

**U.S. Department of the Interior
Bureau of Land Management**

**Environmental Assessment
DOI-BLM-UT-G010-2014-0069-EA
Red Wash Four Disposal Well Project**

PREPARING OFFICE

U.S. Department of the Interior
Bureau of Land Management



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Prepared by
U.S. Department of the Interior
Bureau of Land Management

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Environmental Assessment
DOI-BLM-010-2014-000-BA
of the proposed project

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Finding of No Significant Impact

Finding of No Significant Impact:

Based on the analysis of potential environmental impacts DOI-BLM-UT-G010-2014-0069-EA, I have determined that the proposed action will not have any significant impacts on the environment, and an environmental impact statement is not required.

Signatures:

Recommended by:



Kevin Sadlier
Natural Resource Specialist

3/18/14

[Date]

Approved by:



Authorized Officer
AFM for Minerals

MAR 19 2014

[Date]

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- All vehicles and equipment shall be cleaned either through power-washing, or other approved method, if the vehicles or equipment were brought in from areas outside the Uinta Basin, to prevent weed seed introduction.

QEP has agreed not to construct or drill during the dates in Table 1 Raptor Timing Restrictions (p.), unless otherwise determined by the BLM authorized officer. QEP has also agreed to follow REA standards for raptor protection on all power lines.

Table 1. Raptor Timing Restrictions

Well Name	Ferruginous Hawk March 1 to August 1
RW 11–33B SWD	Yes
RW 14–35B SWD	Yes
RW 33–34B SWD	No
RW 43–35B SWD	Yes
Yes indicates that QEP would not drill within the dates specified above.	

Rationale:

The subject lands were leased for oil or gas development under authority of the Mineral Leasing Act of 1920, as modified by the Federal Land Policy and Management Act of 1976, and the Federal Onshore Oil and Gas Leasing Reform Act of 1987. The lessee/operator has the right to explore for oil and gas on the lease as specified in 43 CFR 3103.1-2, and if a discovery is made, to produce oil and/or natural gas for economic gain.

The selected alternative meets the BLM’s need to acknowledge and allow development of valid existing leases. The BLM objective to reduce impacts is met by the imposing of mitigation measures to protect other resource values.

Land Use Plan Conformance:

The selected alternative is in conformance with the Vernal Field Office Resource Management Plan and Record of Decision (BLM 2008).

The selected alternative is consistent with *Uintah County General Plan* (published in 2007) that encompasses the location of the proposed wells. In general, the plan indicates support for development proposals such as the selected alternative through the plan's emphasis of multiple-use public land management practices, responsible use and optimum utilization.

There are no comprehensive State of Utah plans for the vicinity of the selected alternative. However, the State of Utah School and Institutional Trust Lands Administration (SITLA) have leased much of the nearby state land for oil and gas production. Because the objectives of SITLA are to produce funding for the state school system, and because production on federal leases could further interest in drilling on state leases in the area, it is assumed that the selected alternative is consistent with the objectives of the State.

Decision Record - Memorandum

Selected Action:

It is my decision to approve QEP Energy Company's proposal to drill four salt water disposal wells (RW 14-35B SWD, RW 33-34B SWD, RW 11-33B SWD, and RW 43-35B SWD) in Sections 32, 33, 34, 35, and 36 of T. 7 S., R. 23 E., Uintah County, Utah. The project area is located approximately 29 miles south of Vernal, Utah. The wells will be drilled utilizing new locations. Approximately 9,088 feet of road will be built. Additionally 11,934.2 feet of 6 inch or smaller flex steel buried pipeline, and 6,817 feet of overhead power lines will be constructed. as described in the proposed action alternative of DOI-BLM-UT-G010-2014-0069-EA. This decision is subject to the below conditions of approval.

Conditions of Approval:

This decision is contingent on meeting all stipulations and monitoring requirements listed below, which were designed to minimize and/or avoid impacts.

- Water or other approved dust suppressants will be used at construction sites and along roads, as determined appropriate by the Authorized Officer.
- Open burning of garbage or refuse will not occur at well sites or other facilities.
- Drill rigs will be equipped with Tier II or better diesel engines.
- Well site telemetry will be utilized as feasible for production operations.
- All internal combustion equipment will be kept in good working order.
- Low bleed pneumatics would be installed on separator dump valves and other controllers. The use of low bleed pneumatics will result in a lower emission of VOCs.
- During completion, flaring will be limited as much as possible. Production equipment and gathering lines will be installed as soon as possible.
- If historic or archaeological materials are uncovered during construction, the Operator will immediately stop work that might further disturb such materials and contact the Authorized Officer.
- A BLM authorized permitted paleontologist will be present to monitor the construction process of the access road and well pad.
- QEP will educate its contractors and employees about the relevant federal regulations intended to protect paleontological and cultural resources. All vehicular traffic, personnel movement, construction, and restoration activities will be confined to areas cleared by the site inventory and to existing roads. If any potential paleontological or cultural resources are uncovered during construction, work will stop immediately in the area and the appropriate BLM AO will be notified.

Public Involvement:

The proposed project was posted on the Eplanning NEPA Register on 10/29/2013. One organization requested more information on the project on 11/18/2013, no further comment has been received.

Alternatives Considered:

The EA analyzed the proposed action and no action alternatives. Onsite visits were conducted by Vernal Field Office Personnel. The onsite inspection reports do not indicate that any other locations be proposed for analysis. The no action alternative was not selected because it would not best meet the BLM's need to acknowledge and allow development of valid existing leases.

Appeal or Protest Opportunities:

This decision is effective upon the date it is signed by the authorized officer. The decision is subject to appeal. Under BLM regulation, this decision is subject to administrative review in accordance with 43 CFR 3165. Any request for administrative review of this decision must include information required under 43 CFR 3165.3(b) (State Director Review), including all supporting documentation. Such a request must be filed in writing with the State Director, Bureau of Land Management, Utah State Office, P.O. Box 45155, Salt Lake City, Utah, 84145-0155, within 20 business days of the date this Decision is received or considered to have been received.

If you wish to file a petition for stay, the petition for stay should accompany your notice of appeal and shall show sufficient justification based on the following standards:

1. The relative harm to the parties if the stay is granted or denied;
2. The likelihood of the appellant's success on the merits;
3. The likelihood of irreparable harm to the appellant or resources if the stay is not granted; and,
4. Whether the public interest favors granting the stay.

Signature:

Authorizing Official:

Authorized Officer

MAR 19 2014

Date

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Chapter 1. Introduction

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1.1. Identifying Information:

This Environmental Assessment (EA) has been prepared to analyze the potential impacts of QEP Energy Company's gas well drilling project in the Red Wash area of Uintah County, Utah. The EA is a site-specific analysis of potential impacts that could result from the implementation of the Proposed Action or alternatives to the Proposed Action. The EA assists the Bureau of Land Management (BLM) in project planning and ensuring compliance with the National Environmental Policy Act (NEPA), and in making a determination as to whether any "significant" impacts could result from the analyzed actions. ("Significance" is defined by NEPA and is found in regulation 40 CFR 1508.27.) An EA provides evidence for determining whether to prepare an Environmental Impact Statement (EIS) or a Finding of No Significant Impact (FONSI) statement. A FONSI statement is a document that briefly presents the reasons why implementation of the selected alternative would not result in "significant" environmental impacts (effects) beyond those already addressed in Vernal Field Office Resource Management Plan (BLM 2008). If the decision maker determines that this project has "significant" impacts following the analysis in the EA, then an EIS would be prepared for the project. If not, a Decision Record (DR) may be signed for the EA approving the alternative selected.

QEP Energy Company's proposal to drill four salt water disposal wells (RW 14-35B SWD, RW 33-34B SWD, RW 11-33B SWD, and RW 43-35B SWD) in sections 32, 33, 34, 35, and 36 of T. 7 S., R. 23 E., Uintah County, Utah. The proposed project area is located approximately 29 miles south of Vernal, Utah. The proposed wells would be drilled utilizing new locations. Approximately 9,088 feet of road would be built. Additionally 11934.2 feet of 6 inch buried pipeline, and 6817 feet of overhead power lines would be constructed. Table 2.1, "Surface Disturbance Summary on BLM" (p. 5) lists the wells and their associated disturbance. Rights of way will be issued by the state for the portions of the project on SITLA lands Table 2.2, "Surface Disturbance Summary On SITLA" (p. 5) lists the well and its associated disturbance on state lands.

1.1.1. Title, EA number, and type of project:

Title: Red Wash EA #2014-0069-EA

NEPA #: DOI-BLM-UT-G010-2014-0069-EA

Project Type: Environmental Assessment

1.1.2. Location of Proposed Action:

The proposed project area is located in sections 32, 33, 34, and 35 of T. 7 S., R. 23 E., Uintah County, Utah. The proposed project area is located approximately 29 miles south of Vernal, Utah.

1.1.3. Name and Location of Preparing Office:

Vernal Field Office

170 South 500 East

Vernal, Ut. 84078

(435) 781-4400

1.1.4. Identify the subject function code, lease, serial, or case file number:

Lease Number: UTU-0566, UTU-0933, and UTU-02060.

1.1.5. Applicant Name:

QEP Energy Company

1.2. Purpose and Need for Action:

Private exploration and production from federal oil and gas leases is an integral part of the BLM oil and gas leasing program under authority of the Mineral Leasing Act of 1920, as amended by the Federal Land Policy and Management Act of 1976 and the Federal Onshore Oil and Gas Leasing Reform Act of 1987. The operator has a valid existing right to extract mineral resources from Federal Leases UTU-0566, UTU-0933, and UTU-02060 subject to the lease's terms and conditions. The BLM oil and gas leasing program encourages development of domestic oil and gas reserves and the reduction of U.S. dependence on foreign energy sources. The BLM's purpose is to allow beneficial use of the applicant's lease in an environmentally sound manner. The underlying need for the proposed action is for QEP to develop Federal Lease UTU-0566, UTU-0933, and UTU-02060 by drilling the proposed wells. These wells would be utilized for salt water disposal for wells in the surrounding area. There are known hydrocarbon-trapping mechanisms within QEP's development program, based on previously drilled wells and reasoned geologic formation and mineral potential.

