WILDLIFE APPENDIX

Ecological Services
100 North Park, Suite 320
Helena Montana 59601

ES-61130-Billings
Informal

April 17, 2001

Mr. Larry Rau
Bureau of Land Management
Miles City Field Office
111Garyowen Road
Miles City, Montana 59301

Dear Mr. Rau:

We have received your April 6, 2001 FAX of your 28 February 2001 letter regarding the development of a joint Draft Environmental Impact Statement with the Montana Department of Natural Resources and Conservation (DNRC) addressing oil and gas development. The analysis specifically addresses coal bed methane development in southeast and eastcentral portions of Montana. Under a "full development" scenario, the following counties may be affected by this action: Treasure, Rosebud, Powder River, Wheatland, Golden Valley, Musselshell, Sweet Grass, Stillwater, Yellowstone, Big Horn, Carbon, Blaine, Park, Gallatin, Carter and Custer Counties. The Bureau of Land Management (BLM) is requesting comments and concerns on the impacts of the proposed action on the following threatened, endangered and proposed species.

The threatened, endangered or proposed species which may occur in the identified counties include the bald eagle *Haliaeetus leucocephalus*, pallid sturgeon *Scaphirhynchus albus,* grizzly bear *Ursus arctros horribilis*, Canada lynx *Lynx canadensis*, Utre Ladies' Tresses *Spiranthes diluvialis*, grey wolf *Canis lupus*, interior least tern *Sterna antillarum athalassos*, black footed ferret *Mustela nigripes* and mountain plover *Charadrius montanus.*

The Peregrine falcon (*Falco peregrinus*) was delisted on August 25, 1999. Protection from take and commerce for the peregrine falcon under the Endangered Species Act is removed upon delisting. However, peregrine falcons are still protected by the Migratory Bird Treaty Act (MBTA). The MBTA and its implementing regulations (50 CFR Parts 20 and 21) prohibit take, possession, import, export, transport, selling, purchase, barter, or offering for sale, purchase or barter, any migratory bird, their eggs, parts, and nests, except as authorized under a valid permit (50 CFR 21.11). With limited exceptions, take will not be permitted under MBTA until a management plan developed in cooperation with State wildlife agencies, undergoes public review, is approved, finalized, and published in the Federal Register.

Your action in Blaine County may occur within a "nonessential experimental population" for the black-footed ferret (50 CFR Part 17, Vol. 59, No. 159, 42696-715, August 18, 1994). Section 10(j) of the Act authorizes listed species to be released as experimental populations outside their currently occupied range, but within probable historic habitat, to further species conservation. Before making a release, the Services determine by rulemaking whether that population is "essential" or "nonessential." An "essential experimental population" is a reintroduced population whose loss would be likely to appreciably reduce the likelihood of the survival of the species in the wild. A "nonessential experimental population" is a reintroduced population whose loss would not be likely to appreciably reduce the likelihood of survival of the species in the wild. For section 7 consultation purposes, section 10(j) requires that any nonessential experimental population outside a National Park or National Wildlife Refuge System unit is treated as a proposed species and a conference with the Service may be conducted. It should be noted, that the effects of your proposed action may occur outside this area where the status of the black-footed ferret remains as endangered.

The black-footed ferret is obligate to the black-tailed prairie dog and is found exclusively within prairie dog colonies except when traveling from one colony to another. The Assiniboine and Gros Ventre Tribes at Fort Belknap are a part of the black-footed ferret reintroduction effort in Montana. A total of 167 ferrets have been released on the Fort Belknap Indian Reservation between 1997 and 2000. Therefore, black-footed ferrets may reside in any active prairie dog town within the scope of effects in the action area. A copy of the Service's *Black-footed Ferret Survey Guidelines for Compliance with the Endangered Species Act" (April 1989)*, is available upon request.

In Montana, the mountain plover almost exclusively nests in active prairie dog towns. Blaine and Phillips counties both support the bulk of mountain plover that nest in Montana. This population demonstrates the highest reproductive success of the few remaining within its historic range. The contribution of this local population's recruitment to the species is significant to the point that its loss would be a severe blow to recovery of the species. The Service has established *Mountain Plover Survey Guidelines (1999)* that have been provided for your convenience as APPENDIX I to this letter.

Candidate species are those taxa for which the U.S. Fish and Wildlife Service has sufficient information on biological status and threats to propose to list them as threatened or endangered, but issuance of a proposed rule is currently precluded by higher priority listing actions (61 FR 7596-7613, February 28, 1996). The Service encourages their consideration in environmental planning and partnerships; however, none of the substantive or procedural provisions of the Act apply to candidate species. Federal agencies have policies for the conservation of federal candidate species to manage those species in such a manner as to ensure actions that they authorize, fund, or carry out do not contribute to the need to list any species, and they may have special agency guidelines for their management, i.e. The Bureau of Land Management Instruction Memorandum No. 2000-140. The candidate species found in the counties listed above, includes the black-tailed prairie dog *Cynomys ludovicianus,* Montana arctic grayling *Thymallus arcticus*, and warm spring Zaitzevian riffle beetle *Zaitzevia thermae.* On April 10, 2001, the Service made a 12-month finding for a petition to list the sicklefin chub *Hybopsis meeki* and the sturgeon chub *Hybopsis gelida* as endangered under the Endangered Species Act of 1973, as amended. We found, after review of all available scientific and commercial information, that listing either of these two species is not warranted at this time. However, significant concern for these species remains.

The Service was petitioned to list the sage grouse (*Centrocercus europhasia*) in the state of Washington on May 14, 1999. Depending upon the Service's finding, a new petition may be submitted requesting to list the sage grouse throughout its range. Sage grouse populations have been declining throughout their range. Habitat loss and fragmentation has been identified as one of the primary causes of this decline. This species is dependent on sagebrush, and any removal of this habitat component can have a potentially negative effect on this species. Re-establishment of this shrub by existing coal mines to 30% of pre-disturbance levels has been largely unsuccessful in the Powder River Basin. Additionally, sage grouse are negatively impacted by increased road densities. Indirect impacts to sage grouse are likely, and that surface and timing stipulations are unsuccessful in protection of sage grouse habitat due to split estate mineral ownership. Cumulative surface disturbance of habitat from mining, coal-bed methane production, and oil and gas development may directly affect sage grouse populations. If sage grouse are listed during development of your proposed activity, the need to consult under section 7 of the Act may be avoided by addressing project impacts to this species now.

