

Bear Creek Atlas Progress Report – 2008

Brad A. Andres, The Evergreen Naturalists Audubon Society, Evergreen, CO.

28 March 2009

Background and Methods

The purpose of the Bear Creek Watershed Breeding Bird Atlas (hereafter Bear Creek Atlas) is to provide information on the distribution, abundance, breeding status and habitat use of birds 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 The Evergreen Naturalists Audubon Society (Evergreen Audubon) and will be used for educational purposes in the newly developed 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 defined as 1 May to 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. 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, habitat where species were encountered, and the areas at each site covered on the visit. 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.tenas.org; observers also used this website to enter data and retrieve data forms and descriptions of the survey sites.

Results

Fifty-one participants made 86 trips to the 11 sites we designated to be surveyed in 2008. Observers spent a total of 202.5 hours, of which 196.25 hours were within the core survey period identified above. The effort goal of 10–15 hours was met at most individual sites, and, particularly, when sites were averaged within elevation zones.

A total of 139 species were recorded during all surveys, of which 113 species were suspected of breeding in the Bear Creek Watershed (possible, probable, or confirmed breeding status). As

expected, sites in the Foothills and Plains were much richer (87 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, David Balogh, Inga Brennan**, Barbara Bridges, Karel Buckley, Darlene Cate, Nancy Cook, Lindy Doty, Jim Duggan, Sheila Duranso, **Fran Enright, Loie Evans**, Barbara Fay, **Mike Foster, Carolyn Fraker, Barbara Jean Gard**, Carol Goldstein, Leslie Griffith, Derek Hankins, Peggy Hankins, Susan Harper, Mike Henwood, Debbie Hottinger, Barbara Isaac, Heather Johnson, Clint Jones, Barbara Klaus, Marilyn Kaussner, Kathy LaTourrette, **Kathanne Lynch**, Rebecca Martin, Meredith McBurney, Carolyn Mikkelson, Betty Minges, Barbara Nabors, Irene Neff, **Kayleen Niyo**, Chris Pfaff, Mary Pulick, Donald Randall, Toni Rautus, **Warren Roske**, Nina Routh, Glen Rodriguez, **Bob Santangelo, Else van Erp**, Tom van Erp, Bud Weare, **Larry White**, Mike Wilson, and **Sherman Wing**.

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.

<i>General Level of Evidence</i>	
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 2008. Core hours are those visits that occurred between 1 May and 15 July in the Plains and Foothills and Montane elevation zones and those between 15 May and 31 July in Subalpine and Alpine elevation zones. Suspected breeding includes possible, probable, or confirmed breeding status.

<i>Elevation zone/Site</i>	Total trips	Total hours	Core hours	Total species	No. species suspected of breeding
<i>Plains and Foothills</i>	57	126.10	120.85	118	87
Bear Creek Lake Park	18	24.20	24.20	80	59
Dinosaur Ridge North	5	16.40	16.40	49	38
Dinosaur Ridge South	10	28.00	27.50	47	33
Lair O' the Bear	8	28.50	28.50	62	54
Little Park	7	11.00	6.50	33	30
Mount Glennon	9	18.00	17.75	54	47
<i>Montane</i>	17	41.10	40.10	67	59
Bergen Peak	8	17.80	17.80	32	28
Elk Meadow	9	23.30	22.30	61	56
<i>Subalpine</i>	9	23.30	23.30	42	39
Beaver Meadows	4	9.55	9.55	32	30
Capt. Mt./Lincoln Lake	5	13.75	13.75	28	27
<i>Alpine</i>	3	12.00	12.00	8	6
Summit Lake ¹	3	12.00	12.00	8	6
<i>All sites</i>	86	202.50	196.25	139	113

¹ Included one survey in August.

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

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. See Tables 1 and 4 for definitions of breeding evidence and abundance. Bolded entries indicate species that were previously suspected of breeding within that elevation zone.

