

**U.S. Department of the Interior  
Bureau of Land Management  
White River Field Office  
220 E Market St  
Meeker, CO 81641**

## **ENVIRONMENTAL ASSESSMENT**

**NUMBER:** DOI-BLM-CO-110-2013-0079-EA

**CASEFILE/PROJECT NUMBER:**

**PROJECT NAME:** Wilson Creek Unit 3-94-34H1 Well and Pipeline Replacements

**LEGAL DESCRIPTION:** T. 3N R. 94W Sections 26, 27, 34, 35

**APPLICANT:** Chevron USA, Inc.

**PURPOSE & NEED FOR THE ACTION:**

The purpose of the Proposed Action is to manage the exploration and development of mineral resources on Public Lands in a manner that avoids, minimizes, reduces, or mitigates potential impacts to other resource values. The need for the action is established by national mineral leasing policies and the regulations that enforce them that recognize the statutory right of lessees to develop Federal mineral resources so long as undue and unnecessary environmental degradation does not occur.

**Decision to be Made:**

The Bureau of Land Management (BLM) will decide whether or not to approve the Application for Permit to Drill (APD) and pipeline replacements, and if so, under what conditions.

**SCOPING, PUBLIC INVOLVEMENT, AND ISSUES:**

**Scoping:** Scoping was the primary mechanism used by the BLM to initially identify issues. Internal scoping was initiated when the project was presented to the White River Field Office (WRFO) interdisciplinary team on April 16, 2013 and to Little Snake Field Office (LSFO) on April 29, 2013. External scoping was conducted by posting this project on the WRFO's on-line National Environmental Policy Act (NEPA) register on April 16, 2013.

**Issues:** None identified.

## **DESCRIPTION OF PROPOSED ACTION AND ALTERNATIVES:**

### **Background/Introduction:**

Chevron U.S.A. Inc. (Chevron), a wholly owned subsidiary of Chevron Corporation, is proposing to replace aging flowline infrastructure within the Wilson Creek Oil Field and to further explore the undeveloped potential the Niobrara Formation. These activities would be conducted on Public Lands administered by the WRFO and LSFO of the BLM and on Chevron's privately-owned and operated lands in Rio Blanco County, Colorado. In this filing, Chevron is seeking approval to conduct all surface disturbing activities necessary for access, flowline installation, power distribution, and drilling one horizontal well.

### **Proposed Action:**

Chevron is planning to drill one well in the Wilson Creek Unit (WCU) to further explore the Niobrara Formation potential (WCU 3-94-34H1). This well will be drilled on the WCU 48 pad (Figure 1); this is an existing pad to the abandoned Rice 48 well. The WCU 48 well pad is located on a narrow ridge in the southwestern portion of the Wilson Creek Field at an elevation of 7,788 feet. The existing well on this location was completed in the Morrison Formation in 1968 and subsequently abandoned in 1994.

This well is a horizontal well with a vertical depth of 4,282 feet and a total measured depth of 8,452 feet. The existing pad is approximately 360 feet by 100 feet, but will be expanded to approximately 400 feet by 180 feet. The well will be drilled using a closed-loop system with the cuttings being collected onsite in bins and then trucked offsite to an approved facility (Attachment 1). The total well site disturbance is 3.364 acres. The already existing access road is 0.744 acres; bringing the total acreage to approximately 4.11 acres. The access road to the pad still exists and only minor maintenance may be needed. Production facilities for this location would include wellhead, electrical boxes for an electrical submersible pump control and two 500 bbl closed-top upright tanks. Permanent liquid transfer lines would be designed and installed at a future time pending well evaluation and realized production volumes. The installation of permanent liquid transfer lines and/or other production facilities would be submitted for BLM review and approval in a separate Sundry Notice.

Currently there is no power to the WCU 48 and approximately 1,800 feet of new line would need to be run from the existing 14.4kV line located on the nearby WCU 12 northeast of the pad. This powerline would require setting about 10 poles along an existing two track to the WCU 48 pad. The new power line to this location would be installed by White River Electric and a project proposal would be submitted to the WRFO BLM for review and approval by White River Electric under separate cover.

Due to the size constraints of the WCU 48 well pad, the nearby WCU 66 well pad is currently under consideration for use as a staging area for multiple frac tanks associated with well completion operations. The WCU 66 (T. 3N R. 94W SWNW 34) is a producing natural gas well and the pad is of adequate size to accommodate frac tanks, pumps and other equipment if necessary. An existing two-track road and/or powerline ROW run between WCU 66 and WCU 48 and would constitute the shortest distance between locations (approximately 3,400 feet) for the placement of temporary surface lines to transport water for drilling and well completions.

The temporary surface lines would follow the existing two track to the extent possible. Vehicular access to the surface lines would be limited to only that needed for placement, removal, and maintenance and would be via the two-track. No new roads would be constructed for the installation of temporary surface lines, and the lines would be removed as soon as practicable after drilling and well completions. Chevron would take every necessary precaution to prevent slippage, damage, rupture, freezing, other contingency.

**Table 1:** Table showing the approximate disturbance in acres during the phases of the well location.

	Proposed	Current	Interim*	Final
Well Pad Location	3.364 ac	0.83 ac	0.83 ac	0
Access Road	0.744 ac	0.744 ac	0.744 ac	0
Total	4.108 ac	1.574 ac	1.574 ac	0

*\*There is potential for multiple wells to be drilled from this location as described in the Wilson Creek Plan of Development, and therefore interim reclamation activities associated with reducing pad size would be deferred until such time as it is determine that no further drilling and/or disturbance would occur on this pad.*

Chevron operates oil and natural gas wells, processing equipment and pipeline infrastructure on both private and public lands within the WCU and has identified a need to replace one natural gas flowline and three oil flowlines due to the age and condition of the existing pipe. All or portions of these proposed activities would be conducted on federal lands administered by the WRFO and LSFO BLM.

**Table 2:** Summary of the information for each of the proposed pipeline replacements.

Pipeline	Line Type	Length	Acres	LSFO Acres	WRFO Acres	Private Acres	Size/Material	Installation
WCU 66	Natural Gas	6,454'	4.4 ac*	1.3	0	3.1	3" Flexsteel	Below-Ground
WCU 26	Oil	1,710'	1.2 ac*	0	0.9	0.3	3" Carbon Steel	Above-Ground
WCU 27	Oil	2,220'	1.5 ac*	1.5	0	0	3" Carbon Steel	Above-Ground
WCU 65	Oil	1,614'	1.1 ac*	0.9	0	0.2	3" Carbon Steel	Above-Ground

*\*Rerouted portions may not be within the existing pipeline corridors, but the replacements that follow the same route will be. This was calculated with the 30 foot corridor, when possible they will utilize as much of road surface for the construction corridor as possible.*

#### *WCU 66 flowline*

The WCU 66 is a producing natural gas well and the associated flowline carries sweet gas from the well to the WCU Gas Plant. The WCU 66 well pad is located entirely on federal lands administered by the BLM (LSFO) at an elevation of 8,200 feet. The connecting flowline spans about 6,454 feet, or 1.2 miles, of rugged mountain terrain and steeply sloping hillsides across both public and private lands within the Wilson Creek oil field. The existing WCU 66 flowline is installed below-ground and closely follows existing lease roads over the majority of its route. The existing flowline would be disconnected from service, flushed, capped at both ends, and abandoned in place prior to commencing with the installation of the new line. The WCU 66 well would be temporarily shut-in until the new pipeline was complete and ready to be put into service.

The proposed replacement flowline would begin at the WCU 66 riser and continue along the existing flowline corridor to the tie-in header. The replacement flowline would consist of 3-inch diameter FlexSteel pipe, except where the pipe may be exposed to atmosphere (i.e. riser, tie-in header), where externally coated carbon steel pipe would be used. The pipeline would be installed at a depth of four feet. The new line would be installed by trenching at an approximately 10-foot offset from the existing flowline, with the exception of the route change as shown on Figure 1 where the new line would deviate from the existing corridor for approximately 400 feet. At this location, the new flowline would follow a more direct path to the tie-in header. A small portion of this area would constitute new disturbance; the remainder has previously been disturbed and is currently occupied by existing oil and gas facilities. The proposed route closely follows the existing lease roads and would be installed beneath the road surface over much of the route to avoid any additional and unnecessary disturbance to the slopes and the surrounding aspen woodlands and mountain shrub vegetation. The corridor width needed for construction would be approximately 30 feet to accommodate trenching, welding, and pipe laying equipment. However, most of that width would be within the existing roadway and little to no off-road activity is expected over most of the route. All construction materials and equipment would be stored on existing well pads or pre-determined service pads/laydown areas and no additional new disturbance would be required for that purpose.

#### *WCU 26 Flowline*

The WCU 26 is a producing oil well and the associated flowline carries the produced oil and hydrocarbon liquids from the well to the tie-in header located roughly 0.25 mile to the northeast. The produced fluids are ultimately transported to the WCU Central Tank Battery where the oil and liquids are separated and stored in tanks until the products are piped and/or trucked offsite to market. The WCU 26 well pad and a large portion of the connecting flowline are located on federal lands administered by the BLM (WRFO). A portion of the flowline and the tie-in header are located on private land owned and operated by Chevron.

The existing WCU 26 flowline is installed above-ground along the slope of a steep hillside. In order to minimize any disruption in production, the existing flowline would remain in service until such time as the proposed replacement line was ready to be put into service, after which the existing line would be disconnected from service, cut into lengths, and transported offsite for recycle and/or disposal.

The proposed replacement flowline would also be installed above-ground due to the steep slope and potentially unstable soils that are prone to sloughing. The installation would begin at the tie-in header and the pipe would be lowered by winchline along an existing powerline ROW to the WCU 26. All welding operations would be conducted on the open areas near the header location and/or on the WCU 26 well pad.

The proposed replacement flowline has been rerouted from the existing corridor, as shown on Figure 1, to provide a more direct line from the well to the tie-in header and to keep the new line out of the path of the large drainage just west of the well pad. The replacement line would consist of 3-inch diameter external coated carbon steel pipe. H-brace type supports may be installed where the span of the contact with the ground exceeds the design and load limits of the

pipe. Because the WCU 26 would be installed along the ridgeline and down a steep slope, an anchoring system would be installed at the top of the slope to prevent the pipe from slipping. The anchoring system would require only minimal surface disturbance of approximately 4-foot x 4-foot. The exact locations of the anchors and H-Brace supports would be determined by the project engineer at the time of construction.

#### *WCU 27 Flowline*

The WCU 27 is a producing oil well and the associated flowline carries the produced oil and hydrocarbon liquids from the well to the tie-in header located roughly 0.25 miles to the north. The produced fluids are ultimately transported to the WCU Central Tank Battery where the oil and liquids are separated and stored in tanks until the products are piped and/or trucked offsite to market. The WCU 27 well pad and connecting flowline are located entirely on federal lands administered BLM (LSFO) and the connecting flowline ties in to the header located adjacent to the WCU 22 well.

The existing WCU 27 flowline is installed above-ground and a portion of that line was installed on a steep slope without any type of support system, which has potential to cause strain on the pipe and welds. It is for this reason that Chevron has proposed an alternate route for the new line that would closely follow the natural contours at the toe of the slope to the point where it would then reconnect with the existing corridor (Figure 1). The replacement flowline would be pulled and/or lowered into place via winchline.

In order to minimize any disruption in production, the existing flowline would remain in service until such time as the proposed replacement line was ready to be put into service, after which the existing line would be disconnected from service, cut into lengths, and transported offsite for recycle and/or disposal.

#### *WCU 65 Flowline*

The WCU 65 is a producing oil well and the associated flowline carries the produced oil and hydrocarbon liquids from the well to the tie-in header located roughly 0.25 miles to the east. The produced fluids are ultimately transported to the WCU Central Tank Battery where the oil and liquids are separated and stored in tanks until the products are piped and/or trucked offsite to market. The WCU 65 well pad and a large portion of the connecting flowline are located on federal lands administered by the BLM (LSFO). A portion of the flowline and the tie-in header are located on private land owned and operated by Chevron.

The existing WCU 65 flowline is installed above-ground along the steep slopes on the north side of Rio Blanco County (RBC) Road 9. Again, the existing line was installed without any type of pipe support system and Chevron has proposed an alternate route for the new flowline, which would take advantage of a relatively flat benched area on the south side of the county road. By re-routing the line, the work area would be safer and the pipe would have better contact with the ground. The proposed flowline would be anchored at the top of the slopes and H-brace type supports would be installed as needed along the route to ensure pipe stability. The anchoring system would require only minimal surface disturbance of approximately 4-foot x 4-foot at each location. The placement of anchors and pipe supports would be determined at the time of construction by the project engineer.

The WCU 65 flowline would cross RBC Road 9 at approximately N40°11'13.12" W107°55'24.45" in the SW/NE of Section 34, T3N, R94W. The crossing at this location would be bored beneath the road at a depth of approximately 5-feet per Rio Blanco County Road and Bridge specifications. All Rio Blanco County Land Use and Right-of Way (ROW) Utility Permits would be secured prior to any construction within the county road ROW. Prior to construction and road boring operations, Chevron would ensure that the appropriate traffic controls (i.e. flaggers, warning signs) were in place to ensure the safety of the traveling public. The RBC Road 9 crossing would be completed within a day and would not impede travel any more than absolutely necessary.

Design Features:

Surface Use Plan of Operations (SUPO) is incorporated as a design feature of the Proposed Action.

Further design features are incorporated through reference from the Wilson Creek 2013-2014 Plan of Development under the section for Impacts and Mitigation Plans.

**No Action Alternative:**

The WCU 3-94-34H1 well would not be constructed, drill or maintained. The WCU 26, 27, 65 and 66 pipelines would not be replaced. The flowlines proposed are reaching the end of their useful life due to the age and condition of the pipe. This increases the potential for line failure in the future. This could lead to an environmental release and potentially additional surface disturbance.

**PLAN CONFORMANCE REVIEW:** The Proposed Action is subject to and has been reviewed for conformance with the following plan (43 CFR 1610.5, BLM 1617.3):

Name of Plan: White River Record of Decision and Approved Resource Management Plan (White River ROD/RMP).

Date Approved: July 1, 1997

Decision Number/Page: Page 2-5

Decision Language: "Make federal oil and gas resources available for leasing and development in a manner that provides reasonable protection for other resource values."

Name of Plan: Little Snake Record of Decision and Approved Resource Management Plan (Little Snake ROD/RMP).

Date Approved: October 2011

Decision Number/Page: Page RMP-36

Decision Language: “Identify and make available the federal oil and gas estate (including coalbed natural gas) for exploration and development.”

## **AFFECTED ENVIRONMENT & ENVIRONMENTAL CONSEQUENCES**

**Standards for Public Land Health:** In January 1997, the Colorado BLM approved the Standards for Public Land Health. These standards cover upland soils, riparian systems, plant and animal communities, special status species, and water quality. Standards describe conditions needed to sustain public land health and relate to all uses of the public lands. Because a standard exists for these five categories, a finding must be made for each of them in an environmental analysis (EA). These findings are located in specific elements listed below.

**Cumulative Effects Analysis Assumptions:** Cumulative effects are defined in the Council on Environmental Quality (CEQ) regulations (40 CFR 1508.7) as “...the impact on the environment that results from the incremental impact of the action when added to other past, present, and reasonably foreseeable actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions.” Table 3 lists the past, present, and reasonably foreseeable future actions within the area that might be affected by the Proposed Action; for this project the area considered was the Natural Resources Conservation Service (NRCS) 5<sup>th</sup> Level Watershed. However, the geographic scope used for analysis may vary for each cumulative effects issue and is described in the Affected Environment section for each resource.

**Table 3. Past, Present, and Reasonably Foreseeable Actions**

<b>Action Description</b>	<b>STATUS</b>		
	<b>Past</b>	<b>Present</b>	<b>Future</b>
Livestock Grazing	X	X	X
Recreation	X	X	X
Invasive Weed Inventory and Treatments	X	X	X
Range Improvement Projects : Water Developments Fences & Cattleguards	X	X	X
Wildfire and Emergency Stabilization and Rehabilitation	X	X	X
Oil and Gas Development: Well Pads Access Roads Pipelines Gas Plants Facilities	X	X	X
Power Lines	X	X	X
Vegetation Treatments	X	X	X

### **Affected Resources:**

The CEQ Regulations state that NEPA documents “must concentrate on the issues that are truly significant to the action in question, rather than amassing needless detail” (40 CFR 1500.1(b)). While many issues may arise during scoping, not all of the issues raised warrant analysis in an environmental assessment (EA). Issues will be analyzed if: 1) an analysis of the issue is

necessary to make a reasoned choice between alternatives, or 2) if the issue is associated with a significant direct, indirect, or cumulative impact, or where analysis is necessary to determine the significance of the impacts. Table 4 lists the resources considered and the determination as to whether they require additional analysis.

**Table 4. Resources and Determination of Need for Further Analysis**

Determination <sup>1</sup>	Resource	Rationale for Determination
<b>Physical Resources</b>		
PI	Air Quality	See discussion below.
PI	Geology and Minerals	The proposed well is located in an existing oil field see discussion below.
PI	Soil Resources*	See discussion below.
PI	Surface and Ground Water Quality*	See discussion below.
<b>Biological Resources</b>		
NP	Wetlands and Riparian Zones*	There are no systems that support riparian vegetation that would have the potential to be influenced by the Proposed Action. The nearest riparian habitat to the proposed/existing well location and proposed power line is separated by ~0.70 miles of ephemeral channel. The same riparian habitat is separated by ~1.3 miles of ephemeral channel from the proposed/existing surface flowlines WCU 65 and WCU 26. Proposed/existing surface flowline WCU 27 is separated from Wilson Creek (the nearest system that supports riparian habitat to this location) by a distance of ~0.6 miles and buried pipeline WCU 66 is separate from Wilson creek by ~0.40 miles. All access roads are existing and require no new disturbance. Due to the distances between the proposed disturbance and any riparian habitat, it is unlikely that any sediment resulting from construction activities would reach any riparian habitat.
PI	Vegetation*	See discussion below.
PI	Invasive, Non-native Species	See discussion below.
PI	Special Status Animal Species*	See discussion below.
NP	Special Status Plant Species*	There are no special status plant species present within 600 meters of the Proposed Action. There are no associated concerns.
PI	Migratory Birds	See discussion below.
NP	Aquatic Wildlife*	There are no systems that support aquatic wildlife or provide habitat for aquatic species that would have the potential to be influenced by the Proposed Action. The nearest systems which support higher order aquatic vertebrate species are the White River and Wilson Creek which are separated from the proposed locations by more than 15 miles and approximately 1 mile, respectively, of ephemeral channel.
PI	Terrestrial Wildlife*	See discussion below.

Determination <sup>1</sup>	Resource	Rationale for Determination
NP	Wild Horses	The proposed project is not located within the Piceance-East Douglas Herd Management Area, the North Piceance or West Douglas Herd Areas.
<b>Heritage Resources and the Human Environment</b>		
PI	Cultural Resources	See discussion below.
PI	Paleontological Resources	See discussion below
NP	Native American Religious Concerns	No Native American Religious concerns are known in the area. The previous surveys have documented no cultural sites that Native American tribes have identified as a site type for which they have concerns. Should recommended inventories or future consultations with Tribal authorities reveal the existence of such sensitive properties, appropriate mitigation and/or protection measures may be undertaken.
PI	Visual Resources	See discussion below.
PI	Hazardous or Solid Wastes	See discussion below.
PI	Fire Management	See discussion below.
NI	Social and Economic Conditions	There would not be any substantial changes to local social or economic conditions.
NP	Environmental Justice	According to the most recent Census Bureau statistics (2000), there are no minority or low income populations within the WRFO.
NP	Lands with Wilderness Characteristics	There are no lands with wilderness characteristics identified in or near the proposed project area.
<b>Resource Uses</b>		
PI	Forest Management	See discussion below.
PI	Rangeland Management	See discussion below.
NI	Floodplains, Hydrology, and Water Rights	This action would not impact floodplains, surface hydrology should be protected by Best Management Practices (BMPs) as design features and freshwater would be purchased from local sources. Mitigation in the water quality section assures that this water will be from locations with proper water rights. Therefore impacts to existing water rights are not expected.
NI	Realty Authorizations	Proposed pipeline replacements are all located on-unit; therefore no right-of-way is required. Other right-of-ways are present in the Proposed Action area, however, no impacts expected.
PI	Recreation	See discussion below.
PI	Access and Transportation	See discussion below.
NP	Prime and Unique Farmlands	There are no Prime and Unique Farmlands within the project area.
<b>Special Designations</b>		
NP	Areas of Critical Environmental Concern	The nearest area of critical environmental concern is Black's Gulch which is located 11.5 aerial miles to the southwest of the Proposed

Determination <sup>1</sup>	Resource	Rationale for Determination
		Action. There are no associated concerns.
NP	Wilderness	There are no designated Wilderness areas or Wilderness Study Areas in the proposed project area. Windy Gulch WSA is located five miles to the west of the project area.
NP	Wild and Scenic Rivers	There are no Wild and Scenic Rivers in the WRFO or the vicinity of the project area.
NP	Scenic Byways	There are no Scenic Byways within the project area.

