

**ATTACHMENT 2. DATA COLLECTION AND REPORTING REQUIREMENTS  
AND CONDITIONS OF APPROVAL**

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## DATA COLLECTION AND REPORTING REQUIREMENTS

Table 2.1 summarizes the data collection and reporting requirements of the Selected Alternative. For a full description of the collection and reporting requirements, refer to the source document.

**Table 2.1 Data Collection and Reporting Requirements of the Selected Alternative**

BLM	Gasco	Source	Data Collection and Reporting Requirements
X	X	FEIS Table 2-1	As needed, the BLM, with input from Gasco, Utah Division of Air Quality, and EPA as appropriate, will refine the emissions inventory. The BLM will ensure that any new air quality modeling for this project includes best available control technology requirements and a sensitivity analysis to determine appropriate reductions in ozone precursor emissions.
X		Biological Opinion	The BLM is required to submit to the USFWS an annual report of water depletions associated with oil and gas development, due on October 31.
	X	Biological Opinion	Any annual monitoring reports for impacts on listed species associated with this decision must be submitted to the USFWS and the BLM by January 31 each year following monitoring.
	X	Biological Opinion	Upon locating dead, injured, or sick listed species, immediate notification must be made to the USFWS's Salt Lake City Field Office at (801) 975-3330 and the USFWS's Division of Law Enforcement, Ogden, Utah, at (801) 625-5570. Pertinent information including the date, time, location, and possible cause of injury or mortality of each species shall be recorded and provided to the USFWS. Instructions for proper care, handling, transport, and disposition of such specimens will be issued by the USFWS's Division of Law Enforcement.
X	X	PA	After the project's third adverse effect determination, [third] Discovery of a Historic Property, or combination of three such events, the mitigation will be a project-wide synthesis of the individual site specific cultural resource reports.
X	X	PA	The BLM, SHPO, and consulting parties will meet biennially to provide a project update, information regarding any adverse effect determinations and discoveries since the last meeting, and mitigation efforts.
	X	Water Monitor Plan	Water quality monitoring results will be entered into a database and summarized quarterly.
	X	Water Monitor Plan	An annual water quality monitoring report will be prepared by the third-party hydrologists responsible for monitoring activities.

**Table 2.1 Data Collection and Reporting Requirements of the Selected Alternative**

<b>BLM</b>	<b>Gasco</b>	<b>Source</b>	<b>Data Collection and Reporting Requirements</b>
X		Water Monitor Plan	The BLM will review the water quality monitoring plan every 2 years to determine 1) if the plan needs to be changed to adapt to data results, 2) the locations of active project construction, and 3) other project variables.
	X	Water Monitor Plan	Every 5 years a cumulative assessment of the previous 5 years of water quality monitoring results will be compiled.
	X	Water Monitor Plan	A final water quality monitoring report will also be completed at the conclusion of the project, which will summarize the entire monitoring program and include a final assessment of all sites monitored throughout the life of the project.

## CONDITIONS OF APPROVAL

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Gasco must comply with the COAs of the Selected Alternative, which are listed in Table 2.2. ***These COAs do not reiterate, or excuse implementation of, the primary components of the Selected Alternative as described in Section 3 of the Gasco ROD.*** The COAs were generated from the standard operating practices, applicant-committed environmental protection measures (ACEPMs), best management practices (BMPs), and mitigating measures from the FEIS, transportation plan, biological opinion, water monitoring plan, and PA. They do not reiterate many of the regulatory requirements, ACEPMs, and other usual practices listed in Table 2-1 of the FEIS, which are integral to the Selected Alternative.

The “Source” column identifies where the COA(s) originated. The “Resource” column identifies the resources for which the COAs were identified, including the following:

Air quality, cultural resources, land use and transportation, livestock management, paleontologic resources, recreation, soils and vegetation, special designations, special status species (e.g., bats, Colorado river fish, greater sage-grouse, migratory birds, mountain plover, plants, raptors, and white-tailed prairie dogs), visual resources, water resources, wilderness characteristics, and wildlife.

To facilitate implementation, the COAs below have been consolidated as much as possible, and potentially conflicting measures have been reconciled. Examples are as follows:

- **Consolidation:** Often one mitigation idea was identified for more than one resource; the wording may have varied but was complimentary. These measures were consolidated into a single COA containing all the complimentary ideas and applicable to all the identified resources. For example, proper facility design was identified as a mitigation measure for recreation, soils and vegetation, special designations, visual resources, and wilderness characteristics. The wording for each resource varied in the suggested ways a facility could be sited to minimize its impacts. These variations were combined into one COA for all the benefiting resources that contains all the suggested ways to ensure impact minimization.
- **Reconciliation:** In some instances, one mitigation measure was found to be in common with a measure for another resource, but the wording was mutually exclusive. In these instances, a COA was formed using the more restrictive version of that measure. For example, one measure identified the need to bury pipelines 3 feet below a drainage’s active channel to protect water quality, but a second measure, to protect fish habitat, identified a burial depth of a minimum of 5 feet or below the scour depth (whichever is deeper). The COA retained the more restrictive depth.

**Table 3.2. Conditions of Approval of the Selected Alternative**

Source	Resource	Conditions of Approval
FEIS Various	Various	All applicable fluid minerals BMPs from Appendix R of the 2008 <i>Vernal Field Office Record of Decision and Approved Resource Management Plan</i> (2008 Vernal RMP; BLM 2008) will be implemented as per the following FEIS sections: 4.3.2 Cultural Resources, 4.4.2 Geology and Minerals, 4.5.2.1 and 4.5.2.2 Land Use and Transportation, 4.6.2 Livestock Management, 4.10.2 Soils, 4.12.2.1 and 4.12.2.3 Special Status Species, 4.13.2 Vegetation, 4.15.2 Water Resources, and 4.16.2 Wildlife.
ACEPM FEIS Table 2-1	Air Quality	<p>Gasco will employ measures to mitigate any potential exceedance of the 1-hour NO<sub>2</sub> standard during drilling operations by employing effective public health buffer zones out to 200 meters (m) from the nearest emission source. Examples of an effective public health protection buffer zone include the demarcation of a public access exclusion zone by signage at intervals of every 250 feet that is visible from a distance of 125 feet during daylight hours, and a physical buffer such as active surveillance to ensure the property is not accessible by the public during drilling operations.</p> <p>The proponent may demonstrate compliance with the 1-hour NO<sub>2</sub> National Ambient Air Quality Standards (NAAQS) with appropriate and accepted near-field modeling. As part of this demonstration, the proponent may propose alternative mitigation that could include but is not limited to natural gas-fired drill rigs, installation of NO<sub>x</sub> controls, time/use restrictions, and/or drill rig spacing.</p>
ACEPM FEIS Table 2-1 and FEIS 4.5.2.2	Air Quality	<p>Gasco will comply with the air quality mitigation measure requirements of the 2008 Vernal RMP:</p> <ul style="list-style-type: none"> <li>♦ New and replacement internal combustion gas field engines less than or equal to 300 horsepower (hp) must not emit more than 2 grams of NO<sub>x</sub> per hp hour;</li> <li>♦ New and replacement internal combustion gas field engines greater than 300 design-rated hp must not emit more than 1.0 grams of NO<sub>x</sub> per hp hour.</li> </ul> <p>Gasco will voluntarily reduce emissions through the following:</p> <ul style="list-style-type: none"> <li>♦ Gasco will surface roads as directed by the Authorized Officer (AO) (surfacing involves the covering of soil piles where appropriate, the laying of gravel, or the application of water to roads, etc.) to reduce fugitive dust.</li> <li>♦ Gasco will use radio telemetry to monitor well site operations and production to minimize the amount of vehicle traffic required for operations and the resulting impacts.</li> <li>♦ Gasco will implement a wet gas central gathering system.</li> <li>♦ Gasco will centralize tank locations for water and condensate as feasible (the feasibility will be determined on a site-specific basis).</li> </ul> <p>Gasco will voluntarily reduce ozone precursor volatile organic compound (VOC) emissions through the following:</p> <ul style="list-style-type: none"> <li>♦ The installation of low-bleed pneumatic controllers on new separators.</li> <li>♦ The installation of low-bleed pneumatic controls, where technically feasible, on all new equipment.</li> <li>♦ The replacement or modification of existing high-bleed pneumatic controllers with low-bleed units, where technically feasible.</li> <li>♦ The installation of solar-powered chemical pumps (e.g., methanol pumps) in place of pneumatic pumps at new facilities.</li> </ul>

