla</i>	14%	1 of 3
WRR12	35	Warblers (Family Parulidae)	Yellow Warbler	<i>Dendroica petechia</i>	100%	3 of 3
WRR12	36	Tanagers (Family Thraupidae)	Western Tanager	<i>Piranga ludoviciana</i>	14%	3 of 3
WRR12	37	Towhees & Sparrows (Family Emberizidae)	Song Sparrow	<i>Melospiza melodia</i>	86%	3 of 3
WRR12	37	Towhees & Sparrows (Family Emberizidae)	Spotted Towhee	<i>Pipilo maculatus</i>	32%	2 of 3
WRR12	38	Grosbeaks & Buntings (Family Cardinalidae)	Black-headed Grosbeak	<i>Pheucticus melanocephalus</i>	32%	3 of 3
WRR12	39	Blackbirds & Orioles (Family Icteridae)	Brown-headed Cowbird	<i>Molothrus ater</i>	46%	3 of 3
WRR12	39	Blackbirds & Orioles (Family Icteridae)	Bullock's Oriole	<i>Icterus bullockii</i>	14%	3 of 3
WRR12	39	Blackbirds & Orioles (Family Icteridae)	Red-winged Blackbird	<i>Agelaius phoeniceus</i>	95%	3 of 3
WRR12	40	Finches (Family Fringillidae)	American Goldfinch	<i>Carduelis tristis</i>	14%	1 of 3
WRR12	40	Finches (Family Fringillidae)	Evening Grosbeak	<i>Coccothraustes vespertinus</i>	13%	1 of 3
WRR12	40	Finches (Family Fringillidae)	Pine Siskin	<i>Carduelis pinus</i>	13%	1 of 3
WRR12	40	Finches (Family Fringillidae)	Red Crossbill	<i>Loxia curvirostra</i>	14%	1 of 3
WRR6	1	Grebes (Family Podicipedidae)	Pied-billed Grebe	<i>Podilymbus podiceps</i>	49%	3 of 3
WRR6	2	Cormorants (Family Phalacrocoracidae)	Double-crested Cormorant	<i>Phalacrocorax auritus</i>	23%	3 of 3
WRR6	3	Hérons (Family Ardeidae)	Great-blue Heron	<i>Ardea herodias</i>	47%	3 of 3
WRR6	4	New World Vultures (Family Cathartidae)	Turkey Vulture	<i>Cathartes aura</i>	14%	1 of 3

Location	ID	Family	Common Name	Scientific Name	Detection Probability <sup>1</sup>	Years Observed <sup>2</sup>
WRR6	5	Swans, Geese, & Ducks (Family Anatidae)	American Wigeon	<i>Anas americana</i>	54%	3 of 3
WRR6	5	Swans, Geese, & Ducks (Family Anatidae)	Canada Goose	<i>Branta canadensis</i>	44%	3 of 3
WRR6	5	Swans, Geese, & Ducks (Family Anatidae)	Cinnamon Teal	<i>Anas cyanoptera</i>	27%	2 of 3
WRR6	5	Swans, Geese, & Ducks (Family Anatidae)	Common Goldeneye	<i>Bucephala clangula</i>	17%	2 of 3
WRR6	5	Swans, Geese, & Ducks (Family Anatidae)	Common Merganser	<i>Mergus merganser</i>	20%	1 of 3
WRR6	5	Swans, Geese, & Ducks (Family Anatidae)	Gadwall	<i>Anas strepera</i>	30%	3 of 3
WRR6	5	Swans, Geese, & Ducks (Family Anatidae)	Green-winged Teal	<i>Anas crecca</i>	14%	1 of 3
WRR6	5	Swans, Geese, & Ducks (Family Anatidae)	Mallard	<i>Anas platyrhynchos</i>	55%	3 of 3
WRR6	5	Swans, Geese, & Ducks (Family Anatidae)	Ring-necked Duck	<i>Aythya collaris</i>	14%	1 of 3
WRR6	5	Swans, Geese, & Ducks (Family Anatidae)	Wood Duck	<i>Aix sponsa</i>	28%	3 of 3
WRR6	6	Eagles, Kites & Hawks (Family Accipitridae)	Bald Eagle	<i>Haliaeetus leucocephalus</i>	44%	3 of 3
WRR6	6	Eagles, Kites & Hawks (Family Accipitridae)	Northern Harrier	<i>Circus cyaneus</i>	14%	1 of 3
WRR6	6	Eagles, Kites & Hawks (Family Accipitridae)	Osprey	<i>Pandion haliaetus</i>	32%	3 of 3
WRR6	7	Falcons (Family Falconidae)	American Kestrel	<i>Falco sparverius</i>	14%	1 of 3
WRR6	8	Grouse (Family Phasianidae)	Ring-necked Pheasant	<i>Phasianus colchicus</i>	14%	1 of 3
WRR6	9	Quail (Family Odontophoridae)	California Quail	<i>Callipepla californica</i>	14%	1 of 3
WRR6	11	Plovers (Family Charadriidae)	Killdeer	<i>Charadrius vociferus</i>	17%	2 of 3
WRR6	13	Sandpipers (Family Scolopacidae)	Common Snipe	<i>Gallinago delicata</i>	77%	3 of 3
WRR6	13	Sandpipers (Family Scolopacidae)	Red-necked Phalarope	<i>Phalaropus lobatus</i>	14%	1 of 3
WRR6	13	Sandpipers (Family Scolopacidae)	Spotted Sandpiper	<i>Actitis macularia</i>	39%	3 of 3
WRR6	14	Jaegers, Gulls & Terns (Family Laridae)	Ring-billed Gull	<i>Larus delawarensis</i>	40%	1 of 3
WRR6	15	Doves (Family Columbidae)	Mourning Dove	<i>Zenaida macroura</i>	32%	3 of 3
WRR6	19	Hummingbirds (Family Trochilidae)	Calliope Hummingbird	<i>Stellula calliope</i>	14%	2 of 3