1.3. Scoping, Public Involvement and Issues:

The proposed project was posted on the Eplanning NEPA Register on 1/17/2014.

Chapter 2. Proposed Action and Alternatives

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2.1. Description of the Proposed Action:

QEP proposes to drill four salt water disposal wells (RW 14–35B SWD, RW 33–34B SWD, RW 11–33B SWD, and RW 43–35B SWD) in sections 32, 33, 34, 35, and 36 of T. 7 S., R. 23 E., Uintah County, Utah. The proposed project area is located approximately 29 miles south of Vernal, Utah. The proposed wells would be drilled utilizing new locations. Approximately 9,088 feet of road would be built. Additionally 11934.2 feet of 6 inch buried pipeline, and 6817 feet of overhead power lines would be constructed. Table 2.1, “Surface Disturbance Summary on BLM” (p. 5) lists the wells and their associated disturbance. Rights of way will be issued by the state for the portions of the project on SITLA lands Table 2.2, “Surface Disturbance Summary On SITLA” (p. 5) lists the well and its associated disturbance on state lands..

Table 2.1. Surface Disturbance Summary on BLM

Well Name	New Well Pad Disturbance (acres)	Buried Pipeline (feet)*	Buried Pipeline (acres)*	Over Head Power Lines (feet)	Over Head Power Lines During Construction (acres)	Over Head Power Lines Permanent Access (acres)	Access Road (feet)	Access Road (acres)	Total Acres of New Surface Disturbance (acres)
RW 11–33B SWD	2.10	907.20	0.62	1212	1.39	0.42	85	0.06	4.17
RW 14–35B SWD	2.09	416	0.29	2597	2.98	0.89	407	0.28	5.64
RW 33–34B SWD	2.20	3434	2.37	2297	2.64	0.79	722	0.50	7.56
RW 43–35B SWD	2.05	+7177	4.94	711	0.82	0.24	7874	5.42	13.23
TOTAL	8.44	11934.2	8.22	6817	7.82	2.35	9088	6.26	30.60

Table 2.2. Surface Disturbance Summary On SITLA

Well Name	Buried Pipeline (feet)*	Buried Pipeline (acres)*	Over Head Power Lines (feet)	Over Head Power Lines During Construction (acres)	Over Head Power Lines Permanent Access (acres)	Total Acres of New Surface Disturbance (acres)
RW 11–33B SWD	187.8	0.13	0	0	0	0.13
RW 43–35B SWD	0	0	821	0.94	0.28	0.94
TOTAL	187.8	0.13	821	0.94	0.28	1.07

2.1.1. Access

The new roads would be built to access the proposed wells. The new roads would be crowned (2 to 3%), ditched, and constructed with a running surface of 18 feet and a maximum disturbed width of 30 feet during construction and maintenance.

2.1.2. Well Site Layout

The proposed wells would be constructed on 4 new well pads. This would result in approximately 30.6 acres of new surface disturbance during the construction of the well pads, reserve pits, and access roads. Topsoil stockpiled from construction of the pads and reserve pits would be stripped to a depth determined on the onsite for each well and placed on determined sites for the well, segregated from the subsoil. The topsoil piles would be signed for identification. The topsoil on a well that is to be a producing well would then be re-spread over the reserve pit as soon as completion operations have been finished and the reserve pit has been filled in with subsoil. The reserve pit would then be seeded with the recommended seed mix, and left in place for the life of the well.

The reserve pit would be fenced on three sides prior to drilling activity and closed off on the fourth side after drilling is finished. The reserve pit for the proposed well would be lined with a 20 ml liner. A felt pit liner would be required if bedrock is encountered.

2.1.3. Surface Facilities

All production facilities would be located on the disturbed portion of the well pad and a minimum of 25 feet from the toe of the back slope or the top of the fill slope. A dike would be constructed around those production facilities that contain fluids (i.e. production tanks, produced water tanks, and/or heater-treater). The dikes would be constructed of compacted subsoil. They would be impervious, hold 110 percent of the capacity of the largest tank, and be independent of the back cut.

All permanent (meaning on site for six months or longer) structures would be painted Covert Green to match the surrounding landscape color unless otherwise authorized. This would include all facilities except those required to comply with Occupational Safety and Health Act (OSHA) regulations.

2.1.4. Pipelines

There would be 11934.2 feet of steel pipeline installed for this project. The pipeline would be 6" flex steel. The pipelines would be buried 4 to 6 feet deep and the ditch will be approximately 4 feet wide. The pipeline would be laid within 20 feet of existing roads, pipelines, or existing route authorizations as much as possible. Pipeline Route Authorizations would be 30" wide and the location noted on maps accompanying the APD.

2.1.5. Power Lines

There would be 6817 feet of overhead power lines installed for this project. Access for proposed power lines would be from existing roads. All construction and vehicular traffic will be confined

to the authorized access corridor and designated county and/or BLM roads unless otherwise authorized and approved by the regulating agency. All work would be done according to standards outlined in “Suggested Practices for Raptor Protection” (REA).

QEP is proposing a 50 foot temporary authorized access, and a 15 foot permanent authorized access, for maintenance of the power line. Minimal to no disturbance is required for the power lines following roads and existing disturbance.

2.1.6. Invasive Plants and Noxious Weeds

The operator would control noxious/invasive weeds along their roads, pipelines, well sites, or other applicable facilities by the application of herbicides or by mechanical removal until reclamation is considered to be successful by the Authorized Officer (AO) and the bond for the well is released. A list of noxious weeds would be obtained from the BLM or the appropriate county extension office. On BLM-administered land, the operator would submit a Pesticide Use Proposal and obtain approval prior to the application of herbicides, other pesticides, or possible hazardous chemicals.

2.1.7. Water Supply and Disposal

Fresh water for drilling would be obtained from Wonsits Valley water right 49-251 (which was filed on May 7, 1964), or Red Wash water right 49-2153 (which was filed on March 25, 1960). Water would be hauled by a licensed trucking company. Water wells would not be drilled on the lease.

On January 21–22, 1988, the Secretary of the Interior; the Governors of Wyoming, Colorado, and Utah; and the Administrator of the Western Area Power Administration were cosigners of a cooperative agreement to implement the Recovery Implementation Program for Endangered Fish Species in the Upper Colorado River Basin (USFWS 1987). An objective of the Recovery Program was to identify reasonable and prudent alternatives that would ensure the survival and recovery of the four endangered Colorado River fish species, while providing for new water development in the Upper Colorado River Drainage Basin.

Wonsits Valley, and Red Wash water rights are historic depletion (permitted prior to January 1988). The U.S. Fish and Wildlife Service (USFWS 1994) address’s new and historic depletions differently under the Section 7 agreement of March 11, 1993, historic depletions, regardless of size, do not pay a depletion fee to the Recovery Program. Also, consultation for historic depletions was conducted in association with that 1993 agreement.

2.1.8. Waste Disposal

Drill cuttings would be contained and buried in the reserve pits. Drilling fluids, including salts and chemicals, would be contained in the reserve pits. Upon termination of drilling and completion operations, the liquid contents of the reserve pits would be used at the next drill site or would be removed and disposed of at an approved waste disposal facility within 6 months after drilling is terminated. Immediately upon well completion, any hydrocarbons in the pit would be removed in accordance with 43 CFR 3162.7-1.

Unless specified in the site specific APD, the reserve pits would be constructed on the location and not be located within natural drainages, where a flood hazard exists or surface runoff would destroy or damage the pit walls. The reserve pits would be constructed so that they would not leak, break, or allow discharge of liquids.

After drilling operations have been completed, wastewater would be confined to the approved pit or storage tank for a period not to exceed 90 days. During the 90 day period, in accordance with Onshore Order #7, all produced water would be contained in tanks on location and then hauled to Wonsits Valley injection station located in the SWNW Section 12, T8S, R21E; Red Wash disposal located in SWSE, Section 28, T7S, R22E; Red Wash Central Battery Disposal located in SWSE, Section 27, T7S, R23E; West End Disposal located in the NESE, Section 28, T7S, R22E; or third-party surface evaporative pits.

Produced water, oil, and other byproducts would not be applied to roads or well pads for control of dust or weeds. The dumping of produced fluids on roads, well sites, or other areas would not be allowed.

A chemical porta-toilet would be furnished with the drilling rig. The chemical porta-toilet wastes would be hauled to Ashley Valley Sewer and Water System for disposal.

No hazardous wastes (as defined in 40 CFR 355 or subject to reporting under SARA Title III) would be used, produced, stored, transported, or disposed of annually in association with the drilling, testing, or completing of this well.

Trash would be confined in a covered container and hauled to an approved landfill. No waste or oil would be burned. Human waste would be contained and disposed of at an approved sewage treatment facility.

2.1.9. Reclamation

2.1.9.1. Producing Location

Immediately upon well completion, the locations and surrounding areas would be cleared of all unused tubing, equipment, debris, materials, and trash. Any hydrocarbons in the pit would be removed in accordance with 43 CFR 3162.7-1.

2.1.9.2. Interim Reclamation

Interim reclamation of the surface environment would take place after drilling and completion of the wells. The reserve pit and the portion of the well not needed for production facilities/operations would be recontoured to the approximate natural contours. The reserve pit would be reclaimed within 120 days from the date of well completion, or as soon as environmental conditions allow. The stockpiled pit topsoil would then be spread over the pit area and broadcast-seeded/drill seeded (preferred method) with a seed mixture that would be submitted via sundry. The seed mixture would be worked into the topsoil with a drill seeder, bulldozer or other heavy equipment. If initial seeding is not successful, reseeding may be required.

