



United States Department of the Interior



BUREAU OF LAND MANAGEMENT

Utah State Office

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<http://www.blm.gov/ut/st/en.html>

NOV 16 2015

IN REPLY REFER TO:
UT-933/3100/6840

Memorandum

To: Larry Crist, Field Manager, US Fish & Wildlife Service

From: Kent Hoffman, Deputy State Director, Lands and Minerals

Subject: Informal Section 7 Consultation and Conference on November 2015 Oil and Gas Lease Sale

The Utah Bureau of Land Management (BLM) is preparing to conduct a quarterly oil and gas lease sale on November 17, 2015. It is anticipated that 51 lease parcels will be offered for sale. The parcels being considered for sale are found on public lands administered by the West Desert District Office (Fillmore Field Office) and the Green River District Office (Vernal and Price Field Offices). The parcels are located in Juab, Carbon, Uintah, Grand, Emery, and Duchesne Counties. One hundred eighty seven (187) parcels considered for sale have been deferred for a variety of reasons and are not considered in this consultation.

Consultation History

BLM previously consulted with US Fish and Wildlife Service (FWS) on the oil and gas lease sale program in 2006. This statewide consultation resulted in the development of specific lease notices for individual listed plant and animal species. More recently, programmatic consultation occurred during the revision of six land use plans during which the lease notices were updated. These notices were included in the Biological Assessments as part of the committed mitigation that would accompany individual plan implementation. Additional updates and revisions on the lease notices continue to occur as necessary. The stipulations and notices associated with this lease sale are based on the decisions contained in the Price and Vernal Resource Management Plans that were completed in October, 2008 and the 1987 House Range Resource Area (HRRRA) Resource Management Plan and Record of Decision as amended and supplemented including the *HRRRA Oil and Gas Leasing Implementation EA* completed in 2009. However, the nine lease parcels located on lands administered by the Fillmore Field Office are not located in or near threatened or endangered species habitat; therefore, these parcels are not considered further in this memorandum.

BLM field biologists and botanists have carefully reviewed the parcels being offered for the upcoming sale. The appropriate environmental analysis (EA) work has been completed including an evaluation of potential impacts to listed threatened and endangered species. These EAs can be viewed on Utah BLM's public web site. As part of an informal consultation process,

coordination on these leases has occurred with local FWS personnel. Lease parcel data including shape files and identification numbers have been made available to your office.

Other listed species occur in the six counties where the lease parcels are located. They are not discussed here because they do not occur within or near any of the parcels and BLM does not anticipate that they would be affected by the issuance and development of any of the leases. No parcels containing greater sage grouse habitat are being considered for this sale.

Based on the best available information, the following actions have been taken on the individual parcels that may contain listed species or their habitat being considered for the May lease sale.

Listed Plant and Animal Species

All 51 lease parcels contain an Endangered Species Act stipulation (See Attachment 1). This stipulation puts potential lease holders on notice that the parcels may contain listed plant and animal species or their habitat and that modifications to exploration and development proposals may be required. Certain proposed activities may be disapproved. Additional consultation with FWS may be required.

Listed Species (Plants)

BLM has determined that habitat for three listed plant species may occur in or near 20 of the proposed lease parcels.

Last Chance Townsendia

BLM has determined that 17 lease parcels located in Emery County may contain habitat for the listed Last Chance townsendia. The parcels potentially containing townsendia habitat are UT-1115-068, UT-1115-069, UT-1115-071, UT-1115-086, UT-1115-087, UT-1115-089, UT-1115-090, UT-1115-091, UT-1115-092, UT-1115-093, UT-1115-094, UT-1115-095, UT-1115-096, UT-1115-097, UT-1115-098, UT-1115-100, and UT-1115-101. Development of these leases may affect this species and its habitat; therefore a Last Chance townsendia lease notice has been attached to these parcels.

Wright Fishhook Cactus

BLM has determined that 15 lease parcels located in Emery County may contain habitat for the listed Wright fishhook cactus. The parcels potentially containing the cactus are UT-1115-071, UT-1115-086, UT-1115-087, UT-1115-089, UT-1115-090, UT-1115-091, UT-1115-092, UT-1115-093, UT-1115-094, UT-1115-095, UT-1115-096, UT-1115-097, UT-1115-098, UT-1115-100, and UT-1115-101. Development of these leases may affect this species and its habitat; therefore a Wright fishhook cactus lease notice has been attached to these parcels.

