

Appendix B. IBIS. 2003. Tables of Wildlife Species Occurrence, T&E, Partners in Flight, Historical References, and Environmental Setting in the Lake Chelan Subbasin.

Table 1. Wildlife species occurrence for the Lake Chelan subbasin, Washington (IBIS 2003).

	Common Name	Scientific Name	Salmonid Relationship	Closely Associated with Riparian Wetland	Closely Associated with Other Wetlands
Amphibians					
	Tiger Salamander	<i>Ambystoma tigrinum</i>		1	
	Long-toed Salamander	<i>Ambystoma macrodactylum</i>		1	
	Pacific Giant Salamander	<i>Dicamptodon tenebrosus</i>	1		
	Rough-skinned Newt	<i>Taricha granulosa</i>			1
	Tailed Frog	<i>Ascaphus truei</i>		1	
	Great Basin Spadefoot	<i>Scaphiopus intermontanus</i>		1	
	Western Toad	<i>Bufo boreas</i>		1	
	Pacific Chorus (Tree) Frog	<i>Pseudacris regilla</i>		1	
	Cascades Frog	<i>Rana cascadae</i>			
	Columbia Spotted Frog	<i>Rana luteiventris</i>		1	
	Bullfrog	<i>Rana catesbeiana</i>		1	
	Total Amphibians:	11	Total: 1	8	1
Birds					
	Common Loon	<i>Gavia immer</i>	1		1
	Pied-billed Grebe	<i>Podilymbus podiceps</i>	1		1
	Red-necked Grebe	<i>Podiceps grisegena</i>	1		1
	Eared Grebe	<i>Podiceps nigricollis</i>			1
	American Bittern	<i>Botaurus lentiginosus</i>			1
	Great Blue Heron	<i>Ardea herodias</i>	1	1	
	Black-crowned Night-heron	<i>Nycticorax nycticorax</i>	1	1	
	Turkey Vulture	<i>Cathartes aura</i>	1		
	Canada Goose	<i>Branta canadensis</i>			1
	Tundra Swan	<i>Cygnus columbianus</i>			
	Wood Duck	<i>Aix sponsa</i>		1	
	Gadwall	<i>Anas strepera</i>			1
	American Wigeon	<i>Anas americana</i>			1
	Mallard	<i>Anas platyrhynchos</i>	1	1	
	Blue-winged Teal	<i>Anas discors</i>			1
	Cinnamon Teal	<i>Anas cyanoptera</i>			1
	Northern Shoveler	<i>Anas clypeata</i>			1
	Northern Pintail	<i>Anas acuta</i>			1
	Green-winged Teal	<i>Anas crecca</i>	1		1
	Canvasback	<i>Aythya valisineria</i>	1		1
	Redhead	<i>Aythya americana</i>			1

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	Ring-necked Duck	<i>Aythya collaris</i>			
	Greater Scaup	<i>Aythya marila</i>	1		
	Harlequin Duck	<i>Histrionicus histrionicus</i>	1	1	
	Barrow's Goldeneye	<i>Bucephala islandica</i>	1		
	Hooded Merganser	<i>Lophodytes cucullatus</i>	1	1	
	Common Merganser	<i>Mergus merganser</i>	1	1	
	Ruddy Duck	<i>Oxyura jamaicensis</i>			1
	Osprey	<i>Pandion haliaetus</i>	1		
	Northern Harrier	<i>Circus cyaneus</i>			
	Sharp-shinned Hawk	<i>Accipiter striatus</i>			
	Cooper's Hawk	<i>Accipiter cooperii</i>			
	Northern Goshawk	<i>Accipiter gentilis</i>			
	Swainson's Hawk	<i>Buteo swainsoni</i>			
	Red-tailed Hawk	<i>Buteo jamaicensis</i>	1		
	Rough-legged Hawk	<i>Buteo lagopus</i>			
	Golden Eagle	<i>Aquila chrysaetos</i>	1		
	American Kestrel	<i>Falco sparverius</i>			
	Gyrfalcon	<i>Falco rusticolus</i>	1		
	Prairie Falcon	<i>Falco mexicanus</i>			
	Chukar	<i>Alectoris chukar</i>			
	Gray Partridge	<i>Perdix perdix</i>			
	Ring-necked Pheasant	<i>Phasianus colchicus</i>		1	
	Ruffed Grouse	<i>Bonasa umbellus</i>		1	
	Spruce Grouse	<i>Falcipennis canadensis</i>			
	White-tailed Ptarmigan	<i>Lagopus leucurus</i>			
	Blue Grouse	<i>Dendragapus obscurus</i>		1	
	Sharp-tailed Grouse	<i>Tympanuchus phasianellus</i>		1	
	Wild Turkey	<i>Meleagris gallopavo</i>			
	California Quail	<i>Callipepla californica</i>			
	Virginia Rail	<i>Rallus limicola</i>			1
	Sora	<i>Porzana carolina</i>			1
	American Coot	<i>Fulica americana</i>			1
	Killdeer	<i>Charadrius vociferus</i>	1		
	American Avocet	<i>Recurvirostra americana</i>			1
	Greater Yellowlegs	<i>Tringa melanoleuca</i>	1		
	Lesser Yellowlegs	<i>Tringa flavipes</i>			
	Solitary Sandpiper	<i>Tringa solitaria</i>		1	
	Spotted Sandpiper	<i>Actitis macularia</i>	1		
	Long-billed Curlew	<i>Numenius americanus</i>			
	Semipalmated	<i>Calidris pusilla</i>			

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	Sandpiper				
	Western Sandpiper	<i>Calidris mauri</i>			
	Least Sandpiper	<i>Calidris minutilla</i>			
	Baird's Sandpiper	<i>Calidris bairdii</i>			
	Pectoral Sandpiper	<i>Calidris melanotos</i>			
	Stilt Sandpiper	<i>Calidris himantopus</i>			
	Long-billed Dowitcher	<i>Limnodromus scolopaceus</i>			
	Wilson's Snipe	<i>Gallinago gallinago</i>			1
	Wilson's Phalarope	<i>Phalaropus tricolor</i>			1
	Red-necked Phalarope	<i>Phalaropus lobatus</i>			
	Ring-billed Gull	<i>Larus delawarensis</i>	1		
	California Gull	<i>Larus californicus</i>	1		
	Herring Gull	<i>Larus argentatus</i>	1		
	Thayer's Gull	<i>Larus thayeri</i>	1		
	Glaucous Gull	<i>Larus hyperboreus</i>	1		
	Black Tern	<i>Chlidonias niger</i>			1
	Rock Dove	<i>Columba livia</i>			
	Mourning Dove	<i>Zenaida macroura</i>		1	
	Barn Owl	<i>Tyto alba</i>			
	Flammulated Owl	<i>Otus flammeolus</i>			
	Western Screech-owl	<i>Otus kennicottii</i>		1	
	Great Horned Owl	<i>Bubo virginianus</i>			
	Snowy Owl	<i>Nyctea scandiaca</i>	1		
	Northern Pygmy-owl	<i>Glaucidium gnoma</i>			
	Burrowing Owl	<i>Athene cunicularia</i>			
	Barred Owl	<i>Strix varia</i>			
	Great Gray Owl	<i>Strix nebulosa</i>			
	Long-eared Owl	<i>Asio otus</i>		1	
	Short-eared Owl	<i>Asio flammeus</i>			1
	Boreal Owl	<i>Aegolius funereus</i>			
	Northern Saw-whet Owl	<i>Aegolius acadicus</i>			
	Common Nighthawk	<i>Chordeiles minor</i>			
	Common Poorwill	<i>Phalaenoptilus nuttallii</i>			
	Black Swift	<i>Cypseloides niger</i>			
	Vaux's Swift	<i>Chaetura vauxi</i>			
	White-throated Swift	<i>Aeronautes saxatalis</i>			
	Black-chinned Hummingbird	<i>Archilochus alexandri</i>			
	Calliope Hummingbird	<i>Stellula calliope</i>			
	Rufous Hummingbird	<i>Selasphorus rufus</i>			
	Belted Kingfisher	<i>Ceryle alcyon</i>	1	1	

