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BUREAU OF LAND MANAGEMENT
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IN REPLY REFER TO:
6840 (UT933)

NOV 2 0 2018

☐ Concur No Effect Species:
☒ Concur Not Likely to Adversely Affect Species: See attached
☐ No Comment
U.S. FWS Utah Field Supervisor
Date 11/28/18

To: Larry Crist, Field Manager, U.S. Fish & Wildlife Service

From: for Edwin L. Roberson, State Director

Subject: Re-initiation of Informal Section 7 Consultation on the 2008 Monticello Field Office Record of Decision and Approved Resource Management Plan, the 2008 Vernal Field Office Record of Decision and Approved Resource Management Plan, and the 2008 Price Field Office Record of Decision and Approved Resource Management Plan – for the December 2018 Oil and Gas Lease Sale

The Utah Bureau of Land Management (BLM) is conducting a quarterly oil and gas lease sale on December 11, 2018. Parcels are located in the Moab and Monticello Field Offices in the Canyon Country District, the Richfield Field Office in the Color Country District, the Vernal and Price Field Offices in the Green River District, and the Salt Lake Field Office in the West Desert District. We recently submitted a coordination document for this sale for all the Threatened and Endangered (T&E) species occurring in the proposed parcels that are covered under existing programmatic consultations with the six field offices. Seven species in three field offices were not covered by previous consultation; therefore we are requesting a re-initiation of informal consultation to add those species to the programmatic consultations for the applicable offices. Table 1 lists the species addressed in this informal consultation, the field office where they occur, and the programmatic consultation that we are requesting to amend.

Table 1. T&E Species Occurring in the December 2018 Oil and Gas Lease Sale Parcels, Field Office, and Applicable Programmatic Consultation

SPECIES	STATUS	FIELD OFFICE	PROGRAMMATIC CONSULTATION
Jones cycladenia (*Cycladenia humilis* var *jonesii*)	Threatened	Monticello	2008 Monticello RMP
Yellow-billed cuckoo (*Coccyzus americanus*)	Threatened	Vernal	2008 Vernal RMP
Graham's beardtongue (*Penstemon grahamii*)	Proposed	Vernal	2008 Vernal RMP
White River beardtongue (*Penstemon scariosus* var *albifluvis*)	Proposed	Vernal	2008 Vernal RMP
Ute ladies'-tresses (*Spiranthes diluvialis*)	Threatened	Price	2008 Price RMP

Navajo sedge (*Carex specuicola*)	Threatened	Price	2008 Price RMP
California condor (*Gymnogyps californianus*)	Experimental Population	Price	2008 Price RMP

PROPOSED ACTION

Leasing is an administrative action that affects economic conditions but does not directly cause environmental consequences. However, leasing is considered an irretrievable commitment of resources because the BLM generally cannot deny all surface use of a lease unless the lease is issued with a no surface occupancy (NSO) stipulation. Potential oil and gas exploration, development, and production activities, committed to in a lease sale, could impact other resources and uses in the planning area. Direct, indirect, or cumulative effects to resources and uses could result from as yet undetermined and uncertain future levels of lease exploration or development.

At this time it is unknown when, where, or if future well sites or roads might be proposed on any leased parcel, but should a lease be issued, site specific analysis of individual wells or roads would occur when a lease holder submits an Application for Permit to Drill (APD). The field offices will consult with your office on these site-specific actions if they will affect T&E species, according to Endangered Species Act (ESA) Section 7 requirements. Activities that are likely to occur during exploration and development include road construction or renovation, drilling, and construction of well pads and pipeline routes.

CONSULTATION

July 2, 2018 - The BLM Utah State Office emailed a GIS shapefile and list of the December 2018 lease parcels to your office for review.

July 10, 2018 – The BLM emailed a spreadsheet with T&E species potentially occurring in the parcels by county and field office.

July 26, 2018 - We received your initial comments with the T&E species or their habitats we should consider for each parcel.

The BLM field biologists and botanists have reviewed the parcels being offered for the upcoming sale and based on the best available information, made determinations about what T&E species could potentially occur in the individual parcels. The species are addressed below by field office. In addition to the lease stipulations and notices listed in the tables below, the standard endangered species stipulation as per Handbook H-3120-1 will also be attached to each parcel.

MONTICELLO FIELD OFFICE

The BLM previously consulted with your office in 2008 on management activities in the Monticello Field Office, including Minerals Management, during development of their Resource Management Plan (RMP) (BLM 2008a). That programmatic consultation and Biological

Opinion resulted in the development of specific lease notices for individual listed species; however, the consultation did not include Jones cycladenia. Therefore, we are requesting re-initiation of the Monticello Field Office programmatic consultation (USFWS 2008a) to add Jones cycladenia. Table 2 lists the Monticello Field Office parcels in the December 2018 lease sale that potentially contain suitable habitat for this species, the counties where the parcels occur, and the lease notice that will be attached to those parcels. The Monticello Field Office is completing a Decision of NEPA Adequacy for the December 2018 lease sale, which was available on BLM E-Planning on October 25, 2018.

Table 2. T&E Species in the Monticello Field Office, Parcels in December 2018 Oil/Gas Lease Sale, County, and Lease Stipulations/Notices

Common Name/ Scientific Name	Parcels	County	Lease Notice
Jones cycladenia *Cycladenia humilis* var *jonesii*	323, 324, 325, 326, 360, 361	San Juan	T&E-19 Jones Cycladenia

Jones cycladenia

Jones cycladenia (*Cycladenia humilis* var *jonesii*) was listed as threatened under the ESA on May 5, 1986. No critical habitat has been designated. Jones cycladenia has been documented in 20 populations with 60 occupied sites in Garfield, Grand, Emery, Kane, and San Juan Counties in Utah and Mohave County in Arizona. It grows on gypsiferous saline soils on Wasatch, Chinle, Cutler, and Summerville Formations and is associated with buckwheat and Mormon Tea in sparsely vegetated cool desert shrub and juniper communities between 4,400' and 6,000' elevation (USFWS 2016a, pp 3-4).

One Jones cycladenia site has been documented in the Monticello Field Office, discovered at Dead Horse Point in 2014. This site is within 5 miles of parcel 277, which is covered in the Moab Field Office DNA for the December 2018 oil and gas lease sale. It is within the Moab MLP area (BLM 2018) and therefore, covered under the programmatic consultation for that planning document.

