

Compatibility Determination June 16, 2010 Draft

Use(s): Ruby Pipeline - Temporary Road Use, Road Improvements, and Road Rerouting (Energy [other]).

Refuge Name: Sheldon National Wildlife Refuge, Washoe County and Humboldt County, Nevada; and Lake County, Oregon (see the attached “Map of Sheldon NWR Access Road Improvements for Vehicle Passing Ruby Pipeline Project September 2009”).

Establishing and Acquisition Authority(ies):

Migratory Bird Conservation Act of 1929, as amended (16 U.S.C. 715-715r).

Charles Sheldon Wild Life Refuge, Nevada (Executive Order [EO] 5540, Jan 26, 1931).

Enlarging Charles Sheldon Wildlife Refuge, Nevada (EO 7364, May 6, 1936).

Charles Sheldon Antelope Range, Nevada (EO 7522, Dec 21, 1936).

National Wildlife Refuge System Administration Act of 1966, as amended (16 U.S.C. 668dd-668ee), including the Game Range Act of 1976 (P.L. 94-223, 90 Stat. 199).

Nevada - Prior Amendment of Executive Order No. 7522; Prior Revocation of Public Land Order No. 5497; Consolidation of Charles Sheldon Antelope Range and Charles Sheldon Wildlife Refuge; Change of Name to Sheldon National Wildlife Refuge; Clarification of Administration and Management Under National Wildlife Refuge System Administration Act (Public Land Order [PLO] 5634, Apr 25, 1978).

Mineral Withdrawal of a Portion of the Sheldon National Wildlife Refuge; Nevada (PLO 6849, Apr 15, 1991).

Refuge Purpose(s):

“...for use as an inviolate sanctuary, or for any other management purpose, for migratory birds...” and “...to conserve and protect migratory birds in accordance with treaty obligations...and other species of wildlife found thereon, including species that are listed...as endangered species or threatened species, and to restore or develop adequate wildlife habitat” (Migratory Bird Conservation Act of 1929).

“...reserved and set apart for...use...as a refuge and breeding ground for wild animals and birds...” (EO 5540).

“...in order to effectuate further the purposes of the Migratory Bird Conservation Act ...withdrawn from settlement, location, sale, entry, or other form of appropriation and reserved and set apart...as an addition to the existing Charles Sheldon Wildlife Refuge...” (EO 7364).

“...withdrawn from settlement, location, sale, or entry and reserved and set apart for the conservation and development of natural wildlife resources and for the protection and

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improvement of public grazing lands and natural forage resources...;” and “...the natural resources therein shall be first utilized for the purpose of sustaining in a healthy condition a maximum of three thousand five hundred (3,500) antelope, the primary species, and such nonpredatory secondary species in such numbers as may be necessary to maintain a balanced wildlife population...” (EO 7522).

“...for the conservation, management, and where appropriate, restoration of the fish, wildlife, and plant resources and their habitats within the United States for the benefit of present and future generations of Americans” (National Wildlife Refuge System Administration Act).

Consistent with, “The Act of February 27, 1976 (Pub. L. 94-223, 90 Stat. 199) [aka the Game Range Act] which amended...the National Wildlife Refuge System Administration Act of 1966 ...the Charles Sheldon Antelope Range, shall be administered by the Secretary of the Interior exclusively through the United States Fish and Wildlife Service...;” and “The operation and administration of the Charles Sheldon Antelope Range, including grazing...is now being administered, in accordance with the National Wildlife Refuge System Administration Act...;” and “...the lands and interests in land comprising the Charles Sheldon Wildlife Refuge...and the adjoining Charles Sheldon Antelope Range...are hereby consolidated into one administrative unit...designated and known as the Sheldon National Wildlife Refuge” (PLO 5634).

“...withdraws approximately 445,766 acres of the Sheldon National Wildlife Refuge...from mining location...to protect the wildlife habitat and unique resource values of the refuge lands” (PLO 6849).

National Wildlife Refuge System (Refuge System or NWRS) Mission:

“The mission of the [National Wildlife Refuge] System is to administer a national network of lands and waters for the conservation, management, and where appropriate, restoration of the fish, wildlife, and plant resources and their habitats within the United States for the benefit of present and future generations of Americans” (National Wildlife Refuge System Administration Act).

Description of Use(s):

Ruby Pipeline L.L.C. (Ruby), a subsidiary of El Paso Corporation of Houston, Texas, has proposed the construction and operation of an approximately 675-mile-long, 42-inch-diameter, high-pressure, natural gas pipeline (Pipeline) from Opal, Wyoming to Malin, Oregon. Ruby has proposed initiating construction of the Pipeline in 2010 with the intention of delivering natural gas to customers beginning in March 2011 (U.S. Federal Energy Regulatory Commission, FERC, Jan 2010).

The Pipeline route crosses northwest Nevada approximately 1- to 1.5-miles south of the primary, southernmost boundary of Sheldon National Wildlife Refuge (Refuge or NWR). Along most of its length, the Pipeline would be buried. During construction, Ruby would normally create a 115-foot-wide right-of-way. Following construction, that portion of the right-of-way no longer needed would be restored. Restoration success would be monitored for 2-5 years. Inspectors

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and monitors would be employed to help ensure that Pipeline construction and mitigation satisfied all requirements of applicable certificates, permits, other approvals, and agreements. Ruby would maintain a 50-foot-wide permanent right-of-way along the Pipeline for operations purposes, including maintenance, inspection, repair, cleaning, and emergency response.

Ruby has requested permission from the U.S. Fish and Wildlife Service (Service or USFWS) to use several roads on Sheldon NWR to access their proposed Pipeline. It is expected that Ruby would use these roads for approximately a 6-month period, from July through December 2010, with the highest intensity of use occurring from early August through mid-November. Road use would be for purposes of transporting people, supplies, and equipment for construction, mitigation, operation, inspection, cleaning, maintenance, emergency response, repair, and/or termination. Ruby proposes to cross Refuge roads with a diversity of vehicles, from conventional pickup trucks (a fleet of almost 90) to large and heavy stringing trucks (30), contractor buses (13), water trucks (6), fuel trucks (3), trucks using flatbed and lowboy trailers (3-20), hydro-testing equipment/dryers and compressors (2-4), and motor graders (2). Prior to the start of construction (during July), these vehicles would travel Refuge roads 1-2 times per day for 1 to 12 days each, for a total trip count of approximately 350. During construction (August - November), these vehicles would travel Refuge roads 1-2 times per day for 5 to 20 days, for a total trip count of almost 1,900. Following construction (after November), these vehicles would travel Refuge roads 1-2 times per day for 1 to 12 days, for a total trip count of almost 400.

Including Hwy 140, Ruby has proposed use of approximately 88 miles of the following Refuge roads for these purposes:

- 34.2 miles of Nevada State Highway 140,
- 26.6 miles of Washoe/Humboldt County Road 8A/Cedarville Road,
- 4.6 miles of an un-named road in the south-west corner of the Refuge (Ruby road W-1),
- 18.5 miles of Washoe/Humboldt County Badger Mountain Road/Summit Lake Road (Ruby road H-46B),
- Less than 1 mile of an un-named road along the Refuge's south-central boundary (Ruby road H-50),
- Less than 1 mile of an un-named road along the Refuge's south-central boundary (Ruby road H-46A), and
- 3.4 miles of Humboldt County Knott Creek Road/Summit Lake Road (Ruby road H-46).

Ruby has also requested incidental use of Road 34A.

The Refuge's roads vary considerably in quality and their capacity to accommodate large, long, or heavy vehicles. Ruby has proposed a number of road improvements to facilitate travel and avoid or minimize adverse impacts to the Refuge's roads and adjacent lands and waters. These improvements include: blading, rocking/graveling, and/or widening the roadbed; matting water crossings; mowing adjacent lands; constructing pullouts; adding culverts; and rerouting a section of road. Ruby would also erect cautionary road signs and restrict traffic to a single direction on some roads at selected times (see more-detailed description below and in Appendix X, Chapter C, to FERC' final environmental impact statement [EIS] on the Ruby Pipeline Project [Jan 2010]).

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Ruby has proposed that pullouts be constructed to facilitate passing by large, long, or heavy vehicles. However, construction of a pullout could involve mowing at ground level (e.g., at 0-3" in height), blading and removal of roadside vegetation, and/or graveling. All of these actions would delay habitat restoration following Pipeline construction. In order to minimize the number of pullouts and to the extent that it would eliminate blind corners and otherwise facilitate passage of construction vehicles, Ruby could potentially mow roadside vegetation at a greater height (e.g., at 8') instead of constructing pullouts as described immediately above.

Almost 70% of Ruby's use would occur on Hwy 140 or 8A, roads that are wide, well-built, and regularly maintained. Highway 140 is a two-lane highway and is the only paved road on the Refuge. Ruby proposes no improvements to this Highway. Road 8A is 25-30 feet in width, and is maintained with blading and graveling. Ruby proposes to enhance safety on road 8A by mowing roadside strips approximately 10 feet wide by 30 feet long at up to 13 blind corners (totaling less than 0.1 acres). Road 34A has similar physical characteristics and maintenance practices as road 8A. Ruby proposes no changes to this road.