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	Lewis's Woodpecker	<i>Melanerpes lewis</i>			
	Williamson's Sapsucker	<i>Sphyrapicus thyroideus</i>			
	Red-naped Sapsucker	<i>Sphyrapicus nuchalis</i>		1	
	Red-breasted Sapsucker	<i>Sphyrapicus ruber</i>			
	Downy Woodpecker	<i>Picoides pubescens</i>			
	Hairy Woodpecker	<i>Picoides villosus</i>			
	White-headed Woodpecker	<i>Picoides albolarvatus</i>			
	Three-toed Woodpecker	<i>Picoides tridactylus</i>			
	Black-backed Woodpecker	<i>Picoides arcticus</i>			
	Northern Flicker	<i>Colaptes auratus</i>			
	Pileated Woodpecker	<i>Dryocopus pileatus</i>			
	Olive-sided Flycatcher	<i>Contopus cooperi</i>			
	Western Wood-pewee	<i>Contopus sordidulus</i>			
	Willow Flycatcher	<i>Empidonax traillii</i>	1	1	
	Hammond's Flycatcher	<i>Empidonax hammondii</i>			
	Gray Flycatcher	<i>Empidonax wrightii</i>			
	Dusky Flycatcher	<i>Empidonax oberholseri</i>			
	Pacific-slope Flycatcher	<i>Empidonax difficilis</i>			
	Cordilleran Flycatcher	<i>Empidonax occidentalis</i>		1	
	Say's Phoebe	<i>Sayornis saya</i>			
	Western Kingbird	<i>Tyrannus verticalis</i>			
	Eastern Kingbird	<i>Tyrannus tyrannus</i>			
	Loggerhead Shrike	<i>Lanius ludovicianus</i>			
	Northern Shrike	<i>Lanius excubitor</i>			
	Cassin's Vireo	<i>Vireo cassinii</i>			
	Warbling Vireo	<i>Vireo gilvus</i>		1	
	Red-eyed Vireo	<i>Vireo olivaceus</i>		1	
	Gray Jay	<i>Perisoreus canadensis</i>	1		
	Steller's Jay	<i>Cyanocitta stelleri</i>	1		
	Clark's Nutcracker	<i>Nucifraga columbiana</i>			
	Black-billed Magpie	<i>Pica pica</i>	1	1	
	American Crow	<i>Corvus brachyrhynchos</i>	1		
	Northwestern Crow	<i>Corvus caurinus</i>	1		
	Common Raven	<i>Corvus corax</i>	1		
	Horned Lark	<i>Eremophila alpestris</i>			
	Tree Swallow	<i>Tachycineta bicolor</i>	1	1	

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	Violet-green Swallow	<i>Tachycineta thalassina</i>	1		
	Northern Rough-winged Swallow	<i>Stelgidopteryx serripennis</i>	1	1	
	Bank Swallow	<i>Riparia riparia</i>	1	1	
	Cliff Swallow	<i>Petrochelidon pyrrhonota</i>	1	1	
	Barn Swallow	<i>Hirundo rustica</i>	1	1	
	Black-capped Chickadee	<i>Poecile atricapillus</i>			
	Mountain Chickadee	<i>Poecile gambeli</i>			
	Chestnut-backed Chickadee	<i>Poecile rufescens</i>			
	Boreal Chickadee	<i>Poecile hudsonicus</i>			
	Red-breasted Nuthatch	<i>Sitta canadensis</i>			
	White-breasted Nuthatch	<i>Sitta carolinensis</i>			
	Pygmy Nuthatch	<i>Sitta pygmaea</i>		1	
	Brown Creeper	<i>Certhia americana</i>			
	Rock Wren	<i>Salpinctes obsoletus</i>			
	Canyon Wren	<i>Catherpes mexicanus</i>			
	House Wren	<i>Troglodytes aedon</i>			
	Winter Wren	<i>Troglodytes troglodytes</i>	1		
	Marsh Wren	<i>Cistothorus palustris</i>			1
	American Dipper	<i>Cinclus mexicanus</i>	1	1	
	Golden-crowned Kinglet	<i>Regulus satrapa</i>			
	Ruby-crowned Kinglet	<i>Regulus calendula</i>			
	Western Bluebird	<i>Sialia mexicana</i>			
	Mountain Bluebird	<i>Sialia currucoides</i>			
	Townsend's Solitaire	<i>Myadestes townsendi</i>			
	Veery	<i>Catharus fuscescens</i>		1	
	Swainson's Thrush	<i>Catharus ustulatus</i>			
	Hermit Thrush	<i>Catharus guttatus</i>			
	American Robin	<i>Turdus migratorius</i>	1		
	Varied Thrush	<i>Ixoreus naevius</i>	1		
	Gray Catbird	<i>Dumetella carolinensis</i>		1	
	Sage Thrasher	<i>Oreoscoptes montanus</i>			
	European Starling	<i>Sturnus vulgaris</i>		1	
	American Pipit	<i>Anthus rubescens</i>			
	Bohemian Waxwing	<i>Bombycilla garrulus</i>			
	Cedar Waxwing	<i>Bombycilla cedrorum</i>		1	
	Orange-crowned	<i>Vermivora celata</i>			

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	Warbler				
	Nashville Warbler	<i>Vermivora ruficapilla</i>			
	Yellow Warbler	<i>Dendroica petechia</i>		1	
	Yellow-rumped Warbler	<i>Dendroica coronata</i>			
	Black-throated Gray Warbler	<i>Dendroica nigrescens</i>			
	Townsend's Warbler	<i>Dendroica townsendi</i>			
	American Redstart	<i>Setophaga ruticilla</i>		1	
	Northern Waterthrush	<i>Seiurus noveboracensis</i>		1	
	Macgillivray's Warbler	<i>Oporornis tolmiei</i>			
	Common Yellowthroat	<i>Geothlypis trichas</i>		1	
	Wilson's Warbler	<i>Wilsonia pusilla</i>			
	Yellow-breasted Chat	<i>Icteria virens</i>		1	
	Western Tanager	<i>Piranga ludoviciana</i>			
	Spotted Towhee	<i>Pipilo maculatus</i>	1		
	American Tree Sparrow	<i>Spizella arborea</i>			
	Chipping Sparrow	<i>Spizella passerina</i>			
	Brewer's Sparrow	<i>Spizella breweri</i>			
	Vesper Sparrow	<i>Pooecetes gramineus</i>			
	Lark Sparrow	<i>Chondestes grammacus</i>			
	Black-throated Sparrow	<i>Amphispiza bilineata</i>			
	Sage Sparrow	<i>Amphispiza belli</i>			
	Savannah Sparrow	<i>Passerculus sandwichensis</i>			
	Grasshopper Sparrow	<i>Ammodramus savannarum</i>			
	Fox Sparrow	<i>Passerella iliaca</i>		1	
	Song Sparrow	<i>Melospiza melodia</i>	1		
	Lincoln's Sparrow	<i>Melospiza lincolnii</i>		1	
	White-crowned Sparrow	<i>Zonotrichia leucophrys</i>			
	Dark-eyed Junco	<i>Junco hyemalis</i>			
	Lapland Longspur	<i>Calcarius lapponicus</i>			
	Snow Bunting	<i>Plectrophenax nivalis</i>			
	Black-headed Grosbeak	<i>Pheucticus melanocephalus</i>			
	Lazuli Bunting	<i>Passerina amoena</i>		1	
	Bobolink	<i>Dolichonyx oryzivorus</i>			
	Red-winged Blackbird	<i>Agelaius phoeniceus</i>			1
	Western Meadowlark	<i>Sturnella neglecta</i>			
	Yellow-headed	<i>Xanthocephalus</i>			1