2.1.9.3. Dry Hole / Abandoned Locatoin

Abandoned well sites, roads and other disturbed areas would be restored as near as practical to their natural condition. Stockpiled topsoil would be spread across the recontoured area then seeded with the seed mixture submitted via sundry. Seed application would follow all guidelines in the interim seed mix bullet statement above, and in Green River Reclamation Guidelines (BLM 2009). If reclamation seeding should take place using the broadcast method, the seed at a minimum would be walked into the soil with a dozer or other heavy equipment immediately after the seeding is completed. Reclamation of the well pad and access road would be done within six months, weather permitting, after final abandonment.

2.1.9.4. Monitoring

Prior to any surface disturbance, vegetative monitoring locations and reference sites would be identified by QEP and approved by the BLM Authorized Officer. Vegetation monitoring protocol would be developed by QEP and approved by the BLM Authorized Officer prior to implementation of revegetation techniques and would be designed to monitor percent basal vegetative cover. Revegetated areas would be inspected annually and monitored to document location and extent of areas with successful revegetation, and areas needing further reclamation. A reclamation report would be submitted to the Authorized Officer by March 31 of each year. On Federal lands, the reclamation objective would be a vegetation community that within 5 years is comprised of desired and/or seeded species, and where the basal vegetative cover is 75 percent of a similar undisturbed adjacent native vegetation community. If after 3 years basal cover is less than 30 percent, then additional seeding and reclamation efforts may be required.

2.1.10. Applicant Committed Environmental Protection Measures (ACEPMS)

2.1.10.1. Air Quality

QEP agrees to implement the following measures to reduce emissions:

- Water or other approved dust suppressants would be used at construction sites and along roads, as determined appropriate by the Authorized Officer.
- Open burning of garbage or refuse would not occur at well sites or other facilities.
- Drill rigs would be equipped with Tier II or better diesel engines.
- Well site telemetry would be utilized as feasible for production operations.

2.1.10.2. Cultural Resources

Class III archeological surveys were conducted by Montgomery Archaeology Consultants. Copies of the reports have been submitted directly to the appropriate agencies by Montgomery Archaeology Consultants. Cultural resource clearance has been recommended for this project. If historic or archaeological materials are uncovered during construction, the Operator is to immediately stop work that might further disturb such materials and contact the Authorized Officer.

2.1.10.3. Paleontological Resources

Paleontological surveys have been conducted by Intermountain Paleo-Consulting. A copy of this report was submitted to the BLM by Stephen D. Sandau. The survey for the RW 43–35B SWD resulted in the finding of scientifically important fossil resources. A BLM authorized permitted paleontologist would be present to monitor the construction process of the access road and well pad.

2.1.10.4. Threatened, Endangered Fish and Wildlife Species

QEP has agreed not to construct or drill during the dates in Table 2.3, “Raptor Timing Restrictions” (p.), unless otherwise determined by the BLM authorized officer. QEP has also agreed to follow REA standards for raptor protection on all power lines.

Table 2.3. Raptor Timing Restrictions

Well Name	Ferruginous Hawk March 1 to August 1
RW 11–33B SWD	Yes
RW 14–35B SWD	Yes
RW 33–34B SWD	No
RW 43–35B SWD	Yes
Yes indicates that QEP would not drill within the dates specified above.	

2.2. No Action Alternative

Under the No Action Alternative, QEP would not drill the four disposal wells: RW 11-33B SWD, RW 14-35B SWD, RW 33-34B SWD, and RW 43-35B SWD in sections 32, 33, 34, and 35, T. 7 S., R. 23 E., Uintah County, Utah. However, other oil and gas development in the area would be expected to continue. Other current resource trends and land use practices would also continue. The BLM’s authority to implement the No Action Alternative may be limited because oil and gas leases allow drilling in the lease area subject to the stipulations of the specific lease agreement. The BLM can deny the application for permit to drill (APD) if the proposal would violate lease stipulations and applicable laws and/or regulations. The BLM can also impose conditions of approval to prevent undue or unnecessary environmental degradation. If the BLM were to deny the APD, the applicant could attempt to reverse the BLM’s decision through administrative appeals, seek to exchange its lease for leases in other locations, or seek compensation from the federal government. The outcome of these actions is beyond the scope of this EA because they cannot be projected or meaningfully analyzed at this time.

2.3. Alternatives Considered but not Analyzed in Detail

There were no other alternatives identified aside from the Proposed Action and No Action Alternatives that would meet the purpose and need of this project.

2.4. Conformance

The alternatives are in conformance with the Vernal Field Office RMP/ROD (October 31, 2008) and the terms of the lease. The RMP/ROD decision allows leasing of oil and gas while protecting or mitigating other resource values (RMP/ROD p. 97-99). The Minerals and Energy

Resources Management Objectives encourage the drilling of oil and gas wells by private industry (RMP/ROD, p. 97). The RMP/ROD decision also allows for processing applications, permits, operating plans, mineral exchanges, and leases on public lands in accordance with policy and guidance and allows for management of public lands to support goals and objectives of other resources programs, respond to public requests for land use authorizations, and acquire administrative and public access where necessary (RMP/ROD p. 86). It has been determined that the proposed action and alternative(s) would not conflict with other decisions throughout the plan. .

2.5. Relationships to Statutes, Regulations, or Other Plans

2.5.1. Federal Laws and Statutes

The subject lands were leased for oil or gas development under authority of the Mineral Leasing Act of 1920, as modified by the Federal Land Policy and Management Act of 1976, and the Federal Onshore Oil and Gas Leasing Reform Act of 1987. The lessee/operator has the right to explore for oil and gas on the lease as specified in 43 CFR 3103.1-2, and if a discovery is made, to produce oil and/or natural gas for economic gain.

2.5.2. State and Local Laws and Statutes

There are no comprehensive State of Utah plans for the vicinity of the Proposed Action.

The proposed project is consistent with the *Uintah County General Plan, 2011 (Plan)* that encompasses the location of the proposed well. In general, the Plan indicates support for development proposals such as the Proposed Action through the Plan's emphasis on multiple-use public land management practices, responsible use and optimum utilization.

The State of Utah School and Institutional Trust Lands Administration (SITLA) have leased much of the nearby state land for oil and gas production. Because the objectives of SITLA are to produce funding for the state school system, and because production on federal leases could further interest in drilling on state leases in the area, it is assumed that the alternatives analyzed, except the No Action Alternative, are consistent with the objectives of the state.

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Chapter 3. Affected Environment:

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3.1. Air Quality

The Project Area is located in the Uinta Basin, a semiarid, mid-continental climate regime typified by dry, windy conditions, limited precipitation and wide seasonal temperature variations subject to abundant sunshine and rapid nighttime cooling. The Uinta Basin is designated as unclassified/attainment by the EPA under the Clean Air Act. This classification indicates that the concentration of criteria pollutants in the ambient air is below National Ambient Air Quality Standards (NAAQS), or that adequate air monitoring is not available to determine attainment.

NAAQS are standards that have been set for the purpose of protecting human health and welfare with an adequate margin of safety. Pollutants for which standards have been set include ground level ozone, (O₃), sulfur dioxide (SO₂), nitrogen dioxide (NO₂), and carbon monoxide (CO), and particulate matter less than 10 microns in diameter (PM₁₀) or 2.5 microns in diameter (PM_{2.5}). Airborne particulate matter consists of tiny coarse-mode (PM₁₀) or fine-mode (PM_{2.5}) particles or aerosols combined with dust, dirt, smoke, and liquid droplets. PM_{2.5} is derived primarily from the incomplete combustion of fuel sources and secondarily formed aerosols, whereas PM₁₀ is primarily from crushing, grinding, or abrasion of surfaces. Table 3.1, "Air Quality Background Values" (p. 15) lists ambient air quality background values for the Uinta Basin and NAAQS standards.

Table 3.1. Air Quality Background Values

Pollutant	Averaging Period(s)	Uinta Basin Background Concentration (g/m ³)	NAAQS (g/m ³)
SO ₂	Annual	0.8 ²	--1
	24-hour	3.9 ²	--1
	3-hour	10.1 ²	1,300
	1-hour	19.0 ²	197
NO ₂	Annual	8.1 ³	100
	1-hour	60.2 ³	188
PM ₁₀	Annual	7.0 ⁴	--6
	24-hour	16.0 ⁴	150
PM _{2.5}	Annual	9.4 ³	15
	24-hour	17.8 ³	35
CO	8-hour	3,450 ⁴	10,000
CO	1-hour	6,325 ⁴	40,000

Pollutant	Averaging Period(s)	Uinta Basin Background Concentration (g/m ³)	NAAQS (g/m ³)
O ₃	8-hour	100.0 ^{3,5}	75
<p>1 – The 24-hour and annual SO₂ NAAQS have been revoked by USEPA</p> <p>2 – Based on 2009 data from Wamsutter Monitoring Station Data (USEPA AQS Database)</p> <p>3 – Based on 2010/2011 data from Redwash Monitoring Station (USEPA AQS Database)</p> <p>4 – Based on 2006 data disclosed in the Greater Natural Buttes FEIS. (BLM, 2012)</p> <p>5 – Ozone is measured in parts per billion (ppb)</p> <p>6 – The annual PM₁₀ NAAQS has been revoked by USEPA</p>			

Existing point and area sources of air pollution within the Uinta Basin include the following:

- Exhaust emissions (primarily CO, NO_x, PM_{2.5}, and HAPs) from existing natural gas fired compressor engines used in transportation of natural gas in pipelines;
- Natural gas dehydrator still-vent emissions of CO, NO_x, PM_{2.5}, and HAPs;
- Gasoline and diesel-fueled vehicle tailpipe emissions of VOCs, NO_x, CO, SO₂, PM₁₀, and PM_{2.5};
- Oxides of sulfur (SO_x), NO_x, fugitive dust emissions from coal-fired power plants, and coal mining/ processing;
- Fugitive dust (in the form of PM₁₀ and PM_{2.5}) from vehicle traffic on unpaved roads, wind erosion in areas of soil disturbance, and road sanding during winter months; and,
- Long-range transport of pollutants from distant sources.

