

Table 1. Field effort by month, Otter Creek Mine fish and wildlife resources monitoring, 2011-2012.

Month	Dates		Total
	WESTECH ^a	MTNHP ^b	
Autumn 2011			
Sept. 16-30	---	---	0
October	5, 6, 7, 8, 9	14, 15 ^c	7
November	---	---	0
Dec. 1-15	19, 20	---	2
Winter 2011-2012			
Dec. 16-31	---	---	0
January 2011	26, 27, 28	---	3
February	17, 18, 19	---	3
March 1-15	8, 9, 10	---	3
Spring 2012			
March 16-31	---	---	0
April	21, 22, 23, 24	---	4
May	8, 9, 10	19, 20	5
June 1-15	4, 5, 6, 7	---	4
Summer 2012			
June 16-30	---	---	0
July	2, 3, 4, 5, 6, 7	30, 31	8
August	---	---	0
Sept. 1-15	---	---	0
Autumn 2012			
October	---	15, 16	2
Total	33	8	41

^aDates on which wildlife sightings were recorded by WESTECH wildlife, vegetation and or wetlands biologists.

^bDates on which aquatics, fish and/or wildlife sightings were recorded by Montana Natural Heritage Program (MTNHP) ecologists (Stagliano 2012, 2013).

^cConsidered part of the baseline year by Stagliano (2012).

Table 2. Vertebrate animal Species of Concern potentially occurring in the Otter Creek Mine fish and wildlife resources study area.

Species	Montana Species of Concern	USFS Sensitive Species	USFS Management Indicator Species	BLM Sensitive Species
FISH				
Brassy minnow (<i>Hybognathus hankinsoni</i>)	XP ^a			
Plains minnow (<i>Hybognathus placitus</i>)	XP			
AMPHIBIANS				
Great Plains toad (<i>Bufo cognatus</i>)	X	X		X
Northern leopard frog (<i>Rana pipiens</i>)		X		X
Plains spadefoot (<i>Spea bombifrons</i>)	X	X		X
REPTILES				
Snapping turtle (<i>Chelydra serpentina</i>)	X			X
Spiny softshell (<i>Apalone spinifera</i>)	X			X
Common sagebrush lizard (<i>Sceloporus graciosus</i>)	X			
Greater short-horned lizard (<i>Phrynosoma hernandesi</i>)	X	X		X
Western hog-nosed snake (<i>Heterodon nasicus</i>)	X	X		X
Milksnake (<i>Lampropeltus triangulum</i>)	X	X		X
MAMMALS				
Merriam's shrew (<i>Sorex merriami</i>)	X			
Pallid bat (<i>Antrozus pallidus</i>)	X	X		X
Townsend's big-eared bat (<i>Corynorhinus townsendii</i>)	X	X		X
Eastern red bat (<i>Lasiurus borealis</i>)	X			
Hoary bat (<i>Lasiurus cinereus</i>)	X			
Fringed myotis (<i>Myotis thysanodes</i>)	X	X		X
Meadow jumping mouse (<i>Zapus hudsonius</i>)	X			X
Black-tailed prairie dog (<i>Cynomys ludovicianus</i>)	X	X		X
Swift fox (<i>Vulpes velox</i>)	X			X
Black-footed ferret (<i>Mustela nigripes</i>)	X		X	
White-tailed deer (<i>Odocoileus virginianus</i>)			X	
Elk (<i>Cervus canadensis</i>)			X	
BIRDS				
Trumpeter swan (<i>Cygnus buccinator</i>)	X			
Barrow's goldeneye (<i>Bucephala islandica</i>)	XP			
Hooded merganser (<i>Lophodytes cucullatus</i>)	XP			
Greater sage-grouse (<i>Centrocercus urophasianus</i>)	X	X		X
Sharp-tailed grouse (<i>Tympanuchus pahsianellus</i>)			X	
Common loon (<i>Gavia immer</i>)	X	X		X
Ckark's grebe (<i>Aechmophorus clarkia</i>)	X			
Horned grebe (<i>Podiceps auritus</i>)	X			
Great blue heron (<i>Ardea herodias</i>)	X			
American bittern (<i>Botaurus lentiginosus</i>)	X			
Black-crowned night heron (<i>Nycticorax nycticorax</i>)	X			X
American white pelican (<i>Pelecanus erthrorhynchus</i>)	X			
White-faced ibis (<i>Plegadis chihi</i>)	X			X
Bald eagle (<i>Haliaeetus leucocephalus</i>)	X	X	X	X
Northern goshawk (<i>Accipiter gentilis</i>)	X		X	X
Swainson's hawk (<i>Buteo swainsoni</i>)				X
Ferruginous hawk (<i>Buteo regalis</i>)	X			X
Golden eagle (<i>Aquila chrysaetos</i>)	X			X
Peregrine falcon (<i>Falco peregrines</i>)	X	X	X	X
Merlin (<i>Falco columbarius</i>)			X	
Piping plover (<i>Charadrius melodus</i>)	X			
Mountain plover (<i>Charadrius montanus</i>)	X			X
Black-necked stilt (<i>Hymenopus mexicanus</i>)	X			
Long-billed curlew (<i>Numenius americanus</i>)	X	X		X
Franklin's gull (<i>Leucophaeus pipixcan</i>)	X			X
Common tern (<i>Sterna hirundo</i>)	X			
Forster's tern (<i>Sterna forsteri</i>)	X			

