

SEPTEMBER 2018 STIPULATIONS AND NOTICES

STIPULATIONS	
UT-S-01	<p style="text-align: center;">AIR QUALITY</p> <p>All new and replacement internal combustion gas field engines of less than or equal to 300 design-rated horsepower shall not emit more than 2 grams of NO_x per horsepower-hour.</p> <p>Exception: This requirement does not apply to gas field engines of less than or equal to 40 design-rated horsepower.</p> <p>Modification: None</p> <p>Waiver: None</p> <p>AND</p> <p>All new and replacement internal combustion gas field engines of greater than 300 design rated horsepower must not emit more than 1.0 gram of NO_x per horsepower-hour.</p> <p>Exception: None</p> <p>Modification: None</p> <p>Waiver: None</p>
UT-S-97	<p style="text-align: center;">NO SURFACE OCCUPANCY – FRAGILE SOILS/SLOPES GREATER THAN 40 PERCENT</p> <p>No surface occupancy on slopes greater than 40 percent.</p> <p>Exception: If after an environment analysis the authorized officer determines that it would cause undue or unnecessary degradation to pursue other placement alternatives; surface occupancy in the area may be authorized. In addition, a plan from the operator and BLM’s approval of the plan shall be required before construction and maintenance could begin. The plan would have to include:</p> <ul style="list-style-type: none"> • An erosion control strategy; • GIS modeling; • Proper survey and design by a certified engineer. <p>Modification: None</p> <p>Waiver: None</p>
UT-S-101	<p style="text-align: center;">CONTROLLED SURFACE USE – FRAGILE SOILS/SLOPES 20-40 PERCENT</p> <p>In surface disturbing proposals regarding construction on slopes of 20 percent to 40 percent, include an approved erosion control strategy and topsoil segregation/restoration plan. Such construction must be properly surveyed and designed by a certified engineer and approved by the BLM prior to project implementation, construction, or maintenance.</p> <p>Exception: If after an environment analysis the authorized officer determines that it would cause undue or unnecessary degradation to pursue other placement alternatives; surface occupancy in the area may be authorized. In addition, a plan from the operator and BLM’s approval of the plan would be required before construction and maintenance could begin. The plan must include:</p>

SEPTEMBER 2018 STIPULATIONS AND NOTICES

STIPULATIONS	
	<ul style="list-style-type: none"> • An erosion control strategy; • GIS modeling; • Proper survey and design by a certified engineer. <p>Modification: Modifications also may be granted if a more detailed analysis is conducted and shows that impacts can be mitigated, e.g., Order I soil survey conducted by a qualified soil scientist, finds that surface disturbance activities could occur on slopes between 20 and 40 percent while adequately protecting areas from accelerated erosion.</p> <p>Waiver: None</p>
UT-S-104	<p style="text-align: center;">NO SURFACE OCCUPANCY – SLOPES IN EXCESS OF 30 PERCENT</p> <p>No surface occupancy or other surface disturbance will be allowed on slopes in excess of 30 percent</p> <p>Exception: An exception may be granted with written permission from the authorized officer of the BLM.</p> <p>Modification: None</p> <p>Waiver: None</p>
UT-S-126	<p style="text-align: center;">NO SURFACE OCCUPANCY – NATURAL SPRINGS</p> <p>No surface disturbance or occupancy will be maintained around natural springs to protect the water quality of the spring. The distance would be based on geophysical, riparian, and other factors necessary to protect the water quality of the springs. If these factors cannot be determined, a 660-foot buffer zone would be maintained.</p> <p>Exception: An exception could be authorized if (a) there are no practical alternatives, (b) impacts could be fully mitigated, or (c) the action is designed to enhance the riparian resources.</p> <p>Modification: None</p> <p>Waiver: None</p>
UT-S-127	<p style="text-align: center;">NO SURFACE OCCUPANCY – INTERMITTENT AND PERENNIAL STREAMS</p> <p>No new surface disturbance (excluding fence lines) will be allowed in areas within the 100-year floodplain or 100 meters (330 feet) on either side from the centerline, whichever is greater, along all perennial and intermittent streams, streams with perennial reaches, and riparian areas.</p> <p>Exception: The authorized officer could authorize an exception if it could be shown that the project as mitigated eliminated the need for the restriction.</p> <p>An exception could be authorized if (a) there are no practical alternatives, (b) impacts could be fully mitigated, or (c) the action is designed to enhance the riparian resources.</p> <p>Modification: None</p> <p>Waiver: None</p>

SEPTEMBER 2018 STIPULATIONS AND NOTICES

STIPULATIONS	
UT-S-132	<p style="text-align: center;">NO SURFACE OCCUPANCY – LIVE WATER</p> <p>No occupancy or other surface disturbance will be allowed within 600 feet of live water.</p> <p>Exception: None</p> <p>Modification: This distance may be modified when specifically approved in writing by the authorized officer of the BLM.</p> <p>Waiver: None</p>
UT-S-138	<p style="text-align: center;">NO SURFACE OCCUPANCY – SEVIER RIVER AND DMAD RESERVOIR</p> <p>In order to protect the Sevier River and DMAD Reservoir no occupancy or other subsurface disturbance within 100 feet of the river or 1000 feet of the reservoir high water line will be allowed.</p> <p>Exception: None</p> <p>Modification: None</p> <p>Waiver: None</p>
UT-S-150	<p style="text-align: center;">NO SURFACE OCCUPANCY – SEVIER RIVER RIPARIAN AREA</p> <p>All of the land in the designated area is included in the Sevier River Riparian Area. Therefore, no occupancy or disturbance of the surface of the land described in this area is authorized. The lease holder however, may exploit the oil and gas resources in the area by directional drilling from sites outside this area.</p> <p>Exceptions: None</p> <p>Modification: None</p> <p>Waiver: None</p>
UT-S-155	<p style="text-align: center;">CONTROLLED SURFACE USE – RIPARIAN/WETLAND HABITAT AND MUNICIPAL/NON-MUNICIPAL WATERSHED AREAS</p> <p>In order to protect riparian/wetland habitat and municipal and non-municipal watershed areas, no occupancy or other surface disturbance will be allowed within 1,200 feet of live water or within 1,200 feet of wetlands as defined by the USF&WS in "Classification of Wetlands and Deep Water Habitats of the United States," 1979, page 3. This limitation does not apply to maintenance and operation of producing wells.</p> <p>Exception: If the lessee can demonstrate that operations can take place without impact to the resource being protected, an exemption to this stipulation may be granted if approved in writing by the authorized officer in consultation with the District's watershed specialist. For example, exemptions may be allowed where the riparian zone or the hydrologic influence area of phreatophytes exists less than 1,200 feet from live water.</p> <p>Modification: None</p> <p>Waiver: None</p>

SEPTEMBER 2018 STIPULATIONS AND NOTICES

STIPULATIONS	
UT-S-165	<p style="text-align: center;">CONTROLLED SURFACE USE – VRM CLASS II AND III AREAS</p> <p>In order to protect important visual resources in VRM Class II and III areas, activities in these areas will be located and designed in a way to meet Class II and III management criteria.</p> <p>Exception: None Modification: None Waiver: None</p>
UT-S-166	<p style="text-align: center;">CONTROLLED SURFACE USE – VRM CLASS II AND III AREAS</p> <p>In order to protect important visual resources in VRM Class II and III areas, activities in these areas will be located and designed in a way to meet Class II and III management criteria.</p> <p>Exception: None Modification: None Waiver: None</p>
UT-S-219	<p style="text-align: center;">CONTROLLED SURFACE USE – WHITE-TAILED PRAIRIE DOG TOWNS</p> <p>No occupancy or other surface disturbance will be allowed within White-tailed prairie dog towns, if such activity will result in destruction of the prairie dog town.</p> <p>Exception: None Modification: None Waiver: None</p>
UT-S-235	<p style="text-align: center;">TIMING LIMITATION – CRUCIAL MULE DEER WINTER RANGE</p> <p>In order to protect important wildlife species and habitat values from disturbance, seismic work, well development, rights-of-way, and other disturbance activities excluding maintenance activities would be restricted within mule deer winter range between December 1 and April 15 each year.</p> <p>Exception: Specific exceptions may be granted by BLM if it can be shown that the proposed activity will not seriously disturb the wildlife habitat values being protected.</p> <p>Modification: None Waiver: None</p>
UT-S-237	<p style="text-align: center;">TIMING LIMITATION – CRUCIAL MULE DEER WINTER RANGE</p> <p>In order to protect crucial mule deer winter range, exploration, drilling, and other development activity in will not be allowed from November 15 to April 30. This limitation does not apply to maintenance and operation of producing wells.</p> <p>Exception: This can be excepted by the District Manager Modification: None Waiver: None</p>

SEPTEMBER 2018 STIPULATIONS AND NOTICES

STIPULATIONS	
UT-S-249	<p style="text-align: center;">TIMING LIMITATION – CRUCIAL MULE DEER SUMMER/FAWNING AREAS</p> <p>In order to protect crucial mule deer fawning areas, exploration, drilling and other development activity will be allowed only from August 1 to April 14. This limitation does not apply to maintenance and operation of producing wells.</p> <p>Exception: Specific exceptions may be granted by the BLM if the proposed activity will not seriously disturb wildlife habitat values being protected. This determination will be made by a BLM wildlife biologist in coordination with the UDWR and, if appropriate, the USFS. Such a determination may result if fawning is completed early and the fawning area is abandoned earlier to allow for disturbing activities for fluid mineral leasing and exploration to start earlier than July 31.</p> <p>Modification: None</p> <p>Waiver: None</p>
UT-S-253	<p style="text-align: center;">TIMING LIMITATION – DESERT AND ROCKY MOUNTAIN BIGHORN SHEEP</p> <p>No surface disturbing or otherwise disruptive activities within Desert bighorn sheep and Rocky Mountain bighorn sheep spring/lambing within crucial yearlong range from April 15 to June 15.</p> <p>Exception: Upon review and monitoring, the authorized officer may grant exceptions because of climatic and/or range conditions if certain criteria are met and if activities would not cause undue stress to Desert bighorn sheep and Rocky Mountain bighorn sheep populations or habitats.</p> <p>Modification: Season may be adjusted depending on climatic and range conditions.</p>
UT-S-265	<p style="text-align: center;">CONTROLLED SURFACE USE/TIMING LIMITATION – CRUCIAL RAPTOR NESTING SITES</p> <p>In order to protect crucial raptor nesting sites, exploration, and drilling and other development activity within 0.5 mile radius of the sites will be allowed from September 1 to December 31 and not allowed from January 1 to August 31. This limitation does not apply to maintenance and operation of producing wells.</p> <p>Exception: Specific exceptions may be granted by the BLM if the proposed activity will not seriously disturb wildlife habitat values being protected. This determination will be made by a BLM wildlife habitat biologist in coordination with the Utah Division of Wildlife Resources and, if appropriate, the USF&WS. Such a determination may be made if the raptor nest in question is not active at the time of proposed activity. Quite often raptors will have alternate nesting sites available. If a raptor pair is using such an alternative site, it would be necessary to protect the inactive nest from disturbing activities for fluid mineral leasing and exploration. However, it should be noted that all eagle</p>

