

Bear Creek Atlas Progress Report – 2009

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Background and Methods

The purpose of the Bear Creek Watershed Breeding Bird Atlas (hereafter Bear Creek Atlas) is to provide information on bird distribution, abundance, breeding status, and habitat use on public lands within the Bear Creek Watershed. Information from these surveys will be provided to the appropriate federal, state, county, and local agencies that manage these public lands. Data collected in this project will also help inform conservation decisions considered by Evergreen Audubon and will be used for educational purposes in the Evergreen Nature Center.

Based on Evergreen Audubon's membership and area of interest, the Bear Creek Watershed was designated as an appropriate area to survey breeding birds. Within the watershed, there are more than 58,000 acres of public lands that are managed by Jefferson County Open Space, Denver Mountain Parks, the City of Lakewood, the Colorado Division of Wildlife, and the USDA Forest Service. We have targeted about 30,500 acres of relatively natural lands for breeding bird surveys and began the initial set of surveys in 2008.

The core survey period was generally defined as 1 May – 15 July; for elevations above 10,000 feet, the period was adjusted to 16 May – 31 July. An effort objective was set to have observers spend 10–15 hours at each site and to spread visits out across the survey period. Observers were also encouraged to visit sites prior to the core survey period to confirm breeding of early nesting species, such as owls, and after the core period to confirm any species they suspected were breeding on the site. At each site during each visit, the following data were recorded: observers, amount of effort (party-hours), bird species, count of all adult individuals of each species, evidence of breeding, and habitat where species were encountered. The area covered during the visit was also delineated on a map of the site. Bird behavior used to determine breeding status is presented in Table 1. Detailed field methods are provided in the Leader and Participant Manual, which is available at www.bcwbba.org. The website also provides data entry capability, data forms for use in the field, description and maps of survey sites, and real-time reporting of survey progress.

Results

Thirty-three participants made 69 trips to the 11 sites we designated to be surveyed in 2009. Observers spent a total of 215.8 hours, of which most were within the core survey period identified above. The effort goal of 10–15 hours was met at all individual sites.

A total of 117 species were recorded during all surveys in 2009, of which 104 species were suspected of breeding in the Bear Creek Watershed (possible, probable, or confirmed breeding status). In both years of the study, we recorded a total of 147 species; 122 were suspected of

breeding. As expected, sites in the Foothills and Plains were much richer (93 species suspected of breeding) than sites in the Montane, Subalpine, and Alpine elevation zones (Table 2).

Counts of adults during the core survey period were used to construct a categorical description of abundance for individual sites and sites combined within elevation zones (Table 3). Breeding status and abundance are presented for sites combined within elevation zones (Table 4) and for individual sites (Table 5).

Participants

Thanks to all the participating observers who made this project successful, site leaders are bolded: **Brad Andres**, Dave Balogh, **Inga Brennan**, **Karel Buckley**, **Debra Callahan**, Carol Chapman, **Fran Enright**, Ellen Fitzpatrick, **Mike Foster**, Carolyn Fraker, Mary Beth Fuss, **Barbara Jean Gard**, **Susan Harper**, Mike Henwood, Bobby Holmes, Tory Hurst, Melissa Irwin, Heather Johnson, **Kathanne Lynch**, Margaret McDole, Meredith McGaffic, Betty Minges, Chris Pfaff, Dick Prickett, Bob Santangelo, Daria Shaffer, Marilyn Stechert, Tim Stechert, Jane Stewart, Jeanette Storm, Else Van Erp, **Larry White**, and Sherman Wing. Thanks to Ann Johnson for website development and support. Funding for website support came from a grant from the National Audubon and Toyota's TogetherGreen program.

Table 1. Codes and behavior descriptions for levels of breeding evidence for birds encountered during the Bear Creek Watershed Breeding Bird Atlas, Colorado, in 2008 – 2009.