Elsewhere on the Refuge, some sections of road are rough, winding, narrow, have switchbacks and hairpin curves, cross wet swales, are worn-down to native rock on hills, travel through or are adjacent to sensitive wildlife habitats, and, at higher-elevations, are only passable seasonally. Road W-1 is 8-10 feet in width, is dirt/gravel, and was bladed and ditched in the past. Ruby proposes to blade this road, as needed; mat and bridge over two existing culverts; and add a maximum of 10 pullouts for vehicle passing. Here and elsewhere, each pullout would measure approximately 8 feet wide by 100 feet long, and the total area for the 10 pullouts would be less than 0.2 acres. The Badger Mountain/Summit Lake Road in Washoe and Humboldt counties is 10-12 feet in width, graveled, and maintained with blading. Ruby proposes to blade this road, as needed, mow overhanging sagebrush at an angle, lay back the east edge of the road at one location to enhance visibility, add a maximum of 24 pullouts (totaling less than 0.5 acres) for vehicle passing, and mat one dry wash. Road H-50 is 10-12 feet in width and may have been bladed in the past. Ruby proposes to blade this road, if needed, and mat a spring crossing. Road H-46A is 10-12 feet in width and was bladed in the past. Ruby proposes to lay down rock road base in ruts, as needed, and compact the road in areas with loose material (gravel), as needed. This road would not be bladed. The Knott Creek/Summit Lake Road in Humboldt County is 10-12 feet in width, is graveled, and was maintained in the past with blading. Ruby proposes to blade this road, as needed, and add a maximum of 9 pullouts (totaling less than 0.2 acres) for vehicle passing. Ruby also proposes the rerouting of a 1330-foot (approximately ¼-mile) section of Badger Mountain Road/Summit Lake Road near Ten-Mile Spring. This new section of road would retain its current width (16 feet) and would include needed culverts and new road base. This new road would correct an existing problem where this road crosses a spring-fed, perennial stream and runs adjacent to a research enclosure. Ruby would install caution signs at blind corners and gravel, as needed, all roads it used. Ruby has also proposed that traffic be restricted to a single direction when larger, longer, and/or heavier vehicles would be traveling on the Refuge's smaller roads. See the attached map, "Sheldon NWR Access Roads Overview, Ruby Pipeline Project September 2009" (from FERC's EIS [Jan 2010]).

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In January 2010, FERC issued a final EIS that addressed almost all aspects of the proposed Ruby Pipeline Project. In April 2010, FERC issued an order certificating (approving) the Pipeline Project (FERC, Apr 2010). Much of the information and some of the analyses contained in this compatibility determination are addressed in greater detail in the EIS (see especially Appendix X, Chapter C, “Transportation Plan for Use of Access Roads within Sheldon National Wildlife Refuge”). That EIS is incorporated through reference into this compatibility determination.

Prior to the establishment of Sheldon NWR, the U.S. Bureau of Land Management (BLM) issued the Nevada Department of Highways four rights-of-way for that portion of Nevada State Highway 140 that currently crosses the Refuge (BLM, Oct 1964). As the current land owner and manager of Sheldon NWR, these rights-of-way are now administered by the Service. However, the Nevada Department of Transportation, not the Service, has the authority to allow Ruby to use Highway 140 through Sheldon NWR for highway purposes, including the movement of vehicles and transportation of goods, consistent with State law.

With the exception of Highway 140, the Service has full jurisdiction over all other roads and routes of travel (e.g., two-tracks) across the Refuge. This includes roads referred to as county roads with alpha-numeric labels (e.g., 8A and 34A). Humboldt and Washoe counties maintain stretches of some of these roads through Sheldon NWR; however, neither of the counties has been issued legal rights-of-way for any stretches of roads that cross the Refuge (Shirilla, Jun 2009). Regardless, the Service has coordinated and will continue to coordinate with the counties regarding maintenance of, any proposed significant changes to, and Ruby’s proposed use of road 8A and the Badger Mountain/Summit Lake Road.

The Mineral Leasing Act of 1920, as amended (30 U.S.C. 181-263) and implementing regulations (43 C.F.R. 2880) charge BLM to serve as the lead Federal agency for coordination among other Federal land-management agencies regarding the issuance of rights-of-way for projects such as Ruby’s proposed natural gas pipeline. BLM would also grant any required rights-of-way. The FERC-certificated route for the Ruby Pipeline would not cross Sheldon NWR. Yet because of the close proximity of the route to Sheldon NWR’s southern boundary, Ruby has requested access to the Pipeline through the Refuge. This use would be temporary. Granting Ruby access to the Pipeline through Sheldon NWR would not require their acquisition of an interest in real property on the Refuge and would not require issuance of a right-of-way. The Mineral Leasing Act states, in part, that, “A right-of-way may be supplemented by such temporary permits for the use of Federal lands in the vicinity of the pipeline as the Secretary or agency head finds are necessary in connection with construction, operation, maintenance, or termination of the pipeline, or to protect the natural environment or public safety.” This is also consistent with relevant Service policy which states, in part, that, “...short term and temporary use of an existing road...can best be accommodated through special use permits” (340 FW 3).

Because it would constitute a, “...privilege...provided at refuge expense and not usually available to the general public...,” Ruby’s proposed use of Refuge roads fits the definition of a “specialized use” in Refuge System policy (5 RM 17). Additionally, because it would involve, “An organization that has monetary gain (profit) as a primary objective,” and “...the use of a refuge or its resources for profit,” it would qualify as an economic use undertaken by a commercial organization (5 RM 17). Except in unusual situations which don’t apply here, the

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Service has no obligation to grant such a use. If it was to be allowed, a special use permit (SUP) would be the authorization instrument and a fee would be charged (5 RM 17). This is also consistent with the above-cited Service policy on rights-of-way (340 FW 3).

This proposed use is not a wildlife-dependent general public use. Instead, because the proposed use would include, "...developing lands within a refuge...graveling areas...[and an action that] disturbs the soil, displaces vegetation, or otherwise changes the natural biological or ecological functions or aesthetic values of the land..." it would be an economic use for purposes of Refuge System regulations on economic uses (50 C.F.R. 29.1 and Kurth, Apr 2005). Therefore, prior to authorization of this use and in addition to being found appropriate (603 FW 1) and determined compatible (603 FW 2), a determination would need to be made that the proposed use contributed to the, "...achievement of the [Sheldon] national wildlife refuge purposes or the National Wildlife Refuge System mission."

If approved, Ruby's proposed access to the Pipeline through Sheldon NWR would qualify as a refuge use and would therefore require a positive compatibility determination prior to being allowed (see 16 U.S.C. 668dd-668ee; 50 C.F.R. 25, 26, and 29; and 603 FW 2). Hence this document.

Related to, but not part of this use, is a proposal to exchange lands in the southwest corner of the Refuge. Ruby has proposed the acquisition of fee-simple title to or an easement on an approximately 30-foot wide by 1-mile long section (totaling approximately 3.6 acres) of the southern-most stretch of road W-1 within the Refuge. In exchange, Ruby would acquire and transfer to the Service, fee-simple title to a 20-acre private in-holding on the Refuge. This proposal is not a "use" of the Refuge and; therefore, is not addressed in this compatibility determination. Instead, it is described and evaluated in supplemental information to FERC's final EIS on the Ruby Pipeline Project (USFWS, Jun 2010). Because this land-exchange proposal would occur in some of the same general areas of the Refuge where Ruby has proposed road use, that supplemental information is incorporated through reference into this compatibility determination.

Availability of Resources:

The Service would seek to recover its costs associated with administration of this permit and use, and/or charge a fee equal to the fair market value of the benefit received by Ruby (5 RM 17).

Applicable administrative costs include both direct and indirect costs such as:

- Salaries and associated employee expenses related to evaluation of the proposed use (including appropriateness finding, compatibility determination, and compliance with the National Environmental Policy Act of 1969, as amended [42 U.S.C. 4321-4347], NEPA) and development of the permit;
- Salaries and associated employee expenses related to on-the-ground oversight of the use to ensure that permit requirements (including general and special permit conditions, and compatibility stipulations) are followed and the use remains compatible;
- Salaries and associated employee expenses related to traffic control and law enforcement;

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- Salaries and associated employee expenses related to monitoring of the actual effects of the use on natural and cultural resources, and general public use;
- Travel;
- Supplies and equipment; and
- An applicable portion of Refuge overhead costs.

To the extent that Ruby provided some of these services (e.g., through contracts with independent third parties acceptable to the Service), these costs and associated fees would be reduced. Consistent with the Refuge Revenue Sharing Act (16 U.S.C. 715s) any fee revenues collected from this use would be deposited into the U.S. Treasury Department's National Wildlife Refuge Fund for redistribution to refuges to help offset the costs of administering specialized uses (Expenses for Sales) and for payments-in-lieu of taxes to counties or other local governments (Refuge Revenue Sharing). Following is an estimate of the costs to administer this proposed use on the Refuge.