<sup>1</sup> NP = Not present in the area impacted by the Proposed Action or Alternatives. NI = Present, but not affected to a degree that detailed analysis is required. PI = Present with potential for impact analyzed in detail in the EA.

\* Public Land Health Standard

## AIR QUALITY

*Affected Environment:* The Proposed Action is an attainment area for national and state air quality standards, based on designated non-attainment areas for criteria pollutants published by the Environmental Protection Agency (EPA 2013). The Proposed Action is also located more than 10-miles from any special designation airsheds or non-attainment areas. Non-attainment areas are designated by U.S. Environmental Protection Agency (EPA) as having air pollution levels that persistently exceed the National Ambient Air Quality (NAAQ) standards. Projects that could impact special designation areas and/or non-attainment areas may require special consideration from the Colorado Department of Public Health and Environment (CDPHE) and the EPA. The closest special designation areas are Dinosaur National Monument, which is located northwest of the project area (designated Class II airshed with Prevention of Significant Deterioration (PSD) with thresholds for sulfur oxides and visibility), and the Mount Zirkel and Flat Tops Wilderness Areas located east of the Proposed Action (designated Class I areas). The closest non-attainment area in Colorado is along the Front Range corridor and it is non-attainment for ozone. General conformity regulations require that federal activities do not cause or contribute to a new violation of NAAQ standards; that actions do not cause additional or worsen existing violations of the NAAQ standards; and that attainment of these standards is not delayed by federal actions in non-attainment areas.

The Proposed Action is in Rio Blanco County within the Western Counties Monitoring Region of Colorado (APCD 2010). Local air quality parameters including particulates are measured at monitoring sites located at Meeker, Rangely, Dinosaur and Ripple Creek Pass near the Flat Tops Wilderness Area. Ozone data have been collected in Meeker and Rangely since 2010. The closest location for an Interagency Monitoring of Protected Visual Environments (IMPROVE) site is near the Flat Tops Wilderness, northeast of the Project Area. IMPROVE sites measure visibility impairment from air borne particles.

### *Environmental Consequences of the Proposed Action:*

Direct and Indirect Effects: The Proposed Action would result in low and short-term impacts on air quality during construction, drilling, completion, pipeline installation and, to a lesser extent, from vehicles and gas processing and compression facilities during the production phase. Increases in the following criteria pollutants would occur due to combustion of fossil fuels during construction activities: carbon monoxide, ozone (secondary pollutant formed

photochemically from volatile organic compounds (VOCs) and nitrogen oxides (NO<sub>x</sub>), nitrogen dioxide, and sulfur dioxide. Ozone advisories and alerts were issued in the winter of 2011 and 2013 for the western portion of Rio Blanco County based on data collected from the Rangely monitoring site. Ozone can cause breathing difficulties and worsen respiratory infections especially in the elderly, the young and those with pre-existing ailments such as asthma.

Additional low, short-term impacts to air quality may occur due to venting or flaring of gas from wells and VOCs during drilling and completion activities. Venting and/or flaring of natural gas is typically done for short periods of time in order to determine potential production amounts and characterize the quality of the gas. If the exploratory wells are successful, VOCs including hazardous air pollutants (HAPs) commonly associated with oil and gas production (benzene, toluene, ethylbenzene, xylene, and n-hexane) will be released from tanks, separation equipment and due to transportation of natural gas, produced water and condensate by pipeline or trucks. The amount of these releases are difficult to estimate, but would be within CDPHE air permit limits estimated in tons per year. Non-criteria pollutants (NAAQ standards have not been set for non-criteria pollutants), such as nitric oxide, air toxics (e.g. benzene), and total suspended particulates may experience slight, temporary increases as a result of the Proposed Action.

Soil disturbance resulting from construction, heavy equipment, and drill rigs is expected to cause increases in fugitive dust and inhalable particulate matter, specifically particulate matter (PM) 10 microns (µm) or less (PM<sub>10</sub>) and particles 2.5 µm or less (PM<sub>2.5</sub>). Particulate matter is made up of a number of components, including acids (such as nitrates and sulfates), organic chemicals, metals, and soil or dust particles. More than 70 percent of PM<sub>10</sub> (coarse particles) are created from windblown dust and soil from roads, fields and construction sites. A smaller percentage of coarse particles comes from automobile and diesel engine exhaust, soot from wood fires, and sulfates and nitrates from combustion sources such as industrial boilers (CAQCC 2011). Dust production is the most likely during the construction and drilling phases, especially when conditions are dry and/or windy. Particulate matter is the major contributor to reductions in visibility, due to particulates ability to scatter or absorb light. Particulate matter can also have human health impacts.

Fugitive dust emissions would likely cause low, short-term impacts to local air quality, specifically visibility. Once the well goes into interim reclamation topsoil removed during road construction would be redistributed and stabilized alongside the road and the pads would also be recontoured and stabilized. As vegetation establishes in the reclaimed areas, dust production will occur only when vehicles travel on the access roads to service the well. The increase in airborne particulate matter from this project is not expected to exceed CAAQ or NAAQ standards on an hourly, 8-hour average or daily basis.

It is unlikely that the area the Proposed Action is located would be in a future non-attainment area for ozone. This is due to the distance from Rangely; that this location is not likely to be impacted by emissions from the Uinta and Yampa River Basins; and local climate conditions favor dispersion of pollutants that might form ozone.

In summary, soil disturbance resulting from construction of the pad, installation of pipelines and roads and drilling is expected to cause increases in fugitive dust and inhalable particulate matter

in the project area and immediate vicinity may contribute to reductions in regional visibility. In addition, increases in the following criteria pollutants: carbon monoxide, VOCs, ozone, nitrogen dioxide, and sulfur dioxide would also occur due to combustion of fossil fuels during exploration and production activities. Non-criteria pollutants such as carbon dioxide, methane and nitrous oxides, air toxics (e.g. benzene), total suspended particulates (TSP), and increased impacts to visibility and atmospheric deposition may also increase as a result of the Proposed Action. Even with these increased pollutants the Proposed Action is unlikely to result in an exceedance of NAAQ and Colorado ambient air quality (CAAQ) standards, and is likely to comply with applicable PSD increments and other significant impact thresholds.

Cumulative Effects: The cumulative impacts area for the Proposed Action is the two-county area (Rio Blanco and Garfield Counties). Principal air pollution sources in the two-county area include emissions from motor vehicles, oil and gas development, coal-fired power plants, coal mines, sand and gravel operations, windblown dust, and wildfires and prescribed burns (CAQCC 2011). Facility emissions in the two-county area are dominated by emissions related to oil and gas exploration, processing, or transportation. Due to emission sources in the White River and in the nearby Uinta and Yampa River Basins, VOCs, nitrogen oxides, and dust (particulate matter) are likely to increase into the future. With the exception of ozone, overall air quality conditions in Rio Blanco and Garfield Counties are likely to continue to be in attainment of NAAQ standards due to effective atmospheric dispersion. Since 2010, the Rangely and Dinosaur areas in Northwestern Colorado have measured high values of ozone during static air events. High ozone values are likely due in part to VOCs and nitrogen oxides emitted by oil and gas development in the Uinta basin, near Rangely and from power plants in Utah.

Since 2010 ozone data have been collected at the Rangely air quality monitoring site and this site has measured values of 8-hour values for ozone above the NAAQ ozone standard of 75 ppb. These values have not been high enough to lead to an exceedance of NAAQ standards until this year. Maximum 8-hour average ozone values measured at Rangely in January and February of 2013 are likely to result in exceedance of the NAAQ standards, since the fourth highest value for 2013 is already 91 ppb and the average of the fourth highest values from 2011-2013 is currently 77 ppb. Additional regulation of emissions will be applied to BLM permitted oil and gas development within any future designated non-attainment area. As described above EPA and CDPHE are responsible for designating non-attainment areas and would likely require performance standards and practices in this area to ensure future compliance with NAAQ standards.

The Proposed Action is unlikely to contribute to the exceedance of NAAQ standards for ozone in the Rangely and Dinosaur areas since the predominant wind patterns blow from southwest to the northeast. The Meeker air quality site to the south of the Proposed Action has not measured an exceedance of NAAQ standard, and the average of the fourth highest value for 8-hour ozone for 2010-2012 was 64 ppb. Therefore this action is unlikely to lead to a violation of NAAQ standards for ozone or contribute to the air quality conditions leading to the exceedance of standards measured in Rangely or Meeker.

*Environmental Consequences of the No Action Alternative:*

Direct and Indirect Effects: Impacts to air quality would not occur from the No Action Alternative.

Cumulative Effects: Impacts would be similar to those described for the action alternative.

*Mitigation:* The following should be added as conditions of approval (COAs):

1. Chevron and/or Endeavor will limit unnecessary emissions from point or nonpoint pollution sources and prevent air quality deterioration from necessary pollution sources in accordance with all applicable state, federal and local air quality law and regulation.
2. Chevron and/or Endeavor will treat all access roads with water and/or a chemical dust suppressant during construction and drilling activities so that there is not a visible dust trail behind vehicles. Any technique other than the use of freshwater as a dust suppressant on BLM lands will require prior written approval from BLM.

## **GEOLOGY AND MINERALS**

*Affected Environment:* Surficial geology of the proposed well pad is the Mesaverde. The well pad is located on federal oil and gas lease COD-033926 and a section of the horizontal well would traverse the southeast corner of federal oil and gas lease COD-033780. Both leases are included within the Wilson Creek federal oil and gas exploratory unit COC-47699X.

Wilson Creek is a large anticlinal closure with multiple pays and stratigraphic variations. Northwest of the Wilson Creek Field, the Danforth Hills anticline contains several small, multi-pay oil and gas fields and several other structurally-controlled oil and gas fields occur within a 25 mile radius. The Wilson Creek anticline include coal, oil, and natural gas from the Cretaceous age Mesaverde, Cretaceous age Niobrara, Jurassic age Morrison and Sundance, and the Pennsylvanian age Minturn Formations. The target zone for the proposed drilling plan is the Niobrara. First Niobrara production in Wilson Creek dates back to 1995 from Chevron's WCU #69 well which is located approximately 0.8 miles southwest of the proposed location. According to the Colorado Oil and Gas Conservation Commission (COGCC) database this is a vertical well and is currently shut in. The COGCC database identifies 18 producing, 7 drilled and abandoned, 4 injection and 20 plugged and abandoned well locations within a one mile radius of the well pad location and horizontal extension. Only three of these drilled wells have targeted the Niobrara Formation.

During drilling potential water, coal, oil and gas zones would be encountered from surface to the targeted zone. This area is identified as suitable for surface and underground coal leasing in the White River ROD/RMP. The surface location is within 4 miles of Colowyo Coal Company's federal coal lease COC29226 and approximately 4.5 miles of their active mining pit.

*Environmental Consequences of the Proposed Action:*

Direct and Indirect Effects: The cementing procedure of the Proposed Action isolates the formations and would prevent the migration of gas, water, and oil between formations.

Development of these wells would deplete the hydrocarbon resources in the targeted formation. The Proposed Action would have and little to no effect on coal mining due to the distance from existing coal mining operations and coal leases. It is unlikely this area would be leased for coal in the foreseeable future.

Cumulative Effects: As mentioned above three wells have previously been drilled to the Niobrara in the one mile area surrounding the well in Propose Action. Currently the well spacing for effective reservoir drainage is uncertain. Using an assumption of 80 acres drainage, an additional 30 wells in the above identified area could be necessary for the full recovery of the oil and gas resources.

*Environmental Consequences of the No Action Alternative:*

Direct and Indirect Effects: The oil and gas resources of the targeted zones would not be developed and would remain available for future development.

Cumulative Effects: There would be no contribution to the recovery of oil and gas resources.

*Mitigation:* None

**SOIL RESOURCES**

*Affected Environment:* The classifications of soils within 30 meters of the proposed pad and centerlines of the access road and pipelines, within the WRFO, on BLM administered lands, and that could be impacted by the Proposed Action, are shown in Table 5.

**Table 5.** Soil Classifications within 30 Meters of the Pad and the Centerline of Roads and Pipelines (NRCS, 2008).

Soil Classification	Range Site	Erosion Hazard	Rutting Hazard	Potentially Impacted (Acres)
Jerry-Thornburgh-Rhone complex, 8 to 65 percent slopes	Brushy Loam	Moderate	Severe	9
Mergel-Redthayne-Dollard complex, 8 to 65 percent slopes	Loamy Slopes	Severe	Severe	16

The access road and most of the pad are on soils that are characterized as having the potential for landslides and have slopes of over 50 percent, the pipeline replacements are also on slopes that are greater than 50 percent. Of the 25 acres of soils considered, 7.8 acres are on slopes greater than 50 percent and a total of 9 acres are on soils with landslide potential. Of the 25 acres analyzed, 18 acres are on fragile soils. The rutting hazard on all these soils is severe and the erosion hazard is moderate to severe.

*Environmental Consequences of the Proposed Action:*

Direct and Indirect Effects: The WCU-48 well pad, access road and pipeline replacements would disturb 8.5 acres of soils on the top of steep ridges. With proper BMPs for

stormwater, construction, reclamation and mitigation described below impacts to soils outside the 30 meter buffer around surface disturbance is not expected. The pipeline replacements are expected to disturb 3.8 acres. The proposed replacement is expected to be more stable than current conditions and therefore can be expected to have less of risk for leaks.

Direct impacts from the construction of the WCU-48 well pad, access road and the installation of pipelines would include soil compaction, removal of vegetation, exposure of subsoil, mixing of soil horizons, loss of topsoil productivity, and an increase in the susceptibility of soils to wind and water erosion. Compaction due to construction activities would reduce aeration, permeability and water-holding capacities of soils in some locations. Removal of vegetation exposes soils to erosion from rainfall, wind and surface runoff. Exposure of subsoil and mixing of soil horizons can change the physical characteristics of subsoil and may reduce the productivity of these soils before reclamation is complete. Loss of topsoil productivity can occur during storage due to nutrient loss through percolation of precipitation through the soils, physical loss and mixing of less productive soil layers during moving and a loss of structure. An increase in surface runoff and sedimentation could be expected from impacted soils and these soils are likely to be less resilient to erosion from surface runoff after disturbance. There is also the possibility of destabilizing soils with a landslide potential.

These direct impacts from the Proposed Action could result in increased indirect impacts to soils off the construction sites such as increased runoff and erosion. Implementation of BMPs for stormwater, mitigation and reclamation will reduce impacts from this project and should limit impacts to construction sites. However, there is the potential for intense storm events or BMP failures resulting in erosion off the site. This is most likely on the WCU-48 well pad. Monitoring of areas along the access road and pad as required in the mitigation below should identify any failure of BMPs or unanticipated erosion. Mitigation would require a plan to be developed for addressing any areas of erosion that develop.

Although the soils for the access road to the WCU-48 pad are not clayey, the rutting hazard for these soils is severe. The access road would pass through soils with loam and channery loam surface texture that are likely to provide a suitable road base for the access road, but would likely need to be surfaced or re-surfaced for an all-weather access and to protect the steep slopes adjacent to the access road.

Indirect impacts from this project could result in contamination of surface and subsurface soils due to unintentional leaks or spills from construction equipment, storage tanks production equipment; and if these spills occurred they would affect the productivity of soils.

Cumulative Effects: Well pads in the general area (Wilson Creek Field) have been and are likely to occur on average at one to three well pads per square mile. If this well is successful, additional production wells would include surface disturbance for well pads, pipelines, roads and support facilities. Livestock grazing and dispersed recreation occurs on public and private lands in the area and may reduce canopy cover and lead to localized erosion in some reclamation areas. No other impacts other than oil and gas development, livestock and recreation are expected in the Strawberry Creek watershed. In general, soil disturbance in the Proposed Action and other activities are likely to reduce soil productivity and may lead to increased erosion and instability

of soils in local areas, but is not likely to be outside the 30 meter buffer around the disturbance analyzed for impacts to soil resources.

*Environmental Consequences of the No Action Alternative:*

Direct and Indirect Effects: No impacts to soils would occur.

Cumulative Effects: Impacts would be similar to those described for the action alternative.

*Mitigation:* The following should be added as conditions of approval (COAs):

1. In order to protect public land health standards for soils, erosion features such as rilling, gullyng, piping and mass wasting on the surface disturbance or adjacent to the surface disturbance as a result of this action will be addressed immediately after observation by contacting the Authorized Officer (AO) and by submitting a plan to assure successful soil stabilization with BMPs to address erosion problems.
2. All construction activity shall cease when soils or road surfaces become saturated to a depth of three inches unless approved by the Authorized Officer.
3. To maintain the drainage features of the access roads, newly built and existing access roads will maintained with six inches of road base and/or gravel aggregate. Existing gravel and aggregate may be sufficient in some locations. Maintenance means restoring the travel surface shape and borrow ditches for the road design and maintaining aggregate as necessary. The surfacing will be removed before final reclamation on roads that are no longer needed.

*Finding on the Public Land Health Standard #1 for Upland Soils:* With mitigation, this action is unlikely to reduce the productivity of soils on public lands.

**SURFACE & GROUND WATER QUALITY**

*Affected Environment: Surface Water:* The WCU-48 pad is within the Strawberry Creek watershed tributary to the White River. Table 6 describes water segments that may be impacted by this project.

**Table 6. Water Quality Classification Table (WQCC 2013)**

Segment	Segment Name	Use Protected	Protected Beneficial Uses			
			Aquatic Life	Recreation	Agriculture	Water Supply
9b	All tributaries to the White River from the confluence with Flag Creek to Piceance Creek	No	Cold 2	Not Primary Contact Recreation	Yes	Yes
7	The mainstem of the White River from Miller Creek to Piceance Creek	No	Cold 1	Existing Primary Contact	Yes	Yes

				Recreation		
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Segment 9b describes tributaries to the White River that are protected for cold water aquatic life (Cold 2). The cold designation means the classification standards would be protective of aquatic life normally found in waters where the summer weekly average temperatures do not frequently exceed 20 °C. The Cold 2 designation means that it has been determined that these waters are not capable of sustaining a wide variety of cold water biota. This segment also has standards that are protective of recreation, agriculture, and water supply.

Segment 7, White River, is protected for cold water aquatic life (Cold 1). The Cold 1 designation means that it has been determined that these waters are capable of sustaining a wide variety of cold water biota. Segment 9b and 7 are not listed on the 303d list of Colorado’s impaired waters (WQCC 2012). These segments are also protected for recreation, agricultural and in the case of the White River, water supply.

The pipeline replacements are in the Milk Creek watershed that drains into the Yampa River. This segment is COLCLC20, which has a section in Sinking Gulch listed on the 303d list for metals, although this project would not drain into Stinking Gulch it does drain into the a portion of the Yampa (Elk Head Creek to the Green River) that is listed for sediment on the monitoring and evaluation list and total recoverable iron on the impaired list (WQCC 2012).

Groundwater: This project is generally in an area of recharge that moves to surface waters via alluvial aquifers, bedrock aquifers and on the surface during spring melt and rain storms.

Contact springs are common in the area and are often the result of upper bedrock aquifers consisting of fractured sandstones and shales. Perched groundwater zones occur locally when saturated zones contact differences in permeability and solubility of individual formations. These contact zones can occur in the ridges between surface water drainages and may be manifested as springs and seeps above the valley floor in outcrop areas. Many of the unstable soils and landslides are associated with an elevation band of groundwater discharge areas associated with permeable and fragile rock bands.

*Environmental Consequences of the Proposed Action:*

Direct and Indirect Effects: Surface Waters: Clearing, grading, and soil stockpiling activities associated with the Proposed Action would alter overland flow and natural infiltration patterns. Potential direct impacts include surface soil compaction caused by construction equipment and vehicles, removal of vegetation and disturbance of surface soils, which would increase rain-splash erosion and reduce the soil’s ability to absorb water and increase the volume and rate of surface runoff, which in turn would increase surface erosion. The steep slopes adjacent to the pad and along the access road are the most likely areas for this surface erosion to occur. Stormwater measures and best management practices include periodic monitoring of any erosion problems would be essential to avoid erosion and increased sedimentation to surface waters. Pipeline replacements are not expected to result in impacts beyond the construction site and impacts to impaired waters or the water quality of Milk Creek are not expected.

