

United States Department of the Interior

BUREAU OF LAND MANAGEMENT Utah State Office 440 West 200 South, Suite 500 Salt Lake City, UT 84101-1345 http://www.blm.gov/utah



In Reply Refer To: 3120 (UT-922)

September 4, 2019

ERRATA SHEET NO. 1

This Errata Sheet amends the Notice of Competitive Lease Sale (NCLS) posted on July 25, 2019, for the Bureau of Land Management (BLM) three-day competitive oil and gas lease auction to be held online at https://www.energynet.com/ on September 9-11, 2019.

1. Correction to the acreage is made to the following parcels:

Posted UTU94358 (UT0919-019) T. 19 S., R. 1 W., SLM Sec. 21: Lots 1-4, E2NW, E2SW, W2SE: Sec. 27: Lot 1; Sec. 28: Lots 1-4, W2NE, E2NW, E2SW, SE; Sec. 33: All; Sec. 34: Lots 1-5. 1,717.38 Acres Sanpete County, Utah **Richfield Field Office** UTU94359 (UT0919 - 020)T. 20 S., R. 1 W., SLM Secs. 3 and 10: All; Sec. 14: W2NW, SWSW; Sec. 15: All. 1,972.94 Acres Sanpete County, Utah **Richfield Field Office**

Adjusted UTU94358 (UT0919-019) T. 19 S., R. 1 W., SLM Sec. 21: Lots 1-4, E2NW, E2SW, W2SE: Sec. 27: Lot 1; Sec. 28: Lots 1-4, W2NE, E2NW, E2SW, SE; Sec. 33: All; Sec. 34: Lots 1-5. 1,717.3<u>7</u> Acres Sanpete County, Utah **Richfield Field Office** UTU94359 (UT0919 - 020)T. 20 S., R. 1 W., SLM Secs. 3 and 10: All; Sec. 14: W2NW, SWSW; Sec. 15: All. 1,972.9<u>5</u> Acres Sanpete County, Utah **Richfield Field Office**

UTU94360 (UT0919 - 021)T. 20 S., R. 1 W., SLM Sec. 22: All; Sec. 23: W2NW, N2SW, SESW; Sec. 27: Lots 6-20, SESW, W2SE; Sec. 34: NWNE, W2. 1,760.48 Acres Sevier County, Utah (ac.) Sanpete County, Utah (ac.) **Richfield Field Office** UTU94366 (UT0919 - 027)T. 33 S., R. 11 W., SLM Sec. 19: All; Sec. 30: Lots 1-4, NE, E2NW; Sec. 31: Lots 1-4, E2, E2SW. 1.603.66 Acres Iron County, Utah Cedar City Field Office UTU94395 (UT0919-059) T. 21 S., R. 1 E., SLM Sec. 3: All; Sec. 4: Lots 9-23; Sec. 5: Lot 1, SENE, N2SW, N2SE, SESE. 1,564.78 Acres Sevier County, Utah **Richfield Field Office** UTU94396 (UT0919-060) T. 21 S., R. 1 E., SLM Sec. 8: NENE, S2NE, SESW, SE; Sec. 9: All; Sec. 17: Lots 1-8, NW, NESW, SWSW, Excepting ROW U13951. 1,627.31 Acres Sevier County, Utah **Richfield Field Office**

UTU94360 (UT0919 - 021)T. 20 S., R. 1 W., SLM Sec. 22: All; Sec. 23: W2NW, N2SW, SESW; Sec. 27: Lots 6-20, SESW, W2SE; Sec. 34: NWNE, W2. 1,759.48 Acres Sevier County, Utah (886.95 ac.) Sanpete County, Utah (872.53 ac.) **Richfield Field Office** UTU94366 (UT0919 - 027)T. 33 S., R. 11 W., SLM Sec. 19: All; Sec. 30: Lots 1-4, NE, E2NW; Sec. 31: Lots 1-4, E2, E2SW. 1,603.96 Acres Iron County, Utah Cedar City Field Office UTU94395 (UT0919-059) T. 21 S., R. 1 E., SLM Sec. 3: All; Sec. 4: Lots 9-23; Sec. 5: Lot 1, SENE, N2SW, N2SE, SESE. 1,564.80 Acres Sevier County, Utah **Richfield Field Office** UTU94396 (UT0919-060) T. 21 S., R. 1 E., SLM Sec. 8: NENE, S2NE, SESW, SE; Sec. 9: All: Sec. 17: Lots 1-8, NW, NESW, SWSW, Excepting ROW U13951. 1,610.81 Acres Sevier County, Utah **Richfield Field Office**