Tasks ¹	Estimated Costs ²
1. Review and, as appropriate, approval of Pipeline- and road use-related documents generated by Ruby, FERC, BLM, or others prior to, during, or following the primary period of road use (i.e., July-December 2010). GS-13 Biologist full-time for 14 months.	\$85,000
2. Evaluation of the proposed use and development of any Service-associated compliance documents, including an appropriateness finding, compatibility determination, Endangered Species Act consultation, National Historic Preservation Act compliance, NEPA document(s), and permit. GS-13 Biologist full-time for 4 months.	\$45,000
3. Inspection and monitoring of Ruby's use of Refuge roads and associated activities (including construction of pullouts, road-bed work, invasive-species cleaning, and traffic management) to ensure compliance with general and special permit conditions, compatibility stipulations, and other applicable requirements. GS-12 Biologist full-time for 10 months.	\$65,000
4. Patrolling and enforcement of laws, regulations, and Refuge rules associated with Ruby's road use, associated activities, and actions of Pipeline workers anywhere on the Refuge. GS-9 Law Enforcement Officer one-half time for 10 months.	\$25,000
5. Inspection and monitoring of Ruby's post-use mitigation and restoration. GS-12 Biologist one-tenth time for 10 years.	\$90,000
6. Post and maintain integrity of southern boundary on Sheldon NWR.	\$21,000
7. Treat roadside for invasive weed infestation and reseed with native plant species.	\$10,000
8. Refuge overhead costs associated with the above-listed work. ³	\$75,020
Total Costs	\$416,020

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- 1 Personnel costs = 2010 step 5 salary for appropriate GS level (no locality pay) x 1.30 for benefits.
- 2 Projected costs are calculated as if work would be completed by the Service. Ruby has already compensated the Service for a significant portion of tasks 1, 2, 3, 4, and 6 through a reimbursable agreement and through a contract for third-party consultant support. Approximately 80% of task 3 would be expected to be satisfied by Ruby's inspectors and monitors under The Environmental Compliance Monitoring Plan (Apr 2010). Ruby has also committed to complete task 7 through a third-party contractor.
- 3 Overhead costs = salary + benefit costs x 0.22. Overhead expenses include building rent, utilities, equipment and supplies, and support personnel, and do not include salary-related benefits.

The Refuge currently has inadequate budget and staff to conduct the work listed above. So, if this use was allowed, one condition would be a requirement that Ruby support the conduct of the work listed above and other related costs, as appropriate. This could occur directly (i.e., Ruby could pay the Service to perform the work) or indirectly (e.g., Ruby could contract with an independent third party - which was acceptable to the Service - to conduct the work). Ruby has already reimbursed the Service for some costs related to the Pipeline Project and has also paid for consultants (acceptable to the Service) to conduct much of the listed work since March 2009.

Anticipated Impacts of the Use(s):

Refuge Goal and NWRS Mission

In 1980, the Refuge adopted a renewable natural resources management plan to guide long-term management of the Refuge's fish, wildlife, plants, and their habitats (USFWS, Aug 1980). Among other things, this plan established an overarching goal, "...to manage Sheldon as a representative area of high-desert habitat for optimum populations of native plants and wildlife." The Refuge's management goal nicely complements the Refuge System's statutory mission, "...to administer a national network of lands and waters for the conservation, management, and where appropriate, restoration of the fish, wildlife, and plant resources and their habitats within the United States for the benefit of present and future generations of Americans" (16 U.S.C. 668dd-668ee). For the reasons discussed in more detail elsewhere in this section, Ruby's proposed use of roads on Sheldon NWR would have a modest amount of both negative and positive effects upon achievement of the Refuge's goal and the NWRS' mission.

Fish, Wildlife, Plants, and Their Habitats

Sheldon NWR is a large refuge (over 570,000 acres) in the high desert of north-western Nevada and southern Oregon. The Refuge is characterized by wide-open spaces and a diversity of landforms, including mountains; high, flat tables bordered by rimrock; broad plains and playas; and narrow canyons opening into rolling valleys. Elevation ranges from approximately 4,200 feet to almost 7,300 feet. The Refuge is hot in the summer and cold in the winter. Precipitation occurs mainly in the form of snow and varies from approximately 6 to 13 inches annually. Although numerous springs feed Refuge creeks, surface water is scarce on the Refuge during the late summer and fall (USFWS, Apr 2008).

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Vegetation at the Refuge is dominated by sagebrush-steppe (*Artemisia* spp.). Sheldon NWR is the largest, contiguous piece of land representative of the sagebrush-steppe ecosystem in the Nation that is not grazed by domestic livestock. When not grazed, this habitat type forms one of North America's most imperiled ecosystems (Noss and Peters, Dec 1995; Noss, R.F. et al., 1995). Other habitat types of importance at the Refuge include spring-fed stringer meadows, streams and associated riparian (willow, *Salix* spp.) zones, aspen (*Populus tremuloides*) groves, and stands of mountain mahogany (*Cercocarpus ledifolias*). Sheldon NWR is rich in biological diversity and provides habitat for approximately 300 species of native mammals, birds, reptiles, amphibians, and fish (USFWS, Apr 2008). Fish and wildlife species of special interest include pronghorn antelope (*Antilocapra americana*), mule deer (*Odocoileus hemionus*), bighorn sheep (*Ovis canadensis*), some large mammalian predators, pygmy rabbits (*Brachylagus idahoensis*), American pika (*Ochotona princeps*), greater sage grouse (*Centrocercus urophasianus*), a large number and diversity of migratory birds, including several raptors, Lahonton cutthroat trout (*Oncorhynchus clarki henshawi*), and Alvord (*Gila alvordensis*) and Tui (*Gila bicolor*) chubs. The fact that Sheldon NWR encloses an unusually large, contiguous block of healthy habitat has important benefits for native fish and wildlife. For example, populations of sagebrush-obligate migratory birds are declining across the sagebrush-steppe ecosystem (Rich et al., 2005), yet they are high and stable on the Refuge. As another example, a number of pika populations have recently been documented on the Refuge (Collins, Aug 2009), yet pika populations are also declining across the Great Basin (Beever et al., 2003; and Grayson, 2005) and the USFWS recently conducted a status review to determine whether this species warranted listing under the Endangered Species Act of 1973, as amended (16 U.S.C. 1531-1544).

The Refuge also hosts a number of non-native plant and animal species (e.g., cheatgrass [*Bromus tectorum*], perennial pepperweed [*Lepidium latifolium*], Russian thistle [*Salsola tragus*], Scotch thistle [*Onopordum acanthium*], Halogeton [*Halogeton glomeratus*], white top or hoary cress [*Cardaria draba*], bullfrogs [*Rana catesbeiana*], feral horses [*Equus caballus ferus*], and feral burros [*Equus africanus asinus*]). Many of these species are invasive and degrade native habitats. Ongoing management programs, including control of invasive species and habitat restoration, are designed to help ensure that the Refuge's many native species enjoy a diversity of healthy habitats into the distant future.

Ruby's proposed road use and associated actions would occur on and near roads across the Refuge, but the areas of greatest concern are in the southern and south-western portions of the Refuge where Ruby's large, long, and/or heavy vehicles would travel lesser-used roads in more remote areas. These include areas used by pronghorn antelope, mule deer, pygmy rabbits, and greater sage grouse. Some of these roads cross sage grouse leks (8A) and raptor nesting areas (Badger Mountain Road/Summit Lake Road).

Ruby has also proposed incidental use of Road 34A. This road lies in the western and northwestern section of the Refuge and crosses core pronghorn fawning areas and key sage grouse leks. The road currently receives a modest amount of vehicle traffic. Additional use would contribute to the adverse effects of existing traffic, but might not be measurable if the use was only incidental.

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Highway 140 is heavily constructed, already receives a moderate amount of traffic, and would not be expected to be physically affected by the proposed use. Road 8A receives a modest amount of traffic, and it is bladed and graveled; but it is only suitable for seasonal use and is prone to rutting in the presence of moisture. The minor roads and routes (i.e., W-1, H-46B, H-50, H-46A, and H-46) are mostly graveled roads of varying quality. Passage of numerous, heavy vehicles on such roads can degrade the road bed through rutting and crushing of culverts, and can cause erosion and dust, and sedimentation of nearby waterbodies. Ruby has proposed to address these concerns by laying down and compacting road base, blading, graveled, matting of a dry wash and spring, and matting and bridging of culverts, as needed.

In one location, Badger Mountain Road/Summit Lake Road currently crosses a stream fed by Ten-Mile Spring (a perennial spring) and runs adjacent to an important research enclosure. Existing traffic on this section of road already causes damage to the road, and degrades the stream and meadow. Running large numbers of heavy vehicles through this area would likely cause significant damage to the road, further degrade the stream and meadow, and adversely affect ongoing research associated with the enclosure (which is designed to keep feral horses from using the area). As noted earlier, Ruby proposes to reroute a ¼-mile section of this road around Ten-mile Spring. Ruby would gate the road south of the Spring, remove the existing section of road north of the Spring, and restore the ground surface to resemble the surrounding landscape, which would effectively address both current and potential problems.

In other locations, the routes proposed for use by Ruby (e.g., W-1) cross seasonal wetlands or ephemeral streams. Although much of Ruby's road use would occur during the drier times of year, running large numbers of heavy vehicles through such areas could cause damage to these roads, erode the road materials, and increase sedimentation in the wetlands/streams, degrading these valuable habitats. Ruby would mat the road and bridge key areas, as needed, to address these problems. Additionally, Ruby has developed a "Wetland Mitigation Plan" for the Pipeline Project that is designed to address some of these issues.

