NORTHERN REGION LANDBIRD MONITORING PROGRAM

POINT COUNT PROTOCOL - 2007

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OVERVIEW

In a nutshell, our point count protocol recommends the following:

- Strong random or stratified random sampling design (not discussed here).
- Points at least 250 meters apart
- Spatial location recorded for each point
- Each point repeated at least twice per season
- 10 minute point counts
- Range finders used and distance recorded for each bird detected

COORDINATED BIRD MONITORING

This protocol for standard point counts was developed as part of the Landbird Monitoring Program, initiated in 1994 by the Avian Science Center and the Northern Region of the US Forest Service. It is our "basic" protocol because it is applicable to the widest diversity of bird groups. This protocol is appropriate for most upland landbirds such as songbirds and woodpeckers

This protocol is one of several utilized by Montana's multi-partner Coordinated Bird Monitoring (CBM) program. The overarching goals for the CBM program are to document population trends of bird species and to understand effects of land management activities. Coordinated all-bird monitoring is intended as a feedback system that provides a scientific basis for adaptive management and conservation planning. Montana's CBM Plan (available at http://avianscience.dbs.umt.edu/research_coordinated.htm) is designed to improve the success of bird monitoring programs and make information available to all partners and decision-makers.

Landbirds are a good indicator species "survey group" because they are highly visible and many species can be surveyed simultaneously. The bird community in a landscape reflects an integration of a broad array of ecosystem conditions. The cumulative effects of alterations to these ecosystem conditions are difficult to predict in any other way than through integrators such as birds. Given this broad context for monitoring, birds can then be appreciated as a cost-effective monitoring tool for gathering information on the overall health of many ecosystems in Montana.

Coordination can provide the necessary network for all partners to learn what information is available, how it can be used to inform management, and what new data needs to be collected. The integration of existing monitoring efforts is one of the main motivating factors for developing Coordinated Bird Monitoring. The integration of ongoing work into widely accessible databases will allow partners to determine where resources can be most effectively allocated to obtain information that is lacking; which protocols are recommended for all projects; and how information from local efforts can be put to broader use than that intended by the scope of a smaller, local project.

CONDUCTING POINT COUNTS

The point count technique we use follows recommendations established by participants in a national point count workshop and generally follow Ralph et al. (1995), with some recent modifications. We understand that not every aspect of our protocol will be utilized, and we have tried to emphasize the most important aspects. Feel free to contact us with questions as to how to conduct or which aspects are most important to follow.

In general, a 10-minute point count is conducted at each of the sampling points that constitute a road- or trail-side transect or off-road survey site. Points are visited at least twice during the breeding season. All birds seen or heard within the count period are recorded. "Spishing" is not allowed during a count, but is an acceptable way to attract nearby birds *after* a count to get positive identifications (be sure you don't attract and record a bird that wasn't detected during the count!).

In a point count survey we record all birds that we detect and identify *by any means* during the 10-minute time period—songs, calls, or visual cues. It is important to get as complete a record as possible of the birds present on the site during that period. But we know we are not detecting all the birds that are actually present. We may even have seen or heard other birds before or after the 10-minute period. We do not record these because we need to get a consistent, quantitative *index of abundance* at each point that we can compare across sites and across years. New birds seen outside of the count period should be noted in the comments at the bottom of the page.

We recommend 10-minute rather than 5-minute counts for two reasons: 1) 5-min counts may simply be too hurried to ensure reliable and consistent data among observers (i.e., there is probably considerably greater inter-observer variation in 5-min than in 10-min counts); 2) data from 10-min counts are compatible with Avian Science Center data collected since 1994, and this allows for us to pool data or make comparisons among habitats, years and management scenarios.

SEASON—In the Northern Region, counts are conducted from the third week of May through the second week of July, depending on local bird phenology. Many grassland species are well into their breeding season in May and finish by late June. Highland species, on the other hand, start a little later, and the third week of May is usually the earliest date that counts should be conducted. Generally, family groups are moving and the breeding season is over by the second week of July.