Table 2 (continued).

Species	Montana Species of Concern	USFS Sensitive Species	USFS Management Indicator Species	BLM Sensitive Species
Caspian tern (<i>Hydroprone caspia</i>)	X			
Black tern (<i>Chlidonia niger</i>)	X			X
Black-billed cuckoo (<i>Coccyzus erythrophthalmus</i>)	X			
Yellow-billed cuckoo (<i>Coccyzus americanus</i>)	X			X
Eastern screech-owl (<i>Megascops asio</i>)	XP			
Burrowing owl (<i>Athene cunicularia</i>)	X	X		X
Short-eared owl (<i>Asio flammeus</i>)	XP			
Common poorwill (<i>Phalaenoptilus nuttallii</i>)	XP			
Chimney swift (<i>Chaetura pelagica</i>)	XP			
Lewis' woodpecker (<i>Melanerpes lewis</i>)	X			
Red-headed woodpecker (<i>Melanerpes erythrocephalus</i>)	X			X
Black-backed woodpecker (<i>Picoides arcticus</i>)	X	X		X
Kingbird spp. (<i>Tyrannus spp.</i>)			X	
Cassin's kingbird (<i>Tyrannus vociferans</i>)	XP			
Loggerhead shrike (<i>Lanius ludovicianus</i>)	X	X		X
Plumbeous vireo (<i>Vireo plumbeus</i>)	XP			
Pinyon jay (<i>Gymnorhinus cyanocephalus</i>)	X			
Clark's nutcracker (<i>Nucifraga columbiana</i>)	X			
Brown creeper (<i>Certhia americana</i>)	X			
Eastern bluebird (<i>Sialia sialis</i>)	XP			
Veery (<i>Catharus fuscescens</i>)	X			
Sage thrasher (<i>Oreoscoptes montanus</i>)	X			X
Sprague's pipit (<i>Anthus spragueii</i>)	X	X		X
Chestnut-collared longspur (<i>Calcarius ornatus</i>)	X			X
McCown's longspur (<i>Rhynchophanes mccownii</i>)	X			X
Ovenbird (<i>Seiurus aurocapilla</i>)	XP		X	
Black-and-white warbler (<i>Mniotilta varia</i>)	XP			
Tennessee warbler (<i>Oreothlypis peregrine</i>)	XP			
Green-tailed towhee (<i>Pipilo chlorurus</i>)	X			
Rufus-sided towhee (<i>Pipilo maculatus</i>)			X	
Brewer's sparrow (<i>Spizella breweri</i>)	X		X	X
Baird's sparrow (<i>Ammodramus bairdii</i>)	X	X		X
Bobolink (<i>Dolichonyx orizivorus</i>)	X			X
Northern oriole (<i>Icterus galbula</i>)			X	
Cassin's finch (<i>Carpodacus cassinii</i>)	X			
Gray-crowned rosy-finch (<i>Leucosticte tephrocotis</i>)	X			
Evening grosbeak (<i>Coccothraustes vespertinus</i>)	X			

^aPotential Species of Concern

Table 3. Pronghorn sightings by habitat, Otter Creek Mine area, 2011-2012.