Roads displace habitat and vehicle traffic can present a collision hazard for wildlife. In addition to these direct effects, roads and associated vehicular traffic can also indirectly affect fish, wildlife, plants, and their habitats. Roads and traffic can create a wildlife migration barrier, reduce the quality of habitat in the road's vicinity, subdivide wildlife populations, and create a disturbing linear feature (Andrews et al., Oct 2006; Forman, R.T., Feb 2000; Forman, R.T. and L.E. Alexander, 1998; and Trombulak, S.C., Feb 2000). Tolerance among species varies; however, vehicular traffic, construction, and other human activities all disturb wildlife and reduce the quality, hence carrying capacity of adjacent habitat. These effects generally decrease with distance from the road.

Construction-related activity and noise could disturb raptors and other migratory birds nesting near the roads, possibly causing them to abandon nests. Otherwise, the selective widening of some roads (to create the pullouts) would not be expected to measurably increase the indirect effects already caused by the Refuge's existing roads. The significant increase in traffic would be expected to exacerbate the direct and indirect effects of the existing roads. Ruby has proposed to control the speeds of construction vehicles using Refuge roads. None-the-less, with such a large increase in the number of vehicles using the roads, an unknown increase in the

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number of vehicle-wildlife collisions would be expected. Additionally, for some species, the sights and sounds of this additional traffic would likely increase the barrier effect of the roads and reduce the quality of the habitat in the vicinity of the roads. This increase in traffic would occur over an 8-month period with the greatest increase occurring from August through November. The majority of the use and the effects would occur after the breeding/nesting season for most species and be a one-time event. Although animal movements could be influenced during this period, populations on the Refuge would not be expected to be measurably affected.

Ruby has proposed to enhance traffic safety on road 8A by mowing roadside strips approximately 10 feet wide by 30 feet long at up to 13 blind corners (totaling less than 0.1 acres) and mow additional areas alongside the Badger Mountain/Summit Lake Road. Davies et al. (2009) studied the effects on vegetation and winter wildlife habitat of mowing sagebrush plant communities in eastern Oregon. When compared with controls, areas mowed at 20 cm (~8") in height had decreased cover, density, canopy volume, canopy elliptical area, and height, 0, 2, 4, and 6 years after treatment. Nutritional value appeared to slightly increase following the first winter post treatment, but this increase was believed not to be biologically significant. The authors estimated that cover, density, volume, and height would fully recover after approximately 10-19 years. If mowed at a modest height and because of the small area affected, it is not expected that the temporary reduction in vegetation structure as a result of this roadside mowing would have a measurable impact on Refuge wildlife populations.

With the exception of a ¼-mile section of Badger Mountain Road/Summit Lake Road that would be rerouted, all the roads proposed for use by Ruby already exist. That said, Ruby has proposed the construction of a maximum of 43 pullouts. Pullouts constructed through blading and potentially graveling would directly displace a total of less than 1 acre of habitat immediately adjacent to these roads/routes. Habitat restoration in these areas would be challenging and it could take several decades for shrub communities to approximate those in adjacent undisturbed areas. Pullouts mowed at ground level (e.g., at 0-3" in height) would have somewhat less severe effects. If root systems and the soil crust were not greatly damaged through mowing, grasses and forbs would be expected to recover after a few seasons. Davies et al. (2009) noted that historic mowing of sagebrush in eastern Oregon at approximately 2-3" above the ground often resulted in significant losses of sagebrush from the plant community.

If Ruby mowed the pullouts at a modest height (e.g., $\geq 8''$), the vegetation would recover much more quickly and it would not be expected that the temporary reduction in vegetation structure would have a measurable impact on Refuge wildlife populations. That said, if large, long, and/or heavy construction vehicles were forced onto the mowed areas in order to pass each other, then some of the mowed vegetation would likely be crushed causing damage to or death of vegetation and delaying habitat restoration.

As noted earlier, a number of non-native plants and animals already occur on the Refuge. Concomitant with an increase in traffic across the Refuge's boundary would be an increase in the potential for additional exotic species (both additional individuals of species that already occur and new species) to be brought onto Sheldon NWR. Additionally, Ruby has proposed developments outside the existing roadbed. The potential for invasive plant species to become

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established on the Refuge would increase where the native soil surface was disturbed. Ruby has developed a “Noxious and Invasive Weed Control Plan” for the Pipeline Project that is designed to address some of these issues.

Another effect associated with Ruby’s use of Refuge roads would be an increased potential for gates to inadvertently be left open or for damage to occur to fences, gates, or cattle guards. These concerns would be greater on less-traveled roads in the Refuge’s more-remote areas. Almost all of Sheldon NWR’s boundary is currently fenced. Except on major routes of travel (where cattle guards are employed) there are gates where roads cross fence lines. These fences, gates, and guards serve as important barriers keeping domestic cattle and feral/wild horses and burros from trespassing onto the Refuge where they can severely degrade healthy fish and wildlife habitats. There are also concerns that construction and other activity associated with the Pipeline immediately south of the Refuge’s main boundary could increase the pressure for cattle, horses, and burros to move, including onto the Refuge.

Sheldon NWR contains substantial acreage of healthy sagebrush (including old-growth sagebrush) and the associated perennial bunchgrass and forb plant communities. Such older, intact, and biologically healthy communities are increasingly rare and they require several decades to hundreds of years to grow/regenerate (Noss et al., 1995).

Ruby has proposed mitigation and/or restoration of Refuge habitats displaced, degraded, or otherwise damaged through their road use and associated activities. Restoration of native landscapes in the high desert is, at best, a very long-term proposition. Ruts from heavy vehicles, soil compaction, and breaching or crushing of the desert’s surficial microbiotic crust cause ecological changes that can require decades or longer to heal. Disturbance of the soil surface facilitates invasion by non-native plant species, a very serious concern on the Refuge. Re-establishing a healthy mix and natural density of native grasses and forbs is difficult enough, re-establishing shrubs, especially the vintage of those elsewhere on the Refuge, is extremely challenging and can take decades or longer. Restoration studies in northwest Nevada revealed that, after 8 years, only 50% of native shrubs were well-established, the first step toward recreation of an old-growth community (FERC, Jan 2010). Ruby has developed a “Restoration and Revegetation Plan: Nevada” for the Pipeline Project that is designed to address some of these issues. Regardless of the potential success of restoration efforts, there would remain adverse biological effects as a result of the temporary loss and/or degradation of habitat, and the temporary displacement and disturbance of fish, wildlife, and plants.

Public Use

Ruby’s proposed use would occur on and near roads across the Refuge. Because of their remoteness, many of the roads and routes in the southern and south-western portions of Sheldon NWR are used to a lesser extent than roads elsewhere on the Refuge. Individuals and groups currently using these roads include Refuge officials; Refuge authorized agents (e.g., cooperating agencies, cooperating associations, refuge support groups, volunteers, and contractors); researchers; and wildlife-dependent general public users. Consistent with relevant law and policy, the last group listed - which includes hunters, anglers, wildlife watchers, and

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photographers - are the Refuge's highest-priority general public users (National Wildlife Refuge System Administration Act, General Guidelines for Wildlife-Dependent Recreation policy, and Compatibility policy). The significant increase in traffic and one-way flows that would occur with Ruby's proposed use could conflict with and generate safety hazards for Refuge visitors and these other, important users of Refuge roads.

As described earlier, Ruby has proposed a number of changes to Refuge roads, including the construction of numerous pullouts, mowing of vegetation and installing of caution signs at blind corners, laying down and compacting road base, blading, graveling, matting of a dry wash and spring, matting and bridging of culverts, and rerouting a ¼-mile section of road that crosses a spring-fed stream and runs adjacent to a research enclosure. Ruby has also proposed that traffic be restricted to a single direction when larger, longer, and/or heavier vehicles would be traveling on the Refuge's smaller roads. These actions would facilitate Ruby's use of Refuge roads.

General public use of the Refuge is currently constrained by the location and quality of roads and other access routes. Therefore, the road improvements Ruby has proposed would also facilitate overall vehicular use of these roads by other existing and future travelers, especially along the narrow and windy sections of roads in the southern and south-western portions of the Refuge. Ruby's proposed changes would enhance driver safety and improve access on these roads during times of the year when road conditions (e.g., as a result of snow, ice, and mud) currently challenge travel. Groups and individuals benefitted include those listed above, most of whom perform work that contributes to achievement of Refuge purposes.

However, these same improvements would make this road system easier to access by more people and for an extended period during the year. Increased access and use by the general public could increase vandalism, poaching, littering, fence cutting, gate opening, spread of invasive species, and wildfires associated with camping, recreation, and other activities. In addition to increasing the Refuge's operating costs; these effects could generate secondary impacts to the Refuge's native fish, wildlife, plants, and their habitats.

Ruby has also proposed incidental use of Road 34A which traverses a prime public use area on the Refuge. The road currently receives a modest amount of vehicle traffic. The addition of construction vehicles to the current modest traffic volume would adversely affect the visitor experience, but that effect might not be measurable if the use was only incidental.

It has been suggested that some of the Pipeline's construction workers might wish to camp at the Refuge. With one exception (the Virgin Valley Campground), the Refuge's campgrounds are generally small, remote, difficult-to-access, and have few if any amenities (such as potable water, restrooms/outhouses, tables, or trash collection). These campgrounds were not designed or developed, nor are they managed to accommodate large crowds or multiple large vehicles intended primarily for highway travel. Use of these campgrounds by large numbers of Pipeline workers could generate numerous adverse environmental effects and their use would reduce, potentially significantly, the number of campsites available to the Refuge's priority (wildlife-dependent) visitors.

