UNITED STATES DEPARTMENT OF THE INTERIOR
BLM, BOISE DISTRICT

EA # DOI-BLM-ID-B010-2011-0010-EA - Wilson Road RoW

Applicant (if any): Adams County, BLM Action		Proposed Action: Issue a Adams County a Road Right-of-Way (IDI 36963)		EA No. DOI-BLM-ID-B010-2011-0010-EA
State: Idaho	County: Adams	District: Boise	Field Office: Four Rivers	Authority: FLPMA
Prepared By: Four Rivers Field Office Interdisciplinary Team		Title: Wilson Road RoW		Report Date: March 2, 2012

LANDS INVOLVED

Meridian	Township	Range	Section	Acres
Boise	16 North	2 West	32	5 (+/-)

Consideration of Critical Elements	N/A or Not Present	Applicable or Present, No Impact	Discussed in EA
Air Quality	x		
Areas of Critical Environmental Concern			x
Cultural Resources		x	
Environmental Justice (E.O. 12898)	x		
Farm Lands (prime or unique)	x		
Floodplains			x
Migratory Birds	x		
Native American Religious Concerns		x	
Invasive, Nonnative Species			x
Wastes, Hazardous or Solid	x		
Threatened or Endangered Species			x
Social and Economic	x		
Water Quality (Drinking/Ground)			x
Wetlands/Riparian Zones			x
Wild and Scenic Rivers (Eligible)	x		
Wilderness Study Areas	x		

1.0 Introduction

1.1 Need for and Purpose of Action

Wilson Road (aka Turkey Track Road) was severely damaged by a flashflood event in early June 2010. The flood destroyed about one-half mile of Adams County's public roadway, located on both private and Bureau of Land Management (BLM) lands. Because this county road provided access to private, BLM, and US Forest Service land and no alternative routes exist, it would be necessary for Adams County to rebuild the road to reestablish permanent area access.

Goodrich Creek closely borders Wilson Road, and about 1-mile of the road is located in what would be a well vegetated riparian area in its natural state. To protect Goodrich Creek from future degradation to its floodplains/riparian areas, water quality, and fisheries/wildlife resources resulting from the old roads location in the floodplain, BLM proposes that this roadway be abandoned, closed to all vehicle access, and relocated westward out of the Goodrich Creek 100-year floodplain. In order to authorize Adams County to rebuild Wilson Road across its land, BLM must grant a right-of-way (ROW) under the authority of the Federal Land Policy and Management Act of October 21, 1976, as modified. On January 27, 2011, Adams County submitted road RoW application, IDI-36963, for authorization of the road relocation.

The BLM objectives are to:

- address the Adams County RoW application for Wilson Road
- improve the long-term stability of Goodrich Creek
- decommission and re-vegetate the old Wilson Road
- suppress noxious weeds in the project area

1.2 Summary of Proposed Action

The Proposed Action would be to grant a 30-year ROW to Adams County to allow construction of a new road across BLM lands. The ROW's width would be 60 feet, and length approximately 0.7 miles. The old Wilson Road would be decommissioned and rehabilitated with native vegetation. Two segments of Goodrich Creek would be stabilized with rock rip-rap to prevent the channel from flowing back into the old roadway.

1.3 Location and Setting

The project is located in Adams County, approximately eight miles southwest of Council, Idaho. The site is an east–facing, moderately steep slope at 3,100 feet. Upland vegetation is characterized by open grassland, sagebrush steppe, and forest communities. Goodrich Creek flows on the site's east side, and is characterized by large, cobble substrate vegetated with woody riparian species. The legal location is as follows: Township 16 North, Range 2 West, Section 32, W½ SE ¼.

1.4 Conformance with Applicable Land Use Plan

The proposed action is subject to the Cascade Resource Management Plan, approved July 1, 1988. The proposed action is in conformance with the Land Use Plan (LUP), even though not specifically provided for, because it is clearly consistent with the following LUP decision(s) (objectives, terms, and conditions):

Rights-of-way, under Title V of FLPMA, will be considered in the Cascade Resource Area except where specifically identified in the RMP for avoidance.

Multiple Use Recommendations:

Manage springs, seeps, and meadows and adjacent upland areas as key wildlife habitats for upland game..." (WL 4.3, p. 11)

Maintain and/or enhance unique or special habitats to retain and/or improve their character and value for wildlife, research, and human enjoyment. (WL 5, p. 14)

To enhance wildlife diversity and abundance, all riparian habitats and meadows will be managed to attain and/or maintain a good ecological condition, based on SCS ecological site classification system, or its equivalent. (WL 6.1, p. 13)

1.5 Relationship to Statutes, Regulations, and Other Requirements

- The BLM Special Status Species Management Manual, 6840
- The Federal Clean Water Act (1977, as amended)

The BLM is required to consult with Native American tribes to "help assure (1) that federally recognized tribal governments and Native American individuals, whose traditional uses of public land might be affected by a proposed action, will have sufficient opportunity to contribute to the decision, and (2) that the decision maker will give tribal concerns proper consideration" (U.S. Department of the Interior, BLM Manual Handbook H-8120-1). Tribal coordination and consultation responsibilities are implemented under laws and executive orders that are specific to cultural resources which are referred to as "cultural resource authorities," and under regulations that are not specific which are termed "general authorities." Cultural resource authorities include: the National Historic Preservation Act of 1966, as amended (NHPA); Archaeological Resources Protection Act of 1979 (ARPA); and Native American Graves Protection and Repatriation Act of 1990, as amended (NAGPRA). General authorities include: the American Indian Religious Freedom Act of 1979 (AIRFA); National Environmental Policy Act of 1969 (NEPA); Federal Land Policy and Management Act of 1976 (FLPMA); and Executive Order 13007-Indian Sacred Sites. The proposed action is in compliance with the aforementioned authorities.

