Appendix A
Utah Sensitive Species List

This list is courtesy of the Utah Division of Wildlife Resources and is current as of February 1998. Please see <www.state.ut.us/dwr/> for complete text and references.

DEFINITIONS
For the purposes of this list, wildlife includes all vertebrate animals; crustaceans, including brine shrimp and crayfish; and mollusks in Utah that are living in nature, except feral animals.

Extinct Species: any wildlife species that has disappeared in the world.

Extirpated Species: any wildlife species that has disappeared from Utah since 1800.

State Endangered Species: any wildlife species or subspecies which is threatened with extirpation from Utah or extinction resulting from very low or declining numbers, alteration and/or reduction of habitat, detrimental environmental changes, or any combination of the above. Continued long-term survival is unlikely without implementation of special measures. A management program is needed for these species if a Recovery Plan has not been developed.

State Threatened Species: any wildlife species or subspecies which is likely to become an endangered species within the foreseeable future throughout all or a significant part of its range in Utah or the world. A management program is needed for these species if a Recovery Plan has not been developed.

Species of Special Concern: any wildlife species or subspecies that: has experienced a substantial decrease in population, distribution and/or habitat availability, or occurs in limited areas and/or numbers due to a restricted or specialized habitat, or has both a declining population and a limited range. A management program, including protection or enhancement, is needed for these species.

Conservation Species: any wildlife species or subspecies, except those species currently listed under the Endangered Species Act (ESA) as threatened or endangered, that meets the state criteria of Endangered, Threatened, or of Special Concern, but is currently receiving sufficient special management under a Conservation Agreement developed and/or implemented by the state to preclude its listing above. In the event that the conservation agreement is not implemented, the species will be elevated to the appropriate category.

BIRDS
Extinct Species
Passenger Pigeon (Ectopistes migratorius): The Passenger Pigeon has been extinct since 1914. Both overhunting and habitat loss have been cited as reasons for the species’ demise. There is archaeological evidence from a prehistoric site that Passenger Pigeons may have occurred in Utah; however, the species was probably never an important part of the state’s avifauna.

State Endangered Species
Bald Eagle (Haliaeetus leucocephalus): The Bald Eagle is a federally listed threatened species. There are only four known bald eagle nest sites in the state, they are located in riparian habitat along the Colorado and Jordan Rivers and in a shelterbelt near the town of Castle Dale. Migratory eagles winter throughout the state in riparian, low elevation forest, and desert habitats. The bald eagle is threatened by loss of habitat and environmental contaminants. The species is recovering across its range;
however, the number nesting in Utah remains extremely low.

American Peregrine Falcon (*Falco peregrinus anatum*): The American Peregrine Falcon is a federally listed endangered species. Peregrines nest on cliffs in association with riparian wetland habitats statewide, except in the western basin and range. The species is threatened by environmental contaminants and loss of habitat. While the Colorado Plateau portion of the falcons’ population is currently recovering, the northern Wasatch portion has not reestablished a self-sustaining breeding population.

Southwestern Willow Flycatcher (*Empidonax traillii extimus*): This neotropical migrant ranges and nests primarily in mid to low elevation (less than 2,600 meters [8,500 feet]) willow habitats. The southwest subspecies occurs in southern and southeastern Utah and is difficult to separate from the northern subspecies. The southwestern willow flycatcher is adversely affected by loss of habitat from agricultural and grazing practices, water development, and replacement of native riparian habitats by nonnative plant species. Additional information is needed to more accurately determine the degree of population declines of this species in Utah.

State Threatened Species

Ferruginous Hawk (*Buteo regalis*): This raptor nests at the edge of juniper habitats and open, desert and grassland habitats in western, northeastern, and southeastern Utah. The species is highly sensitive to human disturbance and is also threatened by habitat loss from oil and gas development, agricultural practices, and urban encroachment. The ferruginous hawk, a neotropical migrant, has declined across much of its range and has been extirpated from some of its former breeding grounds in Utah.

Yellow-billed Cuckoo (*Coccyzus americanus occidentalis*): This neotropical migrant species nests in localized riparian valleys statewide. The species is threatened by loss of habitat from agricultural, water, road, and urban development. The species has declined significantly across its range.

Mexican Spotted Owl (*Strix occidentalis lucida*): The Mexican spotted owl, the only subspecies of spotted owl that occurs in the state, is federally listed as threatened. It is a permanent resident that nests in canyon land habitats of southern Utah. The owls exist in small isolated subpopulations; it is potentially threatened by habitat loss and disturbance from recreation, overgrazing, road development, catastrophic fire, timber harvest, and mineral development. There are currently approximately 90 known spotted owl sites in Utah.

Species of Special Concern (Declining Populations)

Northern Goshawk (*Accipiter gentilis*): This neotropical migrant raptor occurs statewide in scattered populations primarily in mature mountain forest and valley cottonwood habitats. The species is adversely affected by loss of habitat from timber harvest and development in riparian areas. Because goshawks occur in low density populations, they are particularly susceptible to population loss. The goshawk’s population appears to have declined across the range and particularly in the Colorado Plateau ecoregion.

Swainson’s Hawk (*Buteo swainsoni*): This neotropical migratory raptor nests in trees near open desert grasslands, shrub-steppes, and agricultural fields primarily, but not exclusively, in the northern valleys and West Desert of Utah. While Swainson’s hawk populations in Utah have declined from historical levels, the species had exhibited a population increase in Utah and across its range from 1966 to 1994. However, pesticide poisonings of tens of thousands of Swainson’s Hawks have occurred since 1994 in Argentina, where at least a portion of Utah’s population winters. The species should be closely monitored on its nesting grounds to determine if winter
mortalities are threatening the Utah breeding population.

Caspian Tern (Sterna caspia): This species nests colonially on Great Salt Lake wetlands, islands, and dikes and occasionally on similar habitat in Utah Lake. The species is sensitive to human disturbance and predation by California Gulls. Colonies are also adversely impacted by water level fluctuations.

