



TECHNICAL REPORT

December 2025

For the project entitled:

Pacific Birds-Canada and CIJV Conservation Tool version 1.0: Explore and download multispecies eBird maps and data for the Pacific Birds-Canada (BC) and Canadian Intermountain Joint Venture regions.

Prepared by:

Jenny Muñoz
Laura Farwell
Andrew Huang
Monica Iglecia

Recommended citation for the online tool:

Pacific Birds-Canada and Canadian Intermountain Joint Venture. 2025. Pacific Birds-Canada and CIJV Conservation Tool version 1.0: Explore and download multispecies eBird maps and data for the Pacific Birds-Canada (BC) and Canadian Intermountain Joint Venture regions.

https://conservationdecisiontools.shinyapps.io/birdsconservationtool_jv_vf/

Recommended citation for this technical report:

Pacific Birds-Canada and Canadian Intermountain Joint Venture. 2025. Pacific Birds-Canada and CIJV Conservation Tool version 1.0: Explore and download multispecies eBird maps and data for the Pacific Birds-Canada (BC) and Canadian Intermountain Joint Venture regions. Technical Report. Portland, OR.

ABOUT THE CONSERVATION TOOL

The Pacific Birds–Canada and CIJV Conservation Tool is a web-based application that provides access to multispecies modeled eBird data, maps, and geospatial information within the Canadian portion of the Pacific Birds Habitat Joint Venture (Pacific Birds-Canada) region, and within the Canadian Intermountain Joint Venture region. This tool is intended to support conservation planners and practitioners in landscape-scale planning and decision-making by highlighting bird hotspots and areas of high potential conservation value for birds, across the JV geographies.

This technical document summarizes the methods used to generate and combine individual bird species layers derived from eBird Status & Trends data, as well as the information presented in the tool.

METHODS

The maps in this tool were created by overlaying multiple modeled species distribution layers derived from eBird Status & Trends data. The composite maps show patterns of bird richness and relative abundance across the region. Maps display modeled distributions, not direct observations.

Each species distribution layer used in the composite maps represents modeled relative abundance estimates, generated using filtered and reviewed eBird citizen-science observations combined with environmental variables, to predict where and how abundantly each species occurs at a 3×3 km resolution.

To learn more about the statistical and machine learning models and environmental predictors that eBird uses to generate species relative abundance estimates, visit [FAQ - eBird](#) and [\(Fink et al 2019\)](#).

HOW ESTIMATES ARE CALCULATED

We used eBird relative abundance estimates for each species, calculated as the count of individuals of a given species detected by an expert eBirder during a 1-hour, 2-kilometer traveling checklist at the optimal time of day. To maximize detection rates, these predictions are optimized for observer skill and hourly weather conditions, specific to the region, season, and species.

For each species, relative abundance was estimated for distinct seasons (breeding, non-breeding, pre-breeding and post-breeding) and annually in a 3 × 3 km-resolution spatial

grid. Estimates for each location and date are based on local habitat, elevation, and topography. The predicted values represent a relative measure rather than an exact count. This standardized index allows meaningful comparisons between regions for the same species (e.g., an abundance of 10 in one area vs. 5 in another indicates twice as many individuals in the first).

In this tool, these relative abundance estimates are used to generate composite maps of multiple species based on three core metrics:

- **Species richness:** Calculated by converting relative abundance values into presence–absence data and summing the total number of predicted species occurring in a given pixel. This can be calculated for all birds or for a specific bird group (e.g., shorebirds) for the selected season or year-round.

What this means: this metric shows the total number of different species predicted to be present in each pixel, for all birds or a selected bird group.

- **Mean relative abundance:** Calculated by averaging the normalized (0–1) relative abundance values of all species within a bird group (e.g., waterfowl) in each pixel. This highlights areas with higher average predicted abundance for the selected group and season. Darker pixels indicate areas where most species in the group have higher abundance.

What this means: this metric shows the average predicted abundance of all species in a selected bird group (e.g., waterfowl) in each pixel, scaled from 0 to 1. Darker areas show places where, on average, species in the group are more abundant.

- **Percent of population:** Calculated by first determining the percentage of the total population for each species by dividing its relative abundance in a pixel by the total relative abundance across all pixels for that species. These percentages are then summed across all species in the selected group for each pixel, and the mean is calculated. This method corrects for species with larger populations and highlights pixels that hold a higher average share of the group’s total population.

What this means: this metric shows the average share of a bird group’s total modeled population found in each pixel. This makes it easier to see which areas hold the largest percentage of global populations of the bird group of interest.

To learn more about eBird estimates visit [FAQ - eBird](#)

BIRD GROUPS

To support conservation planning, species are organized into broad, taxonomically or ecologically informed groups that share habitats and management needs:

- **Waterfowl:** Aquatic birds that are strongly wetland dependent; family Anatidae (ducks, geese, swans).
- **Waterbirds:** Species closely tied to aquatic habitats (e.g., loons, grebes, cormorants, pelicans, herons, cranes, rails, gulls, terns).
- **Shorebirds:** Members of the order Charadriiformes that rely on intertidal zones, beaches, mudflats, and shorelines (sandpipers, plovers, avocets, stilts, and allies).
- **Landbirds:** Landbirds are all bird species primarily using terrestrial habitats — mostly songbirds and allied groups.
- **All-bird species group:** Includes waterfowl, waterbirds, shorebirds, and landbirds. For a complete list of included species, download the species list for the selected group.

PRIORITY

- **BC-JV-Priority:** Includes waterfowl and non-waterfowl species identified as priority species for the CIJV or PBHJV-BC. For more information about priority species visit [CIJV Implementation plan](#).

CONSERVATION STATUS

- **Species at Risk** Include bird species which are Endangered, Threatened or of Special Concern under Canada's Species at Risk Act.

SEASON DEFINITIONS

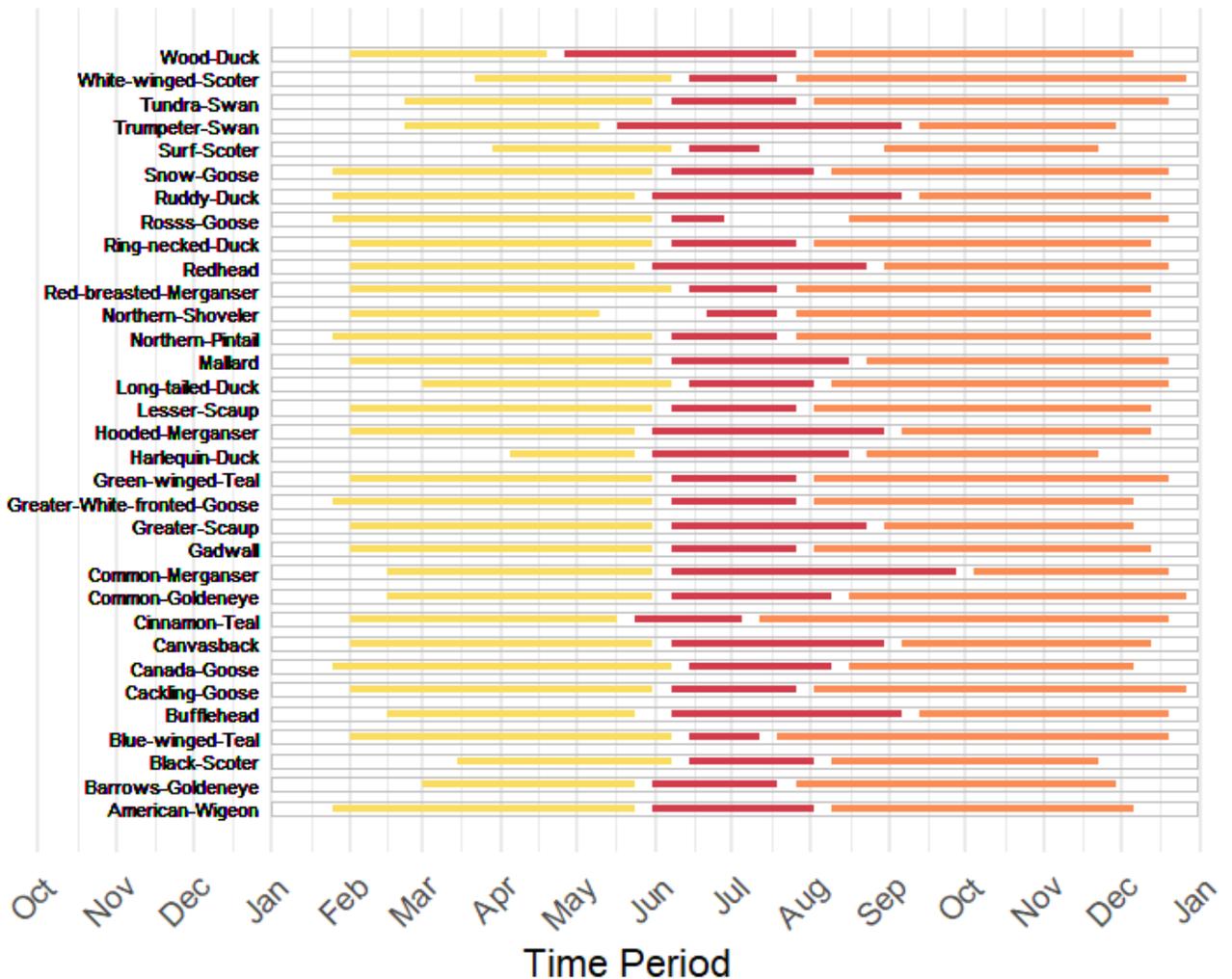
The breeding, non-breeding, pre-breeding (spring migration), and post-breeding (fall migration) seasons shown in this dashboard are species-specific estimates derived from eBird Status & Trends data.

