Section 14 Sevier River Basin FISHERIES AND WATER-RELATED WILDLIFE

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Fisheries And Water-Related Wildlife

Diverse fish and wildlife species are found from alpine environs to the vast dry desert areas and from mountain streams to valley reservoirs.

14.1 INTRODUCTION

This section describes the fisheries and other water-related wildlife in the Sevier River Basin. It also discusses associated problems and presents alternatives to improve this resource. All forms of wildlife depend on water at some time. The multifaceted recreational opportunities provided by wildlife and fishing can be enjoyed by all ages regardless of their situation.

Fishing is clearly dependent on a quality aquatic habitat. However, the quality of the riparian zone also impacts amphibians, birds, mammals, leeches, mollusks and insects. Riparian vegetation provides food, cover and nesting sites for wildlife and helps determine water temperature, which in turn may determine fish species, composition and population size along with influencing the available nutrients. Water development for various uses impacts the historic hydrologic regimes and associated riparian communities which effects fisheries and wildlife resources.

For these reasons, it is important to understand the relationship of fisheries and wildlife to other water-related resources uses.

The quality of the environment contributes to the health, well-being and quality of life of the local residents.

14.2 SETTING

A wide diversity of fish, wildlife and plant species are found in the basin; interacting together to contribute to a functioning ecosystem. There are 92,000 acres of wetlands, riparian vegetation and open water areas. About 50 percent of the riparian and open water areas are located in Millard and Sanpete counties. Management areas such as Manti Meadows and Topaz Slough provide habitat for waterfowl.

Fishing is a popular pastime on the lakes, reservoirs and streams, particularly in the upper reaches of the river and tributary systems. In the lower areas, flat water-based recreation becomes more popular.

14.2.1 Wildlife Species

Early settlers reported big game was scarce although furbearers, waterfowl and predators were abundant, and fish were found in good supply. The few deer were intensively hunted for meat and hides. By the turn of the century, big game was so scarce the sight of a deer or other game animal was a rarity. Through passage and enforcement of laws, big game is abundant today, as is small game, waterfowl and many other wildlife species.

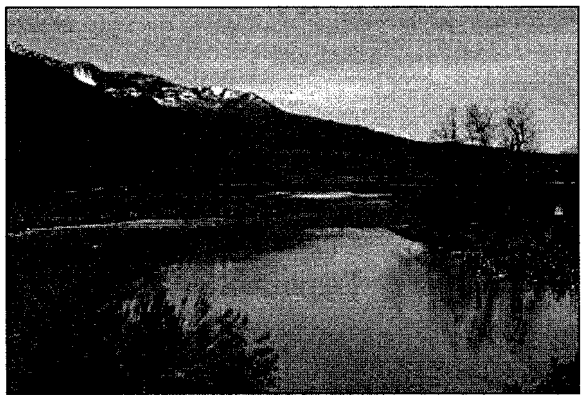
The traveler, local or distant, is often delighted to see ground squirrels, chipmunks and perhaps a lumbering porcupine. Walking through the forest, one is likely to hear the scolding of the red squirrel and in the vicinity of Navajo Lake may even observe the unique flying squirrel. High on the talus slopes of mountains, pika abounds; their chipping mixed with the whistle of yellow-bellied marmots. It may take more effort to see a kit fox on the desert or a coyote, cougar or eagle. The Utah prairie dog, a threatened species, is also found in the Sevier River Basin. Song birds brighten the day with their music while water-fowls bring a feeling of restlessness during their migrations. Many waterfowl and shorebirds use the Sevier River and lakes for resting and feeding during spring and fall migrations. The wide variety of wildlife present, offers many recreational opportunities such as hunting, wildlife viewing, photography and backyard bird feeding. Thousands of snow geese use Gunnison Bend Reservoir as a spring staging area every year, attracting numerous visitors. Each spring the Utah Division of Wildlife Resources (DWR) sponsors a "Snow Goose Day" at Gunnison Bend Reservoir.

Migratory waterfowl hunting occurs along the rivers and streams. Geese are also found in nearby feeding areas, often cultivated lands where grain is

grown. Hunting for pheasants is a popular sport. This takes place in the irrigated areas, although nearby riparian vegetation also provides hunting. Chukars are hunted in the dry foothills and grouse in the uplands and mountain areas.