Black Tern (Chlidonias niger): This species nests colonially in wetlands associated with northern Utah lakes, such as Utah, Pelican, and Great Salt Lake, and the Green and Bear rivers. Much of the insectivorous tern’s habitat has been lost to agricultural and commercial development. Populations appear to be declining and information is needed to accurately determine the degree of decline which has occurred.

Burrowing Owl (Athene cunicularia): The burrowing owl is adversely impacted by agricultural and residential development though it may be able to adapt to minor disturbances. The owl, a neotropical migrant, nests in desert valleys and grasslands and is often found in association with prairie dog colonies. The owl’s population appears to have declined across its range; its distribution has been localized in many areas of Utah.

Common Yellowthroat (Geothlypis trichas): The yellowthroat population has declined significantly in Utah. This neotropical migrant nests in riparian and wetland habitats statewide and is negatively impacted by loss of habitat from a variety of development activities.

Short-eared Owl (Asio flammeus): This raptor is a permanent resident of central and northern Utah wetlands and deserts. The species appears to be declining. It is adversely impacted by loss of habitat to agriculture and urban development.

Species of Special Concern (Limited Distribution)

American White Pelican (Pelecanus erythrorhynchos): This species nests in a large colony on Gunnison Island in the Great Salt Lake (and formerly on Utah Lake) but forages in freshwater wetlands and lakes. The species is extremely sensitive to human disturbance on its nesting grounds and is adversely impacted by loss of foraging (wetland) habitat, environmental contaminants, and water level fluctuations. The nesting colonies in Utah are among the largest in North America and account for a significant proportion of the North American population.

California Condor (Gymnogyps californianus): There is limited evidence that the California Condor occurred in Utah historically. The entire wild population was taken into captivity in the late 1980s and has been successfully bred. Condor were reintroduced into the wild in northern Arizona, 20 miles from Utah, in 1996. The range of this reintroduced population is expected to include southern Utah. These birds are classified as an experimental/nonessential population by the U.S. Fish and Wildlife Service.

Osprey (Pandion haliaetus): This piscivorous raptor is sparsely distributed around mountain lakes and on the Green River. Its historical range has been substantially reduced in the state and nearly all known nesting occurs at Flaming Gorge Reservoir. Osprey are adversely affected by habitat loss and are susceptible to environmental contamination.

Sharp-tailed Grouse (Tympanuchus phasianellus columbianus): Distribution of the Columbia sharp-tailed grouse has been reduced to a remnant of its former range. In Utah, the subspecies is now limited to a few scattered, mostly isolated populations in the northern counties; historically its range covered almost half of the state. The subspecies is threatened by continued loss of habitat from agricultural and urban encroachment. The bird nests in dry grasslands and relies on a variety of grasses and forbs for cover and food; cultivated crops and scattered shrubs and trees are also used as forage.
Williamson’s Sapsucker (*Sphyrapicus thyroideus*): This woodpecker nests in high elevation (2,400 meters [8,000 feet] to timberline) mountain forests (primarily Ponderosa, Conifer-Aspen) habitats statewide. The species is negatively impacted by habitat loss from timber harvest practices. Additional information is needed to more accurately determine the extent of population reductions for this neotropical migrant.

Three-toed Woodpecker (*Picoides tridactylus*): This species nests and winters in mountain forest conifers, usually above 2,400 meters (8,000 feet) elevation in the Wasatch, Uinta, and southern Utah ranges. The population densities of three-toed woodpeckers are low across Utah. The species is negatively affected by forest management practices such as clearcutting and fire suppression.

**Species of Special Concern (Declining Populations and Limited Distribution)**

Sage Grouse (*Centrocercus urophasianus*): Sage grouse populations have declined across the range of the species, including Utah. Since 1967 in Utah, the abundance of male grouse attending breeding grounds has declined by approximately 50 percent in Utah. Brood counts and harvest data show a similar downward trend. Historically, the range of sage grouse in Utah was nearly continuous, including portions of all 29 counties; currently sage grouse exist in scattered populations in only 19 counties. Habitat loss and fragmentation from agricultural encroachment, urbanization, and overgrazing are the primary threats to the sage grouse.

Mountain Plover (*Charadrius montanus*): This neotropical migrant species nests in upland grass and shrub habitats and is frequently associated with prairie dog colonies; the total plover population is from 4,000 to 5,000 birds and is declining significantly across its range. A small population of plovers is known to nest in the Uinta Basin. Additional information is needed to more accurately determine the status of this species in Utah; however, it is negatively impacted by loss of habitat from agricultural encroachment and may be affected by mineral development activities.

Long-billed Curlew (*Numenius americanus*): This neotropical migrant shorebird nests in the upland meadows and rangelands of northern and central Utah valleys. It forages in moist meadow wetlands and upland habitats. The curlew is adversely affected by human disturbance and habitat loss from agricultural practices. The species’ range has been substantially reduced and current information indicates that the population is declining regionally.

Black Swift (*Cypseloides niger*): In Utah, black swifts nest in small colonies near or behind waterfalls. They forage for aerial insects up to several thousand feet above the ground and may forage great distances from their nests. Pairs typically lay only one egg per year and incubation (approximately 30 days) and fledging (approximately 45 days) are both prolonged in this neotropical migratory species. Nesting has only been documented at a few sites in Utah in the Cascade and Timpanogos ranges. While the Utah population’s status is uncertain, the species is declining significantly rangewide.

Lewis’ Woodpecker (*Melanerpes lewis*): This woodpecker is a scattered permanent resident found primarily in the riparian habitats of the Uinta Basin and along the Green River. Some portions of the Utah population may migrate to the neotropics. Formerly common in several areas of the state, the species distribution is currently reduced and the species is experiencing a rangewide decline. This woodpecker usually feeds on flying insects in the spring and summer and thus forages in open areas interspersed with trees. It feeds on mast in the fall and winter. It is
adversely affected by loss of habitat from water development and agricultural practices. It is also increasingly affected by competition for nest cavities from non-native bird species.