- **Breeding and non-breeding season** dates are defined for each species as the weeks when the species' population does not move. These stationary periods were identified by experts using weekly abundance maps and refined to align with known patterns of migration and breeding phenology.

- Pre-breeding and post-breeding season** migration periods represent the intervals of movement between the stationary breeding and non-breeding seasons. These can include movement from breeding grounds to non-breeding grounds, post-breeding dispersal, molt migration, or other transitional movements. In some species, these transitions are not clearly defined, and transitional weeks are excluded to provide the clearest view of distinct seasons. Some species have pre-breeding and post-breeding migration seasons combined into a single migratory season. In cases where the transition between stationary and migratory seasons is not clear, transitional weeks were excluded to provide the clearest picture of individual seasons.

Here is an example of how seasons are defined for some waterfowl species in CIJV: yellow indicates the pre-breeding season, red indicates the breeding season, and orange indicates the post-breeding season:

Phenology of Waterfowl Species



AREAS OF NO PREDICTION

Some areas have insufficient data to predict whether a species is present or absent, or whether a group of species is present or absent.

SUGGESTED USES AND KEY LIMITATIONS

This conservation tool is designed to provide a regional-scale perspective of bird diversity hotspots, helping users assess potential areas of conservation importance for birds. The following are examples of use-cases of this tool:

- **Identifying Conservation Priorities:** The dashboard can highlight regions with high avian diversity, guiding partners in prioritizing areas for habitat protection, restoration, or stewardship activities.
- **Enhancing Communication and Outreach:** The dashboard provides a clear and interactive way to tell the story of bird diversity across the Joint Venture geography, helping engage partners, communities, and the public in conservation efforts
- **Supporting Research and Monitoring:** Researchers can use the spatial layers to design monitoring programs in key areas.
- **Supporting Land-Use Planning:** Spatial summaries of bird diversity can inform regional planning processes, and land-use decisions to minimize impacts on biodiversity.

Although this tool offers powerful capabilities to explore bird hotspots and areas of potential conservation importance, it is important to also understand its limitations. Users should consider whether these data are suitable for their specific questions and be aware of potential scale-related limitations that may affect interpretation. The layers are based on modeled data at a 3*3 km resolution, which may be too coarse to capture fine-scale habitat or landscape variation that influences bird distributions. Furthermore the data presented in this tool is predicted data not raw data, and therefore there are limitations inherent to the models:

- **Errors when predicting species range and abundance:** Like all predictive models, the eBird Status & Trends models are subject to uncertainty and errors in estimating species ranges and abundance. Errors can occur when species are predicted to be present where they are absent, or absent where they actually occur, as well as when abundance estimates are too high or too low. The models address data gaps by borrowing information from nearby areas, which works best when sufficient eBird observations exist and when environmental predictors accurately represent the species' ecological requirements.

Error rates increase in regions with sparse checklist coverage, low detection rates for a species, or inadequate environmental data such as in remote areas where extrapolations may be less reliable.

- **Low detection rates:** Species that are rare, cryptic, or difficult to identify may have higher uncertainty because few observations are available to train the models.
- **Incomplete environmental data:** Predictions may be less accurate in areas where environmental variables do not fully capture key ecological conditions for the species.
- **Species gaps:** It is possible that some species occurring within the JV geography did not have sufficient data to be modeled across the entire area and were therefore excluded from the analysis. Additionally, some pixels may contain insufficient data to predict whether a species is present or absent. In such cases, when the rasters are stacked, those pixels are assigned an NA value and are not included in the species count for that pixel.
- **Citizen-science data** such as eBird provide vast and valuable information for modeling species distributions, but they also contain inherent biases. Sampling effort is uneven across space and time, detection rates vary among observers and species, and certain habitats are under-represented. Although the eBird models correct for many of these factors, residual uncertainty remains — particularly in regions with limited data or low detection rates.
- **Staking multiple species layers** When multiple species layers are combined pixels with missing predictions for some species (due to insufficient data) reduce the total number of species counted in that cell, potentially underestimating richness in poorly sampled regions.

DATA AVAILABLE FOR DOWNLOAD

Data from the Conservation Tool website are available for download in three formats: raster files (.tif), map images (.jpg), and species lists (.csv). All files can be accessed via the download link located at the bottom left of the tool. Raster (.tif) files are intended for use in GIS analyses, map images (.jpg) are suitable for presentations and visual displays, and species lists (.csv) provide supporting tabular information.

SPECIES LIST

We stacked relative abundance maps for 319 species within PacificBirds-Canada and 322 species within CIJV. See Appendix for the full list of species included.

DATA SOURCE

The original data used in this tool are from:

Fink, D., T. Auer, A. Johnston, M. Strimas-Mackey, S. Ligocki, O. Robinson, W. Hochachka, L. Jaromczyk, C. Crowley, K. Dunham, A. Stillman, I. Davies, A. Rodewald, V. Ruiz-Gutierrez, and C. Wood. 2023. eBird Status and Trends, Data Version: 2022; Released: 2023. Cornell Lab of Ornithology, Ithaca, New York. <https://doi.org/10.2173/ebirdst.2022>

REFERENCES

Fink, D., T. Auer, A. Johnston, V. Ruiz-Gutierrez, W. M. Hochachka, and S. Kelling (2020). Modeling avian full annual cycle distribution and population trends with citizen science data. *Ecological Applications* 30:e02056.

APPENDIX

Species list included in the stacked rasters for Pacific Birds-Canada (PacificBirds-BC).

JV_name	common_name	scientific_name
PacificBirds-BC	Alder-Flycatcher	<i>Empidonax alnorum</i>
PacificBirds-BC	American-Avocet	<i>Recurvirostra americana</i>
PacificBirds-BC	American-Bittern	<i>Botaurus lentiginosus</i>
PacificBirds-BC	American-Crow	<i>Corvus brachyrhynchos</i>
PacificBirds-BC	American-Dipper	<i>Cinclus mexicanus</i>
PacificBirds-BC	American-Goldfinch	<i>Spinus tristis</i>
PacificBirds-BC	American-Kestrel	<i>Falco sparverius</i>
PacificBirds-BC	American-Pipit	<i>Anthus rubescens</i>
PacificBirds-BC	American-Redstart	<i>Setophaga ruticilla</i>
PacificBirds-BC	American-Robin	<i>Turdus migratorius</i>
PacificBirds-BC	American-Wigeon	<i>Mareca americana</i>
PacificBirds-BC	American-Golden-Plover	<i>Pluvialis dominica</i>
PacificBirds-BC	American-Tree-Sparrow	<i>Spizelloides arborea</i>
PacificBirds-BC	American-White-Pelican	<i>Pelecanus erythrorhynchos</i>
PacificBirds-BC	Annas-Hummingbird	<i>Calypte anna</i>
PacificBirds-BC	Arctic-Tern	<i>Sterna paradisaea</i>
PacificBirds-BC	American-Three-toed-Woodpecker	<i>Picoides dorsalis</i>
PacificBirds-BC	Bairds-Sandpiper	<i>Calidris bairdii</i>
PacificBirds-BC	Bald-Eagle	<i>Haliaeetus leucocephalus</i>
PacificBirds-BC	Bank-Swallow	<i>Riparia riparia</i>
PacificBirds-BC	Barrows-Goldeneye	<i>Bucephala islandica</i>
PacificBirds-BC	Barn-Swallow	<i>Hirundo rustica</i>
PacificBirds-BC	Band-tailed-Pigeon	<i>Patagioenas fasciata</i>
PacificBirds-BC	Black-crowned-Night-Heron	<i>Nycticorax nycticorax</i>
PacificBirds-BC	Belted-Kingfisher	<i>Megaceryle alcyon</i>