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	Blackbird	<i>xanthocephalus</i>			
	Brewer's Blackbird	<i>Euphagus cyanocephalus</i>			
	Brown-headed Cowbird	<i>Molothrus ater</i>			
	Bullock's Oriole	<i>Icterus bullockii</i>		1	
	Gray-crowned Rosy-Finch	<i>Leucosticte tephrocotis</i>			
	Pine Grosbeak	<i>Pinicola enucleator</i>			
	Cassin's Finch	<i>Carpodacus cassinii</i>			
	House Finch	<i>Carpodacus mexicanus</i>			
	Red Crossbill	<i>Loxia curvirostra</i>			
	White-winged Crossbill	<i>Loxia leucoptera</i>			
	Common Redpoll	<i>Carduelis flammea</i>			
	Pine Siskin	<i>Carduelis pinus</i>			
	American Goldfinch	<i>Carduelis tristis</i>			
	Evening Grosbeak	<i>Coccothraustes vespertinus</i>			
	House Sparrow	<i>Passer domesticus</i>			
	Total Birds:	221	Total: 47	42	28
Mammals					
	Virginia Opossum	<i>Didelphis virginiana</i>	1		
	Masked Shrew	<i>Sorex cinereus</i>	1		
	Vagrant Shrew	<i>Sorex vagrans</i>	1		
	Montane Shrew	<i>Sorex monticolus</i>	1		
	Water Shrew	<i>Sorex palustris</i>	1	1	
	Pacific Water Shrew	<i>Sorex bendirii</i>	1		
	Trowbridge's Shrew	<i>Sorex trowbridgii</i>	1		
	Merriam's Shrew	<i>Sorex merriami</i>			
	Shrew-mole	<i>Neurotrichus gibbsii</i>			
	Coast Mole	<i>Scapanus orarius</i>			
	California Myotis	<i>Myotis californicus</i>			
	Western Small-footed Myotis	<i>Myotis ciliolabrum</i>		1	
	Yuma Myotis	<i>Myotis yumanensis</i>		1	
	Little Brown Myotis	<i>Myotis lucifugus</i>			
	Long-legged Myotis	<i>Myotis volans</i>		1	
	Fringed Myotis	<i>Myotis thysanodes</i>			
	Long-eared Myotis	<i>Myotis evotis</i>			
	Silver-haired Bat	<i>Lasionycteris noctivagans</i>			
	Western Pipistrelle	<i>Pipistrellus hesperus</i>		1	
	Big Brown Bat	<i>Eptesicus fuscus</i>		1	
	Hoary Bat	<i>Lasiurus cinereus</i>			

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	Spotted Bat	<i>Euderma maculatum</i>			
	Townsend's Big-eared Bat	<i>Corynorhinus townsendii</i>			
	Pallid Bat	<i>Antrozous pallidus</i>		1	
	American Pika	<i>Ochotona princeps</i>			
	Nuttall's (Mountain) Cottontail	<i>Sylvilagus nuttallii</i>			
	Snowshoe Hare	<i>Lepus americanus</i>		1	
	White-tailed Jackrabbit	<i>Lepus townsendii</i>			
	Black-tailed Jackrabbit	<i>Lepus californicus</i>			
	Mountain Beaver	<i>Aplodontia rufa</i>			
	Least Chipmunk	<i>Tamias minimus</i>			
	Yellow-pine Chipmunk	<i>Tamias amoenus</i>			
	Townsend's Chipmunk	<i>Tamias townsendii</i>			
	Yellow-bellied Marmot	<i>Marmota flaviventris</i>			
	Hoary Marmot	<i>Marmota caligata</i>			
	Washington Ground Squirrel	<i>Spermophilus washingtoni</i>			
	Columbian Ground Squirrel	<i>Spermophilus columbianus</i>			
	Golden-mantled Ground Squirrel	<i>Spermophilus lateralis</i>			
	Cascade Golden-mantled Ground Squirrel	<i>Spermophilus saturatus</i>			
	Eastern Fox Squirrel	<i>Sciurus niger</i>			
	Western Gray Squirrel	<i>Sciurus griseus</i>			
	Red Squirrel	<i>Tamiasciurus hudsonicus</i>			
	Douglas' Squirrel	<i>Tamiasciurus douglasii</i>	1		
	Northern Flying Squirrel	<i>Glaucomys sabrinus</i>	1		
	Northern Pocket Gopher	<i>Thomomys talpoides</i>			
	Great Basin Pocket Mouse	<i>Perognathus parvus</i>			
	American Beaver	<i>Castor canadensis</i>		1	
	Western Harvest Mouse	<i>Reithrodontomys megalotis</i>		1	
	Deer Mouse	<i>Peromyscus maniculatus</i>	1	1	
	Columbian Mouse	<i>Peromyscus keeni</i>			
	Northern Grasshopper Mouse	<i>Onychomys leucogaster</i>			
	Bushy-tailed Woodrat	<i>Neotoma cinerea</i>		1	
	Southern Red-backed	<i>Clethrionomys</i>		1	



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	Vole	<i>gapperi</i>			
	Heather Vole	<i>Phenacomys intermedius</i>			
	Meadow Vole	<i>Microtus pennsylvanicus</i>		1	
	Montane Vole	<i>Microtus montanus</i>			1
	Long-tailed Vole	<i>Microtus longicaudus</i>		1	
	Creeping Vole	<i>Microtus oregoni</i>			
	Water Vole	<i>Microtus richardsoni</i>		1	
	Sagebrush Vole	<i>Lemmiscus curtatus</i>			
	Muskrat	<i>Ondatra zibethicus</i>		1	
	Northern Bog Lemming	<i>Synaptomys borealis</i>			1
	Black Rat	<i>Rattus rattus</i>			
	Norway Rat	<i>Rattus norvegicus</i>			
	House Mouse	<i>Mus musculus</i>			
	Western Jumping Mouse	<i>Zapus princeps</i>		1	
	Pacific Jumping Mouse	<i>Zapus trinotatus</i>		1	
	Common Porcupine	<i>Erethizon dorsatum</i>			
	Nutria	<i>Myocastor coypus</i>			1
	Coyote	<i>Canis latrans</i>	1		
	Gray Wolf	<i>Canis lupus</i>	1		
	Red Fox	<i>Vulpes vulpes</i>	1		
	Black Bear	<i>Ursus americanus</i>	1		
	Grizzly Bear	<i>Ursus arctos</i>	1		
	Raccoon	<i>Procyon lotor</i>	1	1	
	American Marten	<i>Martes americana</i>	1		
	Fisher	<i>Martes pennanti</i>	1		
	Ermine	<i>Mustela erminea</i>			
	Long-tailed Weasel	<i>Mustela frenata</i>	1		
	Mink	<i>Mustela vison</i>	1	1	
	Wolverine	<i>Gulo gulo</i>	1		
	American Badger	<i>Taxidea taxus</i>			
	Striped Skunk	<i>Mephitis mephitis</i>	1		
	Northern River Otter	<i>Lutra canadensis</i>	1	1	
	Mountain Lion	<i>Puma concolor</i>	1		
	Lynx	<i>Lynx canadensis</i>			
	Bobcat	<i>Lynx rufus</i>	1		
	Elk	<i>Cervus elaphus</i>			
	Mule Deer	<i>Odocoileus hemionus</i>			
	White-tailed Deer	<i>Odocoileus virginianus</i>			
	Moose	<i>Alces alces</i>			
	Mountain Goat	<i>Oreamnos</i>			

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		<i>americanus</i>			
	Bighorn Sheep	<i>Ovis canadensis</i>		22	
	Total Mammals:	93	Total: 25	22	3
Reptiles					
	Painted Turtle	<i>Chrysemys picta</i>			
	Northern Alligator Lizard	<i>Elgaria coerulea</i>			
	Short-horned Lizard	<i>Phrynosoma douglassii</i>			
	Sagebrush Lizard	<i>Sceloporus graciosus</i>			
	Western Fence Lizard	<i>Sceloporus occidentalis</i>			
	Side-blotched Lizard	<i>Uta stansburiana</i>			
	Western Skink	<i>Eumeces skiltonianus</i>			
	Rubber Boa	<i>Charina bottae</i>			
	Racer	<i>Coluber constrictor</i>			
	Sharptail Snake	<i>Contia tenuis</i>			
	Night Snake	<i>Hypsiglena torquata</i>			
	Striped Whipsnake	<i>Masticophis taeniatus</i>			
	Gopher Snake	<i>Pituophis catenifer</i>			
	Western Terrestrial Garter Snake	<i>Thamnophis elegans</i>	1		
	Common Garter Snake	<i>Thamnophis sirtalis</i>	1	1	
	Western Rattlesnake	<i>Crotalus viridis</i>			
	Total Reptiles:	16	Total: 2	1	0
	Total Species:	341	Total: 75	73	32

Table 2. Species richness and associations for the Lake Chelan subbasin, Washington (IBIS 2003).