Water produced from the Wilson Creek field would be used to the greatest extent possible for drilling operations. Freshwater would be purchased from local sources. No estimates of freshwater use are given in the surface use plan and therefore impacts cannot be adequately assessed. The source of this water would likely be from the White or Yampa River. Typical well drilling in the WRFO uses 2.62 acre-feet of fresh water per well per well, and a programmatic agreement was established with the US Fish and Wildlife (FWS) for depletions based on this amount. This programmatic agreement will be used for this project (See the *Special Status Animal Species* Section). Since this is a horizontal completion water use may be higher than this typical value of 2.62 acre-feet, but if production water from the Wilson Creek Field is used this estimate may be high for freshwater use.

Surface runoff associated with storm events may increase sediment loads in surface waters down gradient of disturbed areas. Sediment can be deposited and stored in minor drainages and sediment retention pits where it would be moved into the Strawberry Creek during heavy convective storms. Surface erosion for this project is most likely during the construction and early production phases of the project and would be mitigated using BMPs for stormwater.

Groundwaters: Potential freshwater zones would likely be in the Mesaverde formation. If the wells go into production, these potential freshwater zones will be protected by 1,500 feet of surface casing, cementing behind the surface casing will be carried to the surface according to the drilling plan. The grade of cement used will vary but will be brought up to previously cementing intervals using standard drilling practices and checked to eliminate gaps between cement. Cement protects the well casings from leaking due to deterioration over the life of the well and allows casings to withstand pressure increases during completion and hydrologic fracturing activities.

Loss of drilling fluids may occur at any time in the drilling process due to changes in porosity or other properties of the rock being drilled. When this occurs, drilling fluids may be introduced into the surrounding formations which could include freshwater aquifers. If drilling fluids are lost groundwater aquifers, aquifers may be contaminated by drilling additives. Using bentonite, freshwater and other additives that cannot contaminate groundwater mitigates the loss of drilling fluids that can be common during drilling since the introduction of these substances would not impact the quality of these groundwater features.

Impacts to groundwater resources could occur due to failure of well integrity, failed cement, surface spills, and/or the loss of drilling, completion and hydraulic fracturing fluids into groundwater. Types of chemical additives used in drilling activities may include acids, hydrocarbons, thickening agents, lubricants, and other additives that are operator and location specific. Concentrations of these additives also vary considerably and are not always known since different mixtures can be used for different purposes in gas development and even in the same well bore. According to COGCC requirements, all chemicals (greater than 500 pounds) used during drilling, completion, and work-over operations, including hydraulic fracturing treatments will be disclosed in a chemical disclosure form by well site. Also, chemicals and additives used for hydraulic fracturing will be disclosed on the public web site set up for this purpose.

Hydraulic fracturing is designed to change the producing formations' physical properties by increasing the flow of water and gas around the well bore. Hydraulic fracturing may also introduce chemical additives into the producing formations. Chemical additives used in completion activities will mostly be pumped back to surface tanks before production. Left over fluids will be injected in a Class II injection well nearby in the Wilson Creek Field.

Known groundwater bearing zones in the project area would be protected by drilling plan as described. Groundwater resources (including the contact springs, perched aquifers, and groundwater zones described in the Affected Environment) are all in elevations above the surface casing. With proper drilling and completion practices contamination of groundwater resources is unlikely.

Cumulative Effects: Well pads in the general area (Strawberry Creek watershed) have and would occur on average at one to three well pad per square mile. Production wells include surface disturbance for well pads, pipelines, roads and support facilities. Extensive development of oil and gas in this area has not been proposed or is foreseeable at this time. Livestock grazing and dispersed recreation occurs on public and private lands in the area and may reduce canopy cover and lead to localized erosion in some reclamation areas. No other impacts other than oil and gas development, livestock and reclamation are expected in the Strawberry Creek watershed. In general, soil disturbance in the Proposed Action and other activities are likely to reduce soil productivity and may lead to increased erosion and increased salt or sedimentation loading.

*Environmental Consequences of the No Action Alternative:*

Direct and Indirect Effects: Neither ground nor surface water quality would be impacted by the No Action Alternative.

Cumulative Effects: Impacts would be similar to those described for the action alternative, but would not include the impacts from the Proposed Action.

*Mitigation:* The following should be added as COAs:

1. To protect surface waters below the project area, keep road inlet and outlet ditches, sediment retention basins, and culverts free of obstructions, particularly before and during spring run-off and summer convective storms. Provide adequate drainage spacing to avoid accumulation of water in ditches or on road surfaces.
2. Locate drainage dips and drainage ditches in such a manner as to avoid discharge onto unstable terrain such as headwalls or slumps. Provide adequate spacing to avoid accumulation of water in ditches or dips.
3. When drilling to set the conductor and surface casing, drilling fluid will be composed only of fresh water, bentonite, and/or a benign lost circulation material that does not pose a risk of harm to human health or the environment (e.g., cedar bark, shredded cane stalks, mineral fiber and hair, mica flakes, ground and sized limestone or marble, wood, nut hulls, corncobs, or cotton hulls).

4. Submit via Sundry Notice an estimate of freshwater use with the location and the water rights associated with the source prior to drilling. Freshwater should be used to drill the surface casing. Produced water from the Wilson Creek field may be used for drilling the production casing and any completion or stimulation activities. Estimates of volumes of water used for these purpose should be submitted via sundry.

*Finding on the Public Land Health Standard #5 for Water Quality:* It is unlikely that construction of these well pads, access roads, installation of pipelines or drilling would result in an exceedence of state water quality standards.

## VEGETATION

*Affected Environment:* The overall area of the Proposed Action is a Brushy Loam range site. The associated plant community is mostly mature mountain shrubs including Gambel oak (*Quercus gambelii*), serviceberry (*Amelanchier alnifolia*), mountain brome (*Bromus marginatus*), elk sedge (*Carex garberi*), western wheatgrass (*Pascopyrum smithii*), and native bluegrasses (*Poa spp*). Smaller amounts of snowberry (*Symphoricarpos alba*), Letterman needlegrass (*Achnatherum lettermanii*), slender wheatgrass (*Elymus trachycaulus*), chokecherry (*Prunus virginiana*), and mountain big sagebrush (*Artemesia tridentata vaseyana*) are also commonly present in the potential plant community. Small patches of stunted aspen (*Populus tremuloides*) are on the north-facing slopes. Portions of the pipeline replacement toward the eastern end of the project area lies in a Loamy Slope range site. Vegetation here includes mountain mahogany (*Cercocarpus montanus*) bluebunch wheatgrass (*Pseudogoegneria spicata*), prairie junegrass (*Koeleria macrantha*), and Indian ricegrass (*Achnatherum hymenoides*) with smaller amounts of snowberry, low rabbitbrush (*Chrysothamnus viscidiflorus*), western wheatgrass, and elk sedge.

### *Environmental Consequences of the Proposed Action:*

Direct and Indirect Effects: The majority of vegetation removal would be associated with the re-development and expansion of the WCU 48 pad and the replacement of the WCU 66 buried pipeline. Disturbance for the well pad would involve 4.1 acres initially but after interim reclamation is completed the longer term (for the life of the pad) disturbance would be reduced to approximately 1.6 acres, which is the same area of the old existing pad and access road. Replacement of the WCU 66 pipeline would disturb approximately 4.4 acres of vegetation, however much of the disturbance would be in an existing pipeline corridor.

Direct impacts of vegetation removal include short-term loss of vegetation and the modification of plant community structure, species composition, and a short-term reduction of basal and aerial vegetative cover. Removal of vegetation also results in increased soil exposure, short-term loss of wildlife habitat, reduced plant diversity, and loss of livestock forage. Indirect impacts include the increased potential for non-native/noxious plant establishment and introduction, accelerated wind and water erosion, changes in water runoff due to road/facility construction, soil impacts that affect plant growth (soil erosion or siltation), shifts in species composition and/or changes in vegetative density away from desirable conditions, and changes in visual aesthetics. Depending on the site, reestablishment of native shrubs may not begin for more than 20 years.

Environmental conditions could prevent initial reseeding efforts from being successful, resulting in an extended recovery period for native plant communities. Incorrect placement of excavated soil back in the trench could result in a substrate that is not capable of supporting a healthy native plant community. Construction in more than one phase or construction season could result in more soil loss, greater potential for noxious weed establishment, and longer recovery times for the disturbed sites.

Cumulative Effects: The proposed projects, when added to other projects and developments, in and near the project area would result in an increase in short-term removal of existing vegetation on private and public land. Long-term changes in plant community composition and structure would also occur on those project sites and on a broader scale from activities such as livestock grazing. Of the total potential vegetation removal near the project area the proposed project would not result in a noteworthy increase in vegetation disturbance or long-term changes in plant community.

*Environmental Consequences of the No Action Alternative:*

Direct and Indirect Effects: Denial of the project would result no impact to vegetation at the existing pad, along the proposed corridors, access road, or surface facilities.

Cumulative Effects: Denial of the proposed project would have little impact on the cumulative effect of oil and gas development impacts to the vegetative communities in the Wilson Creek Oil Field area or in the Devils Hole / Wilson Creek area as a whole.

*Mitigation:* In addition to the mitigation addressed in Chevron’s 2013/2014 Wilson Creek Unit Plan of Development, which addresses this Proposed Action, the following mitigation is required.

1. Chevron will promptly re-vegetate all areas of earthen disturbance not necessary for production facilities, with the following recommended seed mix. Future final reclamation will use the seed mix recommended by BLM at that time as seed mixes and reclamation practices should be expected to evolve over time.

White River Field Office Native Seed Mix #6

Variety	Common Name	Seeding Rate Pure Live Seed (PLS)*
UP Plateau	Sandberg bluegrass	0.5
San Luis	Slender Wheatgrass	2
Sherman	Big Bluegrass	1
Bromar	Mountain Brome	2
Maple Grove	Lewis Flax	1
Bandera	Rocky Mountain Penstemon	0.5

\*Seeding rate is for drilled seeding; for broadcast seeding the rate should be doubled

2. Stockpiled topsoil and spoil piles will be separated and clearly labeled to prevent mixing during reclamation efforts. Prior to pad reclamation (especially final reclamation), BLM

recommends testing topsoil to ensure its viability and/or to identify appropriate amendments to improve reclamation success. When backfilling pipeline trenches soils will be returned in their respective order with topsoils placed as the final topdressing. Topsoil may not be used for bedding pipelines.

3. Woody material will not be included within the topsoil piles, but will be piled separately in a manner that avoids windrowing and large piles of material (Michels 2009). For more mitigation related to the handling of woody materials used during reclamation see the *Forestry* section of this document.
4. Final reclamation including seeding will commence immediately after completion of each phase of construction on any of the proposed corridors. Or spreading of topsoil and application of seed may be delayed until the next appropriate seeding dates (September 1 through March 15). Drill seeding is the preferred method of application. Where broadcast, seed will be applied at twice the rate recommended for drill seeding.
5. Where it is apparent that livestock use will hamper reclamation efforts in terms of vegetation establishment Chevron may build fences (built to BLM Specifications, BLM manual H-1741-1) around reclaimed areas (pad and pipeline). Appropriate pass-through areas will be provided on pipelines to allow livestock to trail through the general area. Fences will be maintained by Chevron and upon achieving reclamation success fences will be removed by Chevron.
6. Chevron, as appropriate, will be responsible for achieving a reclamation success rate equal to a minimum cover and composition of 80 percent of the Desired Plant Community (DPC) (as defined by the ecological site, in an early seral state) or in relation to the seed mix applied within three growing seasons after the application of seed. This community must be capable of persisting on the site without intervention and allow for successional processes consistent with achieving the seral stage on the site prior to surface disturbance.
7. Reclamation achievement will be evaluated using the Public Land Health Standards that include Indicators of Rangeland Health. Reclamation would be considered successful when monitoring of reclaimed areas indicates foliar cover of at least 80 percent of the desired plant community in an herbaceous state. Composition of the resulting plant community must have at least five desirable plant species, at least two of which must be a forb or shrub. No one species may exceed 70 percent relative cover to ensure that site species diversity is achieved. If BLM determines that reclamation success is below an acceptable level, reclamation efforts must be repeated at Chevron's expense until vegetation is successfully established.
8. A reclamation status report for each site will be submitted electronically to the WRFO annually (due January 1<sup>st</sup>) until it is determined that reclamation of the site has met all required objectives of that particular reclamation phase. Every third year, a vegetation monitoring report should accompany the status report. The reclamation status report will be submitted electronically via email and as a hard copy to the WRFO project lead (NRS/Realty Specialist). Mail the hardcopy to: BLM, White River Field Office, 220 East

Market Street, Meeker, CO 81641, Attn: Reclamation Status Report/WRFO (name of project lead). The reclamation status report will include at a minimum the necessary components to sufficiently and accurately characterize progress and status of reclamation to be included in a BLM database. Contact the project lead (NRS) for recommended status report components.

*Finding on the Public Land Health Standard #3 for Plant and Animal Communities:* With implementation of mitigation measures and successful re-vegetation, the Proposed Action would have no effect on the status of Land Health Standard 3 in the project area or at a landscape scale.

## **INVASIVE, NON-NATIVE SPECIES**

*Affected Environment:* As stated in Chevron's 2013/2014 Wilson Creek Unit Plan of Development, several State listed noxious weeds were observed throughout the proposed project area during recent biological surveys completed for and submitted by Chevron. Noxious weeds observed include: cheatgrass (*Bromus tectorum*), houndstongue (*Cynoglossum officinale*), common mullein (*Verbascum thapsus*), yellow toadflax (*Linaria vulgaris*), Canada thistle (*Cirsium arvense*), bull thistle (*Cirsium vulgare*), and common burdock (*Arctium minus*). Yellow toadflax (State A-List) was observed in one isolated area along an intermittent drainage in Section 3, T2N, R94W. The remaining noxious weeds observed are widely distributed in scattered infestations across the entire area. Hoary cress (*Cardaria draba*), leafy spurge (*Euphorbia esula*) and spotted knapweed (*Centaurea stoebe*) are all known to occur in the general area surrounding the proposed projects.

### *Environmental Consequences of the Proposed Action:*

Direct and Indirect Effects: The disturbance associated with the Proposed Action could create or exacerbate a noxious weed problem by importing weed seed on vehicles and equipment or by creating suitable conditions in the form of non-vegetated disturbed areas. Construction activities associated with all phases of the project could spread noxious weed species to other areas of the project, some of which have no invasive or noxious weeds at this time, by carrying seeds or plant parts (rhizomes) on construction equipment. Cheatgrass occurrences are scattered throughout the general project area and cheatgrass invasion is very likely if surface disturbances are not reclaimed immediately (at the first appropriate seeding window following disturbance).

Establishment of noxious or invasive weeds on the project's disturbed soils could result in some areas being dominated by these aggressive species. It would also result in additional seed sources that would help to expand the occurrence of these species into adjacent plant communities.

Cumulative Effects: The proposed projects could contribute to the noxious and invasive plant species present in the surrounding areas. However, existing roads through the area are common sources of invasive and noxious weeds, so elimination of these species from the general area may be unlikely.

*Environmental Consequences of the No Action Alternative:*

Direct and Indirect Effects: Noxious and invasive plants would continue to be present within the vicinity of the project area and, depending on the aggressiveness of weed treatment activities, may continue to spread.

Cumulative Effects: Cumulative effects would be similar to those from the Proposed Action.

*Mitigation:* In addition to the weed control measures addressed in Chevron's 2013/2014 Wilson Creek Unit Plan of Development, weed control would occur throughout the life of the projects, on all portions of the projects (pad and pipelines) and through approval of final abandonment.

1. Chevron will implement an integrated weed management plan according to BLM manual 9015-Integrated Weed Management (BLM 1992). Prior to the season of construction, the operators should submit Pesticide Use Proposals for the use of herbicides appropriate for control/eradication of the known noxious and invasive nonnative species around the pad site and along all proposed pipeline ROWs.
2. The operator will eliminate any noxious plants before seed production has occurred. Application of pesticides and herbicides on public lands will conform to BLM manual 9015 and Appendix B of the BLM White River RMP, Management of Noxious Weeds (BLM 1997). Eradication should make use of materials and methods approved in advance by the AO.
3. In order to minimize the potential for invasion of noxious and invasive species, the operator will be required to attain sufficient cover of native reclamation species (similar to that of nearby undisturbed native plant communities in an early seral state).

Additional mitigation is included in the *Vegetation* and *Soils* sections.

## **SPECIAL STATUS ANIMAL SPECIES**

*Affected Environment:* There are no threatened, endangered or candidate animal species that are known to inhabit or derive important use from the project area. The only two listed species that have potential to be directly influenced by the Proposed Action is the Colorado pikeminnow and razorback sucker.

The White River below Taylor Draw Dam and Kenney Reservoir (approximately 30 valley miles from the project area) is considered occupied habitat, and the White River's 100-year floodplain from Rio Blanco Lake to the Utah state line are designated critical habitat for the Colorado pikeminnow. The White River in Colorado does not appear to support spawning activity, young-of-year nurseries, or juvenile concentrations areas for the Colorado pikeminnow. The Yampa River from state highway 394 to the confluence with the Green River provides occupied and critical habitat for Colorado pikeminnow. The Yampa River and its 100-year flood plain from the mouth of Cross Mountain Canyon to the confluence with the Green River is considered occupied and critical habitat for the razorback sucker.

Additionally, while the listed bonytail and humpback chub do not occur in the White or Yampa River, water depletions in both rivers adversely affect these species' downstream habitats in the Green River.

Several additional BLM-sensitive animal species are known to inhabit or may be indirectly influenced by the Proposed Action. This includes northern goshawk, Townsend's big-eared bat, big free-tailed bat, spotted bat, fringed myotis and several species of special status migratory birds.

*Northern Goshawk:* Goshawks are a relatively rare resident in the White River Resource Area. In general this species prefers to nest in contiguous aspen stands, or spruce-fir/aspen mix stands. Within the last several decades however, approximately half a dozen nests have been found in low to mid elevation piñon-juniper woodlands throughout the Piceance Basin, the nearest being over 21 miles from the project area. Much of the woodlands surrounding the existing and proposed flowline 27, and the existing and proposed 66 are composed of aspen stands that provide suitable nesting substrate. A raptor survey was conducted by West Water Engineering (WWE) during October 2012 and no probable goshawk nests or goshawks were observed within the vicinity of the project area.

*BLM Sensitive Bat Species:* Although the distribution of bats in the WRFO is incompletely understood Townsend's big-eared bats, big free-tailed bats, fringed myotis and spotted bats are found along larger perennial waterways in both the WRFO and LSFO. These bats typically use caves, mines, bridges, and unoccupied buildings for night, nursery, and hibernation roosts, but in western Colorado, single or small groups of bats use rock crevices and tree cavities. Rock outcrops and mature components of woodlands which may provide temporary daytime roosts for small numbers of bats are limited in the vicinity of the project area. Relatively extensive riparian communities (foraging grounds) are along the White and Yampa rivers are separated from the project area by 12 and 16 miles respectively. There are no underground mines or known caves or unoccupied buildings in the vicinity of the project area. Birthing and rearing of young for these bats occur in May and June, and young are capable of flight by the end of July. The big free-tailed bat is not known to breed in Colorado.

*BLM Sensitive and Birds of Conservation Concern:* Virginia's warbler, common poorwill, green-tailed towhee, red-naped sapsucker, broad-tailed hummingbird, violet-green swallow, flammulated owl, Williamson's sapsucker and olive-sided flycatcher are all birds of conservation concern that are known to inhabit the project area. Typical of most migratory passerines in this area, nesting activities normally take place between the third week in May and the third week in July.

*Environmental Consequences of the Proposed Action:*

Direct and Indirect Effects: *Endangered Colorado River fish and BLM-sensitive fish species:* Cumulative water depletions from the Colorado River Basin are considered likely to jeopardize the continued existence of the Colorado pikeminnow, humpback chub, bonytail, and razorback sucker and result in the destruction or adverse modification of their critical habitat. In 2008, BLM prepared a Programmatic Biological Assessment (PBA) that addressed water

depleting activities associated with BLM's fluid minerals program in the Colorado River Basin in Colorado, including water used for well drilling, hydrostatic testing of pipelines, and dust abatement on roads. In response, the U.S. Fish and Wildlife Service (FWS) prepared a Programmatic Biological Opinion (PBO) that addressed water depletions associated with fluid minerals development on BLM lands. The PBO included reasonable and prudent alternatives which allowed BLM to authorize oil and gas wells that result in water depletion while avoiding the likelihood of jeopardy to the endangered fishes and avoiding destruction or adverse modification of their critical habitat. The reasonable and prudent alternative authorized BLM to solicit a one-time contribution to the Recovery Implementation Program for Endangered Fish Species in the Upper Colorado River Basin (Recovery Program) in an amount based on the average annual acre-ft depleted by fluid minerals activities on BLM lands. This contribution was ultimately provided to the Recovery Program through an oil and natural gas development trade association. Development associated with this project would be entered into the WRFO and LSFO fluid minerals water depletion log that is submitted to the Colorado State Office at the end of each Fiscal Year. Implementation of state and federally-imposed design measures to control erosion and spills would limit the risk of contaminants migrating off-site and degrading water quality in the White and Yampa Rivers.

