

## 4.0 Terrestrial Fauna

Terrestrial wildlife resources would be impacted directly and indirectly by various phases of the Project on both short-term and long-term bases. Ruby initiated field surveys for wildlife species in 2008, with follow-up surveys for sensitive species in 2009. Additionally, pre-construction surveys in some areas for select species would be needed immediately prior to ground disturbance. These surveys would follow-up any known observations of species from 2008 and 2009 Ruby field surveys. These species include nesting raptors, nesting migratory birds, greater sage-grouse, sharp-tailed grouse, burrowing owls, mountain plovers, yellow-billed cuckoo, pygmy rabbits, black-footed ferret, white-tailed prairie dog, boreal toad, and Columbia spotted frog. Pre-construction surveys for sharp-tailed grouse in Utah and Nevada and greater sage-grouse in Wyoming, Utah, and Nevada were completed in March/April 2009. Pre-construction surveys for nesting raptors (including burrowing owls) along a two-mile-wide corridor centered on the ROW and access roads were completed spring/early summer 2009. Northern goshawk surveys, using audio playback techniques, were completed in the Fremont-Winema National Forest in Oregon in June and July 2009. Based on 2008 survey results, pygmy rabbit follow-up surveys were completed spring 2009. Pre-construction surveys for mountain plover in Wyoming were completed June 2009. Pre-construction surveys for yellow-billed cuckoos in Utah were completed August/September 2009. White-tailed prairie dog and black-footed ferret surveys were conducted in Wyoming and Utah in summer/early fall 2009. Pre-construction surveys for boreal toad in Utah and Columbia spotted frogs in Nevada and Oregon were completed in summer 2009. Potential impacts and mitigation measures to minimize these impacts are outlined below.

Short-term impacts to wildlife would occur during construction and would extend beyond the construction period in habitats that do not return to pre-construction conditions within three years (e.g., sagebrush steppe, forests, woodlands, etc.) following reclamation efforts. Long-term impacts to wildlife would extend through the life of the Project and beyond if supporting capabilities of that habitat are not fully restored. Direct impacts to wildlife habitat, whether through removal, conversion, or alteration of key components or due to close proximity of disturbances, can indirectly affect wildlife populations. Compared to the effects of direct impact, such indirect impact to wildlife is often more subtle and difficult to document. Indirect impacts also may be expressed over the long

term, with some time lag between onset of impact and detection of the impact to wildlife populations. In addition to variability over time, indirect impacts to wildlife due to habitat impacts may be variable over space, such that the expression of the impact may occur some distance away from the impact source.

Direct mortality of wildlife could occur during pipeline construction activities and maintenance operations. Wildlife could be killed by construction vehicles traveling to and from the Project. Species most susceptible to vehicle-related mortality include those that are inconspicuous (such as salamanders, frogs, snakes, and small mammals) and those whose behavioral activity patterns make them more vulnerable (e.g., nocturnal). Species most susceptible to mortality from clearing and grading operations during construction are those with limited mobility (such as amphibians) and burrowing species (such as pygmy rabbits, mice and voles, weasels, beaver, frogs and toads, and snakes).

Wildlife would be displaced from habitats that are cleared of vegetation and from areas adjacent to construction sites due to increased noise and human presence. Activities associated with construction of the Project could decrease individuals' reproductive success by increasing neonate or nest abandonment and possibly by interfering with breeding behaviors, sustenance, and growth of young, conception rates, and fetal survival. These direct impacts would negatively affect population growth through diminished rates of survivorship and fecundity. Both short- and long-term impacts would occur to species associated with waterbodies and riparian areas. Removal of riparian vegetation along stream edges that are crossed by the Project would increase sedimentation into the waterbody and/or increase water temperatures. Changes in hydrology also would occur within wetlands and waterbodies used for breeding, which would limit dispersal or reduce breeding habitat. These modifications to riparian habitat could directly cause mortality of reptiles and amphibians, cause disturbance and/or displacement, and indirectly lower breeding success and survival.

Nesting migratory birds and wildlife would be affected by habitat removal. Based on the magnitude of the Project and the seasonal constraints that the Project would face, only limited modification of the construction schedule would be possible. However, in recognition of its obligation to protect migratory birds under the Migratory Bird Treaty Act (MBTA), Ruby is coordinating with the USFWS to develop appropriate conservation and protection measures for migratory birds and to establish a protocol for addressing the potential unavoidable disruption of nesting activity. These measures are outlined in Ruby's Voluntary Conservation Plan for Migratory Birds, which would be implemented by Ruby.