There are no known Jones cycladenia sites within or near the six parcels included in the Monticello Field Office's DNA for the December 2018 oil and gas lease sale (Table 2). However, the parcels are within or adjacent to areas of influence identified in the Jones cycladenia habitat model (JGMS 2014) and the parcels contain soils that are suitable for this species. The habitat model includes five habitat suitability ratings – lower, low, medium low, medium high, and highest. The six parcels contain areas with the following suitability ratings:

Parcel 323 – medium high, lower
Parcels 324, 325, 326, 360 – medium high, low
Parcel 361 – medium high

The threats described for Jones cycladenia when it was first listed included off-highway vehicle use and oil, gas, and mineral exploration, including uranium mining and tar sands. A subsequent evaluation of threats in a recent draft recovery plan (USFWS 2016a, pp. 19-41), which focused on areas with documented Jones cycladenia populations, concluded that oil and gas

development continues to be a major and significant stressor for Jones cycladenia because a large part of the species range is open for leasing. The areas containing Jones cycladenia were mostly protected from off-highway vehicle use because many of the plants are located on steep slopes that off-highway vehicles cannot access and because designated route restrictions were implemented. However, recreation in general and livestock grazing can result in habitat fragmentation, fugitive dust, and the introduction and spread of nonnative plants.

Without protection measures, oil and gas exploration and development could directly or indirectly impact Jones cycladenia plants if they occur within the areas of disturbance. Vehicles or equipment could run over and kill or damage plants during exploration or development. Suitable habitat could be removed, degraded, or fragmented resulting in a reduction of the extent or quality of suitable habitat available for expansion of populations. Vehicles and equipment stir up dust during the construction and operation phases, which can disrupt plant-pollinator interactions, inhibit photosynthesis, and impact reproductive processes. Motorized vehicles cause ground disturbance during oil and gas exploration and production activities that contribute to the introduction and spread of noxious weeds in the parcels. Noxious weeds negatively impact Jones cycladenia plants by competing with them for resources and crowding out native species, degrading habitat, and potentially reducing the extent of secondary pollinator plants. See the draft Jones cycladenia recovery plan (USFWS 2016a) and the Moab Master Leasing Plan Biological Opinion (USFWS 2016b) for in-depth descriptions of potential impacts to Jones cycladenia from oil and gas development.

Past and present activities in and around the six parcels, including oil and gas development, mining, recreational activities, and livestock grazing, may have caused impacts to Jones cycladenia suitable habitat or plants if present. Lands adjacent to the six parcels are BLM-managed or state and private lands. They contain similar habitat to the parcels, including suitable habitat for Jones cycladenia. We anticipate that future activities on state and private lands will be similar to present activities and could cause impacts to suitable habitat or Jones cycladenia plants, if present. Threatened and Endangered plants receive protection on federal lands, but not on state or privately owned lands, unless an activity has a federal nexus. Although issuing oil and gas leases will not contribute additional cumulative impacts to Jones cycladenia because it does not directly authorize ground-disturbing activities, if exploration and development occurs in the parcels in the future, those activities could contribute cumulative impacts to Jones cycladenia and suitable habitat.

In order to avoid or minimize effects to Jones cycladenia, the lease notice T&E-19 (Jones cycladenia) would be attached to the six parcels containing suitable habitat. The conservation and protection measures in the lease notice include:

- Conducting habitat assessments across 100% of the project disturbance area to determine if suitable habitat is present and inventories within suitable habitat to determine occupancy.
- Designing infrastructure to minimize impacts to suitable habitat. Applying water for dust abatement during the flowering period.

- Establishing 300-foot no disturbance buffers from plants, occupied habitat, and non-surveyed suitable habitat.
- Revegetating disturbed areas with site-appropriate species with a preference for natives.

The BLM would reinitiate Section 7 Consultation with your office when the lessee submits an APD and if the proposed actions would impact Jones cycladenia or suitable habitat. The BLM would also conduct an analysis of potential impacts of the proposed action on noxious weeds and apply mitigation measures, standard operating procedures, and stipulations to minimize those impacts.

The BLM determines the proposed December oil and gas lease sale "*may affect, but would not likely adversely affect*" Jones cycladenia. If the lessees propose development in the future on the parcels, the implementation of avoidance and protection measures provided by the lease stipulations and notices would result in insignificant or discountable impacts.

We anticipate that future oil and gas lease sales in the Monticello Field Office would pose similar threats to Jones cycladenia and suitable habitat and that the BLM would attach lease notice UT-19 (Jones cycladenia) to affected parcels to notify the lessee that this species and/or suitable habitat may be present and conservation and protection measures may apply.

VERNAL FIELD OFFICE

The BLM previously consulted with your office in 2008 on management activities in the Vernal Field Office, including Minerals and Energy Resources, during development of their Resource Management Plan (BLM 2008b). That programmatic consultation and Biological Opinion (USFWS 2008b) resulted in the development of specific lease notices for individual listed species; however, the consultation did not include the yellow-billed cuckoo. Therefore, we are requesting re-initiation of consultation on the 2008 Biological Opinion to add the yellow-billed cuckoo. We are also conferencing on two proposed plants, Graham's beardtongue and White River beardtongue because some of the Vernal Field Office parcels contain documented sites, proposed critical habitat, or are within conservation areas.

Table 3 lists the Vernal Field Office parcels in the December 2018 lease sale that contain known sites, proposed critical habitat, or potentially suitable habitat for these T&E species; the counties they occur in; and the lease stipulations and/or notices that will be attached to those parcels.

For the December 2018 lease sale the Vernal Field Office is completing an Environmental Assessment, which was posted on E-Planning October 25, 2018.