Two year-round air quality monitoring sites were established in summer 2009 near Red Wash (southeast of Vernal, Utah) and Ouray (southwest of Vernal). These monitors were certified as Federal Reference Monitors in fall of 2011, which means they can be used to make a NAAQS compliance determination. The complete EPA Ouray and Redwash monitoring data can be found at: <http://www.epa.gov/airexplorer/index.htm>

Both monitoring sites have recorded numerous exceedences of the 8-hour ozone standard during the winter months (January through March 2010, 2011, and 2013). It is thought that high concentrations of ozone are being formed under a “cold pool” process. This process occurs when stagnate air conditions form with very low mixing heights under clear skies, with snow-covered ground, and abundant sunlight. These conditions, combined with area precursor emissions (NO_x and VOCs), can create intense episodes of ozone. The high numbers did not occur in January through March 2012 due to a lack of snow cover. This phenomenon has also been observed in similar locations in Wyoming. Winter ozone formation is a newly recognized issue, and the methods of analyzing and managing this problem are still being developed. Existing photochemical models are currently unable to reliably replicate winter ozone formation. This is due to the very low mixing heights associated with unique meteorology of the ambient conditions.

Further research is needed to definitively identify ozone precursor sources that contribute to observed ozone concentrations.

The UDAQ conducted limited monitoring of PM_{2.5} in Vernal, Utah in December 2006. During the 2006-2007 winter seasons, PM_{2.5} levels were higher than the PM_{2.5} health standards that became effective in December 2006. The PM_{2.5} levels recorded in Vernal were similar to other areas in northern Utah that experience wintertime inversions. The most likely causes of elevated PM_{2.5} at the Vernal monitoring station are those common to other areas of the western U.S. (combustion and dust) plus nitrates and organics from oil and gas activities in the Basin. PM_{2.5} monitoring that has been conducted in the vicinity of oil and gas operations in the Uinta Basin by the Red Wash and Ouray monitors beginning in summer 2009 have not recorded any exceedences of either the 24 hour or annual NAAQS.

HAPs are pollutants that are known or suspected to cause cancer or other serious health effects, such as reproductive effects or birth defects, or adverse environmental impacts. The EPA has classified 187 air pollutants as HAPs. Examples of listed HAPs associated with the oil and gas industry include formaldehyde, benzene, toluene, ethylbenzene, isomers of xylene (BTEX) compounds, and normal-hexane (n-hexane). There are no applicable Federal or State of Utah ambient air quality standards for assessing potential HAP impacts to human health.

3.1.1. Greenhouse Gases

Greenhouse gases keep the planet's surface warmer than it otherwise would be. However, as concentrations of these gases increase the Earth's temperature is climbing above past levels. According to NOAA and NASA data, the Earth's average surface temperature has increased by about 1.2 to 1.4° F in the last 100 years. The eight warmest years on record (since 1850) have all occurred since 1998, with the warmest year being 1998. However, according to the British Meteorological Office's Hadley Centre (BMO 2009), the United Kingdom's foremost climate change research center, the mean global temperature has been relatively constant for the past nine years after the warming trend from 1950 through 2000. Predictions of the ultimate outcome of global warming remain to be seen.

The analysis of the Regional Climate Impacts prepared by the U.S. Global Change Research Program (USGCRP) in 2009 suggests that recent warming in the region (including the project area) was nationally among the most rapid. Past records and future projections predict an overall increase in regional temperatures, largely in the form of warmer nights and effectively higher average daily minimum temperatures. They conclude that this warming is causing a decline in spring snowpack and reduced flows in the Colorado River. The USGCRP projects a region-wide decrease in precipitation, although with substantial variability in interannual conditions. For eastern Utah, the projections range from an approximate 5 percent decrease in annual precipitation to decreases as high as 40 percent of annual precipitation.

3.2. Invasive Plants/Noxious Weeds, Soils, and Vegetation

The invasive species, cheat grass (*Bromus tectorum*) is present at these locations.

The soils are a sandy clay loam. Soils in the Project Area tend to be shallow and well drained.

The vegetation in the Project Area consists of fairly short shrubs, grasses and some forbs. Species include Little Utah juniper (*Juniperus osteosperma*), Indian ricegrass (*Achnatherum hymenoides*),

Wyoming big sagebrush (*Artemisia tridentata* ssp. *wyomingensis*), shadscale (*Atriplex confertifolia*), mat saltbush (*Atriplex corrugata*), Gardner saltbush (*Atriplex gardneri*), rubber rabbitbrush (*Chrysothamnus nauseosus*), squirreltail (*Elymus elymoides*), needle and thread grass (*Hesperostipa comata*), prickly pear cactus sp. (*Opuntia* sp.), galleta grass (*Pleuraphis jamesii*), black greasewood (*Sarcobatus vermiculatus*), Mormon tea (*Ephedra viridis*), Slender wheatgrass (*Elymus trachycaulus*), Scarlet globemallow (*Sphaeralcea coccinea*).

3.3. Livestock Grazing & Rangeland Health Standards

Livestock Grazing

Rangeland Health The project is located in the Antelope Draw allotment and is a winter sheep allotment and is permitted for 2710 sheep from 10/01 – 05/10 for a total of 3679 Animal Unit Months (AUMs). The operator's livestock numbers, in recent years, have been reduced by the BLM due to drought and decrease in available forage. Under the proposed action, 30.6 acres would be taken out of forage production. This would result in a loss of 465 Sheep AUMs . This may seem a small portion but the Antelope Draw allotment is being heavily impacted by oil and gas production as a whole. When the permit comes up for renewal reductions may be warranted due to reduced forage production.

New construction of roads, and the new salt water disposal (SWD) pads, to the proposed sites both reduces and affects livestock grazing and affects distribution of animals on the allotment. The removal of topsoil for both the proposed SWDs and road right-of-ways may decrease native forage production over an extended period of time, and may increase noxious weeds and invasive forage species production. The Antelope Draw Allotment has been somewhat impacted by extensive energy developments and dry conditions. Large amounts of fragmentation, disturbance and forage loss throughout the allotment has led to multiple years of moderate to minimal use by the current grazing permittee.

Six Rangeland Health sites were established and surveys were conducted in 2002 on the Antelope Draw Allotment. Of these six survey sites all were on some level of departure from the ecological site description due to increases in cheat grass *Bromus tectorum* and rabbit brush species *Chrysothamnus* spp. Decreases in desired native plants fourwing saltbush *Atriplex canescens* and Indian rice grass *Oryzopsis hymenoides* a perennial grass is also noted.

Throughout the last few years energy development has continued to boom in the area through the implementation of the Final Environmental Impact Statement for the Greater Deadman Bench Oil and Gas Producing Region (FEIS). There has been a large increase in the level of disturbance as a result of this oil and gas development.

3.4. Wildlife

3.4.1. Migratory Birds (Including Raptors)

All migratory birds and their nests are protected from take or disturbance under the Bald Eagle and Golden Eagle Protection Act (BEGEPA) of 1940 (16 U.S.C., 668-668d, 54 Stat. 250) and the Migratory Bird Treaty Act (MBTA) of 1918 (16 U.S.C., 703 et seq.). These protection laws were implemented for the protection of avian species. Unless permitted by regulations, it is unlawful to pursue, hunt, kill, capture, possess, buy, sell, purchase, or barter any species covered under

these Acts. In addition, Executive Order 13186 sets forth the responsibilities of federal agencies to further implement the provisions of these Acts by integrating bird conservation principles and practices into agency activities and by ensuring that federal actions evaluate the effects of actions and agency plans on protected avian species.

An occupied Ferruginous Hawk nest and an old Ferruginous Hawk nesting territory were identified the project area. The following addresses migratory birds that may utilize the project area for nesting or foraging activities, including those species classified as Priority Species by Utah Partners-in-Flight.

Pinion ~Juniper/Desert Shrub Habitats: bald eagle, black-chinned hummingbird, broad-tailed hummingbird, Brewer's sparrow, burrowing owl, Cassin's finch, Cassin's kingbird, gray flycatcher, gray vireo, grasshopper sparrow, greater sage-grouse, green-tailed towhee, juniper titmouse, mountain bluebird, sage sparrow, sage thrasher, and Virginia's warbler. (Parrish et al. 2002)

3.4.2. Threatened, Endangered, Proposed or Candidate Fish (Federally Listed Species)

Section 7 (a) (2) of the Endangered Species Act (ESA) requires federal agencies to ensure that activities they authorize, fund, or carry out are not likely to adversely affect or jeopardize the continued existence of a federally-listed species or result in the adverse modification or destruction of its Critical habitat. Regulations implementing this interagency cooperation provision of the ESA are codified at 50 CFR 402. In accordance with Manual 6840 BLM sensitive species are also managed to prevent future federal listing as threatened or endangered.

The U.S. Fish & Wildlife Service (USFWS) has identified four federally listed Colorado River fishes that were once abundant in the upper and lower reaches of the Colorado River Basin that may be impacted by project activities (USFWS 1994). These four federally listed fish that may be impacted by project activities are the bonytail, Colorado pikeminnow, humpback chub, and razorback sucker. These fish have experienced severe population declines due to flow alterations, habitat loss or alteration, and the introduction of non-native fish species. The Green River and its 100-year floodplain have been designated Critical habitat for the four fish species (USFWS 1994). Habitats for these fish include backwaters, sloughs, oxbow lakes, seasonally in-undated floodplains and reservoirs (USFWS 2006).