	Plains/Foothills (n = 6)		Montane (n = 2)		Subalpine (n = 2)		Alpine (n = 1)	
	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	FC			CON	UN		
Blue-winged Teal	POS	RA						
Northern Shoveler	POS	RA						
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							
Great Blue Heron	POS	UN			POS	RA		
Turkey Vulture	POS	UN	OBS					
Osprey	OBS							
Northern Harrier	OBS							
Sharp-shinned Hawk	OBS		OBS					
Cooper's Hawk	CON	RA						
Swainson's Hawk	CON	RA						
Red-tailed Hawk	CON	UN	PRB	UN	POS	UN		
Golden Eagle	PRB	RA	OBS					
American Kestrel	PRB	UN	CON	RA				
Prairie Falcon	OBS							
American Coot	POS	RA						
Killdeer	POS	RA						
Black-necked Stilt	OBS							
Spotted Sandpiper	POS	RA			CON	RA		
Wilson's Snipe					PRB	UN		
Ring-billed Gull	OBS							
Rock Pigeon	CON	FC						

	Plains/Foothills (n = 6)		Montane (n = 2)		Subalpine (n = 2)		Alpine (n = 1)	
	breeding evidence	abund.	breeding evidence	abund.	breeding evidence	abund.	breeding evidence	abund.
Band-tailed Pigeon			POS	RA				
Mourning Dove	CON	FC	POS	UN	POS	RA		
Great Horned Owl	CON	RA	CON	RA				
White-throated Swift	PRB	UN						
Black-chinned Hummingbird	OBS							
Broad-tailed Hummingbird	CON	CO	CON	CO	PRB	FC		
Rufous Hummingbird	OBS		OBS		OBS			
Belted Kingfisher	PRB	RA						
Williamson's Sapsucker			CON	RA				
Red-naped Sapsucker			PRB	RA	POS	RA		
Downy Woodpecker	CON	UN	POS	RA				
Hairy Woodpecker	POS	RA	PRB	UN	CON	UN		
Am. Three-toed Woodpecker					CON	UN		
Northern Flicker	CON	UN	PRB	FC	POS	UN		
Olive-sided Flycatcher	OBS		CON	UN				
Western Wood-Pewee	CON	UN	PRB	FC				
Hammond's Flycatcher			POS	RA				
Gray Flycatcher	OBS							
Dusky Flycatcher	PRB	RA						
Cordilleran Flycatcher	CON	UN	POS	UN	POS	UN		
Say's Phoebe	CON	RA	CON	RA				
Western Kingbird	CON	UN						
Loggerhead Shrike	OBS							
Plumbeous Vireo	POS	RA	POS	RA				
Warbling Vireo	CON	UN	PRB	FC	PRB	UN		
Gray Jay					CON	UN		
Steller's Jay	PRB	RA	PRB	FC	PRB	FC		
Western Scrub-Jay	CON	FC						
Clark's Nutcracker			OBS		POS	UN		
Black-billed Magpie	CON	FC	PRB	FC				
American Crow	CON	UN	PRB	FC	POS	UN		
Common Raven	CON	RA	PRB	UN	PRB	FC		PRB UN
Horned Lark								OBS
Tree Swallow	CON	FC	CON	UN	OBS			
Violet-green Swallow	CON	CO	PRB	FC				
N. Rough-winged Swallow	CON	UN						
Cliff Swallow	PRB	UN						
Barn Swallow	PRB	UN						