Table 3. T&E Species in the Vernal Field Office, Parcels in December 2018 Oil/Gas Lease Sale, County, and Lease Stipulations/Notices

Common Name/ Scientific Name	Parcels	County	Lease Stipulations or Notices
Western yellow-billed cuckoo (*Coccyzus americanus*)	105, 152, 153, 154, 155, 178, 179, 180, 209, 210, 211, 233, 234	Uintah	UT-LN-31 Western yellow-billed cuckoo UT-LN-45 Migratory Bird
Graham's beardtongue (*Penstemon grahamii*)	087*, 100, 111*+, 112*+, 114*+, 115+, 116+, 117, 131*+, 132*+, 133*+, 134*+, 135*+, 136*+, 137*+, 139*+, 140*+, 161, 162*+, 178*, 182*+, 183*+, 184*+, 185*+, 189, 192, 209*, 211*+, 213*+, 214*, 215*, 217*+, 218*+, 219*+, 220*+, 221*+, 222*+ 223+, 235+, 266, 273+	Duchesne, Uintah	T&E-05 Listed Plant Species UT-LN-90 Graham beardtongue (*Penstemon grahamii*) UT-LN-134 Graham beardtongue (*Penstemon grahamii)* and White River beardtongue (*Penstemon scariosus* var. *albifluvis)* Conservation Areas
White River beardtongue (*Penstemon scariosus* var *albifluvis*)	100, 110, 111*, 112*, 114*, 115, 131*, 132*, 133*, 134*, 135*, 136*, 137*, 139*, 140*, 162*, 178*+, 182*, 183*, 184*, 185*, 209*+, 211*+, 213*+, 214*+, 215*+, 217*+, 218*+, 219*, 220*+, 221*+, 222*+, 266, 274, 276, 298	Uintah	T&E-05 Listed Plant Species UT-LN-134 Graham beardtongue (*Penstemon grahamii*) and White River beardtongue (*Penstemon scariosus* var. *albifluvis)* Conservation Areas

*Parcels containing habitat designated as Conservation Areas for Graham's and White River beardtongue. +Parcels with Proposed critical habitat.

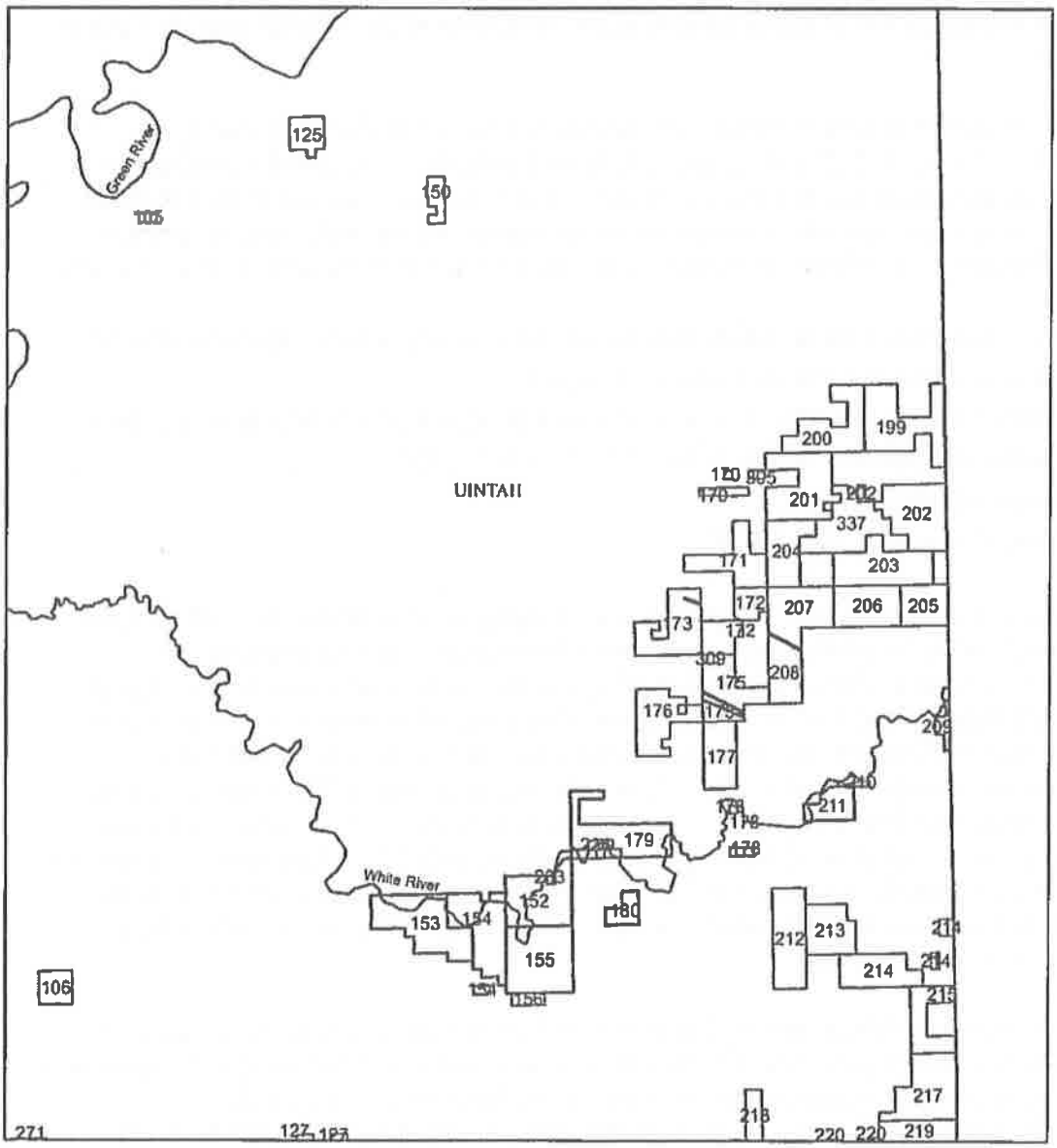
Western Yellow-billed cuckoo

The Fish and Wildlife Service designated the western yellow-billed cuckoo (Yellow-billed cuckoo) as Threatened in 2014. Its range is the western United States. In 2014, the FWS proposed approximately 20,286 acres of critical habitat for Yellow-billed cuckoo in the Uinta Basin; to date the ruling on the proposed critical habitat has not been finalized. None of the Vernal Field Office December 2018 lease sale parcels are within .5 mile of proposed critical habitat.

The decline in Yellow-billed cuckoo populations is primarily due to the loss and degradation of riparian habitat from habitat destruction, modification, long-term drought, climate change, alteration of hydrology, and conversion of existing native habitats to monotypic stands of non-native vegetation (i.e. tamarisk and Russian olive trees) (Halterman et al. 2015). Some of the actions that have caused alterations in hydrology and have negatively impacted Yellow-billed cuckoo populations include dam construction, water diversions, management of river flow that differs from the natural hydrology, and channelization.