In consultation with federal and state agencies, Ruby has avoided or minimized impacts to wildlife by implementing the following measures.

- Ruby has rerouted sections of the pipeline.
- Ruby has restricted widths of the pipeline ROW in environmentally sensitive locations to minimize impacts to habitat.
- For the portion of the Project that is within the jurisdiction of the BLM Kemmerer Field Office, Ruby would limit the time trenches are open to 10 days or less.
- For the remainder of the Project, Ruby would attempt to adhere to the 10-day limit, but the topography and other construction constraints may make that infeasible. At locations where the ditch would need to remain open for extended periods, the open ditch would be fenced with temporary safety fence or protected with other means so wild animals or livestock would not become trapped.
- All fences on the Project would be cut for construction access with temporary “gaps” installed for control of livestock and wildlife. Refer to Appendix E of the POD for fencing/grazing alternatives.
- Ruby would restore affected habitats to the maximum extent practicable,
- Ruby would reduce impact over time by minimizing future disturbances (i.e., routine vegetation maintenance every three to five years, as necessary to maintain vegetation height at 15 feet. This maintenance will likely not occur in shrub communities such as sagebrush steppe).
- Ruby would construct the communication towers in accordance with the USFWS’ *Guidance on the Siting, Construction, Operation and Decommissioning of Communications Towers*.

## 4.1 Special Status Species

### 4.1.1 Black-footed Ferret

Loss of habitat has been identified as the primary impact to black-footed ferrets’ viability and survival. Conversion of grasslands to agricultural uses, widespread prairie dog eradication programs, and plague have reduced ferret habitat to less than two percent of what once existed. Remaining habitat is now fragmented, with prairie dog towns separated by great expanses of cropland and human development.

The requirement to conduct ferret-specific surveys was based on the USFWS’s “Black-Footed, Ferret Survey Guidelines” (April 1989), which direct that if black-tailed prairie dog or white-tailed prairie dog towns greater than 80 and 200 acres, respectively, are not found, then ferret surveys are not required. Although 2008 surveys noted prairie dog towns along the route, Ruby conducted additional surveys in 2009 to document all

prairie dog towns within 0.5 mile of the Project ROW and access roads to determine if towns would meet the acreage criteria. Based upon survey results, Ruby conducted black-footed ferret surveys along portions of the ROW in Wyoming from August 4–12, 2009 and in Utah from August 25–30, 2009. Ruby did not observe any black-footed ferrets during its surveys. As per USFWS regulations, construction must commence within one year of survey dates; otherwise, Ruby would be required to re-survey these areas for black-footed ferrets.

Information indicates a moderate to low potential for occurrence of black-footed ferrets in areas proximal to the Project route in Wyoming and Utah. Because historical data from these states indicate that the species has occurred near the Project route in the past, there remains a remote possibility that Project construction and operation could affect individuals. Should ferrets occur in the Project vicinity, the conservation measures described in the bullet list below would be used to reduce or eliminate potential effects.

Standard pipeline construction techniques would be employed along the pipeline route. Clearing, grading, and subsequent ditching activities would remove grassland, steppe, and shrub-steppe habitat within the portion of the Project route (MP 0 to MP 60) that has been shown to potentially support ferret populations. Trees, brush, and shrubs within the construction route would be cut or scraped at or near the ground level.

As indicated, the black-footed ferret's potential to occur near the Project in Wyoming and Utah is moderate to low. As a result, no mortality to individuals would be anticipated, although indirect impacts would result from temporary loss of habitat that supports prey species (e.g., prairie dog). In addition, if ferrets occur within 0.25 mile of the Project, increased noise and human presence at work site locations may disrupt normal behavioral patterns. Similar constraints and/or conservation measures related to increased noise and human presence may apply to any pipeline maintenance activities if black-footed ferret breeding areas are identified within 0.25 mile of the Project. Effects could occur if construction were to take place during the breeding season or when females are caring for young. Construction personnel would coordinate with the USFWS to establish authorization for construction if activities are required during the mating season within 0.25 mile of suitable breeding habitat. Breeding activity generally occurs in March through May.

The following mitigation measures may be employed to minimize impact to ferrets where appropriate.

- Maintain a biologist during construction to observe potential black-footed ferret habitat or populations in the vicinity of the Project route, if appropriate.