The Endangered Species Act (ESA) does not apply directly to non-federal water-related activities by any agency under a federal permit or license. Owners and operators of non-federal projects are not affected as long as the normal and ongoing operations do not result in the taking of one of these species. The criteria for threatened and endangered status and category designations are explained in Section 16, Federal Programs and Development. Species classified for official listing are shown in Table 16-2.

In the event federal permits are required to develop a water resource or make revisions to existing ones, the Fish and Wildlife Service will review the project. The scope and overall intent of the proposed project or change will be assessed to decide the effect on fish and wildlife in the immediate area. Endangered plants are treated differently than endangered animals on private property. Threats to endangered plants will not stop development activities in an area where federal permits are not required although the ESA provides some protection where plants are not under federal jurisdiction. If listed plants are removed, destroyed or damaged on state or private land in violation of state law or criminal trespass law, it is also a violation of the ESA. The Fish and Wildlife Service and Division of Wildlife Resources makes every effort to work with private landowners to conserve listed and candidate species.



Heppler Pond provides waterfowl habitat

There are three springsnails species in the Sevier River Basin that are found in only one other spring in the entire world. They are found in the springs below Johns Valley groundwater reservoir on the East Fork of the Sevier River, in the central Sevier River area, and in the San Pitch River. A less restricted species occurs in several locations in the Otter Creek drainage. See Table 14-1 for a selected list of wildlife species that occur in the Sevier River Basin.

The Utah prairie dog, bald eagle and peregrine falcon are federally listed threatened or endangered species known to occur in the basin. The upper part of the basin is considered to be within the range of the federally listed endangered Southwestern willow flycatcher. The habitat most commonly utilized by the flycatcher is multi-storied, dense, riparian vegetation. Proper management of this riparian vegetation could greatly improve habitat for these high-interest species. They are judged to be in danger of extinction throughout a significant part of their range and as such, are protected by federal and state laws and regulations.

14.2.2 Fisheries

Prior to about 1870, the Bonneville cutthroat was the only trout found in the Sevier River Basin. This native species was found in moderately large populations throughout the Sevier River and its tributaries. Diaries of early settlers indicated loading pack horses with native trout. After 1870, stocking of Yellowstone cutthroat and rainbow trout started and was increased in the early 1900s. Fishing soon became a pastime of many with license sales multiplying lo-fold within 50 years. The fishing in the Sevier River main stem was reduced to practically nothing by the 1950s and is limited to nonexistent at the present time.

Many streams and reservoirs suitable for planting are stocked each year with fingerlings and catchable-sized fish. Management of wild-fish waters also helps assure natural reproduction to sustain the fishery. Fish populations in wild-fish waters are especially sensitive to alterations and impacts to their habitat.

Table 14-1
WILDLIFE SPECIES

BIG GAME	SMALL GAME	FURBEARERS
antelope	cottontail rabbit	beaver
elk	jack rabbit-nongame	mink
moose		muskrat
mountain goat		
mule deer		
CARNIVORES	**WATERFOWL**	**GAME BIRDS**
badger	var. species of	blue grouse
black bear	coots	chukar
bobcat	cranes	Merriam turkey
cougar	ducks	mourning dove
fox	geese	ring-necked pheasant
skunk	herron	ruffed grouse
weasel	rails	sage grouse
	snipe	
NONGAME BIRDS	**GAME FISH**	**NONGAME FISH**
bald eagle	black bass	carp
golden eagle	brook trout	dace, spp.
ferruginous hawk	catfish	leatherside chub
peregrine falcon	cutthroat trout	minnow
red-tail hawk	German brown trout	mountain sucker
rough-legged hawk	perch	redside shiner
Southwestern willow flycatcher	pike	sculpin, spp.
	rainbow trout	Utah chub
	walleye	Utah sucker
	white bass	

The Division of Wildlife Resources has purchased all the water rights to establish conservation pools in Pine Lake and Manning Meadow Reservoir. There are three state, and five private fish hatcheries. The state fish hatcheries are located on Mammoth Creek in Garfield County, below Glenwood Springs east of the town of Glenwood in Sevier County and below Big Springs west of Fountain Green in Sanpete County. Two of the private fish hatcheries are located between Richfield and Glenwood south of SR-119. These are the Trophy Fish Ranch near the point of Bull Claim Hill and the Hydeaway at the Hepler Ponds. The other three are located in Grass Valley, two near Koosharem and the other near Burrville.