START AND FINISH OF A TRANSECT—You should aim to begin your first point count of the day at 15 min after sunrise, usually sometime between 6:00 and 6:30, Mountain Standard Time (Montana), or 5:00 and 5:30 Pacific Standard Time (Idaho). Thus, counts begin after the pre-dawn chorus and continue throughout the period during which bird activity and song is relatively

constant. Point counts should be completed by ~10:00 Mountain time, or 9:00 Pacific time.

UNACCEPTABLE FIELD CONDITIONS—Refrain from bringing your dog or friends along; they may influence the results in a manner that cannot be adjusted later.

Do not collect data when the weather is bad enough to influence bird activity—that includes continuous rain (but not light drizzle) and wind that is constant and of enough strength to bend the tops of trees (Beaufort 5). Wind on the east slope of the Rockies and in the Little Missouri National Grasslands is constant enough that it may affect observations, but birds are generally still active. Therefore, proceed with counts when strong winds are the norm. Unacceptable conditions in these areas would include brewing storms, wind coupled with steady precipitation, etc.

Under all circumstances safety comes first. If weather (e.g., lightening, cold, rain, snow) or road conditions are placing you at risk, STOP. Take cover, get warm, pull over, or do whatever you need to do to get yourself to safety.

DATA FORMS— The formats for entering data in each section of the data form are presented in Tables 1-3 below. The data forms we use have the bird and habitat data for each point on facing pages. The full protocol requires that all variables be filled in on these field forms. Again, partners may talk with us about streamlining this if desirable. Blanks are interpreted as missing data, NOT as zeros. Likewise, a zero is NOT to be used to represent missing data. Field forms with missing information compromise the reliability of your data.

Top of form: At each point, observers record a number of variables before the point begins. It is imperative that this information be recorded on the data form for every point because multiple forms for one survey site can get mixed up, and we often need to organize and reference the hard copies when questions arise about specific data.

Table 1. Instructions for completing the top of the bird form.

VARIABLE	EXPLANATION
Site name/#	The site name or number for that day's survey (format varies depending on project)
OBSERVER	Use your full last name for the first point of the day and 3 initials thereafter
DATE	Use 2 columns for the month and 2 for the day on which the bird count was conducted; e.g., 0617 = June 17. (Do not use special date types in database.)
STOP	Stop (point) number, should always run from 1 to last point of that day
Visit	First or second visit (1 or 2)
TIME	Use the 4-digit military time-of-day the count is started at point; e.g., 0814.
WIND	Use the Beaufort wind scale codes (0-5) as defined in the Appendix.I
SKY	Use the codes (0-6) defined in Appendix I
TEMP °F	Use a thermometer to record air temperature in shade to nearest 2 degrees (Fahrenheit). Educated guesses are acceptable.
STREAM / NOISE	Use the codes (0-4) defined in the Appendix I for description of stream or other CONSTANT noise (and its probable effect on bird detectability). Intermittent noise is NOT considered here but should be noted in the comment section.

Recording bird detections: One row in the data booklet is used for each detection of a bird (or pair or group of birds at the same location; the number recorded under "Abundance"). Therefore, there can be more than one entry for a given species on a point count.

If you fail to finish a point count (some form of disturbance or weather forces you to quit), do NOT enter those data into the computer; rather, note the time spent at the point in the comments section at the bottom of the bird data page. Make it clear that the count was not completed, and draw a line through the page. If you conduct a legitimate 10-minute count and don't get any birds, that's fine; enter "NONE" under species and leave the rest blank.

If you detect interesting birds near the point outside of the 10-minute count period, add them at the bottom of the page in the comments section. Please, do not be tempted to "add" them to the actual point count!

It is important to check the accuracy of your data records after each point, BEFORE going to the next point. Make sure that all necessary boxes are filled in (NO BLANKS accept for the "cues" as discussed below), and that all of the codes are correct. People DO write the incorrect codes on occasion, e.g., they see a House Finch, but write HOSP by accident; or they consistently use a wrong code, such as MTCH instead of MOCH for Mountain Chickadee. It is easy to catch such errors when you review your entries immediately, but it's hard to remember what you saw a day or two (or even an hour) later.

Table 2. Instructions for recording bird detection data.