SEPTEMBER 2018 STIPULATIONS AND NOTICES

STIPULATIONS	
	<p>nests, active or inactive, are protected by the Eagle Act and must be left intact and cannot be removed from their original location.</p> <p>Modification: None</p> <p>Waiver: None</p>
UT-S-281	<p style="text-align: center;">CONTROLLED SURFACE USE/TIMING LIMITATION – BALD EAGLE HABITAT/NESTING AREAS</p> <p>In order to protect bald eagle habitat/nesting areas, exploration, and drilling and other development activity within 0.5 mile radius of the sites will not be allowed only from March 16 to November 14. This limitation does not apply to maintenance and operation of producing wells.</p> <p>Exception: Specific exceptions may be granted by the BLM if the proposed activity will not seriously disturb wildlife habitat values being protected. This determination will be made by a BLM wildlife biologist in coordination with the Utah Division of Wildlife Resources and the USF&WS. Such a determination may result if the roost site no longer exists or other roost sites are found to have taken over in importance to the bald eagles present to allow for disturbing activities for fluid mineral leasing and exploration.</p> <p>Modification: None</p> <p>Waiver: None</p>
UT-S-285	<p style="text-align: center;">TIMING LIMITATION – MIGRATORY BIRD NESTING</p> <p>Migratory bird nesting areas will be closed seasonally from April 15 to August 1. Areas with migratory birds designated as BLM Special Status Species will have the highest priority.</p> <p>Exception: Upon review and monitoring, the authorized officer may grant exceptions because of climatic and/or habitat conditions if activities would not cause undue stress to migratory bird populations.</p> <p>Modification: Season may be adjusted depending on climatic and range conditions. Distance may be adjusted if natural features provide adequate visual screening.</p> <p>Waiver: None</p>
UT-S-301	<p style="text-align: center;">TIMING LIMITATION – SEASONAL WILDLIFE HABITAT</p> <p>In order to protect seasonal wildlife habitat, exploration, drilling, and other development activity will be allowed only during the period from April 16 to November 30. This limitation does not apply to maintenance and operation of producing wells.</p> <p>Exception: Exceptions to this limitation in any year may be specifically approved in writing by the authorized officer of the BLM.</p> <p>Modification: None</p> <p>Waiver: None</p>

SEPTEMBER 2018 STIPULATIONS AND NOTICES

STIPULATIONS	
UT-S-305	<p style="text-align: center;">CONTROLLED SURFACE USE – NOXIOUS WEED</p> <p>Continue implementation of noxious weed and invasive species control actions in accordance with national guidance and local weed management plans, in cooperation with State, federal, affected counties, adjoining private land owners, and other partners or interests directly affected. Implement Standard Operating Procedures and Mitigation Measures for herbicide use as well as prevention measures for noxious and invasive plants identified in the Record of Decision Vegetation Treatments Using Herbicides on Bureau of Land Management Lands in 17 Western States PEIS and associated documents.</p> <p>Exception: None Modification: None Waiver: None</p>
UT-S-319	<p style="text-align: center;">NO SURFACE OCCUPANCY – CULTURAL ACEC</p> <p>NSO for cultural values within areas of critical environmental concern (ACEC) to retain the cultural character and context of the area.</p> <p>Exception: The AO may grant an oil and gas exception if it is determined that no other economic and technical feasible access is available to reach and drain the fluid mineral resources of the area. A block cultural survey must be completed and a treatment plan developed and submitted to BLM and the State Historic Preservation Office (SHPO) for their approval. The plan must contain measures to mitigate surface disturbance and reduce visual intrusion.</p> <p>Modification: None Waiver: None</p>
UT-S-346	<p style="text-align: center;">NO SURFACE OCCUPANCY – GREATER SAGE-GROUSE SAGEBRUSH FOCAL AREAS</p> <p>No surface occupancy within Greater Sage-Grouse sagebrush focal areas (SFA)</p> <p>Exception: None Modification: None Waiver: None</p>
UT-S-347	<p style="text-align: center;">NO SURFACE OCCUPANCY – GREATER SAGE-GROUSE PRIORITY HABITAT MANAGEMENT AREAS*</p> <p>No surface occupancy within Greater Sage-Grouse Priority Habitat Management Areas (PHMA).</p> <p>Exception: The Authorized Officer with concurrence with the State Director, may grant an exception only where the proposed action:</p> <ul style="list-style-type: none"> i. Would not have direct, indirect, or cumulative effects on GRSG or its habitat; OR, ii. Is proposed to be undertaken as an alternative to a similar action occurring on a nearby parcel, and would provide a clear conservation gain to GRSG. The conservation gain must include measures, such as enforceable institutional

SEPTEMBER 2018 STIPULATIONS AND NOTICES

STIPULATIONS	
	<p>controls and buffers, sufficient to allow the BLM to conclude that such benefits will endure for the duration of the proposed action’s impacts.</p> <p>The Authorized Officer may not grant an exception unless the applicable state wildlife agency, the USFWS, and the BLM unanimously find that the proposed action satisfies (i) or (ii). Such finding shall initially be made by a team of one field biologist or other GRSG expert from each respective agency. In the event the initial finding is not unanimous, the finding may be elevated to the appropriate BLM State Director, USFWS State Ecological Services Director, and state wildlife agency head for final resolution. In the event their finding is not unanimous, the exception will not be granted. Approved exceptions will be made publically available at least quarterly.</p> <p>Modification: None Waiver: None</p> <p>*The other greater sage-grouse stipulations would only be applicable to new fluid minerals leases if the exception criteria identified for the NSO stipulation above were granted.</p>
UT-S-348	<p style="text-align: center;">NO SURFACE OCCUPANCY/CONTROLLED SURFACE USE – GREATER SAGE-GROUSE DISTURBANCE CAP</p> <p>Manage discrete anthropogenic disturbances, whether temporary or permanent, so they cover less than 3 percent on all lands (regardless of land ownership) at each level: 1) PHMA associated with a GRSG population area (referred to as biologically significant units {BSU} when coordinating across state lines) and 2) within the proposed project analysis area to protect PHMA and the life-history needs of GRSG from habitat loss and GRSG populations from disturbance and limit fragmentation in PHMA. This would only be applicable to new fluid minerals leases if the exception criteria identified for the NSO stipulation above (UT-S-347 GRSG) were granted. See Appendix E of the GRSG Approved RMP Amendment for disturbance calculation instructions.</p> <p>Exception: None Modification: None Waiver: None</p> <p>*This would only be applicable to new fluid minerals leases if the exception criteria identified for the NSO stipulation above were granted.</p>
UT-S-349	<p style="text-align: center;">NO SURFACE OCCUPANCY/CONTROLLED SURFACE USE – GREATER SAGE-GROUSE DENSITY LIMITATION</p> <p>Limit the density of energy and mining facilities within Priority Habitat Management Areas (PHMA) during project authorization to an average of one energy/mineral facility per 640 acres on all lands (regardless of land ownership) in PHMA within a proposed project analysis area to protect PHMA and the life-history needs of GRSG from habitat loss and limit fragmentation in PHMA. This would only be applicable to new fluid minerals leases if the exception criteria identified for the NSO stipulation above (UT-S-347 GRSG) were</p>

SEPTEMBER 2018 STIPULATIONS AND NOTICES

STIPULATIONS	
	<p>granted. See Appendix E of the GRSG Approved RMP Amendment for calculation details.</p> <p>Exception: None</p> <p>Modification: None</p> <p>Waiver: None</p> <p>*This would only be applicable to new fluid minerals leases if the exception criteria identified for the NSO stipulation above were granted.</p>
UT-S-350	<p style="text-align: center;">CONTROLLED SURFACE USE/TIMING LIMITATION – GREATER SAGE-GROUSE BREEDING SEASON NOISE LIMITATIONS</p> <p>Limit noise from discrete anthropogenic disturbances within Priority Habitat Management Areas (PHMA), including activities from construction, operation and maintenance, to below 10 decibels above ambient sound levels (baseline as available at the signing of the GRSG RMP Amendment ROD or as <u>first</u> measured thereafter) at occupied leks from 2 hours before to 2 hours after official sunrise and sunset during breeding season to protect strutting Greater Sage-Grouse from auditory disturbance associated with development during the breeding season.</p> <p>AND</p> <p>Limit project related noise in other PHMA habitats and seasons where it would be expected to reduce functionality of habitats that support associated GRSG populations in order to protect GRSG from direct disturbance near leks within PHMA.</p> <p>Exception: None</p> <p>Modification: As additional research and information emerges, specific new limitations appropriate to the type of projects being considered would be evaluated and appropriate measures would be implemented where necessary to minimize potential for noise impacts on PHMA GRSG population behavioral cycles.</p> <p>Waiver: None</p> <p>*This would only be applicable to new fluid minerals leases if the exception criteria identified for the NSO stipulation above were granted.</p>
UT-S-352	<p style="text-align: center;">CONTROLLED SURFACE USE – GREATER SAGE-GROUSE TALL STRUCTURES*</p> <p>Limit the placement of permanent tall structures** within Priority Habitat Management Areas (PHMA) breeding and nesting habitats to minimize placement of structures that introduction of e new perching and/or nesting opportunities for avian predators.</p> <p>Exception: None</p> <p>Modification: None</p> <p>Waiver: None</p>

SEPTEMBER 2018 STIPULATIONS AND NOTICES

STIPULATIONS	
	<p>*This would only be applicable to new fluid minerals leases if the exception criteria identified for the NSO stipulation above were granted.</p> <p>**For the purposes of this restriction, a tall structure is any man-made structure that provides for perching/nesting opportunities for predators (e.g., raptors and ravens) that are naturally absent, or that decreases the use of an area by GRSG. A determination as to whether something is considered a tall structure will be made based on local conditions such as existing vegetation or topography.</p>
UT-S-353	<p style="text-align: center;">TIMING LIMITATION – GREATER SAGE-GROUSE BREEDING, NESTING AND EARLY BROOD REARING*</p> <p>Manage uses to prevent disturbance to GRSG populations and habitat by applying seasonal restrictions (e.g., no surface disturbance) between Feb 15 – June 15, in Greater Sage-Grouse Priority Habitat Management Areas (PHMA) breeding, nesting, and early brood-rearing habitat to seasonally protect those habitats from disruptive activity.</p> <p>Exception: None</p> <p>Modification: Specific time and distance determinations would be based on site-specific conditions and may be modified due to documented local variations (e.g., higher/lower elevations) or annual climactic fluctuations (e.g., early/late spring, long and/or heavy winter) in order to better protect GRSG, in coordination with the appropriate State of Utah agency.</p> <p>Waiver: None</p> <p>*This would only be applicable to new fluid minerals leases if the exception criteria identified for the NSO stipulation above were granted.</p>
UT-S-354	<p style="text-align: center;">TIMING LIMITATION – GREATER SAGE-GROUSE BROOD-REARING</p> <p>Manage uses to prevent disturbance to GRSG populations and habitat by applying seasonal restrictions (e.g., no surface disturbance) between April 15 – August 15 in the Greater Sage-Grouse (GRSG) Priority Habitat Management Areas (PHMA) brood-rearing habitat to seasonally protect that habitat from disruptive activity.</p> <p>Exception: None</p> <p>Modification: Specific time and distance determinations would be based on site-specific conditions and may be modified due to documented local variations (e.g., higher/lower elevations) or annual climactic fluctuations (e.g., early/late spring, long and/or heavy winter) in order to better protect GRSG, in coordination with the appropriate State of Utah agency.</p> <p>Waiver: None</p> <p>*This would only be applicable to new fluid minerals leases if the exception criteria identified for the NSO stipulation above were granted.</p>