Class	Lake Chelan	% of Total	Total (Ecoprovince)
Amphibians	11	65	17
Birds	221	94	234
Mammals	93	96	97
Reptiles	16	84	19
Total	342	93	367
Association			
Riparian Wetlands	73	94	78
Other Wetlands (Herbaceous and Montane Coniferous)	32	86	37
All Wetlands	105	91	115
Salmonids	75	90	83

Table 3. Non-native wildlife species of the Lake Chelan subbasin, Washington (IBIS 2003).

Common Name	Scientific Name
Bullfrog	<i>Rana catesbeiana</i>
Chukar	<i>Alectoris chukar</i>
Gray Partridge	<i>Perdix perdix</i>
Ring-necked Pheasant	<i>Phasianus colchicus</i>
Wild Turkey	<i>Meleagris gallopavo</i>
California Quail	<i>Callipepla californica</i>
Rock Dove	<i>Columba livia</i>
European Starling	<i>Sturnus vulgaris</i>
House Sparrow	<i>Passer domesticus</i>
Virginia Opossum	<i>Didelphis virginiana</i>
Eastern Cottontail	<i>Sylvilagus floridanus</i>
Cascade Golden-mantled Ground Squirrel	<i>Spermophilus saturatus</i>
Eastern Gray Squirrel	<i>Sciurus carolinensis</i>
Black Rat	<i>Rattus rattus</i>
Norway Rat	<i>Rattus norvegicus</i>
House Mouse	<i>Mus musculus</i>
Nutria	<i>Myocastor coypus</i>

Table 4. Threatened and endangered species of the Lake Chelan subbasin, Washington (IBIS 2003).

	Common Name	Scientific Name	State Status		Federal Status
Amphibians					
	Dunn's Salamander	<i>Plethodon dunni</i>	WA	Candidate Species	
	Western Toad	<i>Bufo boreas</i>	WA	Candidate Species	
	Columbia Spotted Frog	<i>Rana luteiventris</i>	WA	Candidate Species	
	Northern Leopard Frog	<i>Rana pipiens</i>	WA	Endangered	
Total Listed Amphibians:		4			

	Common Name	Scientific Name	State Status		Federal Status
Birds					
	Common Loon	<i>Gavia immer</i>	WA	Sensitive	
	Western Grebe	<i>Aechmophorus occidentalis</i>	WA	Candidate Species	
	Northern Goshawk	<i>Accipiter gentilis</i>	WA	Candidate Species	
	Ferruginous Hawk	<i>Buteo regalis</i>	WA	Threatened	
	Golden Eagle	<i>Aquila chrysaetos</i>	WA	Candidate Species	
	Sage Grouse	<i>Centrocercus urophasianus</i>	WA	Threatened	Anticipated Candidate
	Sharp-tailed Grouse	<i>Tympanuchus phasianellus</i>	WA	Threatened	
	Marbled Murrelet	<i>Brachyramphus marmoratus</i>	WA	Threatened	Threatened
	Flammulated Owl	<i>Otus flammeolus</i>	WA	Candidate Species	
	Burrowing Owl	<i>Athene cunicularia</i>	WA	Candidate Species	
	Spotted Owl	<i>Strix occidentalis</i>	WA	Endangered	Threatened
	Vaux's Swift	<i>Chaetura vauxi</i>	WA	Candidate Species	
	Lewis's Woodpecker	<i>Melanerpes lewis</i>	WA	Candidate Species	
	White-headed Woodpecker	<i>Picoides albolarvatus</i>	WA	Candidate Species	
	Black-backed Woodpecker	<i>Picoides arcticus</i>	WA	Candidate Species	
	Pileated Woodpecker	<i>Dryocopus pileatus</i>	WA	Candidate Species	
	Loggerhead Shrike	<i>Lanius ludovicianus</i>	WA	Candidate Species	
	Horned Lark	<i>Eremophila alpestris</i>	WA	Candidate Species	Candidate
	White-breasted Nuthatch	<i>Sitta carolinensis</i>	WA	Candidate Species	
	Sage Thrasher	<i>Oreoscoptes montanus</i>	WA	Candidate Species	
	Vesper Sparrow	<i>Poocetes gramineus</i>	WA	Candidate Species	
	Sage Sparrow	<i>Amphispiza belli</i>	WA	Candidate Species	
Total Listed Birds:		22			
Mammals					
	Merriam's Shrew	<i>Sorex merriami</i>	WA	Candidate Species	
	Townsend's Big-eared Bat	<i>Corynorhinus townsendii</i>	WA	Candidate Species	
	Pygmy Rabbit	<i>Brachylagus idahoensis</i>	WA	Endangered	Endangered
	White-tailed Jackrabbit	<i>Lepus townsendii</i>	WA	Candidate Species	
	Black-tailed Jackrabbit	<i>Lepus californicus</i>	WA	Candidate	

	Common Name	Scientific Name	State Status		Federal Status
				Species	
	Washington Ground Squirrel	<i>Spermophilus washingtoni</i>	WA	Candidate Species	Anticipated Candidate
	Western Gray Squirrel	<i>Sciurus griseus</i>	WA	Threatened	
	Northern Pocket Gopher	<i>Thomomys talpoides</i>	WA	Candidate Species	
	Gray Wolf	<i>Canis lupus</i>	WA	Endangered	Endangered
	Grizzly Bear	<i>Ursus arctos</i>	WA	Endangered	Threatened
	Fisher	<i>Martes pennanti</i>	WA	Endangered	
	Wolverine	<i>Gulo gulo</i>	WA	Candidate Species	
	Lynx	<i>Lynx canadensis</i>	WA	Threatened	Threatened
	White-tailed Deer	<i>Odocoileus virginianus</i>	WA	Endangered	Endangered
Total Listed Mammals:		14			
Reptiles					
	Sharptail Snake	<i>Contia tenuis</i>	WA	Candidate Species	
	Striped Whipsnake	<i>Masticophis taeniatus</i>	WA	Candidate Species	
Total Listed Reptiles:		2			
Total Listed Species:		42			

Table 5. Partners in Flight species of the Lake Chelan subbasin, Washington (IBIS 2003).

Common Name	Scientific Name	PIF 1998-1999 Continental	PIF Ranking by Super Region Draft 2002	WA PIF Priority & Focal Species
Northern Harrier	<i>Circus cyaneus</i>			Yes
Swainson's Hawk	<i>Buteo swainsoni</i>		MO (Intermountain West, Prairies)	Yes
Ferruginous Hawk	<i>Buteo regalis</i>			Yes
Rough-legged Hawk	<i>Buteo lagopus</i>		PR (Arctic)	
American Kestrel	<i>Falco sparverius</i>			Yes
Gyr Falcon	<i>Falco rusticolus</i>		PR (Arctic)	
Sage Grouse	<i>Centrocercus urophasianus</i>		MA (Intermountain West, Prairies)	
Spruce Grouse	<i>Falcapennis canadensis</i>		PR (Northern Forests)	
White-tailed Ptarmigan	<i>Lagopus leucurus</i>		MO (Arctic)	
Blue Grouse	<i>Dendragapus obscurus</i>		MA (Pacific, Intermountain West)	
Sharp-tailed Grouse	<i>Tympanuchus phasianellus</i>		MO (Prairies)	Yes
Long-billed Curlew	<i>Numenius americanus</i>	Yes		
Stilt Sandpiper	<i>Calidris himantopus</i>	Yes		
Flammulated Owl	<i>Otus flammeolus</i>		MO (Pacific, Intermountain)	Yes