Month	Habitat Subtype									
	001 Rock-Cliff	002 Water ^a	021 Bldg.	110 Decid. Tree	123 Pon. Pine- Grass	124 Pon. Pine- Shrub	130 Juniper	212 Big Sage	222 Silver Sage	280 Breaks
AUTUMN										
Sept. 16-30, 2011										
October								3(29) ^b		
November										
Dec. 1-15										
Sub-total Nos.								3(29)		
Sub-total Percent								25.0(17.8)		
WINTER										
Dec. 16-30										
Jan. 2012										
Feb.								1(27)		
March 1-15								2(18)		
Sub-total Nos.								3(45)		
Sub-total Percent								14.3(10.8)		
SPRING										
March 16-31										
April								4(20)		
May								2(11)		
June 1-15									1(1)	
Sub-total Nos.								6(31)	1(1)	
Sub-total Percent								20.7(38.8)	3.4(1.3)	
SUMMER										
June 16-30										
July										
August										
Sept. 1-15										
Sub-total Nos.										
Sub-total Percent										
TOTAL NOS.								12(105)	1(1)	
TOTAL PERCENT								19.4(15.9)	1.6(0.2)	

^aIncludes riparian habitat adjacent to ponds, stream courses, etc.

^bNo. groups (no. individuals)

Table 3 (continued).

Month	Habitat Subtype									
	310 Tall Mesic Shrub	320 Low Mesic Shrub	411 Bunch-grass	412 Sod-forming Grass	413 Rip. Grass	430 P. Dog	510 Hay	530 Pasture	Sub-total Nos.	Sub-total Percent
AUTUMN										
Sept. 16-30, 2010										
October			2(21)	4(78)		1(4)			10(132)	83.3(84.1)
November										
Dec. 1-15				2(31)					2(31)	16.7(15.9)
Sub-total Nos.			2(21)	6(109)		1(4)			12(163)	
Sub-total Percent			16.7(12.9)	50.0(66.9)		8.3(2.4)				100.0(100.0)
WINTER										
Dec. 16-30										
Jan. 2011			1(15)	1(16)					2(31)	9.5(7.4)
Feb.			4(111)	2(58)		1(5)			8(201)	38.1(48.1)
March 1-15			4(70)	4(97)			1(1)		11(186)	52.4(44.5)
Sub-total Nos.			9(196)	7(171)		1(5)	1(1)		21(418)	
Sub-total Percent			42.8(46.9)	33.3(40.9)		4.8(1.2)	4.8(0.2)			100.0(100.0)
SPRING										
March 16-31										
April				4(13)					8(33)	27.6(41.3)
May				3(7)		1(2)		1(1)	7(21)	24.1(26.3)
June 1-15			3(10)	8(11)			1(1)	1(3)	14(26)	48.3(32.5)
Sub-total Nos.			3(10)	15(31)		1(2)	1(1)	2(4)	29(80)	
Sub-total Percent			10.3(12.5)	51.7(38.8)		3.4(2.5)	3.4(1.3)	6.9(5.0)		100.0(100.1)
SUMMER										
June 16-30										
July										
August										
Sept. 1-15										
Sub-total Nos.									0(0)	
Sub-total Percent										0(0)
TOTAL NOS.			14(227)	28(311)		3(11)	2(2)	2(4)	62(661)	
TOTAL PERCENT			22.6(34.3)	45.2(47.0)		4.89(1.7)	3.2(0.3)	3.2(0.6)		100.0(100.0)

^aIncludes shoreline habitat at ponds and streams.

^bNo. groups (no. individuals).

Table 4. Pronghorn population characteristics, Otter Creek Mine area, 2011-2012.