VARIABLE	EXPLANATION
SPECIES	Record the appropriate four-letter bird species code for a given detection. Flyovers should be included as well. A master list is included in Appendix II.
ABUN	Estimate the number of individuals detected at the associated distance and bearing. Should always be 1 or greater - **no blanks**.
SEX	Indicate sex: M, F, U = unknown (use for any abundance > 2, flock), P = pair.
DISTANCE	Estimate distance to the bird at which it was first detected - to the nearest 1 m inside 75 m, and to nearest 5 m beyond. **Flyovers** are also given a distance
D MOVED (closest dist.)	If a bird moves considerably closer during the count, write the **closest distance** in the space between DISTANCE and CUES (this is NOT the distance the bird moved). Optional.
CUES	Aural: S = Song, D = Drum, C = Call; if no auditory clue, leave blank. Visual: V = Visual sighting; if no auditory clue, leave blank.
LOCATION	Record whether the bird was detected within or outside the main vegetative "cover type" at the point. 0 = inside the main cover type; 1 = inside "Edge 1" habitat; 2 = inside "Edge 2" habitat; **9 = unknown; F = flyover**. Optional.
INTERVAL	1 = first 2.5 minutes, 2 = second 5 minutes, 3 = 3rd 2.5 minutes, 4 = 4th 2.5 minutes. Draw line to separate as watch beeps. Be sure to fill in #s after point count. Optional

Species: We use standard 4-letter bird codes from the national Bird Banding Lab (with a few exceptions). These are listed in Appendix II and shoul be used exactly as given. Some codes are very similar and an error can be serious. The codes are based on the first two letters of the first and

second parts of the common name of the bird species (or the first letter of each part of a hyphenated portion). If a 4-letter code is uncertain, write out the name and check the list after the point count is complete – otherwise you'll end up with a nonsense code, and you won't remember which bird species it was supposed to represent.

Record birds that you are reasonably sure of the identification (>95% sure). If you are not sure of the identity of a species, you can right it down to keep track of it, but put a question mark next to the line and BE SURE to cross out the line if there is no subsequent verification (we will not throw out a line that just has a question mark on it – we will assume you just forgot to erase the mark). You can correct a species' identification even a few days later if you learn what that song was (but only if you are SURE).

Sex: For many analytical techniques we want to split the data according to sex. Obviously, males are generally more detectable than females, and we can analyze the sexes separately. Sexing can usually be done only for visual detections. You can't assume it is male based on singing only, as females of some species can sing. Two birds moving together can be assumed to be a Pair if there are no antagonistic interactions. If abundance is greater than 2 (i.e., a flock) – use U for unknown. Obvious fledglings are not recorded on the point counts, but should be entered in comments if they are the only evidence for a particular species.

Distance and "D moved": Estimate the horizontal distance to every bird detection, as precisely as you can within 75 m, and to the nearest 5 m beyond. The distance to birds flying over should be estimated at their closest point, recognizing that this may often be a rough estimate. Once you record a bird, do NOT change the distance if they come closer – instead keep the distance first detected in the distance box and simply add the **closest distance** that the bird reached during the count in the space between Distance and Cues (under "D moved"). This distance moved is optional and need only be used when a bird was identified from far away and then moved in much closer (e.g., first recorded at ~120 m and then moved in to 30 m.). Don't use this for short moves

Distance estimation is very difficult and requires a great deal of practice. First we have to be able to estimate distance well to a visual landmark and that in itself takes a lot of practice. It also takes an accurate pacing ability in varying topography (or use of a laser rangefinder). Then comes the hard part: estimating how far away a SOUND is. We may do it directly, by how loud it sounds, or we may look to see where it sounds like it is coming from and then visually estimate the distance to the physical location (vegetation) from where we think the sound came. It is not clear which is best because we could be easily fooled either way. It helps to walk out and find a singing bird after you have estimated the distance. But remember that the next bird of that species you hear that loud may NOT be at the same distance. We really need to track down enough individuals to have a feel for the fact that loudness can vary depending on species, vegetation, topography, what direction the bird is facing, and perhaps even enthusiasm! A laser rangefinder is very useful here, and we strongly recommend them.