Southwest Idaho is the homeland of two culturally and linguistically related tribes: the Northern Shoshone and the Northern Paiute. In the latter half of the 19th century, a reservation was established at Duck Valley on the Nevada/Idaho border west of the Bruneau River. The Shoshone-Paiute Tribes residing on the Duck Valley Reservation today actively practice their culture and retain aboriginal rights and/or interests in this area. The Shoshone-Paiute Tribes assert aboriginal rights to their traditional homelands as their treaties with the United States, the Boise Valley Treaty of 1864 and the Bruneau Valley Treaty of 1866, which would have extinguished aboriginal title to the lands now federally administered, were never ratified.

Other tribes that have ties to southwest Idaho include the Bannock Tribe and the Nez Perce Tribe. Southeast Idaho is the homeland of the Northern Shoshone Tribe and the Bannock Tribe. In 1867 a reservation was established at Fort Hall in southeastern Idaho. The Fort Bridger Treaty of 1868 applies to BLM's relationship with the Shoshone-Bannock Tribes. The northern part of the BLM's Boise District was also inhabited by the Nez Perce Tribe. The Nez Perce signed treaties in 1855, 1863 and 1868. BLM considers off-reservation treaty-reserved fishing, hunting, gathering, and similar rights of access and resource use on the public lands it administers for all tribes that may be affected by a proposed action.

1.6 Scoping and Development of Issues

Internal scoping identified potential resource impacts to Riparian habitat, Vegetation, Water Quality/Hydrology, and Wildlife. No other Realty or Mining authorizations exist in the project area so no additional external scoping was conducted. The project was presented for consultation to the Shoshone-Paiute Tribes of the Duck Valley Indian Reservation through the formal Wings & Roots Native American campfire Government to Government process. No additional comments were received.

Public notice on the preparation of the EA was posted on the Idaho BLM NEPA webpage at https://www.blm.gov/epl-front-office/eplanning/nepa/nepa_register.do and no additional comments have been received. The final EA will be posted to the website when the authorization for the grant is approved.

Additional coordination on the project was conducted with Adams County Road and Bridge, their contracted engineers, and local residents as identified in Section 4.2

Four meetings were held on-site by BLM resource specialists and representatives from Adams County Road and Bridge Department and their contracted engineers. Two affected adjacent property owner also attended these meetings and provided valuable input. Representatives from the US Army Corps of Engineers and Idaho Department of Water Resources were present on one field tour. The project was also reviewed by US Forest Service, Council Ranger District.

2.0 Description of the Alternatives

2.1 Alternatives

Alternative A would keep the current roadway with the temporary repairs to Goodrich Creek; its degradation would continue. Alternative B would allow Adams County to construct a new access road across BLM land, and improve conditions along and in Goodrich Creek.

2.1 Alternatives Considered But Not Analyzed in Detail

Adams County Road and Bridge personnel and BLM initially considered two other alternatives: 1) rebuild the road in the original pre-flood location, and 2) develop access from the north on the existing roads.

The idea of rebuilding the road was abandoned due to the very high cost of construction and questionable longevity of reestablishing it in the 25-year floodplain. Also, potential environmental damage, from rebuilding the road was too great.

The second consideration was found to be unrealistic as the other existing road(s) coming from the north were not county (public) roads, so no public easements exist. All affected private landowners were unwilling to grant ROW easements to Adams County.

2.2 Description of Proposed Action and Alternatives

2.2.1 Alternative A– No Action/Continue Current Management

The present temporary repair to Goodrich Creek and the road would remain in place. However, the temporary road originates through private property, in a new location, where no public ROW exists. Although the affected landowner is presently allowing other landowners in the watershed

temporary access to their property, he is unwilling to grant the Adams County a permanent easement through his property.

2.2.2 Alternative B – Proposed Action

The BLM would grant to Adams County an easement to construct a new Wilson Road across BLM land. The proposed ROW would be approximately 0.7 miles long and 60-feet wide, totaling five-acres of potential disturbance. It would be authorized subject to 43 Code of Federal Regulations (CFR) 2800 and Boise District BLM standard ROW stipulations, together with any special stipulations determined necessary. The ROW would be issued for a 30–year term. The special stipulations would include completion of all construction and maintenance activities to the satisfaction of the Authorized Officer, compliance with the Plan of Development (pending completion), and submission of an "as-built" drawing of the road upon its completion. In addition, the RoW would be subject to the standard right-of-way stipulations.

Roadway construction would begin in 2012. The roadway would be constructed using a variety of heavy equipment, including dozers, track hoes, and dump trucks. All construction vehicles would be staged on private land. The actual physical disturbance width along the ROW would vary, as dictated by slope, soils, rocky outcrops, cuts and fills, and culvert placements. Each would necessitate wider or narrower disturbance within the allowable 60 feet RoW.

As required by County standards and State and Federal regulations, sediment generated during and following construction activities would be reduced to the maximum extent possible, by utilizing accepted Best Management Practices (BMPs) for sediment control, including sediment filter barriers along the newly constructed roadway; proper road design (drainage, bed slope, road grade, etc.); properly designed and installed culverts and road drainages; and new roadbed surfaces.

The Goodrich Creek stream channel, at its upper segment (Figure 1), was temporarily diverted back to the pre-flood channel by Adams County Road and Bridge personnel during post-flood emergency road repair; however, the diversion was only temporary. The stream segment remains unstable and would eventually re-route back to the old roadbed in future years if not fully stabilized.

Using a trackhoe and/or dozer, the stream's upper segment would be reinforced with native materials, i.e., boulders, logs, and woody debris, to prevent diversion back to the roadbed. The entrenched old roadbed, about 160 linear feet, would then be back-filled with soil and rocks excavated from the new roadway (figure 1). The repaired/filled roadbed would correspond to the level of the natural floodplain. Temporary flow diversion, time lapses to allow water to clear, and minimal mechanical disturbance in the streambed would occur during construction. To provide long-term stability, the fill area would be planted with riparian and upland vegetation after construction.