Pursuant to Section 7 of the Endangered Species Act of 1973 (ESA), as amended (16 U.S.C. 1531 et seq.), the Bureau of Land Management, as the responsible Federal agency, must determine if the proposed actions may affect these listed species and if so, initiate formal consultation with the Fish and Wildlife Service (Service). In order to determine if formal consultation is required, the Service recommends the responsible agency prepare a biological assessment for construction projects requiring an environmental impact statement (refer to Section 402.12, 50 CFR, Part 402, June 3, 1986), or an equivalent analysis for other projects, in accordance with Section 402.14, 50 CFR, part 402. We recommend that biological assessments include the following:

1. A description of the project,

2. A description of the specific area that may be affected by the action,

3. The current status, habitat use, and behavior of threatened and endangered species in the project area,

4. Discussion of the methods used to determine the information in Item 3,

5. An analysis of the affects of the action on listed species and proposed species and their habitats, including an analysis of any cumulative effects (see Section 402.02 50 CFR, Part 402),

6. Coordination/mitigation measures that will reduce/eliminate adverse impacts to threatened and endangered species,

7. The expected status of threatened and endangered species in the future (short and long term during and after project completion),

8. A determination of the project affects for listed species,

9. A determination of "is likely to jeopardize" or "is not likely to jeopardize" for proposed species, and

10. Documentation of the basis of all conclusions, such as the data considered, citation of literature and personal contacts used in developing the assessment.

If it is determined that the proposed project is likely to adversely affect any listed species, formal consultation should be initiated with this office.

Section 9 of ESA prohibits knowingly taking listed species, which includes harm, harassment, capture, or collection activities, except when specifically permitted by the U.S. Fish and Wildlife Service. Please also be apprized of the potential application of the Migratory Bird Treaty Act of 1918 (MBTA), as amended, 16 U.S.C. 703 et seq; and the Bald Eagle Protection Act of 1940 (BEPA), as amended, 16 U.S.C. 668 et seq; to your project. The MBTA does not require intent to "take" to be proven and does not allow for "take," except as permitted by regulations. Section 703 of the MBTA provides: "Unless and except as permitted by regulations...it shall be unlawful at any time, by any means or in any manner, to...take, capture, kill, or attempt to take, capture, or kill, possess... any migratory bird, or any part, nest, or eggs of any such bird...." The BEPA prohibits knowingly taking, or taking with wanton disregard for the consequences of such an activity, any bald or golden eagles or their body parts, nest, or eggs, which includes collection, molestation, disturbance, or killing activities.

Executive Order 13186 for Migratory Bird Conservation was signed by President Clinton on January 10, 2001 and published in the Federal Register on January 17, 2001. Executive Order 13186 reaffirms that Federal Agencies are in fact subject to the Migratory Bird Treaty Act and the executive order provides an effective mechanism for implementing the United States' obligations under its treaties with Canada, Mexico, Russia, and Japan. The requirements of the Executive Order are in addition to, not in lieu of, the prohibitions of the MBTA. Federal Agencies are required to possess permits before taking migratory birds.

The Service does foresee many substantive issues with the proposed project with regard to listed or other protected species, and the proliferation of new power lines to water wells and new infrastructure is a concern. Any power lines in the vicinity, if not properly constructed, could pose electrocution and line strike hazards to listed species and other migratory birds. To conserve any listed species and other migratory birds protected by Federal law, we urge that any power lines that may need to be modified or reconstructed as a result of the project be raptor-proofed following the criteria and techniques outlined in the *Avian Power Line Interaction Committee (APLIC). 1994. Mitigating Bird Collisions with Power Lines: The State of the Art in 1994. Edison Electric Institute, Washington, D.C., 78 pp*, and Avian *Power Line Interaction Committee (APLIC). 1996. Suggested Practices for Raptor Protection on Power Lines. Edison Electric Institute/Raptor Research Foundation, Washington, D.C., 128 pp.* Copies can be obtained via the Internet at http://www.eei.org/resources/pubcat/enviro/, or by calling 1-800/334-5453).

In Montana, recent studies have identified increasing eagle and raptor mortalities when birds encounter electric power lines associated with oil and gas development. All new distribution lines should incorporate contemporary raptor protection measures. These include conventional conductor-conductor and conductor to ground spacing, insulating the bushing conductor terminations and by using insulated jumper conductors. Perches, perching deterrents, nesting platforms and nest deterrent devices should also be used.

Your letter does not mention whether wetlands might be impacted by any of the proposed projects. If so, Corps of Engineers Section 404 permits may eventually be required. In that event, depending on permit type and other factors, the U.S. Fish and Wildlife Service may be required to review permit applications and will recommend any protection or mitigation measures to the Corps of Engineers as may appear reasonable and prudent based on the information available at that time.

Coal bed methane (CBM) development will include extensive networks of pipelines, power lines and roads, which together with collection points and compressors will result in severe disturbance to terrestrial wildlife and the habitats that support them. Saline runoff from CBM wells will also affect terrestrial wildlife through loss of habitat and direct physiological impacts.

Within the affected area, six species of amphibians, 12 species of reptiles, 184 species of birds and 43 species of mammals occur. Some are secure, and could likely weather the effects of CBM development, but the status of most is unknown, as is their potential response to the proposed development. Of the 245 vertebrate species (excluding fish), 13 species and 4 communities are of concern. Attached as an addendum to this letter is a paper by Steve Regele and Judd Stark from the Montana Department of Environmental Quality on *Coal Bed Methane Gas Development in Montana, Some Biological Issues.*

CBM development will draw down existing local and regional aquifers and reduce important ground and surface water supplies. Stock ponds, springs and wells will provide less water for livestock in upland areas, resulting in hardships for local livestock producers, and forcing cattle to use riparian areas for water. Increased livestock use of riparian habitats would violate the *Standards for Rangeland Health and Guidelines for Livestock Grazing Management* adopted by the BLM in the May, 1997 final EIS.

Wastewater discharge will likely cause increased flows in normally dry watercourses such as ephemeral drainages, coulees and gullies resulting in erosion and downstream siltation in streams that are already silt laden. These waters may contain toxic elements hazardous to wildlife. The MT DEQ has identified 22 parameters of concern that could impact water quality. The sturgeon chub has only a few remaining stable populations throughout its range. The Powder River and Lower Yellowstone is probably the most important drainage left for the sturgeon chub. The Powder River is currently one of the few remaining large alkaline prairie rivers that exhibit an intact native fish and invertebrate fauna. A small change in salinity, temperature, turbidity, radioactive or toxic constituents could render extant the current population of sturgeon chub and negatively impact pallid sturgeon. American Rivers, a national river watchdog group, on 11 April 2001, ranked the Powder River as one of the Nation's top five most threatened rivers in an annual tally of endangered rivers.

If you have any questions regarding this letter, please contact Lou Hanebury of my staff at (406) 247-7367. We appreciate your efforts to consider endangered species in your project planning.

Sincerely,

R. Mark Wilson
Field Supervisor
Montana Field Office

Attachment: *Coal Bed Methane Gas Development in Montana, Some Biological Issues.*

LRH/lrh

cc: Suboffice Coordinator, Ecological Services, Billings, MT.
Field Supervisor, Ecological Services, Wyoming Field Office, Cheyenne, Wyo.