When estimate distances, please do NOT assume that we will be cutting off the data at any particular point. At the ASC, all bird records are used regardless of distance. New analytical techniques allow us to use this distance information differently for different species.

Cues: The consistency of our "index of relative abundance" depends on the many things that affect

the *detection probability* of the birds. Detection probability is affected by such things as the behavior of the bird, the density of the vegetation, and the attentiveness of the observer. These variables have different effects on the different cues we use to detect and identify birds. For example, the ability to detect a bird by sight is more strongly influenced by vegetation then is sound detection. When we analyze the bird data from our monitoring program, it is very helpful if we know which birds were detected by songs and which by sight.

We want to know the cues that were used to detect *and identify* each bird. If you hear the primary "song" of a passerine "songbird," use "S". If you hear a woodpecker or grouse "drum", snipe "winnow", or nighthawk "boom," (any non-vocal sound that you use for identification), write "D." If you did not hear one of these but instead heard **and identified** the bird by some type of "call," write "C." This includes all vocal sounds of birds that do not have a recognizable "song" (e.g., swallows, corvids, nuthatches, and non-passerines), or calls of passerines other than the primary song (e.g., WETA "piterik", TOSO call note, warbler chip, etc.).

Location: Collecting these data are optional, and the extent to which partners record these will vary depending on the program. Record location of bird relative to the vegetation around the point. 0 = inside main cover type; 1 = inside "Edge 1" habitat; 2 = inside "Edge 2" habitat; 9 = unknown. F = flyover. This is primarily important when the habitats are very different. For example, you are on the edge of a mature forest and clearcut. Simply indicate on your circle that the Forest is the main (=0) and the clearcut is edge 1 (=1). Or if a stream runs through your forest, indicate the forest as 0 and the stream as 1. If you are familiar with our vegetation categorization scheme, feel free to use these (see below).

Intervals: We may analyze these data using statistics based on the interval during which bird was first detected during the count. We use 4 equal intervals during each 10-min survey. Set your watch to beep every 2.5 minutes, and mark each transition point on your data sheet before you continue recording new (and only new) bird observations. Make sure it is clear which records are within each interval (some intervals may not have any records). Remember that the entire 10-min count is cumulative – do not repeat birds in later intervals. Be sure you do not accidentally stop before 10 minutes (or continue on after 10 minutes).

The use of intervals is optional. A simpler option is to divide the count into 2 intervals of 5 minutes each, allowing comparisons to 5 min counts from other programs.

Incidentals / Comments: The comment section at the bottom of each page is very valuable. Write down anything unusual that happened during the count (e.g. intermittent noise or odd weather event), or anything for which you had any question about how to fill out the data form. Please write out bird names for any species that are at all unusual (e.g. MOPL = Mountain Plover – so we know you didn't really mean MOBL).

We are especially interested in any birds detected before or after the point, or while traveling between points, that are different from the birds you have picked up during the count. Note time seen and the closest point (and ~ distance from point if you can, especially if > 100 m). This is especially important for uncommon species, birds of prey, wetland birds, etc., but you can write down anything that you have not seen yet. This allows for an accurate species list for the site.

GPS DATA

Accurate point locations are essential. Ideally, a Geographic Positioning System (GPS) unit should be used with a consistent format and datum/projection for all points. **We record GPS information in latitude/longitude decimal degrees (e.g., 47.26896 -114.58936) in the WGS 84 datum.** Consistent use of this same format and datum will greatly help us in GIS mapping and analysis and for locating points in future years. Record the Latitude and Longitude on the right side of the data sheet.

Some projects work in a UTM system. If you use UTMs, it is essential to check your GPS unit to see what projection it is set to and record this before you start.

If you are visiting many points, you can store the waypoints on the GPS unit and talk with us about downloading the data electronically to aid with data entry (and reduce entry errors). Because units can break or get lost, it is still important to write the locations on the data form.

HABITAT VARIABLES

We generally record measures of vegetation structure and composition at all of our survey points. The specific set of variables used depends on the project and can be quite detailed. However, partners are requested to record some basic habitat descriptions. Important things to include in a description of the dominant tree or shrub species, estimated canopy cover, height of vegetation layers, and types of apparent disturbance.