Permits from State and Federal agencies would be acquired prior to construction activities within Goodrich Creek's streambed and floodplains. The BLM would provide project design, and monitor all construction activities associated with streambed adjustments, floodplain activities, and old roadbed closure. A BLM hydrologist would be on-site during all stream channel work to periodically monitor water quality (turbidity levels) to insure any in-stream activities would not jeopardize resident redband trout or other aquatic life.

Figure 1. Old incised roadbed and temporary road would be back-filled with excavated road spoil to reestablish a floodplain.

The lower segment stream channel would remain incised into the old roadbed (Figure 3) because re-routing Goodrich Creek back to its previous flow path would require extensive streambed modifications and disturbance, and would be prohibitively expensive to restore. Treatment of this area would include placing large diameter rip-rap at the segment's upstream end to protect the streambank from impinging flows (Figure 2). The temporary road bed would be re-contoured along the western streambank to establish a functional floodplain, followed by planting of native shrubs and other vegetation (Figure 3).

Figure 2. Rip-rap would be placed at areas indicated to protect the streambank from impinging flows.

Figure 3. The temporary road would be scarified, and barren areas re-vegetated with native shrubs, grasses, and forbs.

The old road would be permanently closed to all wheeled vehicles by physically blocking the north entrance at the intersection of the old Wilson Road with the new road, and the southern entrance at the BLM/private property boundary (map 1), with large boulders woody debris, and/or "tank-traps." However, the road path would remain accessible to foot traffic. The southern temporary access road, located on private property, would remain closed by a locked

gate (J. Seal, pers. comm.). Also, the old road's southern portions were totally obliterated in the flashflood; a physical closure would not be necessary.

To reduce soil erosion following construction activities, un-vegetated soils along the newly constructed roadway and disturbed areas along the abandoned roadway would be reseeded with native upland and riparian vegetation. Riparian vegetation along most segments of Goodrich Creek would regenerate naturally without further intervention; however, the washed-out roadbed portions at the upper and lower segments would be planted with bare-root riparian species and rooted willows after the old roadbed is back-filled.

The new ROW and old Wilson Road would be monitored annually by Adams County weed personnel. The County would treat noxious weeds with herbicide, as needed, each year.

3.0 Affected Environment and Environmental Consequences

3.1 Riparian Areas

3.1.1 Affected Environment – Riparian Areas

In the pre-flood condition, vegetation in Goodrich Creek riparian areas was in excellent condition. Plant composition consisted of healthy assemblages of late seral plant species, including cottonwood, quaking aspen, mountain alder, redosier dogwood, mountain maple, elderberry, golden currant, black hawthorn, Douglas fir, ponderosa pine, and willow. These species represent the potential natural vegetation (PNV) along the stream corridor. PNV refers to an intact, natural native plant community with few historic anthropogenic influences.

The BLM performed stream functioning condition assessments, as described in *A Users Guide to Assessing Proper Functioning Condition and the Supporting Science for Lotic Areas* (Technical Reference 1735 – 15 1998), in 2002 and 2006 along the BLM-administered segment of Goodrich Creek. The stream was rated in proper functioning condition. Vegetation characteristics along the riparian areas provided an outstanding example of fully intact native plant communities, and were of "reference reach" quality, i.e., a river segment that represents a stable channel within the particular valley morphology and geology.

The flashflood scoured much of the woody vegetation from Goodrich Creek. Considerable alteration of the stream channel occurred in several reaches, where the active channel was plugged by large volumes of woody debris and boulders, and the stream was forced into the roadbed where no deep-rooted riparian vegetation was present to control erosive forces (Figures 2 and 3). In those areas, the road was down-cut up to 6 feet, and was totally obliterated.

Periodic natural disturbance is an ecological function which maintains the complex dynamics of native vegetation associated with natural stream systems. Native species have evolved to tolerate, thrive, and even depend on periodic disturbance to maintain a diverse balance of plant species and promote vitality and nutrient flow within the riparian community. Natural disturbances include the presence of beaver colonies, flood events, wildland fire, herbivory, disease, and extreme sediment pulses from landslides

3.1.2 Environmental Consequences – Riparian Areas

3.1.2.1 Alternative A- Continue Current Management

Willows, cottonwoods, and redosier dogwood would regenerate from broken rootstocks and rapidly re-populate the riparian areas. Woody vegetation responds immediately in the first year following flood events, and, within 10-15 years, floodplain vegetation would be as dense, robust, diverse, and vigorous than in the pre-flood condition; only the age class balance would change. In vertically-incised segments, vegetation would respond more slowly until a functioning floodplain is reestablished by natural stream hydraulics. In segments now dewatered from the radical channel shifts, existing, deep-rooted woody vegetation should continue to thrive as water, percolating through the coarse streambed substrates, would continue to provide sufficient moisture for plant community maintenance.

3.1.2.2 Alternative B - Proposed Action

Riparian areas would naturally regenerate as described in Alternative A. Planting and reestablishing deep-rooted, native riparian vegetation in the upper segment and back-filled areas (Figure 1) would stabilize exposed soils over the short- (5 years) through long-terms. Similarly, ripping and planting the old roadbed at the lower segment (Figure 2) would revegetate it. Permanent closure and rehabilitation of the old Wilson Road would allow approximately 4.5-acres associated with the old roadbed to become naturally vegetated with mixed upland and riparian plant species in 3-5 years.