APPENDIX I

MOUNTAIN PLOVER SURVEY GUIDELINES
U.S. Fish and Wildlife Service
1999

The mountain plover (*Charadrius montanus*) is a small bird (17.5 cm, 7 in.) about the size of a killdeer (*C. vociferus*). It is light brown above with a lighter colored breast, but lacks the contrasting dark breast-belt common to many other plovers. During the breeding season it has a white forehead and a dark line between the beak and eye, which contrasts with the dark crown.

Mountain plover breeding habitat is known to include short-grass prairie and shrub-steppe landscapes; dryland, cultivated farms; and prairie dog towns. Plovers usually nest on sites where vegetation is sparse or absent, due to disturbance by herbivores, including domestic livestock and prairie dogs. Vegetation at shortgrass prairie sites is less than 4 inches tall, while shrubs visually predominate nest sites within the shrub-steppe landscape. Usually, nest sites within the shrub-steppe are on active prairie dog towns. Nests are commonly located near a manure pile or rock. In addition to disturbance by prairie dogs or livestock, they have also been found on oil drill pads. Mountain plovers are rarely found near water. They may be found on heavily grazed pastures throughout their breeding range and may selectively nest in or near prairie dog towns. Positive indicators for mountain plovers therefore include level terrain, prairie dogs, bare ground, *Opuntia* pads, cattle, widely spaced plants, and horned larks. It would be unusual to find mountain plovers on sites characterized by irregular or rolling terrain; dense, matted vegetation; grass taller than 4 inches, wet soils, or the presence of killdeer.

These guidelines were developed by Service biologists Pat Deibert, Lou Hanebury, and Bob Leachman, and Dr. Fritz Knopf, USGS-BRD. Keep in mind these are guidelines - please call Bob Leachman at 970-243-2778 if you have any suggestions.

GENERAL GUIDELINES FOR SURVEYS

On February 16, 1999, the Service proposed the mountain plover for federal listing as threatened. Because listing of this species is proposed, the Service may recommend surveys for mountain plovers to better define nesting areas, and minimize potential negative impacts. The Service recommends surveys for mountain plovers in all suitable habitat, as well as avoidance of nesting areas, to minimize impact to plovers in a site planned for development. While the Service believes that plover surveys, avoidance of nesting and brood rearing areas, and timing restrictions (avoidance of important areas during nesting) will lessen the chance of direct impacts to and mortality of individual mountain plovers in the area, these restrictions do nothing to mitigate indirect effects, including changes in habitat suitability and habitat loss. Surveys are, however, a necessary starting point. The Service has developed the following 2 survey guidelines, depending on whether the intent is to determine the presence or absence of plovers at a site during the nesting season, or to determine the density of nesting plovers.

Survey Protocol

Two types of surveys may be conducted: 1) surveys to determine the presence/absence of breeding plovers (i.e., displaying males and foraging adults), or 2) surveys to determine nest density. The survey type chosen for a project and the extent of the survey area (i.e., beyond the edge of the construction or operational ROW) will depend on the type of project activity being analyzed (e.g., construction, operation) and the users intent. One methodology outlines a breeding survey that was used in northeastern Colorado to establish the density of occupied territories, based on displaying male plovers or foraging adults. The other was developed to only determine whether plovers occupy an area.

Techniques Common to Each Survey Method

- Conduct surveys during early courtship and territorial establishment. Throughout the breeding range, this period extends from approximately mid-April through early July. However, the specific breeding period depends on latitude, elevation, and weather.

- Conduct surveys between local sunrise and 1000 and from 1730 to sunset (periods of horizontal light to facilitate spotting the white breast of the adult plovers).

- Drive transects within the project area to minimize early flushing. Flushing distances for mountain plovers may be within 3 meters for vehicles, but plovers often flush at 50 to 100 meters when approached by humans on foot.

- Use of a 4-wheel drive vehicle is preferable; however, fallow agricultural fields present an access problem. Use of ATVs has proven highly successful in observing and recording displaying males.

- Stay in or close to the vehicle when scanning. Use binoculars to scan and spotting scopes to confirm sightings. Do not use scopes to scan.

- Do not conduct surveys in poor weather (i.e., high wind, precipitation, etc.).

- Surveys conducted during the courtship period should focus on identifying displaying or calling males, which would signify breeding territories.

- For all breeding birds observed, conduct additional surveys immediately prior to construction activities to search for active nest sites.

- If an active nest is located, an appropriate buffer area should be established to prevent direct loss of the nest or indirect impacts from human-related disturbance. The appropriate buffer distance will vary, depending on topography, type of activity proposed, and duration of disturbance. For disturbances including pedestrian foot traffic and continual equipment operations, a 200-meter buffer is recommended.

SURVEY TO DETERMINE PRESENCE/ABSENCE

1. Conduct the survey between May 1 and June 15, throughout the breeding range.

2. Visual observation of the area should be made within 200 m of the proposed action to detect the presence of plovers. All plovers located should be observed long enough to determine if a nest is present. These observations should be made from within a stationary vehicle, as plovers do not appear to be wary of vehicles.

3. If no visual observations are made from vehicles, the area should be surveyed on ATV's. Extreme care should be exercised in locating plovers due to their highly secretive and quiet nature. Surveys by foot are not recommended because plovers tend to flush at greater distances when approached using this method. Finding nests during foot surveys is more difficult because of the greater flushing distance.

4. A site must be surveyed 3 times during the survey window, with each survey separated by at least 14 days.

5. Initiation of the project should occur as near to completion of the survey as possible. For example, seismic exploration should begin with 2 days of survey completion. A 14-day period may be appropriate for other projects.

6. If an active nest is found in the survey area, the planned activity should be delayed 37 days, or one week post-hatching. If a brood of flightless chicks is observed, activities should be delayed at least seven days.

SURVEY TO DETERMINE DENSITY OF NESTING MOUNTAIN PLOVERS

We are assuming people will have received training on point counts in general before using this specialized point count technique adapted to mountain plovers.

Establishing Transects

7. Identify appropriate habitat and habitat of interest within geographic areas of interest.

8. Upon arriving in appropriate habitat, drive to a previously determined random starting point.

9. For subsequent points, drive a previously determined random distance of 0.3, 0.4 or 0.5 miles.

10. Each transect of point counts should contain a minimum of 20 points.

Conducting The Point Counts

1. Conduct counts between last week in June to July 4th at eastern plains elevation in Colorado.

2. Only 1 counter is used. Do not use a counter and recorder or other combinations of field help. Drivers are okay as long as they don't help spot plovers.

3. If an adult mountain plover is observed, plot occupied territories on a minimum of 1:24,000 scale map and on a ROW diagram or site grid (see attached). The ROW diagram will be at a greater level of detail, depicting the location of breeding birds (and possible nest sites) relative to ROW centerline, construction boundary, and applicable access roads.