SEPTEMBER 2018 STIPULATIONS AND NOTICES

STIPULATIONS	
UT-S-355	<p style="text-align: center;">TIMING LIMITATION – GREATER SAGE-GROUSE WINTER HABITAT</p> <p>Manage uses to prevent disturbance to GRSG populations and habitat by applying seasonal restrictions (e.g., no surface disturbance) between Nov 15 – March 15 in Priority Habitat Management Areas (PHMA) for Greater Sage-Grouse (GRSG) winter habitat to protect GRSG within PHMA from disruptive activity during the winter season.</p> <p>Exception: None</p> <p>Modification: Specific time and distance determinations would be based on site-specific conditions and may be modified due to documented local variations (e.g., higher/lower elevations) or annual climactic fluctuations (e.g., early/late spring, long and/or heavy winter) in order to better protect GRSG, in coordination with the appropriate State of Utah agency.</p> <p>Waiver: None</p> <p>*This would only be applicable to new fluid minerals leases if the exception criteria identified for the NSO stipulation above were granted.</p>
UT-S-356	<p style="text-align: center;">CONTROLLED SURFACE USE – GREATER SAGE-GROUSE INDIRECT IMPACTS FROM NOISE</p> <p>Areas outside of Priority Habitat Management Areas (PHMA), portions of the State of Utah’s opportunity areas within 4 miles of a lek that is located within PHMA will be subject to the following constraints:</p> <p>Limit noise from discrete anthropogenic disturbances (during construction, operation, or maintenance) so it will not exceed 10 decibels above ambient sound levels (baseline as available at the signing of the GRSG RMP Amendment ROD or as first measured thereafter) at occupied leks within PHMA from 2 hours before to 2 hours after official sunrise and sunset during breeding season (e.g., while males are strutting);</p> <p>AND</p> <p>Limit project related noise in other PHMA habitats and seasons where it would be expected to reduce functionality of habitats that support associated GRSG populations in order to protect GRSG from indirect disturbance near leks within PHMA.</p> <p>Exception: None</p> <p>Modification: As additional research and information emerges, specific new limitations appropriate to the type of projects being considered would be evaluated and appropriate measures would be implemented where necessary to minimize potential for noise impacts on PHMA GRSG population behavioral cycles.</p> <p>Waiver: None</p>

SEPTEMBER 2018 STIPULATIONS AND NOTICES

STIPULATIONS	
UT-S-357	<p style="text-align: center;">CONTROLLED SURFACE USE – GREATER SAGE-GROUSE INDIRECT IMPACTS FROM TALL STRUCTURES</p> <p>Areas outside of Priority Habitat Management Areas (PHMA), portions of the State of Utah’s opportunity areas within 4 miles of a lek that is located within PHMA will be subject to the following constraints:</p> <p>Limit the placement of permanent tall structures** adjacent to breeding and nesting habitats to minimize placement of structures that introduce new perching and/or nesting opportunities for avian predators.</p> <p>Exception: None Modification: None Waiver: None</p> <p>**For the purposes of this restriction, a tall structure is any man-made structure that provides for perching/nesting opportunities for predators (e.g., raptors and ravens) that are naturally absent, or that decreases the use of an area by GRSG. A determination as to whether something is considered a tall structure will be made based on local conditions such as existing vegetation or topography.</p>
UT-S-417	<p style="text-align: center;">CONTROLLED SURFACE USE/TIMING LIMITATION – BALD EAGLE ROOST</p> <p>Development or exploration activity would not be allowed within a 0.5 mile radius of bald eagle roost sites from 11/15 – 3/15 of each year. This restriction does not apply to maintenance and operation of producing wells.</p> <p>Exception: The authorized officer may grant an exception if the BLM biologist, in coordination with the DWR and USFWS have determined that the activity will not disturb the bald eagle roost habitat values as they are being protected. The roost must no longer be in existence or other roost sites have taken over in importance to the bald eagles present.</p> <p>Modification: None Waiver: None</p>
UT-S-418	<p style="text-align: center;">TIMING LIMITATION – CRUCIAL ELK WINTER RANGE</p> <p>In order to protect crucial elk calving areas, exploration, drilling and other development activity will be allowed only from May 1 through November 30 and not allowed from December 1 to April 30. This limitation does not apply to maintenance and operation of producing wells.</p> <p>Exception: Specific exceptions may be granted by the BLM if the proposed activity will not seriously disturb wildlife habitat values being protected. This determination will be made by a BLM wildlife biologist in coordination with the UDWR and, if appropriate, the USFWS. Such a determination may result if calving is completed early and the calving area is abandoned earlier to allow for disturbing activities for fluid mineral leasing and exploration to start earlier than June 30.</p> <p>Modification: None</p>

SEPTEMBER 2018 STIPULATIONS AND NOTICES

STIPULATIONS	
	Waiver: None
UT-S-419	<p style="text-align: center;">TIMING LIMITATION – CRUCIAL ELK CALVING</p> <p>In order to protect crucial elk calving areas, exploration, drilling and other development activity will be allowed only from July 1 to April 30 and not allowed from May 1 to June 30. This limitation does not apply to maintenance and operation of producing wells.</p> <p>Exception: Specific exceptions may be granted by the BLM if the proposed activity will not seriously disturb wildlife habitat values being protected. This determination will be made by a BLM wildlife biologist in coordination with the UDWR and, if appropriate, the USFWS. Such a determination may result if calving is completed early and the calving area is abandoned earlier to allow for disturbing activities for fluid mineral leasing and exploration to start earlier than June 30.</p> <p>Modification: None</p> <p>Waiver: None</p>
UT-S-420	<p style="text-align: center;">CONTROLLED SURFACE USE/TIMING LIMITATION – RAPTOR EYRIES</p> <p>Drilling activities will not be allowed within one mile of active raptor eyries between March 1 – July 15 of each year.</p> <p>Exception: None</p> <p>Modification: None</p> <p>Waiver: None</p>
UT-S-421	<p style="text-align: center;">AIR QUALITY MONITORING</p> <p>Require applicants for projects or actions on Public Lands, which may change air quality, to establish an air quality monitoring program. Air quality should be monitored for a year prior to project initiation and during project operation by the applicants at their expense.</p> <p>Exception: None.</p> <p>Modification: None</p> <p>Waiver: None</p>

SEPTEMBER 2018 STIPULATIONS AND NOTICES

NOTICES	
UT-LN-02	<p style="text-align: center;">CRUCIAL WINTER MULE DEER AND ELK HABITAT</p> <p>The lessee/operator is given notice that lands in this lease have been identified as containing crucial mule deer and/or elk winter habitat. Exploration, drilling and other development activities would be restricted from December 1 through April 30 to protect crucial winter range. Modifications to the Surface Use Plan of Operations may be required in accordance with section 6 of the lease terms and 43CFR3101.1-2.</p>
UT-LN-07	<p style="text-align: center;">CRUCIAL ELK CALVING AND DEER FAWNING HABITAT</p> <p>The lessee/operator is given notice that lands in this lease have been identified as containing crucial elk calving or deer fawning habitat. Exploration, drilling and other development activities would be restricted from May 1 through June 30 to protect antelope fawning.</p>
UT-LN-09	<p style="text-align: center;">CRUCIAL ELK CALVING AND DEER FAWNING HABITAT</p> <p>The lessee/operator is given notice that lands in this lease have been identified as containing crucial elk calving or deer fawning habitat. Exploration, drilling and other development activities may be restricted from May 15 through June 30 to protect calving / fawning. Modifications may be required in the Surface Use Plan of Operations including seasonal timing restrictions to protect the species and its habitat.</p>
UT-LN-21	<p style="text-align: center;">BIGHORN SHEEP HABITAT</p> <p>The Lessee/Operator is given notice that the lands in this parcel contains habitat for desert bighorn sheep. Modifications to the surface use plan may be required in order to protect habitat from surface disturbing activities. These modifications may include such measures as timing restrictions to avoid surface use in bighorn sheep habitat during the crucial season (April 15 – June 15). Measure may also include avoidance of certain areas such as water sources and talus slopes.</p>
UT-LN-25	<p style="text-align: center;">WHITE-TAILED AND GUNNISON PRAIRIE DOG</p> <p>The lessee/operator is given notice that this lease parcel has been identified as containing white-tailed or Gunnison prairie dog habitat. Modifications to the Surface Use Plan of Operations may be required in order to protect white-tailed or Gunnison prairie dog from surface disturbing activities in accordance with the Endangered Species Act and 43 CFR 3101.1-2.</p>
UT-LN-37	<p style="text-align: center;">BALD EAGLE HABITAT</p> <p>The lessee/operator is given notice that lands in this lease have been identified as containing Bald Eagle Habitat. Modifications to the Surface Use Plan of Operations may be required in order to protect the Bald Eagle and/or habitat from surface disturbing activities in accordance with Section 6 of the lease terms, Endangered Species Act, and 43 CFR 3101.1-2.</p>

SEPTEMBER 2018 STIPULATIONS AND NOTICES

NOTICES	
UT-LN-38	<p align="center">FERRUGINOUS HAWK NEST SITES</p> <p>The lessee/operator is given notice that this lease has been identified as containing ferruginous hawk nest sites. No surface use or otherwise disruptive activity allowed from March 1 through August 1 which would disrupt ferruginous hawk breeding activities within 0.5 mile of an occupied nest. No surface use or otherwise disruptive activity would be allowed which would result in an aboveground facility within 0.5 mile of known ferruginous hawk nests, which have been active within the past 3 years. Modifications to the Surface Use Plan of Operations may be required in accordance with section 6 of the lease terms and 43CFR3101.1-2.</p>
UT-LN-39	<p align="center">GOLDEN EAGLE NEST SITES</p> <p>The lessee/operator is given notice that this lease has been identified as containing golden eagle nest sites. No surface use or otherwise disruptive activity allowed from January 1 through August 31 which would disrupt golden eagle breeding activities within 0.5 mile of an occupied nest. No surface use or otherwise disruptive activity would be allowed which would result in an aboveground facility within 0.5 mile of known golden eagle nests, which have been active within the past 3 years. Modifications to the Surface Use Plan of Operations may be required in accordance with section 6 of the lease terms and 43CFR3101.1-2.</p>
UT-LN-40	<p align="center">GOLDEN EAGLE HABITAT</p> <p>The lessee/operator is given notice that lands in this lease have been identified as containing Golden Eagle Habitat. Modifications to the Surface Use Plan of Operations may be required in order to protect the Golden Eagle and/or habitat from surface disturbing activities in accordance with Section 6 of the lease terms, Endangered Species Act, and 43 CFR 3101.1-2.</p>
UT-LN-42	<p align="center">BURROWING OWL HABITAT</p> <p>The lessee/operator is given notice that this lease has been identified as containing burrowing owl habitat. No surface use or otherwise disruptive activity allowed from March 1 through August 31 which would disrupt burrowing owl breeding activities within 0.25 mile of an occupied nest. No surface use or otherwise disruptive activity would be allowed which would result in an aboveground facility within 0.25 mile of known burrowing owl nests, which have been active within the past 3 years. Modifications to the Surface Use Plan of Operations may be required in accordance with section 6 of the lease terms and 43CFR3101.1-2.</p>
UT-LN-44	<p align="center">RAPTORS</p> <p>Appropriate seasonal and spatial buffers shall be placed on all known raptor nests in accordance with Utah Field Office Guidelines for Raptor Protection from Human and Land use Disturbances (USFWS 2002) and Best Management Practices for Raptors and their Associated Habitats in Utah (BLM 2006). All construction related activities will not occur within these buffers if pre-</p>

