

## Appendix E - Oil and Gas Leasing Stipulations

This appendix contains the resource protection stipulations that will be attached to the lease as proposed in the Revised Plan. The stipulations are designed to protect important surface resource values and uses and will be applied to specific lands on the Routt National Forest. This appendix will also briefly discuss some of the standard types of mitigation that are used at the time of application for permit to drill (APD). These standard types of mitigation are called conditions of approval.

Standard lease terms, stipulations, and conditions of approval will be applied to all ground-disturbing activities occurring within a lease parcel. These activities include, but are not limited to, prospecting, exploration drilling, and production.

### **Standard Lease Terms**

Standard lease terms apply to all leases. They are attached to Bureau of Land Management (BLM) form 3100-11, "Offer to Lease and Lease for Oil and Gas." Section 6 of this form requires that the "Lessee shall conduct operations in a manner that minimizes adverse impacts to the land, air, and water, to cultural, biological, visual, and other resources, and to other land uses or users." Standard lease terms are commonly considered to be adequate to mitigate most adverse environmental impacts (40 CFR Part 1505.2 (c) and Part 1508.20).

The standard lease terms also apply all nondiscretionary statutes and reasonable measures required by the Authorizing Officer to minimize adverse impacts to other resources and users.

Under standard lease terms, mitigation may include moving the site of proposed developments, restricting the timing of operations, facility design changes, and interim and final reclamation efforts. Many other protection measures can be applied and negotiated under standard terms. It must be demonstrated that standard lease terms are insufficient in order to apply supplemental stipulations.

### **Supplemental Stipulations**

When there are resource values, uses, or user conflicts that cannot be managed or accommodated by the standard lease terms, a lease stipulation may be necessary. The leasing analysis must show that less restrictive stipulations were considered and determined to be insufficient. Stipulations may be applied to all, or part, of a lease parcel as required for resource protection. The leasing analysis will display the need for lease stipulations and establish guidelines for granting waivers, exceptions, or modifications. Substantial modification or waiver after lease issuance is subject to public review for at least a 30-day period, in accordance with Section 5120.f of the Federal On-shore Oil and Gas Leasing Reform Act of 1987.

Stipulations may be necessary if the authority to control the activity on the lease does not already exist under laws, regulations, or orders. It is important to recognize that the Authorized Forest Officer can modify the siting and design of facilities, control the rate of development and timing of activities, and require other mitigation under Sections 2 and 6 of the standard lease terms (BLM Form 3100-11) and 43 CFR 3101.1-2.

The following guidance is provided in order to assist in the determination of needed stipulations. They are displayed from the most to the least restrictive.

The **No Surface Occupancy** (NSO) stipulation is the most restrictive stipulation available and is intended for use only when standard lease terms and other less restrictive stipulations are determined insufficient to adequately protect the public interest. The analysis record must show that a no-lease alternative was considered before the NSO stipulation is applied.

The **Timing Limitation** (often called seasonal) stipulation requires year-long fluid mineral exploration and development activities. When using this stipulation, date(s) and location(s) are as specific as possible. A timing stipulation is not necessary if the time limitation involves the prohibition of new surface-disturbing operations for periods of less than 60 days (43 CFR 3101.1-2).

The **Controlled Surface Use** (CSU) stipulation is used when oil and gas activities are allowed on all, or portions, of the lease area year-round but must be strictly controlled because of special values or resource concerns. The CSU stipulation is used to identify constraints on surface use or operations which might otherwise exceed the mitigation provided by Section 6 of the standard lease terms and the regulations and operating orders. The CSU stipulation is less restrictive than the NSO or Timing Limitation stipulations. The CSU stipulation should not be used in lieu of an NSO or Timing Limitation stipulation but should be limited to areas where restrictions or controls are necessary for specific, rather than all, activity.

The CSU stipulation should explicitly describe what activity is to be restricted or controlled or what operation constraints are required. The CSU stipulation must also identify the applicable area and the reason for the requirement.

## **Stipulations for Use on the Forest**

### **Stipulation Justification**

Stipulations described in Table E-1 have been determined by the interdisciplinary team. The justification for use of the stipulations is disclosed in the following section along with conditions that may warrant a waiver, exception, or modification (WEMs) of the stipulation.

The stipulation map found in the map package accompanying the Revised Plan and FEIS displays the locations where leasing stipulations will apply. Maps indicating site-specific stipulations and the reason for applying the stipulations are found in the planning record at the Forest Service office in Steamboat Springs.

<b>Table E-1. Stipulations in Areas with Resource Sensitivity</b>	
<b>Stipulation</b>	<b>Area/Resource to be Protected</b>
<b>NSO Stipulation</b>	Heritage Resource Areas over 40 acres Developed Recreation Sites High Erosion Hazard Soils High Geologic Hazard Slopes over 60% Bear River Corridor Eligible Wild and Scenic River Research Natural Area Backcountry Nonmotorized and Motorized Recreation Municipal Watersheds
<b>Timing Stipulation</b>	Wildlife - Grouse Production Area Wildlife - Big Game Winter Range Wildlife - Big Game Birthing Area Known Active Raptor Nests
<b>CSU Stipulation</b>	Slopes 40-60% Erosive and Hydric (wet) Soils Alpine Environments Visual Resources Sensitive Watersheds Developed Recreation Sites Cutthroat Trout Habitat Shorty/Cataract Unique Natural Area Special Interest Areas Residential Interface
<b>Lease Notices</b>	Special-Uses Threatened and Endangered Species Vegetation (active/planned timber sales)
<b>Standard Lease Terms</b>	Air Heritage Resources under 40 acres Range Vegetation Special-Uses

**Resource: Soils/Slopes**

Stipulation: NSO for areas with slopes 60 percent or greater and high erosion or geological hazard.