UTU94402 (UT0919-066) T. 19 S., R. 2 E., SLM Sec. 21: E2, E2NW, E2SW, excepting MS 6986; Sec. 28: E2, E2NW, S2SW; Sec. 33: N2NE. 1,031.977 Acres Sanpete County, Utah Richfield Field Office

UTU94446 (UT0919-116) T. 21 S., R. 18 E., SLM Sec. 26: NE, S2; Sec. 35: All excepting ROW U62502. 1,120.00 Acres Grand County, Utah Moab Field Office

UTU94451 U (UT0919-125) ((T. 21 S., R. 19 E., SLM T Sec. 29: N2, SW, W2SE; Secs 30 and 31: All excepting ROW U62502. 1,601.00 Acres Grand County, Utah <u>2</u> Moab Field Office

UTU94455 (UT0919 – 136) T. 21 S., R. 20 E., SLM Sec. 21: NENE, S2SW, NESE, S2SE, excepting ROW U62502. 240.00 Acres Grand County, Utah Moab Field Office

UTU94402 (UT0919-066) T. 19 S., R. 2 E., SLM Sec. 21: E2, E2NW, E2SW, excepting MS 6986: Sec. 28: E2, E2NW, S2SW; Sec. 33: N2NE. 1,036.98 Acres Sanpete County, Utah **Richfield Field Office** UTU94446 (UT0919-116) T. 21 S., R. 18 E., SLM Sec. 26: NE, S2; Sec. 35: All excepting ROW U62502. 1,116.78 Acres Grand County, Utah Moab Field Office UTU94451 (UT0919-125) T. 21 S., R. 19 E., SLM Sec. 29: N2, SW, W2SE; Secs 30 and 31: All excepting ROW U62502. 2,051.96 Acres Grand County, Utah Moab Field Office UTU94455 (UT0919 - 136)T. 21 S., R. 20 E., SLM Sec. 21: NENE, S2SW, NESE, S2SE, excepting ROW U62502. 2**35.23** Acres

Grand County, Utah Moab Field Office 2. Correction to the legal description and acreage is made to the following parcel:

Posted UTU94404 (UT0919 – 068) T. 20 S., R. 2 E., SLM Sec. 4: Lots 1, 2, S2NE, S2; Sec. 5: SESE; Sec. 8: N2NE, SENE, NESE, S2SE; Sec. 9: N2NE; Sec. 17: E2, NESW. 1,199.24 Acres Sanpete County, Utah Richfield Field Office	Adjusted UTU94404 (UT0919 – 068) T. 20 S., R. 2 E., SLM Sec. 4: Lots 1, 2, S2NE, S2; Sec. 9: N2NE; Sec. 17: E2, NESW. 919.24 Acres Sanpete County, Utah Richfield Field Office
UTU94454 (UT0919 – 133) T. 21 S., R. 20 E., SLM Secs. 17 and 18: All; Sec. 19: All excepting ROW U62502; Sec. 20: W2NE, SENE, NW, N2SW, SWSW, NWSE, excepting ROW U62502. 2,354.64 Acres Grand County, Utah Moab Field Office	UTU94454 (UT0919 – 133) T. 21 S., R. 20 E., SLM <u>Secs. 17, 18 and 19: All excepting</u> <u>ROW U62502;</u> <u>Sec. 20: W2NE, SENE, NW, N2SW,</u> <u>SWSW, NWSE, excepting ROW</u> <u>U62502.</u> 2,3 <u>04.70</u> Acres Grand County, Utah Moab Field Office

3. Stipulation UT-S-293, as described below, has been applied to the following parcel:

UTU94360 (UT0919-021)

	CONTROLLED SURFACE USE/TIMING LIMITATIONS – CALIFORNIA CONDOR
UT-S-293	The Lessee/Operator is given notice that the lands located in this parcel contain potential habitat for the California Condor, a federally listed species. Avoidance or use restrictions may be placed on portions of the lease if the area is known or suspected to be used by condors. Application of appropriate measures will depend on whether the action is temporary or permanent, and whether it occurs within or outside potential habitat. A <u>temporary</u> action is completed prior to the following important season of use, leaving no permanent structures and resulting in no permanent habitat loss. This would include consideration for habitat functionality. A <u>permanent</u> action continues for more than one season of habitat use, and/or causes a loss of condor habitat function or displaces condors through continued disturbance (i.e. creation of a permanent structure requiring repetitious maintenance, or emits disruptive levels of noise).

