

Appendix 13

Aquatic and Terrestrial Vertebrate Species Occurrences for the Flathead Subbasin

Table 1. Established Aquatic Species

Name	Native/Introduced
Arctic Grayling	I
Black Bullhead	I
Black Crappie	I
Bluegill	I
Brook Stickleback	I
Brook Trout	I
Brown Trout	I
Bull Trout	N
Central Mudminnow	I
Fathead Minnow	I
Golden Trout	I
Grass Carp	I
Green Sunfish	I
Kokanee	I
Lake Trout	I
Lake Whitefish	I
Largemouth Bass	I
Largescale Sucker	N
Longnose Sucker	N
Mountain Whitefish	N
Northern Pike	I
Northern Pikeminnow	N
Peamouth	N
Pumpkinseed	I
Pygmy Whitefish	N
Rainbow Trout	I
Redside Shiner	N
Slimy Sculpin	N
Smallmouth Bass	I
Walleye	I
Westslope Cutthroat Trout	N
Yellow Perch	I
Yellowstone Cutthroat	I

Table 2 is the species list from the IBIS database and includes species from both the US and Canadian sides of the border and is based on IBIS wildlife habitat types. The list does not include accidental or exotic species. 1= present according to the IBIS datasets.

Table 2. Terrestrial Species

Common Name	Canada	Flathead
Alder Flycatcher	1	
American Avocet	1	1
American Badger	1	1
American Beaver		
American Bittern	1	1
American Black Duck		1
American Coot	1	1
American Crow	1	1
American Dipper	1	1
American Golden-Plover	1	1
American Goldfinch	1	1
American Kestrel	1	1
American Marten	1	1
American Pika		1
American Pipit	1	1
American Redstart	1	1
American Robin	1	1
American Tree Sparrow	1	1
American White Pelican	1	1
American Wigeon	1	1
Anna's Hummingbird	1	1
Ash-throated Flycatcher		1
Baird's Sandpiper	1	1
Bald Eagle	1	1
Band-tailed Pigeon	1	1
Bank Swallow	1	1
Barn Owl	1	1
Barn Swallow	1	1
Barred Owl	1	1
Barrow's Goldeneye	1	1
Beaver	1	
Belted Kingfisher	1	1
Big Brown Bat	1	1
Bighorn Sheep	1	1
Black Bear	1	1
Black Rosy-finch		1
Black Swift	1	1
Black Tern	1	1
Black Turnstone		1
Black-backed Woodpecker	1	1

Common Name	Canada	Flathead
Black-bellied Plover	1	1
Black-billed Magpie	1	1
Black-capped Chickadee	1	1
Black-chinned Hummingbird	1	1
Black-crowned Night-heron	1	1
Black-headed Grosbeak	1	1
Black-necked Stilt		1
Blackpoll Warbler	1	
Black-throated Gray Warbler		1
Black-throated Sparrow		1
Blue Grouse	1	1
Blue Jay	1	
Blue-winged Teal	1	1
Bobcat	1	1
Bobolink	1	1
Bohemian Waxwing	1	1
Bonaparte's Gull	1	1
Boreal Chickadee	1	1
Boreal Owl	1	1
Brewer's Blackbird	1	1
Brewer's Sparrow	1	1
Broad-tailed Hummingbird		1
Brown Creeper	1	1
Brown-headed Cowbird	1	1
Buff-breasted Sandpiper		1
Bufflehead	1	1
Bullfrog		1
Bullock's Oriole	1	1
Burrowing Owl	1	1
Bushy-tailed Woodrat	1	1
California Gull	1	1
California Myotis	1	1
California Quail		
Calliope Hummingbird	1	1
Canada Goose	1	1
Canvasback	1	1
Canyon Wren	1	1
Caribou	1	
Cascade Golden-mantled Ground Squirrel	1	
Caspian Tern	1	1
Cassin's Finch	1	1
Cassin's Vireo	1	1
Cattle Egret	1	1
Cedar Waxwing	1	1
Chestnut-backed Chickadee	1	1
Chipping Sparrow	1	1
Chukar		1
Cinnamon Teal	1	1