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Cultural Resources

Ruby's proposed road use would occur on and near roads across the Refuge, including in the southern and south-western portions of the Refuge where Ruby's vehicles would travel lesser-used roads in more remote areas. Sheldon NWR is rich with a diversity of cultural resources, including prehistoric rock shelters, petroglyphs, quarries, and lithic scatters; and historic trails, ranches, and Civilian Conservation Corps projects. It's likely that traditional foods, medicines, sacred sites, and possibly burials important to the Northern Paiutes also occur on site.

Most of Ruby's proposed improvements to Refuge roads (e.g., blading, graveling, laying down and compacting road base, matting, and bridging culverts) would occur on the existing road bed where the potential for cultural resources effects would be minimal. However, this would not be true for Ruby's proposals to lay back the east edge of the Badger Mountain/Summit Lake Road at one location, create a maximum of 43 pullouts (through blading and potentially graveling), and reroute a ¼-mile section of Badger Mountain Road/Summit Lake Road. These actions would all involve ground disturbance and therefore have the potential to adversely affect cultural resources.

FERC has certificated the Ruby Pipeline Project and will serve as the lead Federal agency for compliance with requirements of the National Historic Preservation Act of 1966, as amended (16 U.S.C. 470) as it applies to this Project and related activities, including access through the Refuge. Ruby has developed an "Unanticipated Discovery Plan" for the Pipeline Project that is designed to address some of these issues.

Wilderness

In 1974, the Service officially established 8 wilderness study areas (WSAs) on the Refuge. Although they are close, none of the roads or routes proposed for use by Ruby runs through any of these WSAs. Visitors in these WSAs can currently see and hear vehicle traffic using the roads proposed for Ruby's access. However, because of their number and size, the sights and sounds of the Pipeline's construction vehicles would penetrate even deeper into the WSAs than current traffic. That said, the effects would be limited to a 6-month period and no permanent physical or other effects would occur within the WSAs. As a result, these areas would remain potentially eligible for wilderness designation.

Paleontological Resources

Some areas on Sheldon NWR are rich in paleontological resources (fossils). Ruby's proposals to reroute a ¼-mile section of Badger Mountain Road/Summit Lake Road, lay back the east edge of the Badger Mountain/Summit Lake Road at one location, and create a maximum of 43 pullouts (through blading and potentially graveling), have the potential to impact paleontological resources. Ruby has developed a "Paleontological Resources Monitoring Plan" for the Pipeline Project that is designed to address some of these issues.

Air Pollution, Noise, and Aesthetics

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Ruby's vehicular use of Sheldon NWR's roads and routes would generate air pollution (dust and internal-combustion-engine emissions) and noise, and add unnatural elements to the Refuge's landscape. It would be expected that roadside litter would increase with the increase in traffic. These same effects are now created by existing traffic on Refuge roads, but to a much lesser extent. The incremental effects created by Ruby's vehicles would be localized and temporary (over an 6-month period), and Ruby would employ use of watering trucks, speed limits, and other means to minimize generation of dust. Regardless of the decision made on this specific proposal, the contribution of Ruby's construction vehicles to regional air pollution would be largely unchanged, because Ruby would access the Pipeline through more-circuitous routes in the same general area if their proposal to use Refuge roads was denied. Ruby has developed a "Fugitive Dust Control Plan" for the Pipeline Project that is designed to address some of these issues.

Wildfire

Vegetation at the Refuge is highly vulnerable to fire and both natural and human-caused wildfires are matters of serious concern. A substantial increase in construction activity and motor-vehicle use of Refuge roads, especially in the summer and fall, would present new opportunities to ignite wildfires and unnaturally alter the landscape. Ruby has developed a "Fire Prevention and Suppression Plan" for the Pipeline Project that is designed to address some of these issues.

Public Review and Comment:

This compatibility determination was made available for a 15-day public review period beginning June 15, 2010 and ending June 30, 2010. The notice of its availability was provided in newspapers with wide distribution in Nevada and Oregon. Notice was also posted on the Refuge's web site.

Determination: (check one below)

Use is Not Compatible

Use is Compatible with following Stipulations

Stipulations Necessary to Ensure Compatibility:

For purposes of the stipulations contained herein, a "Refuge official" would include an employee of the Sheldon-Hart Mountain NWR Complex or a special inspector/monitor who had been officially granted written authority by the Service to represent the Refuge and make decisions regarding Ruby's use of the Refuge in support of the Ruby Pipeline Project.

To the extent that they were equivalent to or exceeded the Refuge-specific stipulations listed below, FERC-, BLM-, or other Federal Government-approved plans, bonds, monitors, and other

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formal commitments made by Ruby for the entire Ruby Pipeline Project (e.g., The Environmental Compliance Monitoring Plan, Apr 2010) could be determined to satisfy parts or all of one or more of these stipulations. Ruby would need to present such documents, bonds, or other legal commitments to the Project Leader of the Sheldon-Hart Mountain National Wildlife Refuge Complex and receive that Refuge official's formal approval prior to moving forward under the assumption that a non-Refuge-specific (i.e., a Project-wide) commitment would satisfy the stipulations listed herein.

General

1. A Refuge official or special inspector/monitor would have the authority to temporarily suspend any portion or all of Ruby's use of Refuge roads and associated activities when, in the judgment of the official or inspector/monitor:
 - a. General or special permit conditions or compatibility stipulations were being or were about to be violated,
 - b. This was necessary to avoid unanticipated damage to the Refuge's natural or cultural resources,
 - c. This was necessary to prevent traffic-related conflicts or public-health or safety hazards, or
 - d. This was necessary for the conduct of horse gathers or other Refuge management activities.

Following such a suspension, Ruby would need to communicate with the Sheldon NWR Manager or Project Leader of the Sheldon-Hart Mountain NWR Complex (or their acting) and receive approval prior to reinitiating road use or associated activities.

2. Ruby would be required to reimburse the Service for all of the Service's costs (including overhead costs) associated with consideration of the Pipeline Project and road-use proposal. This work is briefly described and the associated costs are estimated in the "Availability of Resources" section of this document. As noted there, Ruby has already entered into a reimbursable agreements with the Service and has also paid for third-party consultants (acceptable to the Service) to assist the Service by conducting some of the work described in that section.
3. Ruby would be required to pay for an inspector/monitor who would be responsible for ensuring that Ruby's use of Refuge roads and routes satisfied all general and special permit conditions, and the stipulations listed in this compatibility determination. This special inspector/monitor could be a Service employee or an independent third-party individual who was acceptable to the Service and under contract with Ruby. This special inspector/monitor would need to be a GS-12 biologist or individual with equivalent training and experience, arrive on the ground at least one month prior to the initiation of Ruby's road use (for orientation), and serve full time for at least 10 months.
4. Ruby would also be required to pay for one special inspector/monitor who would be responsible for ensuring that post road-use mitigation and restoration work was accomplished as specified and that it was demonstrated to be successful. This individual would also be responsible for developing and submitting to the Service annual reports

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regarding the success of the mitigation and restoration work. As noted above, this special inspector/monitor could be a Service employee or an independent third-party individual who was acceptable to the Service and under contract with Ruby. This individual GS-12 biologist or equivalent would need to arrive on the ground at least one month prior to the termination of Ruby's road use (for orientation) and serve one-tenth time for at least 10 years.

5. Ruby would also be required to pay for one Refuge law enforcement officer who would be responsible for patrolling and enforcement of laws, regulations, and Refuge rules associated with Ruby's road use, associated activities, and actions of Pipeline workers anywhere on the Refuge. Because of the special training and legal authority this individual would require, s/he would need to be a Service employee. This GS-9 law enforcement officer would need to arrive on the ground at least one month prior to the initiation of Ruby's road use (for orientation) and serve part-time for 10 months.
6. Prior to initiating work to lay back the east edge of the Badger Mountain/Summit Lake Road at one location, blade and/or gravel roadside areas to create a maximum of 43 pullouts, or reroute a ¼-mile section of Badger Mountain Road/Summit Lake Road; Ruby would be required to conduct on-the-ground surveys for federally or State-listed or other special-status species, cultural resources, and paleontological resources. Ruby would be responsible for securing all appropriate Federal, State, or other permits required to conduct such work. Prior to conducting any on-the-ground work on new surveys, Ruby would be required to submit the proposed survey protocol to the Service and receive Service approval to proceed. Ruby would be prohibited from undertaking collection or capture activities in association with these surveys without specific written authorization from a Refuge official. Ruby would be required to report to a Refuge official all wildlife injuries or mortalities, or flushing of nesting raptors in association with these surveys.

Some of these surveys may have already been completed or partially completed. Once the surveys were complete, Ruby would need to report their findings and any proposed special courses of action to a Refuge official, and receive approval from a Refuge official prior to initiating on-the-ground work on the road-related projects.