Location	ID	Family	Common Name	Scientific Name	Detection Probability <sup>1</sup>	Years Observed <sup>2</sup>
WRR6	21	Woodpeckers (Family Picidae)	Downy Woodpecker	<i>Picoides pubescens</i>	20%	1 of 3
WRR6	21	Woodpeckers (Family Picidae)	Northern Flicker	<i>Colaptes auratus</i>	39%	3 of 3
WRR6	21	Woodpeckers (Family Picidae)	Pileated Woodpecker	<i>Dryocopus pileatus</i>	29%	1 of 3
WRR6	21	Woodpeckers (Family Picidae)	Red-naped Sapsucker	<i>Sphyrapicus nuchalis</i>	16%	3 of 3
WRR6	22	Flycatchers (Family Tyrannidae)	Eastern Kingbird	<i>Tyrannus tyrannus</i>	68%	3 of 3
WRR6	22	Flycatchers (Family Tyrannidae)	Western Wood-pewee	<i>Contopus sordidulus</i>	47%	3 of 3
WRR6	22	Flycatchers (Family Tyrannidae)	Willow Flycatcher	<i>Empidonax traillii</i>	14%	2 of 3
WRR6	23	Vireos (Family Vireonidae)	Cassin's Vireo	<i>Vireo cassinii</i>	20%	1 of 3
WRR6	23	Vireos (Family Vireonidae)	Red-eyed Vireo	<i>Vireo olivaceus</i>	51%	3 of 3
WRR6	23	Vireos (Family Vireonidae)	Warbling Vireo	<i>Vireo gilvus</i>	14%	1 of 3
WRR6	24	Jays & Crows (Family Corvidae)	American Crow	<i>Corvus brachyrhynchos</i>	51%	3 of 3
WRR6	24	Jays & Crows (Family Corvidae)	Black-billed Magpie	<i>Pica pica</i>	26%	3 of 3
WRR6	24	Jays & Crows (Family Corvidae)	Common Raven	<i>Corvus corax</i>	32%	3 of 3
WRR6	24	Jays & Crows (Family Corvidae)	Stellar's Jay	<i>Cyanocitta stelleri</i>	20%	1 of 3
WRR6	25	Swallows (Family Hirundinidae)	Tree Swallow	<i>Tachycineta bicolor</i>	100%	3 of 3
WRR6	26	Chickadees & Titmice (Family Paridae)	Black-capped Chickadee	<i>Poecile atricapillus</i>	37%	3 of 3
WRR6	27	Nuthatches (Family Sittidae)	Red-breasted Nuthatch	<i>Sitta canadensis</i>	17%	2 of 3
WRR6	31	Thrushes (Family Turdidae)	American Robin	<i>Turdus migratorius</i>	26%	3 of 3
WRR6	32	Mockingbirds & Thrashers (Family Mimidae)	Gray Catbird	<i>Dumetella carolinensis</i>	47%	3 of 3
WRR6	33	Starling (Family Sturnidae)	European Starling	<i>Sturnus vulgaris</i>	17%	2 of 3
WRR6	34	Waxwings (Family Bombycillidae)	Cedar Waxwing	<i>Bombycilla cedrorum</i>	17%	2 of 3
WRR6	35	Warblers (Family Parulidae)	American Redstart	<i>Setophaga ruticilla</i>	14%	1 of 3
WRR6	35	Warblers (Family Parulidae)	Common Yellowthroat	<i>Geothlypis trichas</i>	37%	3 of 3
WRR6	35	Warblers (Family Parulidae)	MacGillvery's Warbler	<i>Oporornis tolmiei</i>	17%	2 of 3
WRR6	35	Warblers (Family Parulidae)	Orange-crowned Warbler	<i>Vermivora celata</i>	20%	1 of 3
WRR6	35	Warblers (Family Parulidae)	Yellow Warbler	<i>Dendroica petechia</i>	61%	3 of 3
WRR6	35	Warblers (Family Parulidae)	Yellow-rumped Warbler	<i>Dendroica coronata</i>	14%	1 of 3
WRR6	36	Tanagers (Family Thraupidae)	Western Tanager	<i>Piranga ludoviciana</i>	34%	3 of 3
WRR6	37	Towhees & Sparrows (Family Emberizidae)	Chipping Sparrow	<i>Spizella passerina</i>	14%	2 of 3
WRR6	37	Towhees & Sparrows (Family Emberizidae)	Savannah Sparrow	<i>Passerculus sandwichensis</i>	17%	2 of 3
WRR6	37	Towhees & Sparrows (Family	Song Sparrow	<i>Melospiza melodia</i>	95%	3 of 3