- Consult with appropriate state and federal agencies to avoid black-footed ferret populations, should they be encountered within the Project route.
- Designate a construction period for black-footed ferret colonies occurring within 0.25 mile of the Project route to avoid the March to May breeding and rearing season.
- Prohibit all pipeline construction personnel from hunting in potential black-ferret habitat (i.e., prairie dog habitat).
- Prohibit all pipeline personnel from driving vehicles off ROW through habitat or conducting any other activities that may result in take of black-footed ferret.

#### **4.1.2 White-tailed Prairie Dog**

Ruby conducted white-tailed prairie dog surveys in conjunction with black-footed ferret surveys in suitable habitat from approximate MPs 0 to 61 between July and October 2009. The study area was based upon field observations, correspondence with federal and state biologists, and Wyoming and Utah Natural Heritage data and included the ROW and associated access roads. Surveys were conducted according to USFWS ferret and prairie dog protocol by experienced biologists. More than 50 white-tailed prairie dog towns were delineated in this study area. To limit construction-related impacts on white-tailed prairie dog colonies within the construction ROW, Ruby would modify the ROW configuration (e.g., use the opposite side of the ROW to operate vehicle traffic) or reduce the construction ROW width to 75 feet where crossing known colonies to avoid white-tailed prairie dog burrows to the greatest extent possible. In addition, where a colony only occurs along the edge of the construction ROW, the colony edge would be flagged or exclusion fencing would be erected to avoid impacts on burrows.

#### **4.1.3 Pygmy Rabbit**

Please refer to Appendix S of the POD (Pygmy Rabbit and Greater Sage-grouse Conservation Plan) for further detail.

#### **4.1.4 Mountain Plover**

Ruby conducted mountain plover presence/absence surveys in suitable habitat from approximate MPs 0 to 12 and 20 to 26 in May/June 2009. This study area was determined through consultation with state and federal biologists, Natural Heritage data, and field observations. Surveys were conducted according to USFWS protocol by experienced avian biologists. No mountain plovers were observed during these surveys. Seasonal restrictions within suitable habitat are from April 10 to July 10. Should Ruby plan to construct in any of this suitable habitat within the seasonally restricted dates, presence/absence surveys would be conducted prior to ground disturbance. Ruby

would then consult with the appropriate resource management agency to determine subsequent actions in the event that surveys resulted in presence of mountain plovers.

#### **4.1.5 Greater Sage-grouse**

Please refer to Appendix S of the POD for further detail.

#### **4.1.6 Sharp-tailed Grouse**

Ruby consulted with the UDWR regarding impacts to sharp-tailed grouse populations located in eastern Utah. The UDWR recommended that aerial surveys for lek sites be completed following the UDWR survey protocols. These surveys were completed in late April/early May 2009. A biologist from the UDWR participated in these aerial surveys. Consultation is ongoing with the UDWR to develop mitigation measures. The following are possible mitigation measures that would be implemented; however, the UDWR would have final approval of these measures:

- Avoid human activity within four miles of an occupied lek between 8:00 p.m. and 8:00 a.m. from March 15 to June 15 in Cache County, and March 15 to June 1 for leks in Box Elder County.

#### **4.1.7 Yellow-billed Cuckoo**

Ruby conducted yellow-billed cuckoo presence/absence surveys at four locations in Cache County, Utah from approximate MPs 92 to 95 in the early morning on August 18 and September 1, 2009. This study area was determined through consultation with state and federal biologists. Surveys were conducted according to USFWS protocol by experienced avian biologists. No yellow-billed cuckoos were seen or heard during these surveys. If yellow-billed cuckoos are observed prior to or during construction, Ruby will consult with the appropriate resource management agency to determine subsequent actions.

#### **4.1.8 Boreal Toad**

Ruby conducted boreal toad presence/absence surveys in suitable habitat from approximate MPs 69.5 to 76.5 and 85.5 to 85.7 in June 2009. This study area was determined through consultation with state and federal biologists, Natural Heritage data, and field observations. Surveys were conducted according to USFWS-approved protocol by experienced wildlife biologists. Surveys were conducted three times at each site (two diurnal visits and one nocturnal visit). No boreal toads were observed during these surveys. Ruby would consult with the appropriate resource management agency to determine subsequent actions in the event that boreal toads are observed prior or during construction.