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 (ESA). 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 ESA, 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) approved by the BLM, and must be conducted according to approved protocol.
- 2. If surveys result in positive identification of condor use, all lease activities will require monitoring throughout the duration of the project to ensure desired results of applied mitigation and protection. Minimization measures will be evaluated during development and, if necessary, Section 7 consultation may be reinitiated.
- 3. Temporary activities within 1.0 mile of nest sites will not occur during the breeding season.
- 4. Temporary activities within 0.5 miles of established roosting sites or areas will not occur during the season of use, August 1 to November 31, unless the area has been surveyed according to protocol and determined to be unoccupied.
- 5. No permanent infrastructure will be placed within 1.0 mile of nest sites.
- 6. No permanent infrastructure will be placed within 0.5 miles of established roosting sites or areas.
- 7. Remove big game carrion from within 100 feet from lease roadways occurring within foraging range.
- 8. 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.
- 9. Re-initiation of section 7 consultation with the Service will be sought immediately if mortality or disturbance to California condors 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.

Additional measures may also be employed to avoid or minimize effects to the species between the lease sale and lease development stages. 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.

Exception: None Modification: None Waiver: None 4. Lease Notice T&E-09, as described below, has been applied to the following parcel:

UTU94360 (UT0919-021)

	T
	UTAH PRAIRIE DOG
	The lessee/operator is given notice that lands in this lease may contain historic and/or occupied Utah prairie dog habitat, a threatened species under the Endangered Species Act. 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 when prairie dogs are active or hibernating. A <u>temporary</u> action is completed prior to the following active season leaving no permanent structures and resulting in no permanent habitat loss. A <u>permanent</u> action continues for more than one activity/hibernation season and/or causes a loss of Utah prairie dog habitat or displaces prairie dogs 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:
Т&Е-09	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. Where technically and economically feasible, use directional drilling or multiple wells from the same pad to reduce surface disturbance and eliminate drilling in prairie dog habitat.
	4. Surface occupancy or other surface disturbing activity will be avoided within 0.5 mile of active prairie dog colonies.
	5. Permanent surface disturbance or facilities will be avoided within 0.5 mile of potentially suitable, unoccupied prairie dog habitat, identified and mapped by Utah Division of Wildlife Resources since 1976.
	6. The lessee/operator should consider if fencing infrastructure on well pad, e.g., drill pads, tank batteries, and compressors, would be needed to protect equipment from burrowing activities. In addition, the operator should consider if future surface disturbing activities would be required at the site.
	7. Within occupied habitat, set a 25 mph speed limit on operator-created and maintained roads.8. Limit disturbances to and within suitable habitat by staying on designated
	o. Limit distuibances to and within suitable nabitat by staying on designated

routes. 9. 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 ESA.

5. Lease Notice T&E-11, as described below, has been applied to the following parcels:

UTU94360 (UT0919-021) UTU94367 (UT0919-028) UTU94374 (UT0919-035) UTU94375 (UT0919-036) UTU94361 (UT0919-022) UTU94368 (UT0919-029) UTU94362 (UT0919-023) UTU94369 (UT0919-030) UTU94376 (UT0919-037) UTU94363 (UT0919-024) UTU94370 (UT0919-031) UTU94377 (UT0919-038) UTU94364 (UT0919-025) UTU94371 (UT0919-032) UTU94378 (UT0919-039) UTU94365 (UT0919-026) UTU94372 (UT0919-033) UTU94379 (UT0919-040) UTU94366 (UT0919-027) UTU94373 (UT0919-034)