	Plains/Foothills (n = 6)		Montane (n = 2)		Subalpine (n = 2)		Alpine (n = 1)	
	breeding evidence	abund.	breeding evidence	abund.	breeding evidence	abund.	breeding evidence	abund.
Black-capped Chickadee	CON	UN						
Mountain Chickadee	PRB	RA	CON	CO	CON	CO		
Bushtit	POS	RA						
Red-breasted Nuthatch	PRB	RA	POS	RA	CON	FC		
White-breasted Nuthatch	CON	RA	CON	FC	POS	RA		
Pygmy Nuthatch	POS	RA	CON	CO				
Brown Creeper			POS	RA	CON	CO		
Rock Wren	POS	UN					PRB	RA
Canyon Wren	CON	RA						
House Wren	CON	CO	CON	CO	PRB	UN		
American Dipper	CON	UN						
Golden-crowned Kinglet			PRB	RA				
Ruby-crowned Kinglet	OBS		POS	UN	PRB	CO		
Blue-gray Gnatcatcher	CON	CO						
Western Bluebird			CON	FC				
Mountain Bluebird	CON	RA	CON	CO			CON	UN
Townsend's Solitaire			PRB	UN				
Hermit Thrush	OBS		POS	UN	PRB	FC		
American Robin	CON	CO	CON	CO	CON	CO		
Gray Catbird	CON	UN						
Northern Mockingbird			CON	RA				
European Starling	CON	UN	POS	UN				
American Pipit					OBS		CON	CO
Cedar Waxwing	CON	UN						
Orange-crowned Warbler	OBS							
Virginia's Warbler	OBS		OBS					
Yellow Warbler	CON	CO						
Yellow-rumped Warbler	CON	FC	PRB	FC	CON	CO		
Ovenbird	OBS							
American Redstart	POS	RA						
Northern Waterthrush	OBS							
MacGillivray's Warbler	CON	RA						
Common Yellowthroat	POS	RA						
Wilson's Warbler			PRB	RA	CON	FC		
Yellow-breasted Chat	POS	RA						
Western Tanager	CON	FC	CON	FC				
Green-tailed Towhee	POS	RA	POS	UN				
Spotted Towhee	CON	CO						

	Plains/Foothills (n = 6)		Montane (n = 2)		Subalpine (n = 2)		Alpine (n = 1)	
	breeding evidence	abund.	breeding evidence	abund.	breeding evidence	abund.	breeding evidence	abund.
Chipping Sparrow	PRB	UN	CON	CO				
Brewer's Sparrow	OBS		OBS					
Vesper Sparrow	PRB	UN	CON	CO				
Lark Sparrow	POS	RA	POS	RA				
Lark Bunting	OBS							
Savannah Sparrow	POS	RA	PRB	UN				
Fox Sparrow					POS	RA		
Song Sparrow	CON	FC	POS	UN	PRB	UN		
Lincoln's Sparrow					CON	CO		
White-crowned Sparrow	OBS		OBS		CON	UN	CON	FC
Dark-eyed Junco	OBS		CON	CO	CON	CO		
Rose-breasted Grosbeak	OBS							
Black-headed Grosbeak	CON	FC	CON	UN				
Lazuli Bunting	CON	FC						
Indigo Bunting	POS	RA						
Red-winged Blackbird	CON	FC	POS	UN				
Western Meadowlark	CON	FC	POS	UN				
Brewer's Blackbird	CON	UN	PRB	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	UN		
Cassin's Finch			CON	FC				
House Finch	CON	FC	CON	FC				
Red Crossbill			POS	UN	POS	CO		
Evening Grosbeak	OBS							
Pine Siskin	POS	RA	CON	CO	POS	CO		
Lesser Goldfinch	CON	FC	POS	UN				
American Goldfinch	CON	UN						
House Sparrow	CON	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 elevation zone of the Bear Creek Watershed in 2008. See Tables 1 and 4 for definitions of breeding evidence and abundance.

Site:	Bear Creek Lake Park		Dinosaur Ridge North		Dinosaur Ridge South		Mount Glennon		Lair O' Bear Park		Little Park	
	breeding evidence	abund.	breeding evidence	abund.	breeding evidence	abund.	breeding evidence	abund.	breeding evidence	abund.	breeding evidence	abund.
Canada Goose	CON	CO							POS	FC		
Wood Duck	CON	RA										
Gadwall	POS	RA										
Mallard	CON	CO	OBS				POS	UN	CON	FC	POS	FC
Blue-winged Teal	POS	RA										
Northern Shoveler	POS	UN										
Green-winged Teal	POS	RA										
Ring-necked Duck	OBS											
Lesser Scaup	OBS											
Bufflehead	OBS											
Ruddy Duck	OBS											
Dusky Grouse												
Pied-billed Grebe	OBS											
Eared Grebe	OBS											
American White Pelican	OBS											
Double-crested Cormorant	OBS		OBS						OBS			
Great Blue Heron	POS	UN	OBS		OBS		POS	UN	OBS		OBS	
Turkey Vulture	OBS		OBS		OBS		POS	FC	POS	UN		
Osprey	OBS											
Northern Harrier			OBS									
Sharp-shinned Hawk					OBS							
Cooper's Hawk	CON	RA			OBS				CON	UN		
Swainson's Hawk	CON	UN										
Red-tailed Hawk	CON	UN	POS	FC	POS	UN	CON	UN	PRB	UN	OBS	
Golden Eagle							PRB	UN				
American Kestrel	POS	UN	POS	UN	PRB	UN	PRB	UN				
Prairie Falcon					OBS							
American Coot	POS	UN										