#### **4.1.9 Columbia Spotted Frog**

Ruby conducted Columbia spotted frog presence/absence surveys in suitable habitat in three HUCs (Upper Humboldt, North Fork Humboldt, and South Fork Owyhee) traversed by the Project in Elko County, Nevada, and in the Warner Basin in Lake County, Oregon, and extreme northwestern Nevada in August and September of 2009. Ruby also collected incidental observations during baseline environmental surveys in 2009. These study areas were determined in consultation with NDOW and ODFW biologists. All surveys were conducted by experienced field biologists, and surveyors in Elko County were trained by NDOW prior to conducting surveys. NDOW-trained personnel also conducted surveys in the Warner Basin. Ruby biologists performed Visual Encounter Surveys adapted from protocols employed by NDOW and other agencies (Toiyabe Spotted Frog Technical Team 2004). Columbia spotted frogs were observed in Elko County, Nevada, and Lake County, Oregon. Ruby would adhere to in-water work windows to minimize disturbance to frogs at these locations.

#### **4.2 Big Game**

Construction impacts on big game species, including elk, moose, mule deer, pronghorn, and bighorn sheep would include an incremental increase in habitat fragmentation as well as a loss of potential forage. The Project's impact on designated big game habitats would include approximately 549 acres of crucial winter habitat in Wyoming, 1,631 acres of crucial winter habitat in Utah, 2,676 acres of crucial winter and mule deer migration habitat in Nevada, and 1,318 acres of winter habitat in Oregon. Forage species utilized by big game are expected to reestablish quickly, depending on weather conditions and grazing management practices, which would affect reclamation success. In most instances, suitable habitat adjacent to the construction areas would be available for wildlife species until vegetation has been reestablished.

Indirect impacts on big game species include those caused by increased human activity (e.g., noise levels), dispersal of noxious and invasive weeds, and dust produced by gravel road traffic. Increased noise levels and human presence would likely result in reduced use of the construction area by big game. Species temporarily displaced by increased construction noise and human presence would likely return upon completion of the Project. As such, displacement would be short-term and not significant since Ruby will mitigate for habitat impacts by completing restoration of all areas disturbed by construction.

To protect important big game winter habitat, Ruby would comply with agency seasonal restrictions for winter range. The BLM can grant exceptions to seasonal restrictions if the BLM wildlife biologist, in consultation with the state wildlife agencies, determines that

granting an exception would not jeopardize the population being protected. Coordination with BLM and USFS is ongoing regarding construction in winter habitat.

Ruby would implement the following mitigation measures to protect big game winter ranges where appropriate:

- Within big game winter ranges disturbed by the Project, Ruby would seed disturbed areas with preferred big game forage species, as recommended by the BLM, USFWS, and state wildlife agencies.
- Ruby would control noxious weeds on the ROW on all lands crossed, including both summer and winter rangelands, to help maintain native forage species.
- To minimize potential impact of open trenches within agency-identified big game migration corridors, Ruby would install or leave crossovers every 1,200 feet with exit ramps. Ruby would also leave crossovers in areas around water sources or active livestock/wildlife trails. At water sources, at a minimum, Ruby would install one crossover on each side of the source if the source is a stream. Crossovers would also be left in place at existing roads or active two-track roads to allow for vehicle crossings. Each crossover would be sloped on each side to act as an escape ramp for any livestock/wildlife that happens to become trapped in the trench. Ruby would also inspect the open ditch line daily to ensure that livestock/wildlife is not trapped in the open trench.
- A 10-foot gap would be left in spoil and topsoil stockpiles at all hard or soft plug locations, and a corresponding gap in the welded pipe string would be left in these locations. Suitable ramps would also be installed from the bottom of the trench to the top to allow any wildlife that enters the trench to escape. The ramps would be spaced at approximately 0.5-mile intervals at big game migrations corridors or within winter range areas.
- After construction is complete, Ruby would install OHV barriers to reduce unauthorized public access and to maximize big game use of the ROW. These barriers may include dirt/rock berms, log barriers, signs, and locked gates. Slash from clearing operations would also be redistributed on the ROW, which would help discourage OHV travel.
- To reduce potential impacts to big game species, Ruby has agreed to avoid construction activities in designated crucial winter big game ranges. Should Ruby find it necessary to construct within this time period, it would seek written authorization from the BLM, USFS, and FERC. Crucial winter range restrictions would include:

<b>Jurisdiction</b>	<b>Habitat Type</b>	<b>Restriction</b>
Wyoming	Big Game Crucial Winter	November 15 to April 30
Utah	Big Game Crucial Winter (elk, moose, mule deer)	December 1 to April 30
Nevada: Winnemucca District and Surprise Field Office	Deer Migration Corridor	November 15 to January 31
	Deer Winter Range	December 1 to March 31
	Deer Migration Corridor	April 1 to May 15
	Pronghorn Kidding and Summer Range	July 15 to September 30
Nevada: Elko District	Deer Migration Corridor	October 1 to November 30
		March 1 to April 30
		March 15 to May 15
	Deer Winter Range	November 1 to December 1
	Deer Fawning/Summer Range	May 15 to August 31
Oregon	Big Game Winter	May 15 to August 31
		December 1 to February 28
		November 1 to April 1

### 4.3 Raptors

Raptors that occur in the Ruby Pipeline Project area include eagles (golden and bald), accipiters (northern goshawk, and Cooper's and sharp-shinned hawks), falcons (peregrine and prairie falcons, American kestrel, and merlin), *Buteos* (red-tailed, ferruginous and Swainson's hawks), northern harrier, osprey, turkey vulture, and several species of owls. Raptors require nesting protection during construction activities. Except where a site-specific modification is authorized by USFWS and BLM on a case-by-case basis, Ruby would comply with the spatial and seasonal buffers presented in Table 4-1 unless a site-specific variance is authorized. Ruby has committed to adhere to the most restrictive buffers based on each state's guidelines and guidance. In the event of a conflict, the conditions in Ruby's Voluntary Conservation Plan for Migratory Birds supersede the conditions of this POD.

**Table 4-1 Raptor Nest Buffers**

<b>Species</b>	<b>Spatial Buffer (miles)</b>	<b>Seasonal Buffer</b>
Bald eagle	1.0	Jan 1 – Aug 31
Golden eagle	0.75	Jan 1 – Aug 31
Northern goshawk	0.75	March 1 – Aug 15
Northern harrier	0.75	April 1 – Aug 15
Cooper's hawk	0.75	March 15 – Aug 31
Ferruginous hawk	1.0	March 1 – Aug 1 (Feb 1 – July 31 (WY))
Red-tailed hawk	0.75	March 15 – Aug 15
Sharp-shinned hawk	0.75	March 15 – Aug 31
Swainson's hawk	0.75	March 15 – Aug 31
Turkey vulture	0.75	May 1 – Aug 15
Peregrine falcon	1.0	Feb 1 – Aug 31
Prairie falcon	0.75	April 1 – Aug 31
Merlin	0.75	April 1 – Aug 31
American kestrel	300 ft	April 1 – Aug 15
Osprey	0.75	April 1 – Aug 31
Boreal owl	0.75	Feb 1 – July 31
Burrowing owl	0.75	March 1 – Aug 31 (April 15 – Sept 15, or until chicks fledge (WY))
Flammulated owl	0.75	April 1 – Sept 30
Great gray owl	0.25	March 1 – June 30

**Table 4-1 Raptor Nest Buffers**

<b>Species</b>	<b>Spatial Buffer (miles)</b>	<b>Seasonal Buffer</b>
Great horned owl	0.75	Dec 1 – Sept 30
Long-eared owl	0.75	Feb 1 – Aug 15
Northern saw-whet owl	0.75	March 1 – Aug 31
Short-eared owl	0.75	March 1 – Aug 1
Mexican spotted owl	0.75	March 1 – Aug 31
Northern pygmy owl	0.75	April 1 – Aug 1
Western screech owl	0.75	March 1 – Aug 15
Common barn-owl	300 ft	Feb 1 – Sept 15

Source: USFWS - Utah Field Office Guidelines for Raptor Protection from Human and Land Use Disturbance, and WGFD.

As noted above, the seasonal and spatial restrictions identified in Table 4-1, are subject to modification on a site-specific basis depending on the specific species, the topography, habitat features, and level of disturbance. In seeking site-specific modifications to the Table 4-1 restrictions, Ruby would follow the approach set out in the USFWS Utah Field Office's manual, which includes:

- Resource Identification,
- Assessment of Level of Impact,
- Protection of Habitat Components,
- Provision for Reasonable Protection of raptor nesting, and
- Mitigation and Documentation.

Ruby would conduct an aerial survey or ground survey immediately prior to construction at each raptor nest to determine activity. Each active nesting site would be evaluated for potential level of impact. Considerations would include species using the nest, nesting status, distance from the Project route, local land use patterns, topography, and aspect of the nest in relation to the construction ROW. It is expected that most impacts would be considered indirect impacts due to noise disturbance in the ROW and, potentially, minimal degradation of adjacent habitats. It is unlikely that nests would be directly

impacted. This assessment would be conducted by Ruby and reviewed by USFWS and BLM resource specialists.