**Crissal Thrasher (Toxostoma crissale):**
This species is a permanent resident in southwestern Utah. It nests in dense mesquite and streamside shrubs in the Virgin River and its tributaries. The thrasher is adversely affected by riparian habitat loss from agricultural practices, and water, road, and urban development. Information indicates the species is declining in Utah.

**Bell’s Vireo (Vireo bellii):**
This neotropical migrant nests in streamside willows of the Virgin River and Beaver Dam Wash in southwestern Utah. The species is very limited in its distribution in Utah and is declining across its range. It is negatively impacted by riparian habitat loss from agricultural, water, road, and urban development.

**Blue Grosbeak (Guiraca caerulea):**
This neotropical migrant nests in thickets of lowland riparian habitat primarily in the Colorado River drainage; scattered populations are also known from southwestern and central Utah. The species has experienced significant declines over the past five years in Utah. It is negatively impacted by riparian habitat loss from agricultural, water, road, and urban development.

**Grasshopper Sparrow (Ammodramus savannarum):**
This neotropical migratory species was considered to be historically abundant in the state. Currently only a few grasshopper breeding sites are known from northern Utah grasslands. Much of this species’ former habitat has been lost to overgrazing and agricultural and urban encroachment. The species has declined significantly across its range. These birds nest in semi-colonial groups in dry grasslands characterized by short to mid-height clumps of grass with few to no shrubs.

**Bobolink (Dolichonyx oryzivorus):**
This neotropical migrant was historically common but is now a rare nester in flooded grasslands and wet meadows of northern Utah. The range of the bobolink has decreased in Utah because of habitat loss; the species has exhibited a significant long-term population decline across its range in North America. Local populations are threatened by habitat loss from drought and agricultural practices such as early season hay cutting, grassland conversion, and overgrazing.

**MAMMALS**

**Extirpated Species**

**Grizzly Bear (Ursus arctos):**
Formerly found throughout Utah except the western desert areas, it is commonly believed the last grizzly was killed in Utah in 1923 in Logan Canyon, Cache County. The closest population to Utah is in the Yellowstone ecosystem with an occasional report in New Mexico and Colorado.

**Fisher (Martes pennanti):**
Fishers are large members of the weasel family thought to have once occurred in Utah in the Uinta Mountains and possibly the northern Wasatch Mountains. However, Utah is at the southern fringe of their range, and whether there ever existed a stable population within the state is unknown. The only known proof of them inhabiting Utah are tracks that were observed in 1938 in the Trial Lake area of the Uinta Mountains. In Utah, fisher would most likely be found in dense lowland forests containing spruce-fir and spruce-aspen stands and an extensive overhead canopy. They avoid open spaces with no overhead cover. Fishers are opportunistic feeders that feed predominantly upon snowshoe hares, porcupines, rodents, and carrion. Availability of prey species is thought to dictate fisher habitat use and preference. Fishers are thought to be extirpated from Utah, and no populations are known to occur within the state.

**Gray Wolf (Canis lupus):**
Formerly found throughout Utah and most of the United States, several small populations
are now located in the extreme northern United States. The last wolf reported and confirmed was from San Juan County in Harts Draw on February 11, 1937. No other confirmed records have occurred since then.

**State Endangered Species**

**Black-footed Ferret** (*Mustela nigripes*): The black-footed ferret is considered the rarest mammal in North America. It was once common throughout the Great Plains (Canada to Texas), Montana, Wyoming, Colorado, and Utah. Ninety percent of their diet is prairie dogs. The decrease in prairie dog populations as a result of habitat alteration and poisoning has led to the probable extirpation of this species in the wild. Efforts by many agencies have established a successful captive breeding program, and ferrets are now being reintroduced into historical habitat. Efforts are underway in Utah to bring this species back to historical ranges if suitable conditions are present.

**State Threatened Species**

**Utah Prairie Dog** (*Cynomys parvidens*): The Utah prairie dog population once numbered approximately 95,000 individuals. It is found only in southwestern Utah. By 1976 its numbers had declined to about 2,000, and it was listed as an endangered species. In 1984 it was reclassified as threatened. Efforts to establish four self-sustaining populations on federal lands have been in progress since the 1970s.

**Wolverine** (*Gulo gulo*): Utah is the southernmost range extension for this species. The last confirmed sighting was in 1924 near Brighton, Salt Lake County. Several unconfirmed sightings have been reported in recent years near Mt. Timpanogos.

**Species of Special Concern (Declining Populations)**

**Spotted Bat** (*Euderma maculatum*): This bat is distributed throughout the West. Very little specific life history information is available on this species. It is found in very small numbers throughout its range and in association with other bat species. Indications are that its numbers have declined in historical trapping locations.

**Species of Special Concern (Limited Distribution)**

**Fringed Myotis** (*Myotis thysanodes*): The distribution of this bat is listed as statewide, however, voucher specimens have been collected only in the southern and east central portions of Utah. The fringed bat inhabits caves, mines, rock crevices, and buildings at relatively higher elevations (1,217 to 2,438 meters [4,000 to 8,000 feet]).

**Allen’s Big-eared Bat** (*Idionycteris phyllotis*): The distribution of the big-eared bat, according to Durrant (1952) in *Mammals of Utah*, appears to be wide through the lower two-thirds of the state. This may have changed in the past 50 years. There may have been changes in their numbers and habitat. Work needs to be done to determine current distribution.

**Dwarf Shrew** (*Sorex nanus*): Found only in southeastern Utah. It is extremely rare but can occur in high densities locally.

**Desert Shrew** (*Notiosorex crawfordi*): This species occurs only in the southern portions of Kane and San Juan Counties. They inhabit a variety of many different habitats within their range.

**Chisel-toothed Kangaroo Rat** (*Dipodomys microps celsus*): This subspecies of kangaroo rat is found in an isolated population only in Washington County. It is classified as sensitive in distribution because of its isolated location in Utah. Pritchett, in 4,895 trap nights, only collected one specimen in 1993.