Location	ID	Family	Common Name	Scientific Name	Detection Probability <sup>1</sup>	Years Observed <sup>2</sup>
		Emberizidae)				
WRR6	37	Towhees & Sparrows (Family Emberizidae)	Spotted Towhee	<i>Pipilo maculatus</i>	58%	3 of 3
WRR6	38	Grosbeaks & Buntings (Family Cardinalidae)	Black-headed Grosbeak	<i>Pheucticus melanocephalus</i>	29%	2 of 3
WRR6	39	Blackbirds & Orioles (Family Icteridae)	Brown-headed Cowbird	<i>Molothrus ater</i>	28%	3 of 3
WRR6	39	Blackbirds & Orioles (Family Icteridae)	Bullock's Oriole	<i>Icterus bullockii</i>	29%	2 of 3
WRR6	39	Blackbirds & Orioles (Family Icteridae)	Red-winged Blackbird	<i>Agelaius phoeniceus</i>	45%	3 of 3
WRR6	39	Blackbirds & Orioles (Family Icteridae)	Western Meadowlark	<i>Sturnella neglecta</i>	14%	1 of 3
WRR6	39	Blackbirds & Orioles (Family Icteridae)	Yellow-headed Blackbird	<i>Xanthocephalus xanthocephalus</i>	29%	1 of 3
WRR6	40	Finches (Family Fringillidae)	Pine Siskin	<i>Carduelis pinus</i>	14%	1 of 3
WRR6	40	Finches (Family Fringillidae)	Red Crossbill	<i>Loxia curvirostra</i>	17%	2 of 3
WRR7	1	Grebes (Family Podicipedidae)	Pied-billed Grebe	<i>Podilymbus podiceps</i>	38%	3 of 3
WRR7	2	Cormorants (Family Phalacrocoracidae)	Double-crested Cormorant	<i>Phalacrocorax auritus</i>	41%	3 of 3
WRR7	3	Herons (Family Ardeidae)	Great-blue Heron	<i>Ardea herodias</i>	60%	3 of 3
WRR7	5	Swans, Geese, & Ducks (Family Anatidae)	American Wigeon	<i>Anas americana</i>	41%	2 of 3
WRR7	5	Swans, Geese, & Ducks (Family Anatidae)	Blue-winged Teal	<i>Anas discors</i>	23%	2 of 3
WRR7	5	Swans, Geese, & Ducks (Family Anatidae)	Canada Goose	<i>Branta canadensis</i>	35%	3 of 3
WRR7	5	Swans, Geese, & Ducks (Family Anatidae)	Cinnamon Teal	<i>Anas cyanoptera</i>	22%	3 of 3
WRR7	5	Swans, Geese, & Ducks (Family Anatidae)	Common Goldeneye	<i>Bucephala clangula</i>	29%	1 of 3
WRR7	5	Swans, Geese, & Ducks (Family Anatidae)	Gadwall	<i>Anas strepera</i>	29%	1 of 3
WRR7	5	Swans, Geese, & Ducks (Family Anatidae)	Green-winged Teal	<i>Anas crecca</i>	14%	1 of 3
WRR7	5	Swans, Geese, & Ducks (Family Anatidae)	Mallard	<i>Anas platyrhynchos</i>	35%	3 of 3
WRR7	5	Swans, Geese, & Ducks (Family Anatidae)	Northern Shoveler	<i>Anas clypeata</i>	23%	2 of 3
WRR7	5	Swans, Geese, & Ducks (Family Anatidae)	Redhead	<i>Aythya americana</i>	33%	3 of 3

Location	ID	Family	Common Name	Scientific Name	Detection Probability <sup>1</sup>	Years Observed <sup>2</sup>
WRR7	5	Swans, Geese, & Ducks (Family Anatidae)	Ring-necked Duck	<i>Aythya collaris</i>	20%	1 of 3
WRR7	5	Swans, Geese, & Ducks (Family Anatidae)	Wood Duck	<i>Aix sponsa</i>	30%	2 of 3
WRR7	6	Eagles, Kites & Hawks (Family Accipitridae)	Bald Eagle	<i>Haliaeetus leucocephalus</i>	24%	2 of 3
WRR7	6	Eagles, Kites & Hawks (Family Accipitridae)	Osprey	<i>Pandion haliaetus</i>	52%	3 of 3
WRR7	8	Grouse (Family Phasianidae)	Ring-necked Pheasant	<i>Phasianus colchicus</i>	14%	1 of 3
WRR7	9	Quail (Family Odontophoridae)	California Quail	<i>Callipepla californica</i>	29%	1 of 3
WRR7	10	Rails (Family Rallidae)	American Coot	<i>Fulica americana</i>	17%	2 of 3
WRR7	10	Rails (Family Rallidae)	Sora	<i>Porzana carolina</i>	30%	2 of 3
WRR7	11	Plovers (Family Charadriidae)	Killdeer	<i>Charadrius vociferus</i>	29%	1 of 3
WRR7	13	Sandpipers (Family Scolopacidae)	Common Snipe	<i>Gallinago delicata</i>	71%	3 of 3
WRR7	13	Sandpipers (Family Scolopacidae)	Red-necked Phalarope	<i>Phalaropus lobatus</i>	14%	1 of 3
WRR7	13	Sandpipers (Family Scolopacidae)	Spotted Sandpiper	<i>Actitis macularia</i>	15%	2 of 3
WRR7	13	Sandpipers (Family Scolopacidae)	Wilson's Phalarope	<i>Phalaropus tricolor</i>	20%	1 of 3
WRR7	14	Jaegers, Gulls & Terns (Family Laridae)	Ring-billed Gull	<i>Larus delawarensis</i>	40%	1 of 3
WRR7	21	Woodpeckers (Family Picidae)	Northern Flicker	<i>Colaptes auratus</i>	45%	3 of 3
WRR7	21	Woodpeckers (Family Picidae)	Red-naped Sapsucker	<i>Sphyrapicus nuchalis</i>	35%	2 of 3
WRR7	22	Flycatchers (Family Tyrannidae)	Dusky Flycatcher	<i>Empidonax oberholseri</i>	33%	1 of 3
WRR7	22	Flycatchers (Family Tyrannidae)	Eastern Kingbird	<i>Tyrannus tyrannus</i>	48%	3 of 3
WRR7	22	Flycatchers (Family Tyrannidae)	Western Wood-pewee	<i>Contopus sordidulus</i>	28%	3 of 3
WRR7	22	Flycatchers (Family Tyrannidae)	Willow Flycatcher	<i>Empidonax traillii</i>	38%	2 of 3
WRR7	23	Vireos (Family Vireonidae)	Red-eyed Vireo	<i>Vireo olivaceus</i>	27%	2 of 3
WRR7	23	Vireos (Family Vireonidae)	Warbling Vireo	<i>Vireo gilvus</i>	17%	1 of 3
WRR7	24	Jays & Crows (Family Corvidae)	American Crow	<i>Corvus brachyrhynchos</i>	57%	1 of 3
WRR7	24	Jays & Crows (Family Corvidae)	Black-billed Magpie	<i>Pica pica</i>	81%	3 of 3
WRR7	24	Jays & Crows (Family Corvidae)	Common Raven	<i>Corvus corax</i>	39%	3 of 3
WRR7	25	Swallows (Family Hirundinidae)	Cliff Swallow	<i>Petrochelidon pyrrhonota</i>	29%	1 of 3
WRR7	25	Swallows (Family Hirundinidae)	Tree Swallow	<i>Tachycineta bicolor</i>	72%	3 of 3
WRR7	26	Chickadees & Titmice (Family Paridae)	Black-capped Chickadee	<i>Poecile atricapillus</i>	22%	3 of 3
WRR7	27	Nuthatches (Family Sittidae)	Red-breasted Nuthatch	<i>Sitta canadensis</i>	40%	1 of 3
WRR7	31	Thrushes (Family Turdidae)	American Robin	<i>Turdus migratorius</i>	50%	3 of 3