Site:	Bear Creek Lake Park		Dinosaur Ridge North		Dinosaur Ridge South		Mount Glennon		Lair O' Bear Park		Little Park	
	breeding evidence	abund.	breeding evidence	abund.	breeding evidence	abund.	breeding evidence	abund.	breeding evidence	abund.	breeding evidence	abund.
Killdeer	POS	UN										
Black-necked Stilt	OBS											
Spotted Sandpiper	POS	UN										
Wilson's Snipe												
Ring-billed Gull	OBS											
Rock Pigeon	POS	UN					CON	CO	OBS			
Band-tailed Pigeon												
Mourning Dove	POS	CO	POS	FC	POS	FC	CON	CO	PRB	UN	POS	UN
Great Horned Owl	CON	RA					CON	RA				
White-throated Swift			POS	UN	POS	UN	PRB	FC				
Black-chinned Hummingbird	OBS											
Broad-tailed Hummingbird	POS	RA	PRB	FC	POS	UN	POS	FC	CON	CO	CON	CO
Rufous Hummingbird									OBS			
Belted Kingfisher	PRB	RA										
Williamson's Sapsucker												
Red-naped Sapsucker												
Downy Woodpecker	CON	UN					CON	RA	CON	UN	POS	FC
Hairy Woodpecker	OBS								POS	RA		
Am. Three-toed Woodpecker												
Northern Flicker	CON	CO	POS	UN			POS	RA	PRB	UN	POS	UN
Olive-sided Flycatcher					OBS							
Western Wood-Pewee	PRB	FC	POS	RA	POS	UN	CON	FC	CON	UN	POS	FC
Hammond's Flycatcher												
Gray Flycatcher	OBS											
Dusky Flycatcher									PRB	UN	POS	UN
Cordilleran Flycatcher							POS	UN	CON	FC	CON	FC
Say's Phoebe	POS	RA			OBS		CON	RA	POS	RA		
Western Kingbird	CON	UN	PRB	FC	PRB	UN	OBS					
Loggerhead Shrike									OBS			
Plumbeous Vireo	POS	RA			POS	RA			POS	RA		
Warbling Vireo	POS	UN			POS	RA	POS	UN	CON	CO	POS	FC

Site:	Bear Creek Lake Park		Dinosaur Ridge North		Dinosaur Ridge South		Mount Glennon		Lair O' Bear Park		Little Park	
	breeding evidence	abund.	breeding evidence	abund.	breeding evidence	abund.	breeding evidence	abund.	breeding evidence	abund.	breeding evidence	abund.
Gray Jay												
Steller's Jay									PRB	UN		
Western Scrub-Jay			PRB	FC	CON	FC	CON	FC				
Clark's Nutcracker												
Black-billed Magpie	CON	CO	CON	CO	POS	RA	CON	CO				
American Crow			PRB	RA	CON	UN	OBS	RA	POS	UN	PRB	FC
Common Raven			OBS		OBS		CON	UN			PRB	UN
Horned Lark												
Tree Swallow	POS	CO	POS	FC	POS	UN	OBS		CON	FC		
Violet-green Swallow	CON	CO	POS	FC	CON	FC	PRB	CO	CON	CO	POS	CO
N. Rough-winged Swallow	CON	FC							CON	UN		
Cliff Swallow	POS	FC	POS	RA					PRB	UN		
Barn Swallow	POS	FC			PRB	RA	POS	RA				
Black-capped Chickadee	PRB	FC	POS	RA	CON	FC	CON	UN	CON	FC	POS	UN
Mountain Chickadee			PRB	RA	POS	RA			POS	RA	POS	FC
Bushtit			POS	UN	OBS							
Red-breasted Nuthatch			OBS								PRB	RA
White-breasted Nuthatch			OBS				POS	RA	POS	RA	CON	UN
Pygmy Nuthatch											POS	UN
Brown Creeper												
Rock Wren			POS	UN	POS	UN	POS	UN	POS	RA		
Canyon Wren			PRB	RA	CON	UN	POS	UN				
House Wren	CON	CO			POS	RA	CON	UN	CON	CO	PRB	CO
American Dipper	CON	RA					POS	RA	CON	UN	CON	UN
Golden-crowned Kinglet												
Ruby-crowned Kinglet	OBS				OBS							
Blue-gray Gnatcatcher	POS	UN	CON	CO	CON	CO	CON	CO	CON	CO	PRB	UN
Western Bluebird												
Mountain Bluebird									CON	UN		
Townsend's Solitaire												
Hermit Thrush					OBS							

