BLM

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

Environmental Assessment

DOI-BLM-UT-G010-2014–0107–EA
Red Wash 5 Oil Well and 1 Gas Well Project
(RW 11–23AGR, RW 13–23AGR, RW 24–23AGR, RW 44–24AGR, RW 23–26A, RW 23–27AGR)

PREPARING OFFICE

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

Environmental Assessment

DOI-BLM-UT-G010-2014–0107–EA

Red Wash 5 Oil Well and 1 Gas Well Project (RW 11–23AGR, RW 13–23AGR, RW 24–23AGR, RW 44–24AGR, RW 23–26A, RW 23–27AGR)

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

This page intentionally
left blank

Table of Contents

This page intentionally
left blank

List of Tables

This page intentionally
left blank

Finding of No Significant Impact

Finding of No Significant Impact:

Based on the analysis of potential environmental impacts DOI-BLM-UT-G010-2014–0107–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 [Date]
Natural Resource Specialist

Approved by: JUN 1 1 2014

Authorized Officer [Date]
AFM for Minerals

This page intentionally
left blank

This requirement does not apply to gas field engines of less than or equal to 40 design-rated horsepower-hour.

- 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 will upgrade, maintain, and repair existing roads as necessary.
- QEP will maintain constructed access roads in accordance with the original construction standards.
- QEP will keep drainage ditches and culverts clear and free-flowing and will maintain them according to original construction standards.
- All permanent above ground structures constructed or installed, including pumping units, will be painted covert green.
- During construction surface and subsoil materials in the immediate area will be utilized and any gravel obtained will be from a commercial source.
- Drill cuttings will be contained and buried in the reserve pit.
- Drilling fluids including salts and chemicals will be contained in the reserve pit. Upon termination of drilling and completion operations, the liquid contents of the reserve pit will be used at the next drill site or will 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 shall be removed in accordance with 43 CFR 3162.7–1.
- A suitable muffler will be installed on pumping unit to help reduce noise.

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	Golden Eagle January 1 to August 31	Burrowing Owl March 1 to August 31	Ferruginous Hawk March 1 to August 1
RW 11-23AGR	Yes	No	No
RW 13-23AGR	Yes	No	Yes
RW 24-23AGR	No	No	Yes
RW 44-24AGR	No	No	No
RW 23-26A	No	Yes	Yes
RW 23-27AGR	No	Yes	No
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

Decision Record - Memorandum

Selected Action:

It is my decision to approve QEP Energy Company's proposal to drill five oil wells and one gas well (RW 11–23AGR, RW 13–23AGR, RW 24–23AGR, RW 44–24AGR, RW 23–26A, RW 23–27AGR) in Sections 23, 24, 26, and 27, T. 7 S., R. 22 E., Uintah County, Utah. The project area is located approximately 26 miles south of Vernal, Utah. All wells will be drilled utilizing new locations. Approximately 5,369 feet of road will be built. Additionally 8,052 feet of 10 inch or smaller surface pipelines and 3,907 feet of overhead power lines will be constructed as described in the proposed action alternative of DOI-BLM-UT-G010-2014-0107–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.

- All internal combustion equipment will be kept in good working order.
- 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.
- Low bleed pneumatics will 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.
- Well site telemetry will be utilized as feasible for production operations.
- 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.
- 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.
- QEP will follow REA standards for raptor protection on all power lines.
- 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 NOx per horsepower-hour.

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.

Public Involvement:

The proposed project was posted on the Eplanning NEPA Register on 3/31/2014. No organizations requested more information on the project.

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:

JUN 1 1 2014

Authorized Officer Date

Chapter 1. Introduction

This page intentionally
left blank

1.1. Identifying Information:

This Environmental Assessment (EA) has been prepared to analyze the potential impacts of QEP Energy Company's oil and 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 proposes to drill five oil wells and one gas well (RW 11–23AGR, RW 13–23AGR, RW 24–23AGR, RW 44–24AGR, RW 23–26A, RW 23–27AGR) in Sections 23, 24, 26, and 27, T. 7 S., R. 22 E., Uintah County, Utah. All wells will be drilled utilizing new locations. Approximately 5,369 feet of road will be built. Additionally 8,052 feet of 10 inch or smaller surface pipelines and 3,907 feet of overhead power lines will be constructed . Table 2.1, "Surface Disturbance Summary" (p. 5) lists the well and their associated disturbance.

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

Title: Red Wash EA #2014–0107–EA

NEPA #: DOI-BLM-UT-G010-2014–0107–EA

Project Type: Environmental Assessment

1.1.2. Location of Proposed Action:

The proposed project area is located in sections 23, 24, 26, and 27, T. 7 S., R. 22 E., Uintah County, Utah. The proposed project area is located approximately 26 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-0558, UTU-0559, and UTU-0561

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-0558, UTU-0559, and UTU-0561 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-0558, UTU-0559, and UTU-0561 by drilling the proposed wells, and if successful, to produce commercial quantities of gas or oil from the federal oil and gas leases. 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 3/31/2014.

Chapter 2. Proposed Action and Alternatives

This page intentionally
left blank

2.1. Description of the Proposed Action:

QEP proposes to drill five oil wells and one gas well (RW 11–23AGR, RW 13–23AGR, RW 24–23AGR, RW 44–24AGR, RW 23–26A, RW 23–27AGR) in Sections 23, 24, 26, and 27, T. 7 S., R. 22 E., Uintah County, Utah. The project area is located approximately 26 miles south of Vernal, Utah. All wells will be drilled utilizing new locations. Approximately 5,369 feet of road will be built. Additionally 8,052 feet of 10 inch or smaller surface pipelines and 3,907 feet of overhead power lines will be constructed. If dry, the well would be plugged and abandoned as per BLM and State of Utah requirements. Table 2.1, "Surface Disturbance Summary" (p. 5) lists the wells and their associated disturbance.