4. Estimate or measure distances (in meters) to all mountain plovers. Method used should be noted, e.g., estimates w/distance training, estimates w/o distance training, rangefinder or measured with tape measure, etc.

5. Record "fly-overs" as "FO" in the distance column of the data sheet.

6. If you disturb a mountain plover while approaching the point, estimate the distance from point-center to the spot from which the bird was flushed.

7. Conduct counts for 5 minutes with a 3-minute subsample to standardize with BBS.

8. Stay close to your vehicle while scanning.

Recording Data

Record the following information AT EVERY POINT, EVERY DAY.

- start time
- unique point code (don't duplicate within a field crew or across dates)
- number of mountain plovers and distance to each
- land use and/or habitat type (e.g., fallow wheat, plowed, shortgrass)
- temperature, Beaufort wind, and sky conditions (clear, partly cloudy, overcast)
- Information on the data sheet somewhere.
- your name and address
- date
- Record for each point at some point during the census.
- detailed location description of each point count including road number, distance to important intersections.
- record transect and point locations on USGS county maps.
- Universal Transverse Mercator from maps or GPS are useful.

GENERAL HABITAT INDICATORS

Positive habitat images

Stock tank (non-leaking, leaking tanks often attract killdeer)

Flat (level or "tilted) terrain

Burned field/prairie/pasture

Bare ground (minimum of 30 percent)

"Spaced" grass plants

Prairie dog colonies

Horned larks

Cattle

Heavily grazed pastures

Opuntia pads visible

Negative habitat images

Killdeer present (indicating less than optimal habitat)

Hillsides or steep slope

Prominent, obvious low ridge

Leaky stock tanks

Vegetation greater than 4 inches in height

Increasing presence of tall shrubs

Matted grass (i.e., minimal bare ground)

Lark buntings

** SURNAME SLIP **
FOR CORRESPONDENCE REQUIRING
FIELD SUPERVISOR SIGNATURE

AUTHOR: Lou Hanebury
FILE #: blmcbmdeis.wpd (Informal)

REVIEWER (S):

_____

ASST. FIELD SUPERVISOR: _____

SPECIAL INSTRUCTIONS: Rob/Mark/Anne
_____

Anne: please review as to wolf and Grizzley special considerations?

Please print and add as addendum regelestark.doc as an attachment to this letter (**print out as a Work document**)_____
_____

COPIES: _____
_____
_____
[Attach this slip to Field Office file copy]

TABLE WIL-1
WILDLIFE SPECIES OF CONCERN

Common Name	Scientific Name	Counties	Additional Information			
			MT	BLM	USFS	Suitable Habitat
Mammals						
Pallid bat	*Antrozous pallidus*	Carbon	S1		S	Arid areas with rocky outcrops, dry forests, riparian forests, and ponderosa pine low slope forests in south-central Montana (UM).
Townsend's big-eared bat	*Corynorhinus (Plecotus) townsendii*	All	S2S3	SS	S	Arid scrub and pine forest, uses caves, snags, old mines and buildings the Custer and Gallatin National Forests (NM).
Spotted bat	*Euderma maculatum*	Big Horn, Carbon, Powder River	S1	SS	S	Various habitats in south-central Montana from open coniferous to pastureland.
Eastern red bat	*Lasiurus borealis*		S1			Open forest, woody draws, and farm shelter-belts (M).
Northern myotis	*Myotis septentrionalis*	None known in emphasis area.	S1			Mixed and coniferous forests with small woodland pools and streams, in clearings (NM). Lower Missouri River.
Pygmy rabbit	*Brachylagus idahoensis*	None known in emphasis area.	S2S3	SS	S	Areas with tall, dense sagebrush cover.
Hispid pocket mouse	*Chaetodipus hispidus*	Carter and Powder River	S1			Arid, open prairie land.
White-tailed prairie dog	*Cynomys leucurus*	Carbon	S1	SS	S	Grasslands and plains.
Black-tailed prairie dog	*Cynomys ludovicianus*	Custer and Blaine	S3S4	SS	S	Short-grass and mixed-grass prairie in the east of the 110th meridian Fort Belknap Reservation, and Crow Reservation.
North American wolverine	*Gulo gulo luscus*	Park and Gallatin	S2	SS	S	Mature and old-growth fir, pine and larch forests, alpine shrub, talus, and riparian cottonwoods.
Spotted skunk	*Spilogale gracilis*	Carbon		SS		Rocky, brushy grasslands, riparian areas and forest/shrub ecotones.

TABLE WIL-1
WILDLIFE SPECIES OF CONCERN

Common Name	Scientific Name	Counties	Additional Information			
			MT	BLM	USFS	Suitable Habitat
Fisher	*Martes pennanti*	Park and Gallatin	S1S2	SS	S	Forests with mixed habitat, several structural classes, edges and riparian areas.
Merriam's shrew	*Sorex merriami*	All SE MT counties and Blaine	S3	SS		Sagebrush and mountain brush areas and arid forests with sagebrush or bunchgrass.
Northern bog lemming	*Synaptomys borealis*	None known in project area.	S2	SS	S	Damp pastures, tundra, cool bogs, peatlands, marshes, or moist meadows.
Preble's shrew	*Sorex preblei*	Carbon, Musselshell, Treasure, Rosebud, Big Horn	S3	SS		Dry sagebrush and sagebrush-grasslands.
Swift fox	*Vulpes velox*	All counties east of Continental Divide	S1	SS	S	Short to midgrass prairie habitat.
Herptiles						
Boreal/Western toad	*Bufo boreas*	Park, Carbon, Sweetgrass, Gallatin	S3S4		S	Breeding ponds, summer range, and overwinter refugia within lodgepole pine or spruce-fir forests.
Canadian toad	*Bufo hemiophyrs*	None known in project area.	S1	SS	S	Shallow wetlands, streams, ditches, margins of prairie wetlands.
Wood frog	*Rana sylvatica*	Big Horn**		SS		Temporary ponds, lakes, and streams with adjacent forests or brush with damp litter.
Northern leopard frog	*Rana pipiens*	All	S3S4		S	Streams, ponds, lakes, wet prairies, and other bodies of water, frequently moving into grassy, herbaceous fields or forest borders some distance from permanent water.
Snapping turtle	*Chelydra serpentiana*	Eastern Counties	S3	SS		Shallow, mud-bottomed backwaters and ponds with lush aquatic vegetation.
Spiny softshell	*Trionyx spiniferus*	Eastern Counties	S3	SS		Rivers, backwaters, lakes, and ponds with sand or mud areas for digging nests. Missouri and Yellowstone Rivers