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		<ul style="list-style-type: none"> <li>♦ The installation of stock tank emission controls at new facilities with condensate throughput of 14 barrels per day or greater.</li> <li>♦ The construction of glycol dehydration equipment at central facilities only, where stock tank and dehydrator VOC emissions will be controlled by a minimum of 95% (glycol dehydrators will not be used at well sites).</li> <li>♦ The use of solar-powered chemical pumps (e.g., methanol pumps) in place of VOC-emitting pneumatic pumps at new facilities.</li> </ul> <p>Gasco will voluntarily reduce ozone precursor NO<sub>x</sub> emissions through the following:</p> <ul style="list-style-type: none"> <li>♦ The commitment to use only central compression facilities, thereby allowing compression performance and emission controls to be optimized (no well site compression facilities will be constructed).</li> <li>♦ Requiring drilling contractors to meet Tier II or better (low NO<sub>x</sub> emissions engines) drill rig engines (for all drilling years).</li> </ul>
<p style="text-align: center;">FEIS Table 2-1</p>	<p style="text-align: center;">Air Quality</p>	<p>The BLM, in coordination with the Utah Division of Air Quality and EPA as appropriate, will use their respective authorities to implement and enforce emission control strategies and/or limitations necessary to ensure compliance with applicable ambient air quality standards for ozone. Potential mitigation measures include but are not limited to the following:</p> <ul style="list-style-type: none"> <li>♦ Natural gas-fired drilling rig engines</li> <li>♦ Fuel additives</li> <li>♦ Gas turbines rather than internal combustion engines for compressors</li> <li>♦ Reduction in the number of storage tanks containing VOCs</li> <li>♦ Reduction in the number of drilling rigs</li> <li>♦ Selective catalytic reduction on drilling rig engines</li> <li>♦ Electric drilling rigs</li> <li>♦ Lean-burn natural gas-fired stationary compressor engines or equipment with equivalent emission rates</li> <li>♦ The installation of oxidation catalysts on lean-burn compressor engines to reduce VOC emissions</li> <li>♦ Electric compression if and where feasible</li> <li>♦ Centralization of gathering facilities to reduce truck traffic, including the liquids gathering system</li> <li>♦ Dry seals on new centrifugal compressors</li> <li>♦ Treatment of produced water to meet permitting regulations</li> <li>♦ Cleaner technologies on completion activities, and other ancillary sources</li> <li>♦ Green completions for all well completion activities where technically feasible</li> <li>♦ Advancements in drilling technology</li> <li>♦ Reduction in the pace of development</li> <li>♦ A possible annual inspection and maintenance program to reduce VOC emissions, to include                         <ul style="list-style-type: none"> <li>♦ performing inspections of thief hatch seals and Enardo pressure relief valves to ensure proper operations, and</li> <li>♦ reviewing gathering system pressures to evaluate any areas where gathering pressure may be reduced, resulting in lower flash losses from the condensate storage tanks.</li> </ul> </li> </ul>

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Source	Resource	Conditions of Approval
		<ul style="list-style-type: none"> <li>♦ Surfacing (covering of piles where appropriate, graveling, applying water or surfactants) of roads, well-pad construction, and other development-related disturbances in areas with soils susceptible to wind erosion, as directed by the AO to reduce fugitive dust generated by traffic and related activities. Such treatments will also be applied as directed by the AO on local and resource roads that represent a dust problem.</li> </ul>
<p>FEIS 4.18.3.1.7.3</p>	<p>Air Quality</p>	<p>The applicant commits to developing a project-specific adaptive management strategy, including implementation of enhanced ozone mitigation measures, to be informed by periodic emission inventory updates if the following takes place: 1) the EPA designates the area nonattainment for ozone; 2) there is a monitored ozone standard exceedance; 3) the ARMS modeling shows that additional mitigation is needed to prevent future ozone exceedances; or 4) the ARMS group establishes industry-wide mitigation requirements through ongoing modeling. If implementation of this project-specific adaptive management strategy is triggered, the applicant commits to working with the BLM to analyze enhanced mitigation measures and employ them within 1 year. The measures to be considered could include, but will not be limited to, the following:</p> <ul style="list-style-type: none"> <li>♦ Reducing the total number of drill rigs</li> <li>♦ Installing Tier IV or better drill rig engines</li> <li>♦ Seasonally reducing or ceasing drilling during specified periods</li> <li>♦ Using only lower-emitting drill and completion rig engines during specified time periods</li> <li>♦ Using natural gas-fired drill and completion rig engines</li> <li>♦ Replacing internal combustion engines with gas turbines for natural gas compression</li> <li>♦ Using electric drill rig or compression engines</li> <li>♦ Centralizing gathering facilities</li> <li>♦ Limiting blowdowns or restricting them during specified periods</li> <li>♦ Installing plunger lift systems with smart automation</li> <li>♦ Employing a monthly Forward Looking Infrared (FLIR) program to reduce VOCs</li> <li>♦ Enhancing a direct inspection and maintenance program</li> <li>♦ Employing tank load out vapor recovery</li> <li>♦ Employing enhanced VOC emission controls with 95% control efficiency on additional production equipment having a potential to emit greater than 5 tpy.</li> </ul>
<p>ACEPM FEIS 2.1.1; Table 2-1; and FEIS 4.3.2</p>	<p>Cultural Resources</p>	<p>Per the PA executed for the FEIS, all necessary efforts to avoid effects to eligible cultural resources will be made during the planning phases of a particular (facility specific) undertaking. These efforts include, but are not limited to the following:</p> <ul style="list-style-type: none"> <li>♦ A qualified archaeologist will conduct a Class III cultural resource survey over all areas proposed for surface disturbance that have not been previously surveyed in accordance with the PA Stipulations 1, 3, 4, 5, 6, and 10.</li> <li>♦ All necessary efforts to avoid effects to eligible cultural resources will be made during the planning phases of a particular undertaking including, but not limited to, rerouting pipelines or road corridors and moving well locations or other facilities to avoid direct effects to important resources during the design phase in accordance with the PA Stipulations 4G and 9.</li> <li>♦ Indirect effects to historic properties, where setting is an important aspect of site eligibility, will be</li> </ul>