General Level of Evidence	
code	breeding behavior description
<i>Observed (OBS)</i>	
O	Migrants, species beyond normal breeding range, or in unlikely breeding habitat, species flying over, or those that exhibit no breeding behaviors
<i>Possible Breeders (POS)</i>	
H	Species found or breeding calls heard
X	Singing male; less than 7 different males
<i>Probable Breeders (PRB)</i>	
M	Multiple males: 7 different singing males heard in one day; this code is meant for song birds (passerines); don't use it for birds that don't sing to proclaim territory (ducks, geese, pheasants, grouse, quail, grebes, pelicans, raptors, shorebirds, gulls, terns, swifts, hummingbirds, kingfishers, woodpeckers)
P	Pair: male and female observed in behavior suggesting a pair, not just a male and a female present together (except grouse)
T	Territorial behavior: defense of a territory, chasing other birds, or singing in same location on occasions at least a week apart; singing male(s) responding directly to other singing male(s)
C	Courtship behavior: displaying, exchanging food, copulating; be aware that ducks court while migrating
A	Agitated behavior or anxiety calls of adult, indicating nest site or young in vicinity. Don't include if the behavior resulted from your "pishing" or playing recorded calls.
V	Visiting a probable nest site frequently, but showing no confirmed nesting behaviors
N	Nest building, by Bald Eagles; House and Marsh Wrens may build "dummy" nests; woodpeckers dig cavities and nests, so use this code for all of them, but not NB below
<i>Confirmed Breeders (CON)</i>	
NB	Nest building: use for Canyon and Rock Wrens, which do not build dummy nests; and for all other species carrying nesting material to a suitable location
DD	Distraction display, or pretending an injury, and leading you or predators away from a possible nest site
ON	Occupied nest: bird sitting on nest, or flying in and out of a likely nest site that you cannot see into
NE	Nest with eggs: you see eggs in a nest (otherwise ON); for cowbirds, count them and the host species if you find eggs
CF	Carrying food to a suitable nesting site: you do not see the nestlings or fledglings. Caution: raptors, corvids, shrikes, jays, chickadees and nuthatches may carry food some distance before eating or caching
NY	Nest with young: you do see the nestling in the nest, or hear the nestling begging even if you can't locate the nest
FF	Feeding fledgling: you see an adult feeding a recently fledged bird (one not yet capable of sustained flight)
FL	Fledged recently: you see a young bird incapable of sustained flight (be sure it is not a juvenile that may have flown in from a distant location)
FS	Adult carrying away a fecal sac; they don't usually fly very far, so this behavior can help locate a nest
UN	Used nest, or egg shells (if you can reliably link the nest or eggs to a species)

Table 2. Effort and number of species recorded at Bear Creek Watershed Breeding Bird Atlas sites, Colorado, in 2009. Suspected breeding includes possible, probable, or confirmed breeding status.

<i>Elevation zone/Site</i>	Total trips	Total hours	Total species	No. species suspected of breeding
<i>Plains and Foothills</i>	16	54.5	81	
Hayden Green Mountain Park	7	15.0	41	39
Red Rocks Park	9	39.5	75	69
<i>Montane</i>	34	115.8	77	
Bell Park	11	51.5	39	36
Cub Creek Park	8	19.5	44	43
Flying J Ranch	9	33.8	64	61
Genesee Park	6	13.0	55	53
<i>Subalpine</i>	19	42.5	53	
Beartrack Lakes Trail	3	10.0	40	38
Mount Goliath ¹	6	13.5	16	15
Mount Judge/Snyder Mountain	10	19.0	33	33
<i>All sites</i>	69	215.8		

¹ Included some alpine habitat.

Table 3. Categories and descriptions of abundance used in the Bear Creek Watershed Breeding Bird Atlas, Colorado, in 2008 – 2009.

Descriptive abundance category	Number of birds per hour
Rare	<0.125
Uncommon	0.125 – 0.500
Fairly Common	0.510 – 1.250
Common	>1.260

Table 4. Breeding evidence (OBS = observed, POS = possible, PRB = probable, CON = confirmed) and abundance (RA = rare, UN = uncommon, FC = fairly common, CO = common) of bird species found at sites within elevation zones of the Bear Creek Watershed in 2008 and 2009. See Tables 1 and 4 for definitions of breeding evidence and abundance. Bolded entries indicate species that were reported breeding within that elevation zone.