PacificBirds-BC	Bewicks-Wren	<i>Thryomanes bewickii</i>
PacificBirds-BC	Black-billed-Magpie	<i>Pica hudsonia</i>
PacificBirds-BC	Black-bellied-Plover	<i>Pluvialis squatarola</i>
PacificBirds-BC	Black-backed-Woodpecker	<i>Picoides arcticus</i>
PacificBirds-BC	Black-capped-Chickadee	<i>Poecile atricapillus</i>
PacificBirds-BC	Black-headed-Grosbeak	<i>Pheucticus melanocephalus</i>
PacificBirds-BC	Black-headed-Gull	<i>Chroicocephalus ridibundus</i>
PacificBirds-BC	Blackpoll-Warbler	<i>Setophaga striata</i>
PacificBirds-BC	Black-Oystercatcher	<i>Haematopus bachmani</i>
PacificBirds-BC	Black-Phoebe	<i>Sayornis nigricans</i>
PacificBirds-BC	Black-Scoter	<i>Melanitta americana</i>
PacificBirds-BC	Black-Swift	<i>Cypseloides niger</i>
PacificBirds-BC	Black-Turnstone	<i>Arenaria melanocephala</i>
PacificBirds-BC	Blue-Jay	<i>Cyanocitta cristata</i>
PacificBirds-BC	Brown-headed-Cowbird	<i>Molothrus ater</i>
PacificBirds-BC	Bohemian-Waxwing	<i>Bombycilla garrulus</i>
PacificBirds-BC	Bonapartes-Gull	<i>Chroicocephalus philadelphia</i>
PacificBirds-BC	Boreal-Chickadee	<i>Poecile hudsonicus</i>
PacificBirds-BC	Brambling	<i>Fringilla montifringilla</i>
PacificBirds-BC	Brant	<i>Branta bernicla</i>
PacificBirds-BC	Barred-Owl	<i>Strix varia</i>
PacificBirds-BC	Brewers-Blackbird	<i>Euphagus cyanocephalus</i>
PacificBirds-BC	Brown-Creeper	<i>Certhia americana</i>
PacificBirds-BC	Barn-Owl	<i>Tyto alba</i>
PacificBirds-BC	Brown-Pelican	<i>Pelecanus occidentalis</i>
PacificBirds-BC	Broad-winged-Hawk	<i>Buteo platypterus</i>
PacificBirds-BC	Black-throated-Gray-Warbler	<i>Setophaga nigrescens</i>
PacificBirds-BC	Buff-breasted-Sandpiper	<i>Calidris subruficollis</i>
PacificBirds-BC	Bufflehead	<i>Bucephala albeola</i>

PacificBirds-BC	Bullocks-Oriole	<i>Icterus bullockii</i>
PacificBirds-BC	Bushtit	<i>Psaltriparus minimus</i>
PacificBirds-BC	Blue-winged-Teal	<i>Spatula discors</i>
PacificBirds-BC	Cackling-Goose	<i>Branta hutchinsii</i>
PacificBirds-BC	California-Gull	<i>Larus californicus</i>
PacificBirds-BC	California-Quail	<i>Callipepla californica</i>
PacificBirds-BC	Canada-Goose	<i>Branta canadensis</i>
PacificBirds-BC	Canvasback	<i>Aythya valisineria</i>
PacificBirds-BC	Cassins-Finch	<i>Haemorhous cassinii</i>
PacificBirds-BC	Caspian-Tern	<i>Hydroprogne caspia</i>
PacificBirds-BC	Cassins-Vireo	<i>Vireo cassinii</i>
PacificBirds-BC	Cedar-Waxwing	<i>Bombycilla cedrorum</i>
PacificBirds-BC	Chestnut-backed-Chickadee	<i>Poecile rufescens</i>
PacificBirds-BC	Chipping-Sparrow	<i>Spizella passerina</i>
PacificBirds-BC	Cinnamon-Teal	<i>Spatula cyanoptera</i>
PacificBirds-BC	Clarks-Grebe	<i>Aechmophorus clarkii</i>
PacificBirds-BC	Clarks-Nutcracker	<i>Nucifraga columbiana</i>
PacificBirds-BC	Clay-colored-Sparrow	<i>Spizella pallida</i>
PacificBirds-BC	Cliff-Swallow	<i>Petrochelidon pyrrhonota</i>
PacificBirds-BC	Common-Crane	<i>Grus grus</i>
PacificBirds-BC	Common-Goldeneye	<i>Bucephala clangula</i>
PacificBirds-BC	Common-Loon	<i>Gavia immer</i>
PacificBirds-BC	Common-Merganser	<i>Mergus merganser</i>
PacificBirds-BC	Common-Nighthawk	<i>Chordeiles minor</i>
PacificBirds-BC	Common-Poorwill	<i>Phalaenoptilus nuttallii</i>
PacificBirds-BC	Common-Raven	<i>Corvus corax</i>
PacificBirds-BC	Common-Redpoll	<i>Acanthis flammea</i>
PacificBirds-BC	Common-Tern	<i>Sterna hirundo</i>
PacificBirds-BC	Common-Yellowthroat	<i>Geothlypis trichas</i>

PacificBirds-BC	Coopers-Hawk	<i>Accipiter cooperii</i>
PacificBirds-BC	Common-Ringed-Plover	<i>Charadrius hiaticula</i>
PacificBirds-BC	Costas-Hummingbird	<i>Calypte costae</i>
PacificBirds-BC	California-Scrub-Jay	<i>Aphelocoma californica</i>
PacificBirds-BC	Curlew-Sandpiper	<i>Calidris ferruginea</i>
PacificBirds-BC	Dark-eyed-Junco	<i>Junco hyemalis</i>
PacificBirds-BC	Double-crested-Cormorant	<i>Nannopterum auritum</i>
PacificBirds-BC	Downy-Woodpecker	<i>Dryobates pubescens</i>
PacificBirds-BC	Dunlin	<i>Calidris alpina</i>
PacificBirds-BC	Dusky-Flycatcher	<i>Empidonax oberholseri</i>
PacificBirds-BC	Dusky-Grouse	<i>Dendragapus obscurus</i>
PacificBirds-BC	Eared-Grebe	<i>Podiceps nigricollis</i>
PacificBirds-BC	Eastern-Kingbird	<i>Tyrannus tyrannus</i>
PacificBirds-BC	Eurasian-Collared-Dove	<i>Streptopelia decaocto</i>
PacificBirds-BC	European-Starling	<i>Sturnus vulgaris</i>
PacificBirds-BC	Eurasian-Wigeon	<i>Mareca penelope</i>
PacificBirds-BC	Evening-Grosbeak	<i>Coccothraustes vespertinus</i>
PacificBirds-BC	Flammulated-Owl	<i>Psilosops flammeolus</i>
PacificBirds-BC	Fox-Sparrow	<i>Passerella iliaca</i>
PacificBirds-BC	Franklins-Gull	<i>Leucophaeus pipixcan</i>
PacificBirds-BC	Gadwall	<i>Mareca strepera</i>
PacificBirds-BC	Gray-crowned-Rosy-Finch	<i>Leucosticte tephrocotis</i>
PacificBirds-BC	Glaucous-Gull	<i>Larus hyperboreus</i>
PacificBirds-BC	Glaucous-winged-Gull	<i>Larus glaucescens</i>
PacificBirds-BC	Green-winged-Teal	<i>Anas crecca</i>
PacificBirds-BC	Golden-crowned-Kinglet	<i>Regulus satrapa</i>
PacificBirds-BC	Golden-crowned-Sparrow	<i>Zonotrichia atricapilla</i>
PacificBirds-BC	Golden-Eagle	<i>Aquila chrysaetos</i>
PacificBirds-BC	Great-Blue-Heron	<i>Ardea herodias</i>