Site:	Bear Creek Lake Park		Dinosaur Ridge North		Dinosaur Ridge South		Mount Glennon		Lair O' Bear Park		Little Park	
	breeding evidence	abund.	breeding evidence	abund.	breeding evidence	abund.	breeding evidence	abund.	breeding evidence	abund.	breeding evidence	abund.
American Robin	CON	CO	CON	FC	PRB	FC	CON	CO	CON	CO	CON	FC
Gray Catbird	POS	RA					POS	RA	CON	CO		
Northern Mockingbird												
European Starling	CON	CO	CON	RA								
American Pipit												
Cedar Waxwing							POS	RA	CON	CO		
Orange-crowned Warbler			OBS						OBS		OBS	
Virginia's Warbler			OBS		OBS		OBS					
Yellow Warbler	CON	CO	POS	RA			CON	FC	CON	CO	POS	CO
Yellow-rumped Warbler	POS	CO	POS	UN	POS	FC			CON	FC		
American Redstart							POS	RA				
Ovenbird									OBS			
Northern Waterthrush	OBS											
MacGillivray's Warbler									CON	UN		
Common Yellowthroat	POS	RA										
Wilson's Warbler												
Yellow-breasted Chat	POS	UN										
Western Tanager	POS	UN	PRB	FC	POS	UN	POS	UN	CON	FC	POS	UN
Green-tailed Towhee			POS	UN			POS	RA	POS	UN	POS	FC
Spotted Towhee	CON	FC	CON	CO	CON	CO	CON	CO	CON	CO	POS	UN
Chipping Sparrow	POS	UN	PRB	FC			OBS		POS	UN		
Brewer's Sparrow	OBS						OBS					
Vesper Sparrow	PRB	UN	POS	UN	POS	RA			POS	RA		
Lark Sparrow	POS	RA										
Lark Bunting	OBS											
Savannah Sparrow									POS	RA		
Fox Sparrow												
Song Sparrow	PRB	CO					CON	UN	CON	CO		
Lincoln's Sparrow												
White-crowned Sparrow	OBS				OBS							
Dark-eyed Junco											POS	UN

Site:	Bear Creek Lake Park		Dinosaur Ridge North		Dinosaur Ridge South		Mount Glennon		Lair O' Bear Park		Little Park	
	breeding evidence	abund.	breeding evidence	abund.	breeding evidence	abund.	breeding evidence	abund.	breeding evidence	abund.	breeding evidence	abund.
Rose-breasted Grosbeak									OBS			
Black-headed Grosbeak			CON	FC	CON	UN	CON	UN	CON	FC	POS	UN
Lazuli Bunting			POS	RA	POS	RA	POS	RA	CON	CO		
Indigo Bunting									POS	RA		
Red-winged Blackbird	CON	CO	POS	RA			PRB	UN	POS	UN		
Western Meadowlark	CON	CO	POS	FC	POS	RA	POS	FC				
Brewer's Blackbird			CON	FC	OBS							
Common Grackle	PRB	FC	OBS				OBS		POS	RA		
Brown-headed Cowbird	PRB	CO	PRB	FC	PRB	FC	PRB	CO	PRB	FC		
Bullock's Oriole	CON	FC	PRB	UN	POS	RA	PRB	FC	CON	CO		
Brown-capped Rosy-Finch												
Pine Grosbeak												
Cassin's Finch												
House Finch	POS	UN	POS	UN	POS	UN	CON	CO	CON	FC	POS	FC
Red Crossbill												
Evening Grosbeak	OBS											
Pine Siskin									POS	RA	POS	FC
Lesser Goldfinch	PRB	UN	PRB	FC	POS	UN	CON	FC	CON	CO	POS	FC
American Goldfinch	POS	FC							CON	FC		
House Sparrow	CON	RA					CON	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 foothills Elevation zones of the Bear Creek Watershed in 2008. See Tables 1 and 4 for definitions of breeding evidence and abundance.