	Plains/Foothills (n = 8 sites)		Montane (n = 6 sites)		Subalpine (n = 5 sites)		Alpine (n = 2 sites)	
	breeding evidence	abund.	Breeding evidence	abund.	Breeding evidence	abund.	Breeding evidence	abund.
Canada Goose	CON	UN						
Wood Duck	CON	RA					OBS	
Gadwall	POS	RA						
Mallard	CON	UN	PRB	UN	CON	RA		
Blue-winged Teal	POS	RA						
Northern Shoveler	OBS							
Green-winged Teal	POS	RA			CON	UN		
Ring-necked Duck	OBS							
Lesser Scaup	OBS							
Bufflehead	OBS							
Ruddy Duck	OBS							
Dusky Grouse					POS	RA		
Pied-billed Grebe	OBS							
Eared Grebe	OBS							
American White Pelican	OBS							
Double-crested Cormorant	OBS		OBS					
Great Blue Heron	POS	UN	POS	RA	POS	RA		
Turkey Vulture	POS	UN	OBS					
Osprey	OBS							
Northern Harrier	OBS							
Sharp-shinned Hawk	OBS		POS	RA	POS	RA		
Cooper's Hawk	CON	RA	POS	RA				
Swainson's Hawk	CON	RA						
Red-tailed Hawk	CON	UN	PRB	UN	POS	RA		
Golden Eagle	PRB	RA	OBS		OBS			
American Kestrel	CON	UN	CON	RA				
Peregrine Falcon	CON	RA						
Prairie Falcon	POS	RA						
American Coot	POS	RA						
Killdeer	POS	RA						
Black-necked Stilt	OBS							
Spotted Sandpiper	POS	RA	POS	RA	CON	RA		
Wilson's Snipe			POS	RA	PRB	UN		
Ring-billed Gull	OBS							

	Plains/Foothills (n = 8 sites)		Montane (n = 6 sites)		Subalpine (n = 5 sites)		Alpine (n = 2 sites)	
	breeding evidence	abund.	Breeding evidence	abund.	Breeding evidence	abund.	Breeding evidence	abund.
Rock Pigeon	CON	FC						
Band-tailed Pigeon			POS	RA	POS	RA		
Mourning Dove	CON	FC	POS	UN	POS	RA		
Great Horned Owl	CON	RA	CON	RA				
White-throated Swift	CON	FC			PRB	RA		
Black-chinned Hummingbird	POS	RA	PRB	RA				
Broad-tailed Hummingbird	CON	CO	CON	CO	PRB	CO		
Rufous Hummingbird	OBS		OBS		OBS			
Belted Kingfisher	PRB	RA	POS	RA				
Williamson's Sapsucker			CON	RA	CON	RA		
Red-naped Sapsucker			PRB	RA	PRB	RA		
Downy Woodpecker	CON	RA	CON	RA	CON	RA		
Hairy Woodpecker	POS	RA	CON	UN	CON	UN		
Am. Three-toed Woodpecker			POS	RA	CON	UN		
Northern Flicker	CON	UN	CON	FC	CON	UN		
Olive-sided Flycatcher	OBS		CON	RA	CON	RA		
Western Wood-Pewee	CON	UN	PRB	FC	PRB	UN		
Hammond's Flycatcher			PRB	RA				
Gray Flycatcher	OBS							
Dusky Flycatcher	PRB	RA			POS	RA		
Cordilleran Flycatcher	CON	UN	PRB	UN	POS	UN		
Say's Phoebe	CON	RA	CON	RA				
Western Kingbird	CON	FC						
Eastern Kingbird	POS	RA						
Northern Shrike	OBS							
Loggerhead Shrike	OBS							
Plumbeous Vireo	POS	RA	POS	RA				
Warbling Vireo	CON	UN	CON	UN	CON	UN		
Gray Jay			CON	RA	CON	UN		
Steller's Jay	PRB	RA	CON	FC	PRB	FC		
Blue Jay	OBS							
Western Scrub-Jay	CON	FC						
Clark's Nutcracker			OBS		POS	UN		
Black-billed Magpie	CON	FC	CON	UN	PRB	RA		
American Crow	CON	UN	CON	FC	PRB	UN		
Common Raven	CON	UN	CON	UN	PRB	UN	PRB	UN
Horned Lark							OBS	
Tree Swallow	CON	FC	CON	UN	OBS			