SEPTEMBER 2018 STIPULATIONS AND NOTICES

NOTICES	
	<p>construction monitoring indicates the nests are active, unless a site-specific evaluation for active nests is completed prior to construction and if a BLM wildlife biologist, in consultation with USFWS and UDWR, recommends that activities may be permitted within the buffer. The BLM will coordinate with the USFWS and UDWR and have a recommendation within 3-5 days of notification. Any construction activities authorized within a protective (spatial and seasonal) buffer for raptors will require an on-site monitor. Any indication that activities are adversely affecting the raptor and/or its' young the on-site monitor will suspend activities and contact the BLM Authorized Officer immediately. Construction may occur within the buffers of inactive nests. Construction activities may commence once monitoring of the active nest site determines that fledglings have left the nest and are no longer dependent on the nest site. Modifications to the Surface Use Plan of Operations may be required in accordance with section 6 of the lease terms and 43CFR3101.1-2.</p>
UT-LN-45	<p style="text-align: center;">MIGRATORY BIRD</p> <p>The lessee/operator is given notice that surveys for nesting migratory birds may be required during migratory bird breeding season whenever surface disturbances and/or occupancy is proposed in association with fluid mineral exploration and development within priority habitats. Surveys should focus on identified priority bird species in Utah. Field surveys will be conducted as determined by the authorized officer of the Bureau of Land Management. Based on the result of the field survey, the authorized officer will determine appropriate buffers and timing limitations.</p>
UT-LN-49	<p style="text-align: center;">UTAH SENSITIVE SPECIES</p> <p>The lessee/operator is given notice that no surface use or otherwise disruptive activity would be allowed that would result in direct disturbance to populations or individual special status plant and animal species, including those listed on the BLM sensitive species list and the Utah sensitive species list. The lessee/operator is also given notice that lands in this parcel have been identified as containing potential habitat for species on the Utah Sensitive Species List. Modifications to the Surface Use Plan of Operations may be required in order to protect these resources from surface disturbing activities in accordance with Section 6 of the lease terms, Endangered Species Act, Migratory Bird Treaty Act and 43 CFR 3101.1-2.</p>
UT-LN-51	<p style="text-align: center;">SPECIAL STATUS PLANTS: NOT FEDERALLY LISTED</p> <p>The lessee/operator is given notice that lands in this lease have been identified as containing special status plants, not federally listed, and their habitats. Modifications to the Surface Use Plan of Operations may be required in order to protect the special status plants and/or habitat from surface disturbing activities in accordance with Section 6 of the lease terms, Endangered Species Act, and 43 CFR 3101.1-2.</p>

SEPTEMBER 2018 STIPULATIONS AND NOTICES

NOTICES	
UT-LN-52	<p style="text-align: center;">NOXIOUS WEEDS</p> <p>The lessee/operator is given notice that lands in this lease have been identified as containing or is near areas containing noxious weeds. Best management practices to prevent or control noxious weeds may be required for operations on the lease.</p>
UT-LN-53	<p style="text-align: center;">RIPARIAN AREAS</p> <p>The lessee/operator is given notice that this lease has been identified as containing riparian areas. No surface use or otherwise disruptive activity allowed within 100 meters of riparian areas unless it can be shown that (1) there is no practicable alternative; (2) that all long-term impacts are fully mitigated; or (3) that the construction is an enhancement to the riparian areas. Modifications to the Surface Use Plan of Operations may be required in accordance with section 6 of the lease terms and 43CFR3101.1-2.</p>
UT-LN-55	<p style="text-align: center;">WATER AND WATERSHED PROTECTION</p> <p>The lessee/operator is given notice that this lease may need modifications to the Surface Use Plan of Operations in order to prevent water pollution and protect municipal and non-municipal watershed areas. No surface use or otherwise disruptive activity allowed within 500 feet of live water or the reservoirs located in the Beaver, Milford and Sevier River drainages, Parowan and Cedar Valley drainages, or Pinto Creek/Newcastle Reservoir drainage in order to prevent water quality degradation in accordance with section 6 of the lease terms and 43CFR3101.1-2.</p>
UT-LN-56	<p style="text-align: center;">DRINKING WATER SOURCE PROTECTION ZONE</p> <p>This lease (or a portion thereof) is within a public Drinking Water Source Protection zone. Before application for a permit to drill (APD) submittal or any proposed surface-disturbing activity, the lessee/operator must contact the public water system manager to determine any zoning ordinances, best management or pollution prevention measures, or physical controls that may be required within the protection zones. Drinking Water Source Protection plans are developed by the public water systems under the requirements of R309-600. Drinking Water Source Protection for Ground-Water Sources. (Utah Administrative Code). There may also be county ordinances in place to protect the source protection zones, as required by Section 19-4-113 of the Utah Code.</p> <p>Incorporated cities and towns may also protect their drinking water sources using Section 10-8-15 of the Utah Code. This part of the Code gives cities and towns the extraterritorial authority to enact ordinances to protect a source of drinking water ... "For 15 miles above the point from which it is taken and for a distance of 300 feet on each side of such stream..." Class I cities (greater than 100,000 population) are granted authority to protect their entire watersheds.</p> <p>Some public water sources qualify for monitoring waivers which reduce their monitoring requirements for pesticides and volatile organic chemicals (VOCs). Exploration, drilling, and production activities within Source Protection zone 3</p>

SEPTEMBER 2018 STIPULATIONS AND NOTICES

NOTICES	
	<p>could jeopardize these waivers, thus requiring increased monitoring. Contact the public water system to determine what effect your activities may have on their monitoring waivers. Please be aware of other State rules to protect surface and ground water: the Utah Division of Water Quality Rules R317 Water Quality Rules; and Rules of the Utah Division of Oil, Gas and Mining, Utah Oil and Gas Conservation Rules R649.</p> <p>At the time of development, drilling operators will additionally conform to the operational regulations in Onshore Oil & Gas Order No. 2 (which requires the protection and isolation of all usable quality waters, $\leq 10,000$ mg/L Total Dissolved Solids), Onshore Oil and Gas Order No. 7 (which prescribes measures required for the handling of produced water to insure the protection of surface and ground water sources) and the Surface Operating Standards and Guidelines for Oil and Gas Development, The Gold Book, Fourth Edition-Revised 2007 (which provides information and requirements for conducting environmentally responsible oil and gas operations).</p> <p>Additional mitigation measures may be necessary to prevent adverse impacts from oil and gas exploration and development activities. Mitigation measures may include submitting an erosion control plan with best management practices (BMPs) that address rigorous interim reclamation which might include surface roughening, vegetative buffer strips, etc.; and sediment control through the use of sediment logs, silt fences, erosion control blankets, outlet/inlet protection of water control features such as culverts or diversion ditches, sediment traps, run on/run off pad design features. If project activities are close to sensitive areas or water sources a semi or closed-loop drilling system should be required.</p>
UT-LN-57	<p style="text-align: center;">PUBLIC WATER RESERVE</p> <p>The lessee/operator is given notice that lands in this lease have been identified as a designated Public Water Reserve. Surface occupancy or use is subject to the Public Water Reserve Executive Order No. 107. Modification to the Surface Use Plan of Operations may be required for the protection of the reserve up to and including no surface occupancy or use. Protection of a designated public water reserve as discussed in Public Water Reserve Executive Order No. 107. This limitation does not apply to operations and maintenance of producing wells.</p>
UT-LN-59	<p style="text-align: center;">ERODIBLE SOILS AND STEEP SLOPES</p> <p>The lessee/operator is given notice that the area is a municipal or non-municipal watershed and has steep slopes and erosive soils. New roads will be constructed to avoid soils that are highly erosive and / or in critical or severe erosion conditions. New roads will be constructed with water bars. Riprap may be required. Road grades in excess of 8 percent will normally not be allowed. In special circumstances, where a road grade of more than 10 percent is allowed, its maximum length will be 1,000 feet. Access grading along with exploration, drilling, construction, or other activities will be prohibited during wet or muddy conditions (usually during spring runoff and summer monsoon rains).</p>

SEPTEMBER 2018 STIPULATIONS AND NOTICES

NOTICES	
	Based on the result of the field survey, the authorized officer will determine appropriate buffers and timing limitations. Modifications to the Surface Use Plan of Operations may be required in accordance with section 6 of the lease terms and 43CFR3101.1-2.
UT-LN-60	<p style="text-align: center;">STEEP SLOPES</p> <p>The lessee/operator is given notice that this lease has been identified as containing steep slopes. No surface use or otherwise disruptive activity allowed on slopes in excess of 30 percent without written permission from the Authorized Officer. Modifications to the Surface Use Plan of Operations may be required in accordance with section 6 of the lease terms and 43CFR3101.1-2.</p>
UT-LN-68	<p style="text-align: center;">NOTIFICATION & CONSULTATION REGARDING CULTURAL RESOURCES</p> <p>The lease area may now or hereafter be found to contain historic properties and/or resources protected under the National Historic Preservation Act (NHPA), the Archaeological Resources Protections Act (ARPA), the Native American Graves Protection and Repatriation Act (NAGPRA), the American Indian Religious Freedom Act (AIRFA), other statues and Executive Order 13007, and which may be of concern to Native American tribes, interested parties, and the State Historic Preservation Officer (SHPO). BLM will not approve any ground disturbing activities as part of future lease operations until it completes applicable requirements of the National Historic Preservation Act (NHPA), including the completion of any required procedure for notification and consultation with appropriate tribe(s) and/or the SHPO. BLM may require modifications to exploration and development proposals to further its conservation and management objectives on BLM-approved activities that are determine to affect or impact historic or cultural properties and/or resources.</p>
UT-LN-72	<p style="text-align: center;">HIGH POTENTIAL PALEONTOLOGICAL RESOURCES</p> <p>The lessee/operator is given notice that lands in this lease have been identified as having high potential for paleontological resources. Surveys will be required and modifications to the Surface Use Plan of Operations may be required in order to protect paleontological resources from surface disturbing activities in accordance with Section 6 of the lease terms and 43 CFR 3101.1-2. In addition, monitoring may be required during surface disturbing activities.</p>
UT-LN-78	<p style="text-align: center;">LIGHT AND SOUND - AREAS PROXIMATE TO CANYONLANDS NATIONAL PARK</p> <p>Minimize noise and light pollution in areas adjacent with Canyonlands National Park using best available technology such as installation of multi-cylinder pumps, hospital sound reducing mufflers, and placement of exhaust systems to direct noise away from the National Park. Additionally, there would be a requirement to reduce light pollution by using methods such as limiting height of light poles, timing of lighting operations (meaning limiting lighting to times</p>