**Abert Squirrel** (*Sciurus aberti navajo*): This subspecies of Abert squirrel is found only in San Juan County on the Abajo Mountains and Elk Ridge and on the LaSal Mountain range in the Manti-LaSal National Forest. Although limited
in distribution in Utah, its status is currently considered to be stable. It is totally dependent on the ponderosa pine for most aspects of its life cycle (food, nest material, space, and escape cover).

Belding Ground Squirrel (*Spermophilus beldingi*): Distribution of this species is restricted to extreme northeastern Utah in the Raft River Mountains.

Thirteen-lined Ground Squirrel (*Spermophilus tridecemlineatus*): Distribution restricted to the Uinta Basin in Utah. Habitat includes grasslands with well-drained soils, disturbed areas, and semi-desert shrub lands.

Spotted Ground Squirrel (*Spermophilus spilosoma*): Distribution restricted to the southeastern portion of Utah in San Juan County. Occurs in high desert areas with dry, sandy soils and sparse, shrubby vegetation.

Wyoming Ground Squirrel (*Spermophilus elegans*): Listed in Durrant (1947) as a species that may occur in Utah but a record is lacking. May be present in northwestern Box Elder County and northeastern Daggett County.

Yellow Pine Chipmunk (*Tamias amoenus*): This species occurs only in the Raft River Mountains in the northwest corner of Utah. It has a wide distribution in the northwestern United States. Habitat includes young immature conifer forests. Tend to frequent shrubs, slash piles, and stumps.

Rock Pocket Mouse (*Chaetodipus intermedius*): This species is restricted in Utah to the Rainbow Bridge-Navajo Mountain area of San Juan County. Their distribution is restricted to lava flows in sparsely vegetated desert habitats.

Olive-backed Pocket Mouse (*Perognathus fasciatus*): Their range in Utah is confined to the extreme northeast corner of Daggett County. It occurs in open areas with sparse vegetation and sandy soils.

Merriam’s Kangaroo Rat (*Dipodomys merriami*): Has an extensive range in other southwestern states but is restricted to Washington County in Utah. Habitat includes sagebrush, shadscale, creosote brush, and other desert shrub communities.

Cactus Mouse (*Peromyscus eremicus*): Utah is the northernmost extension of their range. Habitat includes riparian zones. Found in lower population densities than most mouse species. Inhabits areas where lower habitat productivity is evident. It’s low tolerance for each other makes low population numbers.

Southern Grasshopper Mouse (*Onychomys torridus*): Southern grasshopper mice are found only in Washington County. They are found in the hot, dry, low-lying desert habitat. They are insectivorous, feeding on scorpions, grasshoppers, spiders, and insect cocoons.

Marten (*Martes americana*): Their distribution is restricted to dense conifer stands of fir, spruce, and lodgepole. Sensitive to habitat alteration, the dead, downed, and woody debris found in old undisturbed forests is a critical component of marten habitat.

Pika (*Ochotona princeps*): Durrant (1952) describes five subspecies of pika. More may be present in Utah mountains. Work is needed to determine the amount of genetic isolation present in these isolated populations.

Ringtail (*Bassariscus astutus*): Most often found in rocky, boulder-strewn riparian areas, most often within a quarter mile of a water source. Dense cover is preferred, providing them with seclusion and prey availability.

Northern Flying Squirrel (*Glaucomys sabrinus*): The northern flying squirrel is well distributed through the major mountain ranges of central and eastern Utah. It is primarily found in the riparian zones of this area. Loss of riparian habitat adversely impacts northern flying squirrel populations.

**Species of Special Concern (Declining Populations and Limited Distribution)**

Western Red Bat (*Lasiurus blossevillii*): This bat could potentially occur in...
most counties in Utah; however, it has been confirmed in only Washington and Carbon Counties. Several state mammalogists have recommended this species be looked at to determine status.

Big Free-tailed Bat (*Nyctinomops macrotis*): The northern range of the big free-tailed bat extends to the southern two-thirds of Utah. Their presence within this range is very rare. Use of caves and mines for maternal colonies makes them very vulnerable to human disturbance.

Brazillian Free-tailed Bat (*Tadarida brasiliensis mexicana*): This species is migratory and forms large maternity colonies in caves and mines in southern Utah. These large congregations are subject to disturbance and indiscriminate killing by humans.

Townsend’s Big-eared Bat (*Plecotus townsendii*): Although statewide in its distribution, the communal roosting habits of this species make it sensitive to the closure of caves and mines.

Desert Kangaroo Rat (*Dipodomys deserti*): Has an extensive range in other southwestern states but is restricted to Washington County in Utah.

Northern Rock Mouse (*Peromyscus nasutus*): Found in Colorado, New Mexico, and central Mexico, but restricted in Utah to southwestern San Juan County in the vicinity of Navajo Mountain.

Stephen’s Woodrat (*Neotoma stephen-si*): Distribution of this species is limited to Navajo Mountain in San Juan County.

Virgin River Montane Vole (*Microtus montanus rivularis*): Restricted in distribution to the Virgin River drainage and environs (Durrant 1952). Very restricted distribution to riparian habitat adjacent to the Virgin River in Washington County. Recent changes in land use patterns and resulting loss of riparian habitat have impacted this small rodent.

Mexican Vole (*Microtus mexicanus*): Only southwestern vole in Utah. Habitat includes yellow pine forests and dry sparsely vegetated grasslands. Also use typical mountain meadows and wet areas.

Northern River Otter (*Lutra canadensis*): Northern river otter have been extremely rare in Utah for the past 100 years. River otter have been documented in the Raft, Weber, Provo, Bear, Colorado, and Green River drainages. Their present range and abundance in Utah has been reduced. River otter are known to occur in the Green River, Colorado River, and Raft River drainages. A few sightings have been reported in the Weber and Provo River drainages in recent years.

North American Lynx (*Felis lynx canadensis*): This species inhabits the higher elevations of Utah. These areas include the slopes of the Uinta Mountains, south to the Fish Lake National Forest. Their present distribution is limited to the southern slopes of the high Uintas. Lynx use a variety of forest types but generally inhabit those habitats with snowshoe hare populations. Due to the remoteness of their habitat and nocturnal nature, very few sightings have been reported and fewer have been verified over the past ten years.