TABLE WIL-1
WILDLIFE SPECIES OF CONCERN

Common Name	Scientific Name	Counties	Additional Information			
			MT	BLM	USFS	Suitable Habitat
Birds						
Swainson's hawk	*Buteo swainsoni*	All	S4B, SZN	SS		Shrub-steppe, prairie with scattered trees, or open woodlands.
Ferruginous hawk	*Buteo regalis*	All	S3B, SZN		S	Undisturbed plains or shrub-steppe with relatively unbroken terrain and scattered trees, rocks, or treed creek bottoms.
Northern goshawk	*Accipiter gentilis*	Carbon, Park, Gallatin, Powder River, Rosebud	S3S4	SS	S	Coniferous, deciduous, and mixed forests with a high density of large, old trees and high overstory canopy.
Burrowing owl	*Athene cunicularia*	All	S3S4	SS	S	Burrows made by prairie dogs or badgers in rangeland and prairie areas.
Great gray owl	*Strix nebulosa*	Carbon, Park, Gallatin, Sweetgrass	S3	SS		Dense, often moist, forests, with openings for hunting.
Flammulated owl	*Otus flammeolus*	Gallatin, Park	S3B, SZN	SS	S	Stands of mature ponderosa pine and Douglas-fir with tree cavities.
Canvasback duck	*Aythya valisineria*	Western and northern counties		SS		Large, shallow prairie marshes bordered by dense emergent vegetation with areas of open water.
Harlequin duck	*Histrionicus histrionicus*	Carbon, Park, Gallatin	S2B, SZN	SS	S	Summer on mountain streams and rivers, nest on the ground near water's edge or in the hollows of dead trees.
Trumpeter swan	*Cygnus buccinator*	Carbon, Park, Gallatin	S2B, S2N	SS		Shallow freshwater marshes, ponds, lakes, and slow-moving rivers with both submerged and emergent vegetation.
White-faced ibis	*Plegadis chihi*	Carbon, Park	S1B, SZN	SS		Freshwater wetlands (marshes, ponds, swamps) with islands of emergent vegetation.
Long-billed curlew	*Numenius americanus*	All		SS		Open grasslands and prairies, often near water.

TABLE WIL-1
WILDLIFE SPECIES OF CONCERN

Common Name	Scientific Name	Counties	Additional Information			
			MT	BLM	USFS	Suitable Habitat
Columbian sharp-tailed grouse	*Tympanuchus phasianellus columbianus*	None known in project area	S1		S	Native bunchgrass and sagebrush-steppe with plant species diversity and structural diversity
Cassin's kingbird	*Tyrannus vociferans*	Southeastern counties	S1			Open country with pinyon-juniper or Ponderosa pine, open scrub, and shrub-steppe.
Loggerhead shrike	*Lanius ludovicianus*	All		SS		Edge habitat with open country, thinly wooded or scrubby land with clearings, meadows, and aspen stands bordering dense, ungrazed or lightly grazed grassland.
Blue-gray gnatcatcher	*Polioptila caerulea*	Carbon	S1			Juniper and limber pine in the Pryor Mountains of south-central Montana.
Sage sparrow	*Amphispiza belli*	NI		SS		Sagebrush steppe species, not confirmed in Montana.
Baird's sparrow	*Ammodramus bairdii*	Eastern Counties	S3S4B SZN		S	Open tall to mixed grass areas with mixture of mostly native prairie grasses and forbs.
Hairy woodpecker	*Picoides villosus*	All		SS		Various types of forest stands throughout Montana.
Pileated woodpecker	*Dryocopus pileatus*	Park, Gallatin		SS		Mature forests with large snags.
Three-toed woodpecker	*Picoides tridactylus*	Carbon, Park, Gallatin, Big Horn, Sweetgrass		SS		Pine-dominated mature forests and burned areas in early successional stages.
Black-backed woodpecker	*Picoides articusi*	Park, Gallatin	S3	SS	S	Coniferous forests, especially early post-fire habitat
Dickcissel	*Spiza americana*	Eastern Counties	S1	SS		Hayfields, pastures, weedy fallow fields, and the weedy margins of ditches and roadsides

TABLE WIL-1
WILDLIFE SPECIES OF CONCERN

Common Name	Scientific Name	Counties	Additional Information			
			MT	BLM	USFS	Suitable Habitat
Fish						
Yellowstone Cutthroat Trout	*Oncorhynchus clarki bouvieri*	Western Counties	S2	SS	S	Mountain lakes and streams with varying habitat structures and water velocities.
Westslope Cutthroat Trout	*Oncorhynchus clarki lewisi*	Gallatin	S3	SS	S	Small, isolated streams in mountainous areas.
Blue sucker	*Cycleptus elongatus*	Eastern Counties	S3	SS		Deep water of large rivers and reservoirs with low turbidity and swift current.
Paddlefish	*Polyodon spathula*	Eastern Counties	S1S2			Historically found in calm, open waters of large rivers in the Mississippi River drainage as far north as the Missouri River in Montana.
Shorthead sculpin	*Cottus confusus*	NI	S3		S	Cold, fast riffles in streams with gravel.
Northern redbelly dace X Finescale dace*	*Phoxinus eos X Phoxinus neogaeus*	Western Counties	S3	SS		Boggy lakes, creeks, and ponds, often with cool, dark, tea-colored water.

*Hybrid, always female.
**Possible/not confirmed.
M=migratory.
UM=unknown migration.
NM=nonmigratory, year-round resident.
NI=no information.
S and SS=species of concern.
S1=critically imperiled in the state.
S2=vulnerable to extinction.
S3=rare or restricted in range.
B= Breeding status of a migratory species.
Z= Ranking not applicable.
N= Non-breeding status of a migratory species.

Table WIL-2

Aquatic Resources Characteristics of Major Drainages and Representative Tributaries in the Billings and Powder River Resource Management Plan Areas and in Park, Gallatin, and Blaine Counties[1]

Location and Drainage	Length (miles)[2]	Aesthetics[3]	Fisheries Management[4]	Fisheries Resource Value[5]	Number of Fish Species Present	Dewatering Problem Identified?[6]
Billings Resource Management Area						
Yellowstone River West of Billings	134	National renown, clean stream and natural setting, stream and area fair	Trout	Outstanding, high, substantial	20	Periodic
Boulder River	66	Natural beauty, pristine	Trout	Outstanding, high, substantial	9	Chronic
Stillwater River	73	Natural beauty, clean stream and natural setting	Trout	Outstanding, high, substantial	9	No
Clarks Fork of the Yellowstone						
Downstream Section	43	Stream and area fair	Non-trout	Substantial	19	Periodic
Upstream Section	30	Clean stream and natural setting	Trout	Substantial	12	Chronic
Yellowstone River East of Billings	26	Clean stream and natural setting, stream and area fair	Warm/cool water and non-trout	High	28	Periodic
Bighorn River						
Downstream Section	59	Stream and area fair	Trout	High	30	Periodic
Little Bighorn River	116	Natural beauty, clean stream and natural setting	Warm/cool water and trout	Moderate	8	No
Upstream Section	38	National renown	Trout	Outstanding	17	No
Musselshell River	246	Clean stream and natural setting, stream and area fair	Trout	High, substantial	32	Chronic
Careless Creek	56	Clean stream and natural setting, stream and area fair	Warm/cool water and trout	Substantial, moderate, limited	10	Chronic
Powder River Resource Management Area						
Yellowstone River	64	Clean stream and natural setting	Non-trout	High	40	No
Rosebud Creek	208	Stream and area fair	Undesignated	High, substantial	21	No
Tongue River						