SEPTEMBER 2018 STIPULATIONS AND NOTICES

NOTICES	
	<p>of darkness associated with drilling and work over or maintenance operations), limiting wattage intensity, and constructing light shields.</p> <p>However, this requirement is not applicable if it affects human health and safety. Movement of operations to mitigate sound and light impacts would be required to be at least 200 meters from the boundary of the National Park in areas with the objectives of Visual Resource Management classifications of II, III and IV.</p>
UT-LN-85	<p style="text-align: center;">TAR SANDS AREA</p> <p>Section 350 of the Energy Policy Act of 2005, enacted August 8, 2005, and amended the Mineral Leasing Act to authorize the Secretary of Interior to issued oil and gas leases in special tar sand areas.</p> <p>Please be advised that all or part of this lease parcel lies within a Special Tar Sands Area. The successful bidder should be aware that special tar sands underlie this lease area. The authorized officer may modify the location or timing of oil and gas activities to provide for future tar sand development.</p>
UT-LN-96	<p style="text-align: center;">AIR QUALITY MITIGATION MEASURES</p> <p>The lessee is given notice that the Bureau of Land Management (BLM) in coordination with the U.S. Environmental Protection Agency and the Utah Department of Air Quality, among others, has developed the following air quality mitigation measures that may be applied to any development proposed on this lease. Integration of and adherence to these measures may help minimize adverse local or regional air quality impacts from oil and gas development (including but not limited to construction, drilling, and production) on regional ozone formation.</p> <ul style="list-style-type: none"> • 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. • Vent emissions from stock tanks and natural gas TEG dehydrators would be controlled by routing the emissions to a flare or similar control device which would reduce emissions by 95% or greater. • Low bleed or no bleed pneumatics would be installed on separator dump valves and other controllers. • 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.

SEPTEMBER 2018 STIPULATIONS AND NOTICES

NOTICES	
	<ul style="list-style-type: none"> Stationary internal combustion engine would comply with the following standards: 2g NOx/bhp-hr for engines <300HP; and 1g NOx/bhp-hr for engines >300HP. <p>Additional site-specific measures may also be employed to avoid or minimize effects to local or regional air quality. These additional measures will be developed and implemented in coordination with the U.S. Environmental Protection Agency, the Utah Department of Air Quality, and other agencies with expertise or jurisdiction as appropriate based on the size of the project and magnitude of emissions.</p>
UT-LN-99	<p style="text-align: center;">REGIONAL OZONE FORMATION CONTROLS</p> <p>To mitigate any potential impact oil and gas development emissions may have on regional ozone formation, the following Best Management Practices (BMPs) would be required for any development projects:</p> <ul style="list-style-type: none"> Tier II or better drilling rig engines Stationary internal combustion engine standard of 2g NOx/bhp-hr for engines <300HP and 1g NOx/bhp-hr for engines >300HP Low bleed or no bleed pneumatic pump valves Dehydrator VOC emission controls to +95% efficiency Tank VOC emission controls to +95% efficiency
UT-LN-101	<p style="text-align: center;">AIR QUALITY</p> <p>All new and replacement internal combustion gas field engines of less than or equal to 300 design-rated horsepower 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. AND All new and replacement internal combustion gas field engines of greater than 300 design rated horsepower must not emit more than 1.0 grams of NOx per horsepower-hour. Modifications to the Surface Use Plan of Operations may be required in accordance with section 6 of the lease terms and 43CFR3101.1-2.</p>
UT-LN-102	<p style="text-align: center;">AIR QUALITY ANALYSIS</p> <p>The lessee/operator is given notice that prior to project-specific approval, additional air quality analyses may be required to comply with the National Environmental Policy Act, Federal Land Policy Management Act, and/or other applicable laws and regulations. Analyses may include dispersion modeling for deposition and visibility impacts analysis, control equipment determinations, and/or emission inventory development. These analyses may result in the imposition of additional project-specific air quality control measures.</p>
UT-LN-104	<p style="text-align: center;">BURROWING OWL HABITAT</p> <p>The lessee/operator is given notice that lands in this lease have been identified as containing Burrowing Owl Habitat. Modification to the Surface Use Plan of Operations may be required in order to protect the Burrowing Owl and/or</p>

SEPTEMBER 2018 STIPULATIONS AND NOTICES

NOTICES	
	<p>habitat from surface disturbing activities in accordance with Section 6 of the lease terms, Endangered Species Act, and 43 CFR 3101.1-2.</p>
UT-LN-107	<p style="text-align: center;">BALD EAGLE</p> <p>The Lessee/Operator is given notice that the lands in this parcel contains nesting/winter roost habitat for the bald eagle. The bald eagle was de-listed in 2007; however, it is still afforded protection under the Bald and Golden Eagle Protection Act (16 U.S.C. 668-668c, 1940). Therefore, avoidance or use restrictions may be placed on portions of the lease. Application of appropriate measures will depend on whether the action is temporary or permanent, and whether it occurs within or outside the bald eagle breeding or roosting season. A <u>temporary</u> action is completed prior to the following breeding or roosting season leaving no permanent structures and resulting in no permanent habitat loss. A <u>permanent</u> action continues for more than one breeding or roosting season and/or causes a loss of eagle habitat or displaces eagles through disturbances, i.e. creation of a permanent structure. The following avoidance and minimization measures have been designed to ensure activities carried out on the lease will not lead to the need to consider listing the eagle as threatened or endangered. Integration of, and adherence to the following measures will facilitate review and analysis of any submitted permits under the authority of this lease.</p> <p>Current avoidance and minimization measures include the following:</p> <ol style="list-style-type: none"> 1. Surveys will be required prior to operations unless species occupancy and distribution information is complete and available. All Surveys must be conducted by qualified individual(s), and be conducted according to protocol. 2. Lease activities will require monitoring throughout the duration of the project. To ensure desired results are being achieved, minimization measures will be evaluated. 3. Water production will be managed to ensure maintenance or enhancement of riparian habitat. 4. Temporary activities within 1.0 mile of nest sites will not occur during the breeding season of January 1 to August 31, unless the area has been surveyed according to protocol and determined to be unoccupied. 5. Temporary activities within 0.5 miles of winter roost areas, e.g., cottonwood galleries, will not occur during the winter roost season of November 1 to March 31, unless the area has been surveyed according to protocol and determined to be unoccupied. 6. No permanent infrastructure will be placed within 1.0 mile of nest sites. 7. No permanent infrastructure will be placed within 0.5 miles of winter roost areas. 8. Remove big game carrion from within 100 feet of lease roadways occurring within bald eagle foraging range.

SEPTEMBER 2018 STIPULATIONS AND NOTICES

NOTICES	
	<p>9. Avoid loss or disturbance to large cottonwood gallery riparian habitats.</p> <p>10. Where technically and economically feasible, use directional drilling or multiple wells from the same pad to reduce surface disturbance and eliminate drilling in suitable habitat Utilize directional drilling to avoid direct impacts to large cottonwood gallery riparian habitats. Ensure that such directional drilling does not intercept or degrade alluvial aquifers.</p> <p>11. All areas of surface disturbance within riparian areas and/or adjacent uplands should be re-vegetated with native species.</p> <p>Additional measures may also be employed to avoid or minimize effects to the species between the lease sale stage and lease development stage. These additional measures will be developed and implemented in coordination with the U.S. Fish and Wildlife Service.</p>
UT-LN-122	<p style="text-align: center;">COLORADO OR BONNEVILLE CUTTHROAT TROUT HABITAT</p> <p>The lessee/operator is given notice that this lease has been identified as containing steep slopes adjacent to streams occupied by the Colorado or Bonneville Cutthroat Trout, a Utah Conservation Agreement Species. No surface use or otherwise disruptive activity allowed on slopes in excess of 30 percent from April 15th through July 1 without written permission from the Authorized Officer. Modifications to the Surface Use Plan of Operations may be required in accordance with section 6 of the lease terms and 43CFR3101.1-2.</p>
UT-LN-128	<p style="text-align: center;">FLOODPLAIN MANAGEMENT</p> <p>The lessee/operator is given notice that, in accordance with Executive Order 11988, to avoid adverse impact to floodplains 1) facilities should be located outside the 100 year floodplain, or 2) would be minimized or mitigated by modification of surface use plans within floodplains present within the lease.</p>
UT-LN-129	<p style="text-align: center;">GREATER SAGE-GROUSE – DISTURBANCE CAP</p> <p>Manage discrete anthropogenic disturbances, whether temporary or permanent, so they cover less than 3 percent of 1) PHMA associated with a GRSG population area (referred to as biologically significant units {BSU} when coordinating across state lines) and 2) within the proposed project analysis area, on all lands (regardless of ownership) at each level.</p> <p>(See Appendix E of the GRSG Approved RMP Amendment for disturbance calculation instructions)</p>
UT-LN-130	<p style="text-align: center;">GREATER SAGE-GROUSE – DENSITY LIMITATION</p> <p>Limit the density of energy and mining facilities within Priority Habitat Management Areas (PHMA) during project authorization to an average of one energy/mineral facility per 640 acres on all lands (regardless of land ownership) in PHMA within a proposed project analysis area to protect PHMA and the life-history needs of GRSG from habitat loss and GRSG populations from disturbance and limit fragmentation in PHMA.</p>