	Montane				Subalpine				Alpine	
	Bergen Peak		Elk Meadow		Beaver Meadows		Captain Mountain/ Lincoln Lake		Summit Lake	
	breeding evidence	abund.	breeding evidence	abund.	breeding evidence	abund.	breeding evidence	abund.	breeding evidence	abund.
Canada Goose										
Wood Duck									OBS	
Gadwall										
Mallard					CON	FC				
Blue-winged Teal										
Northern Shoveler										
Green-winged Teal					CON	FC				
Ring-necked Duck										
Lesser Scaup										
Bufflehead										
Ruddy Duck										
Dusky Grouse							POS	UN		
Pied-billed Grebe										
Eared Grebe										
American White Pelican										
Double-crested Cormorant										
Great Blue Heron					POS	RA				
Turkey Vulture			OBS							
Osprey										
Northern Harrier										
Sharp-shinned Hawk	OBS									
Cooper's Hawk										
Swainson's Hawk										
Red-tailed Hawk			PRB	FC	POS	UN				
Golden Eagle	OBS									
American Kestrel			CON	UN						

	Montane				Subalpine				Alpine	
	Bergen Peak		Elk Meadow		Beaver Meadows		Captain Mountain/ Lincoln Lake		Summit Lake	
	breeding evidence	abund.	breeding evidence	abund.	breeding evidence	abund.	breeding evidence	abund.	breeding evidence	abund.
Prairie Falcon										
American Coot										
Killdeer										
Black-necked Stilt										
Spotted Sandpiper					CON	UN				
Wilson's Snipe					PRB	UN				
Ring-billed Gull										
Rock Pigeon										
Band-tailed Pigeon	POS	RA								
Mourning Dove	POS	RA	POS	FC			POS	RA		
Great Horned Owl			CON	RA						
White-throated Swift										
Black-chinned Hummingbird										
Broad-tailed Hummingbird	PRB	CO	CON	CO	PRB	UN	PRB	CO		
Rufous Hummingbird			OBS				OBS			
Belted Kingfisher										
Williamson's Sapsucker			CON	RA						
Red-naped Sapsucker	PRB	RA			POS	UN				
Downy Woodpecker	POS	RA	POS	UN						
Hairy Woodpecker	PRB	UN	PRB	UN	POS	RA	CON	FC		
Am. Three-toed Woodpecker							CON	UN		
Northern Flicker	POS	FC	PRB	FC	POS	FC	POS	UN		
Olive-sided Flycatcher			CON	UN						
Western Wood-Pewee			PRB	FC						
Hammond's Flycatcher			POS	RA						
Gray Flycatcher										
Dusky Flycatcher										
Cordilleran Flycatcher	POS	UN	POS	UN			POS	UN		
Say's Phoebe			CON	RA						
Western Kingbird										