Location	ID	Family	Common Name	Scientific Name	Detection Probability <sup>1</sup>	Years Observed <sup>2</sup>
WRR7	31	Thrushes (Family Turdidae)	Swainson's Thrush	<i>Catharus ustulatus</i>	17%	1 of 3
WRR7	32	Mockingbirds & Thrashers (Family Mimidae)	Gray Catbird	<i>Dumetella carolinensis</i>	17%	3 of 3
WRR7	33	Starling (Family Sturnidae)	European Starling	<i>Sturnus vulgaris</i>	39%	2 of 3
WRR7	34	Waxwings (Family Bombycillidae)	Cedar Waxwing	<i>Bombycilla cedrorum</i>	40%	1 of 3
WRR7	35	Warblers (Family Parulidae)	Common Yellowthroat	<i>Geothlypis trichas</i>	52%	3 of 3
WRR7	35	Warblers (Family Parulidae)	Orange-crowned Warbler	<i>Vermivora celata</i>	33%	1 of 3
WRR7	35	Warblers (Family Parulidae)	Yellow Warbler	<i>Dendroica petechia</i>	61%	3 of 3
WRR7	35	Warblers (Family Parulidae)	Yellow-rumped Warbler	<i>Dendroica coronata</i>	20%	1 of 3
WRR7	36	Tanagers (Family Thraupidae)	Western Tanager	<i>Piranga ludoviciana</i>	17%	1 of 3
WRR7	37	Towhees & Sparrows (Family Emberizidae)	Chipping Sparrow	<i>Spizella passerina</i>	20%	1 of 3
WRR7	37	Towhees & Sparrows (Family Emberizidae)	Savannah Sparrow	<i>Passerculus sandwichensis</i>	38%	2 of 3
WRR7	37	Towhees & Sparrows (Family Emberizidae)	Song Sparrow	<i>Melospiza melodia</i>	81%	3 of 3
WRR7	37	Towhees & Sparrows (Family Emberizidae)	Spotted Towhee	<i>Pipilo maculatus</i>	18%	2 of 3
WRR7	38	Grosbeaks & Buntings (Family Cardinalidae)	Black-headed Grosbeak	<i>Pheucticus melanocephalus</i>	30%	2 of 3
WRR7	39	Blackbirds & Orioles (Family Icteridae)	Brown-headed Cowbird	<i>Molothrus ater</i>	28%	3 of 3
WRR7	39	Blackbirds & Orioles (Family Icteridae)	Bullock's Oriole	<i>Icterus bullockii</i>	40%	3 of 3
WRR7	39	Blackbirds & Orioles (Family Icteridae)	Red-winged Blackbird	<i>Agelaius phoeniceus</i>	94%	3 of 3
WRR7	39	Blackbirds & Orioles (Family Icteridae)	Yellow-headed Blackbird	<i>Xanthocephalus xanthocephalus</i>	29%	1 of 3
WRR7	40	Finches (Family Fringillidae)	American Goldfinch	<i>Carduelis tristis</i>	33%	1 of 3
WRR7	40	Finches (Family Fringillidae)	Red Crossbill	<i>Loxia curvirostra</i>	18%	2 of 3

<sup>1</sup> The percentage of times a species was observed during 10-minute survey periods. Each location was sampled 6 to 8 times per year.