San Rafael Cactus

BLM has determined that 23 lease parcels located in Emery County may contain habitat for the listed San Rafael cactus. The parcels potentially containing the cactus are UT-1115-68, UT-1115-069, UT-1115-086, UT-1115-087, UT-1115-089, UT-1115-090, UT-1115-091, UT-1115-092, UT-1115-093, UT-1115-094, UT-1115-095, UT-1115-096, UT-1115-097, UT-1115-098, UT-1115-100, UT-1115-101, UT-1115-112, UT-1115-115, UT-1115-116, UT-1115-151, UT-1115-152, UT-1115-156, and UT-1115-182. Development of these leases may affect this species and its habitat; therefore a San Rafael cactus lease notice has been attached to these parcels.

Listed Species (Animals)

The endangered fish of the upper Colorado River drainage basin and the Mexican spotted owl

are known or could potentially occur in or near 16 of the potential lease parcels as discussed below.

Endangered Fish of the Upper Colorado River Drainage Basin

BLM has determined that 14 lease parcels located in Carbon, Uintah, and Grand Counties may contain habitat for the listed Colorado River fish. The parcels potentially containing fish habitat are UT-1115-006, UT-1115-014, UT-1115-016, UT-1115-040, UT-1115-058, UT-1115-062, UT-1115-065, UT-1115-066, UT-1115-151, UT-1115-178, IT-1115-179, UT-1115-210, UT-1115-220, and UT-1115-222. Development of these leases may affect the species and its habitat; therefore an Endangered Colorado fish lease stipulation has been attached to these parcels.

Mexican Spotted Owl

BLM has determined that eight leases located in Grand, Duchesne, and Emery Counties may contain habitat for the Mexican spotted owl. Parcels potentially containing owl habitat are UT-1115-058, UT-1115-062, UT-1115-065, UT-1115-066, UT-1115-086, UT-1115-115, UT-1115-116, and UT-1115-210. Development of these leases may affect the species and its habitat; therefore a Mexican spotted owl lease stipulation has been attached to these parcels.

Summary

BLM has determined that no designated critical habitat or proposed designated critical habitat for any of the listed species discussed above is located on any of the parcels proposed for sale. Therefore, no determination regarding designated critical habitat has been made.

In addition to the measures specifically addressing individual listed species, additional notices and stipulations are attached to the lease parcels that will assist in the protection of listed species and their habitats. These include water and watershed protection, no surface occupancy stipulations on floodplains, riparian areas, springs, and public water resources; no surface occupancy or controlled surface use on fragile and steep slopes; timing limitations in big game winter range, fawning and calving habitat; drinking water source and shallow ground water protection zones, etc. Implementation of all of these measures will assist in the management of the listed species that may occur on any of the lease parcels. Copies of these additional notices are available for your review upon request.

The remaining oil and gas lease parcels being offered for do not contain listed species or suitable habitat for any listed species. Further, BLM does not anticipate that the issuance of any of these remaining leases would have any impact on any listed species or their habitat. Therefore, they are not considered in this document. None of the lease parcels are located in greater sage grouse General Habitat or Priority Habitat Management Areas.

Based on the analysis contained in the Price and Vernal Field Office Environmental Assessments completed for this lease sale and the implementation of the lease stipulations and notices identified in this memorandum, BLM determines that the sale of the parcels discussed above may affect but not likely adversely affect the aforementioned listed species due to insignificant or discountable impacts.

Maps showing all the locations of the potential lease sale parcels and the above referenced lease notices are available for review on the Utah BLM Internet Oil and Gas leasing site.

BLM is now requesting concurrence on this final determination. Any questions or concerns should be directed to Ron Bolander at 801-539-4065 or rbolande@blm.gov. Thank you your assistance in this effort.