Common Name	Canada	Flathead
Clark's Grebe		1
Clark's Nutcracker	1	1
Clay-colored Sparrow	1	1
Cliff Swallow	1	1
Columbia Spotted Frog	1	1
Columbian Ground Squirrel	1	1
Common Garter Snake	1	1
Common Goldeneye	1	1
Common Loon	1	1
Common Merganser	1	1
Common Nighthawk	1	1
Common Pika	1	
Common Poorwill	1	1
Common Porcupine		1
Common Raven	1	1
Common Redpoll	1	1
Common Shrew	1	
Common Snipe	1	1
Common Tern	1	1
Common Yellowthroat	1	1
Cooper's Hawk	1	1
Cordilleran Flycatcher		1
Couer d'Alene Salamander	1	
Coyote	1	1
Creeping Vole	1	
Dark-eyed Junco	1	1
Deer Mouse	1	1
Double-crested Cormorant	1	1
Douglas' Squirrel	1	
Downy Woodpecker	1	1
Dunlin	1	1
Dusky Flycatcher	1	1
Dusky Shrew	1	
Eared Grebe	1	1
Eastern Fox Squirrel		1
Eastern Kingbird	1	1
Elk	1	1
Ermine	1	1
Eurasian Wigeon	1	
European Starling		1
Evening Grosbeak	1	1
Ferruginous Hawk	1	1
Fisher	1	1
Flammulated Owl	1	1
Forster's Tern	1	1
Fox Sparrow	1	1
Franklin's Gull	1	1
Fringed Myotis	1	1

Common Name	Canada	Flathead
Gadwall	1	1
Glaucous Gull	1	1
Glaucous-winged Gull	1	
Golden Eagle	1	1
Golden-crowned Kinglet	1	1
Golden-crowned Sparrow	1	1
Golden-mantled Ground Squirrel	1	1
Gopher Snake	1	1
Grasshopper Sparrow	1	1
Gray Catbird	1	1
Gray Flycatcher	1	
Gray Jay	1	1
Gray Partridge		1
Gray Wolf	1	1
Gray-crowned Rosy-Finch	1	1
Great Basin Pocket Mouse	1	
Great Basin Spadefoot	1	
Great Blue Heron	1	1
Great Egret		1
Great Gray Owl	1	1
Great Horned Owl	1	1
Greater Scaup	1	1
Greater White-fronted Goose	1	1
Greater Yellowlegs	1	1
Green Heron		1
Green-tailed Towhee		1
Green-winged Teal	1	1
Grizzly Bear	1	1
Gyr Falcon	1	1
Hairy Woodpecker	1	1
Hammond's Flycatcher	1	1
Harlequin Duck	1	1
Harris's Sparrow	1	1
Heather Vole	1	1
Hermit Thrush	1	1
Herring Gull	1	1
Hoary Bat	1	1
Hoary Marmot	1	1
Hoary Redpoll	1	
Hooded Merganser	1	1
Horned Grebe	1	1
Horned Lark	1	1
House Finch	1	1
House Mouse		1
House Sparrow		1
House Wren	1	1
Idaho Giant Salamander		1
Keen's Mouse	1	

Common Name	Canada	Flathead
Killdeer	1	1
Lapland Longspur	1	1
Lark Sparrow	1	1
Lazuli Bunting	1	1
Least Chipmunk	1	1
Least Flycatcher	1	1
Least Sandpiper	1	1
Lesser Scaup	1	1
Lesser Yellowlegs	1	1
Lewis' Woodpecker	1	
Lewis's Woodpecker		1
Lincoln's Sparrow	1	1
Little Brown Myotis	1	1
Loggerhead Shrike	1	1
Long-billed Curlew	1	1
Long-billed Dowitcher	1	1
Long-eared Myotis		1
Long-eared Owl	1	1
Long-legged Myotis	1	1
Long-tailed Duck	1	
Long-tailed Vole	1	1
Long-tailed Weasel	1	1
Long-toed Salamander	1	1
Lynx	1	1
Macgillivray's Warbler	1	1
Magnolia Warbler	1	
Mallard	1	1
Marbled Godwit		1
Marsh Wren	1	1
Masked Shrew		1
Meadow Jumping Mouse	1	
Meadow Vole	1	1
Merlin	1	1
Merriam's Shrew	1	
Mew Gull	1	
Mink	1	1
Montane Shrew		1
Montane Vole	1	1
Moose	1	1
Mountain Beaver	1	
Mountain Bluebird	1	1
Mountain Caribou		
Mountain Chickadee	1	1
Mountain Goat	1	1
Mountain Lion	1	1
Mourning Dove	1	1
Mule Deer	1	1
Muskrat	1	1