<sup>2</sup> The number of years a species was observed at a location out of the total number of years when sampling occurred.

Table 6. Avian community/diversity data summary table for Kalispel Tribal monitoring and evaluation sites and reference sites.

Location	Species Richness	Shannon Diversity	Evenness	Similarity to Reference	Minimum Similarity	Maximum Similarity
CCR1	41.7	3.33	0.89			
CCR3	36.3	3.32	0.93			
CCR4	46.0	3.24	0.85			
CCR5	45.0	3.32	0.87			
CCR8	36.0	2.64	0.74			
FGP1	40.5	3.08	0.83	0.82	0.74	0.94
FGP2	40.0	2.71	0.73	0.92	0.89	1.00
FGP3	41.0	3.12	0.84	0.69	0.59	0.78
FGP4	43.0	3.06	0.81	0.72	0.65	0.79
FGP5	44.0	3.01	0.80			
FGP6	41.0	3.27	0.88			
FGP7	40.0	3.17	0.86	0.72	0.66	0.83
FGP8	33.0	2.99	0.86	0.67	0.64	0.73
FGR10	37.7	3.25	0.90			
FGR2	26.3	2.31	0.71			
FGR9	31.7	2.37	0.69			
PRP1	31.0	3.06	0.89	0.69	0.67	0.71
PRP2	36.0	2.94	0.82			
SPP1	42.0	2.48	0.66	0.82	0.75	0.89
SPP2	27.0	2.87	0.87			
SPP3	42.0	3.35	0.90	0.41	0.21	0.54
SPP4	47.0	3.50	0.91	0.58	0.53	0.64
SPP5	44.0	3.05	0.81			
TAP1	44.0	2.76	0.73	0.7	0.63	0.79
TAP2	52.0	3.65	0.92			
TAP3	50.0	3.45	0.88	0.78	0.74	0.81
TAP4	44.0	3.27	0.87	0.8	0.76	0.82
TAR11	39.7	3.22	0.88			
TRP10	26.0	2.44	0.75	0.56	0.53	0.61
TRP11	23.0	2.48	0.79	0.33	0.31	0.36
TRP12	25.0	2.56	0.79	0.6	0.52	0.74
TRP5	34.0	3.14	0.89	0.65	0.64	0.68
TRP6	33.0	2.92	0.83	0.76	0.7	0.85
TRP7	36.0	3.12	0.87	0.64	0.56	0.69
TRP8	41.0	3.24	0.87	0.47	0.47	0.47
TRP9	42.0	3.31	0.88	0.73	0.69	0.77
WRR12	45.0	3.28	0.86			
WRR6	48.0	3.27	0.84			
WRR7	42.0	3.15	0.84			

Table 7. Mammalian data summary table for Kalispel Tribal monitoring and evaluation sites and reference sites.

Point	Scientific Name	Common Name	Years Observed <sup>1</sup>	Captures per 100 trapnights <sup>2</sup>	Range of Captures <sup>3</sup>	Proportion Males <sup>4</sup>	Biomass <sup>5</sup>
CCR1	<i>Peromyscus maniculatus</i>	deer mouse	3	2.35	0.74 - 3.33	27	156
CCR1	<i>Sorex vagrans</i>	vagrant shrew	3	5.19	4.07 - 7.41	38	99
CCR1	<i>Tamias ruficaudus</i>	red-tailed chipmunk	2	0.37	0.37 - 0.37	0	85
CCR3	<i>Microtus montanus</i>	montane vole	1	0.37	0.37 - 0.37	0	18
CCR3	<i>Peromyscus maniculatus</i>	deer mouse	3	3.46	0.74 - 4.81	55	229
CCR3	<i>Sorex vagrans</i>	vagrant shrew	2	1.11	0.74 - 1.48	63	23
CCR3	<i>Tamias ruficaudus</i>	red-tailed chipmunk	3	0.62	0.37 - 0.74	67	116
CCR4	<i>Microtus pennsylvanicus</i>	meadow vole	3	6.67	0.37 - 17.41	31	684
CCR4	<i>Sorex vagrans</i>	vagrant shrew	1	0.37	0.37 - 0.37	0	7
CCR5	<i>Microtus pennsylvanicus</i>	meadow vole	2	7.59	1.11 - 14.07	38	872
CCR5	<i>Sorex vagrans</i>	vagrant shrew	2	0.37	0.37 - 0.37	100	7
CCR8	<i>Clethrionomys gapperi</i>	southern red-backed vole	1	0.37	0.37 - 0.37	0	21
CCR8	<i>Microtus pennsylvanicus</i>	meadow vole	3	7.90	3.33 - 16.67	51	864
CCR8	<i>Sorex cinereus</i>	masked shrew	2	0.93	0.37 - 1.48	67	13
CCR8	<i>Sorex vagrans</i>	vagrant shrew	3	2.72	1.48 - 4.07	55	78
CCR8	<i>Tamias ruficaudus</i>	red-tailed chipmunk	1	0.37	0.37 - 0.37	100	95
FGP1	<i>Microtus pennsylvanicus</i>	meadow vole	2	3.70	2.96 - 4.44	46	365
FGP1	<i>Sorex vagrans</i>	vagrant shrew	2	0.74	0.37 - 1.11	50	22
FGP1	<i>Zapus princeps</i>	Pacific jumping mouse	1	1.11	1.11 - 1.11	33	89
FGP2	<i>Microtus pennsylvanicus</i>	meadow vole	2	2.96	1.85 - 4.07	48	359
FGP2	<i>Sorex vagrans</i>	vagrant shrew	1	0.37	0.37 - 0.37	100	12
FGP3	<i>Microtus pennsylvanicus</i>	meadow vole	2	1.85	0.74 - 2.96	50	231
FGP3	<i>Peromyscus maniculatus</i>	deer mouse	2	1.48	0.37 - 2.59	86	117
FGP3	<i>Sorex vagrans</i>	vagrant shrew	2	1.30	0.74 - 1.85	38	23