PacificBirds-BC	Great-Egret	<i>Ardea alba</i>
PacificBirds-BC	Greater-Scaup	<i>Aythya marila</i>
PacificBirds-BC	Greater-Yellowlegs	<i>Tringa melanoleuca</i>
PacificBirds-BC	Great-Horned-Owl	<i>Bubo virginianus</i>
PacificBirds-BC	Green-Heron	<i>Butorides virescens</i>
PacificBirds-BC	Gray-Catbird	<i>Dumetella carolinensis</i>
PacificBirds-BC	Canada-Jay	<i>Perisoreus canadensis</i>
PacificBirds-BC	Greater-White-fronted-Goose	<i>Anser albifrons</i>
PacificBirds-BC	Gray-cheeked-Thrush	<i>Catharus minimus</i>
PacificBirds-BC	Gray-tailed-Tattler	<i>Tringa brevipes</i>
PacificBirds-BC	Hairy-Woodpecker	<i>Dryobates villosus</i>
PacificBirds-BC	Hammonds-Flycatcher	<i>Empidonax hammondii</i>
PacificBirds-BC	Harlequin-Duck	<i>Histrionicus histrionicus</i>
PacificBirds-BC	Harriss-Sparrow	<i>Zonotrichia querula</i>
PacificBirds-BC	Heermanns-Gull	<i>Larus heermanni</i>
PacificBirds-BC	Herring-Gull	<i>Larus argentatus</i>
PacificBirds-BC	Hermit-Thrush	<i>Catharus guttatus</i>
PacificBirds-BC	Hooded-Merganser	<i>Lophodytes cucullatus</i>
PacificBirds-BC	Horned-Grebe	<i>Podiceps auritus</i>
PacificBirds-BC	Horned-Lark	<i>Eremophila alpestris</i>
PacificBirds-BC	House-Finch	<i>Haemorhous mexicanus</i>
PacificBirds-BC	House-Sparrow	<i>Passer domesticus</i>
PacificBirds-BC	House-Wren	<i>Troglodytes aedon</i>
PacificBirds-BC	Hudsonian-Godwit	<i>Limosa haemastica</i>
PacificBirds-BC	Huttons-Vireo	<i>Vireo huttoni</i>
PacificBirds-BC	Killdeer	<i>Charadrius vociferus</i>
PacificBirds-BC	Lapland-Longspur	<i>Calcarius lapponicus</i>
PacificBirds-BC	Lark-Sparrow	<i>Chondestes grammacus</i>
PacificBirds-BC	Lazuli-Bunting	<i>Passerina amoena</i>

PacificBirds-BC	Least-Flycatcher	<i>Empidonax minimus</i>
PacificBirds-BC	Least-Sandpiper	<i>Calidris minutilla</i>
PacificBirds-BC	Lesser-Goldfinch	<i>Spinus psaltria</i>
PacificBirds-BC	Lesser-Scaup	<i>Aythya affinis</i>
PacificBirds-BC	Lesser-Yellowlegs	<i>Tringa flavipes</i>
PacificBirds-BC	Lewis-Woodpecker	<i>Melanerpes lewis</i>
PacificBirds-BC	Lincolns-Sparrow	<i>Melospiza lincolnii</i>
PacificBirds-BC	Little-Stint	<i>Calidris minuta</i>
PacificBirds-BC	Long-billed-Curlew	<i>Numenius americanus</i>
PacificBirds-BC	Long-billed-Dowitcher	<i>Limnodromus scolopaceus</i>
PacificBirds-BC	Long-eared-Owl	<i>Asio otus</i>
PacificBirds-BC	Long-tailed-Duck	<i>Clangula hyemalis</i>
PacificBirds-BC	MacGillivrays-Warbler	<i>Geothlypis tolmiei</i>
PacificBirds-BC	Magnolia-Warbler	<i>Setophaga magnolia</i>
PacificBirds-BC	Mallard	<i>Anas platyrhynchos</i>
PacificBirds-BC	Marbled-Godwit	<i>Limosa fedoa</i>
PacificBirds-BC	Marbled-Murrelet	<i>Brachyramphus marmoratus</i>
PacificBirds-BC	Marsh-Wren	<i>Cistothorus palustris</i>
PacificBirds-BC	Merlin	<i>Falco columbarius</i>
PacificBirds-BC	Short-billed-Gull	<i>Larus brachyrhynchus</i>
PacificBirds-BC	Mountain-Bluebird	<i>Sialia currucoides</i>
PacificBirds-BC	Mountain-Chickadee	<i>Poecile gambeli</i>
PacificBirds-BC	Mourning-Dove	<i>Zenaida macroura</i>
PacificBirds-BC	Mute-Swan	<i>Cygnus olor</i>
PacificBirds-BC	Nashville-Warbler	<i>Leiothlypis ruficapilla</i>
PacificBirds-BC	Northern-Hawk-Owl	<i>Surnia ulula</i>
PacificBirds-BC	Northern-Pygmy-Owl	<i>Glaucidium gnoma</i>
PacificBirds-BC	Northern-Flicker	<i>Colaptes auratus</i>
PacificBirds-BC	American-Goshawk	<i>Accipiter atricapillus</i>

PacificBirds-BC	Northern-Harrier	<i>Circus hudsonius</i>
PacificBirds-BC	Northern-Mockingbird	<i>Mimus polyglottos</i>
PacificBirds-BC	Northern-Pintail	<i>Anas acuta</i>
PacificBirds-BC	Northern-Shoveler	<i>Spatula clypeata</i>
PacificBirds-BC	Northern-Shrike	<i>Lanius borealis</i>
PacificBirds-BC	Northern-Waterthrush	<i>Parkesia noveboracensis</i>
PacificBirds-BC	Northern-Rough-winged-Swallow	<i>Stelgidopteryx serripennis</i>
PacificBirds-BC	Northern-Saw-whet-Owl	<i>Aegolius acadicus</i>
PacificBirds-BC	Olive-sided-Flycatcher	<i>Contopus cooperi</i>
PacificBirds-BC	Orange-crowned-Warbler	<i>Leiothlypis celata</i>
PacificBirds-BC	Osprey	<i>Pandion haliaetus</i>
PacificBirds-BC	Ovenbird	<i>Seiurus aurocapilla</i>
PacificBirds-BC	Pacific-Loon	<i>Gavia pacifica</i>
PacificBirds-BC	Pacific-Wren	<i>Troglodytes pacificus</i>
PacificBirds-BC	Pacific-Golden-Plover	<i>Pluvialis fulva</i>
PacificBirds-BC	Palm-Warbler	<i>Setophaga palmarum</i>
PacificBirds-BC	Parasitic-Jaeger	<i>Stercorarius parasiticus</i>
PacificBirds-BC	Pectoral-Sandpiper	<i>Calidris melanotos</i>
PacificBirds-BC	Pelagic-Cormorant	<i>Urile pelagicus</i>
PacificBirds-BC	Peregrine-Falcon	<i>Falco peregrinus</i>
PacificBirds-BC	Pied-billed-Grebe	<i>Podilymbus podiceps</i>
PacificBirds-BC	Pink-footed-Goose	<i>Anser brachyrhynchus</i>
PacificBirds-BC	Pigeon-Guillemot	<i>Cephus columba</i>
PacificBirds-BC	Pileated-Woodpecker	<i>Dryocopus pileatus</i>
PacificBirds-BC	Pine-Grosbeak	<i>Pinicola enucleator</i>
PacificBirds-BC	Pine-Siskin	<i>Spinus pinus</i>
PacificBirds-BC	Pomarine-Jaeger	<i>Stercorarius pomarinus</i>
PacificBirds-BC	Prairie-Falcon	<i>Falco mexicanus</i>
PacificBirds-BC	Purple-Finch	<i>Haemorhous purpureus</i>