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		<p>minimized or avoided by implementing measures such as low profile well facilities, screening and facility color selection, mufflers or other noise reducing technologies or adaptations to limit noise in accordance with the PA Stipulations 4G and 9.</p> <ul style="list-style-type: none"> <li>♦ Monitoring will occur in areas with high cultural resource densities, areas with high geomorphological potential for containing cultural resources, or as recommended in the approved APD in accordance with PA Stipulation 7.</li> <li>♦ In the case that an unanticipated cultural resource (discovery) is identified during surface-disturbing or other project activities, the discovery plan outlined in PA Stipulation 8 and collections guidance outlined in PA Stipulation 11 will be implemented.</li> <li>♦ All personnel shall be instructed by Gasco with BLM oversight on cultural resource site avoidance and protection measures in accordance with PA Stipulation 12.</li> <li>♦ Protective fencing will be installed around the boundaries of historic properties that occur within 150 feet of the surface-disturbing activities.</li> <li>♦ Dust on roads, during well-pad construction, and other surface disturbances where necessary, such as in areas with soils susceptible to wind erosion, will be controlled by surfacing as directed by the AO (surfacing involves the covering of soil piles where appropriate, the laying of gravel, or the application of water to roads, etc.).</li> </ul>
ACEPM FEIS Table 2-1	Land Use and Transportation	Gasco will restrict off-highway vehicle (OHV) activity by personnel and contract workers to the immediate area of authorized activity or existing roads and trails.
ACEPM FEIS Table 2-1 and FEIS 4.5.2.2	Land Use and Transportation	<ul style="list-style-type: none"> <li>♦ Gasco will implement speed limits for their employees and contractors while driving roads in the project area, as well as require adherence to speed limits beyond the project area.</li> <li>♦ Permanent and temporary signs will be placed in areas of heavy equipment and truck traffic to alert motorists to upcoming construction vehicles in order to lower the probability of accidents.</li> <li>♦ Gasco will coordinate with the appropriate AO when constructing, maintaining, or reclaiming roads. Cooperative road management and maintenance or improvement plans will be developed between Gasco, Duchesne County, Uintah County, the State of Utah, and private landowners as appropriate to address maintenance requirements and responsibilities, and to ensure that roads used by project vehicles are not degraded and in order to enhance their functional use and safety. Maintenance responsibilities may include, but are not limited to, blading, gravel surfacing, cleaning ditches and drainage facilities, dust abatement, noxious weed control, or other measures as deemed appropriate. When snow is removed from the road during the winter months, the snow will be pushed outside the borrow ditches, and the cutouts kept clear so that snowmelt will be channeled away from the road.</li> <li>♦ Whenever practicable, heavy and/or slow-moving equipment will be moved at night or during non-peak driving times to minimize delays to other users. Flaggers and/or flag cars will be used to alert non-project traffic to upcoming project equipment.</li> <li>♦ Gas and water pipelines will be buried at road crossings. All pipelines crossing county roads will be buried to a minimum depth of 5 feet.</li> <li>♦ Passing areas will be constructed, as directed by the AO, so other users can safely pass project-related vehicles.</li> </ul>

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Source	Resource	Conditions of Approval
ACEPM FEIS 2.1.11	Livestock Management	Gasco will adjust final placement of well locations to avoid stock ponds, guzzlers, or wells currently established for watering livestock. Existing range study plots, corrals, and rain gages will also be avoided.
ACEPM FEIS Table 2-1 and FEIS 2.1.2	Paleontologic Resources	<ul style="list-style-type: none"> <li>♦ Surveys for paleontological resources will be conducted on those areas where bedrock excavation into sensitive (Class IV and V) formations occurs. A qualified paleontologist will survey areas with sandstone outcrops for paleontological resources. The survey will determine fossil localities and the sensitivity of the area for fossil resources. These actions will determine the necessity of having a qualified paleontologist on-site during construction.</li> <li>♦ If paleontological resources are uncovered during surface-disturbing activities, Gasco will suspend operations at the site that will further disturb such resources, and immediately contact the AO, who will arrange for a determination of scientific importance and, if necessary, recommend a recovery or avoidance plan.</li> </ul>
FEIS 4.8.2	Recreation	Drivers will be instructed not to pick up hitchhikers or leave keys in vehicles.
ACEPM FEIS Table 2-1, FEIS 4.8.2, FEIS 4.11.2, FEIS 4.13.2, FEIS 4.14.3, and FEIS 4.17.2	Recreation, Soils and Vegetation, Special Designations, Visual Resources, Wilderness Characteristics	<ul style="list-style-type: none"> <li>♦ To reduce or eliminate the observable effects of gas well pads, roads, and infrastructure (including but not limited to impacts to the wild and scenic quality of the Lower Green River ACEC and suitable wild and scenic rivers and the scenic quality of other ACECs), proper facility design will be considered, including but not limited to 1) conducting construction to enhance reclamation and revegetation opportunities; 2) minimizing removal and disturbance of vegetation, avoiding excessive side-casting of earth materials from ridgelines and steep slopes; 3) properly placing tanks and pads; 4) using camouflage paint; 5) minimizing well pads; 6) using off-site tanks or centralized batteries; 7) constructing roads that follow natural contours; 8) installing low-profile structures such as tanks; 9) edge feathering along access roads and vegetation/road boundaries; 10) implementing interim reclamation; and/or 11) using topographic screening. Topographic screening and proper placement could include hiding the facilities behind or moving away from highly visible points such as ridgelines, or placing facilities in natural depressions, behind vegetation, or behind rock outcrops.</li> <li>♦ As directed by the AO, mats will be used during drilling and other development to protect and preserve underlying vegetation.</li> <li>♦ Noise-reducing technology will be used to reduce noise levels experienced by river recreationists to “quiet” levels.</li> <li>♦ Surface disturbances will be minimized by sharing rights-of-way (ROWs), for example:                             <ul style="list-style-type: none"> <li>♦ Existing crowned and ditched roads will be used when the alignment is acceptable for the proposed use.</li> <li>♦ Pipelines will be buried in the road when feasible.</li> <li>♦ Pipelines will be located adjacent to access roads or other existing linear facilities wherever practical.</li> <li>♦ Pipelines will be routed directly to minimize disturbance lengths when necessary.</li> <li>♦ Directional drilling will be used to reduce or avoid impacts to the ACEC relevant values.</li> </ul> </li> <li>♦ Night-lighting and light pollution skyglow impacts will be reduced as feasible by using only the minimal lighting required for safety and security, installing lights at the minimal heights required, and installing hoods on lights to reduce light diffusion.</li> </ul>
FEIS 4.10.2	Soils and Vegetation	The presence of biological soil crusts will be assessed on a site-specific basis during well-pad and road development and siting. Areas with crusts will be avoided as feasible, and any unavoidable disturbance will be mitigated as necessary.