Table 2.1. Surface Disturbance Summary

Well Name	New Well Pad Disturbance (acres)	Surface Pipeline (feet)*	Surface Pipeline (Acres)*	Overhead Powerlines (feet)	Overhead Powerlines During Construction (acres)	Overhead Powerlines Permanent Access (acres)	Access Road (feet)	Access Road (acres)	Total Acres of New Surface Disturbance (Acres)
RW 11-23 AGR	2.35	3031.00	2.09	1878.00	2.16	0.65	1109.00	0.77	5.28
RW 13-23 AGR	2.47	755.00	0.52	947.00	1.09	0.33	819.00	0.57	4.13
RW 24-23 AGR	2.36	1716.00	1.19	97.00	0.12	0.04	1769.00	1.22	3.70
RW 44-24 AGR	2.06	1740.00	1.20	752.00	0.87	0.26	916.00	0.64	3.57
RW 23-26A	2.29	474.00	0.33	50.00	0.06	0.02	422.00	0.30	2.65
RW 23-27 AGR	2.94	336.00	0.24	183.00	0.22	0.07	334.00	0.24	3.40
Total	14.47	8052.00	5.57	3907.00	4.52	1.37	5369.00	3.74	22.73
* Calculations for new surface disturbance do not include surface pipeline acreage.									

2.1.1. Access

There would be 5,369 feet of new road constructed. 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

All wells will be drilled utilizing new locations. This would result in approximately 22.73 acres of new surface disturbance during the construction of the well pads, reserve pits, pipelines 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.

Drainages crossing well locations would be diverted around locations using ditches, water diversion drains, or berms.

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 8,052 feet of steel pipeline installed for this project. The pipeline would be steel, welded schedule #40 or greater, and consist of one 3 inch oil line and two 1 1/4 inch inside diameter trace lines. The pipelines will be welded together on location and pulled into place. The lines would be banded together in one bundle, insulated and covered with tin that has been painted Covert Green. A fuel gas line (2 inch inside diameter poly pipe) would be laid adjacent to and follow the bundled pipelines to locations. The pipelines would be laid within 20 feet of the existing roads pipelines or existing authorized route as much as possible.

2.1.5. Power Lines

There would be 3,907 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. Plants: BLM Sensitive

Habitat assessment and inventory were conducted by Bowen Collins & Associates. A 300' buffer zone was used. Copies of the reports have been submitted directly to the appropriate agencies by Bowen & Collins & Associates. Table 2.2, "Horseshoe Milkvetch Survey Results" (p. 7) summarizes the results of the habitat assessments.

Table 2.2. Horseshoe Milkvetch Survey Results

Well Name	Date Conducted	Individuals/Populations Located	Action Required
RW 11-23AGR	August 2012	No	None
RW 13-23AGR	NA	NA	NA
RW 24-23AGR	August 2012	No	None
RW 44-24AGR	August 2012	No	None
RW 23-26A	NA	NA	NA
RW 23-27AGR	NA	NA	NA

2.1.8. 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. Consultation was also conducted under the Greater Deadman Bench Oil and Gas Producing Region EIS, 2008.

2.1.9. 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 first production, 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 Red Wash Disposal well located in the SESE, Section 28, T. 7 S. R. 23 E.; West End Disposal located in the NESE, Section 28, T. 7 S., R. 22 E.; 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.

2.1.10. Reclamation

Reclamation would follow QEP Energy Company, Uinta Basin Division's Reclamation plan, September 2009 (QEP Energy Plan) and the BLM Green River District Reclamation Guidelines.

- All trash and debris would be removed from the disturbed area.
- The disturbed area would be backfilled with subsoil.
- Topsoil would be spread to an even, appropriate depth and disced if needed.
- Water courses and drainages would be restored.
- Erosion control devices would be installed where needed.
- Seeding would be done in the fall, prior to ground freeze up.

- seed mix would be submitted to a BLM AO for approval prior to seeding.
- Monitoring and reporting would be conducted as stated in QEP Energy Company's Reclamation Plan. Weed control would be conducted as stated in QEP Energy Company's Reclamation Plan.

2.1.10.1. 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.

2.1.10.2. Interim Reclamation

Interim reclamation of the surface environment would take place after drilling and completion and well is put into production. 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.

2.1.10.3. Dry Hole / Abandoned Location

Abandoned well sites, roads, and other disturbed areas would be restored as near as practical to their original condition. Where applicable, these conditions may include the reestablishment of irrigation systems; reestablishment of appropriate soil conditions; and, the reestablishment of natural vegetation. All disturbed surfaces would be recontoured to approximate natural contours, with reclamation of the well pad and access road to be performed as soon as practical after final abandonment. At final abandonment, the operator, would cap the casing with a metal plate a minimum of 0.25 inch thick. The cap will be welded in place and the well location and identity will be permanently inscribed on the cap. The cap will be constructed with a weep hole. The depth of the permanent cap will be determined at the time of final abandonment. Long-term reclamation will then be applied and will follow the reclamation process described in this plan. When reclamation is deemed successful by the Operator and the BLM, the Operator will request a bond release.

2.1.10.4. 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.