Attachment 1: Lease notices and stipulations

cc: Vernal, Price, and Fillmore Field Offices
Ronald Bolander, Utah State Office

Attachment 1:

Utah Stipulations and Notices

Price Field Office

LEASE STIPULATIONS

WO IM 2002-174 ENDANGERED SPECIES ACT

The lease area may now or hereafter contain plants, animals, or their habitats determined to be threatened, endangered, or other special status species. BLM may recommend modifications to exploration and development proposals to further its conservation and management objective to avoid BLM-approved activity that would contribute to a need to list such a species or their habitat. BLM may require modifications to or disapprove proposed activity that is likely to result in jeopardy to the continued existence of a proposed or listed threatened or endangered species or result in the destruction or adverse modification of a designated or proposed critical habitat. BLM will not approve any ground disturbing activity until it completes its obligations under applicable requirements of the ESA as amended, 16 United States Code (USC) 1531 et seq. including completion of any required procedure for conference or consultation.

LEASE NOTICES

UT-LN-49 ALL OFFICES UTAH SENSITIVE SPECIES

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.

T&E-03

Price Vernal

ENDANGERED FISH OF THE UPPER COLORADO RIVER DRAINAGE BASIN

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 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: 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). 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. Water production will be managed to ensure maintenance or enhancement of riparian habitat. Avoid loss or disturbance of riparian habitats. 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. Conduct watershed analysis for leases in designated critical habitat and overlapping major tributaries in order to determine toxicity risk from permanent facilities. Implement Appendix B (Hydrologic Considerations for Pipeline Crossing Stream Channels, Technical Note 423). Drilling will not occur within 100 year floodplains of rivers or tributaries to rivers that contain listed fish species or critical habitat. 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 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.

T&E-05

LISTED PLANT SPECIES

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

Site inventories:

Must be conducted to determine habitat suitability,

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,

Documentation should include, but not be limited to individual plant locations and suitable habitat distributions, and

All surveys must be conducted by qualified individuals.

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.

Project activities must be designed to avoid direct disturbance to populations and to individual plants:

Designs will avoid concentrating water flows or sediments into plant occupied habitat. 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.

Where populations occur within 300 ft. of well pads, establish a buffer or fence the individuals or groups of individuals during and post-construction.

Areas for avoidance will be visually identifiable in the field, e.g., flagging, temporary fencing, rebar, etc.

For surface pipelines, use a 10 foot buffer from any plant locations:

If on a slope, use stabilizing construction techniques to ensure the pipelines don't move towards the population.

For riparian/wetland-associated species, e.g. Ute ladies-tresses, avoid loss or disturbance of riparian habitats.

Ensure that water extraction or disposal practices do not result in change of hydrologic regime.

Limit disturbances to and within suitable habitat by staying on designated routes.

Limit new access routes created by the project.

Place signing to limit ATV travel in sensitive areas.

Implement dust abatement practices near occupied plant habitat.

All disturbed areas will be re-vegetated with native species comprised of species indigenous to the area.

Post construction monitoring for invasive species will be required.

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.

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.

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.

T&E-06

MEXICAN SPOTTED OWL

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.

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 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.

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:

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).

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.

Document type of activity, acreage and location of direct habitat impacts, type and extent of indirect impacts relative to location of suitable owl habitat.

Document if action is temporary or permanent.

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.

Water production will be managed to ensure maintenance or enhancement of riparian habitat. 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.

For all temporary actions that may impact owls or suitable habitat:

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.

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.

Rehabilitate access routes created by the project through such means as raking out scars, revegetation,

gating access points, etc.

For all permanent actions that may impact owls or suitable habitat:

Survey two consecutive years for owls according to accepted protocol prior to commencing activities.

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).

Avoid drilling and permanent structures within 0.5 mi of suitable habitat unless surveyed and not occupied.

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.

Limit disturbances to and within suitable habitat by staying on approved routes.

Limit new access routes created by the project.

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.