Common Name	Scientific Name	PIF 1998-1999 Continental	PIF Ranking by Super Region Draft 2002	WA PIF Priority & Focal Species
			West, Southwest)	
Snowy Owl	<i>Nyctea scandiaca</i>		PR (Arctic)	
Northern Pygmy-owl	<i>Glaucidium gnoma</i>		PR (Pacific)	
Burrowing Owl	<i>Athene cunicularia</i>			Yes
Spotted Owl	<i>Strix occidentalis</i>		IM (Pacific, Intermountain West, Southwest)	
Great Gray Owl	<i>Strix nebulosa</i>			Yes
Short-eared Owl	<i>Asio flammeus</i>	Yes	MA (Arctic, Northern Forests, Intermountain West, Prairies)	Yes
Common Poorwill	<i>Phalaenoptilus nuttallii</i>			Yes
Black Swift	<i>Cypseloides niger</i>	Yes	IM (Pacific, Intermountain West)	Yes
Vaux's Swift	<i>Chaetura vauxi</i>			Yes
White-throated Swift	<i>Aeronautes saxatalis</i>		MA (Intermountain West, Southwest)	Yes
Calliope Hummingbird	<i>Stellula calliope</i>		MO (Intermountain West)	Yes
Rufous Hummingbird	<i>Selasphorus rufus</i>	Yes	MA (Pacific, Intermountain West)	Yes
Lewis's Woodpecker	<i>Melanerpes lewis</i>	Yes	MO (Intermountain West, Prairies)	Yes
Williamson's Sapsucker	<i>Sphyrapicus thyroideus</i>		MO (Intermountain West)	Yes
Red-naped Sapsucker	<i>Sphyrapicus nuchalis</i>		MO (Intermountain West)	Yes
Red-breasted Sapsucker	<i>Sphyrapicus ruber</i>		MO (Pacific)	Yes
Downy Woodpecker	<i>Picoides pubescens</i>			Yes
White-headed Woodpecker	<i>Picoides albolarvatus</i>	Yes	PR (Pacific, Intermountain West)	Yes
Three-toed Woodpecker	<i>Picoides tridactylus</i>		PR (Northern Forests)	
Black-backed Woodpecker	<i>Picoides arcticus</i>		PR (Northern Forests)	Yes
Pileated Woodpecker	<i>Dryocopus pileatus</i>			Yes

Common Name	Scientific Name	PIF 1998-1999 Continental	PIF Ranking by Super Region Draft 2002	WA PIF Priority & Focal Species
Olive-sided Flycatcher	<i>Contopus cooperi</i>		MA (Pacific, Northern Forests, Intermountain West)	Yes
Western Wood-pewee	<i>Contopus sordidulus</i>			Yes
Willow Flycatcher	<i>Empidonax traillii</i>		MA (Prairies, East)	Yes
Hammond's Flycatcher	<i>Empidonax hammondii</i>			Yes
Gray Flycatcher	<i>Empidonax wrightii</i>		PR (Intermountain West)	Yes
Dusky Flycatcher	<i>Empidonax oberholseri</i>		MA (Intermountain West)	Yes
Pacific-slope Flycatcher	<i>Empidonax difficilis</i>		PR (Pacific)	Yes
Loggerhead Shrike	<i>Lanius ludovicianus</i>			Yes
Northern Shrike	<i>Lanius excubitor</i>		PR (Northern Forests)	
Warbling Vireo	<i>Vireo gilvus</i>			Yes
Red-eyed Vireo	<i>Vireo olivaceus</i>			Yes
Gray Jay	<i>Perisoreus canadensis</i>		PR (Northern Forests)	
Clark's Nutcracker	<i>Nucifraga columbiana</i>		PR (Intermountain West)	Yes
Horned Lark	<i>Eremophila alpestris</i>			Yes
Bank Swallow	<i>Riparia riparia</i>			Yes
Chestnut-backed Chickadee	<i>Poecile rufescens</i>		PR (Pacific)	
Boreal Chickadee	<i>Poecile hudsonicus</i>		MA (Northern Forests)	
White-breasted Nuthatch	<i>Sitta carolinensis</i>			Yes
Brown Creeper	<i>Certhia americana</i>			Yes
House Wren	<i>Troglodytes aedon</i>			Yes
Winter Wren	<i>Troglodytes troglodytes</i>			Yes
American Dipper	<i>Cinclus mexicanus</i>			Yes
Western Bluebird	<i>Sialia mexicana</i>			Yes
Mountain Bluebird	<i>Sialia currucoides</i>		PR (Intermountain West)	
Townsend's Solitaire	<i>Myadestes townsendi</i>			Yes
Veery	<i>Catharus fuscescens</i>			Yes
Swainson's Thrush	<i>Catharus ustulatus</i>			Yes
Hermit Thrush	<i>Catharus guttatus</i>			Yes
Varied Thrush	<i>Ixoreus naevius</i>			Yes
Sage Thrasher	<i>Oreoscoptes montanus</i>		PR (Intermountain West)	Yes
American Pipit	<i>Anthus rubescens</i>		PR (Arctic)	Yes

Common Name	Scientific Name	PIF 1998-1999 Continental	PIF Ranking by Super Region Draft 2002	WA PIF Priority & Focal Species
Bohemian Waxwing	<i>Bombycilla garrulus</i>		MA (Northern Forests)	
Orange-crowned Warbler	<i>Vermivora celata</i>			Yes
Nashville Warbler	<i>Vermivora ruficapilla</i>		PR (Northern Forests)	Yes
Yellow Warbler	<i>Dendroica petechia</i>			Yes
Yellow-rumped Warbler	<i>Dendroica coronata</i>			Yes
Black-throated Gray Warbler	<i>Dendroica nigrescens</i>		MO (Pacific)	Yes
Townsend's Warbler	<i>Dendroica townsendi</i>			Yes
Hermit Warbler	<i>Dendroica occidentalis</i>	Yes	MO (Pacific)	Yes
Macgillivray's Warbler	<i>Oporornis tolmiei</i>			Yes
Wilson's Warbler	<i>Wilsonia pusilla</i>			Yes
Yellow-breasted Chat	<i>Icteria virens</i>			Yes
Western Tanager	<i>Piranga ludoviciana</i>			Yes
Chipping Sparrow	<i>Spizella passerina</i>			Yes
Brewer's Sparrow	<i>Spizella breweri</i>	Yes	MA (Intermountain West)	Yes
Vesper Sparrow	<i>Pooecetes gramineus</i>			Yes
Lark Sparrow	<i>Chondestes grammacus</i>			Yes
Black-throated Sparrow	<i>Amphispiza bilineata</i>			Yes
Sage Sparrow	<i>Amphispiza belli</i>	Yes	PR (Intermountain West)	Yes
Grasshopper Sparrow	<i>Ammodramus savannarum</i>		MA (Prairies)	Yes
Fox Sparrow	<i>Passerella iliaca</i>			Yes
Lincoln's Sparrow	<i>Melospiza lincolni</i>		PR (Northern Forests)	Yes
Lapland Longspur	<i>Calcarius lapponicus</i>		PR (Arctic)	
Snow Bunting	<i>Plectrophenax nivalis</i>		PR (Arctic)	
Black-headed Grosbeak	<i>Pheucticus melanocephalus</i>			Yes
Bobolink	<i>Dolichonyx oryzivorus</i>	Yes		
Western Meadowlark	<i>Sturnella neglecta</i>			Yes
Bullock's Oriole	<i>Icterus bullockii</i>			Yes
Pine Grosbeak	<i>Pinicola enucleator</i>		MO (Northern Forests)	
Purple Finch	<i>Carpodacus purpureus</i>			Yes
Cassin's Finch	<i>Carpodacus cassinii</i>		MA (Intermountain West)	
Red Crossbill	<i>Loxia curvirostra</i>			Yes
White-winged Crossbill	<i>Loxia leucoptera</i>		PR (Northern Forests)	
Total Species:	98			



Table 6. Wildlife game species of the Lake Chelan subbasin, Washington (IBIS 2003).