2.1.11. Applicant Committed Environmental Protection Measures (ACEPMS)

2.1.11.1. Air Quality

QEP agrees to implement the following measures to reduce emissions:

- All internal combustion equipment would be kept in good working order.
- 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.
- Low bleed pneumatics would be installed on separator dump valves and other controllers. The use of low bleed pneumatics would result in a lower emission of VOCs.
- During completion, flaring would be limited as much as possible. Production equipment and gathering lines would be installed as soon as possible.
- Well site telemetry would be utilized as feasible for production operations.

2.1.11.2. 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. Table 2.3, "Cultural Resources Survey Results" (p. 10) lists the wells and associated Archaeologist monitoring requirements.

Table 2.3. Cultural Resources Survey Results

Well Name	Archaeological Project Number	Archaeological Date	Archaeological Recommendations
RW 11-23AGR	U-12–MQ-0621b	09/05/2012	no monitoring required
RW 13-23AGR	U-12–MQ-0682b	08/17/2012	no monitoring required
RW 24-23AGR	U-12–MQ-0621b	09/05/2012	no monitoring required
RW 44-24AGR	U-12–MQ-0630b	7/24/2012	no monitoring required
RW 23-26A	U-11–MQ-0286b	05/10/2011	no monitoring required
RW 23-27AGR	U-12–MQ-0621b	09/05/2012	no monitoring required
Yes indicates that QEP would provide a BLM Authorized Permitted Archaeologist to monitor the construction process for the access road, pipe line, well pad, or power line.			

2.1.11.3. Paleontological Resources

Paleontological surveys have been conducted by Intermountain Paleo Consulting (IPC). A copy of this report was submitted to the BLM by Stephen D. Sandau. The surveys resulted in finding of no scientifically important fossil resources. However, if vertebrate fossils are found during construction a paleontologist would be immediately notified, and QEP would provide a Paleontological monitor if needed. Table 2.4, "Paleontological Resources Survey Results" (p. 11) indicates where and when a paleontologist would be required to monitor surface disturbing activity. A paleontological survey was conducted on all areas where surface disturbance would occur.

Table 2.4. Paleontological Resources Survey Results

Well Name	Paleontological Project Number (IPC#)	Paleontological Date	Paleontological Recommendations
RW 11-23AGR	12–97	07/26/2012	no monitoring required
RW 13-23AGR	12–97	07/26/2012	no monitoring required
RW 24-23AGR	12–97	07/26/2012	no monitoring required
RW 44-24AGR	12–111	09/10/2012	no monitoring required
RW 23-26A	11–61	01/25/2013	no monitoring required
RW 23-27AGR	12–95	08/03/2012	no monitoring required
Yes indicates that QEP would provide a BLM Authorized Permitted Paleontologist to monitor the construction process for the access road, pipe line, well pad, or power line.			

2.1.11.4. Threatened, Endangered Fish and Wildlife Species

QEP has agreed not to construct or drill during the dates in Table 2.5, "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 2.5. Raptor Timing Restrictions

Well Name	Burrowing Owl March 1 to August 1	Golden Eagle January 1 to August 31	Ferruginous Hawk March 1 to August 1
RW 11–23AGR	No	Yes	No
RW 13–23AGR	No	Yes	Yes
RW 24–23AGR	No	No	Yes
RW 44–24AGR	No	No	No
RW 23–26A	Yes	No	Yes
RW 23–27AGR	Yes	No	No
Yes indicates that QEP would not construct, drill, or complete the wells within the dates specified above.			

2.2. No Action Alternative

Under the No Action Alternative, QEP would not drill five oil wells and one gas well (RW 11–23AGR, RW 13–23AGR, RW 24–23AGR, RW 44–24AGR, RW 23–26A, RW 23–27AGR) in Sections 23, 24, 26, and 27, T. 7 S., R. 22 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.

This page intentionally
left blank

Chapter 3. Affected Environment:

This page intentionally
left blank

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, (O_3), sulfur dioxide (SO_2), nitrogen dioxide (NO_2), and carbon monoxide (CO), and particulate matter less than 10 microns in diameter (PM_{10}) or 2.5 microns in diameter ($PM_{2.5}$). Airborne particulate matter consists of tiny coarse-mode (PM_{10}) 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 PM_{10} is primarily from crushing, grinding, or abrasion of surfaces. Table 3.1, "Air Quality Background Values" (p. 17) 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
O_3	8-hour	100.0[3,5]	75

1 – The 24-hour and annual SO_2 NAAQS have been revoked by USEPA

2 – Based on 2009 data from Wamsutter Monitoring Station Data (USEPA AQS Database)

3 – Based on 2010/2011 data from Redwash Monitoring Station (USEPA AQS Database)

4 – Based on 2006 data disclosed in the Greater Natural Buttes FEIS. (BLM, 2012)

5 – Ozone is measured in parts per billion (ppb)

6 – The annual PM_{10} NAAQS has been revoked by USEPA

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, SO_2, PM_{10}, 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 PM_{10} 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

3.2.1. Invasive Plants/Noxious Weeds

The invasive species, cheat grass *(Bromus tectorum)*, russian thistle *(Salsola iberica)*, and halogeton *(Halogeton glomeratus)* are present at or near these locations.