Month	Group Characteristics				No. Classified ^a		
	No. Groups (No. Animals)	Range	Average	Median	Males	Females	Fawns
Autumn							
Sept. 16-30, 2011	---						
October	8(121)	5-37	15.1	13	13	76	32
	Minimum known number ^b : East of Otter Creek: 105 West of Otter Creek: 16				No. Males Per 100 Females: 44 No. Fawns Per 100 Females: 52		
November	---						
Dec. 1-15	2(31)	10-21	15.5				
	Minimum known number ^b : East of Otter Creek: 0 West of Otter Creek: 31						
Winter							
Dec. 16-31	---						
January 2012	0(0)						
February	8(201)	5-45	25.1	27			
	Minimum known number ^b : East of Otter Creek: 85 West of Otter Creek: 80						
March 1-15	11(186)	1-35	16.9	19			
	Minimum known number ^b : East of Otter Creek: 117 West of Otter Creek: 69						
Spring							
March 16-31	---						
April	8(33)	1-7	4.1	4			
May	7(21)	1-6	3.0	2			
June 1-15	14(26)	1-6	1.9	1			
Summer							
June 16-30	---						
July	0(0)						
August	---						
Sept. 1-15	---						

^aDetermined by aerial survey; yearling males and females combined with adults.

^bDetermined by aerial survey; no duplicate counts of individual animals

Table 5. Mule deer sightings by habitat, Otter Creek Mine area, 2011-2012.

Month	Habitat Subtype									
	001 Rock-Cliff	002 Water ^a	021 Bldg.	110 Decid. Tree	123 Pon. Pine- Grass	124 Pon. Pine- Shrub	130 Juniper	212 Big Sage	222 Silver Sage	280 Breaks
AUTUMN										
Sept. 16-30, 2011										
October					1(2) ^b	1(3)		2(7)		1(1)
November										
Dec. 1-15					1(8)					2(5)
Sub-total Nos.					2(10)	1(3)		2(7)		3(6)
Sub-total Percent					16.7(22.7)	8.3(6.8)		16.7(15.9)		25.0(13.6)
WINTER										
Dec. 16-30										
Jan. 2012										
Feb.					3(26)	1(4)		2(28)	1(5)	3(16)
March 1-15					2(8)			1(6)		1(3)
Sub-total Nos.					5(34)	1(4)		3(34)	1(5)	4(19)
Sub-total Percent					19.2(16.7)	3.9(2.0)		11.5(16.7)	3.9(2.5)	15.4(9.3)
SPRING										
March 16-31										
April	2(7)				2(4)			2(8)		1(5)
May								1(7)		
June 1-15					1(1)				1(1)	
Sub-total Nos.	2(7)				3(5)			3(15)	1(1)	1(5)
Sub-total Percent	11.8(14.9)				17.7(10.6)			17.7(31.9)	5.9(2.1)	5.9(10.6)
SUMMER										
June 16-30										
July									1(1)	
August										
Sept. 1-15										
Sub-total Nos.									1(1)	
Sub-total Percent									100.0(100.0)	
TOTAL NOS.	2(7)				10(49)	2(7)		8(56)	3(7)	4(30)
TOTAL PERCENT	3.6(2.4)				17.9(16.6)	3.6(2.4)		14.3(18.9)	5.4(2.4)	14.3(10.1)

^aIncludes riparian habitat adjacent to ponds, stream courses, etc.

^bNo. groups (no. individuals)

Table 5 (continued).