PacificBirds-BC	Purple-Martin	<i>Progne subis</i>
PacificBirds-BC	Red-breasted-Merganser	<i>Mergus serrator</i>
PacificBirds-BC	Red-breasted-Nuthatch	<i>Sitta canadensis</i>
PacificBirds-BC	Red-breasted-Sapsucker	<i>Sphyrapicus ruber</i>
PacificBirds-BC	Red-Crossbill	<i>Loxia curvirostra</i>
PacificBirds-BC	Redhead	<i>Aythya americana</i>
PacificBirds-BC	Red-Knot	<i>Calidris canutus</i>
PacificBirds-BC	Red-eyed-Vireo	<i>Vireo olivaceus</i>
PacificBirds-BC	Red-necked-Grebe	<i>Podiceps grisegena</i>
PacificBirds-BC	Red-necked-Phalarope	<i>Phalaropus lobatus</i>
PacificBirds-BC	Red-naped-Sapsucker	<i>Sphyrapicus nuchalis</i>
PacificBirds-BC	Red-necked-Stint	<i>Calidris ruficollis</i>
PacificBirds-BC	Red-tailed-Hawk	<i>Buteo jamaicensis</i>
PacificBirds-BC	Red-throated-Loon	<i>Gavia stellata</i>
PacificBirds-BC	Red-throated-Pipit	<i>Anthus cervinus</i>
PacificBirds-BC	Red-winged-Blackbird	<i>Agelaius phoeniceus</i>
PacificBirds-BC	Ring-billed-Gull	<i>Larus delawarensis</i>
PacificBirds-BC	Ring-necked-Duck	<i>Aythya collaris</i>
PacificBirds-BC	Ring-necked/Green-Pheasant	<i>Phasianus colchicus/versicolor</i>
PacificBirds-BC	Ring-necked-Pheasant	<i>Phasianus colchicus</i>
PacificBirds-BC	Rock-Pigeon	<i>Columba livia</i>
PacificBirds-BC	Rock-Ptarmigan	<i>Lagopus muta</i>
PacificBirds-BC	Rock-Sandpiper	<i>Calidris ptilocnemis</i>
PacificBirds-BC	Rock-Wren	<i>Salpinctes obsoletus</i>
PacificBirds-BC	Rough-legged-Hawk	<i>Buteo lagopus</i>
PacificBirds-BC	Rosss-Goose	<i>Anser rossii</i>
PacificBirds-BC	Ruby-crowned-Kinglet	<i>Corthylio calendula</i>
PacificBirds-BC	Ruddy-Duck	<i>Oxyura jamaicensis</i>
PacificBirds-BC	Ruddy-Turnstone	<i>Arenaria interpres</i>

PacificBirds-BC	Ruff	<i>Calidris pugnax</i>
PacificBirds-BC	Ruffed-Grouse	<i>Bonasa umbellus</i>
PacificBirds-BC	Rufous-Hummingbird	<i>Selasphorus rufus</i>
PacificBirds-BC	Rusty-Blackbird	<i>Euphagus carolinus</i>
PacificBirds-BC	Rustic-Bunting	<i>Emberiza rustica</i>
PacificBirds-BC	Sabines-Gull	<i>Xema sabini</i>
PacificBirds-BC	Sage-Thrasher	<i>Oreoscoptes montanus</i>
PacificBirds-BC	Sandhill-Crane	<i>Antigone canadensis</i>
PacificBirds-BC	Sanderling	<i>Calidris alba</i>
PacificBirds-BC	Savannah-Sparrow	<i>Passerculus sandwichensis</i>
PacificBirds-BC	Says-Phoebe	<i>Sayornis saya</i>
PacificBirds-BC	Semipalmated-Plover	<i>Charadrius semipalmatus</i>
PacificBirds-BC	Semipalmated-Sandpiper	<i>Calidris pusilla</i>
PacificBirds-BC	Short-billed-Dowitcher	<i>Limnodromus griseus</i>
PacificBirds-BC	Short-eared-Owl	<i>Asio flammeus</i>
PacificBirds-BC	Sharp-shinned-Hawk	<i>Accipiter striatus</i>
PacificBirds-BC	Sharp-tailed-Sandpiper	<i>Calidris acuminata</i>
PacificBirds-BC	Eurasian-Skylark	<i>Alauda arvensis</i>
PacificBirds-BC	Slaty-backed-Gull	<i>Larus schistisagus</i>
PacificBirds-BC	Snow-Bunting	<i>Plectrophenax nivalis</i>
PacificBirds-BC	Snow-Goose	<i>Anser caerulescens</i>
PacificBirds-BC	Snowy-Owl	<i>Bubo scandiacus</i>
PacificBirds-BC	Snowy-Plover	<i>Anarhynchus nivosus</i>
PacificBirds-BC	Solitary-Sandpiper	<i>Tringa solitaria</i>
PacificBirds-BC	Song-Sparrow	<i>Melospiza melodia</i>
PacificBirds-BC	Sooty-Grouse	<i>Dendragapus fuliginosus</i>
PacificBirds-BC	Sora	<i>Porzana carolina</i>
PacificBirds-BC	Spotted-Sandpiper	<i>Actitis macularius</i>
PacificBirds-BC	Spotted-Towhee	<i>Pipilo maculatus</i>

PacificBirds-BC	Spruce-Grouse	<i>Canachites canadensis</i>
PacificBirds-BC	Stellers-Jay	<i>Cyanocitta stelleri</i>
PacificBirds-BC	Surfbird	<i>Calidris virgata</i>
PacificBirds-BC	Surf-Scoter	<i>Melanitta perspicillata</i>
PacificBirds-BC	Swainsons-Hawk	<i>Buteo swainsoni</i>
PacificBirds-BC	Swamp-Sparrow	<i>Melospiza georgiana</i>
PacificBirds-BC	Swainsons-Thrush	<i>Catharus ustulatus</i>
PacificBirds-BC	Tennessee-Warbler	<i>Leiothlypis peregrina</i>
PacificBirds-BC	Townsend's-Solitaire	<i>Myadestes townsendi</i>
PacificBirds-BC	Townsend's-Warbler	<i>Setophaga townsendi</i>
PacificBirds-BC	Tree-Swallow	<i>Tachycineta bicolor</i>
PacificBirds-BC	Tropical-Kingbird	<i>Tyrannus melancholicus</i>
PacificBirds-BC	Trumpeter-Swan	<i>Cygnus buccinator</i>
PacificBirds-BC	Tufted-Duck	<i>Aythya fuligula</i>
PacificBirds-BC	Tundra-Swan	<i>Cygnus columbianus</i>
PacificBirds-BC	Turkey-Vulture	<i>Cathartes aura</i>
PacificBirds-BC	Varied-Thrush	<i>Ixoreus naevius</i>
PacificBirds-BC	Vaux's-Swift	<i>Chaetura vauxi</i>
PacificBirds-BC	Veery	<i>Catharus fuscescens</i>
PacificBirds-BC	Vesper-Sparrow	<i>Pooecetes gramineus</i>
PacificBirds-BC	Violet-green-Swallow	<i>Tachycineta thalassina</i>
PacificBirds-BC	Virginia-Rail	<i>Rallus limicola</i>
PacificBirds-BC	Wandering-Tattler	<i>Tringa incana</i>
PacificBirds-BC	Warbling-Vireo	<i>Vireo gilvus</i>
PacificBirds-BC	Western-Bluebird	<i>Sialia mexicana</i>
PacificBirds-BC	Western-Grebe	<i>Aechmophorus occidentalis</i>
PacificBirds-BC	Western-Gull	<i>Larus occidentalis</i>
PacificBirds-BC	Western-Kingbird	<i>Tyrannus verticalis</i>
PacificBirds-BC	Western-Meadowlark	<i>Sturnella neglecta</i>