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Source	Resource	Conditions of Approval
ACEPM FEIS Table 2-1 and FEIS 2.1.3, 4.13.2, and 4.12.2.1	Soils and Vegetation and Special Status Species: Plants	<ul style="list-style-type: none"> <li>♦ All state- and county-listed noxious weeds (and those identified by the AO) will be controlled if introduced by project-related activity.</li> <li>♦ A pre-project inventory for noxious and listed weeds will be conducted in all areas subject to surface disturbance to identify treatment needs and to aid in the development of an AO-approved weed treatment plan.</li> <li>♦ Gasco will develop and implement an AO-approved noxious weed inventory, monitoring, and control program for the project disturbance areas.</li> <li>♦ The operator will control all noxious/invasive weeds along ROWs for roads, pipelines, well sites, or other applicable facilities by the application of herbicides or by mechanical removal. A list of noxious weeds will be obtained from the BLM or appropriate county extension office. Invasive plant control measures (mechanical, cultural, chemical) will be conducted before seed set each year. Some populations may require more than one treatment per year. Manual pulling around threatened and endangered species will be done as necessary and as directed by the AO.</li> <li>♦ Noxious weed infestations associated with well sites, well facilities, roads, ROWs, or any other area or facility constructed or improved for this project will be treated and controlled by a licensed pesticide applicator, with weed treatment protocols being specified through the AO. An approved pesticide use and weed control plan will be implemented.</li> <li>♦ Herbicides will not be applied in a manner that could lead to inadvertent adverse impacts to special status plants. All herbicide application will be coordinated with the AO (and USFWS when threatened and endangered plants are involved) to ensure that special status plants are not impacted. These measures will be determined on a site-specific basis, but will include 1) applying herbicides only when wind speed is below 7 mph to avoid drift; 2) following buffer distances for each specific herbicide as listed in the <i>Vegetation Treatments Using Herbicides on Bureau of Land Management Lands in 17 Western States Programmatic EIS</i> (BLM 2005), Volume I, pages 4-54 and 61, and specifying application methods.</li> <li>♦ Invasive plant weed inventories will be conducted annually in all disturbed areas. Weed monitoring and reclamation measures will be continued on an annual basis (or as frequently as the AO determines) throughout the 30-year life of the project.</li> <li>♦ Any mulch used by Gasco will be weed-free and free from mold, fungi, or noxious weed seeds. Mulch may include weed-free hay, small grain straw, wood fiber, live mulch, cotton, jute, synthetic netting, and rock.</li> <li>♦ All seed, hay, and matting used for restoration will be certified weed-free.</li> <li>♦ Construction equipment and vehicles coming from outside of the Uinta Basin will be power-washed prior to entering the project area to remove seed and plant materials. Any construction or operational vehicles traveling between the project area and areas outside of the Uinta Basin will be power-washed prior to reentrance. An environmental inspector will inspect each vehicle and place a sticker on them to verify they came in clean.</li> </ul>
ACEPM FEIS Table 2-1, FEIS 4.10.2, FEIS 4.11.2,	Soils and Vegetation and Water Resources	<ul style="list-style-type: none"> <li>♦ Steep slopes and rugged topography will be avoided where possible; otherwise the disturbance will be minimized.</li> <li>♦ If surface-disturbing activities cannot be avoided on slopes from 21% to 40%, a plan including the following will be required: 1) an erosion control strategy, 2) GIS modeling, and 3) proper survey and design by a certified engineer. The plan will be approved by BLM prior to construction and maintenance</li> <li>♦ Surface disturbance on slopes between 40% and 60% will be avoided. If it is not feasible to avoid these slopes,</li> </ul>

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FEIS 4.13.2, and FEIS 4.15.2		<p>then the applicant will provide the AO with an erosion control plan, a maintenance plan, GIS modeling, and an engineered drawing of the proposed disturbance.</p> <ul style="list-style-type: none"> <li>♦ Cut side slopes will be immediately stabilized.</li> <li>♦ Perennial and ephemeral/intermittent drainages will be avoided where possible; otherwise the disturbance will be minimized.</li> <li>♦ Siting well pads within active drainages will be avoided. Well pads sited adjacent to drainages will be bermed to prevent runoff from entering the drainage.</li> <li>♦ To the fullest extent possible, access roads proposed in valley/drainage bottoms will be sited on the toe of the adjacent slope to the valley bottom.</li> <li>♦ Roads will be designed and constructed to divert stormwater runoff around the pad and reduce erosion by proper design and installation of erosion control structures, such as water bars, diversion channels, and silt fences.</li> <li>♦ Roads will have appropriate energy dissipaters (e.g., water bars and silt fences) where water leaves the road and is routed toward an adjacent drainage.</li> <li>♦ As conditions dictate, and as determined by the AO, diversion ditches will be constructed around the pad. Where diversion ditches are constructed to reroute drainages around well pads, ditches will be designed to return the diverted water back to the original channel. If it is not feasible to return diverted water back to its original channel, the water will be diverted to the nearest channel, with energy-dissipating devices installed to prevent channel degradation.</li> <li>♦ New surface-disturbing activities within public water reserves, or within 330 feet of riparian areas, will be avoided unless 1) there are no practical alternatives; 2) impacts could be fully mitigated; or 3) the action is designed to enhance the riparian resources.</li> <li>♦ A buffer strip of vegetation will be maintained between areas of surface disturbance and riparian vegetation. Silt fencing or other erosion control measures will be installed and maintained between areas of surface disturbance and riparian vegetation to protect against erosion or contamination.</li> <li>♦ A closed loop system will be required for all well pads placed on terraces adjacent to the active drainage of a designated floodplain, and for all well pads placed adjacent to wetlands and riparian areas.</li> <li>♦ As determined necessary upon site-specific review, wells will not be developed on saline facies, formerly irrigated lands, or highly erodible soils (k factor greater than 0.37).</li> <li>♦ Areas disturbed by project-related activities (including roads, well pads, etc.) with soils susceptible to wind erosion will be surfaced (covering of piles where appropriate, graveling or surfactants applied to roads, etc.) on a site-specific basis, as directed by the AO. Such treatments will also be applied as directed by the AO on local and resource roads that represent a dust problem.</li> <li>♦ Vegetation and/or structural measures to control erosion will be implemented as soon as possible after initial soil disturbance to prevent erosion of disturbed soils. BMPs include but are not limited to berms, sediment control structures, grading, mulching, revegetation, and interim reclamation.</li> </ul>
ACEPM FEIS Table 2-1	Soils and Vegetation and Water Resources	<ul style="list-style-type: none"> <li>♦ In coordination with the AO, Gasco will implement its <i>Plan for Surface Reclamation and Monitoring</i> (Appendix G of the FEIS) to maximize the success of the reclamation program.</li> <li>♦ Gasco will implement an intensive reclamation program beginning the first growing season after each segment</li> </ul>

**Table 3.2. Conditions of Approval of the Selected Alternative**

Source	Resource	Conditions of Approval
and FEIS 2.1.3, 4.10.2, 4.13.2, 4.12.2.1, 4.15.2, and 4.16.2	and Wildlife	<p>of project completion. Gasco will reseed all portions of well pads and ROWs not used for the operational phase of the project, as well as any sites in the project area determined necessary by the appropriate AO.</p> <ul style="list-style-type: none"> <li>♦ All reclamation will be accomplished as soon as practical after the disturbance occurs, with efforts continuing until a satisfactory revegetation cover is established.</li> <li>♦ As directed by the AO, roads, trails, ROWs, well sites, etc., will be decommissioned and reclaimed.</li> <li>♦ During rehabilitation of areas in important wildlife habitat, provisions will be made for the establishment of native browse and forb species.</li> <li>♦ Follow-up seeding or corrective erosion control measures (such as mulching, use of fiber mats, cross-slope trenching, contour furrows, rock dams, terracing, or other erosion control practices) will occur on areas where initial reclamation efforts were unsuccessful, as determined by the appropriate surface management agency.</li> <li>♦ Biologically active top-soil will be used in reclamation where possible.</li> <li>♦ Available topsoil will be stripped from all road corridors prior to commencement of construction and will be redistributed and reseeded on backslope areas of the borrow ditch after completion of road construction.</li> <li>♦ Except in native badland soils that are unvegetated, all disturbed areas of access roads, other than the driving surface, will be revegetated in the first appropriate season after initial disturbance as directed by the AO when the associated well is put into production. This includes but is not limited to the shoulders, drainage ditches, and cut-and-fill slopes.</li> <li>♦ Where topsoil removal is necessary for pipelines or other linear ROWs, it will be windrowed (i.e., stockpiled/accumulated along the edge of the ROW and in a low row/pile parallel with the ROW) and respread over the disturbed area after construction and backfilling are complete. Vegetation removed from the ROW will also be respread to provide protection, nutrient recycling, and a seed source.</li> <li>♦ To promote soil stability, backfill over the trench will be compacted so as not to extend above the original ground level after the fill has settled. Compacting the backfill will reduce trench settling and water channeling.</li> <li>♦ Gasco will reshape disturbed channel beds to their approximate original configuration.</li> <li>♦ Reclamation of roads will include reshaping, recontouring, resurfacing with topsoil, installation of water bars, and seeding on the contours. Road beds, well pads, and other compacted areas will be ripped to a depth of approximately 1.0 foot on 1.5-foot centers to reduce compaction prior to spreading the topsoil across the disturbed area. Stripped vegetation will be spread over the disturbance area for nutrient recycling, where practical. Additional erosion control measures (e.g., mulching, use of fiber mats, cross-slope trenching, contour furrows, rock dams, terracing, or other erosion control practices) and road barriers to discourage travel may be constructed if appropriate. Graveled roads, well pads, and other sites will be stripped of usable gravel prior to ripping as deemed necessary. Culverts, cattle guards, and signs will be removed as roads are abandoned.</li> <li>♦ Reseeding will be accomplished by planting native species as much as practical; however, non-native species may also be used where site-specific conditions require them, or native species indigenous to the site are not commercially available, or as directed by the AO. Post-construction seeding applications will continue until determined successful by the AO.</li> <li>♦ Interseeding, secondary seeding, or staggered seeding may be used to accomplish revegetation objectives.</li> <li>♦ Mulching, hydro mulching, soil amendments, supplemental mycorrhizal applications, erosion fencing, use of erosion fabric, spray-on fiber matrices, tackifiers, and other state-of-the-art techniques will be used as</li> </ul>