The Landbird Monitoring Program has developed a comprehensive scheme of cover type descriptions and codes that can be also obtained here from our web site. The basic cover type framework is one that includes vegetation types dominated by one or more plant species. Open lands are usually dominated by grasses or sagebrush (*Artemisia*). Several riparian cover types are used, including marshes, shrubby streamside areas, willow flats, aspen stands or cottonwood bottomlands. Because conifer forest stands frequently undergo natural or human-induced disturbance that creates structurally different cover types, we define our conifer cover types based on three different criteria: tree species composition, successional stage, and, for the earlier stages, structure following disturbance (amount of canopy remaining).

Use these categories if you can, or it may at least give you the idea of what information we are looking for. Specify the cover type within which the count point is positioned. Also, because we usually analyze bird-habitat relationships based on the birds detected within 100 m of the point, we record all cover types within a 100-m-radius circle.

Data Entry

Ideally data would be transposed from field record sheets to the computer on a daily basis, so that the data can be viewed while one's memory of the day's events is fresh. Reality for most of us is that data are generally entered on rain days or at season end. Therefore, it is essential that data forms are COMPLETE AND NEAT at days end. Generally, the bird data are entered into a separate file from the vegetation data.

Data are entered in a standard spreadsheet format. We can provide you with Excel files that have the variables already established. Please do not change the formatting of these variables. The first

line in this file contains the variable names and the second is an example of just how your data should look. Before sending your data, delete the second sample line.

Literature Cited

Ralph, C. J., J. R. Sauer, and S. Droege, technical editors. 1995. Monitoring bird populations by point counts. Gen. Tech. Rep. PSW-GTR-149. Albany, CA, 187 pp.

APPENDIX I. Data codes for WIND, SKY, STREAM/NOISE, SEX, CUES, and INTERVALS

WIND CODES (Beaufort Wind Scale):
0 -- < 1 mph; smoke rises vertically
1 -- 1-3 mph; wind direction shown by smoke drift
2 -- 4-7 mph; wind felt on face; leaves rustle at times
3 -- 8-12 mph; leaves and small twigs in constant motion; light flag extended
4 -- 13-18 mph; raises dust and loose paper; small branches in motion
5 -- 19-24 mph; small trees sway; crested wavelets on inland waters

SKY CODES (Sky Condition):
0 -- clear, or very few clouds
1 -- partly cloudy (roughly half-clouded)
2 -- mostly cloudy (overcast; few sky openings)
3 -- fog or smoke (impairs visibility beyond 30 m)
4 -- light drizzle
5 -- constant snow
6 -- constant rain

STREAM / NOISE CODES (FOR CONSTANT NOISE, NOT INTERMITTENT):
0 -- no stream/ noise heard
1 -- stream heard, but not affecting bird detection
2 -- moderate stream noise may be affecting detection
3 -- loud stream noise reducing ability to hear birds
4 -- very loud stream; difficult to hear anything at all

SEX
M = male
F = female
P = pair
U = unknown or flock

CUES - how was the bird identified –
Aural:
S -- identified by song
C -- identified by call
D -- identified by drum
If none – leave blank

Visual:
V-- identified by sight
If none – leave blank

LOCATION:
0 – main cover type, 1 or 2 = edge 1 or edge 2; 9 = unknown (try to reserve for when too far away); F = flyover

INTERVAL
1 = first 2.5 minutes; 2 = second 2.5 minutes; 3 = third 2.5 minutes; 4 = fourth 2.5 minutes

APPENDIX II. Four-letter mnemonic bird codes - Use these 4-letter codes on all data forms. Shaded codes are non-standard or counter-intuitive.