Breeding Yellow-billed cuckoo are riparian obligates and nest in low to moderate elevation (2500-6000 ft.) riparian woodlands that are commonly associated with cottonwood-willow dominated vegetation cover with a dense sub-canopy or shrub layer (Halterman et al. 2015). Cuckoos may require large tracts (100 to 200 acres) of contiguous riparian habitat for nesting.

Thirteen parcels in the Vernal Field office potentially contain suitable habitat for Yellow-billed cuckoo (Table 3, Map 1) based on a habitat suitability model created by UDWR for the Utah BLM. One parcel (105) is along the Green River and is approximately .9 mile away from proposed critical habitat. The other 12 parcels are along the White River and no proposed critical habitat is nearby.



Map1. Vernal Field Office parcels (outlined in cyan) containing suitable habitat for Yellow-billed cuckoo.

The issuance of leases would not directly affect Yellow-billed cuckoo or their proposed critical or suitable habitat. However, the issuance of a lease does convey an expectation that oil and gas development will occur. Nesting Yellow-billed cuckoo, especially during the nest building and pair formation stages can be very sensitive to disturbance (Halterman et al. 2015). Very little research has been done on development impacts on the Yellow-billed cuckoo; however, any development within suitable riparian zones for Yellow-billed cuckoo could adversely affect Yellow-billed cuckoo. Yellow-billed cuckoo may be affected by developmental disturbance such as noise, increased traffic, loss and degradation of habitat and exposure to contaminants. If these disturbances were to take place during the breeding/nesting season, potential effects could include 1) direct loss of nests, eggs and nestlings; 2) indirect disturbance from human activity during the breeding/nesting season can cause nest abandonment; 3) reduction and/or fragmentation of nesting and foraging habitat; and 4) avoidance of the affected area by Yellow-billed cuckoo.

Suitable riparian habitat will be evaluated for impacts to yellow-billed cuckoo during the Application for a Permit to Drill (APD) stage, following guidelines the USFWS produced for identifying and delineating suitable Yellow-billed cuckoo habitat in Utah (USFWS 2015). By following the mitigation measures and stipulations applied during the APD process, impacts could be minimized or completely negated. Conservation measures in the lease notices include:

- No surface disturbance during the nesting and breeding season - spatial buffer: 0.5 miles and seasonal timings: June 1- August 31.
- Surveys within 0.5 mile of an area proposed for development considered suitable habitat or proposed Yellow-billed cuckoo critical habitat.
- Noise mitigation.
- Consultation with the USFWS.

The lands around the Vernal Field Office parcels containing suitable habitat for Yellow-billed cuckoo are a mix of BLM-administered, state, and private lands. It can be expected that activities, such as development of new and existing mineral rights, realty actions (for example, pipeline or road rights of way), or the continuation of agricultural activities, that impact Yellow-billed cuckoo will continue on state and private lands and result in loss of habitat, habitat fragmentation, and disruption or alteration of seasonal migration routes. The proposed action would add to these cumulative impacts by allowing the sale of the proposed lease parcels and making them available for mineral development, with the potential for future surface disturbance if the leases are developed. However, implementing conservation measures developed in the lease stipulations and notices would remove or minimize potential impacts to Yellow-billed cuckoo on BLM-managed lands.

The BLM determines that the proposed December 2018 oil and gas lease sale "*may affect, but would not likely adversely affect*" the Yellow-billed cuckoo and would be "*no effect*" to proposed critical habitat. If the lessees propose development in the future on the parcels, the implementation of protection measures provided by the lease stipulations and notices would result in insignificant or discountable impacts.

We anticipate that future lease sales in the Vernal Field Office would create similar impacts to the yellow-billed cuckoo to those described above and that similar protection and conservation measures would be applied to parcels to minimize those impacts.

Graham's beardtongue and White River beardtongue

Graham's beardtongue (*Penstemon grahamii*) and White River beardtongue (*Penstemon scariousus* var. *albifluvis*) are long-lived perennial herbaceous plants in the plantain family (Plantaginaceae). Both are local endemic species of the Uinta Basin and are associated with soils containing calcium carbonate, derived from oil shale barrens of the Green River geologic formation.

The proposal to list the two beardtongues on August 6, 2013 described threats to the species as energy development and cumulative threats from livestock grazing, invasive weeds, small population sizes, and climate change.

Your office is currently reviewing Graham's beardtongue (*Penstemon grahamii*) and White River beardtongue (*Penstemon albifluvis*) for listing as Endangered species. Critical habitat has also been proposed for them. Although consultation is not required for proposed species, we are conferencing with your office on these two species for the December 2018 lease sale because some of the proposed parcels contain known sites, proposed critical habitat, suitable habitat, or conservation areas (Table 4).

The BLM is currently managing these species as Sensitive and in accordance with the Conservation Agreement and Strategy for Graham's Beardtongue (*Penstemon grahamii*) and White River Beardtongue (*P. scariosus* var *albifluvis*). The Conservation Agreement (CA) was signed in July 2014 by the BLM Vernal Field Office in Utah, the BLM White River Field Office in Colorado, the USFWS, Utah School and Institutional Trust Lands Administration (SITLA), Uintah County (Utah) Commission, Public Lands Policy Coordination Office, Utah Division of Wildlife Resources, and RioBlanco County in Colorado. The original objective of the CA was to promote the two species' persistence and eliminate the need to list them under ESA. Their future status is unsure, but until a final determination is made, the BLM is continuing to implement management actions as directed in the CA. The CA established five conservation area units that contain BLM, Division of Wildlife Resources, SITLA, and private lands. On BLM lands, the actions designed to identify, mitigate, and minimize impacts include limiting new surface disturbance to a maximum of 5% for Graham's beardtongue and 2.5% new surface disturbance for White River beardtongue per conservation unit from the date the agreement was signed. Plants would also be buffered with a 300 foot no ground disturbance buffer both inside and outside the designated conservation areas.