**Table 3.2. Conditions of Approval of the Selected Alternative**

Source	Resource	Conditions of Approval
		<p>determined necessary or as directed by the AO on a site-specific basis to assure the highest possible revegetation success, to stabilize any disturbed areas, and ensure the long-term re-establishment of long-term perennial vegetation.</p> <ul style="list-style-type: none"> <li>♦ Except in native badland soils that are unvegetated, all disturbed areas of access roads, other than the driving surface, will be revegetated as directed by the AO when the associated well is put into production. This includes, but is not limited to, the shoulders, drainage ditches, and cut and fill slopes of the access road. If reclamation is not successful for both herbaceous and woody species, Gasco will coordinate with the AO on appropriate remedial measures.</li> <li>♦ Vegetation removed from a site will be used in interim or final reclamation as appropriate.</li> </ul>
FEIS 4.11.2	Special Designations	<p>Drilling will be limited seasonally, as necessary based on site-specific review, to minimize disturbance of wildlife, waterfowl, and special status species of particular value within each ACEC.</p>
Biological Opinion FEIS 4.12.2.6	Special Status Species: Colorado River Fish	<ul style="list-style-type: none"> <li>♦ Water depletion impacts can be offset by the Project proponent's one-time contribution to the Recovery Program. Gasco will make a one-time payment, which has been calculated by multiplying the project's peak annual depletion (258 acre-feet) by the depletion charge in effect at the time the payment is made. For fiscal year 2012 (October 1, 2011 to September 30, 2012), the depletion charge is \$19.21 per acre-foot for the average annual depletion, which equals a total payment of \$4,950 for this project. A minimum of 10% of the total payment will be provided to the USFWS's designated agent, the Nation Fish and Wildlife Foundation, at the time of issuance of the federal approvals from the BLM, with the rest to be paid when construction commences. For further payment instructions, refer to the Biological Opinion, page 11.</li> <li>♦ All applicable BLM-committed Conservation Measures for Colorado River fishes, as described in Appendix L of the 2008 Vernal RMP, will be used as needed to mitigate potential impacts to endangered and sensitive fishes and their habitat.</li> <li>♦ All actions under the Selected Alternative will take place in a manner that will minimize all impacts to listed endangered fish species and their designated critical habitat. BLM must comply with the following terms and conditions, which implement this reasonable and prudent measure:                         <ul style="list-style-type: none"> <li>♦ To ensure proper tracking of water depletions from the Upper Colorado River System, Gasco will notify the BLM and USFWS as to what water resources will be used for the project as they are designated, and the amounts that will be withdrawn from each one.</li> <li>♦ Coordinate with USFWS regarding design and placement of any structures that may need to be placed in washes or 100-year floodplains of tributaries to the Green River.</li> <li>♦ Appropriate erosion control and revegetation measures will be employed. In areas with unstable soils where seeding alone may not adequately control erosion, grading will be used to minimize slopes, and water bars will be installed on disturbed slopes. Erosion control efforts will be monitored by the operator, and necessary modifications will be made to control erosion.</li> </ul> </li> <li>♦ As determined necessary on a site-specific basis (based on proximity to a 100-year floodplain), wells with the potential to contaminate surface waters will have automatic shutoff valves.</li> <li>♦ Wells proposed in all 100-year floodplains within 5 miles of the Green River will use measures including the use of closed-loop drilling methods, berming and secondary containment of all tanks and pits, and drilling during non-flood prone seasons.</li> </ul>

**Table 3.2. Conditions of Approval of the Selected Alternative**

Source	Resource	Conditions of Approval
		<ul style="list-style-type: none"> <li>♦ Machinery should be fueled outside of all stream channels to prevent spillage into waterway.</li> <li>♦ Gasco and its contractors will locate, handle, and store hazardous substances in locations that will prevent accidental spill or delivery to the Green River or its tributaries.</li> <li>♦ Pipelines containing natural-gas condensate will not cross Nine Mile Creek at any point.</li> <li>♦ Natural gas-condensate pipelines that cross perennial, intermittent, and ephemeral stream channels or Federal Emergency Management Agency (FEMA)-mapped 100-year floodplain, mapped riparian or wetland areas, or perennial, intermittent, or ephemeral stream channels will be routinely pigged and will have emergency/automatic shutoff valves located directly beyond the area at risk of flooding to reduce the magnitude of contamination in the event of an accidental pipeline break.</li> <li>♦ Natural gas pipelines that cross perennial, intermittent, and ephemeral stream channels will either be elevated above the predicted 100-year flood event on a pipe bridge, or buried at least 5 feet below the channel bottom or below the predicted scour depth for an equivalent flood event (whichever is deeper). The construction requirements for each type of crossing will be determined on a site-specific basis, and will consider the technical guidance of the document entitled, <i>Hydraulic Considerations for Pipeline Crossings of Stream Crossings</i>, contained as Appendix B of the 2008 Vernal RMP.</li> <li>♦ To avoid entrainment, water will be pumped from an off-channel location—one that does not connect to the river during high spring flows. An infiltration gallery constructed in a location approved by USFWS will be best.</li> <li>♦ If the pump head is located in the river channel, the following three stipulations will apply:                         <ul style="list-style-type: none"> <li>♦ The pump will not be situated in a low-flow or no-flow area because these habitats tend to concentrate larval fishes.</li> <li>♦ The amount of pumping will be limited, to the greatest extent possible, during that period of the year when larval fish may be present (April 1 to as late as August 31— earlier in dry years, later in wet years).</li> <li>♦ The amount of pumping will be limited, to the greatest extent possible, during the midnight hours (10 p.m. to 2 a.m.), as larval drift studies indicate that this is a period of greatest daily activity. Dusk is the preferred pumping time, as larval drift abundance is lowest during this time.</li> </ul> </li> <li>♦ All pump intakes will be screened with 3/32-inch mesh material.</li> <li>♦ Approach velocities for intake structures will follow the National Marine Fisheries Service's document <i>Fish Screening Criteria for Anadromous Salmonids</i>. For projects with an in-stream intake that operate in stream reaches where larval fish may be present, the approach velocity will not exceed 0.33 feet per second (ft/s).</li> <li>♦ Any fish impinged on the intake screen or entrained into irrigation canals will be reported to the USFWS (801.975.3330) or the Utah Division of Wildlife Resources Northeastern Region, located at 152 East 100 North, Vernal, Utah 84078 (435.781.9453).</li> </ul>
<p>ACEPM                      FEIS 2.1.7                      and FEIS                      4.12.2.5</p>	<p>Special Status                      Species: Greater                      Sage Grouse</p>	<ul style="list-style-type: none"> <li>♦ No permanent facilities will be constructed within 2 miles of active strutting grounds, when possible.</li> <li>♦ On BLM land, new construction and surface-disturbing activities will be avoided year-round within 0.25 mile of active or historic greater sage-grouse strutting grounds (leks).</li> <li>♦ Within 0.5 mile of known active leks, the best available technology will be used to reduce noise, e.g., installation of multi-cylinder pumps, hospital sound-reducing mufflers, and placement of exhaust systems.</li> <li>♦ No new construction or surface-disturbing activities will be conducted between March 1 and June 30 each year within greater sage-grouse nesting areas (a 2-mile radius of strutting grounds in areas of sagebrush vegetation)</li> </ul>