T&E-14

LAST CHANCE TOWNSENDIA (TOWNSENDIA APRICA)

In order to minimize effects to the federally threatened Last Chance Townsendia, 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: Potential habitat is defined as areas which satisfy the broad criteria of the species habitat description; usually determined by preliminary, in-house assessment. Suitable habitat 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 Last Chance Townsendia; habitat descriptions can be found in Federal Register Notice and species recovery plan links at <http://www.fws.gov/endangered/wildlife.html>. Occupied habitat is defined as areas currently or historically known to support Last Chance Townsendia; synonymous with "known habitat." The following avoidance and minimization measures should be included in the Plan of Development:

Pre-project habitat assessments will be completed across 100% of the project disturbance area within potential habitat prior to any ground disturbing activities (including ATV use) to determine if suitable Last Chance Townsendia habitat is present.

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:

Must be conducted by qualified individuals(s) and according to BLM and Service accept survey protocols,

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),

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,

Will include, but not be limited to, plant species lists and habitat characteristics, and

Will be valid until April 15th the following year.

Design project infrastructure to minimize impacts within suitable habitat:

Where standard surveys are technically infeasible, infrastructure and activities will avoid all suitable habitat (avoidance areas) and incorporate 300' buffers, in general; however, sitespecific distances will need to be approved by FWS and BLM when disturbance will occur upslope of habitat,

Reduce well pad size to the minimum needed, without compromising safety,

Where technically and economically feasible, use directional drilling or multiple wells from the same pad,

Limit new access routes created by the project,
Roads and utilities should share common right-of-ways where possible,
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,
Place signing to limit off-road travel in sensitive areas, and
Stay on designated routes and other cleared/approved areas,
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.
Within occupied habitat, project infrastructure will be designed to avoid direct disturbance and minimize indirect impacts to populations and to individual plants:
Follow the above recommendations (#3) for project design within suitable habitats,
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,
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,
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,
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,
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,
Construction activities will not occur from April 15th through June 5th within occupied habitat,
Before and during construction, areas for avoidance should be visually identifiable in the field, e.g., flagging temporary fencing, rebar, etc.,
Place produced oil, water, or condensate tanks in centralized locations, away from occupied habitat, and
Minimize the disturbed area of producing well locations through interim and final reclamation. Reclaim well pads following drilling to the smallest area possible.
Occupied Last Chance Townsendia 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.
Re-initiation of section 7 consultation with the Service will be sought immediately if any loss of plants or occupied habitat for the Last Chance Townsendia 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.

WRIGHT FISHHOOK CACTUS (SCLEROCACTUS WRIGHTIAE)

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: Potential habitat is defined as areas which satisfy the broad criteria of the species habitat description; usually determined by preliminary, in-house assessment. Suitable habitat 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>>. Occupied habitat 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:

Pre-project habitat assessments will be completed across 100% of the project disturbance area within potential habitat prior to any ground disturbing activities (including ATV use) to determine if suitable Wright Fishhook Cactus habitat is present.

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:

Must be conducted by qualified individuals(s) and according to BLM and Service accept survey protocols,

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),

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,

Will include, but not be limited to, plant species lists and habitat characteristics, and

Will be valid until April 15th the following year.

Design project infrastructure to minimize impacts within suitable habitat:

Where standard surveys are technically infeasible, infrastructure and activities will avoid all suitable habitat (avoidance areas) and incorporate 300' buffers, in general; however, sitespecific distances will need to be approved by FWS and BLM when disturbance will occur upslope of habitat,

Reduce well pad size to the minimum needed, without compromising safety,

Where technically and economically feasible, use directional drilling or multiple wells from

the same pad,
Limit new access routes created by the project,
Roads and utilities should share common right-of-ways where possible,
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,
Place signing to limit off-road travel in sensitive areas, and
Stay on designated routes and other cleared/approved areas,
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.
Within occupied habitat, project infrastructure will be designed to avoid direct disturbance and minimize indirect impacts to populations and to individual plants:
Follow the above recommendations (#3) for project design within suitable habitats,
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,
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,
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,
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,
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,
Construction activities will not occur from April 15th through June 5th within occupied habitat,
Before and during construction, areas for avoidance should be visually identifiable in the field, e.g., flagging temporary fencing, rebar, etc.,
Place produced oil, water, or condensate tanks in centralized locations, away from occupied habitat, and
Minimize the disturbed area of producing well locations through interim and final reclamation. Reclaim well pads following drilling to the smallest area possible.
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 thorough review of the monitoring results and annual reports during annual meetings between the BLM and the Service.
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. 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.