PacificBirds-BC	Western-Screech-Owl	<i>Megascops kennicottii</i>
PacificBirds-BC	Western-Sandpiper	<i>Calidris mauri</i>
PacificBirds-BC	Western-Tanager	<i>Piranga ludoviciana</i>
PacificBirds-BC	Western-Wood-Pewee	<i>Contopus sordidulus</i>
PacificBirds-BC	White-crowned-Sparrow	<i>Zonotrichia leucophrys</i>
PacificBirds-BC	Whimbrel	<i>Numenius phaeopus</i>
PacificBirds-BC	White-Wagtail	<i>Motacilla alba</i>
PacificBirds-BC	Whooper-Swan	<i>Cygnus cygnus</i>
PacificBirds-BC	White-tailed-Ptarmigan	<i>Lagopus leucura</i>
PacificBirds-BC	White-throated-Sparrow	<i>Zonotrichia albicollis</i>
PacificBirds-BC	White-winged-Crossbill	<i>Loxia leucoptera</i>
PacificBirds-BC	White-winged-Scoter	<i>Melanitta deglandi</i>
PacificBirds-BC	Willow-Flycatcher	<i>Empidonax traillii</i>
PacificBirds-BC	Willet	<i>Tringa semipalmata</i>
PacificBirds-BC	Wilson's-Phalarope	<i>Phalaropus tricolor</i>
PacificBirds-BC	Willow-Ptarmigan	<i>Lagopus lagopus</i>
PacificBirds-BC	Williamson's-Sapsucker	<i>Sphyrapicus thyroideus</i>
PacificBirds-BC	Wilson's-Snipe	<i>Gallinago delicata</i>
PacificBirds-BC	Wilson's-Warbler	<i>Cardellina pusilla</i>
PacificBirds-BC	Wood-Duck	<i>Aix sponsa</i>
PacificBirds-BC	Wood-Sandpiper	<i>Tringa glareola</i>
PacificBirds-BC	American-Coot	<i>Fulica americana</i>
PacificBirds-BC	Iceland-Gull	<i>Larus glaucooides</i>
PacificBirds-BC	Yellow-breasted-Chat	<i>Icteria virens</i>
PacificBirds-BC	Yellow-bellied-Flycatcher	<i>Empidonax flaviventris</i>
PacificBirds-BC	Yellow-billed-Loon	<i>Gavia adamsii</i>
PacificBirds-BC	Yellow-bellied-Sapsucker	<i>Sphyrapicus varius</i>
PacificBirds-BC	Yellow-browed-Warbler	<i>Phylloscopus inornatus</i>
PacificBirds-BC	Yellow-headed-Blackbird	<i>Xanthocephalus xanthocephalus</i>

PacificBirds-BC	Yellow-Warbler	<i>Setophaga petechia</i>
PacificBirds-BC	Yellow-rumped-Warbler	<i>Setophaga coronata</i>
PacificBirds-BC	Western-Flycatcher	<i>Empidonax difficilis</i>

Species list included in the stacked rasters for the Canadian Intermountain Joint Venture (CIJV).

JV_name	common_name	scientific_name
CIJV	Alder-Flycatcher	Empidonax alnorum
CIJV	American-Avocet	Recurvirostra americana
CIJV	American-Bittern	Botaurus lentiginosus
CIJV	American-Crow	Corvus brachyrhynchos
CIJV	American-Dipper	Cinclus mexicanus
CIJV	American-Goldfinch	Spinus tristis
CIJV	American-Kestrel	Falco sparverius
CIJV	American-Pipit	Anthus rubescens
CIJV	American-Redstart	Setophaga ruticilla
CIJV	American-Robin	Turdus migratorius
CIJV	American-Wigeon	Mareca americana
CIJV	American-Golden-Plover	Pluvialis dominica
CIJV	American-Tree-Sparrow	Spizelloides arborea
CIJV	American-White-Pelican	Pelecanus erythrorhynchos
CIJV	Annas-Hummingbird	Calypte anna
CIJV	Arctic-Tern	Sterna paradisaea
CIJV	American-Three-toed-Woodpecker	Picoides dorsalis
CIJV	Bairds-Sandpiper	Calidris bairdii
CIJV	Bairds-Sparrow	Centronyx bairdii
CIJV	Bald-Eagle	Haliaeetus leucocephalus
CIJV	Baltimore-Oriole	Icterus galbula
CIJV	Bank-Swallow	Riparia riparia

CIJV	Barrows-Goldeneye	<i>Bucephala islandica</i>
CIJV	Barn-Swallow	<i>Hirundo rustica</i>
CIJV	Band-tailed-Pigeon	<i>Patagioenas fasciata</i>
CIJV	Black-and-white-Warbler	<i>Mniotilta varia</i>
CIJV	Black-crowned-Night-Heron	<i>Nycticorax nycticorax</i>
CIJV	Belted-Kingfisher	<i>Megaceryle alcyon</i>
CIJV	Bewicks-Wren	<i>Thryomanes bewickii</i>
CIJV	Black-billed-Cuckoo	<i>Coccyzus erythrophthalmus</i>
CIJV	Black-billed-Magpie	<i>Pica hudsonia</i>
CIJV	Black-bellied-Plover	<i>Pluvialis squatarola</i>
CIJV	Black-backed-Woodpecker	<i>Picoides arcticus</i>
CIJV	Black-capped-Chickadee	<i>Poecile atricapillus</i>
CIJV	Black-chinned-Hummingbird	<i>Archilochus alexandri</i>
CIJV	Black-headed-Grosbeak	<i>Pheucticus melanocephalus</i>
CIJV	Black-necked-Stilt	<i>Himantopus mexicanus</i>
CIJV	Blackpoll-Warbler	<i>Setophaga striata</i>
CIJV	Black-Scoter	<i>Melanitta americana</i>
CIJV	Black-Swift	<i>Cypseloides niger</i>
CIJV	Black-Tern	<i>Chlidonias niger</i>
CIJV	Blue-Jay	<i>Cyanocitta cristata</i>
CIJV	Brown-headed-Cowbird	<i>Molothrus ater</i>
CIJV	Bobolink	<i>Dolichonyx oryzivorus</i>
CIJV	Bohemian-Waxwing	<i>Bombycilla garrulus</i>
CIJV	Bonapartes-Gull	<i>Chroicocephalus philadelphia</i>
CIJV	Boreal-Chickadee	<i>Poecile hudsonicus</i>
CIJV	Brambling	<i>Fringilla montifringilla</i>
CIJV	Barred-Owl	<i>Strix varia</i>
CIJV	Brewers-Blackbird	<i>Euphagus cyanocephalus</i>
CIJV	Brewers-Sparrow	<i>Spizella breweri</i>

CIJV	Brown-Creeper	<i>Certhia americana</i>
CIJV	Barn-Owl	<i>Tyto alba</i>
CIJV	Brown-Thrasher	<i>Toxostoma rufum</i>
CIJV	Broad-winged-Hawk	<i>Buteo platypterus</i>
CIJV	Black-throated-Green-Warbler	<i>Setophaga virens</i>
CIJV	Black-throated-Gray-Warbler	<i>Setophaga nigrescens</i>
CIJV	Bufflehead	<i>Bucephala albeola</i>
CIJV	Blue-headed-Vireo	<i>Vireo solitarius</i>
CIJV	Bullocks-Oriole	<i>Icterus bullockii</i>
CIJV	Burrowing-Owl	<i>Athene cunicularia</i>
CIJV	Blue-winged-Teal	<i>Spatula discors</i>
CIJV	Cackling-Goose	<i>Branta hutchinsii</i>
CIJV	California-Gull	<i>Larus californicus</i>
CIJV	Calliope-Hummingbird	<i>Selasphorus calliope</i>
CIJV	California-Quail	<i>Callipepla californica</i>
CIJV	Cape-May-Warbler	<i>Setophaga tigrina</i>
CIJV	Canada-Goose	<i>Branta canadensis</i>
CIJV	Canvasback	<i>Aythya valisineria</i>
CIJV	Canada-Warbler	<i>Cardellina canadensis</i>
CIJV	Canyon-Wren	<i>Catherpes mexicanus</i>
CIJV	Cassins-Finch	<i>Haemorhous cassinii</i>
CIJV	Caspian-Tern	<i>Hydroprogne caspia</i>
CIJV	Cassins-Vireo	<i>Vireo cassinii</i>
CIJV	Cedar-Waxwing	<i>Bombycilla cedrorum</i>
CIJV	Chestnut-backed-Chickadee	<i>Poecile rufescens</i>
CIJV	Chestnut-collared-Longspur	<i>Calcarius ornatus</i>
CIJV	Chipping-Sparrow	<i>Spizella passerina</i>
CIJV	Chukar	<i>Alectoris chukar</i>
CIJV	Cinnamon-Teal	<i>Spatula cyanoptera</i>