Three additional species are endemic to the Colorado River Basin: bluehead sucker, flannelmouth sucker, and roundtail chub. The roundtail chub is a state-listed threatened species, while the two suckers are species of special concern due to declining population numbers and distribution.

3.4.3. Greater Sage-Grouse (Federal Candidate, BLM Sensitive, Utah State Sensitive)

The greater sage-grouse is an important game bird found in Utah. These birds inhabit sagebrush plains, foothills, and mountain valleys. Sagebrush is the predominant plant of quality habitat. Factors involved in the decline in both the distribution and abundance of greater sage-grouse include permanent loss, degradation, and fragmentation of sagebrush-steppe habitat throughout the western states including Utah (Heath et al. 1996, Braun 1998). Documented severe population declines (approximately 80%) occurred from the mid-1960s to mid-1980s. Research and

conservation efforts in the last 20 years have helped stabilize and recover many populations. Populations appear to have taken a slight positive turn in recent years. Utah Division of Wildlife Resources (UDWR) identifies occupied, nesting/brood, and winter habitat within the project area. The project area is not considered a Sage-Grouse Management Area (SGMA) within the state's Conservation Plan for Greater Sage-grouse in Utah. Occupied habitat was identified for three of the proposed well sites; RW 33-34B, RW 43-35B, and RW 14-35B. Currently, BLM considers all occupied sage-grouse habitat as Preferred Priority Habitat (PPH, BLM IM 2012-043).

Chapter 4. Environmental Effects:

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4.1. Direct and Indirect Impacts

The potential direct, indirect, and cumulative impacts from Alternative A (the Proposed Action) and Alternative B (the No Action Alternative) are discussed in the following sections of Chapter 4. Direct impacts to soils and vegetation in the following analyses are described as short-term and long-term impacts. In areas where interim reclamation is implemented, ground cover by herbaceous and woody species could be re-established to approximately 75 percent of initial basal cover within five years following seeding of native plant species and diligent weed control efforts. These reclaimed areas are categorized as short-term disturbance.

4.2. Proposed Action

4.2.1. Air Quality

This Proposed Action is considered to be a minor air pollution source under the Clean Air Act and is not controlled by regulatory agencies. At present, control technology is not required by regulatory agencies since the Uinta Basin is designated as unclassified/attainment. The Proposed Action would result in different emission sources associated with two project phases: well development and well production. Annual estimated emissions from the Proposed Action are summarized in Table 4.1, "Proposed Action Annual Emissions (tons/year)" (p. 23).

Table 4.1. Proposed Action Annual Emissions (tons/year)

Pollutant	Development (tons/well)	Pneumatics/Fugitives	SWD Well Emissions (tons/yr)	Total
Nox	35.04	0	1.28	36.32
CO	2.28	0	1.08	3.36
VOC	0.16	22.36	18.4	40.92
SO ₂	3.16	0	0	3.16
PM ₁₀	0	0	0.8	0.8
PM _{2.5}	0.2	0	0.8	1
Benzene	0.00488	0	0	0.00488
Toluene	0.001764	0	0	0.001764
Ethylbenzene	0	0	0	0
Xylene	0.00128	0	0	0.00128
n-Hexane	0.003008	0	0.04	0.043008
Formaldehyde	0.00062	0	0	0.00062

¹ Emissions include 4 well(s) and associated operations traffic during the year in which the project is developed.

Well development includes NO_x, SO₂, and CO tailpipe emissions from earth-moving equipment, vehicle traffic, drilling, and completion activities. Fugitive dust concentrations would occur from vehicle traffic on unpaved roads and from wind erosion where soils are disturbed. Drill rig and fracturing engine operations would result mainly in NO_x and CO emissions, with lesser amounts of SO₂. These emissions would be short-term during the drilling and completion phases.

During well production, continuous NO_x, CO, VOC, and HAP emissions would originate from well pad separators, condensate storage tank vents, and daily tailpipe and fugitive dust emissions from operations traffic. Road dust (PM₁₀ and PM_{2.5}) would also be produced by vehicles servicing the wells.

Under the proposed action, emissions of NO_x and VOC, ozone precursors, are 36.32 tons/yr for NO_x, and 40.92 tons/yr of VOC (Table 4.1, “Proposed Action Annual Emissions (tons/year)” (p. 23)). Emissions would be dispersed and/ or diluted to the extent where any local ozone impacts from the Proposed Action would be indistinguishable from background conditions.

The primary sources of HAPs are from oil storage tanks and smaller amounts from other production equipment. Small amounts of HAPs are emitted by construction equipment. These emissions are estimated to be minor and less than 1 ton per year.

4.2.1.1. Greenhouse Gases

The assessment of greenhouse gas emissions and climate change remains in its earliest stages of formulation. Applicable EPA rules do not require any controls and have yet to establish any emission limits related to GHG emissions or impacts. The lack of scientific models that predict climate change on regional or local level prohibits the quantification of potential future impacts of decisions made at the local level, particularly for small scale projects such as the Proposed Action. Drilling and development activities from the Proposed Action are anticipated to release a negligible amount of greenhouse gases into the local air-shed.

4.2.1.1.1. Mitigation

All new and replacement internal combustion gas field engines of less than or equal to 300 design-rated horse power must not emit more than 2 grams of NO_x per horsepower-hour. This requirement does not apply to gas field engines of less than or equal to 40 design-rated horsepower-hour.

4.2.1.2. Invasive Plants/Noxious Weeds, Soils, and Vegetation

In addition to the applicant committed measures outlined within QEP’s reclamation plan, the Plan of Development for this project, the below mitigation measures would reduce the risk of establishment or spread of non-native invasive plant species.

The Proposed Action would disturb approximately 30.60 acre of soils and vegetation. The portions of the disturbed area that would not be utilized for production and product transportation would be subject to interim reclamation. If interim reclamation is successful, direct long-term impacts to vegetation would not occur. If interim reclamation is not successful, the entire area could remain disturbed for the long term. Long-term impacts to vegetation are expected for the life of the well (an average of 25 years or until reclamation is successful).

Each well in the project would contribute an estimated additional 3.0 tons of soil per acre per year above the current natural erosion rate for the first year of development. After the first year, the soil erosion attributed to the project would reduce to 1.5 tons per acre per year until the access roads and well pads are fully reclaimed. Erosion rates are higher during the first year due to disturbance during construction.

Additional direct impacts to vegetation are primarily associated with clearing of vegetation during construction. Indirect impacts to vegetation resources include the invasion and establishment of introduced, undesired plant species. The severity of these invasions would depend on the success of reclamation and revegetation, and the degree and success of noxious weed control efforts.

The area's poor soil reclamation potential, has made successful reclamation efforts challenging. BLM field inspections indicate that short-term impacts may be more accurately portrayed as long-term impacts. However, most of these issues should be addressed in the BLM approved Questar Exploration and Production Company Uinta Basin Division Reclamation Plan. A copy of this plan is on file at the BLM Vernal Field Office.

Impacts to soils and vegetation would be partially mitigated by reclamation of disturbed areas with native vegetation and control of noxious and invasive weeds by mechanical and chemical treatment (see 2.1.6). Under the Proposed Action, reclamation would occur on approximately 25 percent of the well pad upon completion of drilling. The remaining 75 percent of the well pad would be revegetated after abandonment of the well (approximately 25 years).

Mitigation

- All vehicles and equipment shall be cleaned either through power-washing, or other approved method, if the vehicles or equipment were brought in from areas outside the Uinta Basin, to prevent weed seed introduction.

4.2.2. Livestock Grazing & Rangeland Health Standards

Livestock Grazing

Livestock grazing under the proposed action of 30.6 acres of surface disturbance would occur. The allotment may continue to be used below authorized levels. The increase in disturbance and development causes general fragmentation of the landscape, which continues to hinder livestock development causes general fragmentation of the landscape which continues to hinder the livestock operation. Possible increase in livestock mortality could occur due to an increase in vehicle traffic.

There has been a large increase in the level of disturbance as a result of oil and gas development in the area. Impacts from large amounts of disturbance and fragmentation contribute to factors (weeds, bare ground, shifts in ecological community structure, erosion, etc.) that may lead to areas not meeting rangeland health.

Although, much of the disturbed landscape is slated for reclamation; those efforts have not proven to be highly successful within this semi arid shrub steppe environment area for rangeland forage. Therefore, it is assumed that ecological impacts are continuing to occur and have the potential to directly and indirectly affect the areas ability to meet Rangeland Health Standards.

4.2.3. Wildlife

4.2.3.1. Migratory Birds (Including Raptors)

As identified in Chapter 3, the project area contains known raptor nests and has potential foraging and other potential nesting habitats for other migratory birds. Approximately 30 acres of nesting and foraging habitat could be disturbed. Avian species may move to adjacent habitats for nesting and foraging. QEP has committed to no construction or drilling during the Ferruginous Hawk nesting season for salt water disposal wells; RW#11-33B, 33-34B, 43-35B, 14-35B and associated pipelines, refer to Chapter 2, Applicant Committed Measures. Potential effects of the Proposed Action Alternative on other avian species include 1) indirect disturbance from human activity

(including harassment, displacement, and noise), and 2) increased direct impacts such as loss of habitat, habitat fragmentation and collisions with vehicles. Impacts to migratory birds within the proposed project area would also be dependent upon the time when project activities would occur. If these activities occur in the late fall, most of the species would have left the area during winter migration. If construction activities were to occur during the spring or summer months it could cause birds to move into other adjacent habitats or into habitats where inter-specific and intra-specific competition between species may increase. Noise disturbance associated with project activities would be considered temporary and is anticipated to occur during typical working hours. QEP has committed to raptor protection measures for all power-lines; refer to Chapter 2, Applicant Committed Measures.