	Plains/Foothills (n = 8 sites)		Montane (n = 6 sites)		Subalpine (n = 5 sites)		Alpine (n = 2 sites)	
	breeding evidence	abund.	Breeding evidence	abund.	Breeding evidence	abund.	Breeding evidence	abund.
Violet-green Swallow	CON	CO	CON	FC	POS	UN		
N. Rough-winged Swallow	CON	UN	PRB	RA				
Bank Swallow			PRB	RA				
Cliff Swallow	PRB	UN	POS	RA				
Barn Swallow	PRB	UN	POS	RA				
Black-capped Chickadee	CON	UN	POS	R	POS	RA		
Mountain Chickadee	PRB	RA	CON	CO	CON	CO		
Bushtit	POS	RA						
Red-breasted Nuthatch	PRB	RA	PRB	UN	CON	FC		
White-breasted Nuthatch	CON	RA	CON	FC	POS	UN		
Pygmy Nuthatch	POS	RA	CON	CO				
Brown Creeper			PRB	UN	CON	FC		
Rock Wren	POS	UN			CON	RA	PRB	RA
Canyon Wren	CON	UN						
House Wren	CON	CO	CON	FC	CON	FC		
American Dipper	CON	RA						
Golden-crowned Kinglet			PRB	RA	PRB	RA		
Ruby-crowned Kinglet	OBS		PRB	FC	PRB	CO		
Blue-gray Gnatcatcher	CON	CO						
Western Bluebird	POS	RA	CON	FC				
Mountain Bluebird	CON	RA	CON	FC	CON	UN	CON	UN
Townsend's Solitaire	OBS		PRB	UN	CON	UN		
Hermit Thrush	OBS		POS	UN	PRB	CO		
American Robin	CON	CO	CON	CO	CON	CO		
Gray Catbird	CON	UN						
Northern Mockingbird	POS	RA	CON	RA				
European Starling	CON	FC	POS	RA				
American Pipit					OBS		CON	CO
Cedar Waxwing	CON	UN						
Orange-crowned Warbler	OBS							
Virginia's Warbler	OBS		OBS					
Yellow Warbler	CON	CO	POS	RA				
Yellow-rumped Warbler	CON	FC	CON	FC	PRB	CO		
Ovenbird	OBS							
American Redstart	POS	RA						
Northern Waterthrush	OBS							
MacGillivray's Warbler	CON	RA	PRB	RA				
Common Yellowthroat	POS	RA						