3.2.2. Soils

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

3.2.3. Vegetation

The vegetation in the Project Area consists of fairly short shrubs, grasses and some forbs. Species include Indian ricegrass *(Stipa hymenoides)*, Wyoming big sagebrush *(Artemisia tridenta ssp. wyomingensis)*, rubber rabbitbrush (*Chrysothamnus nauseosus*), needle and thread grass *(Hesperostipa comata)*, prickly pear cactus sp. (*Opuntia sp.*), galleta grass *(Pleuraphis jamesii)*, mormon tea (*Ephedra viridis*), black greasewood *(Sarcobatus vermiculatus)*, and scarlet globemallow (*Sphaeralcea coccinea*).

3.3. Livestock Grazing & Rangeland Health Standards

3.3.1. Livestock Grazing

The proposed project is located in the Baeser Wash pasture of the Split Mountain sheep and cattle allotment. The operators livestock number, in recent years, have been reduced by the BLM due to drought and decrease in available forage. Under the proposed action, 22.73 acres would be taken out of forage production. This would result in a loss of 2 Animal Unit Months (AUMs) for sheep and cattle grazing . The Baeser wash pasture of this allotment, is being heavily impacted by oil and gas production. Construction of new roads to these proposed sites would limit and hinder grazing distribution within this pasture. The removal of topsoil for both the proposed pads and road right-of-ways would decrease native forage production over an extended period of time, and increase noxious and invasive species production.

The Split Mountain Allotment has been impacted by full field energy development. Large amount of fragmentation, disturbance and forage loss throughout the allotment has led to multiple years of moderate to minimal use by the current grazing permittees.

3.3.2. Rangeland Health

Rangeland Health surveys were conducted on 4 sites in 2002 on the Baeser Wash pasture. Of these 4 survey sites 2 were not meeting rangeland health requirements due to lack of Biotic Integrity. This issue is due to an increase of invasive species and decrease of perennial grasses and forbs. The 2002 surveys indicated a decrease in shadscale, mat and Gardner saltbush, live specimens were decadent and drought effected. The proposed action would cause decreases in meeting future Rangeland Health Standards due to an increase in undesirable species.

Rangeland Health assessments have been completed in the allotments. 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. Impacts from large amounts of disturbance and fragmentation contribute to factors (weeds, bare ground, shifts in ecological community structure, erosion, etc.) that are likely to lead to areas not meeting Rangeland Health.

Under the Proposed Action approximately 22.73 acres of new surface disturbance would occur. This would contribute to soil loss, weed invasion, and continued fragmentation of grazing allotments, affecting livestock movement patterns and forage availability.

3.4. Wildlife

3.4.1. Migratory Birds

The Migratory Bird Treaty Act (MBTA) was implemented for the protection of migratory birds. Unless permitted by regulations, the MBTA makes it unlawful to pursue, hunt, kill, capture, possess, buy, sell, purchase, or barter any migratory bird, including the feathers or other parts, nests, eggs, or migratory bird products. In addition to the MBTA, Executive Order 13186 sets forth the responsibilities of Federal agencies to further implement the provisions of the MBTA

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 migratory birds.Those migratory bird species that are BLM sensitive or are otherwise of special interest that may occupy the proposed project area are addressed below. This section identifies all other migratory birds that may inhabit the project area, including those species classified as High-Priority birds by Utah Partners in Flight (Parrish et al 2002). High-Priority species are denoted by an asterisk (*).

Sagebrush -Steppe

Migratory bird species commonly associated with the sagebrush-steppe community within the project area include: the Brewer's sparrow* (*Spizella breweri*), grasshopper sparrow* (*Ammodramus savannarum*), green-tailed towhee* (*Pipilo chlorurus*), mountain bluebird* (*Sialia currocoides*), sage sparrow* (*Amphispiza belli*), sage thrasher* (*Oreoscoptes montanus*), Virginia's warbler* (*Vermivora virginiae*), horned lark (*Eremophila alpestris*), loggerhead shrike (*Lanius ludovicianus*), western kingbird (*Tyrannus verticalis*), northern mockingbird (*Mimus polyglottos*), vesper sparrow (*Pooecetes gramineus*) and western meadowlark (*Sturnella neglecta*) (Parrish et al 2002).

3.4.2. Raptors

Western burrowing owl, Golden eagle, and Ferruginous hawk known nesting sites were confirmed during the on site visit. QEP has committed to no constuction, drilling, or completion activities during the nesting seasons for the species listed above.

Burrowing Owl (BLM Sensitive)

The Western burrowing owl is a BLM Sensitive Species. Western burrowing owls are summer residents on the plains over much of Utah and usually arrive on breeding grounds from late March to mid-April. The species is associated with dry, open habitat that has short vegetation and contains an abundance of burrows. In Utah, prairie dog burrows are the most important source of Western burrowing owl nest sites. Western burrowing owl use of abandoned prairie dog towns is minimal, and active dog towns are the primary habitat for the owls. As the range and abundance of these burrowing mammals have decreased, so too has the status of the Western burrowing owl. Potential habitat exists within active prairie dog towns in the proposed project area.

In the project area, Western burrowing owls can be found nesting within active white-tailed prairie dog colonies. One nest site was documented in 2007 within .25 mile of the proposed RW #23–27AGR.

Golden Eagle

Golden eagles are protected under the Bald Eagle and Golden Eagle Protection Act and the Migratory Bird Treaty Act. They are common to Uintah County and throughout the resource area. .

In the project area, a golden eagle nest site was confirmed within .5 mile of the proposed RW #11–23AGR, and RW #13–23 AGR. Notations within BLM records indicate that the nest was active in 2008.