*Northern goshawk:* Although this area contains suitable nesting habitat, no potential nests or birds were observed within the woodland habitats during surveys (WWE 2012).

*BLM Sensitive Bat Species:* While there is suitable roosting and nursery locations in the vicinity of the project area the distance to perennial water ways, lack of rock outcrops that would be involved and limited tree removal, it is unlikely that the Proposed Action would have any direct or indirect effect on BLM sensitive bat species.

*BLM Sensitive and Birds of Conservation Concern:* Direct and indirect effects would be the same as those discussed in the *Migratory Bird Section*.

Cumulative Effects: Cumulative effects would be similar to those discussed in the *Migratory Bird and Terrestrial Wildlife* sections.

*Environmental Consequences of the No Action Alternative:*

Direct and Indirect Effects: Other than surface flowline and buried pipeline replacement, there would be no direct or indirect impacts to migratory bird species or important habitats under the No Action Alternative. However, all of the surface lines and buried pipeline are reaching the end of their useful life due to the age and condition of the pipe. This increases the potential for line failure in the future which could lead to an environmental release and/or additional surface disturbance.

Cumulative Effects: Other than surface flowline and buried pipeline replacement, there would be no contribution to previous or existing disturbances under the No Action Alternative. Failure to replace the pipelines could result in failure of the pipeline leading to an environmental release and/or additional surface disturbance in the future.

*Mitigation:* See *Migratory Bird* section.

*Finding on the Public Land Health Standard #4 for Special Status Species:* The Land Health Standards for special status animal communities are currently being met in the project area. Neither the Proposed nor No Action Alternatives are expected to detract from continued meeting of these standards.

## **MIGRATORY BIRDS**

*Affected Environment:* The proposed well pad, surface flowlines, buried pipeline, access road and power line are all broadly encompassed by dense mountain shrub and aspen stand communities. Both mountain shrub and aspen communities provide nesting habitat for a number of migratory bird species during the breeding season (at this elevation, typically the third week of May through the third week of July).

The BLM lends increased management attention to migratory birds listed by the U.S. Fish and Wildlife Service (FWS) as Birds of Conservation Concern (BCC). These are bird populations that monitoring suggests are undergoing range-wide declining trends and are considered at risk for becoming candidates for listing under the Endangered Species Act (ESA) if not given due consideration in land use decisions. Virginia's warbler, common poorwill, green-tailed towhee, red-naped sapsucker, broad-tailed hummingbird, violet-green swallow, flammulated owl, Williamson's sapsucker and olive-sided flycatcher are all mountain shrub and aspen associated species which likely occur in the project area and are considered BCC.

The development of reserve pits that contain drilling fluids have been known to attract migratory bird use, at least during the migratory period (i.e., local records: mid-March through late May; mid-October through late November). Reserve pits are known to cause mortalities and injuries to migratory birds.

### *Environmental Consequences of the Proposed Action:*

Direct and Indirect Effects: Impacts to migratory birds would vary depending on construction timeframes. Should construction activities be initiated during the nesting season (typically late-May through late-July) there would be greater potential to influence nesting activities/outcomes including bird displacement, nest abandonment and possible nestling mortality.

Directly, access road upgrades and power line construction will not result in any significant ground cover clearing or new disturbance as the access road is already in use and the power line will be placed immediately adjacent to the existing two-track along the ridgeline. Indirectly, approximately 100 acres of functional forage and nesting habitat will be temporarily affected due to reductions in nest densities and avoidance of habitats associated with the increased vehicle traffic and noise along the access road.

Well pad expansion will add an additional 2.5 acres of disturbance through earthwork and vegetation removal of mountain shrub communities surrounding the existing pad site. Activities (pad construction, drilling, etc.) which take place during the breeding season may indirectly

influence an additional 22 acres of functional forage and nesting habitats due to reductions in nest densities and avoidance of habitats associated with increased human activity, vehicle traffic, and construction activities.

Proposed surface flowline construction and removal of existing surface flowlines will result in disturbance, through overland vehicle use, to approximately 5.75 acres (the area within the new and existing 30 ft ROWs). Vegetation that will be disturbed during these activities would be expected to recover during the next growing season. Construction of the new buried pipeline will result in disturbance to 4 acres (area within the 30 ft ROW) of habitat through overland vehicle use and removal of approximately 0.5 acres of vegetation for the 3-4 foot wide trench. Areas where earthwork occurs will be reclaimed. Areas within 100 meters of the 30 foot ROW (approximately 188 acres) for all flowline/pipeline replacement and removal will be subject to short term and temporary disturbances from increased noise and human presence. Once construction is complete, birds would be expected to move back into the area. There will be no new disturbance associated with flushing and capping the existing pipeline.

It has been brought to BLM's attention that in certain situations migratory birds have contacted drilling or frac fluids (i.e., stored in reserve pits) during or after completion operations and are suffering mortality in violation of the Migratory Bird Treaty Act. The extent and nature of the problem is not well defined, but is being actively investigated by the federal agencies and the companies. Until the vectors of mortality are better understood, management measures must be conservative and relegated to preventing bird contact with frac and drilling fluids that may pose a problem.

Cumulative Effects: The Proposed Action is not anticipated to add substantially to existing or proposed disturbances. The Wilson Creek Unit has been in existence since the 1930's and the majority of the disturbances associated with the Proposed Action are taking place in areas that have been previously disturbed. Following interim reclamation, approximately 1.6 acres would remain disturbed for the long-term. Prompt and effective reclamation would promote a healthier, diverse plant community which may potentially benefit local wildlife populations as a whole.

*Environmental Consequences of the No Action Alternative:*

Direct and Indirect Effects: Other than surface flowline and buried pipeline replacement, there would be no direct or indirect impacts to migratory bird species or important habitats under the No Action Alternative. However, all of the surface lines and buried pipeline are reaching the end of their useful life due to the age and condition of the pipe. This increases the potential for line failure in the future which could lead to an environmental release and/or additional surface disturbance.

Cumulative Effects: Other than surface flowline and buried pipeline replacement, there would be no contribution to previous or existing disturbances under the No Action Alternative. Failure to replace the pipelines could result in failure of the pipeline leading to an environmental release and/or additional surface disturbance in the future.

*Mitigation:*

1. Activities associated with the Proposed Action will take place outside the migratory bird nesting season of May 22 through July 22.
2. Although reserve pits are not planned with this project, in the event they are built the operator shall prevent use by species of birds during completion and after completion activities have ceased. Methods may include netting or other alternative methods that effectively prevent use and that meet BLM approval. It will be the responsibility of the operator to notify the BLM of the method that will be used to prevent use two weeks prior to when completion activities are expected to begin. The BLM approved method will be applied within 24 hours after completion.

## TERRESTRIAL WILDLIFE

*Affected Environment:* The higher elevation aspen stands and mountain shrub communities that encompass the project area are categorized by Colorado Parks and Wildlife as big game summer range. This area typically receives the heaviest use by big game generally from May through August.

Mature components of aspen woodlands which surround the proposed and existing pipeline location may provide suitable nest substrate for woodland raptors (accipitrine and buteo species, long-eared and saw-whet owls). Raptors surveys were completed for a portion of Wilson Creek Unit in October 2012.

The distribution and abundance of small mammal populations are poorly documented within the project area; however, those species likely to occur in this area display broad ecological tolerance and are widely distributed throughout the resource area. No narrowly distributed or highly specialized species or subspecific populations are known to occur in the project area.

### *Environmental Consequences of the Proposed Action:*

Direct and Indirect Effects: The Proposed Action would remove approximately 3 acres of a predominately mountain shrub habitat, disrupt (through overland vehicle use) an additional 9.75 acres of mountain shrub and aspen habitat that provide forage and cover resources for local wildlife populations. Following interim reclamation, 1.6 acres would remain disturbed for the life of the project. Increased vehicle traffic, noise and human activity, particularly during the construction and drilling phase would have the greatest potential to displace local wildlife (contributing to increased energetic demands); however, due to the high amount of activity in the surrounding area, it is suspected that local big game populations already avoid or have adapted to disruptions in the area.

Approximately 871 acres of suitable raptor habitat within the Wilson Creek Unit were surveyed for raptor use in October 2012. Thirteen nests were detected within 800 meters of the area encompassing the Proposed Action during surveys. Because surveys were conducted outside of raptor nesting season, none of the nests were occupied; therefore only a prediction as to who occupied the nests could be made based on tree density, nest size and material. Two red-tailed hawks, one Cooper's hawk and one northern saw-whet owl were observed in the vicinity of the

Proposed Action. Activities taking place during the winter months would have no direct influence on raptor nesting activities. Should activities extend into early spring, returning birds would select nest sites in the face of ongoing activities. However, this may indirectly influence site selection as birds would likely avoid functional habitats in close proximity to disturbances. If activities associated with the Proposed Action take place during the late spring or summer months, it is likely that activities would lead to nest abandonment and ergo nest failure if there are eggs or hatchlings in the nest. Nest locations should be revisited prior to activities to determine status. If nests are determined to be active, appropriate development buffers and timing stipulations will apply.

The proposed power line has the potential to cause injury or mortality to raptors through collisions and electrocution. Building the power line to raptor safe specification will minimize these effects.

Cumulative Effects: Cumulative effects would be similar to those discussed in the *Migratory Bird* section.

*Environmental Consequences of the No Action Alternative:*

Direct and Indirect Effects: Other than surface flowline and buried pipeline replacement, there would be no direct or indirect impacts to migratory bird species or important habitats under the No Action Alternative. However, all of the surface lines and buried pipeline are reaching the end of their useful life due to the age and condition of the pipe. This increases the potential for line failure in the future, which could lead to an environmental release and/or additional surface disturbance.

Cumulative Effects: Other than surface flowline and buried pipeline replacement, there would be no contribution to previous or existing disturbances under the No Action Alternative. Failure to replace the pipelines could result in failure of the pipeline leading to an environmental release and/or additional surface disturbance in the future.

*Mitigation:*

1. If construction activities are initiated after February 15 a spot check of existing nest locations (with play back) will be necessary. Should a nest(s) be determined active/occupied, no development activities will be allowed within 1/2 mile of threatened, endangered or special status species and within a 1/4 mile for all other raptor species until August 15 or dispersal of young (WRRRA ROD TL-01 and TL-04).
2. Most-current raptor protection guidelines would be incorporated into power line design in an attempted to prevent raptor electrocution (e.g., *Suggested Practices for Avian Protection on Power Lines: The State of the Art in 2006*. Avian Power Line Interaction Committee [APLIC]; *Suggested Practices for Avian Protection on Power Lines: The State of the Art in 2006*. Edison Electric Institute, APLIC, and the California Energy Commission. Washington, DC and Sacramento, CA). Where perching deterrence is not an issue, providing adequate conductor separation would be the preferred method of protection.

*Finding on the Public Land Health Standard #3 for Plant and Animal Communities:* The Land Health Standards for animal communities are currently being met in the project area. Neither the Proposed nor No Action Alternatives are expected to detract from the continued meeting of the Land Health Standards.

## **CULTURAL RESOURCES**

*Affected Environment:* A literature review for known cultural resources in the project area was made through the BLM-White River Field Office and the Colorado Archaeology and History Compass database. The locations of the proposed Chevron Wilson Creek Unit 3-94-34 H1 well and pipeline replacements, and the associated access roads and pipeline have been completely inventoried at the Class III (100 percent pedestrian) level by multiple surveys (Bradley 2007; Burns 1994; Conner 1998; Davenport 2009, 2010, 2011; and Conner et al 2013, Compliance Dated 3/21/2013). The most recent inventory consisted of a block survey of a portion of the Wilson Creek Oilfield. Within the current project area the most recent inventory (Conner et al 2013) documented five historic well pads (5RB398, 5RB7402, 5RB7405, 5RB7410, and 5RB7426) a historic road (5RB7330.1, the Little Burma Road), and a historic cultural landscape (5RB7384, the Wilson Creek Oilfield). The well pads and the oil field have been modernized and reworked over time and retain little historic integrity from the period of significance, other than their physical location. These sites are all evaluated as not eligible for listing to the National Register of Historic Places. Therefore there will be no effect to historic properties by the Proposed Action.

However, there always remains the potential to disturb previously undetected resources. The previous Class III cultural resource inventories performed in the general vicinity have documented very few cultural resources. These consist mainly of historic features and isolated finds. Prehistoric cultural resources documented are very limited. This low site density is likely attributed to high elevation, steep terrain and abundant brush and ground cover. The prehistoric peoples who occupied this area have left little visible sign of their previous presence.

### *Environmental Consequences of the Proposed Action:*

Direct and Indirect Effects: Construction of the proposed well pad, access route and pipeline replacements will not directly impact any known historic properties. Indirect impacts from the development could result in an irretrievable and irreversible loss of data from the regional archaeological database. The loss would include contextual data as well as any artifacts that might be lost due to erosion or unauthorized collection.

Cumulative Effects: Indirect impacts from the development could result in an increase in erosion and possibly expose cultural material not visible on the surface today. This could lead to an irretrievable and irreversible loss of data from the regional archaeological database. The loss would include contextual data as well as any artifacts that might be lost due to erosion or unauthorized collection. Any future pipelines or infrastructure will be evaluated for potential impacts to cultural resources when they are proposed.

*Environmental Consequences of the No Action Alternative:*

Direct and Indirect Effects: The normal weathering process that has taken place since the archaeological sites were abandoned by people would continue as they have for decades if not centuries causing a slow loss of soil and archaeological context.

Cumulative Effects: There would be a very slow natural weathering of archaeological resources which results in a slow but irreversible and irretrievable loss of data to the regional archaeological database. The weathering processes are fairly well understood and while some data will be lost researchers can still recover significant information for the regional archaeological database.

Mitigation: Although no historic properties are known to exist within the proposed project area there always exists the possibility for new discoveries of cultural resources. Therefore, the following stipulations must be followed:

1. Chevron USA, Inc. is responsible for informing all persons who are associated with the project that they will be subject to prosecution for knowingly disturbing archaeological sites or for collecting artifacts.
2. If any archaeological materials are discovered as a result of operations under this authorization, activity in the vicinity of the discovery will cease, and the BLM WRFO Archaeologist will be notified immediately. Work may not resume at that location until approved by the Authorizing Official (AO). Chevron USA, Inc. will make every effort to protect the site from further impacts including looting, erosion, or other human or natural damage until BLM determines a treatment approach, and the treatment is completed. Unless previously determined in treatment plans or agreements, BLM will evaluate the cultural resources and, in consultation with the State Historic Preservation Office (SHPO), select the appropriate mitigation option within 48 hours of the discovery. Chevron USA, Inc., under guidance of the BLM, will implement the mitigation in a timely manner. The process will be fully documented in reports, site forms, maps, drawings, and photographs. The BLM will forward documentation to the SHPO for review and concurrence.
3. Pursuant to 43 CFR 10.4(g), Chevron USA, Inc. must notify the AO, by telephone and written confirmation, immediately upon the discovery of human remains, funerary items, sacred objects, or objects of cultural patrimony. Further, pursuant to 43 CFR 10.4(c) and (d), the applicant must stop activities in the vicinity of the discovery and protect it for 30 days or until notified to proceed by the AO.

## **PALEONTOLOGICAL RESOURCES**

*Affected Environment:* All of the proposed well locations and pipeline replacement or new construction locations plus the proposed new power line location are all located in what is mapped as the Cretaceous age Iles Formation (Tweto 1979). The BLM WRFO has classified the Iles Formation as a Potential Fossil Yield Classification (PFYC) 5 formation meaning it is known to produce scientifically noteworthy fossils such as dinosaur bones (which are often poorly preserved), gar scales and turtles (c.f. Armstrong and Wolny 1989).

*Environmental Consequences of the Proposed Action:*

Direct and Indirect Effects: If it becomes necessary to excavate into the underlying sedimentary rock formation to expand the existing well pad, bury any of the new pipelines or excavate footers for new pipeline supporting structures there is the potential to impact scientifically noteworthy fossil resources. Fossils could potentially be crushed and destroyed beyond recognition or displaced from their context and lost through accelerated erosion until such time as reclamation is successful.

Cumulative Effects: Under the Proposed Action there is a potential to directly impact fossil resources during construction, plus leave fossil resources exposed to accelerated exposure in areas where vegetation cover is stripped away or other ground disturbing activities could expose the formation. Any such losses would result in the irreversible, irretrievable permanent loss of fossils and valuable scientific data that might have been associated with those fossils.

*Environmental Consequences of the No Action Alternative:*

Direct and Indirect Effects: There would be no new construction related impacts to fossil resources under the No Action Alternative. Fossils would only be impacted by the naturally occurring slow erosion of the formation due to weathering.

Indirect impacts include accelerated erosion and sloughing from the currently existing facilities in the project area. Sloughing results in the displacement of any fossils that might have been present in the formation and destruction of the context in which they were embedded.

Cumulative Effects: The slow natural erosion of a formation plus any accelerated erosion, which is a result of construction disturbance, results in a slow but reasonably steady irreversible, irretrievable permanent loss of scientific data from the regional paleontological database.

*Mitigation:*

1. Chevron USA, Inc. is responsible for informing all persons who are associated with the project operations that they will be subject to prosecution for disturbing or collecting vertebrate fossils, collecting large amounts of petrified wood (over 25lbs./day, up to 250lbs./year), or collecting fossils for commercial purposes on public lands.
2. If any paleontological resources are discovered as a result of operations under this authorization, Chevron USA, Inc. or any of its agents must stop work immediately at that site, immediately contact the BLM Paleontology Coordinator, and make every effort to protect the site from further impacts, including looting, erosion, or other human or natural damage. Work may not resume at that location until approved by the AO. The BLM or designated paleontologist will evaluate the discovery and take action to protect or remove the resource within 10 working days. Within 10 days, the operator will be allowed to continue construction through the site, or will be given the choice of either (a) following the Paleontology Coordinator's instructions for stabilizing the fossil resource in place and avoiding further disturbance to the fossil resource, or (b) following the Paleontology

Coordinator's instructions for mitigating impacts to the fossil resource prior to continuing construction through the project area.

3. Any excavations into the underlying native sedimentary stone must be monitored by a permitted paleontologist. The monitoring paleontologist must be present before the start of excavations that may impact bedrock.

## **VISUAL RESOURCES**

*Affected Environment:* Visual resources are the visible physical features of a landscape that convey scenic value. Scenic values in the BLM White River Resource Area have been classified according to the Visual Resource Management (VRM) system, and VRM objectives were established in the 1997 White River ROD/RMP. The Proposed Action is located within a Visual Resource Management (VRM) Class III area. The objective of the VRM III classification is to partially retain the existing character of the landscape. The level of change to the characteristic landscape should be moderate. Management activities may attract attention but should not dominate the view of the casual observer. Changes should repeat the basic elements found in the predominant natural features of the characteristic landscape.

Generally, the landscape in the project area is of high relief, rugged topography ranging in 8,100 feet elevation along the ridge tops to 7,200 feet elevation in the valley bottoms. The incised steep drainages lead to sharp narrow ridge lines and narrow valley bottoms. The vegetation consists of various mountain shrubs on the drier south facing slopes with mixed stands of aspen and mountain shrubs with grasses on the north facing slopes. There are several portions of the south facing slopes that largely consist of exposed rocks and soils with very little vegetation. Color tones typical of the south facing slopes are generally muted browns and beiges with darker greens in the vegetated areas. Color tones of the north facing slopes are generally dark to light greens.

There is a long history of oil and gas development in the project area and on the surrounding landscape. There are numerous existing roads, pipeline corridors, and power lines in the project area that create a visual impact to the form, line, and color of the landscape. These visual impacts do not largely follow the form and line of the landscape but rather traverse side slopes resulting in highly visible linear scars with exposed soils. The key observation points for the Proposed Action are along RBC Road 9 (Wilson Creek). This two lane graveled road is steep and winding with traffic speeds of 15-25 m.p.h. The casual observer may be able to observe portions of the Proposed Action at various points along this road.

### *Environmental Consequences of the Proposed Action:*

Direct and Indirect Effects: The well proposed to be drilled on the WCU 48 pad would increase the area of disturbance from 0.83 acres to 3.36 acres with interim reclamation plans to be determined after drilling results are received. This additional disturbance would result in more exposed soils and is located on the top of a narrow ridge line. Combined with the proposed location and additional disturbance area, the associated well development and production facilities for this location (wellhead, electrical boxes for an electrical submersible pump control

and two 500 bbl closed-top upright tanks) will create a moderate visual impact to the line of the ridge when viewed from certain areas along RBC Road 9 by the casual observer. This portion of the proposal may attract attention but should not dominate the view of the casual observer. These visual impacts should decrease with the completion of interim reclamation. The associated flowline replacement may have short term weak visual impacts to color with the exposure of new soils but these impacts will decrease as vegetation is re-established over the trenched area. This flowline will follow an existing flowline corridor and therefore should not present any new impacts to other visual characteristics such as form, texture, and line. The new proposed power line would follow the same existing flowline corridor. Because the power line would be visible above the existing surrounding vegetation this would be a moderate visual impact to form and line element. The power line will create a long term moderate visual impact to the line of the ridge when viewed from certain areas along RBC Road 9 by the casual observer. This portion of the proposal may attract attention but should not dominate the view of the casual observer.