American Avocet	AMAV
American Bittern	AMBI
American Coot	AMCO
American Crow	AMCR
American Dipper	AMDI
American Goldfinch	AMGO
American Kestrel	AMKE
American Pipit	AMPI
American Redstart	AMRE
American Robin	AMRO
American White Pelican	AWPE
American Wigeon	AMWI
Baird's Sparrow	BAIS
Bald Eagle	BAEA
Baltimore Oriole	BAOR
Bank Swallow	BANS
Barn Swallow	BARS
Barred Owl	BAOW
Barrow's Goldeneye	BAGO
Belted Kingfisher	BEKI
Black-and-white Warbler	BAWW
Black-backed Woodpecker	BBWO
Black-billed Cuckoo	BBCU
Black-billed Magpie	BBMA
Black-capped Chickadee	BCCH
Black-chinned Hummingbird	BCHU
Black-crowned Night-Heron	BCNH
Black-headed Grosbeak	BHGR
Black-necked Stilt	BNST
Black Rosy-Finch	BLRF
Black Swift	BLSW
Black Tern	BLTE
Blue-gray Gnatcatcher	BGGN
Blue-winged Teal	BWTE
Blue Grouse	BLGR
Blue Jay	BLJA
Bobolink	BOBO
Boreal Chickadee	BOCH
Boreal Owl	BOOW
Brewer's Blackbird	BRBL
Brewer's Sparrow	BRSP
Brown-headed Cowbird	BHCO
Brown Creeper	BRCR
Brown Thrasher	BRTH
Bufflehead	BUFF
Bullock's Oriole	BUOR
Burrowing Owl	BUOW
California Gull	CAGU
Calliope Hummingbird	CAHU
Canada Goose	CAGO
Canvasback	CANV
Canyon Wren	CANW
Caspian Tern	CATE
Cassin's Finch	CAFI
Cassin's Kingbird	CAKI
Cassin's Vireo	CAVI

Cedar Waxwing	CEWA
Chestnut-backed Chickadee	CBCH
Chestnut-collared Longspur	CCLO
Chimney Swift	CHSW
Chipping Sparrow	CHSP
Chukar	CHUK
Cinnamon Teal	CITE
Clark's Grebe	CLGR
Clark's Nutcracker	CLNU
Clay-colored Sparrow	CCSP
Cliff Swallow	CLSW
Common Goldeneye	COGO
Common Grackle	COGR
Common Loon	COLO
Common Merganser	COME
Common Nighthawk	CONI
Common Poorwill	COPO
Common Raven	CORA
Common Snipe (now Wilson's)	WISN
Common Tern	COTE
Common Yellowthroat	COYE
Cooper's Hawk	COHA
Cordilleran Flycatcher	COFL
Dark-eyed Junco	DEJU
Double-crested Cormorant	DCCO
Downy Woodpecker	DOWO
Dusky Flycatcher	DUFL
Eared Grebe	EAGR
Eastern Bluebird	EABL
Eastern Kingbird	EAKI
European Starling	EUST
Evening Grosbeak	EVGR
Ferruginous Hawk	FEHA
Field Sparrow	FISP
Flammulated Owl	FLOW
Forster's Tern	FOTE
Fox Sparrow	FOSP
Franklin's Gull	FRGU
Gadwall	GADW
Golden-crowned Kinglet	GCKI
Golden Eagle	GOEA
Grasshopper Sparrow	GRSP
Gray-crowned Rosy-Finch	GCRF
Gray Catbird	GRCA
Gray Jay	GRJA
Gray Partridge	GRPA
Great Blue Heron	GBHE
Great Gray Owl	GGOW
Great Horned Owl	GHOW
Greater Sage-Grouse	SAGR
Green-tailed Towhee	GTTO
Green-winged Teal	GWTE
Hairy Woodpecker	HAWO
Hammond's Flycatcher	HAFL
Harlequin Duck	HARD
Hermit Thrush	HETH