Table WIL-2

Aquatic Resources Characteristics of Major Drainages and Representative Tributaries in the Billings and Powder River Resource Management Plan Areas and in Park, Gallatin, and Blaine Counties[1]

Location and Drainage	Length (miles)[2]	Aesthetics[3]	Fisheries Management[4]	Fisheries Resource Value[5]	Number of Fish Species Present	Dewatering Problem Identified?[6]
Downstream Section	93	Clean stream and natural setting, stream and area fair	Non-trout	High, substantial	33	Periodic
Pumpkin Creek	172	Clean stream and natural setting, stream and area fair	Non-trout and undesignated	Substantial, moderate, limited	20	No
Upstream Section	114	Clean stream and natural setting	Trout	High	26	No
Otter Creek	103	Stream and area fair	Undesignated	Substantial, moderate	20	No
Hanging Woman Creek	47	Clean stream and natural setting	Undesignated	Substantial, moderate	23	No
Powder River						
Downstream Section	156	Low	Non-trout	High	21	Chronic
Mizpah Creek	150	Low, clean stream and natural setting	Non-trout and undesignated	Moderate, limited	18	No
Little Powder River	72	Stream and area fair	Non-trout	Substantial	13	No
Upstream Section	77	Low, natural and pristine beauty	Warm/cool water	High	21	Chronic
Little Missouri River	103	Clean stream and natural setting	Non-trout	High	18	No
Park County						
Yellowstone River	104	National renown	Trout	Outstanding	12	No
Shields Creek	65	Clean stream and natural setting	Trout	High, substantial	10	Periodic
Gallatin County						
Missouri River	27	National renown	Trout	High	13	Periodic
Gallatin River	102	National renown, clean stream and natural setting	Trout	Outstanding, high	12	Chronic/Periodic
Madison River	20	National renown	Trout	Outstanding	13	No
Jefferson River	19	Clean stream and natural setting	Trout	Substantial	12	Chronic

Table WIL-2

Aquatic Resources Characteristics of Major Drainages and Representative Tributaries in the Billings and Powder River Resource Management Plan Areas and in Park, Gallatin, and Blaine Counties[1]

Location and Drainage	Length (miles)[2]	Aesthetics[3]	Fisheries Management[4]	Fisheries Resource Value[5]	Number of Fish Species Present	Dewatering Problem Identified?[6]
Blaine County						
Missouri River	38	National renown	Non-trout	Outstanding	26	No
Cow Creek	54	Clean stream and natural setting	Trout	Moderate	8	No
Milk River	110	Stream and area fair	Non-trout	High	31	No
Lodge Creek	73	Stream and area fair	Non-trout	High	18	No
Peoples Creek	113	Clean stream and natural setting	Trout and non-trout	Substantial, moderate	14	No

[1]Information derived from the Montana Natural Resource Information System on the Internet at http://nris.state.mt.us/wis/mris1.html. Multiple values for a resource characteristic indicate river reach differences within a given drainage.

[2]Estimated length of drainage within the Resource Management Area or county.

[3]Aesthetics ratings in descending order are: national renown; natural and pristine beauty with some development; clean stream and natural setting; stream and area fair; and low.

[4]Categories of fisheries management are: trout; non-trout; warm/cool water; and undesignated.

[5]Fisheries resource values ratings in descending order are: outstanding; high; substantial; moderate; and limited.

[6]Dewatering indicates a reduction in streamflow beyond the point where stream habitat is adequate for fish and usually occurs during the irrigation season (July through September). Periodic dewatering indicates a significant problem in drought or water-short years, and chronic dewatering indicates a significant problem in virtually all years.

Table WIL-3

Common and Scientific Names and Relative Abundance of Fish Species Present in Major Drainages and Representative Tributaries in the Billings Resource Management Plan Area[1]

Common Name	Scientific Name	Yellowstone River West of Billings	Boulder River	Stillwater River	Clarks Fork of the Yellowstone		Yellowstone River East of Billings	Bighorn River		Little Bighorn River	Musselshell River	Careless Creek
					Downstream Section	Upstream Section		Downstream Section	Upstream Section			
Goldeye	*Hiodon alasoides*	A, C, U, R			A		A	A	C, R		A, C, R	
Lake chub	*Couesius plumbeus*				U	C	R	R			R	A
Common carp[2]	*Cyprinus carpio*	C, U, R			R		C	A, C	A, C		A, C, U	
Western silvery/plains minnow	*Hybognathus argyritis/placitus*				U	R		C, U	R		A, C, U	
Brassy minnow	*Hybognathus hankinsoni*										U, R	
Emerald shiner	*Notropis atherinoides*	C, U, R				R	C	U			C, R	
Sand shiner	*Notropis stramineus*										A, U, R	
Northern redbelley/finescale dace	*Phoxinus eos/neogaeus*										U	U
Fathead minnow	*Pimephales promelas*							U			U	U
Flathead chub	*Platygobio gracilis*						A, C	C			A, C, U, R	A
Longnose dace	*Rhinichthys cataractae*	R	C	A, C, U	C	C	A	A, C	A		A, C, U	A
River carpsucker	*Carpiodes carpio*	C, U			C		C	C	U, R		U, R	
Longnose sucker	*Catostomus catostomus*	A, C, U	A	C, U	A, C	C	C	A	C	C	A, C, U, R	C
White sucker	*Catostomus commersoni*	A, C, U		A, U	A	A	C	A, C	A, C	C	A, C, U	A, C
Mountain sucker	*Catostomus platyrhynchus*	A, U	C	C, R	C	A	A	C		P	A, C	C
Smallmouth buffalo	*Ictiobus bubalus*						R	R			R	
Bigmouth buffalo	*Ictiobus cyprinellus*						R	R				
Shorthead redhorse	*Moxostoma macrolepidotum*	A, C			U		A	A, C	U, R		A, C	C

Table WIL-3

Common and Scientific Names and Relative Abundance of Fish Species Present in Major Drainages and Representative Tributaries in the Billings Resource Management Plan Area[1]