Table 4-1 exhibits both seasonal and special buffers zones for raptor species. In general, construction activities are scheduled to avoid the most critical stages of breeding activity, the mating and egg laying stages. By this time, raptor chicks should have hatched and been in the nest for several weeks. Each active nest identified during the aerial surveys would be evaluated for the appropriateness of the seasonal and spatial buffers that are recommended in the guidelines. Ruby would coordinate with the appropriate state and federal agencies to develop specific conservation measures for each nest site that occurs within agency designated buffer, if Ruby cannot avoid construction during the designated nesting season.

In the event that a conflict with this period arises due to Project constraints, Ruby would request that construction be allowed within the recommended spatial and seasonal buffer zones. Based on a specific location, resource managers may request that specific mitigation measures be employed to ensure that no take of raptor species occurs. Ruby would work with resource managers on a case-by-case basis to determine the appropriate and prudent mitigation measures in these situations. For any sites where the recommended seasonal and spatial buffers cannot be adhered to, Ruby would coordinate with the appropriate resource management agencies and would propose monitoring of active sites by an accredited biologist during construction activities to assess impacts. Following completion of construction activities, Ruby would submit to resource agencies a summary report of the active nests in the Project area, specific treatment of each nest, behavior observed, and apparent health and status of each nest through the completion of the breeding season.

#### **4.3.1 Bald Eagle**

Active bald eagle nests were identified in Wyoming (Uinta County) and Oregon (Lake and Klamath counties) during 2009 aerial surveys. Ruby would apply a one-mile spatial buffer and a seasonal buffer (Table 4-1) to protect these nests. Please refer to Ruby's Voluntary Conservation Plan for Migratory Birds for more details on conservation measures to be employed by Ruby for bald eagles. Ruby would also consider the recommendations of the National Bald Eagle Management Guidelines (USFWS 2007); however, it should be noted that the spatial buffers Ruby has committed to are more stringent than those recommended by the Guidelines.

For portions of the ROW where blasting may be required, Ruby would survey bald eagle nest sites within one mile (and other raptor nests within 0.5 mile) of the specific blasting sites prior to pipeline construction to determine if these nests are active. Based on those

surveys, if any nests are determined to be active bald eagle nests, Ruby would coordinate with appropriate agencies. Ruby may be required to develop a site-specific blasting plan to avoid take under the MBTA and/or the Bald and Golden Eagle Protection Act (BGEPA). Avoidance or minimization measures that may be recommended by the USFWS include delaying blasting activities, buffering or muffling the blasting area, or some other measure to ensure compliance with the MBTA and/or BGEPA.

#### **4.3.2 Golden Eagle**

Golden eagles are known to breed in the general area of the Project, and confirmed nesting locations occur within 0.75 mile of the Project. Species like the golden eagle often utilize several different nesting locations. Therefore, each year the species could utilize a different nest location, all with different aspects. The potential impact to a given nesting pair as a result of the construction activities would be based on which particular nest an eagle pair is using and its specific relationship to the ROW, including aspect, line of sight, and distance. Aerial surveys conducted in 2009 found active golden eagle nests in the vicinity of the ROW in Wyoming (Lincoln County), Utah (Rich County), and Nevada (Elko, Humboldt, and Washoe counties). Ruby would adhere to the spatial and seasonal buffers identified for golden eagle nests. If Project constraints require construction within these buffers, Ruby would coordinate with the BLM, USFWS, and state wildlife agencies to develop suitable conservation measures for this species.

#### **4.3.3 Osprey**

Osprey are known breeders in southern Oregon in the general vicinity of the Project. Three active osprey nests were observed along the ROW in Lake County during 2009 aerial surveys. Ruby would adhere to the seasonal and spatial buffers identified for osprey nests. In the event that Project constraints require construction within these buffers, Ruby would coordinate with the BLM, USFS, USFWS, and state wildlife agencies to develop suitable conservation measures for the species.

#### **4.3.4 Peregrine Falcon**

Peregrine falcons are known to occur in the general vicinity of the Project, and individual falcons were observed during 2008 surveys. The peregrine falcon alternates nesting locations and often utilizes vacant nests of other raptor species. Therefore, each year the species could utilize a different nest location. The potential impact to a given nesting pair as a result of the construction activities would be based on what nest the falcon pair is using and its specific relationship to the ROW, including aspect, line of sight, and distance. The impact would also depend upon the phase of construction within a particular spread. Impacts to this species are not expected since 2008 and 2009 surveys failed to locate active peregrine falcon nests.