	Plains/Foothills (n = 8 sites)		Montane (n = 6 sites)		Subalpine (n = 5 sites)		Alpine (n = 2 sites)	
	breeding evidence	abund.	Breeding evidence	abund.	Breeding evidence	abund.	Breeding evidence	abund.
Wilson's Warbler	POS	RA	PRB	RA	CON	FC		
Yellow-breasted Chat	PRB	FC						
Western Tanager	CON	UN	CON	FC	PRB	UN		
Green-tailed Towhee	POS	RA	POS	RA	POS	RA		
Spotted Towhee	CON	CO						
American Tree Sparrow	OBS							
Chipping Sparrow	PRB	FC	CON	CO	POS	UN		
Brewer's Sparrow	OBS		OBS					
Vesper Sparrow	PRB	UN	CON	FC				
Lark Sparrow	POS	RA	OBS					
Lark Bunting	OBS							
Savannah Sparrow	POS	RA	CON	UN				
Fox Sparrow					PRB	RA		
Song Sparrow	CON	FC	PRB	UN	PRB	UN		
Lincoln's Sparrow			CON	RA	CON	CO		
White-crowned Sparrow	OBS		OBS		CON	FC	CON	FC
Dark-eyed Junco	OBS		CON	CO	CON	CO		
Rose-breasted Grosbeak	OBS							
Black-headed Grosbeak	CON	FC	CON	UN	POS	RA		
Lazuli Bunting	CON	RA						
Indigo Bunting	PRB	RA						
Red-winged Blackbird	CON	UN	PRB	UN				
Western Meadowlark	CON	FC	PRB	RA				
Brewer's Blackbird	CON	UN	CON	UN				
Common Grackle	PRB	UN						
Brown-headed Cowbird	PRB	FC	PRB	FC	POS	RA		
Bullock's Oriole	CON	FC						
Brown-capped Rosy-Finch							CON	UN
Pine Grosbeak					POS	RA		
Cassin's Finch			CON	UN	CON	RA		
House Finch	CON	FC	CON	FC	POS	RA		
Red Crossbill			CON	UN	POS	CO		
Evening Grosbeak	OBS							
Pine Siskin	POS	RA	CON	CO	CON	CO		
Lesser Goldfinch	CON	FC	PRB	UN				
American Goldfinch	CON	UN	POS	RA				
House Sparrow	CON	RA	POS	RA				

Table 5. Breeding evidence (OBS = observed, POS = possible, PRB = probable, CON = confirmed) and abundance (RA = rare, UN = uncommon, FC = fairly common, CO = common) of bird species found at sites within the Plains and Foothills (first two parks) and Montane (last four parks) elevation zones of the Bear Creek Watershed in 2009. See Tables 1 and 4 for definitions of breeding evidence and abundance.

Site:	Hayden Green Mountain Park		Red Rocks Park		Bell Park		Cub Creek Park		Flying J Park		Genesee Park	
	breeding evidence	abund.	breeding evidence	abund.	breeding evidence	abund.	breeding evidence	abund.	breeding evidence	abund.	breeding evidence	abund.
Canada Goose			OBS						PRB	UN		
Mallard					PRB	RA	PRB	FC	PRB	UN		
Double-crested Cormorant			OBS						OBS			
Great Blue Heron			OBS					OBS	POS	RA		
Turkey Vulture	POS	RA	OBS		OBS				OBS		OBS	
Sharp-shinned Hawk									POS	RA		
Cooper's Hawk			POS	RA	OBS			POS				
Red-tailed Hawk	POS	UN	POS	UN				POS	POS	RA	POS	FC
Golden Eagle			OBS									
American Kestrel	POS	UN	CON	FC								
Peregrine Falcon			CON	UN								
Prairie Falcon			POS	RA								
Spotted Sandpiper									POS	UN		
Wilson's Snipe									POS	RA		
Rock Pigeon	POS	UN	PRB	FC								
Band-tailed Pigeon												
Mourning Dove	CON	CO	PRB	FC	PRB	UN	POS	UN	POS	UN	POS	UN
Great Horned Owl			CON	RA								
Northern Saw-Whet Owl					POS	RA						
White-throated Swift			CON	CO								
Black-chinned Hummingbird			POS	RA			PRB	FC				
Broad-tailed Hummingbird	POS	UN	PRB	FC	PRB	CO	PRB	FC	CON	CO	PRB	CO
Rufous Hummingbird											OBS	
Belted Kingfisher							POS	RA				
Williamson's Sapsucker							PRB	UN	CON	UN	CON	FC
Red-naped Sapsucker									POS	RA		