7. In order to minimize the likelihood that Pipeline construction-related activity forced domestic cattle, or feral/wild horses or burros onto the Refuge, or that Pipeline workers were unsure when they were on the Refuge and when they were on adjacent lands, Ruby would be required to inspect, sign (with Sheldon NWR boundary signs), and maintain an approximately 33-mile section of the Refuge's southern boundary fence between road 8A and Knott Creek Road, as specified by the Service. Additionally, Ruby would be required to repair, replace, or pay the Service for the cost of repair or replacement of any Refuge property (e.g., gates, fences, cattle guards, road signs, etc.) damaged or destroyed as a result of Ruby's use of Refuge roads and associated activities.
8. Ruby would be required to brief all Pipeline construction workers who would access the Refuge about the special status of these lands; their priority management for fish, wildlife, plants, their habitats, and wildlife-dependent recreation; the need to exercise care and caution while on the Refuge to minimize the potential for impacts to biological or cultural resources,

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or Refuge visitors; and the need to minimize the likelihood that non-native species, including domestic cattle, feral horses and burros, and noxious weeds or invasive plants were allowed onto the Refuge.

9. Ruby would be required to provide evidence that they had obtained a bond or other security satisfactory to the Service, and adequate to ensure that they could satisfy all of the general and special permit conditions and these compatibility stipulations, or pay another party to do so.
10. In addition to the ones specifically listed herein, Ruby would be required to implement relevant provisions of other appropriate plans included in FERC's final EIS on the Ruby Pipeline Project (Jan 2010).
11. Ruby's supervisor in charge of on-the-ground activities at the Refuge would be required to carry a copy of this permit on his/her person at all times while any Ruby staff, representatives, or contractors were on the Refuge.
12. Ruby would need to take special efforts to minimize the generation of roadside litter and to remove all litter that was created.

Roads, Traffic, and Public Safety

1. Prior to use of Refuge roads or routes by any large or heavy vehicles associated with the Pipeline, Ruby would be required to develop, submit to the Service, and receive Service approval of a "Traffic Management Plan." This plan would spell out how Ruby would propose to ensure that conflicts and safety hazards associated with Pipeline-related traffic were minimized for others using these roads, especially Refuge officials, Refuge-authorized agents, researchers, and wildlife-dependent general public users. At a minimum, this Plan would need to address use of cautionary road signs; flaggers; at least one, on-the-ground, traffic-safety manager; and other appropriate roadway safety measures.

In order to safely accommodate heavy volumes of traffic and larger, longer, and/or heavier vehicles, Ruby would be allowed to restrict traffic on the Refuge's smaller roads to a single direction. This traffic restriction could occur only during morning and evening periods when heavy traffic would be expected traveling to and from the Pipeline route (i.e., from 5:00 am to 8:00 am and 3:00 pm to 6:00 pm, daily) during the primary construction period, August 1, 2010 - December 31, 2010. This unidirectional restriction could only occur as often as actually needed for heavy volumes of traffic or larger, longer, and/or heavier vehicles. The above-mentioned "Traffic Management Plan" would need to include a proposed schedule (actual days of the month and times of the day) for these one-way traffic restrictions. Changes to the proposed schedule would require prior approval from a Refuge official. Ruby would also be required to place large, easily seen and understood signs at appropriate intersections both on and off the Refuge to alert other travelers about the proposed and actual schedule for one-way traffic restrictions. At these signed intersections, Ruby would also be required to provide multiple copies of easily understood road maps advising other travelers of detour routes to avoid these one-way traffic restrictions.

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2. Ruby would be required to pay the Service for or contract for a traffic-safety manager who would be responsible for ensuring that conflicts and safety hazards associated with Pipeline-related traffic were minimized for others using these roads, especially Refuge officials, Refuge-authorized agents, researchers, and wildlife-dependent general public users. This individual could also serve on adjacent BLM or other lands, but would need to give due attention to Sheldon NWR. This traffic-safety manager would need to satisfy typical industry standards (in terms of training and experience), arrive on the ground prior to the initiation of Ruby's road use, and serve at all times that Ruby had large or heavy vehicles (not including pickup trucks) using Refuge roads.
3. Because some roads are worn down and subject to rutting in the presence of moisture, prior to the use of large, long, or heavy construction vehicles on Refuge roads, Ruby would be required to gravel selected sections of these roads, as specified by the Service. Otherwise, if damaged, roads would be subject to shutdown and/or immediate repair.
4. Culverts beneath all roads proposed for use would be inspected prior to use and their condition would be recorded. A copy of this condition report would be filed with the Service prior to use of Refuge roads by any large or heavy vehicles associated with the Pipeline. At the end of the Pipeline construction period, when large, long, or heavy vehicles were no longer traveling on Refuge roads, culverts beneath all roads proposed for use would be inspected again and their condition would be recorded. A copy of this condition report would be immediately filed with the Service and Ruby would be responsible for repairing or replacing damaged or destroyed road culverts and the overlying road materials to the Service's satisfaction.
5. Ruby would be required to implement – for their proposed Refuge use - the “Fugitive Dust Control Plan” included in FERC's final EIS (Appendix O). This would include application of water, as needed, for dust abatement.
6. As noted earlier, a ¼-mile section of Badger Mountain Road/Summit Lake Road would need to be rerouted around Ten-mile Spring. Ruby would need to stake the edges of this new road and receive approval from a Refuge official to proceed prior to initiating construction of this new road section. The road south of the Spring would need to be gated, and the existing section of road north of the Spring would need to be removed and the ground surface restored consistent with the habitat-restoration requirements described below.
7. Construction of the Pipeline in northwest Nevada is scheduled to be completed by January 2011. Thereafter, Ruby should have no need to travel Refuge roads with large, long, and/or heavy construction vehicles. There would remain inspection, mitigation, restoration, monitoring, and perhaps other work along the Pipeline right-of-way and/or on the Refuge for a handful of additional years. Ruby should be able to accomplish this work using standard-sized highway vehicles (e.g., pickup trucks). In the event that Ruby desires to again use large, long, and/or heavy vehicles on Refuge roads, they would need to first contact and receive approval for that use from the Sheldon NWR Manager or Project Leader of the

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Sheldon-Hart Mountain NWR Complex (or their actings). Contact would need to be made at least 24 hours in advance of the anticipated use.

8. Ruby would not be allowed to mow strips or construct pullouts adjacent to, widen, or otherwise alter Refuge roads or routes of travel in any way unless specifically authorized by permit or otherwise approved by the Sheldon NWR Manager or Project Leader of the Sheldon-Hart Mountain NWR Complex (or their actings). The number of pullouts constructed through blading, graveling, and/or ground-level mowing should be kept to the minimum necessary. Each pullout would need to be reviewed for site-specific impacts and approved by the Sheldon NWR Manager or Project Leader of the Sheldon-Hart Mountain NWR Complex (or their actings) prior to construction.
9. Ruby would be required to sign road 34A at all access points as “No Access for Ruby Pipeline Project Traffic,” would be prohibited from making any changes to this road or immediately surrounding area, and would be allowed to use this road for medical emergencies only.
10. Ruby would be allowed to use road H-50 for passage of light-duty construction equipment only (e.g., pickup trucks). Generally, the road would be used as is. Spring crossings could be matted and if the road became excessively rutted or eroded, the roadbed could be selectively bladed, but only after specific consultation with and approval from a Refuge official.

Fish, Wildlife, Plants, and Their Habitats

1. Mountain mahogany is known to grow along Badger Mountain/Summit Lake Road. Because of its high habitat value, damage to or removal of mountain mahogany trees would be prohibited without specific written authorization from a Refuge official.
2. Prior to conducting any earth-moving activities, Ruby would be required to conduct an on-the-ground survey for special-status species their habitats, and other valuable habitats. In light of the survey results, Ruby would be required to lay back the east edge of the Badger Mountain/Summit Lake Road at one location, blade and/or gravel roadside areas to create a maximum of 43 pullouts, and reroute a ¼-mile section of Badger Mountain Road/Summit Lake Road such that they avoided areas important to these species (e.g., sage-grouse leks, big-game winter range, pygmy rabbit burrows, and burrowing owl burrows) and other valuable habitats (e.g., wetlands, streams, springs, and stringer meadows). As noted earlier, initiation of work on any improvements to Refuge roads that require work outside the current roadbed would require prior, site-specific approval from a Refuge official.

Avoidance would mean staying ¼-mile away from active sage-grouse leks, avoiding heavy traffic in proximity to active sage-grouse leks from dawn until 10:00 am, staying ½-mile away from occupied burrowing owl burrows from April 1 through August 15, and otherwise following all other avoidance measures included in the Migratory Bird Agreement for the Ruby Pipeline Project. Without specific approval from a Refuge official, Ruby would be prohibited from undertaking construction activities in mule deer winter range from October

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15 through March 15. If important areas could not be avoided, then Ruby would need to propose an alternate plan to the Service and receive Refuge approval prior to proceeding.

In order to minimize impacts to raptors and other migratory birds nesting near the roads and routes, construction-related activities would need to be initiated prior to the start of the nesting season or otherwise occur consistent with the Migratory Bird Agreement for the Ruby Pipeline Project.

3. Ruby would be required to implement – for their proposed Refuge use - the “Noxious and Invasive Weed Control Plan” included in FERC’s final EIS (Appendix T). This would include training of personnel, monitoring, and vehicle cleaning to minimize the spread of undesirable plants; and post-use control actions, as needed.

Spraying of herbicides or other pesticides on the Refuge would require prior approval from a Refuge Official. Ruby would need to draft and submit to the Service a Pesticide Use Proposal (PUP) for each pesticide proposed for use. The PUP would need to be submitted in advance of any proposed application (preferably by at least one month) to allow for review and other processing by the Service, including satisfaction of other relevant compliance requirements. Pesticides could only be applied by a certified pesticide applicator and consistent with the approved PUP. Unless specifically approved by a Refuge official, pesticides could not be applied closer than 100 feet from a stream or wetland.