Month	Habitat Subtype									
	310 Tall Mesic Shrub	320 Low Mesic Shrub	411 Bunch-grass	412 Sod-forming Grass	413 Rip. Grass	430 P. Dog	510 Hay	530 Pasture	Sub-total Nos.	Sub-total Percent
AUTUMN										
Sept. 16-30, 2010										
October				1(5)			1(2)		7(20)	58.3(45.5)
November										
Dec. 1-15			1(7)	1(4)					5(24)	41.7(54.5)
Sub-total Nos.			1(7)	2(9)			1(2)		12(44)	
Sub-total Percent			8.3(15.9)	16.7(20.5)			8.3(4.5)			100.0(100.0)
WINTER										
Dec. 16-30										
Jan. 2011				1(7)					1(7)	3.8(3.4)
Feb.				2(12)		1(12)			13(103)	50.0(50.5)
March 1-15				3(19)		2(25)	3(33)		12(94)	46.2(46.1)
Sub-total Nos.				6(38)		3(37)	3(33)		26(204)	
Sub-total Percent				23.1(18.6)		11.5(18.1)	11.5(16.2)			100.0(100.0)
SPRING										
March 16-31										
April				1(1)			1(2)		9(27)	52.9(57.5)
May		1(1)		1(4)			1(4)		4(16)	23.5(34.0)
June 1-15				2(2)					4(4)	23.5(8.5)
Sub-total Nos.		1(1)		4(7)			2(6)		17(47)	
Sub-total Percent		5.9(2.1)		23.5(14.9)			11.8(12.8)			99.9(100.0)
SUMMER										
June 16-30										
July									1(1)	100.0(100.0)
August										
Sept. 1-15										
Sub-total Nos.									1(1)	
Sub-total Percent										100.0(100.0)
TOTAL NOS.		1(1)	1(7)	12(54)		3(37)	6(41)		56(296)	
TOTAL PERCENT		1.8(0.3)	1.8(2.4)	21.4(18.2)		5.4(12.5)	10.7(13.9)			100.2(100.1)

^aIncludes shoreline habitat at ponds and streams.

^bNo. groups (no. individuals).

Table 6. Mule deer population characteristics, Otter Creek Mine area, 2011-2012.

Month	Group Characteristics				No. Classified ^a		
	No. Groups (No. Animals)	Range	Average	Median	Males	Females	Fawns
Autumn							
Sept. 16-30, 2011	---						
October	7(20)	2-5	2.9	2	4	11	5
	Minimum known number ^b : East of Otter Creek: 13 West of Otter Creek: 7				No. Males Per 100 Females: 31 No. Fawns Per 100 Females: 38		
November	---						
Dec. 1-15	5(24)	2-8	4.8	4			
	Minimum known number ^b : East of Otter Creek: 15 West of Otter Creek: 9						
Winter							
Dec. 16-31	---						
January 2012	1(7)	7					
	Minimum known number ^b : East of Otter Creek: 7 West of Otter Creek: 0						
February	13(103)	4-18	7.9	7			
	Minimum known number ^b : East of Otter Creek: 78 West of Otter Creek: 22						
March 1-15	12(94)	3-17	7.8	9			
	Minimum known number ^b : East of Otter Creek: 94 West of Otter Creek: 0						
Spring							
March 16-31	---						
April	9(27)	1-6	3.0	2			
May	4(16)	1-7	4.0	4			
June 1-15	4(4)	1	1	1			
Summer							
June 16-30	0(0)						
July	1(1)	1					
August	---						
Sept. 1-15	---						

^aDetermined by aerial survey; yearling males and females combined with adults.

^bDetermined by aerial survey; no duplicate counts of individual animals

Table 7. Sharp-tailed grouse sightings by habitat, Otter Creek Mine area, 2011-2012.

Month	Habitat Subtype									
	001 Rock-Cliff	002 Water ^a	021 Bldg.	110 Decid. Tree	123 Pon. Pine- Grass	124 Pon. Pine- Shrub	130 Juniper	212 Big Sage	222 Silver Sage	280 Breaks
AUTUMN										
Sept. 16-30, 2010										
October										
November										
Dec. 1-15					1(15)					1(15)
Sub-total Nos.					1(15)					1(15)
Sub-total Percent					25.0(35.7)					25.0(35.7)
WINTER										
Dec. 16-30										
Jan. 2011								1(13)		
Feb.										
March 1-15									1(7)	
Sub-total Nos.								1(13)	1(7)	
Sub-total Percent								25.0(24.0)	25.0(13.0)	
SPRING										
March 16-31										
April					1(3)					
May								1(8)		
June 1-15								2(6)		
Sub-total Nos.					1(3)			3(14)		
Sub-total Percent					10.0(7.7)			30.0(35.9)		
SUMMER										
June 16-30										
July										
August										
Sept. 1-15										
Sub-total Nos.										
Sub-total Percent										
TOTAL NOS.					2(18)			4(27)	1(7)	1(15)
TOTAL PERCENT					11.1(13.5)			22.2(20.0)	5.6(5.2)	5.6(11.1)

^aIncludes riparian habitat adjacent to ponds, stream courses, etc.