Site:	Hayden Green Mountain Park		Red Rocks Park		Bell Park		Cub Creek Park		Flying J Park		Genesee Park	
	breeding evidence	abund.	breeding evidence	abund.	breeding evidence	abund.	breeding evidence	abund.	breeding evidence	abund.	breeding evidence	abund.
Downy Woodpecker			PRB	RA					CON	UN	POS	UN
Hairy Woodpecker			OBS		POS	RA	POS	RA	CON	UN	CON	FC
Am. Three-toed Woodpecker									POS	RA		
Northern Flicker	POS	FC	POS	UN	CON	UN	POS	UN	POS	UN	CON	CO
Olive-sided Flycatcher					POS	RA	POS	UN	POS	RA	POS	RA
Western Wood-Pewee	PRB	CO	PRB	UN	POS	RA	POS	RA	PRB	CO	PRB	CO
Hammond's Flycatcher					POS	RA	PRB	UN	POS	RA	POS	RA
Gray Flycatcher			OBS									
Dusky Flycatcher	POS	RA	POS	RA								
Cordilleran Flycatcher			POS	UN	POS	UN	POS	UN	POS	UN	PRB	CO
Say's Phoebe	POS	RA	CON	FC	OBS	RA					POS	RA
Western Kingbird	CON	CO	PRB	UN								
Eastern Kingbird			POS	RA								
Northern Shrike			OBS									
Plumbeous Vireo											POS	UN
Warbling Vireo	POS	RA	POS	UN					CON	UN	POS	FC
Gray Jay									CON	RA		
Steller's Jay					CON	UN	CON	UN	PRB	FC	PRB	CO
Blue Jay			OBS									
Western Scrub-Jay	POS	CO	CON	FC								
Clark's Nutcracker												
Black-billed Magpie	CON	CO	CON	CO	POS	RA	POS	RA	PRB	UN	CON	CO
American Crow	POS	UN	CON	FC	CON	FC	CON	FC	PRB	FC	PRB	CO
Common Raven			CON	UN	OBS		POS	CO	CON	UN	POS	UN
Tree Swallow	CON	FC					POS	RA	PRB	FC	CON	CO
Violet-green Swallow	POS	RA	CON	CO	POS	RA	POS	FC	PRB	FC	CON	CO
N. Rough-winged Swallow									PRB	UN		
Cliff Swallow	POS	FC							POS	RA		
Barn Swallow	POS	FC	POS	RA					POS	RA	POS	UN
Black-capped Chickadee	PRB	FC	CON	CO							POS	RA
Mountain Chickadee					CON	CO	PRB	CO	CON	CO	CON	CO

Site:	Hayden Green Mountain Park		Red Rocks Park		Bell Park		Cub Creek Park		Flying J Park		Genesee Park	
	breeding evidence	abund.	breeding evidence	abund.	breeding evidence	abund.	breeding evidence	abund.	breeding evidence	abund.	breeding evidence	abund.
Red-breasted Nuthatch					POS	UN			PRB	RA	POS	FC
White-breasted Nuthatch					POS	UN	POS	UN	CON	FC	CON	CO
Pygmy Nuthatch					CON	UN	PRB	CO	CON	FC	CON	CO
Brown Creeper					PRB	UN	POS	RA	POS	UN	OBS	UN
Rock Wren			POS	RA								
Canyon Wren			CON	FC								
House Wren	CON	CO	CON	FC	POS	RA	POS	UN	CON	UN	PRB	CO
Golden-crowned Kinglet												
Ruby-crowned Kinglet					PRB	FC	PRB	FC	PRB	FC	POS	RA
Blue-gray Gnatcatcher	PRB	FC	CON	CO								
Western Bluebird			POS	RA	POS	RA	PRB	FC	PRB	UN	CON	CO
Mountain Bluebird			PRB	UN	POS	RA	POS	RA	CON	UN	CON	CO
Townsend's Solitaire			POS	RA	POS	RA	POS	RA	POS	RA	POS	UN
Hermit Thrush					POS	UN			POS	UN	POS	UN
American Robin	CON	CO	CON	CO	PRB	UN	CON	CO	CON	CO	CON	CO
Gray Catbird			CON	UN								
Northern Mockingbird			POS	RA								
European Starling	POS	UN	CON	FC							POS	RA
American Pipit												
Cedar Waxwing			POS	UN								
Orange-crowned Warbler			OBS									
Virginia's Warbler			OBS									
Yellow Warbler	POS	FC	CON	FC					POS	RA	POS	RA
Yellow-rumped Warbler			POS	UN	POS	RA	POS	UN	POS	FC	CON	CO
MacGillivray's Warbler									PRB	RA		
Wilson's Warbler			POS	RA								
Yellow-breasted Chat	PRB	CO	POS	FC								
Western Tanager	PRB	UN	PRB	UN	CON	UN	PRB	RA	PRB	UN	CON	CO
Green-tailed Towhee	POS	UN	POS	RA							POS	UN
Spotted Towhee	PRB	CO	CON	CO								
American Tree Sparrow			OBS									