Cutthroat, brook and rainbow trout are found in the cold mountain streams and lakes and German brown trout in some valley streams. Some streams no longer support abundant fish populations because of silt loads, fluctuating water levels, loss of instream structures, unstable streambeds, streamflow diversions, and degradation of riparian vegetation.

Downstream, fishing changes more to a warm water fishery. Principal species are German brown trout, carp, suckers and channel catfish. Walleye, small mouth bass, yellow perch and northern pike also occur in the lower reservoirs and river.

Physical data for the larger lakes and reservoirs are shown in Table 14-2. See Table 12-4 for additional data.

Classes of Lakes - Class I lakes are large bodies of water that satisfy heavy fishing pressure.

Table 14-2
RESERVOIR PHYSICAL DATA

Reservoir/Lake	Elevation (feet)	Surface area (acres)	Maximum depth (feet)	Aquatic Use (Class)
Barney Lake	10,050	20	16	3A
Big Lake	9,330	120	NA	3A
Chicken Creek	5,050	510	8	3C, 3D
DMAD	4,665	1,200	24	3B
Fairview Lake #2	8,975	105	40	3A
Fool Creek #1	4,805	1,200	20	3C, 3D
Gunnison	5,390	1,285	28	3c
Gunnison Bend	4,620	705	24	3B
Koosharem	6,995	310	20	3A
Lower Box Creek	8,465	50	23	3A
Manning Meadow	9,750	NA	49	3A
Navajo Lake	9,035	715	24	3A
Nine Mile	5,400	215	36	3A
Otter Creek	6,370	2,520	37	3A
Palisades Lake	5,870	65	31	3A
Panguitch Lake	8,210	1,250	66	3A
Pine Lake	8,190	75	20	3A
Piute	5,995	2,510	66	3A
Redmond Lake	5,110	160	10	3B
Rex	7,250	45	38	3A
Sevier Bridge	4,980	10,905	74	3B
Tropic	7,835	180	30	3A

Productivity is such that it supports a high fish population in good condition of one or more species of game fish. Natural reproduction and/or stocking of small fish maintains an excellent sport fishery.

Class II lakes are also important because of their recreational value. Productivity is such that it supports a high fish population in good condition of one or more species of game fish. Coldwater lakes in this class require stocking of small fish to maintain good fishing. Some Class II lakes are smaller and may have lower aesthetic ratings or biological deficiencies.

Class III lakes and reservoirs are often attractions for out-of-state anglers but normally provide angling for those who reside within 50 miles. Some are in areas where there is little fishing but may be very important locally. These key lakes and reservoirs should be enhanced for fishery production if possible.

Class IV, V, and VI lakes and reservoirs contribute little to the fishery resource. Some provide fishing where little fishery exists except when stocked with catchable trout.

Most streams have been classified for fish habitat to assist in management decisions. The classification for selected streams is shown in Table 14-3.

Classes of Streams - Class I streams are top quality fishing waters. They should be preserved and improved for fishery and similar recreational uses. These streams are generally outstanding in natural beauty and are of a unique type. Their productivity supports high fish populations of one or more species of the more desirable game fish in good condition. Natural reproduction or the

stocking of small fish maintains an excellent sport fishery.

Class II waters are of great importance to the fishery. These are productive streams with high aesthetic value and should be preserved. Fishing and other recreational uses should be the primary consideration. They are moderate to large in size and may have some human development along them. Many Class II streams may be comparable to Class I except for size.

Class III streams are the most common and support the bulk of stream fishing pressure. These streams provide fair to good fishery habitat and aesthetics. Water developments involving Class III waters should be planned to include fisheries as a primary use, and fishery losses should be minimized and enhanced when possible.

Class IV streams are typically poor in quality with limited fishery value. Fishing should be considered a secondary use. A few provide an important catchable fishery in areas where no other fishery exists. Water development plans should include proposals to enhance fisheries values where feasible.