The proposed WCU 66 flowline replacement would follow an existing pipeline corridor on BLM administered lands. This flowline replacement will create a moderate short term visual impact during the construction phase and over the next few years before vegetation is well established. This linear scar will moderately impact the line and color element of landscape by creating a visible linear feature of exposed soils and removed vegetation that does not repeat the basic linear and color found in the predominant natural features of the characteristic landscape. This visual impact will be reduced once vegetation is re-established and will then exist as a weak visual impact such as it did before the Proposed Action.

The proposed WCU 26 flowline replacement would follow an existing pipeline corridor on BLM administered lands. This flowline replacement will create a moderate short term visual impact during the construction phase and over the next few years before vegetation is well established. This linear scar will moderately impact the line and color element of landscape by creating a visible linear feature of exposed soils and removed vegetation that does not repeat the basic linear and color found in the predominant natural features of the characteristic landscape. This visual impact will be reduced once vegetation is re-established and will then exist as a weak visual impact such as it did before the Proposed Action. To reduce the visual impact of this above ground flowline, it is recommended all above ground structures associated with the new flowline (H braces, anchor sites, pipeline, etc.) be painted to blend with the surrounding landscape.

The proposed WCU 27 flowline replacement would follow an existing corridor for a portion of the proposed route and a new route towards the top of the ridgeline. This flowline replacement will create a moderate short term visual impact during the construction phase and over the next few years before vegetation is well established. This linear scar will moderately impact the line and color element of landscape by creating a visible linear feature of exposed soils and removed vegetation that does not repeat the basic linear and color found in the predominant natural features of the characteristic landscape. Once vegetation is established on this site there may still be a weak long term visual impact because of the noticeable difference between the vegetation in the corridor and the existing surrounding vegetation. To reduce the visual impact of this above ground flowline, it is recommended all above ground structures associated with the new flowline (H braces, anchor sites, pipeline, etc.) be painted to blend with the surrounding landscape.

The proposed WCU 65 flowline replacement would follow an existing corridor though not where the existing WCU 65 flowline is currently located. This flowline replacement will create a moderate short term visual impact during the construction phase and over the next few years before vegetation is well established. This linear scar will moderately impact the line and color element of landscape by creating a visible linear feature of exposed soils and removed vegetation that does not repeat the basic linear and color found in the predominant natural features of the characteristic landscape. Once vegetation is established on this site there may still be a weak long term visual impact because of the noticeable difference between the vegetation in the corridor and the existing surrounding vegetation. This flowline replacement will be visible to the casual observer traveling RBC Road 9 where it crosses the road and parallels the road. To reduce the visual impact of this above ground flowline, it is recommended all above ground structures associated with the new flowline (H braces, anchor sites, pipeline, etc.) be painted to blend with the surrounding landscape. This portion of the proposal may attract attention but should not dominate the view of the casual observer.

Cumulative Effects: Combined with the existing oil and gas development in the project area, these flowline replacements and the well development may begin to contribute to an increasingly impacted visual landscape.

*Environmental Consequences of the No Action Alternative:*

Direct and Indirect Effects: As the Proposed Action would not occur, no impacts to visual resources are expected.

Cumulative Effects: None have been identified.

*Mitigation:*

1. All above-ground facilities and equipment will be painted to blend in with the surrounding environment. Color of all above-ground equipment and facilities for the well pad and WCU flowline 26 shall be painted shale green. Color of all above-ground equipment and facilities for all other locations shall be painted Juniper Green using Standard Environmental Color Chart CC-001: June 2008. It is important to note that the color chart is an actual paint chart and cannot be faxed, scanned or photocopied as it will change the color and may not be consistent with the actual color.

## **HAZARDOUS OR SOLID WASTES**

*Affected Environment:* Existing levels of hazardous materials that occur within the boundaries of the project area are unknown. However, there are no known hazardous or other solid wastes on the subject lands. Moreover, no hazardous materials are known to have been used, stored, or disposed of at sites included in the project area.

*Environmental Consequences of the Proposed Action:* The proposed activities will use regulated materials and will generate some solid and sanitary wastes. The potential for harm to human health or the environment includes risks associated with spills of fuel, oil and/or

hazardous substances during oil and gas operations. Accidents and mechanical breakdown of machinery are also possible which may result in the release of hazardous materials into the environment.

Direct and Indirect Effects: The proposed activities may pose direct and indirect impacts to soil, water, air, and biological resources that occur in close proximity to individual disturbance features. Impacts to these resources may also occur at farther distances from individual disturbance features, though it is assumed that these impacts would be reduced because of proximity to the point source. Accidents and mechanical breakdown may also have direct and indirect effects to resources depending on the type of accidents or mechanical breakdown and when and where they occur temporally and spatially.

Cumulative Effects: Effects to soil, water, air, and biological resources as a result of cumulative release of hazardous materials into the environment are unknown. Because some hazardous substances persist in the environment, it is reasonable to assume that multiple activities that may occur throughout the project area that result in the release of individual hazardous material spills or discharge events, may cumulatively result in impacts to soil, water, air, and biological resources.

*Environmental Consequences of the No Action Alternative:* In the No Action Alternative the four pipeline replacements would not occur, and no hazardous wastes would be produced in association with that well under the No Action Alternative. The pipelines not being replaced would result in a higher risk of potential environmental release. In association with the proposed well, no hazardous wastes would be produced in association with that well under the No Action Alternative.

Direct and Indirect Effects: The older pipelines not being replaced would lead to a higher potential for an environmental release to occur from the degrading condition of the pipelines. An undetermined amount of waste could be produced from such a release. No regulated materials or waste would be associated with the proposed well under the No Action Alternative.

Cumulative Effects: Cumulative effects are the same as those analyzed in the Proposed Action in terms of the type of disturbance. In terms of duration and extent, however, this alternative would most likely result in reduced cumulative impacts because of the existing development in the project area, rather than the new proposed well pad.

*Mitigation:*

1. Comply with all federal, state and/or local laws, rules and regulations, including but not limited to onshore orders and notices to lessees, addressing the emission of and/or the handling, use, and release of any substance that poses a risk of harm to human health or the environment. All spills or leakages of oil, gas, produced water, toxic liquids or waste materials, blowouts, fires, shall be reported by the operator in accordance with the regulations and as prescribed in applicable orders or notices.
2. All lessees and/or operators and right-of-way holders shall comply with all federal, state and/or local laws, rules, and regulations, including but not limited to onshore orders and

- notices to lessees, addressing the emission of and/or the handling, use, and release of any substance that poses a risk of harm to human health or the environment.
3. Where required by law or regulation to develop a plan for the prevention of releases or the recovery of a release of any substance that poses a risk of harm to human health or the environment, provide a current copy of said plan to the BLM WRFO.
  4. When drilling to set the surface casing, drilling fluid will be composed only of fresh water, bentonite, and/or a benign lost circulation material that does not pose a risk of harm to human health or the environment (e.g., cedar bark, shredded cane stalks, mineral fiber and hair, mica flakes, ground and sized limestone or marble, wood, nut hulls, corncobs, or cotton hulls).
  5. Through all phases of oil and gas exploration, development, and production, all lessees and/or operators and holders of rights-of-way shall employ, maintain, and periodically update to the best available technology(s) aimed at reducing: 1) emissions, 2) fresh water use, and 3) utilization, production, and release of hazardous material.
  6. All substances that pose a risk of harm to human health or the environment shall be stored in appropriate containers. Fluids that pose a risk of harm to human health or the environment, including but not limited to produced water, shall be stored in appropriate containers and in secondary containment systems at 110% of the largest vessel's capacity. Secondary fluid containment systems, including but not limited to tank batteries shall be lined with a minimum 24 mil impermeable liner.
  7. Construction sites and all facilities shall be maintained in a sanitary condition at all times; waste materials shall be disposed of promptly at an appropriate waste disposal site. "Waste" means all discarded matter including, but not limited to, human waste, trash, garbage, refuse, oil drums, petroleum products, ashes, and equipment.
  8. As a reasonable and prudent lessee/operator in the oil and gas industry, acting in good faith, all lessees/operators and right-of-way holders will report all emissions or releases that may pose a risk of harm to human health or the environment, regardless of a substance's status as exempt or nonexempt and regardless of fault, to the BLM WRFO (970) 878-3800.
  9. As a reasonable and prudent lessees/operator and/or right-of-way holder in the oil and gas industry, acting in good faith, all lessees/operators and right-of-way holders will provide for the immediate clean-up and testing of air, water (surface and/or ground) and soils contaminated by the emission or release of any substance that may pose a risk of harm to human health or the environment, regardless of that substance's status as exempt or non-exempt. Where the lessee/operator or right-of-way holder fails, refuses or neglects to provide for the immediate clean-up and testing of air, water (surface and/or ground) and soils contaminated by the emission or release of any quantity of a substance that poses a risk of harm to human health or the environment, the BLM WRFO may take measures to clean-up and test air, water (surface and/or ground) and soils at the lessee/operator's expense. Such action will not relieve the lessee/operator of any liability or responsibility.

10. With the acceptance of this authorization, the commencement of operations under this authorization, or within thirty calendar days from the issuance of this authorization, whichever occurs first, and during the life of the pipeline, the right-of-way holder and the lessee/operator, and through the right-of-way holder and lessee/operator, its agents, employees, subcontractors, successors and assigns, stipulate and agree to indemnify, defend and hold harmless the United States Government, its agencies, and employees from all liability associated with the emission or release of substances that pose a risk of harm to human health or the environment.

## **FIRE MANAGEMENT**

*Affected Environment:* The Proposed Action is located within the C9 Danforth Hills and B1-L Urban Interface fire management polygon. The dominant vegetation within this area is considered mountain shrub, mountain big sagebrush, and aspen. The resource management objective within the C9 polygon is to manage fires up to 200 acres to promote a vegetation mosaic. Within the B1-L polygon, fire is considered undesired due to valuable infrastructure and nearly all fires will receive an immediate and aggressive response. Fires located well away from values at risk may receive a modified suppression response to assist in habitat improvement for wildlife. Due to the proximity of the Proposed Action to oil and gas infrastructure it is expected that all fires within the Wilson Creel field will be suppressed. Since 2000 there have been four fires within two miles of the proposed well pad and pipeline locations ranging in size from 0.10 to .5 acres in size. All four received an aggressive suppression response.

### *Environmental Consequences of the Proposed Action:*

Direct and Indirect Effects: Due to the nature of the Proposed Action, there is a need to clear some vegetation from individual sites. The clearing of brush could create an increased concentrated pocket of fuel that would be receptive to firebrands and would be resistant to control. Design features to incorporate slash generated from brush clearing into top soil and fill should mitigate pockets of slash. During a wildfire event, the primary objective is firefighter and public safety. The use of surface natural gas or oil pipelines creates a safety hazard during a wildfire, particularly if equipment is used in the construction of fire containment lines. Unmarked above ground lines are a hazard to firefighters and can delay communication to affected operators.

Cumulative Effects: The Proposed Action would contribute to activities (i.e., oil and gas development, agriculture, recreational activities, etc.) occurring in the Wilson Creek area that effects fire management. The Proposed Action would create clearings in vegetation that may change the behavior of wildfires in the area, and help to create areas that may be suitable for use as fire breaks to help control wildfires.

### *Environmental Consequences of the No Action Alternative:*

Direct and Indirect Effects: Selection of the No Action Alternative would result in no change to existing fire management conditions and no impacts from the proposed project.

Cumulative Effects: As there would be no direct or indirect effects under this alternative, there would therefore be no change to cumulative effects.

*Mitigation:*

1. When working on lands administered by the BLM WRFO, notify Craig Interagency Dispatch (970-826-5037) in the event of any fire.
  - a) The reporting party will inform the dispatch center of fire location, size, status, smoke color, aspect, fuel type, and provide their contact information.
  - b) The reporting party, or a representative of, should remain nearby, in a safe location, in order to make contact with incoming fire resources to expedite actions taken towards an appropriate management response.
  - c) The applicant and contractors will not engage in any fire suppression activities outside the approved project area. Accidental ignitions caused by welding, cutting, grinding, etc. will be suppressed by the applicant only if employee safety is not endangered and if the fire can be safely contained using hand tools and portable hand pumps. If chemical fire extinguishers are used the applicant must notify incoming fire resources on extinguisher type and the location of use.
  - d) Natural ignitions caused by lightning will be managed by Federal fire personnel. The use of heavy equipment for fire suppression is prohibited, unless authorized by the Field Office Manager.
  - e) In an effort to improve safety to both federal fire personnel and the public, all above ground pipelines will be marked in accordance with CFR Title 49 Part 192.707 "Line markers for mains and transmission lines".
  - f) The operator will provide the White River Field Office with GIS data, in the form of a shape file, as to where any surface lines are located within the lease.

## **FOREST MANAGEMENT**

*Affected Environment:* The Proposed Action is located within an Aspen Woodland stand class. Aspens are native to cold regions with cool summers and are characteristically medium-sized deciduous trees reaching heights of 50-100 feet tall. Aspens typically grow in large clonal colonies and are fast growing. Aspens are well known for their ability to regenerate from sprouts easily after fire or tree harvest. Mature trees within the WRFO and LSFO are valuable locally as a source of fire wood and craft wood.

*Environmental Consequences of the Proposed Action:*

Direct and Indirect Effects: Well pad WCU 3-94-34H1, pipelines WCU26 and WCU65 have no forest resource concerns. No trees will be removed as a result of the well pad construction or the replacement of either pipeline.

Pipelines WCU27 and WCU66 are both located within close proximity to an aspen stand and have the potential to have trees removed as a result of pipeline replacement. While majority of both pipelines occur within already disturbed corridors new trees could have grown since original pipeline construction and need to be removed for new construction. For pipeline WCU

27 Chevron's re-route would traverse through a few trees that have not previously been disturbed, and those trees may need to be removed depending on the method of pipeline construction. From an ocular estimate, about one to two cords would be removed as a result of pipeline construction. Exact cordage can be provided to the Range Management Specialist after pipeline construction is complete for proper tree purchase.

Cumulative Effects: Removing aspen trees in an area increases open space preferred as foraging areas by wildlife and livestock. Reducing canopy cover additionally allows for aspen seedling regeneration which does not occur if the canopy is dense with mature trees.

*Environmental Consequences of the No Action Alternative:*

Direct and Indirect Effects: Under this alternative there would be no construction of a wellpad, no pipeline replacement and no pipeline removal.

Cumulative Effects: If the pipelines are not replaced the chance of a leak from old pipe degradation increases and leaks have the potential to kill off aspen colonies. In addition if trees are not removed, the aspen seedling regeneration would be greatly reduced because the younger trees cannot compete with mature trees for resources.

*Mitigation:* See below.

1. Trees that must be removed for construction and are not required for reclamation shall be cut down to a stump height of six inches or less prior to other heavy equipment operation. These trees shall be cut in four foot lengths (down to four inches diameter) and placed in manageable stacks immediately adjacent to a public road to facilitate removal for company use or removal by the public.

## **RANGELAND MANAGEMENT**

*Affected Environment:* The proposed well pad and some of the surface pipeline replacements are on public land within the Devils Hole pasture of the Smith Crawford allotment #06625. This pasture is grazed yearly for scheduled periods between May 15 and November 15. Most use is from May 15 to July 11 and again from September 1 to November 15 though a small number of cattle are authorized to graze in this pasture in July and August as well. The Devils Hole pasture contains approximately 3,829 acres of BLM administered land 2,702 acres of private land, and has 323 BLM Animal Unit Months (AUMs) of grazing authorized (an AUM is the amount of forage required by one mature cow and one calf for one month). The total disturbance on public land within this allotment would be 4.1 acres reduced to approximately 1.6 acres after interim reclamation. The 1.6 acres of disturbance would remain for the life of the pad. Currently the existing disturbance associated with the old pad, abandoned well and existing access road accounts for 1.6 acres. After interim reclamation the overall size of disturbance associated with this pad and access road would be unchanged from what it has been for the last 30+ years. All pipeline replacements in the WRFO would be surface pipelines.

The remainder of the disturbance associated with this Proposed Action would occur on the Upper Wilson Creek Allotment, which is administered by the LSFO. This allotment has a total of 440

BLM acres and 2,097 private acres and there are no pasture divisions within the allotment. This allotment is permitted to be grazed by cattle and sheep from June 20 to October 1 for a total of 96 BLM AUMs. The livestock permittee for this allotment has applied for non-use during the 2013 grazing season so there would be no livestock present in this portion of the project area this year. Pipeline replacements would be surface pipelines except for approximately 6,450 feet of the WCU 66 buried pipeline. Replacement of this pipeline would create temporary disturbance of approximately 4.4 acres. This disturbance would be reclaimed immediately upon installation and would be expected to have revegetated within three growing seasons.

Vegetation disturbance associated with replacement of surface pipelines in both allotments would be minimal. Equipment use associated with pipeline installation would result in some crushing and breakage of herbaceous and woody vegetation. Effects of this minor level of disturbance would be short term.

Rangeland Improvements: The allotment boundary fence between the Smith Crawford allotment and the Upper Wilson Creek Allotment traverses through the area of the Proposed Action. There are gates and cattle guards at several points associated with the boundary fence as well.

*Environmental Consequences of the Proposed Action:*

Direct and Indirect Effects: Until (buried) pipeline disturbances are reclaimed successfully there would be a short term (2-3 year) forage loss in the Upper Wilson Creek Allotment of less than one AUM. Until interim reclamation associated with the well pad is successfully established there would be a short term (2-3 year) loss of forage in the Devils Hole pasture of the Smith/Crawford allotment of less than one AUM. Vegetation disturbance associated with replacement of surface pipelines would be minimal and limited to the current growing season. Disturbance associated with replacement of surface pipelines would be expected to recover fully the next spring/summer. Any short term forage losses in these allotments would be far less than the annual fluctuation in forage production, are not expected to result in any need for changes in livestock numbers or grazing periods. Reclamation of disturbed areas would likely offset the short-term forage loss on the allotments within two to three years through increased herbaceous production above current production levels.

This Proposed Action could interfere with proper functioning of the range improvements near the proposal. The fences and cattleguards in this area are necessary for control of cattle to achieve grazing objectives on the grazing allotments and to keep cattle from straying into the wrong grazing use area. Damage to fences or gates left open would interfere with control of cattle and ultimately with proper utilization of the rangeland resource. These impacts would be greatest during the construction phases, especially if construction coincides with livestock use of the area.

Cumulative Effects: Agriculture, road development, and oil and gas development which have the potential to impact rangeland management would continue to occur. The Proposed Action would remove forage temporarily in the above mentioned grazing allotments. After project construction has been completed and grass/forb communities have returned the Proposed Action would contribute to broader grass/forb corridors that provide additional forage for livestock in the area.

*Environmental Consequences of the No Action Alternative:*

Direct and Indirect Effects: There would be no direct and/or indirect effects to rangeland management under the No Action Alternative.

Cumulative Effects: Activities associated with agriculture, road development, and oil and gas development would continue to occur in the area, which has the potential to impact rangeland management by removal of forage, impacts to range improvements, etc.

*Mitigation:*

1. Chevron must coordinate with the livestock grazing permittee authorized to graze livestock within the project area a minimum of 72 hours prior to construction activities associated with this permit. Livestock grazing permittee contact information may be found at [www.blm.gov/ras/](http://www.blm.gov/ras/) or by contacting the WRFO or LSFO Range staff (970-878-3800 or 970-826-5000). Chevron will provide the grazing permittee the location, nature, and extent of the anticipated activity being completed.
2. Any range improvement projects such as fences, water developments, cattleguards, gates, or other livestock handling/distribution facilities that are damaged or destroyed either directly or indirectly as a result of implementation of the Proposed Action shall be promptly (at least prior to the livestock grazing permittee's need to utilize the range improvement) be repaired or replaced by the operator to restore it to at least its pre-disturbance functionality. If the operator damages any range improvement project(s) the operator will notify the Authorized Officer through sundry notice (Form 3160-5) and identify the actions taken to repair the feature(s).
3. Cattle guards and or gates used for future access to and maintenance of oil and gas facilities in this area will be maintained by Chevron to ensure they remain functional (cattle guards cleaned and gates kept closed) to control livestock.

## **RECREATION**

*Affected Environment:* The proposed project area is located within the White River Extensive Recreation Management Area (ERMA) on BLM lands administered by the WRFO. The WRFO manages the ERMA to provide for unstructured recreation activities, and a diversity of outdoor recreation opportunities, including hunting, dispersed camping, hiking, horseback riding, wildlife viewing, and off-highway vehicle (OHV) use are to be maintained and protected.