4.2.3.2. Threatened, Endangered, Proposed or Candidate Fish (Federally Listed Species)

Implementation of the Proposed Action would directly impact the Upper Colorado River basin. These impacts would remain until project completion. Water depletions from the Upper Colorado River Basin, along with a number of other factors, have resulted in such drastic reductions in the populations of the bonytail, Colorado pikeminnow, humpback chub, and razorback sucker. The bluehead sucker, flannelmouth sucker, and roundtail chub are also affected by the water depletions. Water depletions reduce the ability of the river to create and maintain the primary constituent elements that define Critical Habitats. Food supply, predation, and competition are important elements of the biological environment. Food supply is a function of nutrient supply and productivity, which could be limited by reduction of high spring flows brought about by water depletions. Predation and competition from nonnative fish species have been identified as factors in the decline of the endangered fishes. Water depletions contribute to alterations in the flow regimes that favor nonnative fishes.

The Proposed Action would result in water depletion from removal of water from the Upper Colorado River Basin for project activities. Therefore, the Proposed Action will have a *“may affect, likely to adversely affect”* determination for the endangered Colorado River fish species. The proposed action may affect individuals of bluehead sucker, flannelmouth sucker, and roundtail chub through indirect impacts of water depletion.

4.2.4. Threatened, Endangered or Candidate Animal Species

4.2.4.1. Greater Sage-Grouse (Federal Candidate, BLM Sensitive, Utah State Sensitive)

Occupied sage-grouse habitat has been identified for three of the proposed wells. BLM considers the area PPH for sage-grouse. Approximately, 23 acres of occupied sage-grouse habitat will be disturbed for the proposed wells, access roads, power-lines, and pipelines. The loss or modification of sagebrush communities would not regain any shrub-land character for 20-30 years, following interim or final reclamation, or longer depending on length of occupation. Invasive vegetation species can affect sagebrush systems through habitat losses and conversions. Invasive plants species establish viable populations and even dominate ecosystems, and their interactions with native species can trigger changes in community structure function. QEP will be required to control invasive plant species along all disturbed areas. QEP will be responsible for reclamation efforts that should over time, return occupied habitat back into a functioning

sagebrush system.. The proposed action is consistent with the guidelines established in Utah IM-2012-04, as personal communication with UDWR (Brian Maxfield) verified no concerns with sage-grouse within section 34 or 35, even though occupied sage-grouse habitat was identified.

4.3. No Action Alternative

4.3.1. Air Quality

Under the No Action Alternative, the proposed gas well(s) would not be drilled and there would be no additional impacts to air quality. Effects on ambient air quality would continue at present levels from existing oil and gas development in the region and other emission producing sources.

4.3.2. Invasive Plants/Noxious Weeds, Soils, and Vegetation

Under the No Action Alternative, there would be no direct disturbance or indirect effects to soils and vegetation from surface-disturbing activities associated these wells. Current land use trends in the area would continue, including increased industrial development, increased traffic, and increased recreation use for hunting, bird watching, and sightseeing.

4.3.3. Livestock Grazing & Rangeland Health Standards

Under the No Action Alternative no additional contribution to existing disturbance and fragmentation would occur. Therefore no impact to the grazing allotment, livestock AUMs, or the allotment's compliance with Rangeland Health Standards would occur.

4.3.4. Wildlife

4.3.4.1. Wildlife: Migratory Birds (including raptors)

Under the No Action Alternative, the BLM would not approve the salt water disposal wells. There would be no direct or indirect effects to migratory birds, including raptors. Current land use trends in the area would continue of which would mainly include increased oil and gas development activities.

4.3.4.2. Threatened, Endangered, Proposed or Candidate

Under the No Action Alternative, there would be no direct or indirect effects to threatened, endangered, proposed or candidate species from the proposed action. Current land use trends in the area would continue to occur, which includes oil and gas development activities.

4.4. Reasonably Foreseeable Development and Cumulative Impacts Analysis

4.4.1. Cumulative Impacts

4.4.1.1. Air Quality

The cumulative impact area for air quality is the Uinta Basin. The potential impact of the Proposed Action to Uinta Basin ozone levels cannot be accurately modeled. In lieu of accurate modeling, the Greater Natural Buttes (GNB) air quality study, which is the most recent regional air model available for the Uinta Basin, and the GNB Final EIS section 5.3.1, is incorporated by reference and summarized below. The GNB Final EIS discloses that most of the cumulative emissions in the Uinta Basin are associated with oil and gas exploration and production activities. Consequently, past, present and reasonably foreseeable wells in the Uinta Basin are a part of the cumulative actions considered in this analysis. **Table 4.2, “2006 Uinta Basin Oil and Gas Operations Emissions Summary” (p. 28)** summarizes the 2006 Uinta Basin emissions as well as the incremental impact of this project’s alternatives. The Proposed Action comprises a small percentage of the Uinta Basin emissions summary.

Table 4.2. 2006 Uinta Basin Oil and Gas Operations Emissions Summary

County	NO _x (tpy)	CO (tpy)	SO _x (tpy)	PM (tpy)	VOC (tpy)
Uintah	6,096	4,133	247	344	45,646
Carbon	995	814	22	40	2,747
Duchesne	3,053	2,448	96	173	19,019
Grand	337	207	16	22	2,360
Emery	273	199	9	14	453
Uinta Basin Total	10,754	7,800	391	592	70,226
Proposed Action	65.6	25.6	3.6	2.92	36
No Action	0	0	0	0	0

The GNB model predicted the following impacts to air quality and air quality related values for the GNB proposed action, which encompassed 3,675 new wells:

- Cumulative impacts from criteria pollutants to ambient air quality are well below the NAAQS at Class I airsheds and selected Class II areas;
- The incremental impacts to visibility would be virtually impossible to discern and would not contribute to regional haze at the Class I areas;
- The 2018 projected baseline emissions would result in impacts of 1.0 deciview for at least 201 days per year at the Class II areas;
- Discernible impacts at Flaming Gorge National Recreation Area and Dinosaur National Monument are anticipated under the GNB Final EIS proposed action;
- The GNB Final EIS proposed action would contribute less than 1 percent to the acid deposition in Class I areas, and 4.3 percent at the Flaming Gorge Class II area;
- Project-related acid deposition impacts at sensitive lakes were below the USFS screening threshold; and,

- Ozone levels are below the current ozone standard of 75 ppb for the fourth highest annual level in the Uinta Basin for the 2018 projected baseline, and the proposed action would be approximately 3.2 percent of the cumulative ozone impact within the Uinta Basin.

Based on the GNB model results, it is anticipated that the impact to ambient air quality and air quality related values associated with the Proposed Action would be indistinguishable from, and dwarfed by, the margin of uncertainty associated with the model and Uinta Basin emission inventory. The No Action alternative would not result in an accumulation of impacts.

4.4.1.2. Greenhouse Gases

Inconsistent results based on scientific models used to predict global climate change prohibit the BLM from quantifying cumulative impacts. Drilling and development activities from the Proposed Action are anticipated to release a negligible amount of greenhouse gases, into the local airshed, resulting in a negligible cumulative impact. The No Action Alternative would not result in an accumulation of impacts.

4.4.2. Invasive Plants/Noxious Weeds, Soils, and Vegetation

The CIAA for soils and vegetation is the boundary of the Final Environmental Impact Statement (FEIS) for the Greater Deadman Bench Oil and Gas Producing Region . The Greater Deadman Bench Oil and Gas Producing Region project area is located 20 miles south of Vernal, Utah.

The project area encompasses approximately 30.60 acres of land within Uintah County. The project area is located in Sections 32, 33, 34, 35, and 36 of T. 7 S., R. 23 E.. The town of Vernal is approximately 29 miles north of the project boundary. The foreseeable activity for the QEP FEIS is the drilling of up to 1,239 new wells. Future total area of disturbance due to oil and gas activity for the FEIS project area is approximately 98,785 acres.

Soil erosion would be increased due to the disturbance associated with oil and gas activities in the area. Each acre of disturbance adds to a cumulative effect by increasing erosion and destroying native vegetation, and through the invasion of undesired plant species. In general, soils in the Uinta Basin are very thin, slow to develop, and difficult to reclaim because of the arid climate and lack of organic material.

Direct surface disturbances to vegetation indicated by past, present, and reasonably foreseeable developments are primarily attributable to oil and gas development and vegetation management by various federal agencies. Oil and gas development, however, would continue to degrade local habitat by direct disturbance and slow reclamation of disturbed areas. Surface disturbance within the CIAA would be approximately 98,785 acres The Proposed Action would add approximately 30.60 acre of surface disturbance. The No Action alternative would not result in an accumulation of impacts.

4.4.3. Livestock Grazing & Rangeland Health Standards

Livestock Grazing

Cumulative effects may result in an increase in oil and gas production in the area which may decrease the availability of usable forage for livestock grazing. AUMs for this allotment may also decrease due to the loss of acreage caused by the increase in oil and gas pad development and

declining rangeland health conditions. A socio-economic impact may be felt by the allotment permittee due to the continued downsizing of livestock numbers to match the decrease in usable AUMs on the allotment.

Rangeland Health Standards

Cumulative effects on Rangeland Health may continue to show a declining trend in native plant communities, with an increasing production of noxious weeds and annual species. Until reclamation of the disturbed sites can reach some acceptable level Ecological Site Descriptions (similar to pre-construction condition) and be fully implemented, this negative trend may continue.

Under the No Action Alternative no additional contribution to existing surface disturbance and fragmentation would occur. Therefore no increase in impacts to the grazing allotment, livestock AUMs, or the allotment's compliance with Rangeland Health Standards may occur due to oil and gas operations and continued development.