Common Name	Canada	Flathead
Mute Swan		1
Nashville Warbler	1	1
Night Snake	1	
Northern Alligator Lizard	1	1
Northern Bobwhite		1
Northern Bog Lemming	1	1
Northern Flicker	1	1
Northern Flying Squirrel	1	1
Northern Goshawk	1	1
Northern Grasshopper Mouse		1
Northern Harrier	1	1
Northern Hawk Owl	1	
Northern Leopard Frog	1	1
Northern Mockingbird	1	1
Northern Pintail	1	1
Northern Pocket Gopher	1	1
Northern Pygmy-owl	1	1
Northern River Otter	1	1
Northern Rough-winged Swallow	1	1
Northern Saw-whet Owl	1	1
Northern Shoveler	1	1
Northern Shrike	1	1
Northern Waterthrush	1	1
Northwestern Crow		
Norway Rat		1
Northern Long-eared Myotis	1	
Nuttall's (Mountain) Cottontail	1	1
Olive-sided Flycatcher	1	1
Orange-crowned Warbler	1	1
Oregon Spotted Frog		
Osprey	1	1
Pacific Chorus (Tree) Frog		1
Pacific Chorus Frog	1	
Pacific Jumping Mouse	1	
Pacific Loon	1	
Pacific-slope Flycatcher	1	
Painted Turtle	1	1
Pallid Bat	1	
Palm Warbler		1
Pectoral Sandpiper	1	1
Peregrine Falcon	1	1
Pied-billed Grebe	1	1
Pileated Woodpecker	1	1
Pine Grosbeak	1	1
Pine Siskin	1	1
Pinyon Jay		1
Porcupine	1	
Prairie Falcon	1	1

Common Name	Canada	Flathead
Preble's Shrew	1	
Pronghorn Antelope		1
Purple Finch	1	1
Purple Martin		1
Pygmy Nuthatch	1	1
Pygmy Shrew	1	1
Raccoon	1	1
Racer	1	1
Red Crossbill	1	1
Red Fox	1	1
Red Squirrel	1	1
Red-breasted Merganser	1	1
Red-breasted Nuthatch	1	1
Red-eyed Vireo	1	1
Redhead	1	1
Red-naped Sapsucker	1	1
Red-necked Grebe	1	1
Red-necked Phalarope	1	1
Red-shouldered Hawk		1
Red-tailed Chipmunk	1	1
Red-tailed Hawk	1	1
Red-throated Loon	1	
Red-winged Blackbird	1	1
Ring-billed Gull	1	1
Ring-necked Duck	1	1
Ring-necked Pheasant		1
Rock Dove		1
Rock Wren	1	1
Rocky Mountain Tailed Frog	1	
Ross's Goose	1	1
Rough-legged Hawk	1	1
Rough-skinned Newt		1
Rubber Boa	1	1
Ruby-crowned Kinglet	1	1
Ruddy Duck	1	1
Ruffed Grouse	1	1
Rufous Hummingbird	1	1
Rusty Blackbird	1	
Sage Grouse		1
Sage Sparrow		1
Sage Thrasher	1	1
Sanderling	1	1
Sandhill Crane	1	1
Savannah Sparrow	1	1
Say's Phoebe		1
Semipalmated Plover	1	1
Semipalmated Sandpiper	1	1
Sharp-shinned Hawk	1	1

Common Name	Canada	Flathead
Sharp-tailed Grouse	1	1
Short-billed Dowitcher	1	1
Short-eared Owl	1	1
Short-horned Lizard		1
Shrew-mole	1	
Silver-haired Bat	1	1
Snapping Turtle		1
Snow Bunting	1	1
Snow Goose	1	1
Snowshoe Hare	1	1
Snowy Egret		1
Snowy Owl	1	1
Solitary Sandpiper	1	1
Song Sparrow	1	1
Sora	1	1
Southern Red-backed Vole	1	1
Spotted Bat	1	
Spotted Sandpiper	1	1
Spotted Towhee	1	1
Spruce Grouse	1	1
Steller's Jay	1	1
Stilt Sandpiper	1	1
Striped Skunk	1	1
Surf Scoter	1	1
Swainson's Hawk	1	1
Swainson's Thrush	1	1
Swamp Sparrow		1
Tailed Frog		1
Tennessee Warbler	1	
Thirteen-lined Ground Squirrel		1
Three-toed Woodpecker	1	1
Tiger Salamander	1	1
Townsend's Big-eared Bat	1	1
Townsend's Chipmunk	1	
Townsend's Solitaire	1	1
Townsend's Warbler	1	1
Tree Swallow	1	1
Trumpeter Swan	1	1
Tundra Swan	1	1
Turkey Vulture	1	1
Upland Sandpiper		1
Vagrant Shrew	1	1
Varied Thrush	1	1
Vaux's Swift	1	1
Veery	1	1
Vesper Sparrow	1	1
Violet-green Swallow	1	1
Virginia Rail	1	1