Thirty-six parcels contain documented sites of Graham's and/or White River beardtongue, 34 contain proposed critical habitat, and 30 contain conservation areas. In addition to these parcels, two contain suitable habitat – 274 and 298. Parcel 298 is adjacent to the newly discovered White River beardtongue Book Cliffs population (Table 4). Fifty of the parcels are located within four of the five conservation area units.

Table 4. Vernal Field Office December 2018 Parcels Containing Documented Sites, Proposed Critical Habitat, and Conservation Areas of Graham's Beardtongue and White River Beardtongue.

Documented Sites	Proposed Critical Habitat	Conservation Areas
087, 100, 110, 111, 112, 114, 116, 117, 132, 133, 134, 135, 136, 137, 139, 140, 161, 162, 182, 184, 185, 189, 192, 209, 211, 213, 214, 215, 217, 218, 219, 220, 221, 222, 266, 276	111, 112, 114, 115, 116, 131, 132, 133, 134, 135, 136, 137, 139, 140, 162, 178, 182, 183, 184, 185, 209, 211, 213, 214, 215, 217, 218, 219, 220, 221, 222, 223, 235, 273	087, 111, 112, 114, 132, 134, 131, 133, 135, 136, 137, 139, 140, 162, 178, 182, 183, 184, 185, 209, 211, 213, 214, 215, 217, 218, 219, 220, 221, 222

The issuance of leases would not directly impact the two Penstemons, but as the BLM generally cannot deny all surface use of a lease, unless the lease is issued with a No Surface Occupancy stipulation, the issuance of leases does convey an expectation that drilling and development would occur. Potential loss or damage to individual plants or populations could occur. In addition, direct dispersed and indirect impacts may occur, including:

- Loss of suitable habitat for the species and its pollinators.
- Increased competition for space, light, and nutrients with invasive and noxious weed species introduced and spread.
- Accidental spray or drift of herbicides used during invasive plant control.
- Altered physiology (*i.e.*, photosynthesis, respiration, and transpiration) and reproductive success due to increased fugitive dust resulting from the surface disturbance and project related traffic.

To address these potential impacts and to inform lessees of the potential presence of the two federally proposed plant species, the BLM would attach lease notices to the parcels (Table 3). If the lessee proposes development in the parcel in the future, additional mitigation and conservation measures may be required and would be applied to the parcel as Conditions of Approval to the APD. It is not possible to predict the amount of new surface disturbance that would occur if the parcels in the December 2018 lease sale are developed. This will be determined when the lessee submits an APD. The BLM will conduct an evaluation at that time to determine the amount of new surface disturbance and will establish limits through the Conditions of Approval to remain below the surface disturbance caps.

The conservation measures, provided by the stipulation, notices, and Conservation Agreement, include but are not limited to:

- Conducting surveys in suitable habitat to determine occupancy.
- Minimizing disturbance areas.
- Graveling roads or applying water for dust abatement.
- Restricting construction activities from April 15 to May 20 within occupied habitat.
- Establishing 300 foot no activity buffers around plants.
- Restricting the extent of surface disturbance within conservation areas.

We anticipate that future activities on private and state lands surrounding the BLM lease parcels will be similar to current activities, including but not limited to oil and gas development, road building, grazing, and recreation. If development of the lease parcels occurs in the future, it could add cumulative impacts to Graham's and White River beardtongues. However, it is expected that the application of protection and conservation measures from the lease stipulation and notices and Conditions of Approval during the exploration and development stages would minimize cumulative effects to the two proposed Penstemons.

The BLM determines the proposed December 2018 oil and gas lease sale is "*not likely to jeopardize Graham's beardtongue or White River beardtongue or adversely modify their proposed critical habitats.*" Lease stipulations, lease notices, and conservation measures in the Conservation Agreement would provide adequate protection and mitigation measures to eliminate or minimize impacts if lessees propose exploration or development in the future and plants are present.

PRICE FIELD OFFICE

The BLM previously consulted with your office in 2008 on management activities in the Price Field Office, including Geology and Minerals Management, during development of their Resource Management Plan (BLM 2008c). That programmatic consultation and Biological Opinion (USFWS 2008c) resulted in the development of specific lease notices for individual listed species; however, the consultation did not include Ute ladies'-tresses or Navajo sedge. Therefore, we are requesting to reinitiate consultation on the 2008 Biological Opinion to add these species to the programmatic consultation. We are also conferencing on California condor (non-essential experimental population) because one parcel contains suitable habitat for foraging and roosting.

For the December 2018 lease sale the Price Field Office is completing an environmental assessment, which was posted on E-Planning on October 25, 2018.

Table 5 lists the T&E species we are consulting on, the parcels containing suitable habitat, the counties where they are located, and the lease stipulations and/or notices that will be attached to the parcels.

Table 5. T&E Species in the Price Field Office, Parcels in December 2018 Oil/Gas Lease Sale, County, and Lease Stipulations/Notices

Common Name/ Scientific Name	Parcels	County	Lease Stipulations or Notices
Ute-ladies'-tresses (*Spiranthes diluvialis*)	001, 002, 003, 004, 005, 006, 007, 008, 009, 010, 011, 013, 014, 015, 016, 017, 245	Carbon	T&E-22 Ute-ladies'-tresses T&E-05 Listed Plant species
Navajo sedge (*Carex specuicola*)	257	Emery	UT-LN-126 Navajo sedge T&E-05 Listed Plant Species
California condor (*Gymnogyps californianus*)	257	Emery	T&E 11 California Condor

Ute ladies'-tresses

Ute ladies'-tresses (*Spiranthes diluvialis*) was listed as federally Threatened in 1992; no critical habitat has been designated. This species has a broad range in the western U.S. and has been documented in Colorado, Idaho, Montana, Nebraska, Utah, Washington, and Wyoming. It grows along riparian edges, gravel bars, old oxbows, high flow channels, and moist to wet meadows along perennial streams. It typically occurs in stable wetland and seepy areas associated with old landscape features within historical flood plains of major rivers. It also is found in wetland and seepy areas near freshwater lakes or springs. Threats to the species have included human activities that modify hydrology, recreation that can impact plants and degrade habitat, invasive nonnative plants that outcompete Ute ladies'-tresses, impacts to native vegetation that reduce or remove pollinators, and improper season or stocking of livestock or range activities that impact habitat. Ute ladies'-tresses is currently being reviewed for de-listing. In 2005, there were an estimated 43,859 plants in 28 populations in Utah (Fertig et al 2005).