Common Name	Scientific Name	Yellowstone River West of Billings	Boulder River	Stillwater River	Clarks Fork of the Yellowstone		Yellowstone River East of Billings	Bighorn River		Little Bighorn River	Musselshell River	Careless Creek
					Downstream Section	Upstream Section		Downstream Section	Upstream Section			
	macrolepidotum											
Black bullhead[2]	*Ameiurus melas*	U									R	
Yellow bullhead[2]	*Ameiurus natalis*						U					
Channel catfish	*Ictalurus punctatus*	C, U, R			U, R		A	C, U	R	C	C, U	
Stonecat	*Noturus flavus*	U			C		C	U			C, U, R	
Northern pike[2]	*Esox lucius*						R	R	R		U, R	
Yellowstone cutthroat trout	*Oncorhynchus clarki bouvieri*	R	C, U	C, U, R	R	R						
Rainbow trout[2]	*Oncorhynchus mykiss*	C	A, C, U	A, C, U	U, R	R	U	C, U	A	C		
Mountain whitefish	*Prosopium williamsoni*	A, C	A	A, C, U	C	A	U	U	C	C	C, U	
Brown trout[2]	*Salmo trutta*	C	A	A, C, U	R	U	U	C, U	A	C	C, R	
Brook trout[2]	*Salvelinus fontinalis*	R	A, U	C, U, R								C
Arctic grayling	*Thymallus arcticus*					R						
Burbot	*Lota lota*	C, U, R			C		C	C, U	R			
Plains killifish	*Fundulus zebrinus*							R				
Mottled sculpin	*Cottus bairdi*	A, C, U	C		R						A, C	
Green sunfish[2]	*Lepomis cyanellus*							R, I			R, I	
Smallmouth bass[2]	*Micropterus dolomieu*						C	U, R	R	C	C, U, R	
Largemouth bass[2]	*Micropterus salmoides*						R				I	
Black crappie[2]	*Pomoxis nigromaculatus*						I	I			I	

Table WIL-3

Common and Scientific Names and Relative Abundance of Fish Species Present in Major Drainages and Representative Tributaries in the Billings Resource Management Plan Area[1]

Common Name	Scientific Name	Yellowstone River West of Billings	Boulder River	Stillwater River	Clarks Fork of the Yellowstone		Yellowstone River East of Billings	Bighorn River		Little Bighorn River	Musselshell River	Careless Creek
					Downstream Section	Upstream Section		Downstream Section	Upstream Section			
Yellow perch[2]	*Perca flavescens*						R	R			U	
Sauger	*Stizostedion canadense*	U			R		U	U	R		C, U	
Walleye[2]	*Stizostedion vitreum*						R	U	R		R	
Freshwater drum	*Aplodinotus grunniens*						R	R			R	

[1]Information derived from the Montana Natural Resource Information System on the Internet at http://nris.state.mt.us/wis/mris1.html. Multiple values for relative abundance indicate variation among river reaches and/or study results within a given drainage. Relative abundance: A = abundant; C = common; U = uncommon; R = rare; I = incidental; P = present.

[2]Indicates species is not native.

Table WIL-4

Common and Scientific Names and Relative Abundance of Fish Species Present in Major Drainages and Representative Tributaries in the Powder River Resource Management Plan Area[1]

Common Name	Scientific Name	Yellowstone River	Rosebud Creek	Tongue River		Pumpkin Creek	Powder River		Little Powder River	Little Missouri River
				Downstream Section	Upstream Section		Downstream Section	Upstream Section		
Pallid sturgeon	*Scaphirhynchus albus*	R								
Shovelnose sturgeon	*Scaphirhynchus platorynchus*	A		A			A	A		
Paddlefish	*Polyodon spathula*	C		R						
Goldeye	*Hiodon alasoides*	A	U	A		U, R	C	C	C	U
Lake chub	*Couesius plumbeus*	R	U			C, U				C
Common carp[2]	*Cyprinus carpio*	A	C	C	C	C, U	R	C, U, R	U	U
Western silvery/plains minnow	*Hybognathus argyritis/placitus*	C, U		U		C	A	A, C	A	C
Brassy minnow	*Hybognathus hankinsoni*	R	R			C	R	R		
Sturgeon chub	*Macrhybopsis gelida*	U, R		R			C	C		
Golden shiner[2]	*Notemigonus crysoleucas*									C
Emerald shiner	*Notropis atherinoides*	A		C	C					
Sand shiner	*Notropis stramineus*	R		R		C	U	U	U	A
Northern redbelley/finescale dace	*Phoxinus eos/neogaeus*	U								
Fathead minnow	*Pimephales promelas*	C	U	C		A, C	C		C	C
Flathead chub	*Platygobio gracilis*	A	A	A	A	C, U	A	A	R	A
Longnose dace	*Rhinichthys cataractae*	U	C	C	U	U	U	C, U	R	C
Creek chub	*Semotilus atromaculatus*	R		R	R		R	R		C
River carpsucker	*Carpiodes carpio*	A	U	C	C	C, R	U	U	C	U
Longnose sucker	*Catostomus catostomus*	C	U	C	A					
White sucker	*Catostomus commersoni*	A	C	C	A	C, U	C		U	C

Table WIL-4

Common and Scientific Names and Relative Abundance of Fish Species Present in Major Drainages and Representative Tributaries in the Powder River Resource Management Plan Area[1]

Common Name	Scientific Name	Yellowstone River	Rosebud Creek	Tongue River		Pumpkin Creek	Powder River		Little Powder River	Little Missouri River
				Downstream Section	Upstream Section		Downstream Section	Upstream Section		
Mountain sucker	*Catostomus platyrhynchus*	U		U	C	R				
Blue sucker	*Cycleptus elongatus*			U						
Smallmouth buffalo	*Ictiobus bubalus*	C		U	C					
Bigmouth buffalo	*Ictiobus cyprinellus*	C		U						
Shorthead redhorse	*Moxostoma macrolepidotum*	A	A	A	A	C, U	U	C, U	A	A
Black bullhead[2]	*Ameiurus melas*		R	U	U	U				U
Yellow bullhead[2]	*Ameiurus natalis*			U	U					
Channel catfish	*Ictalurus punctatus*	A	C	A	C	C, U	C	C, U	C	C
Stonecat	*Noturus flavus*	A	U	C	C	U, R	U	U	U	
Northern pike[2]	*Esox lucius*	U	C	U	U					
Rainbow trout[2]	*Oncorhynchus mykiss*	R			U		R	U, R		
Mountain whitefish	*Prosopium williamsoni*		U		U					
Brown trout[2]	*Salmo trutta*	R			U			U		
Brook trout[2]	*Salvelinus fontinalis*		U					U		
Burbot	*Lota lota*	A	C	U			R	R		
Plains killifish	*Fundulus zebrinus*									U
Rock bass[2]	*Ambloplites rupestris*	R		U	C					
Green sunfish[2]	*Lepomis cyanellus*	R			U	U	R	R	U	U
Pumpkinseed[2]	*Lepomis gibbosus*	R		U	U	U				
Smallmouth bass[2]	*Micropterus dolomieu*	R								