Specific to road 8A and prior to construction on the Refuge or use of Refuge roads by large or heavy construction vehicles, Ruby would be required to treat (with herbicide spraying) infested areas for control of halogeton, Russian thistle, and hoary cress along the roadside. Following their Refuge-related construction and use of Refuge roads, Ruby would be required to re-seed these areas with native seed mixes approved by the Service and monitor the success of that re-seeding consistent with the habitat-restoration requirements described below.

4. Domestic cattle or feral/wild horses or burros could trespass onto the Refuge in association with Ruby’s use of the Refuge (e.g., because a gate was left open, or a fence, gate, or cattle guard was cut or otherwise damaged). In such an event, Ruby would be required to compensate the Service for the cost of rounding up and removing the trespass animals.
5. The Service could determine that the changes Ruby proposes to make to Refuge roads were desirable for public safety, operational, or other reasons. Such changes would then remain in place. However, in the event the Service determined that some or all of the changes were not desirable, then Ruby would be required to remove those changes and restore conditions to their pre-use state, and/or mitigate for damage (e.g., habitat displacement or degradation and disturbance to wildlife as a result of their road use and associated activities).

Restoration would include reshaping surface elevations to approximate pre-construction contours; seeding and/or planting vegetative starts, as appropriate; stabilizing restored surfaces with straw or other acceptable materials; controlling invasive plants; and monitoring of disturbed areas until it was clear that the restoration had been successful. Unless

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specifically approved by a Refuge official, fertilizer, lime, or mulch could not be applied closer than 100 feet from a stream or wetland. Using as a guide the “Restoration and Revegetation Plan: Nevada” included in FERC’s final EIS (Appendix L), Ruby would be required to develop and submit for Service approval a Restoration and Mitigation Plan specific to Sheldon NWR. This Plan would need to include relevant, site-specific descriptions of proposed restoration and an accompanying schedule of action. Ruby would need to receive Service approval of the Plan, including the seeds and planting stock proposed for use, prior to initiating restoration or mitigation work on the Refuge. Restoration monitoring would be required for at least 5 years and as long as 10 years, until the monitoring determined it to have been successful. Habitat restoration would be deemed successful when erosion was minimal, and the mix of healthy and growing native plants, and the absence of invasive plants, was similar in disturbed and adjacent undisturbed areas.

Using as a guide the information contained in the “Wetland Mitigation Plan” included in FERC’s final EIS (Appendix S), Ruby would be required to avoid and minimize potential impacts to wetlands and streams (especially along road W-1), and, post-use, restore these habitats if damaged.

6. To help ensure healthy and relatively swift regrowth in roadside mowed areas, Ruby would be required to cut vegetation no shorter than 8 inches in height and angle (at 30°-45°) the mowed areas up and away from the roadbed until the mowed vegetation was equal in height to the surrounding un-mowed vegetation (Davies et al., 2009). This stipulation would not apply to areas approved for pullouts and associated ground-level mowing (at 0-3” in height). Site-specific decisions regarding mowing versus construction of pullouts would be made following an on-the-ground inspection and with the approval of a Refuge official.

Public Use

1. Ruby has proposed the construction of a large, full-service, temporary construction-workers camp near Vya, Nevada, approximately 20 miles from where the proposed Pipeline would pass near Sheldon’s southwest corner. Therefore, Pipeline workers should have no need to camp on the Refuge. In order to further minimize conflicts between Ruby’s use of Sheldon NWR and use by the Refuge’s highest priority visitors (i.e., wildlife-dependent visitors), Pipeline workers would not be allowed to camp overnight on the Refuge.

The one exception to this stipulation could involve camping at Virgin Valley Campground which is developed, easily accessible, and provides potable water, restrooms, and tables. If Ruby made a specific request and provided a strong rationale, the Service could consider allowing a prescribed number of workers to use the Virgin Valley Campground. Use by Pipeline construction workers would be an economic use requiring issuance of an SUP.

2. Also see requirements above under “Roads, Traffic, and Public Safety.”

Cultural Resources and Paleontological Resources

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1. Ruby has conducted an on-the-ground cultural resources survey of the areas surrounding the Refuge's access roads they propose for use. In light of the survey results, Ruby would be required to lay back the east edge of the Badger Mountain/Summit Lake Road at one location, blade and/or gravel roadside areas to create a maximum of 43 pullouts, and reroute a ¼-mile section of Badger Mountain Road/Summit Lake Road such that they avoided known cultural resources sites.

If construction work or any additional on-the-ground surveys revealed cultural resources potentially at risk of harm from Ruby's road use or related activities, then effects to these resources would need to be evaluated and appropriate mitigative or other actions taken consistent with requirements of the National Historic Preservation Act of 1966, as amended (16 U.S.C. 470), as directed by the Service. Ruby would also be required to implement the "Final Cultural Resources Treatment Plan for the Ruby Pipeline Project, Elko, Humboldt, and Washoe Counties, Nevada" (Hildebrandt et al., May 2010).

2. At least two weeks prior to initiating any construction activities outside existing roadbeds, Ruby would be required to conduct and provide the Service with a report of an on-the-ground survey for paleontological resources of the areas surrounding the Refuge's roads they propose for use. In light of the survey results, Ruby would be required to lay back the east edge of the Badger Mountain/Summit Lake Road at one location, blade and/or gravel roadside areas to create a maximum of 43 pullouts, and reroute a ¼-mile section of Badger Mountain Road/Summit Lake Road such that they avoided known paleontological resources sites. In the event any of the proposed construction activities outside the existing roadbed could adversely impact paleontological resources, the above-mentioned survey report would need to include recommendations to the Service regarding appropriate mitigative or other actions to be taken.

Consistent with protection provisions of the Paleontological Resources Preservation Act of 2009 (16 U.S.C. 470aaa et seq.), Ruby would be required to immediately stop work if unanticipated discoveries were made of paleontological resources. A Refuge official would then need to be immediately advised of those discoveries and consulted regarding the need for appropriate mitigative or other actions. Ruby would need to wait until a Refuge official granted them approval to proceed prior to reinitiating work. Ruby would also be required to implement the "Paleontological Resources Monitoring Plan" included in FERC's final EIS (Appendix I).

Wildfire

1. To minimize the potential for wildfire related to their proposed use of Sheldon NWR, Ruby would be required to implement the "Fire Prevention and Suppression Plan" included in FERC's final EIS (Appendix H).

Justification:

Refuge Purposes and Goal, and the Refuge System Mission. Ruby's proposed changes to and use of Refuge roads and routes to access the Pipeline would displace a few acres of habitat;

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temporarily increase disturbance to Refuge wildlife; and temporarily conflict with access to and use of the Refuge by visitors, Refuge officials, and others. Following Pipeline construction, the road improvements that the Service chose to retain would be permanent. These improvements would make the roads safer and easier to travel more times during the year and thereby facilitate access to and use of the Refuge by visitors, and management of Sheldon NWR by Refuge officials, Refuge-authorized agents, and researchers. In light of the associated stipulations, this proposed use would both minimally affect, both positively and negatively, achievement of Sheldon NWR's purposes and goal, and the Refuge System mission.

Fish, Wildlife, Plants, and Their Habitats. The required stipulations included in this compatibility determination would greatly reduce the potential biological impacts of Ruby's proposed use of the Refuge. Assuming the Service decided to retain some or all of the pullouts, a few acres of habitat would have been displaced. Ruby would restore – consistent with Service specifications - any of the pullouts the Service chose not to retain. The increased volume, size, and noise of traffic would result in increased disturbance to Refuge wildlife. This disturbance would occur on a temporary (approximately 6-month) and localized basis. Authorization of this use would require Ruby to undertake a variety of projects benefitting the Refuge's fish, wildlife, plants, and habitats including control of roadside invasive plants; repair and maintenance of the southern boundary fence and gates to minimize crossing by cattle, or feral/wild horses and burros; posting of the southern Refuge boundary; rerouting a road segment that currently crosses a spring-fed, perennial stream and runs adjacent to a research enclosure; and restoration of roadside habitats, including replanting natives in areas currently invaded by exotic plants.

Public Use. Following Pipeline construction, the road improvements made by Ruby that the Service chose to retain would be permanent. These improvements would make the roads safer and easier to travel more times during the year and thereby facilitate access to and use of Sheldon NWR by priority wildlife-dependent visitors and other publics. Most of the effects would occur in the more-remote, southern and south-western portions of the Refuge where access is now challenging - especially on a seasonal basis - due to poor road conditions.

If Pipeline construction workers were allowed to camp on the Refuge, they would be restricted to the Virgin Valley Campground and their numbers would be limited so that they did not displace wildlife-dependent visitors.

Cultural Resources and Paleontological Resources. The stipulations require on-the-ground surveys for cultural and paleontological resources prior to any off-road earth-moving activities. Discovered sites/resources would need to be avoided or appropriate mitigative action would need to be taken, in consultation with the Service. Ongoing monitoring requirements would help ensure protection of unanticipated discoveries.