Ferruginous Hawk (BLM Sensitive)

The ferruginous hawk is a BLM Sensitive and a Partners in Flight Species of Concern. Throughout their range, ferruginous hawks have been found nesting on a wide variety of substrates. The ferruginous hawk is a common species in western, northeastern, and southeastern Utah. Within the State of Utah, ferruginous hawks nest on junipers, piñon pines, cottonwoods, on the ground, on low hills and knolls, on low cliffs, and on artificial structures. Generally, this species nests where visibility is extensive and this, in part, may contribute to the species' relatively high sensitivity to human disturbance. Ferruginous hawks lay eggs from mid-March through early April and the young fledge from early June to early July.

In the project area, ferruginous hawk stick nests are typically located on rock outcrops and low cliffs elevated from the surrounding terrain, as well as in isolated junipers. BLM records and a field survey documented a ferruginous hawk nest within a 0.5 mile radius of the proposed project. Notations within BLM records along with recent ground surveillance indicate that the nest has been inactive for the last two years.

QEP has committed to no construction, drilling, or completion activities during the nesting seasons for the species listed above. Due to these protective operator committed measures, along with the proposed wells being out of the line-of-sight from existing stick nests, these species will not be discussed in Chapter 4.

3.5. Fish and Wildlife Species Excluding USFWS Designated Species

White-tailed Prairie Dogs

The white-tailed prairie dog is a BLM Sensitive Species. White-tailed prairie dogs occur in the eastern portion of the state, primarily in the Uinta Basin and the northern portion of the Colorado Plateau. Range wide, the white-tailed prairie dog population is estimated at 1-2 million individuals. In northeastern Utah, the species occurs in areas around Flaming Gorge/Manila, Diamond Mountain, and in the Uinta Basin. Approximately, 87,500 acres of active prairie dog colonies have been identified in the Northeast Region. Areas that remain to be surveyed should only contain scattered, small colonies surrounded by rocky terrain that is unsuitable as prairie dog habitat.

White-tailed prairie dogs inhabit mountain valleys, semidesert grasslands, agricultural areas, and open shrublands in Western North America. They are distributed in relatively large, sparsely populated complexes and live in loosely knit family groups or "clans." Clan boundaries are ill-defined with most activity being concentrated around feeding sites.

The main threat to white-tailed prairie dog populations has been the introduction of sylvatic plague *(Yersinia pestis)* into North America in the late 1930's. Prairie-dogs appear to have little immunity to this disease, and plague epizootics frequently kill greater than 99 percent of prairie-dogs in infected colonies. Other threats include oil, gas, and mineral extraction, urbanization, conversion of land to agriculture, and Federal and State sponsored eradication campaigns. Recreational shooting pressure can reduce prairie-dog numbers on a local scale, in conjunction with outbreaks of sylvatic plague. However, it has not been documented to threaten population stability alone.

In the project area, White-tailed prairie dog colonies were identified near the proposed RW #23–26A, and RW #23–27AGR.

3.5.1. Roundtail Chub, Flannelmouth Sucker, and Bluehead Sucker (BLM Sensitive)

These three fish species are endemic to the Colorado River Basin, including the Green and White Rivers. All three species are listed as BLM sensitive species due to declining population numbers and distribution.

3.6. Threatened, Endangered or Candidate Animal Species

3.6.1. Colorado River Fish Species

The U.S. Fish & Wildlife Service (USFWS) has identified four federally listed fish species historically associated with the Upper Colorado River Basin, including the Green and White Rivers. These fish are the Colorado pikeminnow, humpback chub, bonytail, and razorback sucker. The four fish species are federally and state-listed as endangered and have experienced severe population declines due to flow alterations, habitat loss or alteration, and introduction of non-native fish species. The Green and White River and their 100-year floodplains have been designated critical habitat for these four endangered fish species (USFWS 1994).

This page intentionally
left blank

Chapter 4. Environmental Effects:

This page intentionally
left blank

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. 27).

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

Pollutant	Development[1]	Production	Total
PM_{10}	4.2	0.18	4.38
NO_X	85.2	13.2	98.4
CO	19.2	19.2	38.4
VOC	15	14.5	29.5
SO_2	5.4	0	5.4
$PM_{2.5}$	1.8	0.06	1.86
Benzene	0.18	0.28	0.46
Toluene	0.12	0.29	0.41
Ethylbenzene	0.12	0.37	0.49
Xylene	0	0.27	0.27
n-Hexane	0.3	0.18	0.48
Formaldehyde	0	0	0

[1] Emissions include 6 producing well(s) and associated operations traffic during the year in which the project is developed.

Well development includes NO_x, SO_2, 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 SO_2. 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 (PM_{10} 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 65.6 tons/yr for NO_X, and 16.4 tons/yr of VOC (**Table 4.1, "Proposed Action Annual Emissions (tons/year) " (p. 27)**). 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 NOx per horsepower-hour. This requirement does not apply to gas field engines of less than or equal to 40 design-rated horsepower-hour.

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

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 (Invasive Plants and Noxious Weeds (p.)). 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).

4.2.2.1. Invasive Plants/Noxious Weeds

The Proposed Action would disturb approximately 22.73 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).

4.2.2.1.1. 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.

4.2.2.2. Soils

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.

Direct impacts to soils include mixing of soil horizons, soil compaction, short-term loss of topsoil and site productivity, and loss of soil/topsoil through wind and water erosion. Loss of soil/topsoil in disturbed areas would reduce the revegetation success of seeded native species due to increased competition by annual weed species. Annual weed species are adapted to disturbed conditions, and have less stringent moisture and soil nutrient requirements than do perennial native species.

4.2.2.3. Vegetation

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.