SEPTEMBER 2018 STIPULATIONS AND NOTICES

NOTICES	
UT-LN-131	<p style="text-align: center;">GREATER SAGE-GROUSE – NET CONSERVATION GAIN</p> <p>In Priority and General Habitat Management Areas (PHMA and GHMA) all actions that result in habitat loss and degradation will require mitigation that provides a net conservation gain to the Greater Sage-Grouse (GRSG). Mitigation must account for any uncertainty associated with the effectiveness of the mitigation and will be achieved through avoiding, minimizing and compensating for impacts. Mitigation will be conducted according to the mitigation framework found in Appendix F in the Utah Approved Management Plan Amendment.</p>
UT-LN-132	<p style="text-align: center;">GREATER SAGE-GROUSE – NET CONSERVATION GAIN</p> <p>In Priority and General Habitat Management Areas (PHMA and GHMA) all actions that result in habitat loss and degradation will require mitigation that provides a net conservation gain to the Greater Sage-Grouse (GRSG). Mitigation must account for any uncertainty associated with the effectiveness of the mitigation and will be achieved through avoiding, minimizing and compensating for impacts. Mitigation will be conducted according to the mitigation framework found in Appendix F in the Utah Approved Management Plan Amendment.</p>
UT-LN-133	<p style="text-align: center;">GREATER SAGE-GROUSE - BUFFER</p> <p>In Priority and General Habitat Management Areas (PHMA and GHMA), the BLM will apply the lek buffer-distances identified in the USGS Report Conservation Buffer Distance Estimates for Greater Sage-Grouse – A Review (Open File Report 2014-1239) in accordance with Appendix B, Applying Lek-Buffer Distances, consistent with valid and existing rights and applicable law in authorizing management actions.</p>
UT-LN-147	<p style="text-align: center;">KIT FOX HABITAT</p> <p>The lessee/operator is given notice that no surface disturbances would be allowed within 660 feet (200 meters) of an occupied natal kit fox den.</p>
UT-LN-156	<p style="text-align: center;">POLLINATORS AND POLLINATOR HABITAT</p> <p>In order to protect pollinators and pollinator habitat, in accordance with BLM policy outlined in Instruction Memorandum No. 2016-013, Managing for Pollinators on Public Lands, and Pollinator-Friendly Best Management Practices for Federal Lands (2015), the following avoidance, minimization, and mitigation measures would apply to this parcel:</p> <ol style="list-style-type: none"> 1. Give a preference for placing well pads in previously disturbed areas, dry areas that do not support forbs, or areas dominated by nonnative grasses. 2. Utilize existing well pads where feasible. 3. Avoid disturbance to native milkweed patches within Monarch migration routes to protect Monarch butterfly habitat. 4. Avoid disturbance of riparian and meadow sites, as well as small depressed areas that may function as water catchments and host nectar-

SEPTEMBER 2018 STIPULATIONS AND NOTICES

NOTICES	
	<p>producing species, to protect Monarch butterfly habitat and nectaring sites.</p> <p>5. Minimize the use of pesticides that negatively impact pollinators.</p> <p>6. During revegetation treatments:</p> <ol style="list-style-type: none"> a. Use minimum till drills where feasible. b. Include pollinator-friendly site-appropriate native plant seeds or seedlings in seed mixes. c. Where possible, increase the cover and diversity of essential habitat components for native pollinators by: <ul style="list-style-type: none"> ▪ Using site-appropriate milkweed seeds or seedlings within Monarch migration routes through priority sage-grouse habitat. ▪ Using seed mixes with annual and short-lived perennial native forbs that will bloom the first year and provide forage for pollinators. ▪ Using seed mixes with a variety of native forb species to ensure different colored and shaped flowers to provide nectar and pollen throughout the growing season for a variety of pollinators. ▪ Seeding forbs in separate rows from grasses to avoid competition during establishment. ▪ Avoiding seeding non-native forbs and grasses that establish early and out compete slower-growing natives.
UT-LN-157	<p style="text-align: center;">SAN RAFAEL SWELL SRMA</p> <p>The lessee/operator is given notice that this lease occurs within the San Rafael Swell Special Recreation Management Area (SRMA). The Price Field Office Resource Management Plan (RMP) requires the SRMA to be managed to provide the following benefits, experiences, and opportunities: undeveloped recreation tourism with portions that are destination strategy associated with OHV routes (REC-II: Within SRMAs, manage for Recreation Opportunity Spectrum (ROS), as identified in the ROS inventory. Recreation facilities will be developed only in response to resource management needs and will be appropriate to the managerial setting identified for each ROS class). Development that interferes with the SRMAs goals and objectives should be avoided to the extent practicable. Modifications to the Surface Use Plan of Operations may be required in order to protect remote, expansive, intact landscapes from surface disturbing activities in accordance with section 6 of the lease terms and 43 CFR 3110.1-2.</p>
T&E-03	<p style="text-align: center;">ENDANGERED FISH OF THE UPPER COLORADO RIVER DRAINAGE BASIN</p> <p>The Lessee/Operator is given notice that the lands in this parcel contain Critical Habitat for the Colorado River fish (bonytail, humpback chub, Colorado pike minnow, and razorback sucker) listed as endangered under the Endangered Species Act, or these parcels have watersheds that are tributary to designated habitat. Critical habitat was designated for the four endangered Colorado River</p>

SEPTEMBER 2018 STIPULATIONS AND NOTICES

NOTICES

fishes on March 21, 1994(59 FR 13374-13400). Designated critical habitat for all the endangered fishes includes those portions of the 100-year floodplain that contain primary constituent elements necessary for survival of the species. Avoidance or use restrictions may be placed on portions of the lease. The following avoidance and minimization measures have been designed to ensure activities carried out on the lease are in compliance with the Endangered Species Act. Integration of and adherence to these measures will facilitate review and analysis of any submitted permits under the authority of this lease. Following these measures could reduce the scope of Endangered Species Act, Section 7 consultation at the permit stage. Current avoidance and minimization measures include the following:

1. Surveys will be required prior to operations unless species occupancy and distribution information is complete and available. All surveys must be conducted by qualified individual(s).
2. Lease activities will require monitoring throughout the duration of the project. To ensure desired results are being achieved, minimization measures will be evaluated and, if necessary, Section 7 consultation reinitiated.
3. Water production will be managed to ensure maintenance or enhancement of riparian habitat.
4. Avoid loss or disturbance of riparian habitats.
5. Where technically and economically feasible, use directional drilling or multiple wells from the same pad to reduce surface disturbance and eliminate drilling in suitable riparian habitat. Ensure that such directional drilling does not intercept or degrade alluvial aquifers.
6. Conduct watershed analysis for leases in designated critical habitat and overlapping major tributaries in order to determine toxicity risk from permanent facilities.
7. Implement Appendix B (Hydrologic Considerations for Pipeline Crossing Stream Channels, Technical Note 423).
8. Drilling will not occur within 100 year floodplains of rivers or tributaries to rivers that contain listed fish species or critical habitat.
9. In areas adjacent to 100-year flood plains, particularly in systems prone to flash floods, analyze the risk for flash floods to impact facilities, and use closed loop drilling, and pipeline burial or suspension according to Appendix B (Hydrologic Considerations for Pipeline Crossing Stream Channels, Technical Note 423, to minimize the potential for equipment damage and resulting leaks or spills.

Water depletions from *any* portion of the Upper Colorado River drainage basin above Lake Powell are considered to adversely affect or adversely modify the critical habitat of the four resident endangered fish species, and must be evaluated with regard to the criteria described in the Upper Colorado River

SEPTEMBER 2018 STIPULATIONS AND NOTICES

NOTICES	
	<p>Endangered Fish Recovery Program. Formal consultation with USFWS is required for all depletions. All depletion amounts must be reported to BLM. Additional measures to avoid or minimize effects to the species may be developed and implemented in consultation with the U.S. Fish and Wildlife Service between the lease sale stage and lease development stage to ensure continued compliance with the ESA.</p>
T&E-05	<p style="text-align: center;">LISTED PLANT SPECIES</p> <p>The Lessee/Operator is given notice that the lands in this parcel contain suitable habitat for federally listed plant species under the Endangered Species Act. The following avoidance and minimization measures have been developed to facilitate review and analysis of any submitted permits under the authority of this lease</p> <ol style="list-style-type: none"> 1. Site inventories: <ol style="list-style-type: none"> a. Must be conducted to determine habitat suitability, b. Are required in known or potential habitat for all areas proposed for surface disturbance prior to initiation of project activities, at a time when the plant can be detected, and during appropriate flowering periods, c. Documentation should include, but not be limited to individual plant locations and suitable habitat distributions, and d. All surveys must be conducted by qualified individuals. 2. Lease activities will require monitoring throughout the duration of the project. To ensure desired results are being achieved, minimization measures will be evaluated and, if necessary, Section 7 consultation reinitiated. 3. Project activities must be designed to avoid direct disturbance to populations and to individual plants: <ol style="list-style-type: none"> a. Designs will avoid concentrating water flows or sediments into plant occupied habitat. b. Construction will occur down slope of plants and populations where feasible; if well pads and roads must be sited upslope, buffers of 300 feet minimum between surface disturbances and plants and populations will be incorporated. c. Where populations occur within 300 ft. of well pads, establish a buffer or fence the individuals or groups of individuals during and post-construction. d. Areas for avoidance will be visually identifiable in the field, e.g., flagging, temporary fencing, rebar, etc. e. For surface pipelines, use a 10 foot buffer from any plant locations: f. If on a slope, use stabilizing construction techniques to ensure the pipelines don't move towards the population.

SEPTEMBER 2018 STIPULATIONS AND NOTICES

NOTICES	
	<ol style="list-style-type: none"> 4. For riparian/wetland-associated species, e.g. Ute ladies-tresses, avoid loss or disturbance of riparian habitats. 5. Ensure that water extraction or disposal practices do not result in change of hydrologic regime. 6. Limit disturbances to and within suitable habitat by staying on designated routes. 7. Limit new access routes created by the project. 8. Place signing to limit ATV travel in sensitive areas. 9. Implement dust abatement practices near occupied plant habitat. 10. All disturbed areas will be re-vegetated with native species comprised of species indigenous to the area. 11. Post construction monitoring for invasive species will be required. 12. Where technically and economically feasible, use directional drilling or multiple wells from the same pad to reduce surface disturbance and eliminate drilling in plant habitat. Ensure that such directional drilling does not intercept or degrade alluvial aquifers. 13. Lease activities will require monitoring throughout the duration of the project. To ensure desired results are being achieved, minimization measures will be evaluated and, if necessary, Section 7 consultation reinitiated. <p>Additional measures to avoid or minimize effects to the species may be developed and implemented in consultation with the U.S. Fish and Wildlife Service between the lease sale stage and lease development stage to ensure continued compliance with the Endangered Species Act.</p>
T&E-06	<p style="text-align: center;">MEXICAN SPOTTED OWL</p> <p>The Lessee/Operator is given notice that the lands in this parcel contain suitable habitat for Mexican spotted owl, a federally listed species. The Lessee/Operator is given notice that the lands in this lease contain Designated Critical Habitat for the Mexican spotted owl, a federally listed species. Critical habitat was designated for the Mexican spotted owl on August 31, 2004 (69 FR 53181-53298). Avoidance or use restrictions may be placed on portions of the lease. Application of appropriate measures will depend whether the action is temporary or permanent, and whether it occurs within or outside the owl nesting season.</p> <p>A <u>temporary</u> action is completed prior to the following breeding season leaving no permanent structures and resulting in no permanent habitat loss. A <u>permanent</u> action continues for more than one breeding season and/or causes a loss of owl habitat or displaces owls through disturbances, i.e. creation of a permanent structure.</p> <p>The following avoidance and minimization measures have been designed to ensure activities carried out on the lease are in compliance with the Endangered Species Act. Integration of, and adherence to these measures, will facilitate</p>

SEPTEMBER 2018 STIPULATIONS AND NOTICES

NOTICES

review and analysis of any submitted permits under the authority of this lease. Following these measures could reduce the scope of Endangered Species Act, Section 7 consultation at the permit stage. Current avoidance and minimization measures include the following:

1. Surveys will be required prior to operations unless species occupancy and distribution information is complete and available. All Surveys must be conducted by qualified individual(s).
2. Assess habitat suitability for both nesting and foraging using accepted habitat models in conjunction with field reviews. Apply the conservation measures below if project activities occur within 0.5 mile of suitable owl habitat. Determine potential effects of actions to owls and their habitat.
 - a. Document type of activity, acreage and location of direct habitat impacts, type and extent of indirect impacts relative to location of suitable owl habitat.
 - b. Document if action is temporary or permanent.
3. Lease activities will require monitoring throughout the duration of the project. To ensure desired results are being achieved, minimization measures will be evaluated and, if necessary, Section 7 consultation reinitiated.
4. Water production will be managed to ensure maintenance or enhancement of riparian habitat.
5. Where technically and economically feasible, use directional drilling or multiple wells from the same pad to reduce surface disturbance and eliminate drilling in canyon habitat suitable for Mexican spotted owl nesting.
6. For all temporary actions that may impact owls or suitable habitat:
 - a. If the action occurs entirely outside of the owl breeding season (March 1 – August 31), and leaves no permanent structure or permanent habitat disturbance, action can proceed without an occupancy survey.
 - b. If action will occur during a breeding season, survey for owls prior to commencing activity. If owls are found, activity must be delayed until outside of the breeding season.
 - c. Rehabilitate access routes created by the project through such means as raking out scars, re-vegetation, gating access points, etc.
7. For all permanent actions that may impact owls or suitable habitat:
 - a. Survey two consecutive years for owls according to accepted protocol prior to commencing activities.
 - b. If owls are found, no actions will occur within 0.5 mile of identified nest site. If nest site is unknown, no activity will occur within the designated Protected Activity Center (PAC).
 - c. Avoid drilling and permanent structures within 0.5 mi of suitable habitat unless surveyed and not occupied.

SEPTEMBER 2018 STIPULATIONS AND NOTICES

NOTICES	
	<p>d. Reduce noise emissions (e.g., use hospital-grade mufflers) to 45 dBA at 0.5 mile from suitable habitat, including canyon rims. Placement of permanent noise-generating facilities should be determined by a noise analysis to ensure noise does not encroach upon a 0.5 mile buffer for suitable habitat, including canyon rims.</p> <p>e. Limit disturbances to and within suitable habitat by staying on approved routes.</p> <p>f. Limit new access routes created by the project.</p> <p>Additional measures to avoid or minimize effects to the species may be developed and implemented in consultation with the U.S. Fish and Wildlife Service between the lease sale stage and lease development stage to ensure continued compliance with the Endangered Species Act.</p>
T&E-10	<p style="text-align: center;">CANADA LYNX</p> <p>The Lessee/Operator is given notice that the lands in this parcel contain potential habitat for Canada lynx, a federally listed species. Avoidance or use restrictions may be placed on portions of the lease. Application of appropriate measures will depend on the nature of the proposed development, as well as proposed timing and location. The following avoidance and minimization measures have been designed to ensure activities carried out on the lease are in compliance with the Endangered Species Act. Integration of, and adherence to these measures will facilitate review and analysis of any submitted permits under the authority of this lease. Following these measures could reduce the scope of Endangered Species Act, Section 7 consultation at the permit stage. Current avoidance and minimization measures are generally adapted from the standards and guidelines listed in Chapter 7 (Conservation Measures) of the LCAS (Ruediger 2000) and include the following:</p> <ol style="list-style-type: none"> 1. Surveys will be required prior to operations unless species occupancy and distribution information is complete and available. All Surveys must be conducted by qualified individual(s), and be conducted according to protocol. 2. Based on data and information gathered in item 1, lease activities within, or in proximity to, occupied lynx habitats will require monitoring throughout the duration of the project. To ensure desired results are being achieved, minimization measures will be evaluated and, if necessary, Section 7 consultation reinitiated. 3. Avoid all surface disturbing actions within occupied denning habitat. 4. Avoid construction and surface disturbing actions in proximity to potential denning habitat during the breeding season (mid-April to July). 5. Activities involved with routine maintenance and operation will only occur during daytime hours, when lynx are least active. 6. Where technically and economically feasible, wells will be remotely monitored within lynx habitat. 7. Limit disturbance to and within suitable habitat by staying on approved

SEPTEMBER 2018 STIPULATIONS AND NOTICES

NOTICES	
	<p>access routes.</p> <ol style="list-style-type: none"> 8. Limit new access routes created by the project. 9. Dirt and gravel roads traversing lynx habitat (particularly those that could become highways) should not be paved or otherwise upgraded (e.g., straightening of curves, widening of roadway etc.) in a manner that is likely to lead to significant increases in traffic volume, traffic speed, increased width of the cleared ROW, or would foreseeably contribute to development or increases in human activity in lynx habitat. When these types of upgrades are proposed, a thorough analysis of potential direct and indirect impacts to lynx and lynx habitat should be conducted. 10. Minimize impacts to habitats that support lynx prey. 11. Where technically and economically feasible, use directional drilling or multiple wells from the same pad to reduce surface disturbance and to minimize or eliminate drilling in suitable lynx habitat. <p>Additional measures may also be employed to avoid or minimize effects to the species at the development stage and will be developed and implemented in consultation with the U.S. Fish and Wildlife Service to ensure continued compliance with the Endangered Species Act.</p>
T&E-15	<p style="text-align: center;">WRIGHT FISHHOOK CACTUS (<i>SCLEROCACTUS WRIGHTIAE</i>)</p> <p>In order to minimize effects to the federally threatened Wright Fishhook Cactus, the Bureau of Land Management (BLM), in coordination with the U.S. Fish and Wildlife Service (Service), has developed the following avoidance and minimization measures. Implementation of these measures will help ensure the activities carried out during oil and gas development (including but not limited to drilling, production, and maintenance operations) are in compliance with the endangered Species Act (ESA). For the purposes of this document, the following terms are so defined: <i>Potential habitat</i> is defined as areas which satisfy the broad criteria of the species habitat description; usually determined by preliminary, in-house assessment. <i>Suitable habitat</i> is defined as areas which contain or exhibit the specific components or constituents necessary for plant persistence; determined by field inspection and/or surveys; may or may not contain Wright Fishhook Cactus; habitat descriptions can be found in Federal Register Notice and species recovery plan links at <http://www.fws.gov/endangered/wildlife.html>. <i>Occupied habitat</i> is defined as areas currently or historically known to support Wright Fishhook Cactus; synonymous with “known habitat.” The following avoidance and minimization measures should be included in the Plan of Development:</p> <ol style="list-style-type: none"> 1. Pre-project habitat assessments will be completed across 100% of the project disturbance area within potential habitat¹ prior to any ground disturbing activities (including ATV use) to determine if suitable Wright Fishhook Cactus habitat is present. 2. Site inventories will be conducted within suitable habitat to determine occupancy. Where standard surveys are technically infeasible and

SEPTEMBER 2018 STIPULATIONS AND NOTICES

NOTICES

otherwise hazardous due to topography, slope, etc. suitable habitat will be assessed and mapped for avoidance (hereafter, “avoidance areas”); in such cases, in general, 300’ buffers will be maintained between surface disturbance and avoidance areas. However, site-specific distances will need to be approved by FWS and BLM when disturbance will occur upslope of habitat. Where conditions allow, inventories:

- a. Must be conducted by qualified individuals(s) and according to BLM and Service accept survey protocols,
 - b. Will be conducted in suitable and occupied habitat for all areas proposed for surface disturbance prior to initiation of project activities and within the same growing season, at a time when the plant can be detected (usually April 15th to June 5th, however, surveyors should verify that the plant is flowering by contacting a BLM or FWS botanist or demonstrating that the nearest known population is in flower),
 - c. Will occur within 300’ from the centerline of the proposed right-of-way for surface pipelines or roads; and within 300’ from the perimeter of disturbance for the proposed well pad including the well pad,
 - d. Will include, but not be limited to, plant species lists and habitat characteristics, and
 - e. Will be valid until April 15th the following year.
3. Design project infrastructure to minimize impacts within suitable habitat:
- a. Where standard surveys are technically infeasible, infrastructure and activities will avoid all suitable habitat (avoidance areas) and incorporate 300’ buffers, in general; however, site-specific distances will need to be approved by FWS and BLM when disturbance will occur upslope of habitat,
 - b. Reduce well pad size to the minimum needed, without compromising safety,
 - c. Where technically and economically feasible, use directional drilling or multiple wells from the same pad,
 - d. Limit new access routes created by the project,
 - e. Roads and utilities should share common right-of-ways where possible,
 - f. Reduce the width of right-of-ways and minimize the depth of excavation needed for the road bed; where feasible, use the natural ground surface for the road within habitat,
 - g. Place signing to limit off-road travel in sensitive areas, and
 - h. Stay on designated routes and other cleared/approved areas,
 - i. All disturbed areas will be revegetated with native species comprised of species indigenous to the area and non-native species that are not likely to invade other areas.

SEPTEMBER 2018 STIPULATIONS AND NOTICES

NOTICES

4. Within occupied habitat, project infrastructure will be designed to avoid direct disturbance and minimize indirect impacts to populations and to individual plants:
 - a. Follow the above recommendations (3.) for project design within suitable habitats,
 - b. To avoid water flow and/or sedimentation into occupied habitat and avoidance areas, silt fences, hay bales, and similar structures or practices will be incorporated into the project design; appropriate placement of fill is encouraged,
 - c. Construction of roads will occur such that the edge of the right of way is at least 300' from any plant and 300' from avoidance areas,
 - d. Roads will be graveled with occupied habitat; the operator is encouraged to apply water for dust abatement to such areas from April 15th to June 5th (flowering period); dust abatement applications will be comprised of water only,
 - e. The edge of the well pad should be located at least 300' away from plants and avoidance areas, in general; however, site-specific distances will need to be approved by FWS and BLM when disturbance will occur upslope of habitat,
 - f. Surface pipelines will be laid such that a 300' buffer exists between the edge of the right of way and plants and 300' between the edge of right of way and avoidance areas; use stabilizing and anchoring techniques when the pipeline crossed suitable habitat to ensure pipelines don't move towards the population; site-specific distances will need to be approved by FWS and BLM when disturbance will occur upslope of habitat,
 - g. Construction activities will not occur from April 15th through June 5th within occupied habitat,
 - h. Before and during construction, areas for avoidance should be visually identifiable in the field, e.g., flagging temporary fencing, rebar, etc.,
 - i. Place produced oil, water, or condensate tanks in centralized locations, away from occupied habitat, and
 - j. Minimize the disturbed area of producing well locations through interim and final reclamation. Reclaim well pads following drilling to the smallest area possible.
5. Occupied Wright Fishhook Cactus habitats within 300' of the edge of the surface pipelines' right-of-ways, 300' of the edge of the roads' right-of-ways, and 300' from the edge of the well pad shall be monitored for a period of three years after ground disturbing activities. Monitoring will include annual plant surveys to determine plant and habitat impacts relative to project facilities. Annual reports shall be provided to the BLM and the Service. To ensure desired results are being achieved, minimization measures will be evaluated and may be changed after a