Wilderness. The sights and sounds of the Pipeline's construction vehicles would penetrate into the Refuge's WSAs for an 8-month period, but no permanent physical or other effects would occur. The WSAs would remain potentially eligible for wilderness designation.

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Wildfire. Operation of numerous motor vehicles and construction associated with Ruby's use of Refuge roads would increase the potential for wildfires; however, Ruby would implement a program specifically designed to prevent and suppress such fires.

Off-Refuge Alternatives. Ruby could access the Pipeline along other existing and to-be-constructed routes, but the additional cost and time involved would be substantial.

Administrative Costs, Inspector/Monitor, and Law Enforcement Officer. Ruby would pay the Service for their costs (including overhead costs) associated with consideration of the proposed Pipeline and use of Refuge roads, and administration of this use. Additionally, Ruby would be required to pay for an inspector/monitor and a law enforcement officer. The inspector/monitor would help ensure that Ruby's activities were conducted consistent with general and special permit conditions and the stipulations listed herein. The law enforcement officer would help ensure that Ruby's traffic and other activities did not pose safety hazards to the public or Refuge personnel, and that the large number of Pipeline workers observed applicable laws, regulations, and rules while on the Refuge.

Contribute To. Together, the use proposal and stipulations herein would result in a set of actions that generated minor adverse effects and modest beneficial effects. On net, the proposed use would contribute to achievement of the Refuge's purposes and the Refuge System mission.

Construction of road changes and increased use of Refuge roads would adversely affect the Refuge's biological resources over a 6-month period; however, in association with authorization of this use, Ruby would be required to undertake a variety of projects benefitting the Refuge's natural resources. These include control of roadside invasive plants; repair and maintenance of the southern boundary fence and gates to minimize crossing by cattle, or feral/wild horses and burros; posting of the southern Refuge boundary; rerouting a road segment that currently crosses a spring-fed, perennial stream and runs adjacent to a research enclosure; and restoration of roadside habitats, including replanting natives in areas currently invaded by exotic plants. In aggregate, these actions would generate positive benefits for Refuge habitats and biota near roads in the southwest and southern areas of the Refuge.

As noted earlier, Ruby has proposed a number of changes to the Refuge's roads and routes, including laying down and compacting road base, blading, graveling, matting of a dry wash and spring, matting and bridging of culverts, and rerouting a section of road. These changes would enhance driver safety and improve access on these roads during times of the year when road conditions currently challenge travel. These changes would facilitate access to and management of Sheldon NWR by Refuge officials, Refuge-authorized agents, and researchers and thereby directly and indirectly contribute to achievement of Refuge purposes, goal, objectives, and the Refuge System mission. Additionally, these road improvements would facilitate access to and use of the Refuge by visitors, including the Refuge's highest priority general public users (i.e., hunters, anglers, wildlife observers, and photographers).

Materially Interfere with or Detract From. Ruby's proposed use of Refuge roads, routes, and related actions is an economic use and; therefore, is the lowest priority for use of the Refuge. In light of the stipulations, this use would have a mix of minor and modest effects. The adverse

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effects would not handicap the Refuge's ability to achieve its purposes and the beneficial effects would modestly facilitate achievement of those purposes. On net, in light of the foregoing, including the several stipulations, Ruby's proposed use of Refuge roads to access the Pipeline would not materially interfere with or detract from achievement of the purposes for which Sheldon NWR was established or the Refuge System mission.

Mandatory 10- or 15-Year Re-evaluation Date: (provide month and year for "allowed" uses only)

_____ Mandatory 15-year reevaluation date (for wildlife-dependent public uses)

___ N/A ___ Mandatory 10-year reevaluation date (for all uses other than wildlife-dependent public uses)

NEPA Compliance for Refuge Use Decision: (check one below)

___ Categorical Exclusion without Environmental Action Statement

___ Categorical Exclusion and Environmental Action Statement

___ Environmental Assessment and Finding of No Significant Impact

X Environmental Impact Statement and Record of Decision

In January 2010, the FERC issued a final EIS that addressed almost all aspects of the proposed Ruby Pipeline Project. The Service is a cooperating agency on that EIS, but has yet to adopt it or issue a Record of Decision for the proposed Pipeline access through Sheldon NWR. Much of the information and some of the analyses contained in this compatibility determination are addressed in greater detail in the EIS.

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EA: Environmental assessment.

EIS: Environmental impact statement.

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NWR: National Wildlife Refuge.

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Pipeline: Ruby Pipeline Project.

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PUP: Pesticide Use Proposal.

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Refuge: National Wildlife Refuge.

Refuge authorized agents: Cooperating agencies, cooperating associations, refuge support groups, volunteers, and contractors.

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RM: National Wildlife Refuge System Manual.

ROW: Right-of-way.

Ruby: Ruby Pipeline L.L.C.

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USFWS. Aug 1980. Sheldon National Wildlife Refuge Renewable Natural Resources Management Plan. Portland, OR.

WSA: Wilderness study area.

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Refuge Determination:

Prepared by: _____
(Signature) (Date)

Approved by
Project Leader
Sheldon –
Hart Mountain
NWRC: _____
(Signature) (Date)

Concurrence:

Refuge Supervisor
National Wildlife
Refuge System
Pacific Region: _____
(Signature) (Date)

Regional Chief,
National Wildlife
Refuge System
Pacific Region: _____
(Signature) (Date)

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Map: "Sheldon NWR Access Road Improvements for Vehicle Passing Ruby Pipeline Project September 2009" (FERC, Jan 2010).

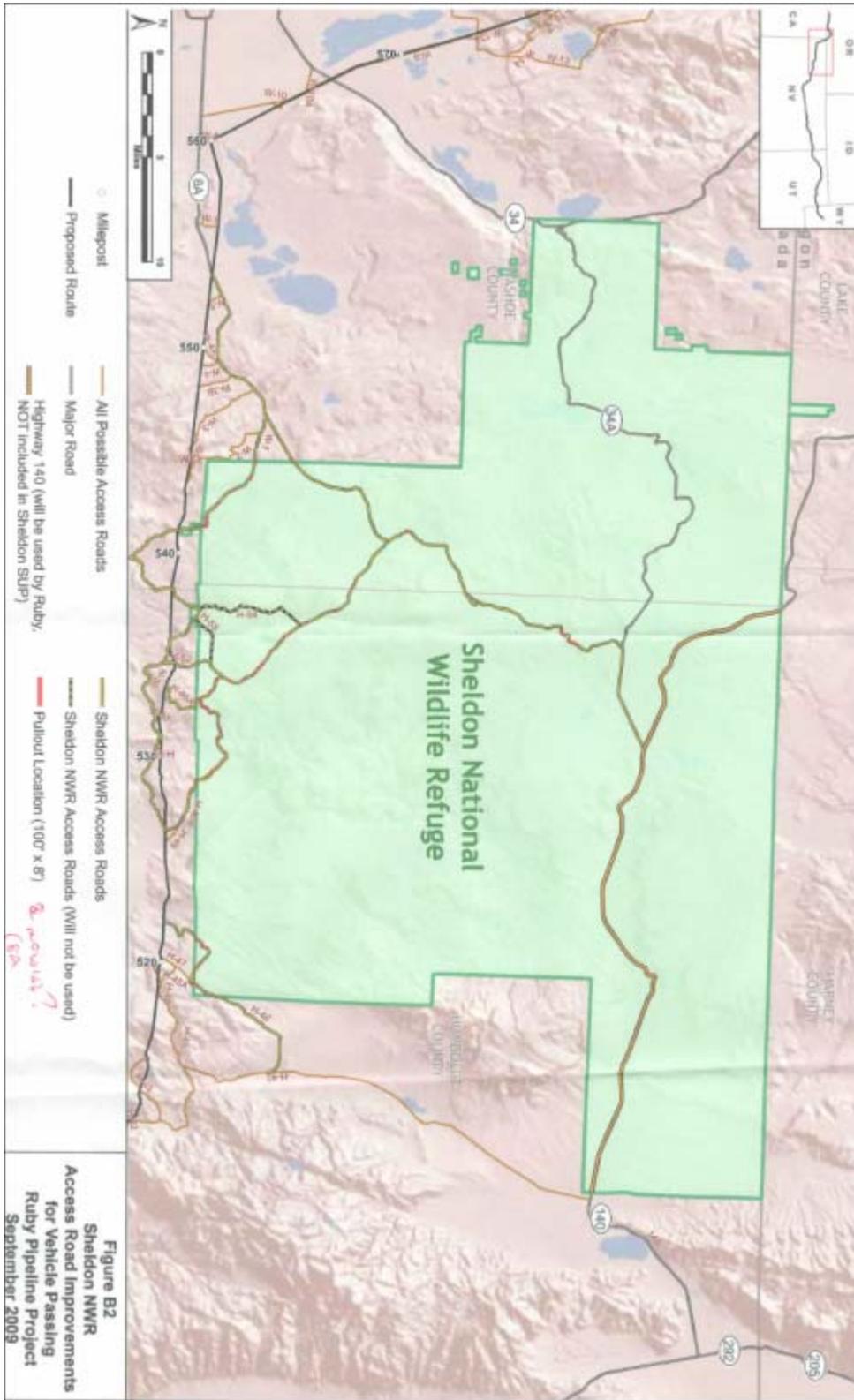


Figure B2
Sheldon NWR
Access Road Improvements
for Vehicle Passing
Ruby Pipeline Project
September 2009