Table WIL-4

Common and Scientific Names and Relative Abundance of Fish Species Present in Major Drainages and Representative Tributaries in the Powder River Resource Management Plan Area[1]

Common Name	Scientific Name	Yellowstone River	Rosebud Creek	Tongue River		Pumpkin Creek	Powder River		Little Powder River	Little Missouri River
				Downstream Section	Upstream Section		Downstream Section	Upstream Section		
Largemouth bass[2]	*Micropterus salmoides*	R								
White crappie[2]	*Pomoxis annularis*	U	R	U	U	U				
Black crappie[2]	*Pomoxis nigromaculatus*	U		R	R					
Yellow perch[2]	*Perca flavescens*	U		U						
Sauger	*Stizostedion canadense*	A	C	C	C	R	A	A, U		U
Walleye[2]	*Stizostedion vitreum*	C, U	U	U	C		R	R		
Freshwater drum	*Aplodinotus grunniens*	U								

[1]Information derived from the Montana Natural Resource Information System on the Internet at http://nris.state.mt.us/wis/mris1.html. Multiple values for relative abundance indicate variation among river reaches and/or study results within a given drainage. Relative abundance: A = abundant; C = common; U = uncommon; R = rare; I = incidental; P = present.

[2]Indicates species is not native.

Table WIL-5

Common and Scientific Names and Relative Abundance of Fish Species Present in Major Drainages and Representative Tributaries in Park, Gallatin, and Blaine Counties[1]

		Park County		Gallatin County				Blaine County				
Common Name	**Scientific Name**	**Yellowstone River**	**Shields Creek**	**Missouri River**	**Gallatin River**	**Madison River**	**Jefferson River**	**Missouri River**	**Cow Creek**	**Milk River**	**Lodge Creek**	**Peoples Creek**
Pallid sturgeon	*Scaphirhynchus albus*							R				
Shovelnose sturgeon	*Scaphirhynchus platorynchus*							C				
Paddlefish	*Polyodon spathula*							U				
Goldeye	*Hiodon alasoides*							C		C		
Lake chub	*Couesius plumbeus*							U		C	C	
Common carp[2]	*Cyprinus carpio*	R		A		U	C	C		C	C	U
Utah chub[2]	*Gila atraria*					U						
Western silvery/plains minnow	*Hybognathus argyritis/placitus*							C	C	U	C	C, U
Brassy minnow	*Hybognathus hankinsoni*									R		
Sturgeon chub	*Macrhybopsis gelida*							U				
Pearl dace	*Margariscus margarita*										U	
Emerald shiner	*Notropis atherinoides*							C		C	U	
Spottail shiner[2]	*Notropis hudsonius*									U		
Northern redbelley/finescale dace	*Phoxinus eos/neogaeus*									C	U	C
Fathead minnow	*Pimephales promelas*							U	C	C, U	A	
Flathead chub	*Platygobio gracilis*			A			U	A, C		C		C
Longnose dace	*Rhinichthys cataractae*	C, U	C, U	C	U	A	C	C	C	C	U	C
Redside shiner	*Richardsonius balteatus*						U					
River carpsucker	*Carpiodes carpio*							C		U		
Longnose sucker	*Catostomus catostomus*	A, C	A, U	C	C	A	C	C	C	U	R	U
White sucker	*Catostomus commersoni*	A, C	A, U	C	C	A	C		C	A	C	A, C

Table WIL-5

Common and Scientific Names and Relative Abundance of Fish Species Present in Major Drainages and Representative Tributaries in Park, Gallatin, and Blaine Counties[1]

		Park County		Gallatin County				Blaine County				
Common Name	**Scientific Name**	**Yellowstone River**	**Shields Creek**	**Missouri River**	**Gallatin River**	**Madison River**	**Jefferson River**	**Missouri River**	**Cow Creek**	**Milk River**	**Lodge Creek**	**Peoples Creek**
Mountain sucker	*Catostomus platyrhynchus*	U, R	C	R	U	U	R		R			R
Blue sucker	*Cycleptus elongatus*							U				
Smallmouth buffalo	*Ictiobus bubalus*							C		U		
Bigmouth buffalo	*Ictiobus cyprinellus*							U		U		
Shorthead redhorse	*Moxostoma macrolepidotum*	U, R						C		U		
Black bullhead[2]	*Ameiurus melas*									A, C	C	
Channel catfish	*Ictalurus punctatus*							A		U		
Stonecat	*Noturus flavus*			U		U		C		C	U	
Northern pike[2]	*Esox lucius*							U		C	C	U
Cisco[2]	*Coregonus artedi*							U				
Lake whitefish[2]	*Coregonus clupeaformis*									C	R	
Yellowstone cutthroat trout	*Oncorhynchus clarki bouvieri*	C, U	C, U, R		R							
Westslope cutthroat trout	*Oncorhynchus clarki lewisi*				R							
Rainbow trout[2]	*Oncorhynchus mykiss*	C	R	C	A	A, U	U			I		U
Mountain whitefish	*Prosopium williamsoni*	A	A, C	A	A	C	A					
Brown trout[2]	*Salmo trutta*	C	C, U	C	A, C, U	U	C					
Brook trout[2]	*Salvelinus fontinalis*	R	U		U	R			A			C
Arctic grayling	*Thymallus arcticus*				R							
Burbot	*Lota lota*			U			U	U		C, R		
Brook stickleback	*Culaea inconstans*									R	C	U
Mottled sculpin	*Cottus bairdi*	A	A, C	C	A, C	A	C		C			C

Table WIL-5

Common and Scientific Names and Relative Abundance of Fish Species Present in Major Drainages and Representative Tributaries in Park, Gallatin, and Blaine Counties[1]

		Park County		Gallatin County				Blaine County				
Common Name	**Scientific Name**	**Yellowstone River**	**Shields Creek**	**Missouri River**	**Gallatin River**	**Madison River**	**Jefferson River**	**Missouri River**	**Cow Creek**	**Milk River**	**Lodge Creek**	**Peoples Creek**
Smallmouth bass[2]	*Micropterus dolomieu*									U		
Largemouth bass[2]	*Micropterus salmoides*			R								
Black crappie[2]	*Pomoxis nigromaculatus*									U		
Iowa darter	*Etheostoma exile*									U		
Yellow perch[2]	*Perca flavescens*					R				C	C	
Sauger	*Stizostedion canadense*							C		C	U	
Walleye[2]	*Stizostedion vitreum*							U		C	U	U
Freshwater drum	*Aplodinotus grunniens*							U				

[1]Information derived from the Montana Natural Resource Information System on the Internet at http://nris.state.mt.us/wis/mris1.html. Multiple values for relative abundance indicate variation among river reaches and/or study results within a given drainage. Relative abundance: A = abundant; C = common; U = uncommon; R = rare; I = incidental; P = present.

[2]Indicates species is not native.