Class V streams are now practically valueless to the fishery resource. Other water uses should take preference over fisheries use in planning water development.

Class VI streams are those stream channels which are dewatered for significant time periods during the year. Many of the stream sections could support good to excellent fish populations if appropriate minimum flows could be provided.

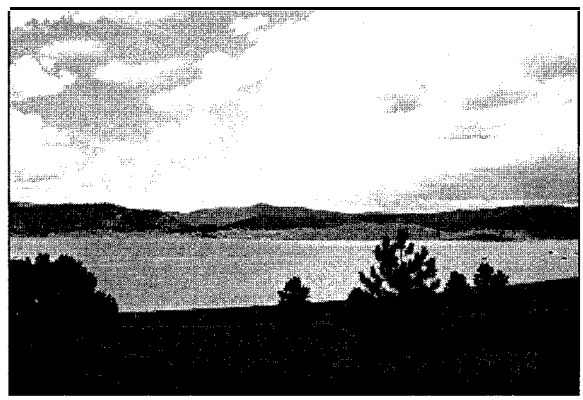
14.2.3 Wildlife Habitat

Habitat is the most important factor in maintaining healthy and self sustaining populations of fish and wildlife. Habitat is influenced by the overall condition of the ecological system and the level and type of human activities. Nature's abundance of water along with a favorable climate have created an exceptional ecosystem for a wide variety of fish and wildlife. Healthy riparian zones provide habitat as well as travel and migration corridors, winter cover, and food supply for resident species. Streams flowing off the surrounding mountain sides are often dewatered in the lower stretches, reducing wildlife habitat and watering sources.

Construction of water storage facilities has expanded and diversified recreational fishing and hunting opportunities for people. At the same time, the increased demand for water and building of communities has been in direct conflict with the needs of many fish and wildlife species.

14.3 ORGANIZATIONS AND REGULATIONS

Local, state and federal agencies have a part in passing and enforcing laws to regulate management of water facilities affecting wildlife. Private organizations work with public entities to protect fish and wildlife habitat.



Panguitch Lake provides prime fishing

14.3.1 Local

Irrigation companies control most of the water facilities affecting fish and wildlife. The impact may be either direct or indirect. Early irrigation rights holders were not required to leave water in the streams during times of low flow. As a result, there are no instream flow water rights in the Sevier River mainstem. The only exception is Manning Creek which is owned by the Division of Wildlife Resources.

There are several wildlife groups active in the Sevier River Basin. They are involved in the policy making process by providing local input to the Regional Advisory Council, which makes recommendations about regulations to the Wildlife Board.

Table 14-3
STREAM CLASSIFICATION FOR FISH HABITAT

Stream Reach	Use Class	support Status	Stream Reach	Use Class	Support Status
Asay Creek	3A	u-PS,l-NS	Salina Cr, hdwtr to USFS bd	3A	PS
Duck Creek	3A	F S	Salina Cr, USFS bdy to SR	3 B	PS
Mamoth Creek	3A	u-FS,1-NS	San Pitch R, hdwtrs to U132	3A	NA
Panguitch Cr, ab Pang L	3A	F S	San Pitch R, U132 to Svr R	3C-3D	NA
Panguitch Cr, blw Pang L	3A	u-PS,m-FS,1-NS	San Pitch R, east side trib	3A	NA
Sevier, Piute R to hdwts	3A	N S	Ivie Creek	3A	u-FS, I-NS
Bear Creek	3A	NS"	Chicken Cr, hdwtr to Levan	3A	NA
EF Sevier R, ab Tropic R	3A	F S	Chicken Cr, Levan to Svr R	3 B	NA
EF Sevier R, TR to Johns V	3A	N S	Deep, Little Salt, Chris	3A	NA
Deer & Antimony Creeks	3A	F S	Creeks above USFS bdy		
EF SR, Johns V to Piute R	3A	PS	SR, Svr Brdg to Gnnsn Bnd R	3 B	PS
Otter C ab Koos R & Gmwh C	3A	F S	Tanner, Cherry, Judd Creeks	3A	NA
Box Creek	3A	PS	Fool Cr, hdwtrs to USFS bdy	3A	NA
Otter Cr, Otter R to Kshm R	3A	N S	Fool Cr, USFS bdy to mouth	3 B	NA
SR, Piute Res to Clear Cr	3A	PS	Oak Cr, hdwtrs to USFS bdy	3A	F S
SR, Clr Cr to Annabella Div	3A	NS	Oak Cr, USFS bdy to mouth	3 B	N S
SR, Annbll Div to Vrmllm Dm	3 B	N S	Goose Cr, hdwtr to USFS bdy	3A	no trout
Beaver & Deer Creeks	3A	F S	Goose Cr, USFS bdy to mouth	3 B	no trout
Manning3& Monroe Creeks	A	F S	3 Pioneer Cr, hdwt to USFS bd	A	F S
SR, Vrmln Dm to Rcky Fd Res	3 B	PS	Pioneer Cr, USFS bd to mouth	3 B	N S
SR, Rcky Frd Rs to Salilna C	3A	PS	Chalk Cr,hdwtrs to USFS bd	3A	F S
SR. Slna Cr to Svr Brdg Res	3 B	PS	Chalk Cr, USFS bdy to mouth	3A	N S
Willow Cr, hdwt to USFS bdy	3A	F S	Meadow Creek, abv diversion	3A	PS
Lost Cr, hdwtrs to USFS bdy	3A	F S	Corn Creek, above diversion		PS
Lost Cr, USFS bdy to SR	3A	PS			