SEPTEMBER 2018 STIPULATIONS AND NOTICES

NOTICES	
	<p>thorough review of the monitoring results and annual reports during annual meetings between the BLM and the Service.</p> <p>6. Re-initiation of section 7 consultation with the Service will be sought immediately if any loss of plants or occupied habitat for the Wright Fishhook Cactus is anticipated as a result of project activities.</p> <p>Additional site-specific measures may also be employed to avoid or minimize effects to the species. These additional measures will be developed and implemented in consultation with the U.S. Fish and Wildlife Service to ensure continued compliance with the ESA.</p>
T&E-19	<p style="text-align: center;">JONES CYCLADENIA (<i>CYCLADENIA HYMILIS VAR JONESII</i>)</p> <p>In order to minimize effects to the federally threatened Jones Cycladenia, the Bureau of Land Management (BLM), in coordination with the U.S. Fish and Wildlife Service (Service), has developed the following avoidance and minimization measures. Implementation of these measures will help ensure the activities carried out during oil and gas development (including but not limited to drilling, production, and maintenance operations) are in compliance with the endangered Species Act (ESA). For the purposes of this document, the following terms are so defined: <i>Potential habitat</i> is defined as areas which satisfy the broad criteria of the species habitat description; usually determined by preliminary, in-house assessment. <i>Suitable habitat</i> is defined as areas which contain or exhibit the specific components or constituents necessary for plant persistence; determined by field inspection and/or surveys; may or may not contain Jones Cycladenia; habitat descriptions can be found in Federal Register Notice and species recovery plan links at http://www.fws.gov/endangered/wildlife.html. <i>Occupied habitat</i> is defined as areas currently or historically known to support Jones Cycladenia; synonymous with “known habitat.” The following avoidance and minimization measures should be included in the Plan of Development:</p> <ol style="list-style-type: none"> 1. Pre-project habitat assessments will be completed across 100% of the project disturbance area within potential habitat¹ prior to any ground disturbing activities (including ATV use) to determine if suitable Jones Cycladenia habitat is present. 2. Site inventories will be conducted within suitable habitat to determine occupancy. Where standard surveys are technically infeasible and otherwise hazardous due to topography, slope, etc. suitable habitat will be assessed and mapped for avoidance (hereafter, “avoidance areas”); in such cases, in general, 300’ buffers will be maintained between surface disturbance and avoidance areas. However, site-specific distances will need to be approved by FWS and BLM when disturbance will occur upslope of habitat. Where conditions allow, inventories: <ol style="list-style-type: none"> a. Must be conducted by qualified individuals(s) and according to BLM and Service accept survey protocols, b. Will be conducted in suitable and occupied habitat for all areas proposed for surface disturbance prior to initiation of project activities

SEPTEMBER 2018 STIPULATIONS AND NOTICES

NOTICES

- and within the same growing season, at a time when the plant can be detected (usually April 15th to June 5th, however, surveyors should verify that the plant is flowering by contacting a BLM or FWS botanist or demonstrating that the nearest known population is in flower),
- c. Will occur within 300' from the centerline of the proposed right-of-way for surface pipelines or roads; and within 300' from the perimeter of disturbance for the proposed well pad including the well pad,
 - d. Will include, but not be limited to, plant species lists and habitat characteristics, and
 - e. Will be valid until April 15th the following year.
3. Design project infrastructure to minimize impacts within suitable habitat:
- a. Where standard surveys are technically infeasible, infrastructure and activities will avoid all suitable habitat (voidance areas) and incorporate 300' buffers, in general; however, site-specific distances will need to be approved by FWS and BLM when disturbance will occur upslope of habitat,
 - b. Reduce well pad size to the minimum needed, without compromising safety,
 - c. Where technically and economically feasible, use directional drilling or multiple wells from the same pad,
 - d. Limit new access routes created by the project,
 - e. Roads and utilities should share common right-of-ways where possible,
 - f. Reduce the width of right-of-ways and minimize the depth of excavation needed for the road bed; where feasible, use the natural ground surface for the road within habitat,
 - g. Place signing to limit off-road travel in sensitive areas, and
 - h. Stay on designated routes and other cleared/approved areas,
 - i. All disturbed areas will be re-vegetated with native species comprised of species indigenous to the area and non-native species that are not likely to invade other areas.
4. Within occupied habitat, project infrastructure will be designed to avoid direct disturbance and minimize indirect impacts to populations and to individual plants:
- a. Follow the above recommendations (3.) for project design within suitable habitats,
 - b. To avoid water flow and/or sedimentation into occupied habitat and avoidance areas, silt fences, hay bales, and similar structures or practices will be incorporated into the project design; appropriate placement of fill is encouraged,
 - c. Construction of roads will occur such that the edge of the right of way is at least 300' from any plant and 300' from avoidance areas,

SEPTEMBER 2018 STIPULATIONS AND NOTICES

NOTICES

- d. Roads will be graveled with occupied habitat; the operator is encouraged to apply water for dust abatement to such areas from April 15th to June 5th (flowering period); dust abatement applications will be comprised of water only,
 - e. The edge of the well pad should be located at least 300' away from plants and avoidance areas, in general; however, site-specific distances will need to be approved by FWS and BLM when disturbance will occur upslope of habitat,
 - f. Surface pipelines will be laid such that a 300' buffer exists between the edge of the right of way and plants and 300' between the edge of right of way and avoidance areas; use stabilizing and anchoring techniques when the pipeline crossed suitable habitat to ensure pipelines don't move towards the population; site-specific distances will need to be approved by FWS and BLM when disturbance will occur upslope of habitat,
 - g. Construction activities will not occur from April 15th through June 5th within occupied habitat,
 - h. Before and during construction, areas for avoidance should be visually identifiable in the field, e.g., flagging temporary fencing, rebar, etc.,
 - i. Place produced oil, water, or condensate tanks in centralized locations, away from occupied habitat, and
 - j. Minimize the disturbed area of producing well locations through interim and final reclamation. Reclaim well pads following drilling to the smallest area possible.
5. Occupied Jones Cycladenia habitats within 300' of the edge of the surface pipelines' right-of-ways, 300' of the edge of the roads' right-of-ways, and 300' from the edge of the well pad shall be monitored for a period of three years after ground disturbing activities. Monitoring will include annual plant surveys to determine plant and habitat impacts relative to project facilities. Annual reports shall be provided to the BLM and the Service. To ensure desired results are being achieved, minimization measures will be evaluated and may be changed after a thorough review of the monitoring results and annual reports during annual meetings between the BLM and the Service.
 6. Re-initiation of section 7 consultation with the Service will be sought immediately if any loss of plants or occupied habitat for the Jones Cycladenia is anticipated as a result of project activities.
- Additional site-specific measures may also be employed to avoid or minimize effects to the species. These additional measures will be developed and implemented in consultation with the U.S. Fish and Wildlife Service to ensure continued compliance with the ESA.

SEPTEMBER 2018 STIPULATIONS AND NOTICES

T&E-31	<p style="text-align: center;">WESTERN YELLOW-BILLED CUCKOO</p> <p>The Lessee/Operator is given notice that the lands in or adjacent to this parcel contain potentially suitable habitat that falls within the range for western yellow-billed cuckoo, a federally listed species. Avoidance or use restrictions may be placed on portions of the lease. Application of appropriate measures will depend upon whether the action is temporary or permanent, and whether it occurs within or outside the breeding and nesting season. A temporary action is completed prior to the following breeding season leaving no permanent structures and resulting in no permanent habitat loss. A permanent action could continue for more than one breeding season and/or cause a loss of habitat or displace western yellow-billed cuckoos through disturbances. The following avoidance and minimization measures have been designed to ensure activities carried out on the lease are in compliance with the Endangered Species Act. Integration of, and adherence to, these measures will facilitate review and analysis of any submitted permits under the authority of this lease. Following these measures could reduce the scope of Endangered Species Act, Section 7 consultation at the permit stage. Avoidance and minimization measures include the following:</p> <ol style="list-style-type: none">1. Habitat suitability within, and within a 0.5-mile buffer, of the proposed project analysis area will be identified prior to lease development to identify potential survey needs.2. If suitable or proposed critical habitat is present, protocol Breeding Season Surveys will be required within, and within 0.5-mile buffer, of the proposed project analysis area prior to operations unless species occupancy and distribution information is complete and available. All Surveys must be conducted by permitted individual(s), and be conducted according to protocol.3. For all temporary actions that may impact cuckoo or suitable habitat:<ol style="list-style-type: none">a. If action occurs entirely outside of the cuckoo breeding season (June 1 – Aug 31), and leaves no structure or habitat disturbance, action can proceed without a presence/absence survey.b. If action is proposed between June 1 and August 31, presence/absence surveys for cuckoo will be conducted prior to commencing activity. If cuckoo are detected, activity should be delayed until September 1. The cuckoo survey protocol requires four surveys across the breeding season to conclude absence, thus the survey cannot conclude absence of cuckoos until mid-August.c. Eliminate access routes created by the project through such means as raking out scars, revegetation, gating access points, etc.4. For all permanent actions that may impact cuckoo or suitable habitat:<ol style="list-style-type: none">a. Habitat suitability within and within a 0.5-mile buffer of the proposed project analysis area will be identified prior to lease development to identify potential survey needs.b. Protocol level surveys by permitted individuals will be conducted within, or within a 0.5-mile buffer, of the proposed project analysis area prior to commencing activities.
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SEPTEMBER 2018 STIPULATIONS AND NOTICES

NOTICES	
	<ul style="list-style-type: none">c. Avoid drilling and permanent structures within 0.5 miles of suitable or proposed critical habitat unless absence is determined according to protocol level surveys conducted by permitted individual(s).d. During construction and operation phases of the project, ensure noise levels at the edge of suitable habitat do not exceed baseline conditions. Placement of permanent noise-generating facilities should be determined by a noise analysis. <ol style="list-style-type: none">5. Temporary or permanent actions will require monitoring throughout the duration of the project to ensure that western yellow-billed cuckoo or its habitat is not affected in a manner or to an extent not previously considered. Avoidance and minimization measures will be evaluated throughout the duration of the project.6. Water produced as a by-product of drilling or pumping will be managed to ensure maintenance or enhancement of riparian habitat.7. Where technically and economically feasible, use directional drilling or multiple wells from the same pad to reduce surface disturbance and eliminate drilling in suitable habitat. Ensure that such directional drilling does not intercept or degrade alluvial aquifers.8. Ensure that water extraction or disposal practices do not result in change of hydrologic regime that would result in loss or degradation of riparian habitat.9. Re-vegetate with native species, where possible, all areas of surface disturbance within riparian areas and/or adjacent uplands. <p>Additional measures to avoid or minimize effects to the species may be developed and implemented in consultation with the U.S. Fish and Wildlife Service between the lease sale stage and lease development stage to ensure continued compliance with the ESA.</p>