Common Name	Canada	Flathead
Warbling Vireo	1	1
Water Shrew	1	1
Water Vole	1	1
Western Bluebird	1	1
Western Grebe	1	1
Western Harvest Mouse	1	
Western Jumping Mouse	1	1
Western Kingbird	1	1
Western Long-eared Myotis	1	
Western Meadowlark	1	1
Western Rattlesnake	1	1
Western Sandpiper	1	1
Western Screech-owl	1	1
Western Skink	1	1
Western Small-footed Myotis	1	
Western Tanager	1	1
Western Terrestrial Garter Snake	1	1
Western Toad	1	1
Western Wood-pewee	1	1
Whimbrel		1
White-breasted Nuthatch	1	1
White-crowned Sparrow	1	1
White-faced Ibis		1
White-headed Woodpecker	1	1
White-tailed Deer	1	1
White-tailed Jackrabbit		1
White-tailed Ptarmigan	1	1
White-throated Sparrow	1	1
White-throated Swift	1	1
White-winged Crossbill	1	1
White-winged Scoter	1	
Whooping Crane		1
Wild Turkey		1
Willet		1
Williamson's Sapsucker	1	1
Willow Flycatcher	1	1
Wilson's Phalarope	1	1
Wilson's Warbler	1	1
Winter Wren	1	1
Wolverine	1	1
Wood Duck	1	1
Wood Frog	1	
Woodchuck	1	
Woodhouse's Toad		1
Yellow Warbler	1	1
Yellow-bellied Marmot	1	1
Yellow-billed Cuckoo		1
Yellow-breasted Chat	1	1

Common Name	Canada	Flathead
Yellow-headed Blackbird	1	1
Yellow-pine Chipmunk	1	1
Yellow-rumped Warbler	1	1
Yuma Myotis	1	1
Grand Total*	363	374

**These totals are total species minus accidentals, extirpations, introduced species, and reintroduced species.*

Sources: Csuti et al. (1997), Verts and Carraway (1998), Ingles (1965), Hall (1981), Bailey (1936), Gilligan et al. (1994), ODFW (1994),

Puchy and Marshall (1993), Dvornich et al. (1997), Johnson and Cassidy (1997), Smith et al. (1997), and Brueggeman (1992). Supplemental information also came from Alexander (1996), Aubry (1982), Aubry and Houston (1992), Best (1988), and Bradley (1982).” (Marcot, B.G. 2002. A Multi-Species Framework Approach for the Columbia River Basin Integrating Fish, Wildlife, and Ecological Functions Version: February 2002)

The Canadian IBIS species list was reviewed and appended by Chris Steeger and Marlene Machmer of Pandion Consulting Services (<http://habitat.cbt.org/>)

With regard to organizations such as the Montana Natural Heritage Program that maintains lists of species of concern and threatened and endangered species, IBIS only made sure that the names they used were standard. They did incorporate the species listing status from these organizations within the database.

Much of our work with IBIS has been done at the province level and so includes the U.S. and Canadian portions of both the Flathead and Kootenai Subbasins. In the course of our analysis, we discovered there were differences between the species lists for Canada, the Flathead, and the Kootenai. We then tried to understand why there were differences and how they might affect our analysis. We learned that there are some real differences in species composition between the U.S. and Canada and there are also errors in the database that account for differences. After careful examination of those differences and consultation with IBIS staff we decided that the differences were not significant for the kind of trend analysis we were conducting. (The differences are not clustered within a particular key ecological function or in a particular biome, and because we are concerned with determining trends rather than absolute differences between biomes with regard to species composition and related ecological impacts, it is unlikely that the discrepancies in the dataset are significant.) Further, IBIS personnel in the U.S. and Canada felt that the Canada database was probably the best list of species to use that was available at the moment for any detail work beyond what was already provided using the IBIS-USA website.