On BLM-administered lands, the Recreation Opportunity Spectrum (ROS) is a classification system and a prescriptive tool used for recreation planning and management. ROS settings within the WRFO ERMA are not specified for the entire project area. However, the proposed project area most closely resembles a ROS class of Semi Primitive Motorized (SPM). The SPM physical and social recreation setting is typically characterized by a natural appearing

environment with few administrative controls and low interaction between users (but evidence of other users may be present). SPM recreational experience is characterized by a high probability of isolation from the sights and sounds of humans within a setting that offers challenge and risk.

Current recreation activities in the project area include a moderate amount of elk and deer hunting during the fall with some minimal bear and lion hunting through the fall and winter. The Proposed Actions are located in Colorado Parks and Wildlife's Game Management Unit (GMU) 211. Other uses include a low amount of dispersed camping associated primarily with hunting and a low amount OHV use of the nearby roads and trails during the summer and fall. There is one Special Recreation Permit for commercially guided big game hunting in the project area.

*Environmental Consequences of the Proposed Action:*

Direct and Indirect Effects: The majority of the recreational activity and use in the project area occurs during the big game season. For 2013, the first big game season in GMU 211 is Archery season, which starts August 31, 2013, with the last season being a late rifle hunt which ends December 31, 2013. It is anticipated that some of the drilling activity and flowline replacement will be occurring during the 2013 big game hunting season. These activities will likely displace big game wildlife in the localized areas where flowlines are being replaced and near the well drilling pad. See the *Terrestrial Wildlife* section for more information in regards to wildlife impacts. The big game hunting experience desired by hunters may be affected by the additional traffic, associated noise, and construction activities in the project area. Because the proposed well pad area has been used in the past by campers during the big game hunting seasons, the proposed well drilling activity and development will displace some campers to other areas. It is likely that campers and hunters will be able to find other places to hunt and camp on nearby public lands, but the original expectation by these recreationalists will likely be negatively affected by the Proposed Actions.

Cumulative Effects: Because the area surrounding the Proposed Action has not seen recent well drilling and there are no other plans for well drilling in the immediate area, it is not likely to have cumulative impacts combined with other drilling and well pad construction activities and operations. The flowline replacement however will contribute to a landscape that is heavily bisected by flowline corridors, powerline corridors, and oil and gas roads. Because many of these corridors and roads have been in existence for decades and the high quantity of these corridors and roads in the project area, the proposed flowlines would have an overall small incremental long term impact to recreationalists in the project area.

*Environmental Consequences of the No Action Alternative:*

Direct and Indirect Effects: Because the well pad and flowline replacement activity would not occur, there would be no immediate impact to recreationalists in the area. However, if there were to be a failure of the existing flowlines proposed to be replaced, there could be long term impacts to recreationalists and recreational activities in the project area.

Cumulative Effects: By not drilling the well and replacing the flowlines there would be no immediate cumulative impact or effect to recreational activities in the project area. Should there be a failure of the existing flowlines proposed to be replaced, there could be long term impacts to recreationalists and recreational activities in the project area.

*Mitigation:* none

## ACCESS AND TRANSPORTATION

*Affected Environment:* The project area is located approximately 20 miles north of Meeker, CO or 30 miles southwest of Craig, CO. The primary access route to the project area from either the north or south is the graveled and annually maintained Rio Blanco County (RBC) Road 9 (Wilson Creek). From RBC Road 9 there are a variety of unnumbered BLM roads that provide access to the Proposed Actions.

Generally, the landscape in the project area is of high relief, rugged topography ranging in 8,100 feet elevation along the ridge tops to 7,200 feet elevation in the valley bottoms. The incised steep drainages lead to sharp narrow ridge lines. Because of this topography, there is a relatively high density of roads in the project area. Many of the roads and routes in the project area are located on side slopes and traverse these steep slopes and ridges to access oil and gas developments.

Many of the routes in the project area receive traffic year round from oil and gas operations, local ranch operations, and local residents. There is an increase in traffic volume during big game hunting seasons.

### *Environmental Consequences of the Proposed Action:*

Direct and Indirect Effects: Because it is proposed that when possible Chevron. will utilize as much of road surface for the construction corridor as possible, it is likely there will be direct impacts that result in increased travel time and increased time to access public land for the general public. To make the public aware of this impact, it is recommended that any planned traffic delays or impacts to traffic flow along RBC Road 9 be signed along this road stating the anticipated delay on both sides of the project at least one week in advance. It is also proposed to locate WCU 65 flowline under RBC Road 9. Chevron would ensure that the appropriate traffic controls (i.e. flaggers, warning signs) were in place to ensure the safety of the traveling public. The RBC Road 9 crossing would be completed within a day and would not impede travel any more than absolutely necessary. To make the public aware of this impact, it is recommended that RBC Road 9 be signed stating the anticipated road closure on both sides of the project at least one week in advance. There is a potential for roads and routes to be damaged if activities associated with the Proposed Actions occur when roads and routes are saturated. To prevent road damage as a result of use of these roads when they are saturated is it recommended that all activity cease when soils or roads surfaces become saturated to a depth of three inches.

Cumulative Effects: Combined with the existing traffic on RBC Road 9, there would be a short term cumulative impact during construction and drilling of the well and the replacement of the flowlines. There may be some long term but incremental impacts to traffic flow on RBC Road 9 if the well production results in trucking the oil or gas to the nearby plant for processing.

### *Environmental Consequences of the No Action Alternative:*

Direct and Indirect Effects: Because the Proposed Actions would not occur, there would be no associated traffic or impacts to traffic flow and public lands access.

Cumulative Effects: No additional effects identified.

*Mitigation:*

1. Place signs on both sides of the project area at least one week in advance warning those traveling RBC Road 9 of any traffic delays or roads closures.
2. All activity shall cease when soils or roads surfaces become saturated to a depth of three inches unless approved by the Authorized Officer.

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**INTERDISCIPLINARY REVIEW:**

Name	Title	Area of Responsibility	Date Signed
Bob Lange	Hydrologist	Air Quality; Surface and Ground Water Quality; Floodplains, Hydrology, and Water Rights; Soils	5/31/2013
Baili Foster	Ecologist Intern	Areas of Critical Environmental Concern; Special Status Plant Species	4/18/2013
Heather Woodruff	Rangeland Management Specialist	Forest Management	4/30/2013

<b>Name</b>	<b>Title</b>	<b>Area of Responsibility</b>	<b>Date Signed</b>
Michael Wolfe	Archaeologist	Cultural Resources; Native American Religious Concerns	5/29/2013
Michael Selle	Archaeologist	Paleontological Resources	4/29/2013
Mary Taylor	Rangeland Management Specialist	Invasive, Non-Native Species; Vegetation; Rangeland Management	5/9/2013
Laura Dixon	Wildlife Biologist	Migratory Birds; Special Status Animal Species; Terrestrial and Aquatic Wildlife; Wetlands and Riparian Zones	5/9/2013
Ryan Snyder	Natural Resource Specialist	Hazardous or Solid Wastes	6/2/2013
Aaron Grimes	Outdoor Recreation Planner	Wilderness; Visual Resources; Access and Transportation; Recreation,	5/1/2013
Scott Nilson	Fuels Specialist	Fire Management	5/14/2013
Paul Daggett	Mining Engineer	Geology and Minerals	6/1/2013
Janet Doll	Realty Specialist	Realty	5/7/2013
Melissa J. Kindall	Range Technician	Wild Horse Management	5/1/2013
Ryan Snyder	Natural Resource Specialist	Project Lead – Document Preparer	6/2/2013
Paul Kelley	Supervisory Natural Resource Specialist	NEPA Compliance	6/13/2012

**ATTACHMENTS:**

Figure 1: Map of the Project

Attachment 1: Surface Use Plan of Operations

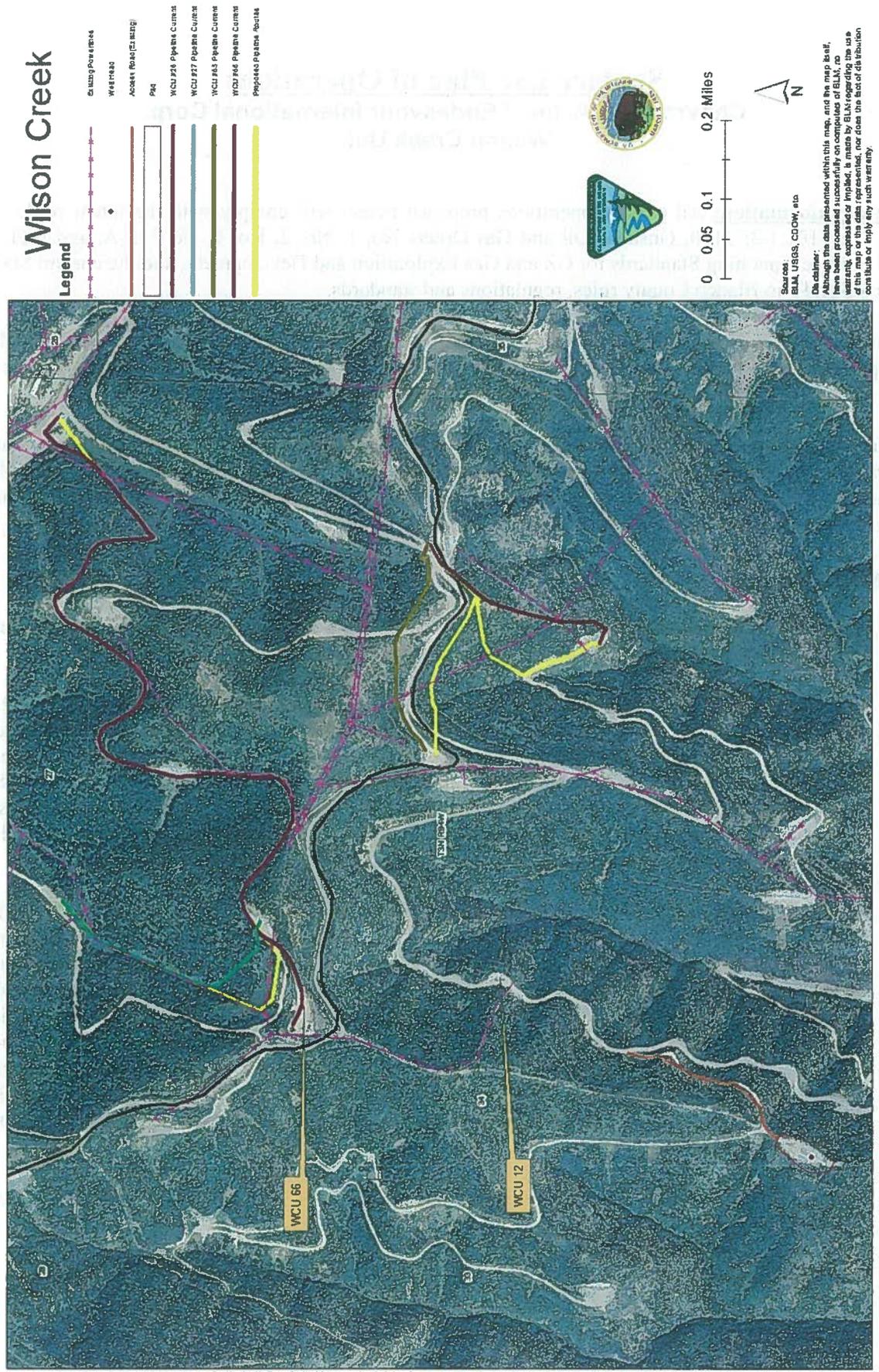


Figure 1: Map depicting the locations for the disturbances associated with the Proposed Action.

**Surface Use Plan of Operations**  
**Chevron U.S.A. Inc. / Endeavour International Corp.**  
**Wilson Creek Unit**

**General Information:** All surface operations proposed herein will comply with the intent of 43 CFR 3101.1-2; 3101.1-3; 3160, Onshore Oil and Gas Orders No. 1, No. 2, No. 6, No 7, 3-A, and NTL-4A, BLM Surface Operating Standards for Oil and Gas Exploration and Development, and the current State of Colorado and Rio Blanco County rules, regulations and standards.

These standards will guide applicable surface use for Chevron's Wilson Creek Oil Field and will be incorporated by reference into subsequent Applications for Permit to Drill (APD), Sundry Notices and other permits.

Chevron would submit to BLM for review and approval any changes to the plans contained herein under separate Sundry Notices. Likewise, assuming permit approvals and pending well evaluation and realized production volumes, any associated flowlines and other permanent support facilities would be submitted to BLM for review and approval under separate Sundry Notices.

**1 . Existing Roads**

- a. **Location of proposed well & access road in relationship to a town or other reference point:**  
The proposed well location is approximately 16.6 miles Northwest of Meeker, Colorado.

Existing State Highways, County Roads, and lease roads would be used to access the WCU #48 pad. The rig and all associated truck traffic would be routed to the State Highway 13 entrance at Axial, CO to avoid any unnecessary nuisance impacts to the local ranchers adjacent to County Road 9 at the southern entrance to the Unit. Rig and Truck traffic would enter the WCU via State Highway 13 to Moffat County Roads 17 and 51/ Rio Blanco County Road 9. These roads are designed to State and/or County standards, maintained and accessible year-around, and are adequate to accommodate the size and volume of truck traffic proposed.

- b. **Plans for improvement and/or maintenance of existing roads:** The existing lease road from Rio Blanco County Road 9 would require minor grading, drainage improvements, and gravel resurfacing, as necessary, to ensure safe, all-weather vehicular travel and to minimize surface erosion and fugitive dust. Drainage improvements may include cleaning out the existing v-ditch and installing check dams as needed to slow runoff velocity. Road surfacing materials would be purchased from Meeker Sand and Gravel in Meeker, Colorado and trucked to the proposed location. Other material sources may be considered depending on cost and availability. A Sundry Notice would be provided to BLM if another material sources is selected for use. The existing lease road and pad access road will be maintained to meet minimum road standards as found in the BLM Manual Section 9113.

There are no culverts or other road structures at the proposed location, and no road structures are proposed in this application.

- c. **Existing Grade:** 7.4%

## 2. New or Re-constructed Access Roads

No new or significantly upgraded roads are proposed in this application.

## 3. Location of Existing Wells

Existing wells in the vicinity of the proposed location are listed below. Also reference the attached “One Mile Radius Map”.

Nearest Producing Well – 2300’ (WCU #12)  
Nearest Well Drilled – NA  
Nearest Water Well – 7,287’ (WCU Field Office)  
Nearest Injection Well – 6,200’ (WCU #2)  
Nearest P&A Well – 65’ (WCU #48)  
Nearest Shut-in Well – 3500’ (WCU #7)  
Nearest Monitoring or Observation Well – 500’ (#43611-MH, not in service)

## 4. Location of Proposed Production Facilities

- a. No existing production facilities are present on the WCU #48 pad.

Proposed production facilities would include the wellhead, electrical boxes for Electrical Submersible Pump (ESP) control, and two 500 bbl closed-top upright tanks. Permanent liquid transfer lines would be designed and installed at a future time pending well evaluation and realized production volumes. The installation of permanent liquid transfer lines and/or other production facilities, if applicable, would be submitted for BLM review and approval under separate Sundry Notice.

Permanent tanks and other production facilities would be painted in a non-reflective color to blend with the natural surroundings as determined by vegetation observation during growing season and in consultation with the BLM Authorized Officer.

## 5. Location and Types of Water Supply

- a. **Fresh Water:** Any fresh water used would be purchased from local sources as follows: 1) legal diversion from the White River near the confluence of Piceance Creek [load out point @ bridge crossing of County Road 77 and the White River – Latitude 40.162030, Longitude -108.345500 (Nad 83)]; or 2) from local municipal supply in Meeker or Craig depending on transportation cost and availability. Fresh water would be trucked to the site by tanker (construction and drilling operations) or hauled in 500 barrel frac tanks (well completion operations).

**Drilling Water:** Water produced from the field would be used to the extent possible. Water for drilling and well completions would be transported by means of truck or temporary surface lines from the nearest Water Injection well (WCU #2). Trucking and/or temporary surface lines would follow existing roads and/or powerline rights-of-way.

**Potable Water:** Potable water would be purchased from the local municipal supply in Meeker or Craig and supplied on a semi-weekly basis. Potable water for drill site personnel would be stored in one or more 80 bbl fresh water-approved plastic poly tanks. RN Industries would provide

potable water and sanitation services to the rig site. Drinking/cooking water would be supplied via 5-gallon sealed containers on an as-needed basis.

- b. The estimated total volume of water needed for construction, drilling and well completions is as follows:
- **Construction:** Approximately 2,000 barrels (84,000 gallons) of fresh water would be used for construction activities, including, soil compaction and dust abatement (Note: water used in construction could vary depending on several factors, including weather and soil moisture content at the time of construction).
  - **Drilling:** Water used in drilling is estimated at 3,100 barrels (130,000 gallons).
  - **Well Completions:** Water used for hydraulic fracture stimulation is estimated at 50,000 barrels (2,100,000 gallons).

Water produced from the field would be used and recycled, to the extent possible, in both drilling and well completion operations.

- c. No re-constructed access roads would be required for the hauling of the water to the location at this time.
- d. There are no plans to drill a water supply well on lease.

## **6. Construction Materials**

- a. Onsite materials would be used for pad construction. Native materials would be used to enlarge the pad. All fill slopes would be keyed in at the toe of the slope and constructed in 1-foot lifts compacted to at least 90 percent.
- b. Surfacing materials (i.e., gravel) for the well pad and access roads would be purchased from Meeker Sand and Gravel in Meeker, Colorado. Depending on cost and availability, an alternate local source may be used for material supply. A Sundry Notice would be provided to the WRFO BLM identifying the name and location of any alternate source used.

## **7. Methods for Handling Waste**

**Hazardous Materials:** No hazardous substance as defined by CERCLA would be used in the construction and drilling of the proposed well site. Commercial preparations, which may contain hazardous substances, may be used in production operations and would be transported within the project area. These materials would be handled in an appropriate manner to minimize potential for leaks or spills to the environment. No RCRA hazardous wastes would be generated in drilling operations. The disposal of any unapproved or unauthorized liquid or solid wastes is strictly prohibited.

- a. A closed-loop mud system would be used for the drilling operations. Drilling fluids would be recycled and reused to the extent possible.

E&P exempt drill cuttings and cement returns would be collected in bins and trucked offsite to the RN Industries landfarm facility in Vernal, Utah. Chevron would comply with all applicable special waste characterization and manifest requirements for waste disposal. In the event that another waste disposal alternative was identified as being more efficient and/or cost effective, Chevron would identify the alternative on a Sundry Notice submittal to the WRFO BLM.

- b. Sewage from temporary construction sites would be disposed in self-contained chemically treated portable toilets provided and serviced by RN Industries. Contents would be hauled off location and disposed at a municipal wastewater treatment facility in accordance with state and local regulations.

Drill site employee housing sewage would be disposed in three 1,000-gallon Vault-type Individual Sewage Disposal Systems. All septic tanks would be equipped with flag gauges to provide warning of overflow and sewage would be hauled off-site to an approved municipal wastewater treatment facility in Meeker or Craig on an as-needed basis by RN Industries. Two or more portable toilets would also be located on site.

- c. Garbage, refuse and trash would be collected in bear-proof rolloff dumpsters and transported to the Wray Gulch Landfill. RN Industries would supply and service dumpsters on an as-needed basis. The use of trash dumpsters for any wastes other than common trash would be strictly prohibited. Trash would be disposed at the Wray Gulch Landfill, owned and operated by Rio Blanco County.
- d. Produced water and drilling fluids, including salts and chemicals, would be contained within the closed-loop drilling system for recycle and stored in an upright steel tank on location. Produced water and drilling fluids for disposal would be trucked to the Wilson Creek Unit Central Tank Battery for processing and ultimate disposal by injection at one or more existing salt water disposal wells within the WCU.
- e. Liquid hydrocarbons would be stored on location in two upright steel tanks and trucked to the Wilson Creek Unit Central Tank Battery for processing and transport to sales.
- f. The disposal of potentially hazardous substances, including any unused and/or waste chemicals, and used oil recycling would be managed by Safety-Kleen, who would remove, transport and dispose of products in accordance with their approved waste disposal policy and procedures.
- g. Upon release of the drilling rig the rathole and mousehole would be filled. All debris and equipment would be removed from location.
- h. Any reportable spills of oil, gas, saltwater or other potentially hazardous substances would be reported immediately to the BLM, and other responsible parties, and would be cleaned up as soon as practicable.

## **8. Ancillary Facilities**

- a. Certified Colorado Division of Housing units (Self-contained skid mounted trailers) would be used on site during drilling operations to accommodate essential rig personnel. All temporary housing units would be permitted, inspected, and occupied in accordance with the Colorado Division of Housing and Rio Blanco County Building Department rules and regulations.