Point	Scientific Name	Common Name	Years Observed <sup>1</sup>	Captures per 100 trapnights <sup>2</sup>	Range of Captures <sup>3</sup>	Proportion Males <sup>4</sup>	Biomass <sup>5</sup>
FGP3	<i>Tamias ruficaudus</i>	red-tailed chipmunk	1	0.37	0.37 - 0.37	100	81
FGP4	<i>Microtus pennsylvanicus</i>	meadow vole	2	4.81	2.96 - 6.67	38	613
FGP4	<i>Peromyscus maniculatus</i>	deer mouse	1	0.37	0.37 - 0.37	100	23
FGP4	<i>Sorex vagrans</i>	vagrant shrew	2	2.78	1.11 - 4.44	44	66
FGP5	<i>Microtus pennsylvanicus</i>	meadow vole	2	4.44	3.70 - 5.19	47	438
FGP5	<i>Peromyscus maniculatus</i>	deer mouse	2	0.56	0.37 - 0.74	25	35
FGP5	<i>Sorex vagrans</i>	vagrant shrew	1	1.11	1.11 - 1.11	33	23
FGP5	<i>Zapus princeps</i>	Pacific jumping mouse	1	0.37	0.37 - 0.37		31
FGP6	<i>Peromyscus maniculatus</i>	deer mouse	2	2.59	1.85 - 3.33	51	161
FGP6	<i>Sorex cinereus</i>	masked shrew	1	0.74	0.74 - 0.74	0	11
FGP6	<i>Sorex vagrans</i>	vagrant shrew	1	0.37	0.37 - 0.37	100	8
FGP6	<i>Zapus princeps</i>	Pacific jumping mouse	1	1.48	1.48 - 1.48	100	133
FGP7	<i>Microtus pennsylvanicus</i>	meadow vole	2	4.26	2.96 - 5.56	39	590
FGP7	<i>Peromyscus maniculatus</i>	deer mouse	2	1.30	0.74 - 1.85	20	103
FGP7	<i>Sorex vagrans</i>	vagrant shrew	1	0.37	0.37 - 0.37	0	12
FGP7	<i>Zapus princeps</i>	Pacific jumping mouse	1	1.11	1.11 - 1.11	67	107
FGP8	<i>Microtus pennsylvanicus</i>	meadow vole	1	14.07	14.07 - 14.07	61	1811
FGR10	<i>Microtus pennsylvanicus</i>	meadow vole	2	9.81	3.33 - 16.30	51	1191
FGR10	<i>Peromyscus maniculatus</i>	deer mouse	3	5.19	1.85 - 7.41	38	388
FGR10	<i>Sorex vagrans</i>	vagrant shrew	2	4.07	1.11 - 7.04	27	96
FGR2	<i>Microtus pennsylvanicus</i>	meadow vole	1	1.48	1.48 - 1.48	50	150
FGR2	<i>Peromyscus maniculatus</i>	deer mouse	3	4.94	3.70 - 7.41	60	367
FGR2	<i>Sorex vagrans</i>	vagrant shrew	3	1.36	1.11 - 1.85	51	31
FGR2	<i>Tamias ruficaudus</i>	red-tailed chipmunk	2	0.74	0.74 - 0.74	50	147

Point	Scientific Name	Common Name	Years Observed <sup>1</sup>	Captures per 100 trapnights <sup>2</sup>	Range of Captures <sup>3</sup>	Proportion Males <sup>4</sup>	Biomass <sup>5</sup>
FGR2	<i>Zapus princeps</i>	Pacific jumping mouse	1	0.37	0.37 - 0.37	0	52
FGR9	<i>Microtus pennsylvanicus</i>	meadow vole	1	2.96	2.96 - 2.96	88	309
FGR9	<i>Sorex vagrans</i>	vagrant shrew	1	0.74	0.74 - 0.74	50	21
PRP1	<i>Microtus pennsylvanicus</i>	meadow vole	1	0.37	0.37 - 0.37		
PRP1	<i>Peromyscus maniculatus</i>	deer mouse	1	0.74	0.74 - 0.74	50	64
PRP1	<i>Sorex vagrans</i>	vagrant shrew	1	1.11	1.11 - 1.11	100	29
PRP1	<i>Tamias ruficaudus</i>	red-tailed chipmunk	1	0.37	0.37 - 0.37	0	79
PRP1	<i>Zapus princeps</i>	Pacific jumping mouse	1	0.74	0.74 - 0.74	0	68
PRP2	<i>Microtus pennsylvanicus</i>	meadow vole	1	10.00	10.00 - 10.00	32	631
PRP2	<i>Sorex vagrans</i>	vagrant shrew	1	1.11	1.11 - 1.11	100	15
SPP1	<i>Microtus pennsylvanicus</i>	meadow vole	1	22.59	22.59 - 22.59	51	1514
SPP1	<i>Sorex vagrans</i>	vagrant shrew	1	1.11	1.11 - 1.11	50	17
SPP2	<i>Clethrionomys gapperi</i>	southern red-backed vole	1	1.11	1.11 - 1.11	100	32
SPP2	<i>Microtus pennsylvanicus</i>	meadow vole	1	0.37	0.37 - 0.37		
SPP2	<i>Peromyscus maniculatus</i>	deer mouse	1	2.22	2.22 - 2.22	33	139
SPP3	<i>Peromyscus maniculatus</i>	deer mouse	1	1.85	1.85 - 1.85	40	129
SPP3	<i>Tamias ruficaudus</i>	red-tailed chipmunk	1	1.48	1.48 - 1.48	50	181
SPP4	<i>Peromyscus maniculatus</i>	deer mouse	1	0.37	0.37 - 0.37	100	30
SPP4	<i>Tamias ruficaudus</i>	red-tailed chipmunk	1	0.37	0.37 - 0.37	100	83
SPP5	<i>Microtus pennsylvanicus</i>	meadow vole	1	0.37	0.37 - 0.37	100	51
SPP5	<i>Peromyscus maniculatus</i>	deer mouse	1	0.74	0.74 - 0.74	50	53
SPP5	<i>Tamias ruficaudus</i>	red-tailed chipmunk	1	0.37	0.37 - 0.37	0	104
TAP1	<i>Microtus pennsylvanicus</i>	meadow vole	1	7.78	7.78 - 7.78	50	730