**AMPHIBIANS**

**Extinct Species**

Relict Frog (*Rana onca*): This species once occurred around stream-sides and several springs along the Virgin River in Washington County. No individuals were observed in recent surveys (Jennings et al. 1995) of amphibians in the Virgin River Basin. Habitat loss and degradation are thought to be the cause of the extirpation of this species in Utah.

**Species of Special Concern (Declining Populations)**

Arizona Toad (*Bufo microscaphus*): This species inhabits loose gravelly areas of streams and arroyos in drier portions of its range and along sandy banks of quiet water in other areas. The range of this species is highly fragmented. Its distribution in Utah is limited to the southwest corner of the state, which is its northernmost range.
extension. Noticeable declines have been observed in this species; however, the reasons remain unclear.

Boreal Toad (Bufo boreas boreas): This species inhabits areas near springs, streams, meadows, or woodlands at higher elevations. Beaver ponds with abundant riparian vegetation appear to be its preferred habitat. Recently, this species has experienced declines in many areas of the Rocky Mountain region. These declines may be related to one or a combination of factors. These include habitat loss and degradation, environmental contaminants, disease, and ozone layer depletion. In Utah, this species has been noticeably absent or greatly reduced in numbers in previously occupied areas. Additional surveys are warranted to better document distribution of this species in Utah. This species is currently listed as a candidate species for listing under the ESA in Colorado, New Mexico, and Wyoming.

Lowland Leopard Frog (Rana yavapaiensis): Inhabiting areas close to springs and pools along rivers in deserts, grasslands, and oak and oak-pine woodlands, it is only known in Utah from an area near St. George. It is thought that reproductive mechanisms have isolated this species from other ranids within its range. It is not known if any viable populations of this species still exist in Utah or in adjacent states.

Species of Special Concern (Limited Distribution)

Pacific Chorus Frog (Pseudacris regilla): Pacific chorus is chiefly a ground dweller, found among low plant growth near water in a variety of habitats. These include grassland, chaparral, woodland, forest, desert oases and ditches, reservoirs, and slow streams. A few specimens exist from southeastern Washington County and unverified records have been reported from extreme northwestern Utah. The current status and distribution of this species remains unclear.

Conservation Species

Spotted Frog (Rana pretiosa): This species inhabits shallow, spring- or creek-fed marshes, seeps, and springs along the Wasatch Front and in the West Desert. Further genetic analysis may indicate that some populations of spotted frog in Utah may become classified as a separate subspecies, Rana pretiosa luteiventris. Recent surveys and monitoring indicate that the Wasatch Front populations are declining, fragmented, and of limited size. Habitat loss due to human growth and water development is the major threat to the Wasatch Front populations. Currently, West Desert populations appear to be somewhat stable. Several populations of this species, however, are currently candidates for listing under the ESA, including the Wasatch Front populations in Utah. As part of recovery efforts, several agencies are working cooperatively under a conservation agreement to eliminate or significantly reduce the threats facing this species.

REPTILES

State Endangered Species

Banded Gila Monster (Heloderma suspectus cinctum): This species occurs in arid and semi-arid areas of gravelly and sandy soils, especially areas with shrub and some moisture. In Utah its distribution is limited to the extreme southwest corner of the state, primarily in the Mojave desert ecosystem of Washington County. It is currently threatened with extirpation due to limited numbers, overcollection, and habitat loss.

Desert Tortoise (Gopherus agassizii): The desert tortoise is the only native turtle to Utah. It occupies desert habitats with washes, dunes, and rocky slopes that consist of creosote bush and Joshua trees. Like the Gila monster, the distribution of this species in Utah is limited to the Mojave desert ecosystem in extreme southwest Utah, including the Beaver Dam Slope and other areas near St.
George. This species is in danger of extirpation due to habitat alteration and loss, impacts of cattle grazing, and introduction of disease. Populations are thought to have declined by as much as 75 percent in Utah. Currently, recovery efforts are being directed by the Desert Tortoise Recovery Plan and the Washington County Habitat Conservation Plan.

Species of Special Concern (Declining Populations)

Utopia Mountain Kingsnake (Lampropeltis pyromelana infralabialis): This colorful tri-colored snake occurs in disjunct, localized populations in many of the central Utah mountain ranges. Its habitat includes chaparral woodland and pine forests in mountainous regions, bushy rocky canyons, and talus slopes and near streams and springs above 850 meters (2,800 feet). Population declines, although difficult to detect in this secretive species, are thought to be due to habitat impacts and over collection.

Utah Milk Snake (Lampropeltis triangulum taylori): Often nocturnal, this species inhabits semi-arid regions, pine forests, deciduous woodlands, and suburban areas. It is spottily distributed in the mountain regions of eastern and central Utah. Attractive to snake fanciers, overcollection as well as habitat impacts may be factors in its apparent decline.

Species of Special Concern (Limited Distribution)

Desert Iguana (Dipsosaurus dorsalis): This species occurs in sandy and rocky arid and semiarid areas where creosote bushes are abundant. A fairly common species in the southern part of its range, its distribution is limited to the extreme southwest corner of Washington County in Utah.

Utah Banded Gecko (Coleonyx variegatus utahensis): This species occurs in very dry habitats with rocky tracts, canyon walls, and sand dunes. Its distribution in Utah is limited to the extreme southwest corner of the state.

Utah Night Lizard (Xantusia vigilis utahensis): This Utah endemic subspecies is limited to one area in the southeast corner of the state. Typical habitat includes arid and semiarid granite outcroppings and rocky areas. Population densities of this subspecies are unknown within its limited distribution.

Desert Night Lizard (Xantusia vigilis vigilis): The desert (common) night lizard is fairly common throughout its range; however, in Utah, the distribution is limited to the southwest corner of the state in Washington County. Its typical habitat includes arid and semiarid rock outcroppings and rocky areas among fallen leaves and trunks of yuccas, agaves, and Joshua trees.