	CALIFORNIA CONDOR
T&E-11	The Lessee/Operator is given notice that the lands located in this parcel contain potential habitat for the California Condor, a federally listed species. Avoidance or use restrictions may be placed on portions of the lease if the area is known or suspected to be used by condors. Application of appropriate measures will depend on whether the action is temporary or permanent, and whether it occurs within or outside potential habitat. A <u>temporary</u> action is completed prior to the following important season of use, leaving no permanent structures and resulting in no permanent habitat loss. This would include consideration for habitat functionality. A <u>permanent</u> action continues for more than one season of habitat use, and/or causes a loss of condor habitat function or displaces condors through continued disturbance (i.e. creation of a permanent structure requiring repetitious maintenance, or emits disruptive levels of noise). 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) approved by the BLM, and must be conducted according to approved protocol.
	2. If surveys result in positive identification of condor use, all lease activities will require monitoring throughout the duration of the project to ensure desired results of applied mitigation and protection. Minimization measures will be evaluated during development and, if necessary, Section

4. Temporary activities within 0.5 miles of established roosting sites or areas will not occur during the season of use, August 1 to November 31, unless the area has been surveyed according to protocol and determined to be unoccupied.

7 consultation may be reinitiated.

the breeding season.

- 5. No permanent infrastructure will be placed within 1.0 mile of nest sites.
- 6. No permanent infrastructure will be placed within 0.5 miles of established roosting sites or areas.
- 7. Remove big game carrion 100 feet from lease roadways occurring within foraging range.
- 8. 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.
- 9. Re-initiation of section 7 consultation with the Service will be sought immediately if mortality or disturbance to California condors 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.

Additional measures may also be employed to avoid or minimize effects to the species between the lease sale and lease development stages. These additional measures will be developed and implemented in consultation with the U.S. Fish and Wildlife Service to ensure continued compliance with the Endangered Species Act.

6. Lease Notice T&E-22, as described below, has been applied to the following parcels:

UTU94437 (UT0919-106)

	UTE LADIES'-TRESSES (SPIRANTHES DILUVIALIS)
Т&Е-22	The Lessee/Operator is given notice that the lands in this parcel contain suitable habitat for Ute ladies'-tresses under the Endangered Species Act (ESA). The following avoidance and minimization measures have been developed to facilitate review and analysis of any submitted permits under the authority of this lease. In order to minimize effects to the federally threatened Ute ladies'-tresses, the BLM in coordination with the USFWS, developed the following avoidance and minimization measures. Integration of and adherence to these measures will help ensure the activities carried out during oil and gas development (including but not limited to drilling, production, and maintenance) are in compliance with the ESA. Ute ladies'-tresses habitat is

provided some protection under Executive Orders 11990 (wetland protection) and 11988 (floodplain management), as well as section 404 of the Clean Water Act. 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 Ute ladies'-tresses. Habitat descriptions can be found in Recovery Plans and Federal Register Notices for the species at <http://www.fws.gov/endangered/wildlife.html>. Occupied habitat is defined as areas currently or historically known to support Ute ladies'-tresses; synonymous with "known habitat. Although plants, habitat, or populations may be afforded some protection under these regulatory mechanisms, the following conservation measures should be included in the Plan of Development:

- 1. Pre-project habitat assessments will be completed across 100% of the project disturbance area, including areas where hydrology might be affected by project activities, within potential habitat prior to any ground disturbing activities to determine if suitable Ute ladies'-tresses habitat is present.
- 2. Within suitable habitat, site inventories will be conducted to determine occupancy. Inventories:
 - a. Must be conducted by qualified individual(s) and according to BLM and USFWS accepted survey protocols,
 - b. Will be conducted in suitable and occupied habitat for all areas proposed for surface disturbance or areas that could experience direct or indirect changes in hydrology from project activities,
 - c. Will be conducted prior to initiation of project activities and within the same growing season, at a time when the plant can be detected, and during appropriate flowering periods (usually August 1st and August 31st in the Uintah Basin; however, surveyors should verify that the plant is flowering by contacting a BLM or USFWS botanist or demonstrating that the nearest known population is in flower),
 - d. Will occur within 300' from the edge 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,
 - e. Will include, but not be limited to, plant species lists, habitat characteristics, source of hydrology, and estimated hyroperiod, and
 - f. Will be valid until August 1st the following year.
- 3. Design project infrastructure to minimize direct or indirect impacts to suitable habitat both within and downstream of the project area:
 - a. Alteration and disturbance of hydrology will not be permitted,
 - b. Reduce well pad size to the minimum needed, without compromising safety,
 - c. Limit new access routes created by the project,