^bNo. groups (no. individuals)

Table 7 (continued).

Month	Habitat Subtype									
	310 Tall Mesic Shrub	320 Low Mesic Shrub	411 Bunch-grass	412 Sod-forming Grass	413 Rip. Grass	430 P. Dog	510 Hay	530 Pasture	Sub-total Nos.	Sub-total Percent
AUTUMN										
Sept. 16-30, 2010										
October				1(3)			1(9)		2(12)	50.0((28.6)
November										
Dec. 1-15									2(30)	50.0(71.4)
Sub-total Nos.				1(3)			1(9)		4(42)	
Sub-total Percent				25.0(7.1)			25.0(21.4)			100.0(100.0)
WINTER										
Dec. 16-30										
Jan. 2011									1(13)	25.0(24.1)
Feb.										
March 1-15				2(34)					3(41)	75.0(75.9)
Sub-total Nos.				2(34)					4(54)	
Sub-total Percent				50.0(63.0)						100.0(100.0)
SPRING										
March 16-31										
April				2(11)					3(14)	30.0(35.9)
May				4(11)					5(19)	50.0(48.7)
June 1-15									2(6)	20.0(15.4)
Sub-total Nos.				6(22)					10(39)	
Sub-total Percent				60.0(56.4)						100.0(100.0)
SUMMER										
June 16-30										
July										
August										
Sept. 1-15										
Sub-total Nos.									0(0)	
Sub-total Percent										0(0)
TOTAL NOS.				9(59)			1(9)		18(135)	
TOTAL PERCENT				50.0(43.7)			5.6(6.7)			100.1(100.2)

^aIncludes shoreline habitat at ponds and streams.

^bNo. groups (no. individuals).

Table 8. Red-tailed hawk nest characteristics, Otter Creek Mine fish and wildlife resources inventory area, 2011-2012.

Nest ID No.	Location			Nest Substrate ^a	Tree/snag hgt. (ft.) ^b	Nest hgt. (ft.) ^b	Active				Comments
	Section	T	R				2011	Chicks	2012	Chicks	
OC-RTH-01	NE ¼ Ne ¼ S 16	4S	45E	Live <i>Pop del</i>	75	60	Y	2	Y	?	Fledged one in 2011; unknown in 2012
OC-RTH-02	NE ¼ SE ¼ S 34	4S	45E	Live <i>Pop del</i>	75	70	Y	0	N	0	Destroyed in spring 2011; rebuilt in summer 2011
OC-RTH-03	SE ¼ NW ¼ S 11	5S	45E	Live <i>Pop del</i>	70	60	N	0	Y	?	Production unknown in 2012
OC-RTH-04	SE ¼ NW ¼ S 10	5S	45E	Live <i>Pop del</i>	60	50	N	0	N	0	Inactive
OC-RTH-05	SE ¼ SW ¼ S 34	4S	45E	Live <i>Pin pon</i>	70	69	--- ^c	---	Y	?	Production unknown in 2012
OC-RTH-06	NW ¼ NE ¼ S 10	4S	45E	Live <i>Pop del</i>	60	40	---	---	Y	?	Production unknown in 2012

^a*Pop del* = Eastern cottonwood ; *Pin pon* = Ponderosa pine

^bOcular estimate

^cNest not identified in 2011

Table 9. Landbird plot results, Otter Creek Mine fish and wildlife resources inventory, 2011.