Point	Scientific Name	Common Name	Years Observed <sup>1</sup>	Captures per 100 trapnights <sup>2</sup>	Range of Captures <sup>3</sup>	Proportion Males <sup>4</sup>	Biomass <sup>5</sup>
TAP1	<i>Peromyscus maniculatus</i>	deer mouse	1	0.37	0.37 - 0.37	0	42
TAP2	<i>Peromyscus maniculatus</i>	deer mouse	1	1.85	1.85 - 1.85	60	112
TAP2	<i>Sorex vagrans</i>	vagrant shrew	1	1.11	1.11 - 1.11	67	22
TAP2	<i>Zapus princeps</i>	Pacific jumping mouse	1	0.74	0.74 - 0.74	100	75
TAP3	<i>Microtus pennsylvanicus</i>	meadow vole	1	0.74	0.74 - 0.74	100	108
TAP3	<i>Peromyscus maniculatus</i>	deer mouse	1	0.37	0.37 - 0.37	100	31
TAP3	<i>Zapus princeps</i>	Pacific jumping mouse	1	0.74	0.74 - 0.74	50	59
TAP4	<i>Microtus pennsylvanicus</i>	meadow vole	1	1.85	1.85 - 1.85	80	232
TAP4	<i>Sorex vagrans</i>	vagrant shrew	1	2.59	2.59 - 2.59	57	50
TAR11	<i>Clethrionomys gapperi</i>	southern red-backed vole	3	3.09	2.96 - 3.33	56	222
TAR11	<i>Microtus pennsylvanicus</i>	meadow vole	2	1.30	0.37 - 2.22	25	142
TAR11	<i>Peromyscus maniculatus</i>	deer mouse	3	2.84	1.11 - 5.19	36	221
TAR11	<i>Sorex vagrans</i>	vagrant shrew	3	5.93	0.37 - 8.89	28	138
TRP11	<i>Microtus pennsylvanicus</i>	meadow vole	1	1.85	1.85 - 1.85	40	211
TRP11	<i>Sorex vagrans</i>	vagrant shrew	1	0.74	0.74 - 0.74	50	14
TRP12	<i>Microtus pennsylvanicus</i>	meadow vole	1	4.07	4.07 - 4.07	64	483
TRP12	<i>Peromyscus maniculatus</i>	deer mouse	1	1.48	1.48 - 1.48	25	92
TRP12	<i>Sorex vagrans</i>	vagrant shrew	1	1.85	1.85 - 1.85	40	36
TRP5	<i>Microtus pennsylvanicus</i>	meadow vole	1	0.37	0.37 - 0.37	0	50
TRP5	<i>Peromyscus maniculatus</i>	deer mouse	1	0.74	0.74 - 0.74	50	60
TRP5	<i>Sorex vagrans</i>	vagrant shrew	1	1.48	1.48 - 1.48	25	28
TRP6	<i>Peromyscus maniculatus</i>	deer mouse	1	0.37	0.37 - 0.37	100	33

Point	Scientific Name	Common Name	Years Observed <sup>1</sup>	Captures per 100 trapnights <sup>2</sup>	Range of Captures <sup>3</sup>	Proportion Males <sup>4</sup>	Biomass <sup>5</sup>
TRP6	<i>Sorex vagrans</i>	vagrant shrew	1	1.11	1.11 - 1.11	33	22
TRP7	<i>Microtus pennsylvanicus</i>	meadow vole	1	5.93	5.93 - 5.93	63	790
TRP8	<i>Microtus pennsylvanicus</i>	meadow vole	1	2.96	2.96 - 2.96	25	288
TRP8	<i>Sorex vagrans</i>	vagrant shrew	1	2.96	2.96 - 2.96	50	57
TRP9	<i>Microtus pennsylvanicus</i>	meadow vole	1	0.37	0.37 - 0.37	0	33
TRP9	<i>Peromyscus maniculatus</i>	deer mouse	1	1.85	1.85 - 1.85	60	144
TRP9	<i>Sorex vagrans</i>	vagrant shrew	1	1.85	1.85 - 1.85	40	36
WRR12	<i>Microtus pennsylvanicus</i>	meadow vole	2	1.67	0.74 - 2.59	46	161
WRR12	<i>Peromyscus maniculatus</i>	deer mouse	2	1.48	0.74 - 2.22	17	229
WRR12	<i>Sorex vagrans</i>	vagrant shrew	2	1.11	0.74 - 1.48	42	25
WRR6	<i>Microtus pennsylvanicus</i>	meadow vole	2	5.74	1.11 - 10.37	74	674
WRR6	<i>Sorex vagrans</i>	vagrant shrew	1	0.37	0.37 - 0.37	100	13
WRR6	<i>Zapus princeps</i>	Pacific jumping mouse	1	0.37	0.37 - 0.37	100	32
WRR7	<i>Microtus pennsylvanicus</i>	meadow vole	3	19.38	1.85 - 41.48	44	2160
WRR7	<i>Sorex vagrans</i>	vagrant shrew	1	0.74	0.74 - 0.74	100	14