	Common Name	Scientific Name	WA
Amphibians			
	Bullfrog	<i>Rana catesbeiana</i>	Game Species
	Total Game Amphibians:	1	
Birds			
	Canada Goose	<i>Branta canadensis</i>	Game Bird
	Wood Duck	<i>Aix sponsa</i>	Game Bird
	Gadwall	<i>Anas strepera</i>	Game Bird
	American Wigeon	<i>Anas americana</i>	Game Bird
	Mallard	<i>Anas platyrhynchos</i>	Game Bird
	Blue-winged Teal	<i>Anas discors</i>	Game Bird
	Cinnamon Teal	<i>Anas cyanoptera</i>	Game Bird
	Northern Shoveler	<i>Anas clypeata</i>	Game Bird
	Northern Pintail	<i>Anas acuta</i>	Game Bird
	Green-winged Teal	<i>Anas crecca</i>	Game Bird
	Canvasback	<i>Aythya valisineria</i>	Game Bird
	Redhead	<i>Aythya americana</i>	Game Bird
	Ring-necked Duck	<i>Aythya collaris</i>	Game Bird
	Greater Scaup	<i>Aythya marila</i>	Game Bird
	Harlequin Duck	<i>Histrionicus histrionicus</i>	Game Bird
	Barrow's Goldeneye	<i>Bucephala islandica</i>	Game Bird
	Hooded Merganser	<i>Lophodytes cucullatus</i>	Game Bird
	Common Merganser	<i>Mergus merganser</i>	Game Bird
	Ruddy Duck	<i>Oxyura jamaicensis</i>	Game Bird
	Chukar	<i>Alectoris chukar</i>	Game Bird
	Gray Partridge	<i>Perdix perdix</i>	Game Bird
	Ring-necked Pheasant	<i>Phasianus colchicus</i>	Game Bird
	Ruffed Grouse	<i>Bonasa umbellus</i>	Game Bird
	Spruce Grouse	<i>Falcapennis canadensis</i>	Game Bird
	White-tailed Ptarmigan	<i>Lagopus leucurus</i>	Game Bird
	Blue Grouse	<i>Dendragapus obscurus</i>	Game Bird
	Wild Turkey	<i>Meleagris gallopavo</i>	Game Bird
	California Quail	<i>Callipepla californica</i>	Game Bird
	American Coot	<i>Fulica americana</i>	Game Bird
	Common Snipe	<i>Gallinago gallinago</i>	Game Bird
	Mourning Dove	<i>Zenaida macroura</i>	Game Bird
	Total Game Birds:	31	
Mammals			
	Eastern Cottontail	<i>Sylvilagus floridanus</i>	Game Mammal
	Nuttall's (Mountain) Cottontail	<i>Sylvilagus nuttallii</i>	Game Mammal
	Snowshoe Hare	<i>Lepus americanus</i>	Game Mammal
	White-tailed Jackrabbit	<i>Lepus townsendii</i>	Game Mammal
	Black-tailed Jackrabbit	<i>Lepus californicus</i>	Game Mammal

	American Beaver	<i>Castor canadensis</i>	Game Mammal
	Muskrat	<i>Ondatra zibethicus</i>	Game Mammal
	Red Fox	<i>Vulpes vulpes</i>	Game Mammal
	Black Bear	<i>Ursus americanus</i>	Game Mammal
	Raccoon	<i>Procyon lotor</i>	Game Mammal
	American Marten	<i>Martes americana</i>	Game Mammal
	Ermine	<i>Mustela erminea</i>	Game Mammal
	Long-tailed Weasel	<i>Mustela frenata</i>	Game Mammal
	Mink	<i>Mustela vison</i>	Game Mammal
	American Badger	<i>Taxidea taxus</i>	Game Mammal
	Northern River Otter	<i>Lutra canadensis</i>	Game Mammal
	Mountain Lion	<i>Puma concolor</i>	Game Mammal
	Bobcat	<i>Lynx rufus</i>	Game Mammal
	Elk	<i>Cervus elaphus</i>	Game Mammal
	Rocky Mountain Elk	<i>Cervus elaphus nelsoni</i>	Game Mammal
	Mule Deer	<i>Odocoileus hemionus</i>	Game Mammal
	Black-tailed Deer (westside)	<i>Odocoileus hemionus columbianus</i>	Game Mammal
	Moose	<i>Alces alces</i>	Game Mammal
	Mountain Goat	<i>Oreamnos americanus</i>	Game Mammal
	Bighorn Sheep	<i>Ovis canadensis</i>	Game Mammal
	Total Game Mammals:	25	
	Total Game Species:	57	

Establishment of conditions favorable to focal species also will likely benefit a wider group of species with similar habitat requirements ([Table 12](#)).

Table 7. Wildlife species occurrence by focal wildlife habitat type in the Lake Chelan subbasin, Washington (IBIS 2003).

Riparian Wetlands	Ponderosa Pine	Shrubsteppe	Agriculture
American Badger	American Badger	American Avocet	
American Beaver	American Beaver	American Badger	
American Crow	American Crow	American Crow	
American Dipper	American Goldfinch	American Goldfinch	
American Goldfinch	American Kestrel	American Kestrel	
American Kestrel	American Marten	American Robin	
American Marten	American Robin	Bank Swallow	
American Redstart	Bank Swallow	Barn Owl	
American Robin	Barn Swallow	Barn Swallow	
American Tree Sparrow	Barred Owl	Barrow's Goldeneye	
American Wigeon	Big Brown Bat	Big Brown Bat	
Bank Swallow	Black Bear	Black Bear	
Barn Owl	Black Swift	Black-billed Magpie	
Barn Swallow	Black-backed Woodpecker	Black-chinned Hummingbird	
Barred Owl	Black-billed Magpie	Black-tailed Jackrabbit	
Belted Kingfisher	Black-capped Chickadee	Black-throated Sparrow	
Big Brown Bat	Black-chinned Hummingbird	Blue Grouse	
Black Bear	Black-headed Grosbeak	Bobcat	
Black Swift	Black-throated Gray Warbler	Brewer's Blackbird	
Black-backed Woodpecker	Blue Grouse	Brewer's Sparrow	
Black-billed Magpie	Bobcat	Brown-headed Cowbird	
Black-capped Chickadee	Brewer's Blackbird	Bullfrog	
Black-chinned Hummingbird	Brewer's Sparrow	Burrowing Owl	
Black-crowned Night-heron	Brown Creeper	Bushy-tailed Woodrat	
Black-headed Grosbeak	Brown-headed Cowbird	California Myotis	
Black-throated Gray Warbler	Bullfrog	California Quail	
Blue Grouse	Bushy-tailed Woodrat	Canada Goose	
Bobcat	California Myotis	Canyon Wren	
Bobolink	California Quail	Chipping Sparrow	
Bohemian Waxwing	Calliope Hummingbird	Chukar	
Brewer's Blackbird	Canyon Wren	Cliff Swallow	
Brown Creeper	Cascade Golden-mantled Ground Squirrel	Columbia Spotted Frog	
Brown-headed Cowbird	Cassin's Finch	Columbian Ground Squirrel	
Bullfrog	Cassin's Vireo	Common Garter Snake	
Bullock's Oriole	Cedar Waxwing	Common Nighthawk	
Bushy-tailed Woodrat	Chipping Sparrow	Common Poorwill	
California Myotis	Clark's Nutcracker	Common Porcupine	
California Quail	Cliff Swallow	Common Raven	

Calliope Hummingbird	Coast Mole	Cooper's Hawk	
Canada Goose	Columbia Spotted Frog	Coyote	
Canyon Wren	Columbian Ground Squirrel	Deer Mouse	
Cascade Frog	Common Garter Snake	Eastern Kingbird	
Cassin's Finch	Common Nighthawk	European Starling	
Cassin's Vireo	Common Poorwill	Fringed Myotis	
Cedar Waxwing	Common Porcupine	Golden Eagle	
Chipping Sparrow	Common Raven	Golden-mantled Ground Squirrel	
Chukar	Cooper's Hawk	Gopher Snake	
Cliff Swallow	Coyote	Grasshopper Sparrow	
Coast Mole	Dark-eyed Junco	Gray Flycatcher	
Columbia Spotted Frog	Deer Mouse	Gray Partridge	
Columbian Ground Squirrel	Douglas' Squirrel	Great Basin Pocket Mouse	
Columbian Mouse	Downy Woodpecker	Great Basin Spadefoot	
Common Garter Snake	Dusky Flycatcher	Great Horned Owl	
Common Merganser	Eastern Kingbird	Greater Yellowlegs	
Common Nighthawk	Ermine	Hoary Bat	
Common Porcupine	European Starling	Horned Lark	
Common Raven	Evening Grosbeak	Killdeer	
Common Redpoll	Fisher	Lark Sparrow	
Common Yellowthroat	Flammulated Owl	Least Chipmunk	
Cooper's Hawk	Fox Sparrow	Lesser Yellowlegs	
Cordilleran Flycatcher	Fringed Myotis	Little Brown Myotis	
Coyote	Golden Eagle	Loggerhead Shrike	
Creeping Vole	Golden-crowned Kinglet	Long-billed Curlew	
Dark-eyed Junco	Golden-mantled Ground Squirrel	Long-eared Myotis	
Deer Mouse	Gopher Snake	Long-eared Owl	
Downy Woodpecker	Gray Flycatcher	Long-legged Myotis	
Dusky Flycatcher	Gray Jay	Long-tailed Vole	
Eastern Fox Squirrel	Gray Wolf	Long-tailed Weasel	
Eastern Kingbird	Great Basin Spadefoot	Long-toed Salamander	
Ermine	Great Gray Owl	Mallard	
European Starling	Great Horned Owl	Merriam's Shrew	
Evening Grosbeak	Grizzly Bear	Mink	
Fisher	Hairy Woodpecker	Montane Vole	
Flammulated Owl	Hammond's Flycatcher	Mountain Bluebird	
Fox Sparrow	Hermit Thrush	Mourning Dove	
Fringed Myotis	Hoary Bat	Mule Deer	
Golden Eagle	House Finch	Nashville Warbler	
Golden-crowned Kinglet	House Wren	Night Snake	
Golden-mantled Ground Squirrel	Killdeer	Northern Flicker	
Gopher Snake	Lark Sparrow	Northern Goshawk	
Gray Catbird	Lazuli Bunting	Northern Grasshopper Mouse	