	Montane				Subalpine				Alpine	
	Bergen Peak		Elk Meadow		Beaver Meadows		Captain Mountain/ Lincoln Lake		Summit Lake	
	breeding evidence	abund.	breeding evidence	abund.	breeding evidence	abund.	breeding evidence	abund.	breeding evidence	abund.
Loggerhead Shrike										
Plumbeous Vireo			POS	RA						
Warbling Vireo	POS	FC	PRB	FC	PRB	UN				
Gray Jay							CON	UN		
Steller's Jay	POS	FC	PRB	FC	PRB	FC	POS	FC		
Western Scrub-Jay										
Clark's Nutcracker	OBS				POS	RA	POS	UN		
Black-billed Magpie	POS	RA	PRB	FC						
American Crow	POS	FC	PRB	FC			POS	UN		
Common Raven			PRB	UN	PRB	UN	POS	FC	PRB	UN
Horned Lark									OBS	
Tree Swallow			CON	FC	OBS					
Violet-green Swallow			PRB	CO						
N. Rough-winged Swallow										
Cliff Swallow										
Barn Swallow										
Black-capped Chickadee										
Mountain Chickadee	CON	FC	CON	CO	POS	FC	CON	CO		
Bushtit										
Red-breasted Nuthatch	POS	RA	POS	RA	POS	RA	CON	FC		
White-breasted Nuthatch	POS	RA	CON	FC			POS	RA		
Pygmy Nuthatch	POS	RA	CON	CO						
Brown Creeper			POS	RA			CON	CO		
Rock Wren									PRB	RA
Canyon Wren										
House Wren	CON	FC	CON	CO	PRB	FC				
American Dipper										
Golden-crowned Kinglet			PRB	RA						
Ruby-crowned Kinglet			POS	UN	POS	FC	PRB	CO		
Blue-gray Gnatcatcher										

	Montane				Subalpine				Alpine	
	Bergen Peak		Elk Meadow		Beaver Meadows		Captain Mountain/ Lincoln Lake		Summit Lake	
	breeding evidence	abund.	breeding evidence	abund.	breeding evidence	abund.	breeding evidence	abund.	breeding evidence	abund.
Western Bluebird	POS	RA	CON	CO						
Mountain Bluebird	PRB	UN	CON	CO					CON	UN
Townsend's Solitaire	POS	UN	PRB	UN						
Hermit Thrush	POS	UN	POS	UN	POS	RA	PRB	CO		
American Robin	CON	CO	CON	CO	PRB	CO	CON	FC		
Gray Catbird										
Northern Mockingbird			CON	RA						
European Starling			POS	UN						
American Pipit					OBS				CON	CO
Cedar Waxwing										
Orange-crowned Warbler										
Virginia's Warbler			OBS							
Yellow Warbler										
Yellow-rumped Warbler	POS	FC	PRB	FC	PRB	CO	CON	CO		
American Redstart										
Ovenbird										
Northern Waterthrush										
MacGillivray's Warbler										
Common Yellowthroat										
Wilson's Warbler	OBS				PRB	CO	CON	UN		
Yellow-breasted Chat										
Western Tanager	PRB	FC	CON	CO						
Green-tailed Towhee			POS	UN						
Spotted Towhee										
Chipping Sparrow	POS	FC	CON	CO						
Brewer's Sparrow			OBS							
Vesper Sparrow			CON	CO						
Lark Sparrow			POS	UN						
Lark Bunting										
Savannah Sparrow			PRB	FC						

	Montane				Subalpine				Alpine	
	Bergen Peak		Elk Meadow		Beaver Meadows		Captain Mountain/ Lincoln Lake		Summit Lake	
	breeding evidence	abund.	breeding evidence	abund.	breeding evidence	abund.	breeding evidence	abund.	breeding evidence	abund.
Fox Sparrow					POS	RA				
Song Sparrow			POS	UN	PRB	FC				
Lincoln's Sparrow					PRB	CO	CON	FC		
White-crowned Sparrow			OBS		POS	UN	CON	UN	CON	FC
Dark-eyed Junco	CON	CO	PRB	FC	PRB	FC	CON	CO		
Rose-breasted Grosbeak										
Black-headed Grosbeak	POS	UN	CON	UN						
Lazuli Bunting										
Indigo Bunting										
Red-winged Blackbird			POS	UN						
Western Meadowlark			POS	FC						
Brewer's Blackbird			PRB	FC						
Common Grackle										
Brown-headed Cowbird	POS	UN	PRB	FC	POS	RA				
Bullock's Oriole										
Brown-capped Rosy-Finch									CON	UN
Pine Grosbeak							POS	UN		
Cassin's Finch			CON	FC						
House Finch			CON	CO						
Red Crossbill			POS	UN	POS	FC	POS	CO		
Evening Grosbeak										
Pine Siskin			CON	CO	POS	FC	POS	CO		
Lesser Goldfinch			POS	FC						
American Goldfinch										
House Sparrow										