**Table 3.2. Conditions of Approval of the Selected Alternative**

Source	Resource	Conditions of Approval
		<p>until an activity survey was completed. The survey will be conducted by a qualified biologist to determine the presence or absence of nesting greater sage-grouse. The activity survey will be conducted each year between April 1 and April 15, or as determined in coordination with the AO to account for annual climate fluctuations, and the results will be reported to the AO. If active nesting areas are documented during the annual survey, no new construction and surface-disturbing activities will take place within 0.5 mile of those nesting areas during the nesting period identified by the AO.</p> <ul style="list-style-type: none"> <li>♦ The use of low-profile tanks will be used within 2 miles of active leks, as appropriate, given the topography and as directed by the AO.</li> <li>♦ Workover visits will be limited to the hours between 9:00 a.m. and 5:00 p.m. during breeding season (March 1–June 30) within 2 miles of active leks.</li> </ul>
<p>FEIS 4.12.2.4</p>	<p>Special Status Species: Migratory Birds</p>	<ul style="list-style-type: none"> <li>♦ Surface pipelines (4 inches or greater in diameter) will be elevated on level or gently sloping ground (5% slope or less) to a minimum of 6 inches above the ground to allow passage beneath the pipe. This ground clearance will be achieved by placing the pipeline on blocks at intervals of 150–200 feet.</li> <li>♦ Noise-reduction devices (e.g., mufflers) will be installed on all pump jacks to reduce intermittent noise to 45 dBA at 660 feet (200 m) from the source.</li> </ul>
<p>ACEPM FEIS 2.1.9</p>	<p>Special Status Species: Mountain Plover</p>	<p>The BLM has identified mountain plover breeding habitat in the project area. On BLM land in areas containing suitable mountain plover breeding habitat (as identified by the AO during the on-site inspection), presence/absence surveys will be conducted according to the USFWS plover survey protocol prior to beginning new construction or surface-disturbing activities. No new construction or surface-disturbing activities will be conducted during the mountain plover breeding and fledging season (March 15–June 15) in areas known to contain mountain plover or active mountain plover nest sites. Motorized travel in plover breeding habitat areas will take place only on designated routes with no cross-country travel permitted, and speed limits will be posted as no more than 35 mph in identified plover habitat. As possible, vehicle trips within habitat areas will be limited to daylight hours. Road maintenance will be avoided between May 1 and June 15 to avoid hazards to chicks. Reclamation mixes in mountain plover habitat will be designed to include low-growing native grasses and forbs such as galleta grass and globe mallow to promote better nesting habitat.</p>
<p>ACEPM FEIS 2.1.4 and FEIS 4.12.2.1</p>	<p>Special Status Species: Plants</p>	<ul style="list-style-type: none"> <li>♦ The avoidance and minimization measures for Uinta Basin hookless cactus, Pariette hookless cactus, Ute ladies'-tresses, clay reed-mustard, shrubby reed-mustard, and Graham's penstemon included in Appendix B of the FEIS will be employed.</li> <li>♦ Surveys and monitoring will be conducted in compliance with the BLM Manual 6840 for Untermann daisy (<i>Erigeron untermanni</i>).</li> <li>♦ The conservation measures described in FEIS's Appendix B for federally listed plants will also be applied to sensitive plant species, except that there will be a 150-foot buffer for survey and avoidance areas.</li> <li>♦ Dust palliatives (other than gravel and water) will be used at the direction of the AO.</li> </ul>
<p>FEIS 4.12.2.1</p>	<p>Special Status Species: Plants: <i>Schoenocrambe suffrutescens</i></p>	<p>Suitable habitat for the shrubby reed-mustard that falls within 500 feet of any area to be disturbed will be inventoried for weeds. A treatment plan will be developed and initiated at the discretion of the AO. The weed treatment will be designed to treat existing weed infestations and avoid their further spread. See also</p>

**Table 3.2. Conditions of Approval of the Selected Alternative**

Source	Resource	Conditions of Approval			
		ACEPM FEIS Table 2-1 and FEIS 2.1.3, 4.13.2, and 4.12.2.1 Soils and Vegetation and Special Status Species: Plants.			
ACEPM FEIS 2.1.5 and FEIS 4.12.2.3	Special Status Species: Raptors	<ul style="list-style-type: none"> <li>Project-related development in areas directly associated with raptor nests area will be guided by the use of <i>Best Management Practices for Raptors and Their Associated Habitats in Utah</i> (Appendix A of the 2008 Vernal RMP), using seasonal and spatial buffers (reproduced below), as well as mitigation, to maintain and enhance raptor nesting and foraging habitat, while allowing other resource uses.</li> <li>Well pads, roads, and other facilities will be located in a manner to conceal them from raptor nests (active or inactive) by using topographic and vegetative screening features.</li> <li>No new construction or surface-disturbing activities will be conducted within a specified buffer of known active raptor nests from courtship through fledging. Activity surveys of known nest locations will be conducted each year, with the surveys' timing determined in coordination with the AO to account for annual climate fluctuations. These surveys will be conducted by the AO, the Utah Division of Wildlife Resources, or a qualified biologist approved by the AO, and the survey results will be reported to the AO. Active nests are defined as currently occupied nests or those that have been occupied for nesting activities within the previous two nesting seasons; inactive nests are those that have not been occupied for nesting activities within the previous two nesting seasons. If active nests were documented during the activity survey, new construction or surface-disturbing activities within the specified buffer of those nests will be avoided during the nesting period identified by the AO.</li> </ul>			
		Common Name	Latin Name	Distance from Active Nest	Timing Constraints
		American Kestrel	<i>Falco sparverius</i>	—*	Apr 1–Aug 15
		Burrowing Owl	<i>Athene cunicularia</i>	0.25 mile	Mar 1–Aug 31
		Cooper's Hawk	<i>Accipiter cooperii</i>	0.50 mile	Mar 15–Aug 31
		Great Horned Owl	<i>Bubo virginianus</i>	0.25 mile	Feb 1–Sep 30
		Long-eared Owl	<i>Asio otus</i>	0.25 mile	Feb 1–Aug 15
		Merlin	<i>Falco columbarius</i>	0.50 mile	Apr 1–Aug 31
		Mexican Spotted Owl	<i>Strix occidentalis lucida</i>	0.50 mile	Mar 1–Aug 31
		Northern Goshawk	<i>Accipiter gentilis</i>	0.50 mile	Apr 1 –Aug 15
		Northern Harrier	<i>Circus cyaneus</i>	0.50 mile	Apr 1–Aug 15
		Osprey	<i>Pandion haliaetus</i>	0.50 mile	Apr 1–Aug 31
		Peregrine Falcon	<i>Falco peregrinus</i>	1.0 mile	Feb 1 – Aug 31
Prairie Falcon	<i>Falco mexicanus</i>	0.25 mile	Apr 1–Aug 31		
Red-tailed Hawk	<i>Buteo jamaicensis</i>	0.50 mile	Mar 15–Aug 15		