CIJV	Clarks-Grebe	<i>Aechmophorus clarkii</i>
CIJV	Clarks-Nutcracker	<i>Nucifraga columbiana</i>
CIJV	Clay-colored-Sparrow	<i>Spizella pallida</i>
CIJV	Cliff-Swallow	<i>Petrochelidon pyrrhonota</i>
CIJV	Common-Goldeneye	<i>Bucephala clangula</i>
CIJV	Common-Grackle	<i>Quiscalus quiscula</i>
CIJV	Common-Loon	<i>Gavia immer</i>
CIJV	Common-Merganser	<i>Mergus merganser</i>
CIJV	Common-Nighthawk	<i>Chordeiles minor</i>
CIJV	Common-Poorwill	<i>Phalaenoptilus nuttallii</i>
CIJV	Common-Raven	<i>Corvus corax</i>
CIJV	Common-Redpoll	<i>Acanthis flammea</i>
CIJV	Common-Tern	<i>Sterna hirundo</i>
CIJV	Common-Yellowthroat	<i>Geothlypis trichas</i>
CIJV	Connecticut-Warbler	<i>Oporornis agilis</i>
CIJV	Coopers-Hawk	<i>Accipiter cooperii</i>
CIJV	Dark-eyed-Junco	<i>Junco hyemalis</i>
CIJV	Double-crested-Cormorant	<i>Nannopterum auritum</i>
CIJV	Downy-Woodpecker	<i>Dryobates pubescens</i>
CIJV	Dunlin	<i>Calidris alpina</i>
CIJV	Dusky-Flycatcher	<i>Empidonax oberholseri</i>
CIJV	Dusky-Grouse	<i>Dendragapus obscurus</i>
CIJV	Eared-Grebe	<i>Podiceps nigricollis</i>
CIJV	Eastern-Kingbird	<i>Tyrannus tyrannus</i>
CIJV	Eastern-Phoebe	<i>Sayornis phoebe</i>
CIJV	Eurasian-Collared-Dove	<i>Streptopelia decaocto</i>
CIJV	European-Starling	<i>Sturnus vulgaris</i>
CIJV	Eurasian-Wigeon	<i>Mareca penelope</i>
CIJV	Evening-Grosbeak	<i>Coccothraustes vespertinus</i>

CIJV	Ferruginous-Hawk	<i>Buteo regalis</i>
CIJV	Flammulated-Owl	<i>Psiloscopus flammeolus</i>
CIJV	Forsters-Tern	<i>Sterna forsteri</i>
CIJV	Fox-Sparrow	<i>Passerella iliaca</i>
CIJV	Franklins-Gull	<i>Leucophaeus pipixcan</i>
CIJV	Gadwall	<i>Mareca strepera</i>
CIJV	Gray-crowned-Rosy-Finch	<i>Leucosticte tephrocotis</i>
CIJV	Glaucous-Gull	<i>Larus hyperboreus</i>
CIJV	Glaucous-winged-Gull	<i>Larus glaucescens</i>
CIJV	Green-winged-Teal	<i>Anas crecca</i>
CIJV	Golden-crowned-Kinglet	<i>Regulus satrapa</i>
CIJV	Golden-crowned-Sparrow	<i>Zonotrichia atricapilla</i>
CIJV	Golden-Eagle	<i>Aquila chrysaetos</i>
CIJV	Grasshopper-Sparrow	<i>Ammodramus savannarum</i>
CIJV	Great-Blue-Heron	<i>Ardea herodias</i>
CIJV	Great-Egret	<i>Ardea alba</i>
CIJV	Greater-Scaup	<i>Aythya marila</i>
CIJV	Greater-Yellowlegs	<i>Tringa melanoleuca</i>
CIJV	Great-Horned-Owl	<i>Bubo virginianus</i>
CIJV	Gray-Catbird	<i>Dumetella carolinensis</i>
CIJV	Gray-Flycatcher	<i>Empidonax wrightii</i>
CIJV	Canada-Jay	<i>Perisoreus canadensis</i>
CIJV	Gray-Partridge	<i>Perdix perdix</i>
CIJV	Greater-White-fronted-Goose	<i>Anser albifrons</i>
CIJV	Gray-cheeked-Thrush	<i>Catharus minimus</i>
CIJV	Hairy-Woodpecker	<i>Dryobates villosus</i>
CIJV	Hammonds-Flycatcher	<i>Empidonax hammondii</i>
CIJV	Harlequin-Duck	<i>Histrionicus histrionicus</i>
CIJV	Harriss-Sparrow	<i>Zonotrichia querula</i>

CIJV	Herring-Gull	<i>Larus argentatus</i>
CIJV	Hermit-Thrush	<i>Catharus guttatus</i>
CIJV	Hoary-Redpoll	<i>Acanthis hornemanni</i>
CIJV	Hooded-Merganser	<i>Lophodytes cucullatus</i>
CIJV	Horned-Grebe	<i>Podiceps auritus</i>
CIJV	Horned-Lark	<i>Eremophila alpestris</i>
CIJV	House-Finch	<i>Haemorhous mexicanus</i>
CIJV	House-Sparrow	<i>Passer domesticus</i>
CIJV	House-Wren	<i>Troglodytes aedon</i>
CIJV	Hudsonian-Godwit	<i>Limosa haemastica</i>
CIJV	Killdeer	<i>Charadrius vociferus</i>
CIJV	Lapland-Longspur	<i>Calcarius lapponicus</i>
CIJV	Lark-Bunting	<i>Calamospiza melanocorys</i>
CIJV	Lark-Sparrow	<i>Chondestes grammacus</i>
CIJV	Lazuli-Bunting	<i>Passerina amoena</i>
CIJV	Lesser-Black-backed-Gull	<i>Larus fuscus</i>
CIJV	Least-Flycatcher	<i>Empidonax minimus</i>
CIJV	Least-Sandpiper	<i>Calidris minutilla</i>
CIJV	LeContes-Sparrow	<i>Ammospiza leconteii</i>
CIJV	Lesser-Goldfinch	<i>Spinus psaltria</i>
CIJV	Lesser-Scaup	<i>Aythya affinis</i>
CIJV	Lesser-Yellowlegs	<i>Tringa flavipes</i>
CIJV	Lewis-Woodpecker	<i>Melanerpes lewis</i>
CIJV	Lincolns-Sparrow	<i>Melospiza lincolnii</i>
CIJV	Little-Gull	<i>Hydrocoloeus minutus</i>
CIJV	Long-billed-Curlew	<i>Numenius americanus</i>
CIJV	Long-billed-Dowitcher	<i>Limnodromus scolopaceus</i>
CIJV	Long-eared-Owl	<i>Asio otus</i>
CIJV	Loggerhead-Shrike	<i>Lanius ludovicianus</i>

CIJV	Long-tailed-Duck	Clangula hyemalis
CIJV	MacGillivrays-Warbler	Geothlypis tolmiei
CIJV	Magnolia-Warbler	Setophaga magnolia
CIJV	Mallard	Anas platyrhynchos
CIJV	Marbled-Godwit	Limosa fedoa
CIJV	Marsh-Wren	Cistothorus palustris
CIJV	Thick-billed-Longspur	Rhynchophanes mccownii
CIJV	Merlin	Falco columbarius
CIJV	Short-billed-Gull	Larus brachyrhynchus
CIJV	Mountain-Bluebird	Sialia currucoides
CIJV	Mountain-Chickadee	Poecile gambeli
CIJV	Mourning-Dove	Zenaida macroura
CIJV	Mourning-Warbler	Geothlypis philadelphia
CIJV	Nashville-Warbler	Leiothlypis ruficapilla
CIJV	Northern-Hawk-Owl	Surnia ulula
CIJV	Northern-Pygmy-Owl	Glaucidium gnoma
CIJV	Northern-Flicker	Colaptes auratus
CIJV	American-Goshawk	Accipiter atricapillus
CIJV	Northern-Harrier	Circus hudsonius
CIJV	Northern-Pintail	Anas acuta
CIJV	Northern-Shoveler	Spatula clypeata
CIJV	Northern-Shrike	Lanius borealis
CIJV	Northern-Waterthrush	Parkesia noveboracensis
CIJV	Northern-Rough-winged-Swallow	Stelgidopteryx serripennis
CIJV	Nelsons-Sparrow	Ammospiza nelsoni
CIJV	Northern-Saw-whet-Owl	Aegolius acadicus
CIJV	Olive-sided-Flycatcher	Contopus cooperi
CIJV	Orange-crowned-Warbler	Leiothlypis celata
CIJV	Osprey	Pandion haliaetus