3.2 Affected Environment-Upland Vegetation/ Special Status Plants /Noxious Weeds

Upland Vegetation

Upland vegetation in the project area is primarily a mosaic of antelope bitterbrush and mountain shrub (e.g. serviceberry, snowberry, currant, bitter cherry, and chokecherry) communities, with little apparent anthropogenic disturbances other than an old ditch, Wilson Road, and a few livestock and game trails. The bitterbrush communities support numerous species of native perennial grasses, such as bluebunch wheatgrass, bottlebrush squirreltail, and Sandberg bluegrass; mountain shrub communities support western wheatgrass and mountain brome. Native perennial forbs, such as arrowleaf balsamroot, lupine, yarrow, nettleleaf horsemint, desert-parsley, and buckwheat species are components of both shrub communities. Ponderosa pine and Douglas-fir occur in low densities, primarily in side draws and adjacent to Goodrich Creek. Tree density was reduced by the 1986 Goodrich fire, but grass, forb, and shrub cover is likely similar to pre-fire conditions.

An evaluation and determination for Idaho Standards for Rangeland Health and Guidelines for Livestock Grazing Management (USDI-BLM 1997) was conducted in the Goodrich Management Area in 2008, which included BLM lands within the project area. The upland areas were found to be meeting watershed and native vegetation standards. Two upland botanical surveys, conducted in 2010, show the area remains in good condition.

The BLM lands adjacent to, but outside, the project area on Goodrich Creek's eastern side are designated as the Goodrich Creek Area of Critical Environmental Concern (ACEC). The ACEC

was designated in the 1988 RMP based on the presence of uplands in "good range condition" and a "good riparian zone along Goodrich Creek."

Special Status Plants
Based on a 2010 field survey and other BLM survey data, no special status plant species are known to occur in the area. Therefore, no impacts to special status plants are expected.

Noxious Weeds
Noxious weeds present in the project area are primarily associated with the irrigation ditch and existing Goodrich Creek. The following were observed in the 2010 botanical assessment: spotted knapweed, rush skeletonweed, Scotch thistle, field bindweed, and leafy spurge.

3.2.1.1 Alternative A - Continue Current Management

Upland Vegetation
Upland vegetation health would remain in good condition over the short- through long-term. Uplands disturbed by the flood event would be colonized by early seral species from adjacent areas over the short-term. Shrubs and later seral grass and forb species would be expected to dominate these areas over the long-term. Periodic road maintenance would remove adjacent vegetation during the short-term. These areas would be dominated by early seral species, where maintenance occurs regularly (every five years), and could transition to mid-late seral species where disturbance is less frequent.

Noxious Weeds
The presence of noxious weeds would present a persistent threat to upland health over the long-term. Disturbed areas would be especially susceptible to noxious weed infestations over the long-term. Existing occurrences and anthropogenic factors (e.g. vehicles, livestock) would provide consistent distribution of seed sources. Consistent treatment of priority species could help reduce their area abundance over the long-term, but other species would be expected to persist at low to moderate levels.

3.2.1.2 Alternative B - Proposed Action

Upland Vegetation
Construction of the new road could remove up to 5-acres (0.7 miles by 60 feet wide) of upland vegetation over the short-term. Disturbed areas adjacent to the new road would be re-vegetated within two to four years by seeded species and early seral species from adjacent seed sources. Over the long-term, the new ROW would be vegetated with native and seeded species to within six to ten feet each side of the active roadbed center-line, similar to the old Wilson Road. Approximately 1.7-acres (0.7 miles by 20 feet wide) of upland areas would remain un-vegetated during the road's life.

Vegetation on the ROW's downslope side could be smothered or lost over the short-term by spoil material. These impacts would be reduced in areas where spoil is transported by dump truck and used as channel fill at the upper stream segment (Map 1). Root systems of vegetation immediately adjacent to the new road's upslope side would be exposed by excavation activities. Moderate to high exposure levels could result in plant mortality, whereas low to moderate levels could result in reduced plant vigor until root systems adapt to the altered conditions through lost root replacement in the remaining soil.

Erosion of exposed soils on the up and downslope road sides could result in increased soil movement in limited areas, over the short–term, which could eliminate some plants and reduce

the vigor of others. Establishment of seeded species would reduce the erosion potential over the long-term. Water from moderate to severe storm events collected in the roadway and channeled through culverts could result in small-scale erosion events (blowouts) in downslope areas over the short- and long-term. These disturbed areas would be susceptible to noxious weeds over the short-term, but desirable species would recolonize and stabilize them over the long-term. Early seral species would dominate the steeper upslope areas above road cuts.

Closure and rehabilitation of the abandoned Wilson Road would reestablish approximately one acre of upland and riparian vegetation in about five years; therefore, over the long–term, minimal net loss of vegetation would occur as a result of new road construction in the project area.

Noxious Weeds

Soils exposed by construction activities would be susceptible to noxious weeds over the short- and possibly long-term. Seed sources are readily available upslope of the proposed construction. Weed treatments and establishment of desirable species would help minimize noxious weeds over the short-term. Low levels of noxious weeds could be expected to occur adjacent to the road over the long-term.

3.3 Affected Environment – Water Quality/Hydrology

In the *Weiser River Watershed Subbasin Assessment and TMDL (*IDEQ 2006*),* the Idaho Department of Environmental Quality (DEQ) examined water quality of several streams in the Weiser River Watershed listed on the 1998 303(d) list of water quality impaired streams. In 2006, TMDL targets were established in the Weiser River watershed to bring impaired waters into compliance with State and Federal standards. The DEQ found all applicable water quality standards were fully met in Goodrich Creek, and subsequently removed the stream from its 303(d) list (HUC # ID17050124SW023_02, IDEQ 2010 Integrated Report).

Cold water temperatures are necessary to maintain viable populations of redband trout, other cold water fishes, and native aquatic species. The BLM temperature data collected in Goodrich Creek (2002, 2007) show this stream has outstanding water temperature regimes to fully support salmonid spawning (redband trout) and cold water biota throughout the year. Samples collected (BLM 2006) to analyze pathogen presence (E. coli) and density show this stream continues to meet standards for primary and secondary contact recreation.