	d. Roads and utilities should share common right-of-ways where possible,
	e. Reduce width of right-of-ways and minimize the depth of excavation needed for the road bed,
	f. Construction and right-of-way management measures should avoid soil compaction that would impact Ute ladies' tresses habitat,
	g. Off-site impacts or indirect impacts should be avoided or minimized (i.e. install berms or catchment ditches to prevent spilled materials from reaching occupied or suitable habitat through either surface or groundwater),
	h. Place signing to limit off-road travel in sensitive areas,
	i. Stay on designated routes and other cleared/approved areas, and
	j. All disturbed areas will be re-vegetated with species approved by USFWS and BLM botanists.
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 (#3) recommendations for project design within suitable habitats,
	b. Buffers of 300 feet minimum between right of way (roads and surface pipelines) or surface disturbance (well pads) and plants and populations will be incorporated,
	c. Surface pipelines will be laid such that a 300-foot buffer exists between the edge of the right of way and the plants, using stabilizing and anchoring techniques when the pipeline crosses habitat to ensure the pipelines don't move towards the population,
	d. Before and during construction, areas for avoidance should be visually identifiable in the field (e.g., flagging, temporary fencing, rebar, etc.),
	e. Where technically and economically feasible, use directional drilling or multiple wells from the same pad,
	f. Designs will avoid altering site hydrology and concentrating water flows or sediments into occupied habitat,
	g. Place produced oil, water, or condensate tanks in centralized locations, away from occupied habitat, with berms and catchment ditches to avoid or minimize the potential for materials to reach occupied or suitable habitat, and
	h. 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 Ute ladies'-tresses 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. Habitat impacts include monitoring any
changes in hydrology due to project related activities. Annual reports
shall be provided to the BLM and the USFWS. 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 USFWS will be sought immediately if any loss of plants or occupied habitat for the Ute ladies'-tresses 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 USFWS to ensure continued compliance with the ESA.
•

7. Lease Notice T&E-23, as described below, has been applied to the following parcels:

UTU94444 (UT0919-112) UTU94445 (UT0919-115) UTU94446 (UT0919-116) UTU94447 (UT0919-117) UTU94448 (UT0919-118) UTU94449 (UT0919-121) UTU94450 (UT0919-122) UTU94451 (UT0919-125) UTU94452 (UT0919-128) UTU94453 (UT0919-129) UTU94454 (UT0919-133) UTU94455 (UT0919-136)

COLORADO RIVER ENDANGERED FISH The lessee/operator is given notice in order to minimize effects to critical habitats of endangered fish in the Colorado and Green Rivers, surfacedisturbing activities within the 100-year floodplain of the Colorado River, Green River, and all associated back waters would not be allowed. Other avoidance and minimization measures include: Surveys would be required prior to operations unless species occupancy • and distribution information is complete and available. All surveys must be conducted by qualified individuals. Lease activities would require monitoring throughout the duration of the project. To ensure desired results are being achieved, minimization measures T&E-23 would be evaluated and, if necessary, Section 7 consultation reinitiated. Water production would be managed to ensure maintenance or • enhancement of riparian habitat. Avoid loss or disturbance of riparian habitats. • Conduct watershed analysis for leases in designated critical habitat and • overlapping major tributaries in order to determine toxicity risk from permanent facilities. Implement the Utah Oil and Gas Pipeline Crossing Guidance. In areas • adjacent to 100-year floodplains, 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 the Utah Oil

and Gas Pipeline Crossing Guidance to minimize the potential for equipment damage and resulting leaks or spills.

- Water depletions from any portions of the Upper Colorado River drainage basin are considered to adversely affected and adversely modify the critical habitat of the endangered fish species (bonytail, Colorado pikeminnow, humpback chub, and razorback sucker). Section 7 consultation would be completed with the U.S. Fish and Wildlife Service (USFWS) prior to any such water depletions.
- Additional measures to avoid or minimize effects to the species may be developed and implemented in consultation with the USFWS between the lease sale stage and lease development stage to ensure continued compliance with the ESA.