4.4.4. Wildlife

The CIAA for wildlife would be the same as the invasive plants/noxious weeds, soils, and vegetation section.

4.4.4.1. Migratory Birds, (Including Raptors)

The CIAA for migratory birds and raptors is defined as the Greater Deadman Bench Oil and Gas Producing Region EIS (GDBR) which encompasses approximately 98,785 acres. Approximately 30 acres of sage-steppe/Juniper habitat will be disturbed and lost for up to 30 years. Future actions of the Proposed Action could increase human presence in the area continuing to fragment and manipulate the surrounding habitats by increasing the presence of non-native invasive plant species. Further introduction of non-native invasive plant species could have significant adverse impacts on migratory birds that are dependent upon prevalent species for their survival. In general such an environmental shift would probably have negative impacts on migratory birds and raptors and would favor non-native and readily adaptive species.

Past, present, and future land uses have reduced and will likely continue to reduce the quality and quantity of habitats for wildlife species. Habitat alteration occurring throughout the range of these species would potentially reduce the ability of such species to recover. Cumulative impacts include habitat fragmentation, loss of prey species, increased predation, and loss of breeding habitat. Although many of these impacts continue to occur, many of these impacts as stated under the Proposed Action Alternative have been minimized or completely negated through wildlife mitigations and/or stipulations in accordance with the Vernal Field Office Land Use Plan.

4.4.4.2. Threatened, Endangered, Proposed or Candidate Animal Species

The CIAA for Threatened, Endangered, Proposed or Candidate is identified as the GDBR, which encompasses approximately 98,785 acres. Approximately 23 acres will be disturbed within Greater Sage-Grouse PPH. Cumulative effects include the effects of the future state, tribal, local, or private actions that are reasonably certain to occur in the project area. Declines in the abundance or range of many special status species have been attributed to various human

activities on federal, state, and private lands, such as human population expansion and associated infrastructure development; construction and operation of dams along major waterways; water retention, diversion, or dewatering of springs, wetlands, or streams; recreation, including off-road vehicle activity; expansion of agricultural or grazing activities, including alteration or clearing of native habitats for domestic animals or crops; and introductions of nonnative plant, wildlife, or fish, or other aquatic species, which can alter native habitats or out compete or prey upon native species. Many of these activities are expected to continue on state and private lands within the range of the various federally protected wildlife, fish, and plant species, and could contribute to cumulative effects to the species within the project area. Species with small population sizes, endemic locations, or slow reproductive rates, or species that primarily occur on non-federal lands where landholders may not participate in recovery efforts, would be highly susceptible to cumulative effects.

Reasonably foreseeable future activities that may affect river-related resources in the area include oil and gas exploration and development, irrigation, urban development, recreational activities, and activities associated with the Upper Colorado River Endangered Fish Recovery Program. Implementation of all or any of these projects has affected and continues to affect the environment including, but not limited to, water quality, water rights, socioeconomic, and wildlife resources.

Reasonably foreseeable future activities that may affect greater sage-grouse PPH in the area include oil and gas expansion throughout the GDBR.

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**Chapter 5. Tribes, Individuals,
Organizations, or Agencies Consulted:**

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Table 5.1. List of Persons, Agencies and Organizations Consulted

Name	Purpose & Authorities for Consultation or Coordination	Findings & Conclusions
USFWS	Information on Consultation, under Section 7 of the Endangered Species Act (16 USC 1531).	This project falls within the scope of the "Greater Deadman Bench Oil & Gas Producing Region" EIS, Section 7 Consultation; therefore consultation for the water depletion impacts to the four Colorado River Fish and their designated critical habitat is complete.
State Historic Preservation Office (SHPO)	Historic Preservation Act.	BLM recommended a No Effect determination based on Class III surveys and asked for concurrence on all of the wells listed in this EA. Concurrence was received, documentation of this can be found in the individual well/APD files.
Ute Mountain Ute Tribe, Hopi Tribe, Goshute Indian Tribe, Zia Pueblo Tribe, White Mesa Ute Tribe, Navajo Nation, Northwest Band of Shoshone Tribe, Southern Ute Tribe, Eastern Shoshone Tribe, Ute Indian Tribe, Santa Clara Pueblo Tribe, and Pueblo of Laguna Tribe.	Consultation with Native American Tribes.	Tribal consultation for this area was done during preparation of the Greater Deadman Bench EIS (2004). No concerns were raised at that time.

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Chapter 6. List of Preparers

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Table 6.1. List of Preparers

Name	Title	Responsible for the Following Section(s) of this Document
Kevin Sadler	Natural Resource Specialist/ Environmental Scientist	Chapters 1 & 2 Chapters 3 & 4: Soils and vegetation
Dixie Sadler	Wildlife Biologist	Chapters 3 & 4: Wildlife
Maggie Marston	Botanist	SSPS, T&E plants, Vegetation,
Craig Newman	Range Conservationist	Rangeland Health and Livestock Grazing.

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Chapter 7. References Cited

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BLM 1997. Standards for Rangeland Health and Guidelines for Grazing Management on BLM Lands in Utah. U.S. Department of the Interior, Bureau of Land Management. Washington. D.C. May 20.)

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BLM. 2012c. Final Environmental Impact Statement for the Greater Natural Buttes

Braun, C. E., 1998. Sage grouse declines in western North America: what are the problems? Proceedings of the Western Association of State Fish and Wildlife Agencies 78:139-156

Conservation Plan for Greater Sage-grouse in Utah. Approved February 14, 2013.

Heath, B. R., Straw, S Anderson and J. Lawson. 1996. Proceedings of sage grouse workshop. Pinedale, Wy. USA.

Parrish, J.R., F.P. Howe and R.E. Norvell. 2002. Utah Partners in Flight Avian Conservation Strategy Version 2.0. Utah Partners in Flight Program, Utah Division of Wildlife Resources, 1594 West North Temple, Salt Lake City, Utah 84116. UDWR Publication Number 02-27. i – xiv + 302 pp. U.S. Fish & Wildlife Service (USFWS). 1987.

Uintah County. 2011. Uintah County General Plan. Amended Number 02-27. i – xiv + 302 pp.

Utah Greater Sage-Grouse Management Plan. 2009. State of Utah Department of Natural Resources, Division of Wildlife Resources.

Utah Steering Committee (USC). 2005. Coordinated Implementation Plan for Bird Conservation In Utah. Intermountain West Joint Venture.

U.S. Bureau of Land Management, Approved December 22, 2011. IM 2012-043, Greater Sage-Grouse Interim Management Policies and Procedures.

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Appendix A. Interdisciplinary Team Checklist

Project Title: Red Wash Four Disposal Well Project

NEPA Log Number: DOI-BLM-UT-G010-2014-0069-EA

File/Serial Number:

Project Leader: Kevin Sadlier

DETERMINATION OF STAFF: (Choose one of the following abbreviated options for the left column)

NP = not present in the area impacted by the proposed or alternative actions

NI = present, but not affected to a degree that detailed analysis is required

PI = present with potential for relevant impact that need to be analyzed in detail in the EA

NC = (DNAs only) actions and impacts not changed from those disclosed in the existing NEPA documents cited in Section D of the DNA form. The Rationale column may include NI and NP discussions.

Determination	Resource/Issue	Rationale for Determination	Signature	Date
RESOURCES AND ISSUES CONSIDERED (INCLUDES SUPPLEMENTAL AUTHORITIES APPENDIX I H-1790-1)				
PI	Air Quality & Greenhouse Gas Emissions	Emissions from earth-moving equipment, vehicle traffic, drilling and completion activities, separators, oil storage tanks, and daily tailpipe and fugitive dust emissions could adversely affect air quality. No standards have been set by EPA or other regulatory agencies for greenhouse gases. In addition, the assessment of greenhouse gas emissions and climate change is still in its earliest stages of formulation. Global scientific models are inconsistent, and regional or local scientific models are lacking so that it is not technically feasible to determine the net impacts to climate due to greenhouse gas emissions. It is anticipated that greenhouse gas emissions associated with this action and its alternative(s) would be negligible.	Kevin Sadlier	2/12/2014
NP	BLM Natural Areas	None are present in the project area per the Vernal Field Office RMP and GIS review.	Kevin Sadlier	2/12/2014
NP	Cultural: Archaeological Resources	No eligible cultural resources were identified within the APE of the proposed project area.	Jimmy McKenzie	1/16/2014

Determination	Resource/Issue	Rationale for Determination	Signature	Date
NP	Cultural: Native American Religious Concerns	No Traditional Cultural Properties (TCPs) are identified within the APE. The proposed project will not hinder access to or use of Native American religious sites.	Jimmy McKenzie	1/16/2014
NP	Designated Areas: Areas of Critical Environmental Concern	None are present in the project area per the Vernal Field Office RMP and GIS review.	Kevin Sadlier	2/12/2014
NP	Designated Areas: Wild and Scenic Rivers	None are present in the project area per the Vernal Field Office RMP and GIS review.	Kevin Sadlier	2/12/2014
NP	Designated Areas: Wilderness Study Areas	None are present in the project area per the Vernal Field Office RMP and GIS review.	Kevin Sadlier	2/12/2014
NI	Environmental Justice	No minority or economically disadvantaged communities or populations would be disproportionately adversely affected by the proposed action or alternatives.	Kevin Sadlier	2/12/2014
NP	Farmlands (prime/unique)	No prime or unique farmlands, as identified by the NRCS, based on soil survey data for the county are located in the project area; therefore, this resource will not be carried forward for analysis.	Kevin Sadlier	2/12/2014
NI	Fuels/Fire Management	No fuel management activities planned for the project area. The proposed project would not conflict with fire management activities following GIS/field office review.	Kevin Sadlier	2/12/2014