[a] No trout to maintain an important 3C fishery.

Note: FS • Fully Supportive
PS • Partially Supportive
NS • Nonsupportive

Some NS streams flows are inadequate for trout.

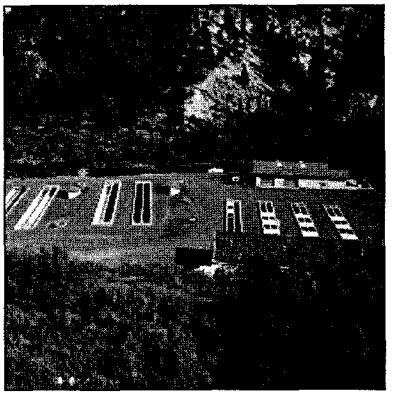
Stream Class:

3A • Protected for cold water species of game fish and other cold water aquatic life, including the necessary aquatic organisms in their food chain.
3B • Protected for warm water species of game fish and other warm water aquatic life. including the necessary aquatic organisms in their food chain.
3C • Protected for nongame fish and other aquatic life, including the necessary aquatic organisms in their food chain.
3D • Protected for waterfowl, shore birds and other water-oriented wildlife not included in class 3A, 3B, or 3C, including the necessary aquatic organisms in their food chain.

14.3.2 State

The Division of Wildlife Resources (DWR) responsibility for the management, protection, propagation and conservation of the state's wildlife resources. Planning for wildlife habitat needs is recognized as an integral part of basin water planning. Fishing, hunting and non-game wildlife activities contribute financially to the economy and these need to be considered.

The DWR will assume the lead role in determining potential impacts (positive and negative) to wildlife resources from water development projects. DWR will assess plans and identify benefits and adverse impacts, recommend possible mitigation and minimization of impacts, and if this is not possible, suggest project termination. DWR also provides factual information regarding consequences of unmitigated and mitigated impacts to wildlife resources.



Mammoth Fish Hatchery

Title 73-3-3 of the ***Utah Code Annotated*** allows the division to file for minimum instream-flow water rights. They can also file requests for permanent changes in the operation of certain streams and rivers to preserve critical fish habitat and to provide permanent enhancement of the state's stream and river fisheries. Water releases from reservoirs could be used to provide instream flows. Filing for instream flows could affect water rights in some areas. Currently, there are no instream flow rights except Manning Creek.

14.3.3 Federal

The Fish and Wildlife Service (FWS) is charged with carrying out the Fish and Wildlife Coordination Act. This act requires consultation between FWS and state agencies on specific activities. FWS is also charged with administering and regulating the Endangered Species Act. All federal agencies are charged with using their authorities to further the purposes of the act by carrying out programs for the conservation of threatened and endangered species.

14.4 PROBLEMS AND ISSUES

The following are problems and issues.