Hydrology

Goodrich Creek drains a 10,160 acre watershed (6^{th} field Hydrologic Unit Code # 1705012408). Watershed elevations range from 2,800 to 7,400 feet above sea level. In most years, peak high water flows generally occur in May, and average flows are about 140 cubic-feet-per-second (cfs) during spring run-off (USGS 2008). However, examination of the flood aftermath suggests the June 2010 rain-on-snow event probably exceeded 2,000 cfs at peak flow. The flood occurred as a high volume (flash-flood), two-day descending hydrograph. The flood mobilized large volumes of woody debris and large boulders, which caused debris jams, some as deep as seven feet and 120 feet long. The depositions blocked the stream's flow path, laterally shifting the active stream course up to 160 feet in some locations. The stream was diverted into Wilson Road, along two segments on BLM land and several reaches along private land. In these areas, the road was totally obliterated and is now the present stream channel.

Major elevation adjustments occurred throughout the stream, down-cutting 8-12 feet to virgin bedrock in some places. While this channel altering event will have a long-term effect on the

stream's hydrological functioning condition and morphology, it is a natural phenomenon which has occurred over millennia in all mountainous stream systems. However, anthropogenic influences contributed significantly to floodplain and stream degradation where the road intercepted and captured flooding stream flows.

Landslide Prone Areas
Road construction across steeper terrains (> 25 percent slope) can cause landslides after road material is removed. Average slope along the new Wilson Road route approaches 40 percent along some segments.

Because landslides can significantly diminish water quality if slide material is deposited into the active stream channel, the project area was analyzed for landslide susceptibility using ground reconnaissance, aerial photographs, and U.S. Geological Survey (USGS) terrain coverage's (USGS 2011). Two pre-historic, mass rotational landslides were discovered in the Goodrich Creek drainage, each upstream of the project area. However, examination of the terrain, above the old Wilson Road and proposed road location, indicated the slope was mostly stable as no appreciable movement of terrain was encountered anywhere above the vulnerable toe-slope of the historic roadway, where risk of shallow slope failure would be most likely to occur. The geologic terrain above the proposed roadway consists of highly terraced extrusive rocks of the Grande Ronde Basalt Group which formed relatively stable terrains (USGS 2011).

3.3.1 Environmental Consequences – Water Quality/Hydrology

3.3.1.1 Alternative A – Continue Current Management

The DEQ standards for cold water biota and primary contact recreation would continue to be met over the short- through long-terms (20-30 years). If not back-filled and stabilized, the temporary stream diversion at the upper segment would eventually fail, allowing the stream to recut a flow path back to the old roadbed. This would generate additional sediment inputs to Goodrich Creek, but probably not to levels exceeding water quality standards because of the very coarse streambed substrates contain relatively small quantities of fine materials. In addition, annual road maintenance by Adams County would generate additional sediments originating from disturbances in the old Wilson Road. Depending on the characteristics of future watershed events, stream morphology would naturally adjust and attain hydraulic equilibrium (a stable state with less than 20% active bank erosion) over the long term (25-30 years).

Alternative B - Proposed Action
The DEQ standards for cold water biota and primary and secondary contact recreation would continue to be met over the short through long terms.

Short duration, low-yield sediment pulses would occur during construction activities in the stream channel. Sediment levels may at times spike beyond DEQ turbidity standards (a surrogate measurement for suspended sediment) over a very short timeframe (2-4-hours). However, water quality would not be jeopardized over the long-term. Compliance with the Clean Water Act (CWA) is achieved through proper, site-specific design, implementation, and monitoring of BMPs. The BMPs for sediment control may include sediment filter barriers along the newly constructed roadway, streambed adjustment sites, and at other sensitive sites with higher erosion potential.

Confining the stream to the pre-flood channel and filling the washed-out roadbed with spoil from the new road construction to form a new floodplain would help assure Goodrich Creek would

remain stable at the upper segment over the short- through long-terms. Overall, stream channel morphology in the project area and greater watershed, would naturally adjust and attain hydraulic equilibrium (defined as ≤ 20% active bank erosion) over the long-term (25-30 years).

Increased upland sediment yield would occur along the newly constructed roadway in response to precipitation and annual snowmelt over the short-term. This would be most noticeable in the first three years following construction. After three years, adequate vegetation would be present to stabilize loose soils generated by the previous road construction. In addition, the 500-600 foot distance from Goodrich Creek to the new roadbed would allow most construction sediment to be filtered and sequestered by upland vegetation over the short- through long-terms.

Risk of slope failure (landslides) and possible short-term negative effects to water quality in Goodrich Creek are considered to be low given the relatively stable nature of the upslope, terraced Grande Ronde basalts. No localized, shallow landslides were detected above the old Wilson Road; however, they could occur over the short- through long-terms following road construction. It is also possible that mass rotational landslides, not associated with road construction, could occur in the Goodrich drainage over the short- through long-terms. Most likely any slope failure associated with the new road would be small "pop-out" failures which are shallow and generally localized. Failures of this type could have short-term negative effects on water quality in Goodrich Creek.

3.4 Wildlife/Aquatics/Special Status Animal Species

3.4.1 Affected Environment – Wildlife/ Aquatics /Special Status Animal Species

Terrestrial/Special Status Wildlife

Mountain shrub, bitterbrush, and conifer dominated communities support a wide range of wildlife, including ungulates (mule deer, elk), predators (coyote, mountain lion, red-tailed hawk), small mammals (voles, mice), songbirds (American robin, lazuli bunting, yellow warbler), and reptiles and amphibians (night snake, western toad). The mosaic distribution of habitat types is typical in the watershed and favors generalist wildlife species. Because 75% of the wildlife species utilizing these habitats require riparian zones for some portion of their life cycles (Thomas et.al. 1979), areas adjacent to a perennial water source are particularly important to wildlife. The proposed project occurs within 0.25 miles of crucial elk winter range. Crucial winter range is characterized by native-grass dominated areas with limited human disturbance.