All non-essential drilling personnel would stay in their respective homes in nearby cities and towns or in local hotels, campgrounds, or other accommodations in the towns of Meeker or Craig.

- b. Potable water and septic would be provided in standard Vault and Haul Systems managed and maintained by RN Industries (See Section 5 above).
- c. No construction required for the above mentioned facilities.

## **9. Well Site Layout**

- a. *See attached "Location Layout & Cross Sections" & "Typical Rig Layout"*
- b. See Section 12 Other Information for "Stormwater Management & BMP's"
- c. See Section 12 Other Information for "Reclamation & Re-vegetation"
- d. See Section 12 Other Information for "Noxious Weed Management"

## **10. Plans for Surface Reclamation**

Chevron assumes all responsibility for the interim and final reclamation of all surface disturbances attributable to the location proposed in this application. All areas that have been disturbed would be reclaimed to a safe and stable condition as approved by the BLM Authorized Officer.

All site rehabilitation efforts would be conducted in accordance with the White River Field Office Resource Management Plan and Bureau of Land Management Reclamation Policy. This plan addresses the following Reclamation Policy Requirements:

<i>Waste material handling and disposal</i>	<i>Site Preparation</i>
<i>Subsurface Integrity</i>	<i>Revegetation</i>
<i>Surface reconstruction and stabilization</i>	<i>Visual Resources</i>
<i>Re-establishing surface hydrology</i>	<i>Weed management</i>
<i>Soil Management and handling</i>	<i>Monitoring</i>

***Note: Chevron is currently evaluating options to reduce the amount of surface disturbance necessary to prepare the WCU #48 pad for drilling, including various options for equipment placement on and/or off location. Any and all alterations/changes to the pad or rig layout would be submitted to the WRFO BLM for review and approval on a separate Sundry Notice prior to construction.***

Chevron is currently considering drilling an additional two wells on the WCU #48 pad and as such, would make the determination to drill the additional wells following evaluation of the production potential of the proposed 3-94-34-H1 well. The decision to drill additional wells would be made within three (3) months after completing the 3-94-34-H1 well. Interim/Final Reclamation would occur based on the following:

- If the well is dry, it would be Plugged and Abandoned and final reclamation would commence immediately following the P&A work;
- If the well is performing below expectations, interim reclamation would begin within three-months of well completion and would be completed within 6 months.
- If well performance is promising, Applications for Permits to Drill the additional wells would be submitted to the WRFO BLM for review and approval within the three (3) month well evaluation period.

***Interim Reclamation:*** Topsoil salvaged during construction/pad expansion would be spread over fill slopes, seeded and mulched to reclaim slopes and other disturbances no longer needed for drilling and operations.. Any remaining topsoil would be windrowed and used in stormwater management and/or stockpiled at the location shown on the attached survey plats.

All disturbed areas not necessary for drilling and well completion operations, including all fill slopes, would be covered with salvaged topsoil, seeded and mulched as soon as practicable following construction. Disturbed areas would be left in a roughened state and/or pocked and woody debris would

be incorporated into the topsoil and spread across the disturbed areas to aid in moisture/seed retention and to more closely resemble pre-construction conditions.

Upon completion of all drilling, well completion, and permanent production facility installations, the location would be reduced in size to only that need for well production. Those areas no longer needed for safe and efficient operations would be ripped to reduce compaction, covered with salvaged topsoil and seeded.

As this is an existing well pad that had been constructed many years ago, it is unknown whether sufficient viable topsoil remains for use in reclamation. As such, Chevron would amend any soil deficits by importing clean topsoil material from a reputable source for use in interim and final reclamation as needed.

***Waste Material Handling and Disposal:*** All surface equipment no longer needed for construction, drilling, well completions, and/or operations would be removed from the site following each of the respective activities. Any liquid or solid wastes would be collected and disposed of at an appropriate waste management facility. Miscellaneous trash and debris would be removed and disposed of at the local landfill.

***Subsurface Integrity:*** The well proposed in this application would be plugged and abandoned at the end of its useful life. Well abandonment would be conducted in accordance with all requirements set forth in 43 CFR 3162.3-4 and Onshore Orders 1 and 2. The WRFO BLM would be notified of any plans to abandon a well and approval would be obtained prior to the initiation of any abandonment operations. Plugging design would comply with all requirements set forth in Onshore Order 2, section G, *Drilling Abandonment Requirements*.

The well casing would be cut off below grade and a weep plate would be welded in place over the well bore. All pertinent well information would be permanently imprinted onto the weep plate for future reference.

***Surface Reconstruction and Stabilization:*** The long term objective of final reclamation is to set the course for eventual ecosystem restoration including the restoration of natural vegetation. Chevron would avoid disturbance to the mature vegetation (i.e. oakbrush, mountain shrubs) that has become well established on the pad perimeter to the extent practicable, and would focus reclamation efforts toward decompaction, removing sharp, angular features to more closely approximate the natural contours, re-establishing natural drainage patterns, and revegetating the abandoned well pad and associated access road.

Chevron's plan for final reclamation of the well pad surfaces is described below (*Note: some steps may occur in a different sequence than listed below or may occur simultaneously as the case may be*):

1. *The following activities would take place before commencing with any dirt work to restore the pad surfaces:*
  - *The BLM Authorized Officer would be notified at least 48 hours prior to construction;*
  - *Pre-construction conditions would be documented and pictures would taken from the four cardinal directions for future reference;*
  - *The well casing would be cut off below grade and replaced with a weep plate as described above; and*

- *Temporary and/or permanent stormwater and erosion BMPs would be employed at appropriate locations around the pads as dictated by local drainage patterns and expected areas of disturbance. BMP selection would be determined by local factors and would be a combination of sediment and erosion controls that are deemed effective and low maintenance. Straw wattles, diversion ditches, mulch, soil blankets, and/or other suitable BMPs may be used in various combinations, as appropriate, during and after construction activities.*
2. *Any sharp, angular cuts or fills would be recontoured and/or smoothed to blend more naturally with the surrounding topography. Those areas where healthy, mature, and weed-free vegetation has established along the pad perimeter would remain undisturbed to the extent possible;*
  3. *Any man-made piles of earthen material (i.e. berms, spoil, rock) would be used as fill, where needed, spread across the pad, and/or placed on reclaimed areas to more closely approximate natural conditions as the case may be;*
  4. *Natural drainage patterns would be restored as near as possible to pre-disturbance conditions;*
  5. *The pad surface would be ripped by Bulldozer or Grader to reduce compaction and to establish a suitable root zone in preparation for topsoil replacement;*
  6. *Topsoil would be redistributed across the pad surface to prepare the soil for seeding;*
  7. *All disturbed areas would be re-seeded in accordance with BLM recommended seed mixtures and application rates appropriate to the area.*

**Access Road Reclamation:** Provided that the access roads were not necessary for access to producing wells or other operational areas within the field, the pad access road would be reclaimed using much the same methods as described above. The road would be ripped and scarified to reduce compaction, and any sharp or angular cuts or fills would be restored as near as possible to pre-disturbance contours. Natural drainage patterns would be restored, to the extent practical, as near as possible to pre-disturbance conditions.

Established vegetation along the roadsides would remain undisturbed where possible to encourage native plant growth onto the new disturbance and to maintain erosion and sediment control. Straw wattles and/or diversion ditches would be placed at appropriate locations along the road as needed to prevent sediment transport to local drainages. Other suitable BMPs may be used in various combinations, as appropriate, during and after construction activities.

The reclaimed road would be left in a roughened state and available topsoil would be redistributed across the road surface. All disturbed areas would be re-seeded in accordance with BLM recommended seed mixtures and application rates appropriate to the area.

Rocks, brush and woody debris would be spread over the disturbance to approximate natural conditions, provide vegetative erosion and sediment control, alleviate visual impact, and to discourage future use of the road. A temporary rock barricade may be used to discourage access to the newly reclaimed road and would be left in place until the road was stabilized.

**Re-establishing Surface Hydrology:** Natural drainage patterns would be restored as near as possible to pre-construction conditions, except where restoring the natural drainage would cause excessive

disturbance and disrupt the natural rehabilitation processes that have already established. In those areas, additional means for ensuring proper drainage, such as water bars or diversion ditches, may be employed.

Given that the well pad would effectively be inaccessible following road reclamation and because the only potential pollution source would be runoff sediment; the temporary stormwater BMPs would be removed upon completion of construction activities. Drainage, sediment, and erosion controls would be managed through vegetative practices and/or biodegradable materials (i.e. soil blankets, straw wattles, crimped straw, mulch, brush and woody debris, pocking, etc.).

All drainage, sediment, and erosion controls would be implemented in accordance with the Chevron Wilson Creek Stormwater Management Plan (COR03A140), this plan is on file at the Chevron Field Office and is available for review and inspection upon request.

**Site Preparation, Soil Management and handling:** Topsoils would be removed and stockpiled for subsequent redistribution. Topsoils would only be stockpiled such that they are protected from wind and water erosion by means of strategic placement (i.e. away from drainages), or by blanketing or other mechanical means. The pad and road surfaces would then be ripped, scarified, and/or disked to a depth adequate for establishing a suitable root zone. Fill material would be pushed into cuts and over the back slope as necessary and any sharp, angular cuts and fills would be smoothed to conform as nearly as practical to the adjacent landform.

All salvaged and/or imported topsoil material would be spread evenly over the disturbed areas. The soil would be redistributed in a manner that prevents compaction and achieves a thickness consistent with the desired post-construction land use. All soils removed/used in reclamation activities would be segregated and replaced in their respective original positions (last out, first in). Prior to seeding, all disturbed areas would be left with a rough surface to facilitate moisture and seed retention, and vegetative slash/brush would be placed at expected discharge areas to minimize sediment transport.

**Revegetation:** Following soil preparations, the approved seed mix would be applied over disturbed areas by range drill and/or broadcast as appropriate. The range drill would be equipped with a depth regulator to ensure even planting depths appropriate to the plant species and soil types. Should broadcast seeding be deemed more appropriate in some areas, the seed application rates would be doubled and a rake or harrow would be used to incorporate the seed into the soil. Any steep slopes, greater than or equal to 2:1, would be blanketed for soil stabilization and seed retention.

Seed mixture and application rates would be selected after consultation with the BLM Authorized Officer.

The selected seed mixture would be certified weed-free and the seeding records (bag labels) or other official documentation would be provided to the Authorized Officer at least 14 days before the date of proposed seeding for acceptance. The Authorized Officer would be notified forty-eight (48) hours prior to commencing with seed application.

Newly planted areas would be fenced, if necessary, to prevent livestock grazing.

**Visual Resources:** The Wilson Creek Unit is in a remote mountainous area and isolated from the general public. The well pad described in this application is in a prominent ridgetop location, but still screened from view of the ranching communities by distance and topography. Minor visual impacts would persist until such time as the larger woody shrubs and trees were established at that location.

**Weed Management:** Chevron's objective would be to implement an integrated weed management program to control weed populations and establish desirable vegetation utilizing the following strategies:

- Control the introduction and spread of weeds through early detection.
- Establish desirable native vegetation on disturbed areas through successful re-vegetation efforts.
- Treat and control known weed populations.

Among the measures that would be implemented to prevent the introduction or establishment of weeds include:

- Identification and eradication of new infestations as quickly as practical.
- Implement successful re-vegetation efforts as quickly as practical in areas that have been disturbed.

Local factors, such as soil type and stability; grade; associated vegetation; existing and proposed land use; proximity to water; weed type and stage of growth; and severity of infestation; would be considered in selecting the appropriate weed management method(s). The management method(s) selected would be the least environmentally damaging, yet practical and reasonable in achieving the desired results.

Chevron is proposing to utilize chemical treatment as the preferred method of weed management and control. The proper use of herbicides at the optimum time can be an effective method for controlling persistent weeds. A Pesticide Use Proposal (PUP) would be pre-approved by the BLM prior to any chemical treatment. The use and handling of herbicides would be in accordance with all application rates, restrictions, and warnings listed on the label and MSDS. Preparation and application of all herbicides would be by a qualified contractor licensed by the State of Colorado Department of Agriculture, and Weed Pesticide Application Records would be completed and retained for all spraying activities.

Other methods to be used for weed control would include the following:

- Ensuring that all construction equipment and transport vehicles, trucks, pickups, and other vehicles are cleaned to remove soil, seeds, and vegetative matter prior to entering the project site;
- Ensuring that all seed mixes, straw, and/or mulch used in reclamation are certified weed-free;
- Promptly revegetating disturbed areas;
- Treating and/or removing weeds prior to ground-disturbing activities to limit seed production and dispersal;
- Treating noxious weeds that have escaped the project area onto adjacent areas to prevent further expansion into un-infested areas and re-infestation of the treated area;
- Reporting any List A weed species observed to the appropriate authorities.

**Monitoring:** Once the remediation work is completed, follow up inspections would occur every 30 days for stormwater management and erosion control, as weather permits, and at least once each year early in the growing season to assess vegetation success and inventory/control weeds. Follow up inspections and site maintenance would continue until such time as the site is deemed stabilized. Maintenance items identified in any inspection reports would be addressed promptly and records of all maintenance activities would be kept for a period of three (3) years. If found, weeds would be treated at the time of inspection and follow-up treatments would be conducted as necessary.

Initial revegetation attempts would be monitored during the growing season and in the event these were not successful, subsequent re-seeding and weed control applications would be performed until successful vegetation is re-established.

Reclamation would be considered successful when cover of seeded species or other naturally recruited native species is at least 80% of cover of adjacent or nearby undisturbed areas where vegetation is in a

healthy condition. Reclamation efforts and monitoring would continue until BLM and Chevron agree that this objective has been met. Once 80% pre-disturbed vegetation levels are obtained, the BLM would be notified and upon approval; the remediation project would be considered completed.

**Reference Areas:** Chevron would consult with the WRFO BLM to establish an appropriate reference area.

## **11. Surface Ownership**

The majority of the WCU, including the WCU #48 pad and associated lease and access roads, is located on public lands administered by the Bureau of Land Management:

Bureau of Land Management  
White River Field Office  
220 E. Market Street  
Meeker, CO 81641

Hydrocarbon storage, processing and sales facilities associated with this proposal are located on lands owned and operated by:

Chevron U.S.A. Inc.  
760 Horizon Drive  
Grand Junction, CO 81506

## **12. Other Information**

- a. A cultural resource inventory was conducted in September/October by Grand River Institute of Grand Junction, CO. The final report was provided to the WRFO BLM in March of 2013.

Chevron is responsible for informing all persons in the area who are associated with this project that they will be subject to prosecution for knowingly disturbing history or archaeological sites, or for collecting artifacts. If historic or archaeological materials are uncovered during construction, Chevron would immediately stop work that might further disturb such materials, and contact the White River Field Office. Within five (5) working days the BLM will inform the operator as to:

- Whether the materials appear eligible for the National Register of Historic Places;
  - The mitigation measures the operator will likely have to undertake before the site can be used; and
  - A time frame for the BLM to complete an expedited review under 36 CFR 800.11 to confirm, through the State Historic Preservation Officer, that the findings of the BLM are correct and that mitigation is appropriate.
  - If, prior to or during any disturbance activity, items of archaeological, paleontological, or historic value are reported or discovered, or an unknown deposit of such items is disturbed, the Operator will immediately cease disturbance activities in the affected area and notify the BLM. Disturbance activities will not resume until the BLM gives approval.
- b. Environmental Surveys, including Raptors and Sensitive Plants, was conducted by WestWater Engineering biologists in September/October of 2012. The Biological Survey Report was provided to the WRFO BLM with the Chevron Wilson Creek Unit Plan of Development in January of 2013.

c. A check in the amount of \$ 6500.00 for the Application Fee was provided to the WRFO BLM on April 3, 2013.

14. Public Comments

The public comments received by the WRFO BLM are summarized below and are provided in the following table.

WRFO BLM  
2300 E. Highway 100  
P.O. Box 100  
Boulder, CO 80501

The following table summarizes the public comments received by the WRFO BLM.

WRFO BLM  
2300 E. Highway 100  
P.O. Box 100  
Boulder, CO 80501

15. Other Information

The following table summarizes the other information received by the WRFO BLM.

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**U.S. Department of the Interior  
Bureau of Land Management  
White River Field Office  
220 E Market St  
Meeker, CO 81641**

**Finding of No Significant Impact (FONSI)  
DOI-BLM-CO-110-2013-0079-EA**

**BACKGROUND**

Chevron U.S.A. Inc. (Chevron), a wholly owned subsidiary of Chevron Corporation, is proposing to replace aging flowline infrastructure within the Wilson Creek Oil Field and to further explore the undeveloped potential the Niobrara Formation. These activities would be conducted on public lands administered by the White River Field Office (WRFO) and Little Snake Field Office (LSFO) of the Bureau of Land Management (BLM) and on Chevron's privately-owned and operated lands in Rio Blanco County, Colorado. In this filing, Chevron is seeking approval to conduct all surface disturbing activities necessary for access, flowline installation, power distribution, and drilling.

**FINDING OF NO SIGNIFICANT IMPACT**

Based upon a review of the EA and the supporting documents, I have determined that the Proposed Action is not a major federal action and will not have a significant effect on the quality of the human environment, individually or cumulatively with other actions in the general area. No environmental effects meet the definition of significance in context or intensity, as defined at 40 CFR 1508.27 and do not exceed those effects as described in the White River Resource Area Proposed Resource Management Plan and Final Environmental Impact Statement (1996), or the Little Snake Record of Decision and Approved Resource Management Plan (Little Snake ROD/RMP) of 2011. Therefore, an environmental impact statement is not required. This finding is based on the context and intensity of the project as described below.

**Context**

The project is a site-specific action directly involving BLM administered public lands that do not in and of itself have international, national, regional, or state-wide importance. This project involves four pipeline replacements and one new well drilled. The well is on an already existing pad that will be expanded. As of May 20, 2013, and Automated Fluid Minerals Support System (AFMSS) review showed that in the Wilson Creek 30 producing wells with a total of 89 wells, in which 26 of those well have already been plugged and abandoned. The WRFO had 2138 producing wells; this well would be less than 0.05 percent increase of wells in the office.

**Intensity**

The following discussion is organized around the 10 Significance Criteria described at 40 CFR 1508.27. The following have been considered in evaluating intensity for this Proposed Action:

**1. Impacts that may be both beneficial and adverse.**

The depletion of the subsurface petroleum reservoir in general is a beneficial impact that adds to domestic energy reserves. While surface impacts would be short-term and of low intensity, improper implementation of approved techniques for construction and reclamation has potential to adversely impact surface resources at a higher intensity and time duration than anticipated.

**2. The degree to which the Proposed Action affects public health or safety.**

There would be no impact to public health and safety if the safety measures described in the operator's drilling plan and SUPO are properly implemented, and the developed mitigation is adhered to.

**3. Unique characteristics of the geographic area such as proximity to historic or cultural resources, park lands, prime farmlands, wetlands, wild and scenic rivers, or ecologically critical areas.**

No prime farmlands, parklands, ecologically critical areas or scenic rivers occur in the project area. Cultural resources were inventoried at the Class III level and no known cultural resources will be impacted by the project. The Wilson Creek Unit has been in existence since the 1930s, but any of the older well pads that would have been eligible no longer have historical characteristics (older equipment has been removed and replaced with more modern equipment).

**4. Degree to which the possible effects on the quality of the human environment are likely to be highly controversial.**

No comments or concerns have been received regarding possible effects on the quality of the human environment.

**5. Degree to which the possible effects on the quality of the human environment are highly uncertain or involve unique or unknown risk.**

No highly uncertain or unknown risks to the human environment were identified during analysis of the Proposed Action.

**6. Degree to which the action may establish a precedent for future actions with significant effects or represents a decision in principle about a future consideration.**

The Proposed Action neither establishes a precedent for future BLM actions with significant effects nor represents a decision in principle about a future consideration. Similar proposals to drill wells with associated pipelines and/or pipeline replacements have been evaluated and approved, so authorization to drill the proposed well would not set a precedent for future actions.

**7. Whether the action is related to other actions with individually insignificant but cumulatively significant impacts.**

It is not known that the Proposed Action is related to other actions with individually insignificant but cumulatively significant impacts.

**8. The degree to which the action may adversely affect districts, sites, highways, structures, or objects listed on the National Register of Historic Places or may cause loss or destruction of significant scientific, cultural, or historical resources.**

As currently known, there is no potential to adversely affect districts, structure or objects during this project as long mitigation is followed.