U.S. Fish and Wildlife Service (Service) Measures to Minimize Effects of Surface Water Pumping to Endangered Colorado River Fish

Issue: Endangered larval fish are very small (<0.5 inches total length) and incapable of directed swimming from the time of hatching through the first 2-4 weeks of their life. Depending on the water year, larval fish may be present in the Green, Colorado, Gunnison, and Yampa Rivers from as early as April 1 to as late as August 31 (earlier in dry years; later in wet years). Young of the year endangered fish are the most susceptible to entrainment.

Goal: Minimize entrainment of Federally listed species into pumps.

Measures:

- 1. The best method to avoid entrainment is to pump from an off-channel location one that does not connect to the river during high spring flows. An infiltration gallery constructed in a Service approved location is best.
- 2. If the pump head is located in the river channel the following stipulations apply:
 - a. Do not situate the pump in a low-flow or no-flow area, as these habitats tend to concentrate larval fishes.
 - b. Limit the amount of pumping, to the greatest extent possible, during that period of the year when larval fish may be present (see above).
 - c. Limit the amount of pumping, to the greatest extent possible, during the midnight hours (10 pm to 2 am), as larval drift studies indicate that this is a period of greatest daily activity. Dusk and the afternoon are the preferred pumping times, as larval drift abundance is lowest during this time.
- 3. Screen all pump intakes with 3/32" mesh material.
- 4. Approach velocities for intake structures should follow the National Marine Fisheries Service's document "Fish Screening Criteria for Anadromous Salmonids." For projects with an in-stream intake that operate in stream reaches where larval fish may be present, the approach velocity should not exceed 0.33 feet per second (ft/s).

5. Report any fish impinged on the intake screen or entrained into irrigation canals to the Service (801-975-3330) or the Utah Division of Wildlife Resources:
Northeastern Region 152 East 100 North, Vernal, UT 84078 Phone: 435-781- 9453
Southeastern Region 475 West Price River Drive, Suite C, Price, UT 84501 Phone: 435-636-0260

8. Lease Notice UT-LN-32, as described below, has been applied to the following parcels:

UTU94444 (UT0919-114) UTU94450 (UT0919-122)