Gray Jay	Least Chipmunk	Northern Harrier	
Great Basin Spadefoot	Lewis's Woodpecker	Northern Pocket Gopher	
Great Blue Heron	Little Brown Myotis	Northern Rough-winged Swallow	
Great Horned Owl	Long-eared Myotis	Northern Shrike	
Greater Yellowlegs	Long-eared Owl	Nuttall's (Mountain) Cottontail	
Green-winged Teal	Long-legged Myotis	Orange-crowned Warbler	
Grizzly Bear	Long-tailed Vole	Osprey	
Hairy Woodpecker	Long-tailed Weasel	Pacific Chorus (Tree) Frog	
Harlequin Duck	Long-toed Salamander	Painted Turtle	
Heather Vole	Macgillivray's Warbler	Pallid Bat	
Hermit Thrush	Masked Shrew	Prairie Falcon	
Hoary Bat	Mink	Racer	
Hooded Merganser	Montane Vole	Red-tailed Hawk	
House Finch	Mountain Bluebird	Ring-necked Pheasant	
House Wren	Mountain Chickadee	Rock Dove	
Killdeer	Mountain Lion	Rock Wren	
Lazuli Bunting	Mourning Dove	Rocky Mountain Elk	
Least Chipmunk	Mule Deer	Rough-legged Hawk	
Lesser Yellowlegs	Nashville Warbler	Rough-skinned Newt	
Lewis's Woodpecker	Night Snake	Rubber Boa	
Lincoln's Sparrow	Northern Alligator Lizard	Sage Sparrow	
Little Brown Myotis	Northern Flicker	Sage Thrasher	
Long-eared Myotis	Northern Flying Squirrel	Sagebrush Lizard	
Long-eared Owl	Northern Goshawk	Sagebrush Vole	
Long-legged Myotis	Northern Pocket Gopher	Savannah Sparrow	
Long-tailed Vole	Northern Pygmy-owl	Say's Phoebe	
Long-tailed Weasel	Northern Rough-winged Swallow	Sharp-shinned Hawk	
Long-toed Salamander	Northern Saw-whet Owl	Sharp-tailed Grouse	
Macgillivray's Warbler	Olive-sided Flycatcher	Short-eared Owl	
Mallard	Orange-crowned Warbler	Short-horned Lizard	
Masked Shrew	Osprey	Side-blotched Lizard	
Meadow Vole	Pacific Chorus (Tree) Frog	Snow Bunting	
Mink	Pacific Jumping Mouse	Solitary Sandpiper	
Montane Shrew	Painted Turtle	Spotted Bat	
Montane Vole	Pallid Bat	Spotted Sandpiper	
Moose	Pileated Woodpecker	Striped Whipsnake	
Mountain Bluebird	Pine Siskin	Swainson's Hawk	
Mountain Chickadee	Prairie Falcon	Tiger Salamander	
Mountain Lion	Pygmy Nuthatch	Townsend's Big-eared Bat	
Mourning Dove	Racer	Townsend's Solitaire	
Mule Deer	Red Crossbill	Turkey Vulture	
Muskrat	Red Fox	Vagrant Shrew	
Nashville Warbler	Red Squirrel	Vesper Sparrow	

Northern Alligator Lizard	Red-breasted Nuthatch	Washington Ground Squirrel	
Northern Flicker	Red-breasted Sapsucker	Western Fence Lizard	
Northern Flying Squirrel	Red-naped Sapsucker	Western Harvest Mouse	
Northern Goshawk	Red-tailed Hawk	Western Kingbird	
Northern Harrier	Ring-necked Pheasant	Western Meadowlark	
Northern Pocket Gopher	Rock Wren	Western Pipistrelle	
Northern Pygmy-owl	Rocky Mountain Elk	Western Rattlesnake	
Northern River Otter	Rough-legged Hawk	Western Skink	
Northern Rough-winged Swallow	Rough-skinned Newt	Western Small-footed Myotis	
Northern Saw-whet Owl	Rubber Boa	Western Terrestrial Garter Snake	
Northern Waterthrush	Ruby-crowned Kinglet	Western Toad	
Olive-sided Flycatcher	Ruffed Grouse	White-crowned Sparrow	
Orange-crowned Warbler	Rufous Hummingbird	White-tailed Jackrabbit	
Osprey	Sagebrush Lizard	White-throated Swift	
Pacific Chorus (Tree) Frog	Say's Phoebe	Yellow-bellied Marmot	
Pacific Jumping Mouse	Sharp-shinned Hawk	Yuma Myotis	
Pacific Water Shrew	Sharptail Snake		
Painted Turtle	Short-horned Lizard		
Pallid Bat	Silver-haired Bat		
Pied-billed Grebe	Snowshoe Hare		
Pileated Woodpecker	Song Sparrow		
Pine Siskin	Spotted Bat		
Prairie Falcon	Spotted Owl		
Pygmy Nuthatch	Spotted Towhee		
Raccoon	Steller's Jay		
Racer	Striped Skunk		
Red Crossbill	Striped Whipsnake		
Red Fox	Tailed Frog		
Red-breasted Nuthatch	Three-toed Woodpecker		
Red-breasted Sapsucker	Tiger Salamander		
Red-eyed Vireo	Townsend's Big-eared Bat		
Red-naped Sapsucker	Townsend's Solitaire		
Red-tailed Hawk	Townsend's Warbler		
Red-winged Blackbird	Tree Swallow		
Ring-necked Duck	Trowbridge's Shrew		
Ring-necked Pheasant	Turkey Vulture		
Rocky Mountain Elk	Vagrant Shrew		
Rough-legged Hawk	Varied Thrush		
Rough-skinned Newt	Vaux's Swift		
Rubber Boa	Violet-green Swallow		
Ruby-crowned Kinglet	Warbling Vireo		
Ruffed Grouse	Western Bluebird		
Rufous Hummingbird	Western Fence Lizard		
Savannah Sparrow	Western Gray Squirrel		
Say's Phoebe	Western Jumping Mouse		

Sharptail Snake	Western Kingbird		
Sharp-tailed Grouse	Western Pipistrelle		
Shrew-mole	Western Rattlesnake		
Silver-haired Bat	Western Screech-owl		
Snowshoe Hare	Western Skink		
Solitary Sandpiper	Western Small-footed Myotis		
Song Sparrow	Western Tanager		
Southern Red-backed Vole	Western Terrestrial Garter Snake		
Spotted Bat	Western Toad		
Spotted Sandpiper	Western Wood-pewee		
Spotted Towhee	White-breasted Nuthatch		
Steller's Jay	White-crowned Sparrow		
Striped Skunk	White-headed Woodpecker		
Swainson's Hawk	White-throated Swift		
Swainson's Thrush	Wild Turkey		
Tailed Frog	Williamson's Sapsucker		
Three-toed Woodpecker	Willow Flycatcher		
Tiger Salamander	Wilson's Warbler		
Townsend's Big-eared Bat	Yellow-bellied Marmot		
Townsend's Solitaire	Yellow-pine Chipmunk		
Townsend's Warbler	Yellow-rumped Warbler		
Tree Swallow	Yuma Myotis		
Trowbridge's Shrew			
Turkey Vulture			
Vagrant Shrew			
Vaux's Swift			
Veery			
Violet-green Swallow			
Virginia Opossum			
Warbling Vireo			
Water Shrew			
Water Vole			
Western Bluebird			
Western Harvest Mouse			
Western Jumping Mouse			
Western Pipistrelle			
Western Rattlesnake			
Western Screech-owl			
Western Small-footed Myotis			
Western Tanager			
Western Terrestrial Garter Snake			
Western Toad			
Western Wood-pewee			
White-breasted Nuthatch			