#### **4.3.5 Prairie Falcon**

Ruby surveys encountered prairie falcons throughout Nevada during 2008. Aerial surveys in 2009 documented active nests in Utah (Rich and Box Elder counties), Nevada (Elko, Humboldt, and Washoe counties), and Oregon (Lake County). Ruby would adhere to the seasonal and spatial buffers identified for prairie falcon nests. In the event that Project constraints require construction within these buffers, Ruby would coordinate with the BLM, USFS, USFWS, and state wildlife agencies to develop suitable conservation measures for the species.

#### **4.3.6 American Kestrel**

American kestrels are a common and widespread breeder in North America. Surveys conducted in 2009 documented active nests in Utah (Box Elder County) and Nevada (Elko and Humboldt counties). Ruby would adhere to the seasonal and spatial buffers identified for prairie falcon nests. In the event that Project constraints require construction within these buffers, Ruby would coordinate with the BLM, USFS, USFWS, and state wildlife agencies to develop suitable conservation measures for the species.

#### **4.3.7 Northern Harrier**

Northern harriers were observed during 2008 surveys in the vicinity of the ROW. Therefore, there is a potential for impacts to this species. Completed 2009 aerial surveys found active northern harrier nests in Wyoming (Lincoln and Uinta counties) and Nevada (Humboldt County). Ruby would adhere to the seasonal and spatial buffers identified for northern harrier nests. In the event that Project constraints require construction within these buffers, Ruby would coordinate with the BLM, USFWS, and state wildlife agencies to develop suitable conservation measures for the species.

#### **4.3.8 Northern Goshawk**

Ruby conducted protocol level surveys for goshawks in areas along the ROW where suitable habitat occurred, including within the Wasatch-Cache National Forest in Utah and the Fremont-Winema National Forest in Oregon in 2008. Survey results did not document species occurrence within 0.75 mile from the ROW. Northern goshawk nests were not found during 2009 aerial surveys. Following agency recommended protocol, further intensive surveying of the Fremont-Winema National Forest in Oregon were conducted June and July 2009. These surveys located two active nests in Lake County. Ruby would adhere to the seasonal and spatial buffers identified for northern goshawk nests. In the event that Project constraints require construction within these buffers, Ruby would coordinate with the BLM, USFS, USFWS, and state wildlife agencies to develop suitable conservation measures for the species. Although no northern goshawk nests were observed on Wasatch-Cache National Forest lands, Ruby would adhere to the guidelines outlined in the Conservation Strategy and Agreement for the Management

of Northern Goshawk Habitat in Utah (1998) if nests are documented prior to construction.

#### **4.3.9 Cooper's Hawk**

Completed 2009 aerial surveys found Cooper's hawk nests across Nevada (Elko, Humboldt, and Washoe counties). Ruby would adhere to the seasonal and spatial buffers identified for Cooper's hawk nests. In the event that Project constraints require construction within these buffers, Ruby would coordinate with the BLM, USFWS, and state wildlife agencies to develop suitable conservation measures for the species.

#### **4.3.10 Red-tailed Hawk**

Aerial surveys conducted in 2009 identified widespread red-tailed hawks nesting within 0.75 mile of the ROW. Active nests were recorded in Wyoming (Lincoln and Uinta counties), Utah (Rich, Cache, and Box Elder counties), Nevada (Elko and Humboldt counties), and Oregon (Lake and Klamath counties). Ruby would adhere to the seasonal and spatial buffers identified for red-tailed hawk nests. In the event that Project constraints require construction within these buffers, Ruby would coordinate with the BLM, USFS, USFWS, and state wildlife agencies to develop suitable conservation measures for the species.

#### **4.3.11 Ferruginous Hawk**

Ferruginous hawks are known to breed in the general area of the Project. Active ferruginous hawk nests were identified during 2009 aerial surveys. Nests were located in Utah (Box Elder County) and Nevada (Elko and Humboldt counties). Ruby would adhere to the seasonal and spatial buffers identified for ferruginous hawk nests. In the event that Project constraints require construction within these buffers, Ruby would coordinate with the BLM, USFWS, and state wildlife agencies to develop suitable conservation measures for the species.

#### **4.3.12 Swainson's Hawk**

Completed 2009 aerial surveys found active Swainson's hawk nests in Utah (Box Elder County) and Nevada (Elko and Humboldt County). Ruby would adhere to the seasonal and spatial buffers identified for Swainson's hawk nests. In the event that Project constraints require construction within these buffers, Ruby would coordinate with the BLM, USFWS, and state wildlife agencies to develop suitable conservation measures for the species.