There are no known Ute ladies'-tresses populations in the Price Field Office. The closest known population is approximately 23 miles away in Utah County. However, after reviewing all the Price Field Office December 2018 lease parcels, the field office botanist determined all 17 parcels could potentially contain suitable habitat for Ute ladies-tresses (*Spiranthes diluvialis*) and the lease notices T&E-22 (Ute ladies-tresses) and T&E-05 (Listed Plant Species) would be applied to the parcels.

Although leasing does not authorize ground-disturbing activities, it is reasonable to assume future exploration and development will occur in the parcels when the lessee applies for an APD. Attaching the lease notices will notify the lessee that this species and/or suitable habitat may occur and that conservation and protection measures may need to be applied to the parcels. These measures will avoid and minimize potential impacts to plants and suitable habitat if present. Activities that could directly impact individual plants or negatively affect habitat could include ground disturbance from road and facility construction, removal and stockpiling of topsoil, and post-project reclamation. The increase in human and motorized vehicles could trample plants, cause erosion or compaction, and introduce or spread invasive non-native plant species. Protection measures in the lease notice include conducting pre-disturbance surveys and designing projects to avoid direct impacts and to minimize indirect impacts, including establishing 300 foot no disturbance buffers around occupied habitat.

Land ownership around the Price Field Office December lease sale parcels is a mix of BLM-administered, state, and private lands. Future activities on lands adjacent to BLM that could negatively impact Ute ladies'-tresses will likely be similar to current and past activities, including recreation, livestock grazing, possibly oil and gas or other mineral development, and activities that alter hydrology. The proposed oil and gas lease sale, if the parcels are developed in the future, could add cumulative impacts to Ute ladies'-tresses. The implementation of protection and conservation measures in the lease notices, along with additional measures determined at the APD stage, would eliminate or minimize impacts to Ute ladies'-tresses on BLM-administered lands if oil and gas exploration and production is pursued in the future. The Price Field Office

would conduct an analysis of potential impacts to Ute ladies'-tresses when they receive an APD and a site specific plan and would consult with your office if the proposed actions would impact Ute ladies'-tresses or suitable habitat.

We determine the issuance of these oil and gas leases in the December 2018 sale "*may affect*, but would *not likely adversely affect*" Ute ladies'-tresses because this action does not authorize activities that would create impacts and future activities related to the leases would be analyzed at that time and appropriate protection and conservation measures applied.

We anticipate that future oil and gas lease sales in the Price Field Office would be a similar situation for Ute ladies'-tresses and suitable habitat. The BLM would attach lease notice UT-22 (Ute ladies'-tresses) to affected parcels to notify the lessee that this species and/or suitable habitat may be present and conservation and protection measures may apply.

Navajo sedge

Navajo sedge (*Carex specuicola*) was designated as federally Threatened on May 8, 1985. Critical habitat has only been designated for three small areas in Arizona; there is no critical habitat for this species in Utah. When it was listed, threats included impacts from livestock grazing and habitat deterioration due to water development. The species grows in sandstone seep springs or hanging gardens in pinyon-juniper woodlands on Navajo, Cedar Mesa, De Chelly, and Kayenta sandstone formations. It usually grows on sandstone cliffs of varying height and slope at 4,200-7,600 feet elevation. It has been documented at 57 populations in the Navajo Nation, National Park Service, Hopi Tribe, and BLM-administered lands.

In Utah, Navajo sedge has only been documented in San Juan County, but suitable habitat containing one of the formations extends into Kane, Garfield, Wayne, Emery, and Grand Counties. Based on a review of the FWS' area of influence, soils data, and the presence of cliffs within the project area, parcel 257 may contain suitable habitat for this species.

Oil and gas exploration and production in Navajo sedge habitat that contains seeps or hanging gardens is not expected to directly impact or alter this habitat because the locations are typically on steep canyon walls making these sites unavailable for pad development or installation of infrastructure. Suitable habitat in canyon bottoms that support perennial and ephemeral drainages and riparian habitats are protected by No Surface Occupancy stipulations. Stipulation UT-S-127, which protects riparian areas from new disturbance with a 330- foot buffer, will be attached to parcel 257.

Little is known about the groundwater hydrology and the dynamics of the aquifers that the plant communities in these seep-springs habitats depend upon for water. However, exploration drilling, pumping, and extraction activities are not expected to draw, remove or alter water resources in these perched aquifers, as casing requirements will insure drill holes have minimal contact with the waters found in the perched aquifers. Target products are associated with geological formations located far below these perched aquifers, therefore waters from perched aquifers in these sandstone formations are not expected to be removed during extraction or pumping.

The act of leasing parcels for oil and gas development does not authorize ground-disturbing activities and it is not possible to forecast site-specific actions. However, attaching Lease Notice 126 to the parcels will notify the lessee that conservation measures may be required when they submit a site-specific APD. Those measures would include, but not be limited to, conducting site inventories, monitoring, project designs to avoid direct impacts to plants and populations with 100-foot buffers, dust abatement, and restoration of disturbed sites with site-appropriate native species. Any additional specific conservation measures necessary to accommodate site- or situation-specific peculiarities not predictable at the leasing level will be developed and applied prior to local implementation of mineral development activities. The Price Field Office will reinitiate Section 7 Consultation with your office at the APD stage if the site-specific proposed actions would impact Navajo sedge or suitable habitat. Based on these conservation measures, we determine that the impacts to Navajo sedge would be eliminated or minimized and that the issuance of the Price Field Office leases "*may affect*, but are *not likely to adversely affect*" Navajo sedge.

We anticipate that future oil and gas lease sales and impacts to Navajo sedge from future development of those parcels will be similar to those described for the December 2018 lease sale. We will attach lease notice UT-126 to affected parcels to notify the lessee that this species and/or suitable habitat may be present and conservation and protection measures may apply.