**Table 3.2. Conditions of Approval of the Selected Alternative**

Source	Resource	Conditions of Approval			
		Sharp-shinned Hawk	<i>Accipiter striatus</i>	0.50 mile	Mar 15–Aug 31
		Short-eared Owl	<i>Asio flammeus</i>	0.25 mile	Mar 1–Aug 1
		Swainson's Hawk	<i>Buteo swainsoni</i>	0.50 mile	Mar 1–Aug 31
		Turkey Vulture	<i>Cathartes aura</i>	0.50 mile	May 1–Aug 15
<p>* Due to apparent high population densities and ability to adapt to human activity, a spatial buffer is not currently considered necessary for maintenance of American kestrel populations. Actions resulting in direct mortality of individual birds or take of known nest sites are unlawful.</p>					
<p>FEIS                      4.12.2.3,                      4.12.2.4,                      4.12.2.7 and                      4.16.2</p>	<p>Special Status                      Species:                      Raptors,                      Migratory Birds,                      Bats and Wildlife</p>	<p>The proper installation of netting or other deterrents as directed by AO will be required to exclude wildlife (including raptors, birds, and bats) from evaporative basins (or reserve pits as needed).</p>			
<p>ACEPM                      FEIS 2.1.8                      and FEIS                      4.12.2.3.2</p>	<p>Special Status                      Species:                      Raptors: Bald                      Eagle</p>	<ul style="list-style-type: none"> <li>♦ No construction or surface-disturbing activity will occur within 0.5 mile of a roost site from November 1 through March 31. Temporary actions may occur within this 0.5-mile buffer outside of this seasonal restriction. If temporary actions must occur within the seasonal restrictions, then they will occur between 9 a.m. (typically after a bald eagle leaves a roost for the day) and 5 p.m. (typically before a bald eagle returns to the roost site for the day).</li> <li>♦ Construction or surface-disturbing activities will be avoided within 0.5 mile of known bald eagle winter concentration areas and winter night roost sites from November 1 through March 31. Daily activities that must occur within the recommended spatial buffers at winter night roosts sites will be scheduled between 9:00 a.m. and 1 hour prior to the official sunset. These measures will be implemented on a site-by-site basis in coordination with the BLM.</li> </ul>			
<p>ACEPM                      FEIS 2.1.5,                      FEIS 2.1.6,                      and FEIS                      4.12.2.3.1</p>	<p>Special Status                      Species:                      Raptors:                      Ferruginous                      Hawk and                      Golden Eagle</p>	<ul style="list-style-type: none"> <li>♦ For each existing artificial ferruginous hawk nest site (active or inactive) that is located within 0.5 mile of a new project-related surface-disturbing activity, one artificial nesting structure (ANS) will be installed in coordination with the BLM, Utah Division of Wildlife Resources, and the USFWS. These new ANSs will be afforded the same protection as natural raptor nests for the life of the project. Existing ANSs that are encroached upon will be left in place, but will not be treated as natural raptor nests. Monitoring of new ANSs will be conducted by the AO annually to determine nesting activity.</li> <li>♦ Gasco employees will be trained to identify ferruginous hawks and golden eagles, instructed to avoid disturbance of active nests, and required to stay within or near vehicles to prevent flushing when birds are present.</li> </ul> <p>The following applicant-committed measures will be implemented for all ferruginous hawk and golden eagle nests that have been active within the past 2 years.</p> <ul style="list-style-type: none"> <li>♦ No new construction or surface-disturbing activities will be conducted within a 0.5-mile buffer of active ferruginous hawk and golden eagle nests during courtship, nest building, egg laying, incubation, hatching, or fledging periods (February 1 through July 15).</li> <li>♦ Between August 1 and January 31 (outside the courtship to fledging period), new construction or drilling</li> </ul>			

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Source	Resource	Conditions of Approval
		activities could be conducted within a 0.5-mile buffer of active nests subject to these restrictions: <ul style="list-style-type: none"> <li>♦ No well pad will be constructed within 0.5 mile of an active nest where any portion of its permanent facilities will be visible from the nest.</li> <li>♦ Under no circumstances will construction or surface-disturbing activities take place within 0.25 mile of an active nest.</li> <li>♦ All access roads to well pads will be designed to avoid line-of-site visibility from active nests to the maximum extent practical.</li> <li>♦ Wells proposed within 0.5 mile of inactive nests will either be equipped with multi-cylinder engines or muffled to reduce noise levels.</li> <li>♦ Between May 30 and January 31 (outside the courtship to fledging period), new construction or surface-disturbing activities could be conducted within a 0.5-mile buffer of inactive nests only if permanent facilities are not visible from the nest.</li> </ul>
ACEPM FEIS 2.1.10 FEIS 4.12.2.3.3	Special Status Species: Raptors: Mexican Spotted Owl	<ul style="list-style-type: none"> <li>♦ Gasco will avoid all Mexican spotted owl habitat currently rated as “fair” and “good” (see Map 40 of the FEIS).</li> <li>♦ Where technically and economically feasible, directional drilling, including drilling multiple wells from the same pad, will be used to reduce surface disturbance and eliminate drilling in “fair” or “good” habitat for Mexican spotted owl nesting.</li> </ul> For all temporary actions that may impact owls or “fair” or “good” habitat: <ul style="list-style-type: none"> <li>♦ If the action occurs entirely outside the owl breeding season (March 1–August 31), and leaves no permanent structure or permanent habitat disturbance, the action can proceed without an occupancy survey.</li> <li>♦ If the action will occur during a breeding season, surveys for owls will occur prior to the commencement of the activity in accordance with USFWS survey protocol for the species. If owls are found, the activity must be delayed until outside of the breeding season.</li> <li>♦ Rehabilitate access routes created by the project through such means as raking out scars, re-vegetation, gating access points, etc.</li> </ul> For all permanent actions that may impact owls or “fair” or “good” habitat: <ul style="list-style-type: none"> <li>♦ Survey 2 consecutive years for owls according to the USFWS survey protocol for the species prior to commencing activities.                             <ul style="list-style-type: none"> <li>♦ If owls are found, no actions will occur within 0.5 mile of an identified nest site. If the nest site is unknown, no activity will occur within the designated protected activity center.</li> <li>♦ Avoid drilling and permanent structures within 0.5 mile of “fair” or “good” habitat unless it is determined, based on the surveys, that the habitat is not occupied.</li> </ul> </li> <li>♦ Reduce noise emissions (e.g., use hospital-grade mufflers) to 45 dBA at 0.5 mile from “fair” or “good” habitat. Siting of permanent noise-generating facilities will be determined based on a noise analysis to ensure noise does not encroach upon the 0.5-mile buffer for “fair” or “good” habitat.</li> <li>♦ Stay on approved routes and limit new access routes.</li> </ul>
FEIS 4.12.2.8	Special Status Species: White- tailed prairie dog	No surface-disturbing activities or permanent aboveground facilities will be allowed within 660 feet of prairie dog colonies unless the impacts of the action can be adequately mitigated or, if due to the size of the town, there is no reasonable location to develop a lease and avoid colonies.