T&E-17

SAN RAFAEL CACTUS (PEDIOCACTUS DESPAINII)

In order to minimize effects to the federally threatened San Rafael 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: Potential habitat is defined as areas which satisfy the broad criteria of the species habitat description; usually determined by preliminary, in-house assessment. Suitable habitat 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 San Rafael Cactus; habitat descriptions can be found in Federal Register Notice and species recovery plan links at <<http://www.fws.gov/endangered/wildlife.html>>. Occupied habitat is defined as areas currently or historically known to support San Rafael Cactus; synonymous with "known habitat." The following avoidance and minimization measures should be included in the Plan of Development:

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 San Rafael Cactus habitat is present.

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:

Must be conducted by qualified individuals(s) and according to BLM and Service accept survey protocols,

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),

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,

Will include, but not be limited to, plant species lists and habitat characteristics, and

Will be valid until April 15th the following year.

Design project infrastructure to minimize impacts within suitable habitat:

Where standard surveys are technically infeasible, infrastructure and activities will avoid all suitable habitat (voidance areas) and incorporate 300' buffers, in general; however, sitespecific distances will need to be approved by FWS and BLM when disturbance will occur upslope of habitat,

Reduce well pad size to the minimum needed, without compromising safety,

Where technically and economically feasible, use directional drilling or multiple wells from the same pad,

Limit new access routes created by the project,
Roads and utilities should share common right-of-ways where possible,
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,
Place signing to limit off-road travel in sensitive areas, and
Stay on designated routes and other cleared/approved areas,
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.
Within occupied habitat, project infrastructure will be designed to avoid direct disturbance and minimize indirect impacts to populations and to individual plants:
Follow the above recommendations (#3) for project design within suitable habitats,
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,
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,
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,
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,
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,
Construction activities will not occur from April 15th through June 5th within occupied habitat,
Before and during construction, areas for avoidance should be visually identifiable in the field, e.g., flagging temporary fencing, rebar, etc.,
Place produced oil, water, or condensate tanks in centralized locations, away from occupied habitat, and
Minimize the disturbed area of producing well locations through interim and final reclamation. Reclaim well pads following drilling to the smallest area possible.
Occupied San Rafael Cactus habitats within 300' of the edge of the surface pipelines' rightof-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.
Re-initiation of section 7 consultation with the Service will be sought immediately if any loss of plants or occupied habitat for the San Rafael Cactus 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.

Vernal Field Office

LEASE STIPULATIONS

WO IM 2002-174 ENDANGERED SPECIES ACT

The lease area may now or hereafter contain plants, animals, or their habitats determined to be threatened, endangered, or other special status species. BLM may recommend modifications to exploration and development proposals to further its conservation and management objective to avoid BLM-approved activity that would contribute to a need to list such a species or their habitat. BLM may require modifications to or disapprove proposed activity that is likely to result in jeopardy to the continued existence of a proposed or listed threatened or endangered species or result in the destruction or adverse modification of a designated or proposed critical habitat. BLM will not approve any ground disturbing activity until it completes its obligations under applicable requirements of the ESA as amended, 16 United States Code (USC) 1531 et seq. including completion of any required procedure for conference or consultation.

LEASE NOTICES

UT-LN-49 UTAH SENSITIVE SPECIES

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. UT-LN-51.

T&E-03 ENDANGERED FISH OF THE UPPER COLORADO RIVER DRAINAGE BASIN

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 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 Appendix A Preliminary Oil and Gas Lease Sale List Environmental Assessment 75 of the four resident endangered fish species, and must be evaluated with regard to the criteria described in the Upper Colorado River 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.

T&E-06 MEXICAN SPOTTED OWL

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. 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 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. 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. 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: Appendix A Preliminary Oil and Gas Lease Sale List 76 Environmental Assessment 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. 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. e. Limit disturbances to and within suitable habitat by staying on approved routes. f. Limit new access routes created by the project. 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.

A handwritten signature in blue ink, appearing to read "A. Hoffman", is located in the lower right quadrant of the page.