California condor

The California condor (*Gymnogyps californianus*) was reported as an Endangered species in 1967 in some counties in Arizona, California, and southern Utah. The remaining 27 birds in the wild were removed in 1986-87 and put into a captive breeding program. Releases back into the wild began in 1992 and have occurred at five sites. The closest release site to the Price Field Office is the Vermillion Cliffs National Monument in Northern Arizona. The California condor has non-essential experimental status south of Interstate 70 and west of Highway 191 in Utah and is treated as a proposed rather than listed species. The only critical habitat designated for this species occurs in California. Impacts to individual birds have included direct persecution, collection of specimens, secondary poisoning from varmint control, and lead poisoning from ammunition. In 2017, the population was recorded as 463, with 290 free-flying birds, including 82 in Arizona/Utah, and 173 birds in captivity (USFWS 2017).

California condors are cavity nesters with a preference for cavities in steep rock formations or in the hollows of old growth trees, although they also sometimes nest on cliff ledges. They feed only on carrion and have wide-ranging foraging patterns throughout the year.

Only one of the Price Field Office parcels in the December 2018 lease sale – number 257 – is located south of Interstate 70 and west of Highway 191. There are no known occurrences or nesting sites within the lease area and the closest designated critical habitat is over 200 miles to the southwest. Current breeding populations are restricted to California and Northern Arizona near the release sites. Parcel 257 could provide suitable habitat for foraging or roosting. The mostly likely chance of occurrence would be near the green River and large cliffs. California condors prefer mountainous country at low and moderate elevations, especially rocky and brushy areas near cliffs. The lease area is mainly low elevation with limited cliffs, therefore occurrences

of Condors are unlikely. If they occurred there, it would likely be during foraging activities. Potential impacts from oil and gas exploration or production to foraging California condors would be impacts from vehicles when condors are feeding on carrion along roadways. The lease notice provides measures that would provide protection to either foraging or roosting condors, including surveys, avoiding roosting sites, seasonal restrictions, and removing carrion within 100 feet of roadways.

Although issuing an oil and gas lease does not authorize ground-disturbing activities, we can assume that future oil and gas exploration and development may occur in the leased parcels. Absent the application of conservation measures, these activities may have negative effects on California condor and/or their suitable habitats. In recognition of this, the conservation measures outlined in lease notice T&E-11, developed with USFWS recommendations, was designed to reduce impacts. The implementation of the avoidance and mitigation measures identified in this lease notice would help ensure minimal impacts to any condors in the area. The application of the lease notice also provides an opportunity to make adjustments to reduce potential effects to the birds in the area at the site-specific level when an APD is received. The BLM would conference with your office if the proposed activities would result in impacts to the California condor or suitable habitat. As a result, with the application of the conservation measures identified in the lease notices, the BLM determines that issuing leases "*would not likely result in jeopardy to the continued existence of the California condor and would not destroy or adversely modify critical habitat.*"

We anticipate that future oil and gas lease sales and impacts to California condor from future development of those parcels will be similar to those described for the December 2018 lease sale. We will attach lease notice T&E-11 to affected parcels to notify the lessee that this species and/or suitable habitat may be present and conservation and protection measures may apply.

Summary

The BLM requests re-initiation of section 7 informal consultation on the:

1) 2008 Monticello Field Office Record of Decision and Approved Resource Management Plan to amend the programmatic Biological Opinion to add Jones cycladenia to the Monticello Field Office.

2) 2008 Vernal Field Office Vernal Field Office Record of Decision and Approved Resource Management Plan to add yellow-billed cuckoo to the Vernal Field Office and to conference on two proposed plants, Graham's and White River beardtongues.

3) 2008 Price Field Office Record of Decision and Approved Resource Management Plan to add Ute ladies-tresses, Navajo sedge, and to conference on an experimental (10)j nonessential population of California condor.

We have evaluated Threatened and Endangered species for the December 2018 oil and gas lease sale and have determined that the lease sale "*may affect,* but is *not likely to adversely affect*"

Jones cycladenia, yellow-billed cuckoo, Navajo sedge, and Ute ladies-tresses and no critical habitat would be impacted by the proposed action. We have also determined that issuing the oil and gas leases is "*not likely to jeopardize Graham's beardtongue or White River beardtongue or adversely modify their proposed critical habitats*" and "*would not result in jeopardy to the continued existence" of the California condor and would not destroy or adversely modify critical habitat.*" The BLM requests concurrence from the Service on these determinations.

Please direct any questions or concerns to Marcia Wineteer, Utah BLM T&E Program Lead, 801 539-4065, mwinetee@blm.gov. Thank you for your assistance in this effort.

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UT-S-127 **Price**	**NO SURFACE OCCUPANCY – INTERMITTENT AND PERENNIAL STREAMS** No new surface disturbance (excluding fence lines) will be allowed in areas within the 100-year floodplain or 100 meters (330 feet) on either side from the centerline, whichever is greater, along all perennial and intermittent streams, streams with perennial reaches, and riparian areas. **Exception:** The authorized officer could authorize an exception if it could be shown that the project as mitigated eliminated the need for the restriction. An exception could be authorized if (a) there are no practical alternatives, (b) impacts could be fully mitigated, or (c) the action is designed to enhance the riparian resources. **Modification:** None **Waiver:** None
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 1. Site inventories: a. Must be conducted to determine habitat suitability, b. Are required in known or potential habitat for all areas proposed for surface disturbance prior to initiation of project activities, at a time when the plant can be detected, and during appropriate flowering periods, c. Documentation should include, but not be limited to individual plant locations and suitable habitat distributions, and d. All surveys must be conducted by qualified individuals. 2. Lease activities will require monitoring throughout the duration of the project. To ensure desired results are being achieved, minimization measures will be evaluated and, if necessary, Section 7 consultation reinitiated. 3. Project activities must be designed to avoid direct disturbance to populations and to individual plants: a. Designs will avoid concentrating water flows or sediments into plant occupied habitat. b. Construction will occur down slope of plants and populations where feasible; if well pads and roads must be sited upslope, buffers of 300 feet minimum between surface disturbances and plants and populations will be incorporated. c. Where populations occur within 300 ft. of well pads, establish a buffer or fence the individuals or groups of individuals during and post-construction. d. Areas for avoidance will be visually identifiable in the field, e.g., flagging, temporary fencing, rebar, etc.