#### **4.3.13 Burrowing Owl**

Active burrowing owl burrows were identified on the ROW in Wyoming (Lincoln County), Utah (Box Elder County), and Nevada (Elko and Humboldt counties) during 2009

surveys. The construction schedule may overlap with the later stages of young rearing for the owl. Ruby is coordinating with the BLM, USFWS, and state wildlife agencies to develop suitable conservation measures for the species.

Ruby proposes a plan of action that would include passive relocation for burrowing owls prior to nesting season. Passive relocation would not involve actual capture and removal. Rather, the owls would be enticed to artificial (or natural) burrows by providing such burrows and using one-way door “traps” that allow owls to leave the burrow of concern but would not let them reenter. Relocation is most successful if the added burrows are located less than 200 meters away. Once the passive relocation has been completed all burrows within the ROW would be collapsed to assure owls do not occupy the ROW. Ruby would work with the BLM, USFWS, and state wildlife agencies to further refine the measures to move owls off the ROW prior to construction, and obtain the necessary wildlife permits (e.g., Certificate of Registration in Utah).

Passive relocation would not be utilized in Wyoming. Ruby would adhere to spatial and temporal restrictions to construction in areas where active burrowing owls exist in the Project area in Wyoming. These restrictions are identified in Ruby’s Voluntary Conservation Plan for Migratory Birds s.

#### **4.3.14 Great Horned Owl**

Great horned owls are a widespread, but often sparsely distributed nester in the Project area. Active nests were identified during 2009 aerial surveys. Nests were located in Utah (Rich County), Nevada (Elko, Humboldt, and Washoe counties), and Oregon (Lake County). Ruby would adhere to the seasonal and spatial buffers identified for great horned owl nests. In the event that Project constraints require construction within these buffers, Ruby would coordinate with the BLM, USFS, USFWS, and state wildlife agencies to develop suitable conservation measures for the species.

#### **4.3.15 Great Gray Owl**

At the request of the USFS, Ruby conducted great gray owl surveys in Oregon during 2008 surveys. These surveys failed to elicit any response and no nests or individuals were observed. Ruby does not anticipate impacting great gray owls during construction. If active nests are observed prior to and during construction, Ruby would adhere to the seasonal and spatial buffers identified for great gray owl nests. In the event that Project constraints require construction within these buffers, Ruby would coordinate with the BLM, USFS, USFWS, and state wildlife agencies to develop suitable conservation measures for the species.

#### **4.3.16 Long-eared Owl**

Completed 2009 aerial surveys found active long-eared owl nests in Nevada (Elko and Washoe counties). Ruby would adhere to the seasonal and spatial buffers identified for long-eared owl nests. In the event that Project constraints require construction within these buffers, Ruby would coordinate with the BLM, USFWS, and state wildlife agencies to develop suitable conservation measures for the species.

#### **4.3.17 Short-eared Owl**

Aerial surveys conducted in 2009 documented short-eared owl nests in Nevada (Elko and Washoe County). Ruby would adhere to the seasonal and spatial buffers identified for short-eared owl nests. In the event that Project constraints require construction within these buffers, Ruby would coordinate with the BLM, USFWS, and state wildlife agencies to develop suitable conservation measures for the species.

Please refer to Ruby's Voluntary Conservation Plan for Migratory Birds for best management practices to be implemented by Ruby to avoid and minimize impacts on raptors.

### **4.4 Other MBTA-Protected Species**

The construction of the Project would impact other birds protected under the MBTA. Habitat for one or more MBTA-protected nesting bird species is found along most of the Project route. Ruby is in the process of preparing its Voluntary Conservation Plan for Migratory Birds, as recommended by the USFWS, for the protection of MBTA-protected species during construction.

During construction, Ruby would avoid both temporal and spatial direct impacts to birds protected under the MBTA. Temporal avoidance (March 1–July 31) eliminates impact to nesting birds by constructing outside the nesting season. This can be accomplished by starting construction prior to the onset of nesting, so that nesting cannot be initiated that would then be impacted by construction. Spatial avoidance is used when construction occurs during the nesting season and nests are present, but construction would be avoided within a protective "buffer" around the nest.

Please refer to Ruby's Voluntary Conservation Plan for Migratory Birds for avoidance, minimization, and conservation measures to be implemented by Ruby.