4.2.3. Livestock Grazing & Rangeland Health Standards

4.2.3.1. Livestock Grazing

Under the Proposed Action approximately 22.73 acres of surface disturbance would occur. The allotment would continue to be used below authorized levels. The increase in disturbance and development causes general fragmentation of the landscape, which continues to hinder livestock operations. Possible increase in livestock mortality could occur due to an increase in vehicle traffic.

4.2.3.2. Rangeland Health Standards

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 are likely to lead to areas not meeting rangeland health.

Under the Proposed Action approximately 22.73 acres of new surface disturbance would occur. This would contribute to soil loss, weed invasion, and continued fragmentation of grazing allotments, affecting livestock movement patterns and forage availability.

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.

4.2.4. Wildlife

4.2.4.1. Migratory Birds

As identified in Chapter 3, the area has potential nesting and foraging habitat for avian species associated with the sage-steppe habitat type. Approximately 22.73 acres of sage-steppe habitat will be disturbed. The proposed action would result in direct impacts including; 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 of construction and location(s). If construction occurs in the spring, during the nesting season, impacts would be greater than if ground disturbing activities occurred between late summer and winter. Impacts to birds during the nesting season could include nest abandonment, reproductive failure, displacement, destruction of nests, and mortality of individuals. Construction would likely have a greater impact on Utah Partners in Flight high-priority migratory bird species that may be utilizing the project area due to their declining populations, habitat requirements dependence in restricted or vulnerable habitats and limited distribution. Spring construction activities could cause birds to move into adjacent habitats or into habitats where inter-specific and intra-specific competition between species may increase. If reclamation efforts are successful, the well sites could return to pre-disturbance levels, which may take between 30 –50 years for Wy. sagebrush habitat types. Noise disturbance associated with project activities would be considered temporary and is anticipated to occur only during construction and drilling. BLM/UDWR biologist will continue nest monitoring on known raptor nesting sites identified within the project area.

4.2.5. Fish and Wildlife Species Excluding USFWS Designated Species

4.2.5.1. White-tailed Prairie Dog

Development of the proposed action would have both positive and negative impacts on white-tailed prairie dogs in the area. The principal potential negative impacts include a direct loss of habitat (6.05 acres), an increase in the potential for direct mortality caused by poaching, vehicle collisions, or exposure to toxic substances, and the decreased availability/use of certain habitats through displacement, habitat fragmentation and habitat modification. Potential positive impacts of energy development on these species include habitat enhancements caused by the creation of bare ground and the establishment of re-growth vegetation.

Any direct habitat loss in existing (e.g., established prairie dog towns) or potential (e.g., short-grass prairie; low growing shrublands) habitats would negatively affect white-tailed prairie dogs in the project area. In addition to habitat losses, the proposed action could potentially increase direct mortality of white-tailed prairie dogs. Construction and operation of facilities associated with the Proposed Action would expand current roadway systems and increase both traffic and visitation to the area. Increases in traffic and human presence could lead to increased mortality from vehicle collisions as well as potential poaching. In addition to direct human caused

mortality, these species could also be affected through exposure to spills or other sources of petroleum products.

As mentioned previously, development of the proposed action would alter existing habitat in the project area. As traffic volumes and human presence are increased, adjacent habitats may be avoided due to human interaction, noise and the influx of invasive weeds. After construction and drilling are complete, traffic volumes would most likely return to pre-project levels. Although prairie dogs are often found on or near roadways, prairie dog colonies are typically fragmented by road development. When colonies are fragmented by roads, therefore reducing dispersal ability, prairie dog densities increase. As prairie dog densities increase, so does the potential for plague transmittance and habitat degradation (e.g., decreased food resources) (Cully and Williams 2001). Habitat quality for these species can also be degraded by the introduction of noxious and invasive weeds. Weed invasions may lead to a decrease in the amount of native perennials and bare ground therefore degrading habitat for prairie dogs by decreasing visibility, forage quality, and burrow development. QEP will follow the Green River District Reclamation Guidelines, which would help deter the spread of invasive plants or noxious weeds in the project area.

QEP has placed the proposed well pads nest to existing roads to help limit habitat fragmentation and direct loss of White-tailed prairie dog habitat.

4.2.5.2. Roundtail Chub, Flannelmouth Sucker, and Bluehead Sucker

The impacts to the Roundtail Chub, Flannelmouth Sucker, and Bluehead Sucker would be the same as the Colorado River Fish Species found in Section 4.2.7.1

4.2.6. Threatened, Endangered or Candidate Animal Species

4.2.6.1. Colorado River Fish 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 other factors, have resulted in 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.

4.3. No Action Alternative

4.3.1. Air Quality

Under the No Action Alternative, the proposed oil or 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

Under the No Action Alternative there would be no impacts to wildlife species including; migratory birds, fish and wildlife species, and threatened, endangered or candidate animal species. There would be no additional water depletion to the Green or White River systems.

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. 32)** 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	16.4
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 22.73 acres of land within Uintah County. The project area is located in Sections 23, 24, 26, and 27, T. 7 S., R. 22 E., Uintah County, Utah Salt

Lake Base Meridian. The town of Vernal is approximately 26 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 22.73 acres of surface disturbance. The No Action alternative would not result in an accumulation of impacts.

4.4.3. Livestock Grazing & Rangeland Health Standards

4.4.3.1. Livestock Grazing

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

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

4.4.3.2. Rangeland Health

Cumulative effects on Rangeland Health would show a declining trend in native plant communities, with an upward trend in the production of noxious weeds and annual species. Until reclamation of the disturbed sites can reach pre-construction condition and be fully implemented, this negative trend will continue.