**Table 3.2. Conditions of Approval of the Selected Alternative**

Source	Resource	Conditions of Approval
<p>FEIS                      Table 2-1                      FEIS 4.15.2</p>	<p>Water Resources</p>	<ul style="list-style-type: none"> <li>♦ Evaporation facilities will require site-specific hydrologic site characterization prior to permitting by the Utah Division of Oil Gas and Mining (DOGM) and BLM. The DOGM and BLM will require compliance with all specifications contained in Utah Administrative Code R649-9-3, and will require that evaporation basins be lined and incorporate leak detection to be permitted by DOGM. Basins constructed in relatively impermeable soils will have an underlying gravel-filled sump and lateral system or a suitable leak detection system. Pits constructed in relatively permeable soils will have a secondary liner underlying the leak detection system that is graded to direct leaks to the observation sump.</li> <li>♦ All evaporative basins will have a secondary containment system to prevent accidental discharges into surface waters.</li> <li>♦ All evaporative basins will be sited away from active drainages to prevent surface water inputs or erosion of berms and facilities.</li> <li>♦ A final closure plan will be submitted to BLM and DOGM prior to closure of the evaporative basins. This plan will include 1) provisions for removal and proper disposal of all equipment at the site; 2) a plan for sampling and testing soil and groundwater at the project site, with soil samples analyzed at the levels outlined by DOGM's Cleanup Levels for Contaminated Soils or background levels, whichever is less stringent; 3) provisions for future monitoring plans, if required by BLM and DOGM; and 4) considerations for post-disposal land use and landowner requests upon completion of closure.</li> <li>♦ Closure procedures will include the following: the pits will be pumped dry with all debris and any solid waste removed; 2) the pit liner will then be folded over into the pit and the pit backfilled; 3) the backfilled area will then be recontoured with top soil and reseeded; and 4) any waste and solids removed will be transported to an approved disposal site and disposed of according to BLM, DOGM, and/or EPA regulations.</li> </ul>
<p>FEIS                      Table 2-1                      and FEIS                      4.15.2</p>	<p>Water Resources</p>	<ul style="list-style-type: none"> <li>♦ Pumping of groundwater in or adjacent to ephemeral or isolated wetlands will be avoided or minimized,</li> <li>♦ All spills or leaks will be completely remediated.</li> <li>♦ Pipelines within channel crossings or in mapped flood hazard areas will either be elevated above the predicted 100-year flood event on a pipe bridge, or buried at least 5 feet below the channel bottom or below the predicted scour depth for an equivalent flood event (whichever is deeper) and in conformance with hydrological design practices.</li> <li>♦ Pipelines that cross stream channels will incorporate a sediment retention system along the construction corridor to minimize movement of sediment into the water courses. These could range from silt fencing and culverts to sediment retention basins, depending on the location.</li> <li>♦ Natural gas-condensate pipelines that cross perennial, intermittent, and ephemeral stream channels or FEMA-mapped 100-year floodplain, mapped riparian or wetland areas, or perennial, intermittent, or ephemeral stream channels will be routinely pigged and will have emergency/automatic shutoff valves located directly beyond the area at risk of flooding to reduce the magnitude of contamination in the event of an accidental pipeline break.</li> <li>♦ Road crossings of drainages will be built to accommodate the 100-year flood, typically using at-grade crossings rather than culverts. Crossings will be designed so they will not cause siltation or accumulation of debris, nor will the roadbed block the drainage. Any culverts used will be designed and constructed to allow passage of aquatic species.</li> <li>♦ Gasco will not import or use any discarded asphalt or fill that may leech nutrients or organic chemicals in the</li> </ul>

**Table 3.2. Conditions of Approval of the Selected Alternative**

Source	Resource	Conditions of Approval
		<p>construction of roads and/or locations.</p> <ul style="list-style-type: none"> <li>♦ As determined appropriate by the AO, toxic characteristic leaching procedure (TCLP) testing will used to characterize drilling waste as hazardous or nonhazardous, thereby ensuring proper disposal of drilling waste.</li> <li>♦ As determined necessary on a site-specific basis (based on proximity to a 100-year floodplain), wells with the potential to contaminate surface waters will have automatic shutoff valves.</li> <li>♦ All tanks at production facilities will be bermed sufficiently to contain the contents of the largest tank or connected series of tanks.</li> <li>♦ Reserve pits will not be constructed in areas of shallow groundwater and natural watercourses.</li> <li>♦ A closed-loop drilling system will be used in areas of porous soils over fractured bedrock when drilling through a Drinking Water Source Protection Zone or Sole Source Aquifer, or in areas of shallow groundwater.</li> <li>♦ At sites without clay soils, where soils are moderately to highly permeable, as well as sites closer to ephemeral/perennial channels, the reserve pit (if used) will be lined with a 12- or 16-mil pit liner on top of a protective felt layer to minimize the potential for pit fluid leaks.</li> <li>♦ If reserve pit leakage is detected, operations at the site will be curtailed as directed by the BLM until the leakage is corrected.</li> <li>♦ Following drilling and completion of the well, the reserve pit must be closed within 1 year, unless permission is granted by the BLM for a longer period. The pit contents must meet the DOGM's Cleanup Levels (guidance document for numeric cleanup levels) or background levels prior to burial. The contents may require treatment to reduce mobility and/or toxicity to meet cleanup levels. The alternative to meeting cleanup levels will be transporting material to an appropriate disposal facility. BLM will generally defer to DOGM's preference, which will be for materials to remain onsite if possible.</li> <li>♦ If any of the following impacts are observed, the adaptive management mitigation identified in the Long Term Water Monitoring Plan (see Attachment 4 of the Gasco ROD) will be implemented:                         <ul style="list-style-type: none"> <li>♦ Increased sedimentation</li> <li>♦ Increased concentrations of inorganic constituents, including metals</li> <li>♦ Increased concentrations of selenium, boron, or total dissolved solids</li> <li>♦ Contamination with petroleum and other organic constituents</li> <li>♦ Reduction of spring flows</li> <li>♦ Reduction of water levels in wells</li> </ul> </li> </ul>
FEIS 4.16.2	Wildlife	<ul style="list-style-type: none"> <li>♦ Exploration, drilling, and other development activity will not be conducted within crucial elk calving and deer fawning habitat from May 15 to June 30.</li> <li>♦ Activities that will result in adverse impacts to deer and elk within crucial winter range will be avoided from December 1 to April 30 unless deer and/or elk are not present or unless it is determined through analysis and coordination with UDWR that impacts could be mitigated.</li> <li>♦ Wells and roads will be sited, whenever possible, within pinyon-juniper woodland-dominated habitat to reduce disturbance to mule deer foraging habitat.</li> <li>♦ For every 1 acre of disturbance within BLM-designated crucial mule deer winter range, 1 acre of mitigation will take place either on lease or in the project area.</li> <li>♦ Within BLM-designated crucial deer winter range as described in the 2008 Vernal RMP, additional</li> </ul>

**Table 3.2. Conditions of Approval of the Selected Alternative**

Source	Resource	Conditions of Approval
		reclamation requirements may be identified on a site-specific basis to offset habitat loss. ♦ All roads and well pads will be sited as far from permanent water sources as possible.

*Literature Cited:*

BLM. 2005. *Vegetation Treatments Using Herbicides on Bureau of Land Management Lands in 17 Western States Programmatic EIS*

———. 2008. *Vernal Field Office Record of Decision and Approved Resource Management Plan*. BLM-UT-PL-09-003-1610. UT-080-2005-71. Vernal, Utah: DOI, BLM, Vernal FO.