CIJV	Ovenbird	Seiurus aurocapilla
CIJV	Pacific-Loon	Gavia pacifica
CIJV	Pacific-Wren	Troglodytes pacificus
CIJV	Palm-Warbler	Setophaga palmarum
CIJV	Parasitic-Jaeger	Stercorarius parasiticus
CIJV	Pectoral-Sandpiper	Calidris melanotos
CIJV	Peregrine-Falcon	Falco peregrinus
CIJV	Philadelphia-Vireo	Vireo philadelphicus
CIJV	Pied-billed-Grebe	Podilymbus podiceps
CIJV	Pileated-Woodpecker	Dryocopus pileatus
CIJV	Pine-Grosbeak	Pinicola enucleator
CIJV	Pine-Siskin	Spinus pinus
CIJV	Prairie-Falcon	Falco mexicanus
CIJV	Purple-Finch	Haemorhous purpureus
CIJV	Pygmy-Nuthatch	Sitta pygmaea
CIJV	Red-breasted-Merganser	Mergus serrator
CIJV	Red-breasted-Nuthatch	Sitta canadensis
CIJV	Red-breasted-Sapsucker	Sphyrapicus ruber
CIJV	Red-Crossbill	Loxia curvirostra
CIJV	Redhead	Aythya americana
CIJV	Red-eyed-Vireo	Vireo olivaceus
CIJV	Red-necked-Grebe	Podiceps grisegena
CIJV	Red-necked-Phalarope	Phalaropus lobatus
CIJV	Red-naped-Sapsucker	Sphyrapicus nuchalis
CIJV	Red-tailed-Hawk	Buteo jamaicensis
CIJV	Red-throated-Loon	Gavia stellata
CIJV	Red-winged-Blackbird	Agelaius phoeniceus
CIJV	Ring-billed-Gull	Larus delawarensis
CIJV	Ring-necked-Duck	Aythya collaris

CIJV	Ring-necked/Green-Pheasant	Phasianus colchicus/versicolor
CIJV	Ring-necked-Pheasant	Phasianus colchicus
CIJV	Rose-breasted-Grosbeak	Pheucticus ludovicianus
CIJV	Rock-Pigeon	Columba livia
CIJV	Rock-Ptarmigan	Lagopus muta
CIJV	Rock-Wren	Salpinctes obsoletus
CIJV	Rough-legged-Hawk	Buteo lagopus
CIJV	Rosss-Goose	Anser rossii
CIJV	Ruby-crowned-Kinglet	Corthylio calendula
CIJV	Ruddy-Duck	Oxyura jamaicensis
CIJV	Ruffed-Grouse	Bonasa umbellus
CIJV	Rufous-Hummingbird	Selasphorus rufus
CIJV	Rusty-Blackbird	Euphagus carolinus
CIJV	Sabines-Gull	Xema sabini
CIJV	Sage-Thrasher	Oreoscoptes montanus
CIJV	Sandhill-Crane	Antigone canadensis
CIJV	Sanderling	Calidris alba
CIJV	Savannah-Sparrow	Passerculus sandwichensis
CIJV	Says-Phoebe	Sayornis saya
CIJV	Semipalmated-Plover	Charadrius semipalmatus
CIJV	Semipalmated-Sandpiper	Calidris pusilla
CIJV	Short-billed-Dowitcher	Limnodromus griseus
CIJV	Short-eared-Owl	Asio flammeus
CIJV	Sharp-shinned-Hawk	Accipiter striatus
CIJV	Sharp-tailed-Grouse	Tympanuchus phasianellus
CIJV	Sharp-tailed-Sandpiper	Calidris acuminata
CIJV	Slaty-backed-Gull	Larus schistisagus
CIJV	Snow-Bunting	Plectrophenax nivalis
CIJV	Snow-Goose	Anser caerulescens

CIJV	Snowy-Owl	Bubo scandiacus
CIJV	Solitary-Sandpiper	Tringa solitaria
CIJV	Song-Sparrow	Melospiza melodia
CIJV	Sooty-Grouse	Dendragapus fuliginosus
CIJV	Sora	Porzana carolina
CIJV	Spotted-Sandpiper	Actitis macularius
CIJV	Spotted-Towhee	Pipilo maculatus
CIJV	Spruce-Grouse	Canachites canadensis
CIJV	Spragues-Pipit	Anthus spragueii
CIJV	Stellers-Jay	Cyanocitta stelleri
CIJV	Stilt-Sandpiper	Calidris himantopus
CIJV	Surf-Scoter	Melanitta perspicillata
CIJV	Swainsons-Hawk	Buteo swainsoni
CIJV	Swamp-Sparrow	Melospiza georgiana
CIJV	Swainsons-Thrush	Catharus ustulatus
CIJV	Tennessee-Warbler	Leiothlypis peregrina
CIJV	Townsend's-Solitaire	Myadestes townsendi
CIJV	Townsend's-Warbler	Setophaga townsendi
CIJV	Tree-Swallow	Tachycineta bicolor
CIJV	Trumpeter-Swan	Cygnus buccinator
CIJV	Tundra-Swan	Cygnus columbianus
CIJV	Turkey-Vulture	Cathartes aura
CIJV	Upland-Sandpiper	Bartramia longicauda
CIJV	Varied-Thrush	Ixoreus naevius
CIJV	Vaux's-Swift	Chaetura vauxi
CIJV	Veery	Catharus fuscescens
CIJV	Vesper-Sparrow	Pooecetes gramineus
CIJV	Violet-green-Swallow	Tachycineta thalassina
CIJV	Virginia-Rail	Rallus limicola

CIJV	Wandering-Tattler	<i>Tringa incana</i>
CIJV	Warbling-Vireo	<i>Vireo gilvus</i>
CIJV	Western-Bluebird	<i>Sialia mexicana</i>
CIJV	Western-Grebe	<i>Aechmophorus occidentalis</i>
CIJV	Western-Kingbird	<i>Tyrannus verticalis</i>
CIJV	Western-Meadowlark	<i>Sturnella neglecta</i>
CIJV	Western-Screech-Owl	<i>Megascops kennicottii</i>
CIJV	Western-Sandpiper	<i>Calidris mauri</i>
CIJV	Western-Tanager	<i>Piranga ludoviciana</i>
CIJV	Western-Wood-Pewee	<i>Contopus sordidulus</i>
CIJV	White-breasted-Nuthatch	<i>Sitta carolinensis</i>
CIJV	White-crowned-Sparrow	<i>Zonotrichia leucophrys</i>
CIJV	White-faced-Ibis	<i>Plegadis chihi</i>
CIJV	White-headed-Woodpecker	<i>Dryobates albolarvatus</i>
CIJV	White-tailed-Ptarmigan	<i>Lagopus leucura</i>
CIJV	White-throated-Sparrow	<i>Zonotrichia albicollis</i>
CIJV	White-throated-Swift	<i>Aeronautes saxatalis</i>
CIJV	White-winged-Crossbill	<i>Loxia leucoptera</i>
CIJV	White-winged-Scoter	<i>Melanitta deglandi</i>
CIJV	Willow-Flycatcher	<i>Empidonax traillii</i>
CIJV	Willet	<i>Tringa semipalmata</i>
CIJV	Wilsons-Phalarope	<i>Phalaropus tricolor</i>
CIJV	Willow-Ptarmigan	<i>Lagopus lagopus</i>
CIJV	Williamsons-Sapsucker	<i>Sphyrapicus thyroideus</i>
CIJV	Wilsons-Snipe	<i>Gallinago delicata</i>
CIJV	Wild-Turkey	<i>Meleagris gallopavo</i>
CIJV	Winter-Wren	<i>Troglodytes hiemalis</i>
CIJV	Wilsons-Warbler	<i>Cardellina pusilla</i>
CIJV	Wood-Duck	<i>Aix sponsa</i>

CIJV	American-Coot	<i>Fulica americana</i>
CIJV	Iceland-Gull	<i>Larus glaucoides</i>
CIJV	Yellow-breasted-Chat	<i>Icteria virens</i>
CIJV	Yellow-bellied-Flycatcher	<i>Empidonax flaviventris</i>
CIJV	Yellow-billed-Loon	<i>Gavia adamsii</i>
CIJV	Yellow-bellied-Sapsucker	<i>Sphyrapicus varius</i>
CIJV	Yellow-headed-Blackbird	<i>Xanthocephalus xanthocephalus</i>
CIJV	Yellow-Warbler	<i>Setophaga petechia</i>
CIJV	Yellow-rumped-Warbler	<i>Setophaga coronata</i>
CIJV	Western-Flycatcher	<i>Empidonax difficilis</i>