4.4.4. Wildlife

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

The No Action Alternative would not result in an accumulation of impacts for any of the wildlife species.

4.4.4.1. Migratory Birds, 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 22.73 acres of sage-steppe/Juniper habitat will be disturbed and lost for up to 30–50 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, including raptors, 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.

4.4.4.2. Fish and Wildlife Species Excluding USFWS Designated Species

White-tailed Prairie Dog

Approximately 22.73 acres of prairie dog habitat will be disturbed with the proposed action. Impacts to the species and habitat will continue by construction/drilling activities. Cumulative impacts resulting from the surface disturbance and other actions include; habitat fragmentation, degradation and habitat loss, and mortalities of individuals. In general, the severity of the cumulative effects would depend on factors such as the sensitivity of the species, seasonal intensity of use, type of project activity, and physical parameters (e.g., topography, forage quality, cover availability, visibility, and noise presence). The proposed action would add 22.73 acres of disturbance.

Reasonably foreseeable future activities that may affect White tailed-prairie dogs and their habitat, within the GDBR includes future oil and gas exploration and development.

4.4.4.3. Roundtail Chub, Flannelmouth Sucker, and Bluehead Sucker

Cumulative impacts for the Roundtail Chub, Flannelmuth Sucker, and Bluehead Sucker would be the same as the Threatened, Endangered or Candidate Animal Species found in Section 4.4.4.4.

4.4.4.4. Threatened, Endangered or Candidate Animal Species

The CIAA for Threatened, Endangered, Proposed or Candidate is identified as the GDBR, which encompasses approximately 98,785 acres. 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.

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

This page intentionally
left blank

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).	Two sources, Wonsits Valley water right # 49–251 (which was filed on May 7, 1964), and Red Wash water right 49-2153 (which was filed on March 25, 1960) are considered to be historic depletions are proposed. Historic sources were consulted on during preparation of the Recovery Implementation and Recovery Action Plan. No additional consultation is needed.
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.

This page intentionally
left blank

Chapter 6. List of Preparers

This page intentionally
left blank

Table 6.1. List of Preparers

Name	Title	Responsible for the Following Section(s) of this Document
David Baird Kevin Sadlier	Natural Resource Specialist/ Environmental Scientist	Chapters 1 & 2 Chapters 3 & 4: Soils and vegetation
Dixie Sadlier	Wildlife Biologist	Chapters 3 & 4: Wildlife
Maggie Marston	Botanist	SSPS, T&E plants, Vegetation
Marcus Whitebull	Range Conservationist	Rangeland Health and Livestock Grazing.
Stephanie Howard	Environmental Coordinator	Air Quality

This page intentionally
left blank

Chapter 7. References Cited

This page intentionally
left blank

BLM. 2008. Vernal Field Office Resource Management Plan, U.S. Department of the Interior, Bureau of Land Management, Vernal District Office.

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.)

BLM. 2008. Final Environmental Impact Statement for the Greater Deadman Bench Oil and Gas Producing Region Project, U.S. Department of the Interior, Bureau of Land Management, Vernal District Office.

BLM. 2009. Green River District Reclamation Guidelines, U.S. Department of the Interior, Bureau of Land Management, Vernal District Office.

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

British Meteorological Office (BMO). 2009. British Meteorological Office's Hadley Centre, 2009. Accessed January 2009 at http://www.metoffice.gov.uk/climatechange/science/monitoring/.

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. Recovery Implementation Program for Endangered Fish Species in the Upper Colorado River Basin. Final. US Department of the Interior, Fish and Wildlife Service, Denver, Colorado. September 29, 1987.

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

U.S. Fish & Wildlife Service (USFWS). 1987. Recovery Implementation Program for Endangered Fish Species in the Upper Colorado River Basin. Final. US Department of the Interior, Fish and Wildlife Service, Denver, Colorado. September 29, 1987.

U.S. Fish & Wildlife Service (USFWS). 1994. Final Rule: Determination of Critical Habitat for the Colorado River Endangered Fishes: Razorback sucker, Colorado squawfish, Humpback chub, and Bonytail chub. Federal Register 59: 13375-13400.

This page intentionally
left blank

Appendix A. Interdisciplinary Team Checklist

Project Title: Red Wash Four Oil Well Project

NEPA Log Number: DOI-BLM-UT-G010-2014–0107–EA

File/Serial Number: Federal Lease # UTU-0558, UTU-0559, and UTU-0561

Project Leader: David Baird

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.

Table A.1.

Determination	Resource/Issue	Rationale for Determination	Signature	Date
RESOURCES AND ISSUES CONSIDERED (INCLUDES SUPPLEMENTAL AUTHORITIES APPENDIX 1 H-1790-1)				
PI	Air Quality & Greenhouse Gas Emissions	Emissions from earth-moving equipment, vehicle traffic, drilling and completion activities, separators, oil storage tanks, dehydration units, 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	3/31/ 2014
NP	BLM Natural Areas	None are present in the project area per the Vernal Field Office RMP and GIS review.	Kevin Sadlier	3/31/ 2014
NP	Cultural: Archaeological Resources	No cultural resources are identified within the APE of this project.	Cameron Cox	8/6/ 2013
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.	Cameron Cox	8/6/ 2013