Species	Plot ^a /Habitat Subtype ^b					
	16/280	17/110	18/123	19/002	20/124	21/110
Wood duck				1 ^c		
Mallard				2		2
Blue-winged teal				1		
Ruddy duck				2		
Ring-necked pheasant		1	(1) ^d			
Red-tailed hawk		(1)				
American coot				1		
Killdeer				2		2
Mourning dove		2			1	3
Hairy woodpecker						1
Northern flicker		1	1			
Western wood-pewee		2	1			1
Least flycatcher		2				
Say's phoebe						1
Western kingbird		(1)				4
Eastern kingbird		(1)			1	2
American crow			1			
Tree swallow				(1)		
Bank swallow		(2)				
Black-capped chickadee		1	2		3	
White-breasted nuthatch			1			
Red-breasted nuthatch			1			
House wren		3	1			
Mountain bluebird		1				
American robin		3			1	1
Brown thrasher		1				
European starling		(1)				
Yellow warbler		2				5
Yellow-rumped warbler					1	
Spotted towhee		(1)			1	1
Chipping sparrow			1		1	
Vesper sparrow	3					1
Lark sparrow	2	1	2			4
Lark bunting	(2)			(5)		
Grasshopper sparrow	2					
Lazuli bunting		(1)				
Western tanager					1	
Red-winged blackbird				10		1
Western meadowlark	3	3	1	(5)	1	1
Brown-headed cowbird		2			2	3
Bullock's oriole						3
Red crossbill					2	
American goldfinch		1				1
Total No. Species	5	15	10	7	11	18

^aFigure 5

^b002 = Pond; 110 = Riparian Tree; 123 = Ponderosa Pine/Grass; 124 = Ponderosa Pine/Shrub; 280 = Breaks

^cLargest number of displaying males counted at this plot

^dFlyovers or incidentals (not breeding in plot)

Table 10. Relative abundance of Species of Concern^a in the Otter Creek Mine fish and wildlife resources study area (Farmer 2012).

Species	Preferred Habitat in Study Area ^b	Recorded During Study ^b	Relative Abundance ^c	Section of Report
FISH				
Brassy minnow	Yes	X	Common	Appendix D
Plains minnow	Yes? ^e		Rare	Appendix A
AMPHIBIANS				
Great Plains toad	Yes		Uncommon	Section 4.13
Northern leopard frog ^d	Yes	X	Common	Section 4.13
Plains spadefoot	Yes		Uncommon/rare	Section 4.13
REPTILES				
Snapping turtle	Yes	X	Common	Section 4.13; Appendix D
Spiny softshell	Yes		Uncommon/rare	Section 4.13
Common sagebrush lizard	Yes		Uncommon	Section 4.13
Greater short-horned lizard	Yes	X	Uncommon	Section 4.13
Western hog-nosed snake	Yes	X	Common	Section 4.13
Milksnake	Yes	X	Uncommon	Section 4.13
MAMMALS				
Merriam's shrew	Yes		Unknown	Appendix A
Pallid bat	Yes	X	Uncommon/rare	Section 4.12; Appendix E
Townsend's big-eared bat	Yes		Uncommon/rare	Section 4.12; Appendix E
Eastern red bat	Yes		Rare	Section 4.12; Appendix E
Hoary bat	Yes	X	Common	Section 4.12; Appendix E
Fringed myotis	Yes	X	Uncommon	Section 4.12; Appendix E
Meadow jumping mouse	Yes		Unknown	Section 4.15
Black-tailed prairie dog	Yes	X	Common	Section 4.10
Swift fox	No		---	Appendix A
Black-footed ferret	No		---	Section 3.14; Section 4.14
White-tailed deer ^d	Yes	X	Common	Section 4.5.3
Elk ^d	Yes	X	Common	Section 4.5.4
BIRDS				
Trumpeter swan	No		---	Appendix A
Barrow's goldeneye	No		---	Appendix A
Hooded merganser	No		---	Appendix A
Greater sage-grouse	Yes	X	Uncommon	Section 4.6.4
Sharp-tailed grouse ^d	Yes	X	Common	Section 4.6.5
Common loon	No		---	Appendix A
Ckark's grebe	No		---	Appendix A
Horned grebe	Yes		Uncommon	Appendix A
Great blue heron	Yes	X	Common	Section 4.8
American bittern	No		---	Appendix A
Black-crowned night heron	No		---	Appendix A
American white pelican	No		---	Appendix A
White-faced ibis	No		---	Appendix A
Bald eagle	Yes	X	Common migrant/winter resident	Section 4.7.2
Northern goshawk	Yes		Unknown	Appendix A
Swainson's hawk ^d	Yes		Uncommon	Appendix A
Ferruginous hawk	Yes		Uncommon	Appendix A
Golden eagle	Yes	X	Uncommon	Section 4.7.3
Peregrine falcon	No		---	Appendix A
Merlin ^d	Yes		Unknown	Appendix A
Piping plover	No		---	Section 3.14
Mountain plover	Yes		Rare	Appendix A
Black-necked stilt	No		---	Appendix A
Long-billed curlew	Yes		Uncommon	Appendix A
Franklin's gull	No		---	Appendix A
Common tern	No		---	Appendix A
Forster's tern	No		---	Appendix A