Determination	Resource/Issue	Rationale for Determination	Signature	Date
NI	Geology/Minerals/ Energy Production	<p>No known gilsonite veins are in the area, however, encounters with gilsonite during any surface or drilling operation must be reported to the BLM Vernal Field Office. Please provide location and depth encountered.</p> <p>Natural gas, oil, gilsonite, oil shale, and tar sand are the only mineral resources that could be impacted by the project. Production of natural gas or oil would deplete reserves, but the proposed project allows for the recovery of natural gas and oil per 43 CFR 3162.1(a), under the existing Federal lease. Compliance with "Onshore Oil and Gas Order No. 2, Drilling Operations" will assure that the project will not adversely affect gilsonite, oil shale, or tar sand deposits. Due to the state-of-the-art drilling and well completion techniques, the possibility of adverse degradation of tar sand or oil shale deposits by the proposed action will be negligible.</p> <p>Well completion must be accomplished in compliance with "Onshore Oil and Gas Order No. 2, Drilling Operations". These guidelines specify the following: <i>... proposed casing and cementing programs shall be conducted as approved to protect and/or isolate all usable water zones, potentially productive zones, lost circulation zones, abnormally pressured zones, and any prospectively valuable deposits of minerals. Any isolating medium other than cement shall receive approval prior to use.</i></p>	Betty Gamber	2/12/2014

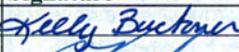
Determination	Resource/Issue	Rationale for Determination	Signature	Date
IP/NW: PI Soils: PI Veg: PI	Invasive Plants/ Noxious Weeds, Soils & Vegetation	<p>IP/NW: Proposed disturbance would provide suitable habitat for the establishment and spread of non-native plant species.</p> <p>Operator would control invasive species in all disturbed areas as discussed in Chapter 2 and QEP approved reclamation plan.</p> <p>Soils: 30.60 acres of soil disturbance would occur during construction until reclamation is successful. Soils would be recontoured and reseeded during reclamation. The locations would be reclaimed and monitored in accordance with the Questar Exploration and Production Company Uintah Basin Division Reclamation Plan on file with the Vernal Field Office of the BLM. Locations would be seeded with the seed mix approved by the BLM Authorized Officer.</p> <p>Veg: 30.60 acres of initial vegetation disturbance/removal. Upon construction completion, the disturbed area would be reseeded and re-contoured to the approximate natural contours. This would reduce the effects of the disturbance when the seeding becomes established. The locations would be reclaimed and monitored in accordance with the Questar Exploration and Production Company Uintah Basin Division Reclamation Plan on file with the Vernal Field Office of the BLM. Locations would be seeded with the seed mix approved by the BLM Authorized Officer.</p>	Kevin Sadlier	2/12/2014
NI	Lands/Access	The proposed area is located within the Vernal Field Office Resource Management Plan area which allows for oil and gas development with associated road and pipeline right-of-ways. The proposed project is within QEP's Red Wash Unit. The Salt Water Disposal Wells would inject fluid from outside the Red Wash Unit therefore a BLM ROW would be required.	Kevin Sadlier	11/21/2013
NP	Lands with Wilderness Characteristics (LWC)	None are present in the project area per the Vernal Field Office RMP and GIS review.	Kevin Sadlier	2/12/2014

Determination	Resource/Issue	Rationale for Determination	Signature	Date
PI	Livestock Grazing & Rangeland Health Standards	The proposed project would create additional ground disturbance reducing forage production, an increase in non-desirable vegetation and fragmentation of the allotment which may impact the livestock operations as well as rangeland health.	Craig Newman	2/14/2014
NI	Paleontology	No fossils were found at well locations RW 11-33B, RW 14-35B, and 33-34B(IPC rpts: May 23, 2013, July 31, 2013). Scientifically important fossils were found at well location RW 43-35B (IPC July 31, 2013). A paleo monitor will be required at this site during beginning of construction at access road and well pad and spot checks thereafter as needed. Operator has agreed to monitoring as recorded in Chap 2 of this EA.	Betty Gamber	2/12/2014
NI	Plants: BLM Sensitive	<p>Sterile <i>Yucca (Yucca sterilis)</i>, a UT BLM Sensitive plant species, could inhabit sandy locations near the proposed action. BLM spot checks were conducted on February 19, 2014 for the proposed action, and in travel along access and connecting roads and were negative for <i>Yucca</i> ssp. . Formal surveys have not been conducted, however the species is highly infrequent, therefore requests for formal survey by BLM to energy proponents have been limited to co-survey when other BLM sensitive or listed plant species surveys are requested.</p> <p>Although the proposed action falls southeast of a potential habitat polygon established by BLM for <i>A. equisolensis</i>, rocky breaks are present east of the RW-11-33B SWD site. The proponent has amended the proposed action to include installation of powerpoles using rubber-tired vehicles without ground clearing or additional surface disturbance beyond pole set.</p> <p>Additional BLM Sensitive species are precluded based on soil, elevation, geography and plant population VFO GIS data. Green River shale-derived soils are not present at either location.</p>	Maggie Marston	2/28/2014
NP	Plants: Threatened, Endangered, Proposed, or Candidate	Threatened, Endangered, Proposed and Candidate plant species are precluded based on GIS soil, elevation, known location data, and on-site BLM botanist field review for habitats, riparian areas and Green River shale sites, on February 19, 2014.	Maggie Marston	2/28/2014

Determination	Resource/Issue	Rationale for Determination	Signature	Date
NP	Plants: Wetland/Riparian	None are present in the project area per the Vernal Field Office RMP and GIS review.	Kevin Sadlier	2/12/2014
NI	Recreation	Proposed project is in a developed area with numerous infrastructures currently in place. Recreation access will not be restricted by the proposed project.	Keivn Sadlier	2/12/2014
NI	Socio-Economics	No impact to the social or economic status of the county or nearby communities would occur from this project due to its small size in relation to ongoing development throughout the Basin.	Kevin Sadlier	2/12/2014
NI	Visual Resources	The proposed project is in a VRM Class IV area, per the Vernal Field Office GIS Data Base & RMP/ROD. A contrast rating worksheet was not completed as the area has not been identified within class III sensitive areas which are the current standard for site visits with VRM evaluations taking place. Class IV objective states: The objective of this class is to provide for management activities which require major modifications of the existing character of the landscape. The level of change to the characteristic landscape can be high. These management activities may dominate the view and be the major focus of viewer attention. However, every attempt should be made to minimize the impact of these activities through careful location, minimal disturbance, and repeating the basic elements. The proposal will follow existing form, line and texture in the landscape, but will contrast in color temporarily with the landscape. The contrast in color, form, line and texture is within the class IV objectives.	Kevin Sadlier	2/12/2014
NI	Wastes (hazardous/solid)	Hazardous Waste: No chemicals subject to reporting under SARA Title III in an amount equal to or greater than 10,000 pounds will be used, produced, stored, transported, or disposed of annually in association with the project. Solid Wastes: Trash would be confined in a covered container and hauled to an approved landfill. Burning of waste or oil would not be done. Human waste would be contained and be disposed of at an approved sewage treatment facility.	Kevin Sadlier	2/12/2014
NP	Water: Floodplains	None are present in the project area per the Vernal Field Office RMP and GIS review.	Kevin Sadlier	2/12/2014

Determination	Resource/Issue	Rationale for Determination	Signature	Date
NI	Water: Groundwater Quality	Compliance with "Onshore Oil and Gas Order No. 1, will assure that the project will not adversely affect groundwater quality. Due to the state-of-the-art drilling and well completion techniques, the possibility of adverse degradation of groundwater quality or prospectively valuable mineral deposits by the proposed action will be negligible	Betty Gamber	2/12/2014
NP	Water: Hydrologic Conditions (stormwater)	The proposed construction of the well pads, and roads, would alter the topography of the area to a small degree. It is not expected that surface water or stormwater would be created to the level of concern for Clean Water Act Section 402 (stormwater) review. In addition federal law has exempted energy development from stormwater requirements.	Kevin Sadlier	2/12/2014
NI	Water: Surface Water Quality	Surface Waters: The only potential for the proposed project to negatively impact water quality would be increased potential for chemical spills or increased disturbance to surface soils which could cause soil erosion. This would not be expected to occur in a way that would be a relevant impact to surface waters. The site is in an upland area and more than 3 miles from perennial waters.	Kevin Sadlier	2/12/2014
NP	Water: Waters of the U.S.	Waters of the U.S. are not present per USGS topographic map and GIS data review. The proposed project would not impact any drainage where a high water mark can be distinguished, drainages which regularly run water, or wetlands/riparian areas, per onsite.	Kevin Sadlier	2/12/2014
NP	Wild Horses	No herd areas or herd management areas are present in the project area per BLM GIS database.	Kevin Sadlier	2/12/2014
PI	Wildlife: Migratory Birds (including raptors)	Potential impacts to migratory bird species. Operator has committed to avoid the nesting season for Ferruginous Hawk.	Dixie Sadlier	2/12/2014
NI	Wildlife: Non-USFWS Designated	No crucial big game habitat was identified within the project area.	Dixie Sadlier	2/12/2014

Determination	Resource/Issue	Rationale for Determination	Signature	Date
PI	Wildlife: Threatened, Endangered, Proposed or Candidate	Is the proposed project in sage grouse PPH or PGH? Yes <input checked="" type="checkbox"/> No If the answer is yes, the project must conform with WO IM 2012-043. Personal communication with UDWR (Brian Maxfield May 2013) confirmed no concerns with sage-grouse. There will be a loss of approximately 30 acres of occupied/PPH.	Dixie Sadlier	2/12/2014
NP	Woodlands/Forestry	No herd areas or herd management areas are present in the project area per BLM GIS database.	Kevin Sadlier	2/12/2014

FINAL REVIEW:			
Reviewer Title	Signature	Date	Comments
Environmental Coordinator		03-14-2014	
Authorized Officer		3-19-2014	