Mojave Zebra-tailed Lizard (Callisaurus draconoides rhodostictus): This species is typically found in areas with hard-packed soils and sparse vegetation associated with sandy washes. Occasionally it can be found among small rocks. Its distribution in Utah is limited to the extreme southwest corner of the state in the Mojave desert.

California Kingsnake (Lampropeltis getula californiae): This species occurs in diverse habitats, including dry, rocky wooded hillsides, river wetlands, desert, and chaparral. Its range in Utah is limited to the southwest part of the state, particularly in Washington County. Only the black and white-banded color morph occurs in Utah and is prohibited from collection.

Southwestern Black-headed Snake (Tantilla hobartsmithi): This species occurs in open areas of the southwest, particularly in areas with canyons and arroyos ascending into open forests, as well as along river corridors. Because it is an extremely secretive, ground-dwelling snake, its status remains unclear. Its distribution in Utah is limited to areas along the Colorado River Valley.

Desert Glossy Snake (Arizona elegans eburnata): Habitats include dry, open sandy or loamy areas; creosote-mesquite
desert; and sagebrush flats. Its distribution in Utah is limited to the southwest portion of Washington County.

**Painted Desert Glossy Snake (Arizona elegans philipi):** Habitats include dry, open sandy areas; creosote-mesquite desert; sagebrush flats; and oak-hickory woodlands. Its distribution in Utah is limited to the southwest portion of Washington County.

Sonora Lyre Snake (Trimorphodon biscutatus lambda): Chiefly a rock-dwelling species of lowlands, mesas, and lower mountain slopes, it can be found in desert grassland, creosote-bush, desert scrub, and chaparral up to evergreen forests. The range of this species is limited to the lower portions of Washington and Kane Counties in the southwest corner of the state.

Utah Blind Snake (Leptotyphlops humilis utahensis): The habitat of this snake includes deserts, grassland, scrub, canyons, and brush-covered mountain slopes with moist sandy or gravelly soil suitable for burrowing. The range of this species is limited to the southwest corner of Washington County.

Mojave Desert Sidewinder (Crotalus cerastes cerastes): The sidewinder inhabits arid desert flatlands with sandy washes or mesquite-crowned sand hammocks and occasionally rocky areas. In Utah, this species only occurs in Washington County where the Mojave Desert extends.

**Species of Special Concern (Declining Populations and Limited Distribution)**

**Glen Canyon Chuckwalla (Sauromalus obesus multiforaminatus):** This species is a rock dweller which occurs in arid and semiarid areas with open flats and rocky areas with large boulders. Its distribution extends from the Colorado River at the Glen Canyon Dam at Page, Arizona, to near Hite and the Henry Mountains in Utah. This subspecies is threatened due to habitat loss and overcollection.

**Western Chuckwalla (Sauromalus obesus obesus):** This species is a rock dweller which occurs in arid and semi-arid areas with open flats and rocky areas with large boulders. Its distribution in Utah is limited to the extreme southwest corner of the state and in some areas in south central Kane County. This subspecies is also threatened due to habitat loss and overcollection.

**Many-lined Skink (Eumeces multivirgatus gaigeae):** This species is only known to occur in the lower southeastern part of the state in San Juan County. Since few locations have been documented, it is unclear what its actual distribution in Utah is. Declines in these areas have been observed. Typical habitat of this species includes areas of rocks and small brush in open grassy plains, sandy hills, and desert. It has also been observed in mountainous wooded areas.

**Plateau Striped Whiptail (Cnemidophorus velox):** Typical habitat of this species includes pinon-juniper woodlands.
and ponderosa pine forests at elevations between 1,700 and 1,800 meters (5,500 and 6,000 feet). Few locations are known in Utah. The known distribution is limited to the lower southwest part of the state.

Great Plains Rat Snake (*Elaphe guttata emoryi*): This species is common throughout its range; however, the populations in Utah consist of a unique color morph, making it a target for over-collection. Very few individuals of this race have been documented in Utah. Its distribution appears to be limited to areas in eastern Utah in San Juan, Grand, and Uintah Counties. Its habitat includes woody groves, rocky hillsides, and meadowlands along water courses and springs.

Smooth Green Snake (*Opheodrys vernalis*): The smooth green snake typically inhabits meadows, grassy marshes, and moist grassy fields along forest edges. Its distribution is somewhat unclear. This snake occurs in the upper northeast part of the state in the Uinta Mountain region.

**FISHES**

**Extinct Species**

Utah Lake Sculpin (*Cottus echinatus*): This species once occurred only in Utah Lake. It was probably extinct by the 1950s.

**State Endangered Species**

Bonytail (*Gila elegans*): Bonytail are endangered under the ESA and are endemic to the Colorado River Basin. Bonytail have been severely reduced in numbers with no wild bonytail being captured for several years. Flow regulation, habitat loss/alteration, and introduction of nonnative fish have been identified as causes for decline. The only significant numbers of these fish known to exist are held in culture facilities. Reintroduction efforts have begun to reestablish this species.

Colorado Squawfish (*Ptychocheilus lucius*): Colorado squawfish are endangered under the ESA and are endemic to the Colorado River Basin. Presently, Colorado squawfish are only found in the upper Colorado River Basin, upstream of Glen Canyon Dam. Reproduction is known to occur in a few locations in the Green River, and the Ouray reach has been identified as an important nursery habitat area. Flow regulation, migration barriers, habitat loss/alteration, and introduction of nonnative fish have been identified as causes for decline.

Humpback Chub (*Gila cypha*): Humpback chub are endangered under the ESA and are endemic to the Colorado River Basin. Humpback chub have been severely reduced in numbers. Canyon areas with deep, swift water and rocky substrates on the Green and Colorado rivers have been identified as important habitat for this species. Flow alteration has been identified as a significant cause of decline.