Site:	Hayden Green Mountain Park		Red Rocks Park		Bell Park		Cub Creek Park		Flying J Park		Genesee Park	
	breeding evidence	abund.	breeding evidence	abund.	breeding evidence	abund.	breeding evidence	abund.	breeding evidence	abund.	breeding evidence	abund.
Chipping Sparrow	POS	UN	PRB	CO	CON	UN	PRB	UN	CON	CO	CON	CO
Brewer's Sparrow	OBS											
Vesper Sparrow	PRB	CO	PRB	UN			POS	RA	CON	FC	PRB	FC
Lark Sparrow			OBS									
Savannah Sparrow									CON	FC	POS	UN
Fox Sparrow												
Song Sparrow			POS	UN			PRB	UN	PRB	FC	PRB	FC
Lincoln's Sparrow									CON	UN		
White-crowned Sparrow			OBS									
Dark-eyed Junco					POS	FC	CON	FC	CON	CO	CON	CO
Rose-breasted Grosbeak			POS	RA								
Black-headed Grosbeak	CON	CO	CON	FC	POS	RA	PRB	FC	PRB	UN	POS	UN
Lazuli Bunting			PRB	UN								
Indigo Bunting			PRB	RA								
Red-winged Blackbird											PRB	CO
Western Meadowlark	PRB	CO	CON	FC							POS	RA
Brewer's Blackbird			POS	FC					CON	UN		
Common Grackle												
Great-tailed Grackle	PRB	FC										
Brown-headed Cowbird	PRB	CO	PRB	FC	POS	RA	PRB	FC	POS	UN	PRB	CO
Bullock's Oriole	CON	CO	CON	CO								
Pine Grosbeak												
Cassin's Finch							PRB	FC	POS	RA		
House Finch	PRB	CO	PRB	FC	POS	UN	PRB	CO	CON	FC	PRB	CO
Red Crossbill					POS	UN	CON	RA	POS	UN	CON	CO
Pine Siskin					PRB	CO	PRB	CO	PRB	CO	CON	CO
Lesser Goldfinch	PRB	UN	PRB	FC					POS	RA	PRB	CO
American Goldfinch			POS	UN					POS	RA	POS	RA
House Sparrow	PRB	CO					POS	RA				

Table 6. Breeding evidence (OBS = observed, POS = possible, PRB = probable, CON = confirmed) and abundance (RA = rare, UN = uncommon, FC = fairly common, CO = common) of bird species found at sites within the subalpine and alpine elevation zones of the Bear Creek Watershed in 2009. See Tables 1 and 4 for definitions of breeding evidence and abundance.

	Mount Judge/ Snyder Mountain		Beartrack Lakes		Mount Goliath	
	breeding evidence	abund.	breeding evidence	abund.	breeding evidence	abund.
Canada Goose						
Mallard						
Double-crested Cormorant						
Great Blue Heron						
Turkey Vulture						
Sharp-shinned Hawk			POS	RA		
Cooper's Hawk						
Red-tailed Hawk						
Golden Eagle			OBS			
American Kestrel						
Prairie Falcon						
Spotted Sandpiper						
Wilson's Snipe						
Rock Pigeon						
Band-tailed Pigeon			POS	RA		
Mourning Dove	POS	U				
Great Horned Owl						
White-throated Swift	PRB	RA				
Black-chinned Hummingbird						
Broad-tailed Hummingbird	PRB	CO	PRB	CO		
Rufous Hummingbird			OBS			
Belted Kingfisher						
Williamson's Sapsucker			CON	UN		
Red-naped Sapsucker	POS	RA	PRB	UN		
Downy Woodpecker			CON	RA		
Hairy Woodpecker	POS	UN	CON	UN		
Am. Three-toed Woodpecker						
Northern Flicker	POS	UN	CON	FC	POS	RA
Olive-sided Flycatcher			CON	UN		
Western Wood-Pewee			PRB	CO		
Hammond's Flycatcher						
Gray Flycatcher						
Dusky Flycatcher			POS	UN	POS	RA
Cordilleran Flycatcher	POS	UN	POS	UN		
Say's Phoebe						
Western Kingbird						
Eastern Kingbird						
Northern Shrike						
Plumbeous Vireo						