CISCO MILKVETCH

T&E-32	The lessee/operator is given notice that the lands located in this parcel contain potential habitat for Cisco milkvetch (<i>Astragalus sabulosus</i>). The U.S. Fish and Wildlife Service (Service) was petitioned to list Cisco milkvetch under the Endangered Species Act (ESA) and the species' status is currently under review. Cisco milkvetch is currently a Bureau of Land Management (BLM) sensitive plant species. In order to minimize effects to the Cisco milkvetch, the BLM, in coordination with the 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) avoids or minimizes impacts to the species. 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 Cisco milkvetch; habitat descriptions can be found in NatureServe links at http://explorer.natureserve.org/. <i>Occupied habitat</i> is defined as areas currently or historically known to support Cisco milkvetch; synonymous with "known habitat."
	The following avoidance and minimization measures should be included in the plan of development:
	1. Pre-project habitat assessments will be completed across 100% of the project disturbance area within potential habitat prior to any ground disturbing activities to determine if suitable Cisco milkvetch habitat is present.
	2. Species surveys 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, 300 foot buffers will be maintained between surface
	disturbance and avoidance areas. Where conditions allow, surveys:
	a. Will be conducted by qualified individual(s) and according to BLM and Service accepted survey protocols (USFWS 2011);
	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 15 th to May 31 st ;
	however, surveyors should verify that the plant is flowering by
	contacting a BLM or Service botanist or demonstrating that the
	nearest known population is in flower);
	c. Will occur within 300 feet from the edge of the proposed right-of-
	way and/or project disturbance for surface pipelines, roads, well
	pads, and other facilities requiring removal of vegetation;
	d. Will include, but not be limited to, plant species lists and habitat characteristics, and;
	e. Will be valid until April 15 th of the following year.
	f. Clearance surveys in occupied habitat will be combined with historic plant location data for that particular site to delineate the outer
	boundary of occupied habitat. The 300 foot avoidance buffer will then
	be applied to the outer boundary of occupied habitat for that site. This
	evaluation will occur in coordination with the BLM and Service to
	ensure that the appropriate buffer is applied to protect both active and
	dormant Cisco milkvetch plants in occupied habitat.
	g. Electronic copies of clearance survey reports (included appendices)
	and GIS shape files will be sent no later than December 31 st to each of
	the following:
	• Utah Natural Heritage Program (with copies of NHP field survey forms);
	• Applicable/affected land owners and/or management agencies; and,
	• U.S. Fish and Wildlife Service Utah Field Office (mailing address:
	2369 West Orton Circle, Suite 50, West Valley City, Utah 84119).
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 foot buffers;
	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;
h. Stay on designated routes and other cleared/approved areas;
i. All disturbed areas will be revegetated with species native to the region, or seed mixtures approved by the action agency.
4. Where there is occupied habitat, project infrastructure will be designed
to avoid direct disturbance and indirect impacts to populations and to individual plants:
a. Follow the above recommendations (#3, above) 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 prostings will be incomposited into the project design enpropriate.
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 feet from: (1) any plant; (2) the outer boundary of occupied habitat; and (3) avoidance areas;
d. Existing roads will be graveled within 300 feet of occupied habitat; the operator is encouraged to apply water for dust abatement to such areas from April 15 th to May 31 st (flowering period); dust abatement applications will be comprised of water only;
e. The edge of the well pad should be located at least 300 feet away from plants and avoidance areas, in general;
 f. Surface pipelines will be laid such that a 300 foot buffer exists between the edge of the right of way and plants and 300 feet between the edge of right of way and avoidance areas; use stabilizing and anchoring techniques when the pipeline crosses suitable habitat to ensure pipelines don't move towards the population;
g. Construction activities will not occur 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. A qualified botanist will be on site during construction to monitor the surface disturbance activity and assist with implementation of applicable conservation measures (USFWS 2011);
j. Place produced oil, water, or condensate tanks in centralized locations, away from occupied habitat; and,
k. Minimize the disturbed area of producing well locations through interim and final reclamation. Reclaim well pads following drilling to the smallest area possible.
 For projects that cannot implement the measures or avoidance buffers identified in #4, above, site specific conservation measures will be
Localition in a state of the specific conservation medbures will be

developed in coordination with the Service. Occupied Cisco milkvetch habitats within: (1) 300 ft. of the edge of the surface pipeline right of ways; (2) 300 ft. of the edge of the road right of ways; and (3) 300 ft. from the edge of the well pads 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. Coordination with the Service will be sought immediately if any loss of
plants or occupied habitat for the Cisco milkvetch 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 coordination with the BLM and the Service.
Literature Cited: U.S. Fish and Wildlife Service (USFWS). 2011. Utah Field Office Guidelines for Conducting and Reporting Botanical Inventories and
Monitoring of Federally Listed, Proposed, and Candidate Plants. Utah
Ecological Services Field Office, West Valley City, Utah. August 2011.
Available at: <u>http://www.fws.gov/utahfieldoffice/SurveyorInfo.html</u> .

9. Lease Notice UT-LN-32, as described below, has been applied to the following parcels:

UTU98869 (UT0919-406), UTU98870 (UT0919-407), UTU98871 (UT0919-408), UTU98872 (UT0919-409), UTU98873 (UT0919-410), UTU98874 (UT0919-411), UTU98875 (UT0919-412), UTU98876 (UT0919-413), UTU98877 (UT0919-414), UTU98878 (UT0919-415), UTU98879 (UT0919-416), UTU98880 (UT0919-417), UTU98881 (UT0919-418), UTU98882 (UT0919-419), UTU98883 (UT0919-420), UTU98884 (UT0919-421), UTU98885 (UT0919-422), UTU98886 (UT0919-423), UTU98887 (UT0919-424)

	AIR QUALITY NPS MOU
UT-LN-163	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 and Management Act, and/or other applicable laws and regulations. In accordance with the Bureau of Land Management's 2011 Memorandum of Understanding with the National Park Service Consultation with the NPS Air Resources Division will be undertaken to determine those analyses, which 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.

Please direct any questions regarding this Errata Sheet to Leslie Wilcken, Land Law Examiner, at 801-539-4112 or lwilcken@blm.gov.

/s/ Kent Hoffman

Kent Hoffman Deputy State Director Division of Lands & Minerals