Determination	Resource/Issue	Rationale for Determination	Signature	Date
RESOURCES AND ISSUES CONSIDERED (INCLUDES SUPPLEMENTAL AUTHORITIES APPENDIX 1 H-1790-1)				
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	3/31/ 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	3/31/ 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	3/31/ 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	3/31/ 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	3/31/ 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	3/31/ 2014
NI	Geology/Minerals/ Energy Production	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. 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. Well completion must be accomplished in compliance with "Onshore Oil and Gas Order No. 2, Drilling Operations". These guidelines specify the following: ... *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.*	Betty Gamber	4/1/ 2014

Determination	Resource/Issue	Rationale for Determination	Signature	Date
RESOURCES AND ISSUES CONSIDERED (INCLUDES SUPPLEMENTAL AUTHORITIES APPENDIX 1 H-1790-1)				
IP/NW: PI Soils: PI Veg: PI	Invasive Plants/ Noxious Weeds, Soils & Vegetation	IP/NW: Proposed disturbance would provide suitable habitat for the establishment and spread of non-native plant species. Operator would control invasive species in all disturbed areas as discussed in Chapter 2 and QEP approved reclamation plan. Soils: 22.73 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. Veg: 22.73 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.	Kevin Sadlier	3/31/ 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 APD's would be authorized under beneficial use of their lease; therefore, this project does not require a ROW.	Kevin Sadlier	3/31/ 2014
NP	Lands with Wilderness Characteristics (LWC)	None are present in the project area per the Vernal Field Office RMP and GIS review.	Kevin Sadlier	3/31/ 2014
PI	Livestock Grazing & Rangeland Health Standards	The proposed project would create additional ground disturbance and fragmentation of the allotment of which may impact both the livestock operation as well as the fundamentals of rangeland health.	Craig Newman	5/20/ 2014
NP	Paleontology	No scientifically important fossils were found at any of the proposed locations (IPC#12–97, 7–26–12; IPC#12–111, 1–25–13; IPC#12–95, 8–3–12)	Betty Gamber	4/1/ 2014

Determination	Resource/Issue	Rationale for Determination	Signature	Date
RESOURCES AND ISSUES CONSIDERED (INCLUDES SUPPLEMENTAL AUTHORITIES APPENDIX 1 H-1790-1)				
NI	Plants: BLM Sensitive	Horseshoe milkvetch (*Astragalus equisolensis*) and less likely, sterile yucca(*Yucca sterilis*), both UT BLM Sensitive plant species, could inhabit caprock and sandy locations near the proposed actions, respectively. Survey for *A. equisolensis* was requested by BLM and conducted by QEP at location 13–23 AGR. Habitat for horseshoe milkvetch was present, however no horseshoe milkvetch or sterile yucca were found. Additional locations were on-sited by BLM botanist and habitat for the milkvetch was noted as not present, and sterile yucca was not observed. The proposed action will remove caprock in this small, isolated area of habitat, however, downward species trend as a result would not be expected as the area lies slightly outside of the species' currently known range. 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 in proposed action areas.	Maggie Marston	5/14/ 2014
NP	Plants: Threatened, Endangered, Proposed, or Candidate	The proposed action does not lie within the 2013 USFWS-approved cactus polygons delineated for both *Sclerocactus* species. In addition, Green River shale outcrops are not evident from VFO GIS inventory, special status species survey reports, and field site checks conducted by BLM on 4/1/2014. Additional TEPC plant species are precluded based on GIS soil, elevation, known location data, and onsite field review for riparian, soil and plant community affiliates.	Maggie Marston	5/15/ 2014
NP	Plants: Wetland/Riparian	None are present in the project area per the Vernal Field Office RMP and GIS review.	Kevin Sadlier	3/31/ 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	3/31/ 2014
NI	Socioeconomics	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	3/31/ 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	3/31/ 2014

Table 13.

FINAL REVIEW:			
Reviewer Title	**Signature**	**Date**	**Comments**
Environmental Coordinator	Kelley Bushnell	06-05-2014	
Authorized Officer		6-11-2014	

Deter-mina-tion	Resource/Issue	Rationale for Determination	Signa-ture	Date
RESOURCES AND ISSUES CONSIDERED (INCLUDES SUPPLEMENTAL AUTHORITIES APPENDIX 1 H-1790-1)				
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	3/31/ 2014
NP	Water: Floodplains	None are present in the project area per the Vernal Field Office RMP and GIS review.	Kevin Sadlier	3/31/ 2014
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 wells completion techniques, the possibility of adverse degradation of groundwater quality or prospectively valuable mineral deposits by the proposed action will be negligible	Betty Gamber	4/1/ 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	3/31/ 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	3/31/ 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	3/31/ 2014
NP	Wild Horses	No herd areas or herd management areas are present in the project area per BLM GIS database.	Kevin Sadlier	3/31/ 2014
PI	Wildlife : Migratory Birds (including raptors)	Migratory bird foraging and nesting habitat is present. There are also known raptor nests within .5 miles of the proposed wells.	Dixie Sadlier	4/2/ 2014
PI	Wildlife: Non-USFWS Designated	Known White-tailed prairie dog colonies are within the project areas. Project activities will result in a direct loss of habitat for the species.	Dixie Sadlier	4/2/ 2014
PI	Wildlife: Threatened, Endangered, Proposed or Candidate	GIS layers and field data was reviewed and found no federally listed species and/or habitat. Water depletions will occur with project activities, however, the depletions will be historic and consultation was completed under the Greater Deadman Bench Oil and Gas Producing Region EIS.	Dixie Sadlier	4/2/ 2014
NP	Woodlands/Forestry	No herd areas or herd management areas are present in the project area per BLM GIS database.	Kevin Sadlier	3/31/ 2014