<sup>1</sup> Trapping was conducted from 2002 to 2005. Reference sites were trapped 3 times and permanent sites were trapped 1 or 2 times.

<sup>2</sup> Removal trapping was conducted on 5 by 9 grids (12-m spacing) for 3 days each year. Two traps were placed at each grid point yielding a total of 270 trapnights per year. The total number of captures per grid was standardized to captures per 100 trapnights. The mean value for all years is presented.

<sup>3</sup> The minimum and maximum capture per 100 trapnights is presented for all years.

<sup>4</sup> The sex ratio presented as the percentage of males observed. This value is averaged over all years.

<sup>5</sup> An estimate of the average biomass in grams per hectare.

Table 8. Mammalian community/diversity data summary table for Kalispel Tribal monitoring and evaluation sites and reference sites.

Location	Species Richness <sup>1</sup>	Shannon Diversity <sup>2</sup>	Evenness <sup>3</sup>	Similarity to Reference <sup>4</sup>	Minimum Similarity <sup>5</sup>	Maximum Similarity <sup>6</sup>
CCR1	2.67	0.67	0.66			
CCR3	3.00	0.76	0.69			
CCR4	1.33	0.14	0.86			
CCR5	2.00	0.34	0.49			
CCR8	3.33	0.80	0.75			
FGP1	2.50	0.66	0.74	0.82	0.67	1.00
FGP2	1.50	0.23	0.83	0.93	0.75	1.00
FGP3	3.50	1.00	0.80	0.61	0.32	0.93
FGP4	2.50	0.62	0.75	0.91	0.83	1.00
FGP5	3.00	0.66	0.60			
FGP6	2.50	0.62	0.95			
FGP7	3.00	0.84	0.81	0.67	0.57	0.86
FGP8	1.00	0.00	1.00	0.95	0.75	1.00
FGR10	2.33	0.62	0.75			
FGR2	3.33	0.85	0.79			
FGR9	2.00	0.50	0.72			
PRP1	5.00	1.52	0.95	0.55	0.52	0.59
PRP2	2.00	0.33	0.47			
SPP1	2.00	0.19	0.27	0.96	0.93	1.00
SPP2	3.00	0.90	0.82			
SPP3	2.00	0.69	0.99	0.58	0.34	0.75
SPP4	2.00	0.69	1.00	0.28	0.21	0.34
SPP5	3.00	1.04	0.95			
TAP1	2.00	0.18	0.27	0.90	0.83	0.95
TAP2	3.00	1.03	0.94			
TAP3	3.00	1.05	0.96	0.46	0.37	0.68
TAP4	2.00	0.68	0.98	0.73	0.61	1.00
TAR11	3.67	1.00	0.78			
TRP11	2.00	0.60	0.86	0.86	0.81	1.00
TRP12	3.00	1.00	0.91	0.73	0.63	0.91
TRP5	3.00	0.96	0.87	0.57	0.33	0.96
TRP6	2.00	0.56	0.81	0.05	0.01	0.14
TRP7	1.00	0.00	1.00	0.94	0.86	0.99
TRP8	2.00	0.69	1.00	0.55	0.55	0.55
TRP9	3.00	0.93	0.85	0.79	0.77	0.82
WRR12	2.00	0.59	0.99			
WRR6	2.00	0.15	0.63			
WRR7	1.33	0.03	0.71			

<sup>1</sup> The total number of species observed at a location during yearly surveys was tallied and averaged across all yearly surveys.

<sup>2</sup> This common measure of diversity was calculated each year based on the total number of observations of each species and averaged across all yearly surveys.

<sup>3</sup> Shannon diversity divided by the logarithm of number of species. This measures the evenness with which individuals are divided among the species present.

<sup>4</sup> The similarity between the location and its reference locations was calculated using the Chao-Jaccard Index each year (Chao, A., et al. 2005. Ecology Letters 8:148-159). This measure of compositional similarity incorporates relative abundance and consideration of unseen shared species. Similarity values were averaged over all sampling years.

<b>Location</b>	<b>Species Richness<sup>1</sup></b>	<b>Shannon Diversity<sup>2</sup></b>	<b>Evenness<sup>3</sup></b>	<b>Similarity to Reference<sup>4</sup></b>	<b>Minimum Similarity<sup>5</sup></b>	<b>Maximum Similarity<sup>6</sup></b>
<sup>5</sup> The smallest value of the Chao-Jaccard Index observed over all years.						
<sup>6</sup> The largest value of the Chao-Jaccard Index observed over all years.						