Razorback Sucker (*Xyrauchen texanus*): Razorback sucker are endangered under the ESA and are endemic to the Colorado River Basin. Adult razorback sucker prefer slow runs, pools, and eddies. The Green River has the only known spawning areas; however, only extremely limited recruitment of this species has been documented in the last 30 years. Young razorback sucker likely require backwaters and flooded bottomlands. Flow regulation, habitat loss/alteration, and introduction of nonnative fish have been identified as causes for decline.

Woundfin (*Plagopterus argentissimus*): Woundfin are endangered under the ESA and are endemic to the Colorado River Basin. They have been severely reduced in numbers and distribution; they are now restricted to the Virgin River Basin. Flow regulation and introduction of nonnative fish have been identified as causes for decline. Runs and riffles close to channel banks have been identified as important habitat for the woundfin.

Virgin River Chub (*Gila seminuda*): Virgin River chub are endangered under
the ESA and are endemic to the Virgin River. This species has been severely reduced in numbers and distribution. Deep runs and pools with adequate cover have been identified as important habitat for the Virgin River chub. Flow regulation and introduction of nonnative fish have been identified as causes for decline.

June Sucker (*Chasmistes liorus*): June Sucker are endangered under the ESA and are endemic to Utah Lake. Only extremely limited recruitment of this species has been documented in the last 30 years. Flow alteration and introduction of nonnative fish have been identified as causes for decline.

**State Threatened Species**

Lahontan Cutthroat Trout (*Oncorhynchus clarki henshawi*): Lahontan cutthroat trout are not native to Utah. The species was introduced and has persisted in a few streams in western Utah. It is listed as state threatened because it is federally listed as threatened under the ESA.

Roundtail Chub (*Gila robusta*): Roundtail chub are endemic to the Colorado River Basin. Runs and pools of streams and rivers have been identified as important habitat for roundtail chub. Roundtail chub have been reduced in numbers and distribution. Flow alteration and the introduction of nonnative fish have been identified as significant causes of decline.

**Species of Special Concern (Declining Populations)**

Leatherside Chub (*Gila copei*): Leatherside chub have been extirpated from much of their historical range. Pools and riffles in cool to cold streams and rivers have been identified as important habitat for leatherside chub. Introduction of nonnative fish and habitat alteration have been identified as the primary causes for decline.

Flannelmouth Sucker (*Catostomus latipinnis*): Flannelmouth sucker are endemic to the Colorado River Basin. Rocky pools and slow-flowing, lower gradient reaches in larger rivers have been identified as important habitat for flannelmouth sucker. Flannelmouth sucker have been reduced in numbers and distribution. Flow alteration, habitat loss/alteration, and the introduction of nonnative fish have been identified as significant causes of decline.

Bluehead Sucker (*Catostomus discobolus*): Bluehead sucker have been reduced in numbers and distribution. Fast-flowing rocky riffles in higher gradient reaches of small to large rivers have been identified as important habitat for bluehead sucker. Flow alteration, habitat loss/alteration, and the introduction of nonnative fish have been identified as significant causes of decline.

**Species of Special Concern (Limited Distribution)**

Bonneville Cisco (*Prosopium gempiferum*): Bonneville cisco are endemic to Bear Lake. Bonneville cisco are sought as a sport fish. They are managed under an intensive fishery program at Bear Lake.

Bonneville Whitefish (*Prosopium spilonotus*): Bonneville whitefish are endemic to Bear Lake. Bonneville whitefish are sought as a sport fish. They are managed under an intensive fishery program at Bear Lake.

Bear Lake Whitefish (*Prosopium abysicola*): Bear Lake whitefish are endemic to Bear Lake. Bear Lake whitefish are sought as a sport fish. They are managed under an intensive fishery program at Bear Lake.

Bear Lake Sculpin (*Cottus extensus*): Bear Lake sculpin are endemic to Bear Lake.

Desert Sucker (*Catostomus clarki*): Desert sucker are restricted to the Virgin River Basin. Flow regulation and introduction of nonnative fish have adversely affected this species's populations.

**Conservation Species**

Colorado River Cutthroat Trout (*Oncorhynchus clarki pleuriticus*): Colorado
River cutthroat trout are one of two native subspecies of cutthroat trout inhabiting Utah waters. Special emphasis, including the development of a conservation strategy and agreement, has been given to this species for several years. Habitat alteration and introduction of nonnative fish have contributed to their decline.

Bonneville Cutthroat Trout (*Oncorhynchus clarki utah*): Bonneville cutthroat trout are one of two native subspecies of cutthroat trout inhabiting Utah waters. Special emphasis, including the development of a conservation strategy and agreement, has been given to this species for several years. Habitat alteration and introduction of nonnative fish have contributed to their decline.

Virgin Spinedace (*Lepidomeda mollispinis mollispinis*): Virgin spinedace are endemic to the Colorado River Basin and are now restricted to the Virgin River Basin. The species is severely reduced in numbers and distribution. Special emphasis, including the development of a conservation strategy and agreement, has been given to this species for several years. Habitat alteration and introduction of nonnative fish have contributed to their decline.

Least Chub (*Ictíchtýs phlegethontis*): Least chub are proposed to be listed as endangered under the ESA because they have been extirpated from over 90 percent of their historical range. Least chub currently exist in only a few springs. Special emphasis, including the development of a conservation strategy and agreement, has been given to this species for several years. Introduction of nonnative fish has been identified as causes for decline.

**MOLLUSKS**

**Endangered Species**

Kanab Ambersnail (*Oxýloma haydení kanabenisis*): This is a terrestrial species, but it is associated with soils wetted by springs and seeps at the base of sandstone cliffs. It is closely associated with semiaquatic plants, such as monkey flower and watercress. Significant declines have been noted in Arizona and it is thought one population in Utah has been extirpated. The significant threat to this species has been identified as loss of habitat due to human development.