	Mount Judge/ Snyder Mountain		Beartrack Lakes		Mount Goliath	
	breeding evidence	abund.	breeding evidence	abund.	breeding evidence	abund.
Warbling Vireo	POS	UN	CON	FC		
Gray Jay						
Steller's Jay	POS	FC	POS	FC		
Western Scrub-Jay						
Clark's Nutcracker	POS	RA	POS	UN	POS	RA
Black-billed Magpie	PRB	UN				
American Crow	PRB	FC			OBS	
Common Raven	POS	UN	POS	UN		
Tree Swallow						
Violet-green Swallow			POS	FC		
N. Rough-winged Swallow						
Cliff Swallow						
Barn Swallow						
Black-capped Chickadee	POS	RA				
Mountain Chickadee	PRB	CO	CON	CO	PRB	UN
Red-breasted Nuthatch	CON	FC	POS	RA		
White-breasted Nuthatch	POS	UN	POS	UN		
Pygmy Nuthatch	POS	FC				
Brown Creeper	POS	UN	POS	UN		
Rock Wren			CON	FC		
Canyon Wren						
House Wren	POS	UN	CON	CO		
Golden-crowned Kinglet			PRB	UN		
Ruby-crowned Kinglet	POS	FC	PRB	CO	POS	UN
Blue-gray Gnatcatcher						
Western Bluebird						
Mountain Bluebird			CON	CO	CON	UN
Townsend's Solitaire	PRB	UN	CON	UN		
Hermit Thrush	POS	FC	PRB	FC	POS	UN
American Robin	POS	FC	CON	CO	POS	RA
Gray Catbird						
Northern Mockingbird						
European Starling						
American Pipit					CON	FC
Cedar Waxwing						
Orange-crowned Warbler						
Virginia's Warbler						
Yellow Warbler						
Yellow-rumped Warbler	CON	CO	POS	CO	PRB	FC
MacGillivray's Warbler						
Wilson's Warbler					PRB	UN
Yellow-breasted Chat						
Western Tanager	PRB	UN	PRB	FC		
Green-tailed Towhee	POS	RA				

	Mount Judge/ Snyder Mountain		Beartrack Lakes		Mount Goliath	
	breeding evidence	abund.	breeding evidence	abund.	breeding evidence	abund.
Spotted Towhee						
Chipping Sparrow			POS	FC		
Brewer's Sparrow						
Vesper Sparrow						
Lark Sparrow						
Savannah Sparrow						
Fox Sparrow					PRB	UN
Song Sparrow						
Lincoln's Sparrow			CON	FC	POS	UN
White-crowned Sparrow			CON	FC	CON	CO
Dark-eyed Junco	CON	CO	CON	CO	POS	UN
Rose-breasted Grosbeak						
Black-headed Grosbeak	POS	UN				
Lazuli Bunting						
Indigo Bunting						
Red-winged Blackbird						
Western Meadowlark						
Brewer's Blackbird						
Common Grackle						
Brown-headed Cowbird	POS	RA				
Bullock's Oriole						
Pine Grosbeak						
Cassin's Finch			CON	UN		
House Finch	POS	RA				
Red Crossbill	POS	FC	POS	CO		
Pine Siskin	CON	CO	POS	CO		
Lesser Goldfinch						
American Goldfinch						
House Sparrow						