**9. The degree to which the action may adversely affect an endangered or threatened species or its habitat that has been determined to be critical under the Endangered Species Act (ESA) of 1973.**

No special status plant species concerns have been identified. Cumulative water depletions from the Colorado River Basin are considered likely to jeopardize the continued existence of the Colorado pikeminnow, humpback chub, bonytail, and razorback sucker and result in the destruction or adverse modification of their critical habitat. In 2008, BLM prepared a Programmatic Biological Assessment (PBA) that addressed water depleting activities associated with BLM's fluid minerals program in the Colorado River Basin in Colorado, including water used for well drilling, hydrostatic testing of pipelines, and dust abatement on roads. In response, the U.S. Fish and Wildlife Service (FWS) prepared a Programmatic Biological Opinion (PBO) that addressed water depletions associated with fluid minerals development on BLM lands. The PBO included reasonable and prudent alternatives which allowed BLM to authorize oil and gas wells that result in water depletion while avoiding the likelihood of jeopardy to the endangered fishes and avoiding destruction or adverse modification of their critical habitat. The reasonable and prudent alternative authorized BLM to solicit a one-time contribution to the Recovery Implementation Program for Endangered Fish Species in the Upper Colorado River Basin (Recovery Program) in an amount based on the average annual acre-ft depleted by fluid minerals activities on BLM lands. This contribution was ultimately provided to the Recovery Program through an oil and natural gas development trade association. Development associated with this project would be entered into the WRFO and LSFO fluid minerals water depletion log that is submitted to the Colorado State Office at the end of each Fiscal Year.

**10. Whether the action threatens a violation of Federal, State, or local law or requirements imposed for the protection of the environment.**

Neither the Proposed Action nor impacts associated with it violate any laws or requirements imposed for the protection of the environment.

**SIGNATURE OF AUTHORIZED OFFICIAL:**

  
Acting Field Manager

**DATE SIGNED:**

6/14/13

**U.S. Department of the Interior  
Bureau of Land Management  
White River Field Office  
220 E Market St  
Meeker, CO 81641**

## **DECISION RECORD**

**PROJECT NAME:** Wilson Creek Unit 3-94-34H1 Well and Pipeline Replacements

**ENVIRONMENTAL ASSESSMENT NUMBER:** DOI-BLM-CO-2013-0079-EA

### **DECISION**

It is my decision to implement the Proposed Action, as mitigated in DOI-BLM-CO-2013-0079-EA, authorizing the construction, operation, and maintenance of the Wilson Creek Unit 3-94-34H1 well and the four pipeline replacements.

### **Mitigation Measures**

1. Chevron and/or Endeavor will limit unnecessary emissions from point or nonpoint pollution sources and prevent air quality deterioration from necessary pollution sources in accordance with all applicable state, federal and local air quality law and regulation.
2. Chevron and/or Endeavor will treat all access roads with water and/or a chemical dust suppressant during construction and drilling activities so that there is not a visible dust trail behind vehicles. Any technique other than the use of freshwater as a dust suppressant on BLM lands will require prior *written* approval from BLM.
3. In order to protect public land health standards for soils, erosion features such as rilling, gullyng, piping and mass wasting on the surface disturbance or adjacent to the surface disturbance as a result of this action will be addressed immediately after observation by contacting the Authorized Officer (AO) and by submitting a plan to assure successful soil stabilization with BMPs to address erosion problems.
4. All construction activity shall cease when soils or road surfaces become saturated to a depth of three inches unless approved by the Authorized Officer.
5. To maintain the drainage features of the access roads, newly built and existing access roads will maintained with six inches of road base and/or gravel aggregate. Existing gravel and aggregate may be sufficient in some locations. Maintenance means restoring the travel surface shape and borrow ditches for the road design and maintaining aggregate as necessary. The surfacing will be removed before final reclamation on roads that are no longer needed.
6. To protect surface waters below the project area, keep road inlet and outlet ditches, sediment retention basins, and culverts free of obstructions, particularly before and

during spring run-off and summer convective storms. Provide adequate drainage spacing to avoid accumulation of water in ditches or on road surfaces.

7. Locate drainage dips and drainage ditches in such a manner as to avoid discharge onto unstable terrain such as headwalls or slumps. Provide adequate spacing to avoid accumulation of water in ditches or dips.
8. When drilling to set the conductor and surface casing, drilling fluid will be composed only of fresh water, bentonite, and/or a benign lost circulation material that does not pose a risk of harm to human health or the environment (e.g., cedar bark, shredded cane stalks, mineral fiber and hair, mica flakes, ground and sized limestone or marble, wood, nut hulls, corncobs, or cotton hulls).
9. Submit via Sundry Notice an estimate of freshwater use with the location and the water rights associated with the source prior to drilling. Freshwater should be used to drill the surface casing. Produced water from the Wilson Creek field may be used for drilling the production casing and any completion or stimulation activities. Estimates of volumes of water used for these purpose should be submitted via sundry.
10. Chevron will promptly re-vegetate all areas of earthen disturbance not necessary for production facilities, with the following recommended seed mix. Future final reclamation will use the seed mix recommended by BLM at that time as seed mixes and reclamation practices should be expected to evolve over time.

White River Field Office Native Seed Mix #6

Variety	Common Name	Seeding Rate Pure Live Seed (PLS)*
UP Plateau	Sandberg bluegrass	0.5
San Luis	Slender Wheatgrass	2
Sherman	Big Bluegrass	1
Bromar	Mountain Brome	2
Maple Grove	Lewis Flax	1
Bandera	Rocky Mountain Penstemon	0.5

\*Seeding rate is for drilled seeding; for broadcast seeding the rate should be doubled

11. Stockpiled topsoil and spoil piles will be separated and clearly labeled to prevent mixing during reclamation efforts. Prior to pad reclamation (especially final reclamation), BLM recommends testing topsoil to ensure its viability and/or to identify appropriate amendments to improve reclamation success. When backfilling pipeline trenches soils will be returned in their respective order with topsoils placed as the final topdressing. Topsoil may not be used for bedding pipelines.
12. Woody material will not be included within the topsoil piles, but will be piled separately in a manner that avoids windrowing and large piles of material (Michels 2009). For more mitigation related to the handling of woody materials used during reclamation see the *Forestry* section of this document.

13. Final reclamation including seeding will commence immediately after completion of each phase of construction on any of the proposed corridors. Or spreading of topsoil and application of seed may be delayed until the next appropriate seeding dates (September 1 through March 15). Drill seeding is the preferred method of application. Where broadcast, seed will be applied at twice the rate recommended for drill seeding.
14. Where it is apparent that livestock use will hamper reclamation efforts in terms of vegetation establishment Chevron may build fences (built to BLM Specifications, BLM manual H-1741-1) around reclaimed areas (pad and pipeline). Appropriate pass-through areas will be provided on pipelines to allow livestock to trail through the general area. Fences will be maintained by Chevron and upon achieving reclamation success fences will be removed by Chevron.
15. Chevron, as appropriate, will be responsible for achieving a reclamation success rate equal to a minimum cover and composition of 80 percent of the Desired Plant Community (DPC) (as defined by the ecological site, in an early seral state) or in relation to the seed mix applied within three growing seasons after the application of seed. This community must be capable of persisting on the site without intervention and allow for successional processes consistent with achieving the seral stage on the site prior to surface disturbance.
16. Reclamation achievement will be evaluated using the Public Land Health Standards that include Indicators of Rangeland Health. Reclamation would be considered successful when monitoring of reclaimed areas indicates foliar cover of at least 80 percent of the desired plant community in an herbaceous state. Composition of the resulting plant community must have at least five desirable plant species, at least two of which must be a forb or shrub. No one species may exceed 70 percent relative cover to ensure that site species diversity is achieved. If BLM determines that reclamation success is below an acceptable level, reclamation efforts must be repeated at Chevron's expense until vegetation is successfully established.
17. A reclamation status report for each site will be submitted electronically to the WRFO annually (due January 1<sup>st</sup>) until it is determined that reclamation of the site has met all required objectives of that particular reclamation phase. Every third year, a vegetation monitoring report should accompany the status report. The reclamation status report will be submitted electronically via email and as a hard copy to the WRFO project lead (NRS/Realty Specialist). Mail the hardcopy to: BLM, White River Field Office, 220 East Market Street, Meeker, CO 81641, Attn: Reclamation Status Report/WRFO (name of project lead). The reclamation status report will include at a minimum the necessary components to sufficiently and accurately characterize progress and status of reclamation to be included in a BLM database. Contact the project lead (NRS) for recommended status report components.
18. Place signs on both sides of the project area at least one week in advance warning those traveling RBC Road 9 of any traffic delays or roads closures.

19. All activity shall cease when soils or roads surfaces become saturated to a depth of three inches unless approved by the Authorized Officer.
20. Activities associated with the Proposed Action will take place outside the migratory bird nesting season of May 22 through July 22.
21. Although reserve pits are not planned with this project, in the event they are built the operator shall prevent use by species of birds during completion and after completion activities have ceased. Methods may include netting or other alternative methods that effectively prevent use and that meet BLM approval. It will be the responsibility of the operator to notify the BLM of the method that will be used to prevent use two weeks prior to when completion activities are expected to begin. The BLM approved method will be applied within 24 hours after completion.
22. If construction activities are initiated after February 15 a spot check of existing nest locations (with play back) will be necessary. Should a nest(s) be determined active/occupied, no development activities will be allowed within 1/2 mile of threatened, endangered or special status species and within a 1/4 mile for all other raptor species until August 15 or dispersal of young (WRRRA ROD TL-01 and TL-04).
23. Most-current raptor protection guidelines would be incorporated into power line design in an attempted to prevent raptor electrocution (e.g., *Suggested Practices for Avian Protection on Power Lines: The State of the Art in 2006*. Avian Power Line Interaction Committee [APLIC]; *Suggested Practices for Avian Protection on Power Lines: The State of the Art in 2006*. Edison Electric Institute, APLIC, and the California Energy Commission. Washington, DC and Sacramento, CA). Where perching deterrence is not an issue, providing adequate conductor separation would be the preferred method of protection.
24. Chevron USA, Inc is responsible for informing all persons who are associated with the project that they will be subject to prosecution for knowingly disturbing archaeological sites or for collecting artifacts.
25. If any archaeological materials are discovered as a result of operations under this authorization, activity in the vicinity of the discovery will cease, and the BLM WRFO Archaeologist will be notified immediately. Work may not resume at that location until approved by the Authorizing Official (AO). Chevron USA, Inc will make every effort to protect the site from further impacts including looting, erosion, or other human or natural damage until BLM determines a treatment approach, and the treatment is completed. Unless previously determined in treatment plans or agreements, BLM will evaluate the cultural resources and, in consultation with the State Historic Preservation Office (SHPO), select the appropriate mitigation option within 48 hours of the discovery. Chevron USA, Inc, under guidance of the BLM, will implement the mitigation in a timely manner. The process will be fully documented in reports, site forms, maps, drawings, and photographs. The BLM will forward documentation to the SHPO for review and concurrence.

26. Pursuant to 43 CFR 10.4(g), Chevron USA, Inc must notify the AO, by telephone and written confirmation, immediately upon the discovery of human remains, funerary items, sacred objects, or objects of cultural patrimony. Further, pursuant to 43 CFR 10.4(c) and (d), the applicant must stop activities in the vicinity of the discovery and protect it for 30 days or until notified to proceed by the AO.
27. Chevron USA, Inc is responsible for informing all persons who are associated with the project operations that they will be subject to prosecution for disturbing or collecting vertebrate fossils, collecting large amounts of petrified wood (over 25lbs./day, up to 250lbs./year), or collecting fossils for commercial purposes on public lands.
28. If any paleontological resources are discovered as a result of operations under this authorization, Chevron USA, Inc or any of its agents must stop work immediately at that site, immediately contact the BLM Paleontology Coordinator, and make every effort to protect the site from further impacts, including looting, erosion, or other human or natural damage. Work may not resume at that location until approved by the AO. The BLM or designated paleontologist will evaluate the discovery and take action to protect or remove the resource within 10 working days. Within 10 days, the operator will be allowed to continue construction through the site, or will be given the choice of either (a) following the Paleontology Coordinator's instructions for stabilizing the fossil resource in place and avoiding further disturbance to the fossil resource, or (b) following the Paleontology Coordinator's instructions for mitigating impacts to the fossil resource prior to continuing construction through the project area.
29. Any excavations into the underlying native sedimentary stone must be monitored by a permitted paleontologist. The monitoring paleontologist must be present before the start of excavations that may impact bedrock.
30. All above-ground facilities and equipment will be painted to blend in with the surrounding environment. Color of all above-ground equipment and facilities for the well pad and WCU flowline 26 shall be painted shale green. Color of all above-ground equipment and facilities for all other locations shall be painted Juniper Green using Standard Environmental Color Chart CC-001: June 2008. It is important to note that the color chart is an actual paint chart and cannot be faxed, scanned or photocopied as it will change the color and may not be consistent with the actual color.
31. Comply with all Federal, State and/or local laws, rules and regulations, including but not limited to onshore orders and notices to lessees, addressing the emission of and/or the handling, use, and release of any substance that poses a risk of harm to human health or the environment. All spills or leakages of oil, gas, produced water, toxic liquids or waste materials, blowouts, fires, shall be reported by the operator in accordance with the regulations and as prescribed in applicable orders or notices.
32. All lessees and/or operators and right-of-way holders shall comply with all federal, state and/or local laws, rules, and regulations, including but not limited to onshore orders and

notices to lessees, addressing the emission of and/or the handling, use, and release of any substance that poses a risk of harm to human health or the environment.

33. Where required by law or regulation to develop a plan for the prevention of releases or the recovery of a release of any substance that poses a risk of harm to human health or the environment, provide a current copy of said plan to the BLM WRFO.
34. Through all phases of oil and gas exploration, development, and production, all lessees and/or operators and holders of rights-of-way shall employ, maintain, and periodically update to the best available technology(s) aimed at reducing: 1) emissions, 2) fresh water use, and 3) utilization, production, and release of hazardous material.
35. All substances that pose a risk of harm to human health or the environment shall be stored in appropriate containers. Fluids that pose a risk of harm to human health or the environment, including but not limited to produced water, shall be stored in appropriate containers and in secondary containment systems at 110% of the largest vessel's capacity. Secondary fluid containment systems, including but not limited to tank batteries shall be lined with a minimum 24 mil impermeable liner.
36. Construction sites and all facilities shall be maintained in a sanitary condition at all times; waste materials shall be disposed of promptly at an appropriate waste disposal site. "Waste" means all discarded matter including, but not limited to, human waste, trash, garbage, refuse, oil drums, petroleum products, ashes, and equipment.
37. As a reasonable and prudent lessee/operator in the oil and gas industry, acting in good faith, all lessees/operators and right-of-way holders will report all emissions or releases that may pose a risk of harm to human health or the environment, regardless of a substance's status as exempt or nonexempt and regardless of fault, to the BLM WRFO (970) 878-3800.
38. As a reasonable and prudent lessees/operator and/or right-of-way holder in the oil and gas industry, acting in good faith, all lessees/operators and right-of-way holders will provide for the immediate clean-up and testing of air, water (surface and/or ground) and soils contaminated by the emission or release of any substance that may pose a risk of harm to human health or the environment, regardless of that substance's status as exempt or non-exempt. Where the lessee/operator or right-of-way holder fails, refuses or neglects to provide for the immediate clean-up and testing of air, water (surface and/or ground) and soils contaminated by the emission or release of any quantity of a substance that poses a risk of harm to human health or the environment, the BLM WRFO may take measures to clean-up and test air, water (surface and/or ground) and soils at the lessee/operator's expense. Such action will not relieve the lessee/operator of any liability or responsibility.
39. With the acceptance of this authorization, the commencement of operations under this authorization, or within thirty calendar days from the issuance of this authorization, whichever occurs first, and during the life of the pipeline, the right-of-way holder and the lessee/operator, and through the right-of-way holder and lessee/operator, its agents,

employees, subcontractors, successors and assigns, stipulate and agree to indemnify, defend and hold harmless the United States Government, its agencies, and employees from all liability associated with the emission or release of substances that pose a risk of harm to human health or the environment.

40. When working on lands administered by the BLM WRFO, notify Craig Interagency Dispatch (970-826-5037) in the event of any fire.
  - g) The reporting party will inform the dispatch center of fire location, size, status, smoke color, aspect, fuel type, and provide their contact information.
  - h) The reporting party, or a representative of, should remain nearby, in a safe location, in order to make contact with incoming fire resources to expedite actions taken towards an appropriate management response.
  - i) The applicant and contractors will not engage in any fire suppression activities outside the approved project area. Accidental ignitions caused by welding, cutting, grinding, etc. will be suppressed by the applicant only if employee safety is not endangered and if the fire can be safely contained using hand tools and portable hand pumps. If chemical fire extinguishers are used the applicant must notify incoming fire resources on extinguisher type and the location of use.
  - j) Natural ignitions caused by lightning will be managed by Federal fire personnel. The use of heavy equipment for fire suppression is prohibited, unless authorized by the Field Office Manager.
  - k) In an effort to improve safety to both federal fire personnel and the public, all above ground pipelines will be marked in accordance with CFR Title 49 Part 192.707 "Line markers for mains and transmission lines".
  - l) The operator will provide the White River Field Office with GIS data, in the form of a shape file, as to where any surface lines are located within the lease.
41. Trees that must be removed for construction and are not required for reclamation shall be cut down to a stump height of six inches or less prior to other heavy equipment operation. These trees shall be cut in four foot lengths (down to four inches diameter) and placed in manageable stacks immediately adjacent to a public road to facilitate removal for company use or removal by the public.
42. Chevron must coordinate with the livestock grazing permittee authorized to graze livestock within the project area a minimum of 72 hours prior to construction activities associated with this permit. Livestock grazing permittee contact information may be found at [www.blm.gov/ras/](http://www.blm.gov/ras/) or by contacting the WRFO or LSFO Range staff (970-878-3800 or 970-826-5000). Chevron will provide the grazing permittee the location, nature, and extent of the anticipated activity being completed.
43. Any range improvement projects such as fences, water developments, cattleguards, gates, or other livestock handling/distribution facilities that are damaged or destroyed either directly or indirectly as a result of implementation of the Proposed Action shall be promptly (at least prior to the livestock grazing permittee's need to utilize the range improvement) be repaired or replaced by the operator to restore it to at least its pre-disturbance functionality. If the operator damages any range improvement project(s) the

operator will notify the Authorized Officer through sundry notice (Form 3160-5) and identify the actions taken to repair the feature(s).

44. Cattle guards and or gates used for future access to and maintenance of oil and gas facilities in this area will be maintained by Chevron to ensure they remain functional (cattle guards cleaned and gates kept closed) to control livestock.
45. Place signs on both sides of the project area at least one week in advance warning those traveling RBC Road 9 of any traffic delays or roads closures.

#### **COMPLIANCE WITH LAWS & CONFORMANCE WITH THE LAND USE PLAN**

This decision is in compliance with the Endangered Species Act, and the National Historic Preservation Act. It is also in conformance with the 1997 White River Record of Decision/Approved Resource Management Plan, and the 2011 Little Snake Record of Decision and Approved Resource Management Plan.

#### **ENVIRONMENTAL ANALYSIS AND FINDING OF NO SIGNIFICANT IMPACT**

The Proposed Action was analyzed in DOI-BLM-CO-2013-0079-EA and it was found to have no significant impacts, thus an EIS is not required.

#### **PUBLIC INVOLVEMENT**

Scoping was the primary mechanism used by the BLM to initially identify external and internal issues related to the Proposed Action. Internal scoping was initiated when the project was presented to the White River Field Office (WRFO) interdisciplinary team on April 16, 2013, and to the Little Snake Field Office on April 29, 2013. External scoping was conducted by posting this project on the White River Field Office's (WRFO's) on-line National Environmental Policy Act (NEPA) register on April 16, 2013. As of May 20, 2013 no comments have been received.

#### **RATIONALE**

Analysis of the Proposed Action has concluded that there are no significant negative impacts and that it meets Colorado Standards for Public Land Health. Additionally, authorization to drill the proposed well would allow for the development of an oil and gas lease.

#### **ADMINISTRATIVE REMEDIES**

##### **State Director Review**

Under regulations addressed in 43 CFR 3165.3(b), any adversely affected party that contests a decision of the Authorized Officer may request an administrative review, before the State Director, either with or without oral presentation. Such request, including all supporting documentation, shall be filed in writing with the BLM Colorado State Office at 2850 Youngfield Street, Lakewood, Colorado 80215 within 20 business days of the date such decision was received or considered to have been received. Upon request and showing of good cause, an extension may be granted by the State Director. Such review shall include all factors or circumstances relevant to the particular case.

##### **Appeal**

Any party who is adversely affected by the decision of the State Director after State Director review, under 43 CFR 3165.3(b), of a decision may appeal that decision to the Interior Board of Land Appeals pursuant to the regulations set out in 43 CRF Part 4.

**SIGNATURE OF AUTHORIZED OFFICIAL:**

*Est M M S Cyl*  
Acting Field Manager

**DATE SIGNED:** 6/14/13