The project would occur in the northern end of identified greater sage-grouse habitat and, by association, Columbian sharp-tailed grouse. Sage-grouse were listed as a Candidate species under the Endangered Species Act (ESA) in 2010. Sharp-tailed grouse are a BLM Type 3 species (regional/state imperiled). The BLM, in cooperation with the Idaho Department of Fish and Game (IDFG), identified the area as Type 1 (perennial grass dominated) habitat for sage-grouse. Additionally the project area lies outside the designated boundary of Priority and General Habitat for sage-grouse. The IM 2012-044 has designated priority and general sage-grouse habitats in order to maintain and/or increase sage-grouse abundance and distribution by conserving, enhancing, or restoring the sagebrush ecosystem upon which populations depend. Priority sage-grouse habitats are areas that have the highest conservation value to maintaining or increasing sage-grouse populations, while general sage-grouse habitats are occupied habitat outside of priority habitat. The project is 12.5 miles from the closest known sage-grouse lek and 9.7 miles from the closest sharp-tailed grouse lek. Because the project area is in the extreme northern edge of identified habitat, the potential for nesting and early brood-rearing activities

would be low. Areas adjacent to the proposed project are dominated by sagebrush/bunchgrass communities which could provide late brood-rearing and winter habitat. Riparian areas dominated by trees are not considered habitat for sage-grouse or sharp-tailed grouse.

Upland vegetation dependent species likely in the area include BLM Type 3 loggerhead shrike and Brewer's sparrow; riparian dependent species are likely Calliope hummingbird and common garter snake, also BLM Type 3. The current road is either in or within 200 feet of riparian habitat. Riparian dependent species are subjected to low levels of disturbance by vehicle activity.

The closest special status species, northern goshawk, flammulated owl, and white-headed woodpecker, identified in the IDFG's Conservation Data Center 2010 database, occur approximately 4.5 miles to the northeast of the project area. These species are associated with large stands (80+ acres) of old-growth or second-growth conifer forests. The project area does not provide habitat for these species.

The closest recorded observations of southern Idaho ground squirrel (SIDGS), a U.S. Fish and Wildlife Service (FWS) Candidate species, are 15 miles south of the project area. Based on a 2009 site visit, no burrows were observed that SIDGS could be utilizing and the soil type appeared to be a shallow, rocky-loam not likely to support a burrow system; therefore, SIDGS will not be discussed further.

Aquatic/Special Status Wildlife

Whitefish, brook trout (an introduced species of char), northern pikeminnow, mottled sculpin, red sided shiner, mountain sucker, and dace are present in Goodrich Creek. Following the flood event, fish populations suffered significant mortality due, in most part, from stranding in the many abandoned channels and on the adjacent floodplain. In addition, many mature fish were probably washed downstream into the Weiser River.

Channel form and associated complex aquatic habitats were significantly altered by the flood event. Deep pools, woody in-channel debris, and stream shading vegetation was lost; most notably, in segments where Wilson Road is now the present channel. These segments now have undesirable "sluice-box" morphologies with little hiding, resting, or escape cover. All aquatic habitats were adversely affected, but still some segments still possess fair aquatic habitat provided by very large boulders in the stream channel.

Native redband trout populations were significantly depleted following the flashflood. However, fisheries are expected to recover in the near future (5-10 years). Recovery of the fishery would be hampered by a large headcut which developed in Goodrich Creek 1.5-miles downstream on private land. This headcut would block passage of mature spawning age fish which commonly migrate upstream from Weiser River each year to spawn. Because spawning class fish were so depleted upstream of this headcut, it would take some time for those fish remaining above the headcut to reach mature spawning age and spawn. This could slow recovery of population densities in the fisheries above the headcut.

Bull Trout (*Salvelinus confluentus*) - Bull trout, a species of char, require high-quality cold, clean, and well oxygenated water. They need complex aquatic habitats which include deep pools, undercut banks, and in-channel woody debris, and prefer lower velocity streams with less than two percent slope. Bull trout were listed as Threatened under the ESA in 1998.

No resident or fluvial populations of bull trout are known to occur in Goodrich Creek (IDFG 2002). Further, none were encountered there when two segments were electro-fished by BLM in 2002 and 2009. Therefore, formal consultation with the FWS would not be necessary, as the proposed action would have a "no effect" on bull trout.

Redband Trout (*Onchoryncus mykiss*) – Redband trout occur in the Weiser River watershed and most of its perennial tributaries, including Goodrich Creek. They are native to the Intermountain West, and, unlike introduced rainbow trout, are uniquely adapted to a broader range of stream temperature regimes, including cold water in mountain streams and higher water temperatures/lower oxygen levels commonly found in desert streams in the summer.

The BLM conducted electro-fishing surveys in Goodrich Creek in 2002 and 2009. Data from each survey show redband trout density, age classes, and general fish and aquatic habitat health were in excellent condition. The population was adversely affected by the 2010 flood. However, redband trout are very resilient, having evolved to tolerate flood events and short-term sediment increases with little long-term harm to the species.

3.4.2 Environmental Consequences – Wildlife/ Aquatic /Special Status Species

Assumptions

- Current use levels are estimated to be less than or equal to (≤)10 vehicle trips per day (VTD) during spring-fall and 0 VTD during the winter because of snow cover. Because the proposed project would replace an existing road, the level of use would not be expected to change after the project is completed.
- Because animals respond to changes in their environment without regard to their status, impacts will be discussed for terrestrial and aquatic species as groups. Impacts to special status species will be highlighted, where appropriate.
- Because of their similar habitat requirements, impacts to sage grouse and sharp-tailed grouse will be discussed together.

General Impacts

Disturbance – Vehicle traffic can disrupt animal behavior and habitat use. These disturbances can occur over the short- or long-term.