White-crowned Sparrow			
White-headed Woodpecker			
White-tailed Jackrabbit			
White-throated Swift			
Wild Turkey			
Williamson's Sapsucker			
Willow Flycatcher			
Wilson's Warbler			
Winter Wren			
Wood Duck			
Yellow Warbler			
Yellow-bellied Marmot			
Yellow-breasted Chat			
Yellow-pine Chipmunk			
Yellow-rumped Warbler			
Yuma Myotis			

Species historically or currently present in Lake Chelan Basin

<b>Species</b>	<b>Scientific name</b>	<b>Origin</b>
Bull trout	<i>Salvelinus confluentus</i>	Native
Cutthroat trout	<i>Oncorhynchus clarkii</i>	Native
Rainbow trout	<i>Oncorhynchus mykiss</i>	Introduced in 1917
Lake trout	<i>Salvelinus namaycush</i>	Introduced in 1980
Brook trout	<i>Salvelinus fontinalis</i>	Introduced in 1934
Grayling	<i>Thymallus arcticus</i>	One-time plant introduced in 1945
Kokanee	<i>Oncorhynchus nerka</i>	Introduced in 1917
Chinook salmon	<i>Oncorhynchus tshawytscha</i>	Introduced in 1974
Mountain whitefish	<i>Prosopium williamsoni</i>	Native
Pygmy whitefish	<i>Prosopium coulteri</i>	Native
Burbot	<i>Lota lota</i>	Native
Smallmouth bass	<i>Micropterus dolomieu</i>	Introduced approx. 1990
Northern pikeminnow	<i>Ptychocheilus oregonensis</i>	Native
Slimy sculpin	<i>Cottus cognatus</i>	Native
Bridgelip sucker	<i>Catostomus columbianus</i>	Native
Chiselmouth	( <i>Acrocheilus alutaceus</i> )	Native
Lake chub	<i>Couesius plumbeus</i>	Presumed native
Largescale sucker	<i>Catostomus macrocheilus</i>	Presumed native
Longnose sucker	<i>Catostomus catostomus</i>	Presumed native
Peamouth chub	<i>Mylocheilus caurinus</i>	Presumed native
Redside shiner	<i>Richardsonius balteatus</i>	Presumed native
Threespine stickleback	<i>Gasterosteus aculeatus</i>	Presumed native
Carp	<i>Cyprinus carpio</i>	Introduced
Tench	<i>Tinca tinca</i>	Introduced



Species historically or currently present in Lake Chelan Basin

Species	Scientific name	Origin
Bluegill	<i>Lepomis macrochirus</i>	Introduced

Sources: Brown, 1984; Hillman and Giorgi, 2000; DES, 2001a)

The Lake Chelan Water Quality Committee (LCWQC) coordinates with local agencies and the public to implement protective measures. The LCWQC is composed of five local agencies and the USFS, who jointly prepared a Lake Chelan Water Quality Plan (R. W. Beck, 1991) to provide a framework to maintain and monitor water quality (FERC, 2001).

Table 8. Environmental setting and general conditions at 8 focus tributaries and Chelan River

Study Area	Aspect	Regional Setting	Valley Configuration	Riparian Habitat
Chelan River	NW	Shrub steppe, open coniferous forest, cliffs, and urban areas.	Steep-walled gorge descends to a broad floodplain.	Sparse, deciduous trees and shrubs, mostly restricted to upper and lower reaches.
Mitchell Creek	SW	Shrub steppe with widely scattered conifers.	Narrow channel confined within a V-shaped valley with moderately steep slopes and some terraces.	Mostly narrow but typically dense deciduous tree and shrub habitats.
Grade Creek	SW	Shrub steppe with widely scattered conifers.	Narrow channel confined within a deeply incised canyon.	Sparse and narrow, limited to creek bank; mostly small deciduous trees.
Box Canyon	NE	Predominantly open coniferous forest with some shrub steppe.	Narrow channel with broad terraces confined within a steep-walled canyon.	Narrow riparian zone alongside incised creek bed; in places dense shrub habitats; deciduous forest occurs on terraces outside of riparian influence.
Big Creek	NE	Predominantly open coniferous forest with some shrub steppe.	Narrow channel confined within a narrow gorge; steep side slopes.	Narrow riparian zone along creek consisting mostly of mature western red cedar forest (small grove of deciduous trees at mouth).

Table 8. Environmental setting and general conditions at 8 focus tributaries and Chelan River

Study Area	Aspect	Regional Setting	Valley Configuration	Riparian Habitat
Bear Creek	NE	Predominantly coniferous and mixed forest.	Narrow channel confined within a U-shaped valley with moderately steep slopes and some terraces.	Narrow riparian zone along creek consisting of dense shrub and deciduous tree habitats; adjacent areas of mixed forest occur on higher ground that is probably outside of riparian influence.
Prince Creek	SW	Open coniferous forest.	Moderately wide channel; V-shaped valley terminates in a broad alluvial fan.	Narrow riparian zone alongside creek consisting mostly of shrub-sized cottonwoods and willows, and occasional larger trees.
Fish Creek	W	Coniferous forest.	Moderately wide channel; V-shaped valley terminates in a broad alluvial fan.	Narrow bands of mixed forest and shrub habitats along main channel and overflow channels.
Stehekin River	SE	Extensive coniferous and mixed forest, with scattered clearings; private residential developments and public recreation areas.	Wide alluvial channel within a broad U-shaped glacial trough with broad terraces.	Extensive riparian zone that includes stands of deciduous trees, scrub-shrub habitat, and emergent wetlands; riparian areas occur in bottomlands along the river channel, along a tributary stream (Devore Creek), and along a broad alluvial delta at the confluence with Lake Chelan.

Table 9. Mountain goat population, Lake Chelan area, 1989-1998

Year	Kids	Adults	Population	Estimate K:100 <sup>1</sup>
1989	29	112	141	26:100
1990	18	98	116	18:100
1991	27	155	185	17:100
1992	16	88	104	18:100
1993	13	92	105	14:100
1994	25	98	123	26:100
1995	12	109	121	11:100
1996	7	47	70	15:100
1997	18	105	124	17:100
1998	17	88	105	19:100

<sup>1</sup> K:100 = kids per 100 adults

Table 10. Characteristics of tributaries to Lake Chelan (excluding Stehekin River and tributaries) that support adfluvial trout and kokanee

Stream location Stream name	Temperature ° C	Flow (cfs)	Width (m)	Gradient (%)	Accessible length (m)
North shore, Chelan to Safety Harbor					
Mitchell	15.0	2.4	2.2	6.0	<600
Gold	15.0	1.2	2.3	10.0	300
Poison	15.0	1.7	2.4	9.0	60
Grade	13.9	5.9	3.2	10.0	400
Coyote	13.3	0.4	1.6	26.0	30
Safety Harbor	15.0	4.6	4.0	6.0	>300
South shore, Chelan to Big Creek					
First	10.6	7.4	3.4	5.0	>1,600
25-Mile	13.3	8.1	4.8	4.0	>3,200
Little Big	11.1	0.5	2.6	19.0	50
Big	11.1	5.2	3.7	8.0	75
North shore, Safety Harbor to Stehekin					
Lone Fir	13.3	0.9	2.1	23.0	26
Prince	12.2	9.5	5.6	10.0	>300
Cascade	11.1	0.6	1.8	12.0	150
Fish	11.1	7.1	5.4	8.0	>400
4-Mile	9.4	2.2	3.0	12.0	>300
South shore, Big Creek to Stehekin					
Deep Harbor	12.2	0.9	2.1	23.0	26
Graham Harbor	12.8	0.9	2.2	20.0	33
Pyramid	10.6	4.2	3.3	19.0	>300
Bear	8.9	8.6	3.2	11.0	100
Railroad	7.7	106.6	13.3	4.0	>1,600
Lightning	7.8	1.3	1.9	11.0	60
Riddle	11.1	3.3	3.4	13.0	>70
Castle	3.2	11.0			100