	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 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 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.
T&E-19 (Outside Moab MLP)	**JONES CYCLADENIA (*CYCLADENIA HYMILIS VAR JONESII*)** In order to minimize effects to the federally threatened Jones Cycladenia, the Bureau of Land Management (BLM), in coordination with the U.S. Fish and Wildlife Service (Service), has developed the following avoidance and minimization measures. Implementation of these measures will help ensure the activities carried out during oil and gas development (including but not limited to drilling, production, and maintenance

	a. Where standard surveys are technically infeasible, infrastructure and activities will avoid all suitable habitat (voidance areas) and incorporate 300' buffers, in general; however, site-specific distances will need to be approved by FWS and BLM when disturbance will occur upslope of habitat, b. Reduce well pad size to the minimum needed, without compromising safety, c. Where technically and economically feasible, use directional drilling or multiple wells from the same pad, d. Limit new access routes created by the project, e. Roads and utilities should share common right-of-ways where possible, f. Reduce the width of right-of-ways and minimize the depth of excavation needed for the road bed; where feasible, use the natural ground surface for the road within habitat, g. Place signing to limit off-road travel in sensitive areas, and h. Stay on designated routes and other cleared/approved areas, i. All disturbed areas will be re-vegetated with native species comprised of species indigenous to the area and non-native species that are not likely to invade other areas. 4. Within occupied habitat, project infrastructure will be designed to avoid direct disturbance and minimize indirect impacts to populations and to individual plants: a. Follow the above recommendations (3.) for project design within suitable habitats, b. To avoid water flow and/or sedimentation into occupied habitat and avoidance areas, silt fences, hay bales, and similar structures or practices will be incorporated into the project design; appropriate placement of fill is encouraged, c. Construction of roads will occur such that the edge of the right of way is at least 300' from any plant and 300' from avoidance areas, d. Roads will be graveled with occupied habitat; the operator is encouraged to apply water for dust abatement to such areas from April 15th to June 5th (flowering period); dust abatement applications will be comprised of water only, e. The edge of the well pad should be located at least 300' away from plants and avoidance areas, in general; however, site-specific distances will need to be approved by FWS and BLM when disturbance will occur upslope of habitat, f. Surface pipelines will be laid such that a 300' buffer exists between the edge of the right of way and plants and 300' between the edge of right of way and avoidance areas; use

	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

	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.
T&E-31 **Vernal**	**WESTERN YELLOW-BILLED CUCKOO** The Lessee/Operator is given notice that the lands in or adjacent to this parcel contain potentially suitable habitat that falls within the range for western yellow-billed cuckoo, a federally listed species. Avoidance or use restrictions may be placed on portions of the lease. Application of appropriate measures will depend upon whether the action is temporary or permanent, and whether it occurs within or outside the breeding and nesting season. A temporary action is completed prior to the following breeding season leaving no permanent structures and resulting in no permanent habitat loss. A permanent action could continue for more than one breeding season and/or cause a loss of habitat or displace western yellow-billed cuckoos through disturbances. The following avoidance and minimization measures have been designed to ensure activities carried out on the lease are in compliance with the Endangered Species Act. Integration of, and adherence to, these measures will facilitate review and analysis of any submitted permits under the authority of this lease. Following these measures could reduce the scope of Endangered Species

	8. Ensure that water extraction or disposal practices do not result in change of hydrologic regime that would result in loss or degradation of riparian habitat. 9. Re-vegetate with native species, where possible, all areas of surface disturbance within riparian areas and/or adjacent uplands. 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.
UT-LN-45 **Statewide**	**MIGRATORY BIRD** The lessee/operator is given notice that surveys for nesting migratory birds may be required during migratory bird breeding season whenever surface disturbances and/or occupancy is proposed in association with fluid mineral exploration and development within priority habitats. Surveys should focus on identified priority bird species in Utah. Field surveys will be conducted as determined by the authorized officer of the Bureau of Land Management. Based on the result of the field survey, the authorized officer will determine appropriate buffers and timing limitations.
UT-LN-90 **Vernal**	**GRAHAM'S BEARDTONGUE (*PENSTEMON GRAHAMII*)** In order to minimize effects to the federally proposed Graham's beardtongue, the Bureau of Land Management (BLM) in coordination with the U.S. Fish and Wildlife Service (Service) developed the following avoidance and minimization measures. 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[1] prior to any ground disturbing activities to determine if suitable Graham's beardtongue habitat is present. 2. Within suitable habitat[3], site inventories will be conducted to determine occupancy. Inventories: a. Must be conducted by qualified individual(s) and according to BLM and Service accepted survey protocols, b. Will be conducted in suitable and occupied habitat[4] 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 May 20th in the Uintah Basin; however, surveyors should verify that the plant is flowering by contacting a BLM or FWS botanist or demonstrating that the nearest known population is in flower), c. Will occur within 300' from the centerline of the proposed right-of-way for surface pipelines or roads; and within 300' from the perimeter of disturbance for the proposed well pad including the well pad, d. Will include, but not be limited to, plant species lists and habitat characteristics, and e. Will be valid until April 15th the following year.

	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. 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 conservation of the species.
UT-LN-126 (Outside of Moab MLP)	**NAVAJO SEDGE** In areas that contain habitat for Navajo sedge, actions will be avoided or restricted if that area is known or suspected to be habitat for Navajo sedge and the action may cause stress or disturbance to the plant. 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. 1. Site inventories: a. Must be conducted to determine habitat suitability, b. Are required in known or potential habitat for all areas proposed for surface disturbance prior to initiation of project activities, at a time when the plant can be detected, and during appropriate flowering periods, c. Documentation should include, but not be limited to individual plant locations and suitable habitat distributions, and d. All surveys must be conducted by qualified individuals. 2. Lease activities will require monitoring throughout the duration of the project. To ensure desired results are being achieved, minimization measures will be evaluated and, if necessary, Section 7 consultation reinitiated. 3. Project activities must be designed to avoid direct disturbance to populations and to individual plants: a. Designs will avoid concentrating water flows or sediments into plant occupied habitat. b. Construction will occur down slope of plants and populations where feasible; if well pads and roads must be sited upslope, buffers of 100 feet minimum between surface disturbances and plants and populations will be incorporated. c. Where populations occur within 200 ft. of well pads, establish a buffer or fence the individuals or groups of individuals during and post-construction. d. Areas for avoidance will be visually identifiable in the field, e.g., flagging, temporary fencing, rebar, etc.