- Short-term (≤ 1 day) – Vehicle noise and motion can disrupt normal behaviors (e.g. breeding, feeding). Animals that depend on sound (to attract mates, detect prey or predators) could be adversely affected when vehicles are present. Persistent disturbance during critical periods could reduce individual breeding success or fitness over the long-term.
- Long-term (days to years) – Animals that are sensitive to persistent disturbance levels may avoid areas adjacent to roads. Where these areas are critical to an animal's survival, it could reduce the suitability of surrounding areas that provide less critical habitat. Animals that are tolerant of disturbance could be expected to maintain or increase over the long-term.

Mortality – Motorized vehicles can cause wildlife mortality either directly (collisions) or indirectly, by making prey species more vulnerable to predators or increasing sediment loads in aquatic systems. Factors that influence mortality potential include:

- Sight distances - As the distance at which a driver or animal becomes aware of the other increases, the likelihood for either one to avoid a collision increases.
- Vehicle speed – As the speed of a vehicle increases, the ability to avoid collisions decreases.
- Mobility of animals – Highly mobile animals (birds) are potentially less vulnerable to collisions than animals with limited mobility (reptiles).
- Habitat requirements - Species restricted to confined systems immediately adjacent to roads (aquatic or riparian dependant species) are more vulnerable to mortality from motorized vehicles than those with more general habitat requirements.

Habitat Modification – The amount and quality of habitat available can affect seasonal and long-term survival of individual animals.

- Activities that directly remove vegetation (road building) can eliminate breeding, brood-rearing, or feeding habitat. Activities that increase vegetation (restoration) can increase the amount and quality of habitat.
- Impacts from disturbed areas (increased sediments, noxious weeds) can reduce the habitat amount and quality in adjacent areas (e.g. increased sediment input from roads can reduce suitable spawning substrate in streams, noxious weed spread from disturbed roadsides to adjacent uplands can reduce or eliminate more desirable nesting cover or forage species).
- Activities that fragment habitats (road building) can reduce the suitability of remaining and surrounding ones, especially for species that require larger blocks. Edge adapted species can benefit from habitat fragmentation.

3.4.2.1 Alternative A – Continue Current Management

Terrestrial/Special Status Wildlife

Wildlife would experience short-term disturbances from vehicle traffic, primarily between March and November, coinciding with breeding and brood-rearing periods for many bird and mammal species. Because the daily and annual levels of vehicle use would be relatively unchanged, species composition and abundance would remain static over the long-term for species that tolerate low disturbance levels. Species intolerant of human disturbance would continue to avoid the area. Because of the road's proximity to riparian habitat, riparian dependent species would be affected along 0.4 miles of habitat. Elk winter range would not be adversely affected because vehicle use would be negligible during the winter.

Vehicle-caused mortality rates would remain low over the short- and long-term. Sight distance would be relatively short (20-200 feet) and decrease as riparian vegetation becomes re-established in the disturbed, flood areas. However, vehicle speeds would be low (5-15 mph) allowing most species, except those with limited mobility (juveniles, reptiles) to avoid vehicles.

The short-term recovery of riparian vegetation would benefit many terrestrial wildlife species. The road's presence would continue to cause minor riparian habitat fragmentation because of the narrow road, but tree canopy cover would provide some degree of connectivity.

Aquatic/Special Status Wildlife

Fisheries would recover and thrive in Goodrich Creek over the long-term as aquatic and fisheries habitat quality continued to improve each year. Water quality would be favorable for aquatic life forms, including redband trout.

3.4.2.2 Alternative B - Proposed Action

Terrestrial/Special Status Wildlife

Impacts from vehicle disturbances would be similar to those described in Alternative A. Species that depend on riparian habitat would benefit from the project, since moving the road west of its current alignment and more than 600 feet from riparian areas would reduce disturbances over the long-term. Springtime construction activities could result in some disturbance of avian breeding activity. Species intolerant of human disturbance would be more likely to utilize the riparian habitat than in Alternative A; therefore, species diversity could increase slightly.

Species that utilize upland communities (e.g. mountain shrub, bitterbrush, and conifer) would be disturbed more than under Alternative A; however, impacts to animal behavior and fitness would be minimal. Springtime construction activities would not affect breeding activities at previously identified leks; the project would be well outside the 0.6 mile-radius consideration area for leks, thus minimizing breeding activity disturbance, as identified in IDFG's *2006 Conservation Plan for the Greater Sage-grouse in Idaho*.

Vehicle-caused mortality rates would remain low over the short and long-terms. Sight distance would be greater than Alternative A (50-1,000 feet); recovery of adjacent vegetation would primarily reduce sight distances only in mountain shrub communities. Vehicle speeds would be greater than Alternative A (10-20 mph); however, they would still be slow enough that most species could avoid vehicles.

Recovery of riparian habitat would result in improved connectivity and habitat quality over the long–term, which would benefit riparian-dependent species. The direct loss of upland habitat, up to 5-acres would be removed by the project's construction, would adversely affect wildlife over the short-term; however, habitat loss impacts would be minimized by restoration of the old roadbed and short-term recovery of disturbed areas associated with new construction. Connectivity between uplands west of the proposed road and riparian habitat would be adversely affected over a 0.4 mile distance. Because of the road's narrowness and low number of vehicle trips and speed, the fragmentation level would be low and of minimal consequence to most species. Animals that have difficulty negotiating cut banks and open areas would be most affected. Animals could be adversely affected, over the short- and long–term, in areas where noxious weeds become established and out-compete desirable species.

Aquatic/Special Status Wildlife

Due to bank stabilization and road ROW re-routing, aquatic species would recover and thrive in Goodrich Creek over the long-term, since aquatic and fisheries habitat quality would continue improving each year after the 2010 flood. Water quality would remain favorable for salmonids and other aquatic life forms over the short- through long-terms.