Hooded Merganser	HOME
Horned Grebe	HOGR
Horned Lark	HOLA
House Finch	HOFI
House Sparrow	HOSP
House Wren	HOWR
Indigo Bunting	INBU
Killdeer	KILL
Lark Bunting	LARB
Lark Sparrow	LASP
Lazuli Bunting	LAZB
Least Flycatcher	LEFL
Lesser Scaup	LESC
Lewis's Woodpecker	LEWO
Lincoln's Sparrow	LISP
Loggerhead Shrike	LOSH
Long-billed Curlew	LBCU
Long-eared Owl	LEOW
MacGillivray's Warbler	MGWA
Mallard	MALL
Marbled Godwit	MAGO
Marsh Wren	MAWR
McCown's Longspur	MCLO
Merlin	MERL
Mountain Bluebird	MOBL
Mountain Chickadee	MOCH
Mountain Plover	MOPL
Mountain Quail	MOQU
Nashville Warbler	NAWA
Northern Flicker	NOFL
Northern Goshawk	NOGO
Northern Harrier	NOHA
Northern Pintail	NOPI
Northern Pygmy-Owl	NOPO
Northern Rough-winged Swallow	NRWS
Northern Saw-whet Owl	NSWO
Northern Shoveler	NSHO
Northern Waterthrush	NOWA
Olive-sided Flycatcher	OSFL
Orange-crowned Warbler	OCWA
Osprey	OSPR
Ovenbird	OVEN
Peregrine Falcon	PEFA
Pied-billed Grebe	PBGR
Pileated Woodpecker	PIWO
Pine Grosbeak	PIGR
Pine Siskin	PISI
Pinyon Jay	PIJA
Plumbeous Vireo	PLVI
Prairie Falcon	PRFA
Pygmy Nuthatch	PYNU
Red-breasted Nuthatch	RBNU
Red-eyed Vireo	REVI
Red-headed Woodpecker	RHWO
Red-naped Sapsucker	RNSA
Red-necked Grebe	RNGR
Red-tailed Hawk	RTHA
Red-winged Blackbird	RWBL
Red Crossbill	RECR
Redhead	REDH
Ring-billed Gull	RBGU
Ring-necked Duck	RNDU
Ring-necked Pheasant	RPHE
Rock Dove	RODO
Rock Wren	ROWR

Ruby-crowned Kinglet	RCKI
Ruddy Duck	RUDU
Ruffed Grouse	RUGR
Rufous Hummingbird	RUHU
Sage-Grouse (Greater)	SAGR
Sage Thrasher	SATH
Sandhill Crane	SACR
Savannah Sparrow	SAVS
Say's Phoebe	SAPH
Sharp-shinned Hawk	SSHA
Sharp-tailed Grouse	STGR
Short-eared Owl	SEOW
Solitary Vireo	SOVI
Song Sparrow	SOSP
Sora	SORA
Spotted Sandpiper	SPSA
Spotted Towhee	SPTO
Sprague's Pipit	SPPI
Spruce Grouse	SPGR
Steller's Jay	STJA
Swainson's Hawk	SWHA
Swainson's Thrush	SWTH
Tennessee Warbler	TEWA
Three-toed Woodpecker	TTWO
Townsend's Solitaire	TOSO
Townsend's Warbler	TOWA
Tree Swallow	TRES
Trumpeter Swan	TRUS
Turkey Vulture	TUVU
Upland Sandpiper	UPSA
Varied Thrush	VATH
Vaux's Swift	VASW
Veery	VEER
Vesper Sparrow	VESP
Violet-green Swallow	VGSW
Virginia Rail	VIRA
Warbling Vireo	WAVI
Western Bluebird	WEBL
Western Grebe	WEGR
Western Kingbird	WEKI
Western Meadowlark	WEME
Western Screech-Owl	WESO
Western Tanager	WETA
Western Wood-Pewee	WEWP
White-breasted Nuthatch	WBNU
White-crowned Sparrow	WCSP
White-faced Ibis	WFIB
White-headed Woodpecker	WHWO
White-tailed Ptarmigan	WTPT
White-throated Swift	WTSW
White-winged Crossbill	WWCR
Wild Turkey	WITU
Willet	WILL
Williamson's Sapsucker	WISA
Willow Flycatcher	WIFL
Wilson's Phalarope	WIPH
Wilson's Snipe	WISN
Wilson's Warbler	WIWA
Winter Wren	WIWR
Wood Duck	WODU
Yellow-breasted Chat	YBCH
Yellow-headed Blackbird	YHBL
Yellow-rumped Warbler	YRWA
Yellow Warbler	YWAR