Species	Preferred Habitat in Study Area ^b	Recorded During Study ^b	Relative Abundance ^c	Section of Report
Caspian tern	No		---	Appendix A
Black tern	No		---	Appendix A
Black-billed cuckoo	Yes; very limited		Rare	Appendix A
Yellow-billed cuckoo	Yes; very limited		Rare	Appendix A
Eastern screech-owl	Yes; very limited	X	Uncommon	Section 4.7.10
Burrowing owl	Yes	X	Common	Section 4.7.12
Short-eared owl	Yes		Uncommon	Appendix A
Common poorwill	Yes	X	Uncommon	Appendix A
Chimney swift	Yes		Rare	Appendix A
Lewis' woodpecker	Yes		Unknown	Appendix A
Red-headed woodpecker	Yes		Unknown	Appendix A
Black-backed woodpecker	Yes?		Rare	Appendix A
Kingbird spp. ^d	Yes	X	Common	Appendix A
Cassin's kingbird	Yes	X	Common	
Loggerhead shrike	Yes	X	Uncommon	Appendix A
Plumbeous vireo	Yes		Unknown	Appendix A
Pinyon jay	Yes	X	Common	Appendix A
Clark's nutcracker	Yes	X	Uncommon	Appendix A
Brown creeper	Yes?		Unknown	Appendix A
Eastern bluebird	Yes	X	Unknown	Appendix A
Veery	Yes?		Uncommon/rare	Appendix A
Sage thrasher	No		---	Appendix A
Sprague's pipit	Yes		Rare	Section 3.14, Section 4.14
Chestnut-collared longspur	Yes		Unknown	Appendix A
McCown's longspur	Yes		Unknown	Appendix A
Ovenbird	No		Unknown	Appendix A
Black-and-white warbler	No?		Rare migrant	Appendix A
Tennessee warbler	Yes		Rare migrant	Appendix A
Green-tailed towhee	Yes		Unknown	Appendix A
Rufus-sided towhee ^d	Yes	X	Common	Appendix A
Brewer's sparrow	Yes	X	Uncommon	Appendix A
Baird's sparrow	Yes	X	Uncommon	Appendix A
Bobolink	Yes		Rare	Appendix A
Northern oriole ^d	Yes	X	Common	Appendix A
Cassin's finch	Yes		Unknown	Appendix A
Gray-crowned rosy-finch	No		---	Appendix A
Evening grosbeak	Yes	X	Uncommon	Appendix A

^aIncludes Montana Species of Concern (SOC; includes Potential Species of Concern), USFS Sensitive Species, USFS Management Indicator Species (MIS) and BLM Sensitive Species (Table 3).

^bAppendix A.

^cCommon = easy to detect with applicable methods in appropriate habitats; Uncommon = seldom detected with applicable methods in appropriate habitats; Rare = almost never detected with applicable methods in appropriate habitats; Unknown = too little information available to determine relative abundance.

^dNot a Montana SOC but is a USFS or BLM Sensitive Species, or USFS MIS.

^e? = Availability of preferred/breeding habitat uncertain.