Short duration water quality impacts would occur during in-stream construction activities at the upper segment. Both suspended and bedload sediment could have adverse effects on aquatic life. Many fish species can tolerate elevated suspended sediment levels for short periods of time, such as during annual spring runoff. However, longer durations are detrimental as elevated, suspended sediment levels can interfere with feeding behavior, damage gills, reduce growth rates, and smother eggs and fry, which are especially sensitive to high suspended sediment levels. High sediment also limits the production and abundance of aquatic invertebrates, reducing the quantity of food available for foraging fish.

During construction activities in the active channel, sediment levels may exceed DEQ turbidity standards over a short time frame (2-4 hours). Temporary flow diversions, time lapses to allow water to clear, and minimal mechanical disturbance levels during construction would help minimize sediments. Further, the streambed substrates are very coarse and minimal fine sediment is present. Streambed modification would not result in detectable mortality to salmonids or aquatic organisms over the short- or long-terms.

3.5 Cultural Resources

3.5.1 Affected Environment – Cultural Resources

3.5.2 Environmental Consequences – Cultural Resources

A review of cultural resource records revealed no previously recorded sites located within the proposed road construction area. The Four Rivers Archaeologist walked along the proposed new road alignment, marked with wooden lathes, and surveyed the route for cultural resources. The Archaeologist did not discover any new cultural resources within the area of potential effect (APE)

3.5.2.1 Alternative A – Continue Current Management

Cultural resources would not be impacted by allowing vehicle traffic to drive along the existing road.

3.5.2.2 Alternative B – Proposed Action

Cultural resources would not be impacted by constructing, maintaining, and using the new road alignment because no cultural resources were discovered.

3.6 Cumulative Impacts

The impacts analyzed in the cumulative effects section applies to both alternatives. "Cumulative impacts" are those resulting from the incremental impact of an action when added to other past, present, or reasonably foreseeable actions. These impacts can result from individually minor, but collectively important actions, taking place over a period of time. When considering cumulative impacts, two major issues were considered. The first was defining the geographic area of potential impacts. This can, and usually does, vary for each resource considered. The second issue is determining what past, present, and future actions are relevant to the analysis.

3.6.1 Scope of Analysis

The scope of the analysis is the 4,500-acre boundary of the Lower Goodrich Creek HUC 6 (IDEQ Hydrologic Unit Code # 17500124080201.

3.6.2 Environmental Consequences – Cumulative Impacts

Riparian Areas and Watershed

The environmental effects analysis disclosed that no significant concerns requiring mitigation for riparian areas, fisheries, special status plants, or animal species would be necessary. There are no known adverse cumulative effects. The project would in fact increase the percentage of riparian areas in the watershed when the old road is decommissioned, which would increase high

quality wildlife habitat. No net increased mileage of roads in the watershed would result from the proposed action.

Within the affected watershed, land ownership is1, 270-acres of USFS land (30 percent), 2,620-acres of private lands (58 percent), and 620-acres of BLM lands (14 percent).

Land management uses range from multiple use management on Forest Service property, including grazing, logging, and recreation. Payette National Forest has indicated that no commercial logging operations are anticipated in the near future (10 years); however, some pre-commercial thinning could occur within that time frame (pers, comm., Jeff Canfield, USFS, Council Ranger District). Pre-commercial thinning would have negligible impact within the watershed.

There are 19-separate private landowners which once accessed their property by way of the old Wilson Road. Some small home sites and travel trailer pads, most <1-acres in size, have been cleared, and a few small vacation-style houses have been constructed in the watershed. For the most part, the home sites have been minimally disturbed and no excessive erosion should occur as a consequence. It is not known how many other home sites would be constructed in the future, or what impacts they would have on the functioning condition of the watershed, although it is anticipated it would have little adverse impact over the next 20-years, and likely well beyond that.

The 620-acres of BLM lands are managed as grazing lands, and would continue to be managed in this fashion for the foreseeable future. The condition of the rangelands on BLM, and across all land ownerships in the watershed is good to excellent.

4.0 Consultation and Coordination

4.1 List of Preparers/Reviewers

J. Allen Tarter, Natural Resources Specialist (Team Lead)
Candida Aguirre, Realty Specialist
Cecil Werven, Realty Specialist
Dean Shaw, Archaeologist
Matt McCoy, Assistant Field Manager and Wildlife Biologist
Joey Weldon, Wildlife Biologist
Lara Hannon, Ecologist
Seth Flanigan, NEPA Specialist
Barbara Albiston, District Writer-Editor

4.2 List of Agencies, Organizations, and Individuals Consulted

Governments:
Shoshone-Paiute Tribes of the Duck Valley Indian Reservation
Adams County Commissioners
Adams County Road and Bridge personnel

Local affected landowners:
James Seal

Gary Gallant
David Flowers
Ronald Nay (representing the affected homeowners association)

Agencies:
US Army Corps of Engineers
U.S. Fish and Wildlife Service
Idaho Department of Water Resources

4.3 Public Participation

No comments were received from the general public following scoping. Verbal comments of support were received from affected private landowners in the watershed. Those governments and agencies providing input during formulation of the proposed action all supported the plan.

Literature Cited

Thomas, J. W., C Maser, and J. E. Rodiek. 1979. Riparian zones. in J. W. Thomas ed. Wildlife habitats in managed forests: the Blue Mountains of Oregon and Washington. Agriculture Handbook No. 553. United States Department of Agriculture, Forest Service. 516 pp.

USDI-BLM. 1997. Idaho standards for rangeland health and guidelines for grazing management. Bureau of Land Management, Idaho State Office, Boise, Idaho. 18 pp.

Map 1. Wilson Road RoW showing land status, new Wilson Road RoW route, road closure areas, route of road to be decommissioned, and stream segments to be repaired along Goodrich Creek