Fish Springs Pond Snail (*Stagnículo pilsbryi*): This is a freshwater snail that occurs in isolated groups of springs in a scrub desert environment. It appears to have been closely associated with a locally extinct species, the large ramshorn snail, *Helisoma tribolvis subcrenatum*. This species is endemic to the area known as Fish Springs National Wildlife Refuge in Juab County; however, no live specimens have been collected since prior to 1871. It is now thought that the species may be extinct. It appears that overmanagement for the purpose of enhancing duck habitat may have caused the extinction of this species. Further investigations are required.

Utah Valvatasnail (*Valvata utahensis*): Historically, this species was known to occur in Utah Lake. The species has not been documented in Utah in the last 100 years and may be extirpated. However, populations may occur where habitat still exists.

**Threatened Species**

California Floater (*Anodota californiensis*): This is a freshwater clam that lives in shallow areas of unpolluted perennial waters and which is dependent on host fish during its larval stage. Found in Bear River south of Evanston, Wyoming, and near Randolph under rare conditions; west of Mona Lake; in Otter Creek below the dam; at Callao; and in Redden Spring. Collected historically from Huntington Creek in the San Rafael River drainage. Found historically in Farmington Canyon, Salt Lake City, Provo River, and Utah Lake. Several factors have been identified as causing declines in this species. They include alteration and destruction of habitat, declining water quality, and...
competition with and predation by non-native fish and grayfish. Arizona has noted that possible declines may also be linked with reduced populations of native fish that serve as larval hosts. Rare in Nevada, also indicating severe declines from historic times.

Thickshell Pondsnail [Utah Band Snail] (Stagnicola utahensis): The species was historically abundant in Utah Lake until the late 19th century. By 1933 it survived only in a few springs along the west side of Utah Lake. No recent collections have been noted. Major threat to this species is habitat loss and degradation.

Species of Special Concern (Declining Populations)

Round Mouth Valvata (Valvata humeralis): Historical records are from Lake Bonneville Basin; the Bear River in Wyoming, Utah, and Idaho; Bear Lake; and the Snake River in Idaho. Post-Pleistocene records are from Utah Lake, Bear River in Idaho, and the Snake River. Living populations are now apparently restricted to the Snake River in Idaho.

Species of Special Concern (Due to limited distribution)

Clinton Cave Snail (Pristiloma [Ogaridiscus] subrupicola): This species occurs in the north end of the Oquirrh Mountains in Clinton Cave. This species may also occur in Nevada and Oregon but in very restricted populations.

Eureka Mountainsnail (Oreohelix eurekensis eurekensis): This is one of a small group of mountain species which occurs principally at high elevations. It is only known to occur in the East Tintic Mountains in Juab and Utah County, at least from Mammoth Peak to Godiva Mountain and on Lime Peak.

Lyrate Mountainsnail (Oreohelix haydeni haydeni): One of a conspicuous species having only a few, widely separated colonies, O.H. haydeni appears to be restricted to a single population located in Quarry Cottonwood Canyon west of Devils Slide in Morgan County. Habitat consists of west-facing, xeric slopes. Possible future threats to species include increases in grazing practices or expansion of quarry activities.

Ogden Rocky Mountainsnail (Oreohelix peripherica wasatchensis): This subspecies of mountain snail is only known to occur in a small area near the mouth of Ogden Canyon. This subspecies is typically found under leaf litter and among quartzite boulders on open slopes associated with scrub oak clones. Fire appears to be the only current threat to the continued existence of this species.

Wet-rock Physa [Zion Canyon Snail, Zion Tadpole Snail] (Physella zionis): It is a primitive species without close living relatives. This is the smallest species within the family Physidae, reaching only 5 millimeters in maximum length. Unlike other physids, all of which are truly aquatic, the natural habitat of P. zionis is the subaerially exposed surface of wet cliffs. This species is only known from Zion National Park, Washington County.

Yavapai Mountainsnail (Oreohelix yavapai): This species is only known to occur in Utah in the Abajo Mountains in San Juan County. A land snail found in large, stable colonies in very xeric, open rocky areas, this species has a very limited distribution and may be declining due to habitat degradation from livestock grazing.

Species of Special Concern (Declining Populations and Limited Distribution)

Brian Head Mountainsnail (Oreohelix parowanensis): This is a rather small mountain snail which occurs at high elevations. It is known only from the type locality near the top of Brian Head, Parowan Mountains, in Iron County. No live specimens have ever been collected. This species may also occur in the LaSal Mountains, Logan Canyon, Beaver Canyon, and Panguitch Creek.
Fat-whorled Pondsnail [Banded Bonneville] (*Stagnicola bonnevillensis*): This is a rather large relict lymnaeid resembling some morphs of the widely distributed *Stagnicola catascopium* (Say). It occupies small spring-fed, well-vegetated ponds, although the presence of this species in Lake Bonneville deposits suggests that it previously lived in a large lake. Shells are widespread in the Bonneville Basin; however, live specimens have only been found near Corinne in Box Elder County. The threats to this species remain unclear.

Utah Physa [Utah Bubble Snail] (*Physella utahensis*): This is a relict freshwater snail of Pleistocene Lake Bonneville. It only exists in six verified sites, four in Utah and two in Colorado. It is a rare species with only two confirmed living populations in Utah, near Utah Lake and Redden Springs in the West Desert. The threats to this species remain unclear.

Uinta Mountainsnail (*Oreohelix eurekensis uinta*): Known only from the type locality from Whiterocks River in the Uinta Mountains. Possible reasons for its decline include range management practices for sheep (e.g. burning).

Desert Spring Snail (*Pyrgulopsis deserta*): This species is known only from springs along the Virgin River in southwestern Utah. Potential threats include water and land development. Currently *Pyrgulopsis* is under study in the Great Basin, which may result in a description of over 50 new species including many throughout the Bonneville Basin.

Fish Lake Physa Snail (*Physella microstriata*): This is a freshwater snail species that has only been found in shallow water along the shore of portions of Fish Lake, Utah. Recent surveys have not observed this species, and it is suspected that it may now be extinct. It is suspected that the decline of this species may be attributed to the management activities of Fish Lake designed to propagate sport fishes and to improve boating (e.g. removal of shoreline vegetation).