- Instream flows are critical for maintaining the fishery resources, aquatic and wetland habitats.
- There is a need to manage the riparian vegetation along the river and stream banks and the open water shore lines.
- Erosion is affecting water quality and degrading fish habitat where there is severe loss and degradation.
- Over-grazing by livestock and wildlife induces erosion of the upper watersheds and degrades the habitat, deposits sediment in the stream and river fisheries, reduces the water quality and prevents percolation into the groundwater, thus lowering spring flows. The problem of over-grazing of valley bottoms and along streams and rivers should be addressed where needed.
- Draining and development of wetlands should be approached with caution and mitigated where feasible.
- Consideration should be given to restoring meanders in the Sevier River through Sevier Valley to improve wildlife habitat and improve river hydrology. Any action taken should consider any adverse impacts such as increased water use by riparian vegetation and reduced channel capacity to carry flood flows.
- Actions should be taken to preserve habitat for threatened and endangered species as well as for state sensitive species.

Many people are attracted to live and play in this area because of the unique year-round attractions and facilities. This results in more pressure on the environment as a whole and on the water resources in particular. Many of the canyons and lakes are heavily used in the summer for recreational pursuits. Many summer homes are being constructed in the upper watershed areas and towns

and businesses are expanding as the population continues to grow. All of these and other activities tend to degrade the environment, making it more susceptible to deterioration of fish and wildlife habitat.

Conflicts are going to increase in the future due to finite water resources and expanding population. Some groups are advocating preserving all resources from all development and use. At the same time, others depend on these and other resources for their livelihood.

Most of the perennial streams are either captured in storage reservoirs or are diverted for irrigation during the growing season. Some stream channels are enlarged by erosion from cloudburst floods, loss of riparian vegetation and wildlife and livestock trampling.

Water quality is a problem in many reaches of the Sevier River. Streambank erosion, lack of riparian vegetation and increasing amounts of dissolved-solids are destroying the fisheries.

Other areas are damaged by ATV travel. This can cause a reduction in vegetation and associated wildlife values, loss of streambank stability, and siltation.

14.5 ALTERNATIVE SOLUTIONS

There are alternatives for using the resources so negative impacts can be avoided. ATV trails can provide control of this increasing activity. The Paiute ATV Trail in Sevier, Millard and Piute counties is a good example.

Riparian areas are important wildlife habitat for many species. These areas generally offer all four major habitat components: food, water, cover and living space. The linear lines of the riparian areas increase the "edge" between contrasting vegetation types. These are the zones of different types of vegetation that line streams at varying distances from stream banks. Different species use different vegetative types. These areas need to be protected.

Riparian areas can be protected from livestock and wildlife use by providing water upland from stream banks. Options include upstream ponds, horizontal wells, and wind power or solar energy to pump water to upland areas within the constraints of existing water rights. In the worst areas, fencing can be used to control access.

Another technique to assist with acceleration of regrowth on riparian areas is construction of instream structures. These include small impoundments or low head dams (much like those built by beavers), rock weirs, streambank protection, building up water tables, vegetative plantings and/or anchoring trees or rocks to streambanks to prevent further erosion. Some of these practices may be met with resistance from irrigation companies because it may impact their water rights.

Many of the poor cold water fisheries can be improved. Some of the waters are similar to the section of the East Fork of the Sevier River south of Antimony in Black Canyon. Electroshocking surveys here on August 10, 1995 indicates the potential for cold water fisheries in other waters of the Sevier River Basin. See Table 14-4.

Table 14-4
BLACK CANYON ELECTROSHOCKING SURVEY RESULTS

Location	Survey Length	Catchable Size Trout	Comment
At Osiris	0.1 mile	59 brown & 5 rainbow	4 brown, 19 rainbow, and 2 cutthroat, 6"-8"
1.5 mi below Osiris	0.1 mile	37 brown 4 rainbow, & 3 cutthroat	
2 mi below Osiris	0.1 mile	24 brown, 4 rainbow, & 3 cutthroat	suckers, sculpin & minnows were common

Note: Number of catchable size trout (8 inches or larger) captured in one pass on August 10, 1995.
Source: Division of Wildlife Resources, Southern Region.