Zones Found: 1, 2, 3, and 4

Justification: This stipulation is needed for the basic protection of soil and water resources. Soil disturbance necessary for well pad development in these locations is very difficult to reclaim and results in unacceptable soil loss. This disturbance may also adversely affect slope stability and increase the potential for mass movements.

The less restrictive stipulations of CSU and timing are not applicable. The CSU stipulation is for operational guidance; use and occupancy is allowed. The timing stipulation prohibits use during specified time periods. In this case, the protection is required year-round and is only achieved with NSO.

Application Methodology: Applying this stipulation to specific lands is very basic, using quad maps, aerial photos, and field verification. It is one of the first criteria looked at when processing a lease. Rarely will an entire lease be NSO for soils/slope concerns. The resource quad maps in the planning record will be used for locating soils and slope NSO stipulations where they exist in areas over 40 acres. Where these criteria exist in areas less than 40 acres, standard lease terms will provide the Forest Service with the authority needed to prohibit surface occupancy on those areas.

Conditions for WEMs: Waivers, exceptions, or modifications would rarely be granted in these situations, as steep slopes are a fixed condition over the life of a lease. In the event that too broad an area was stipulated and the operator found an acceptable location of less than 60 percent at APD stage, an exception would be feasible.

**Resource: Soils/Slopes**

Stipulation: CSU for areas 40-60 percent slopes, moderate erosion or geologic hazard, and hydric soils.

Zones Found: 1, 2, 3, and 4

Justification: The CSU stipulation is needed in these areas because strict environmental controls are necessary to prevent adverse environmental consequences. Surface occupancy will be allowed, but the manner in which development activities will be permitted will be more restricted than standard lease terms would permit.

Application methodology: Applying this stipulation to specific lands is very basic, using quad maps, aerial photos, and field verification. It is one of the first criteria looked at when processing a lease. Rarely will an entire lease be CSU for soils/slope concerns. The resource quad maps in the planning record will be used for locating soils and slope NSO stipulations where they exist in areas over 40 acres. When these conditions exist on an area less than 40 acres, the standard lease terms will be enforced, and controlled surface use will be allowed.

Conditions for WEMs: This is the same as NSO soil/slope stipulation described previously.

**Resource: Alpine Environments**

Stipulation: CSU

Zones Found: 2 and 3

Justification: The CSU stipulation is needed in these sensitive ecosystems due to the limited revegetation potential. The CSU stipulation will be used to require any revegetation technique needed to ensure revegetation in these environments. It will also allow for site relocation beyond that which is permitted in the standard lease terms.

Application Methodology: Soil mapping units were used to identify the alpine areas. Some of the alpine environments in the analysis area fall within a 60 percent or greater slope class and are NSO because of that criteria. Approximately 4,500 acres of alpine lands will be covered by this CSU stipulation.

Conditions For WEMs: Waivers, exceptions and modifications are not expected in these alpine environments. If the operator demonstrates that the values can be maintained and that revegetation can be accomplished, and this is confirmed through Forest Service analysis, an exception may be feasible.

**Resource: Developed Recreation Sites (campgrounds, picnic areas, trail heads)**

Stipulation: NSO for 1/4-mile around sites, CSU for 1/4-mile around NSO.

Zones Found: 1, 2, 3, and 4

Justification: The combination of these two stipulations is necessary to protect the setting in developed sites and to maintain and enhance the recreation opportunities, including the visual setting and audible and olfactory environments. This stipulation will also ensure the safety of Forest visitors.

The less restrictive stipulations of timing or all CSU will not prevent possible adverse impacts to this resource because timing and CSU are operational stipulations which allow surface occupancy. Any surface occupancy may result in adverse impacts to the recreation resource.

Application Methodology: To apply this stipulation combination to developed recreation sites, the interdisciplinary team identifies the sites to be protected.

Conditions for WEMs: Waivers, exceptions, and modifications will rarely occur. The one situation where an exception might be granted is if the stipulation is applied over a broad area and the operator can demonstrate that the values stated above can be met by siting the development within the NSO area. The stipulation may be waived if a recreation site is removed from the recreation management inventory.

**Resource: Wildlife (Raptors including Golden Eagles, Osprey, Hawks, Owls, and Falcons, except Peregrine)**

Stipulation: Timing (no activity between February 1 and August 15) within 1/4-mile of known active nest sites.

Zones Found: 1, 2, and 3

Justification: This stipulation is necessary to protect nesting potential for these species. A 1/4-mile no-disturbance buffer around these sites while they are active will ensure their solitude and maintain the viable nesting habitat.

Application Methodology: This stipulation is applied to known active sites of these species. Active means the site is used periodically (some species rotate two or three nesting sites over

the years) and maintained in a usable condition. The active status must be field-verified no earlier than May 15.

All disturbance zones are line-of-sight distances up to 1/4-mile. If topography or vegetation provides screening, this distance may be reduced, provided analysis concludes that site integrity can be maintained.

Application of the stipulation would rarely prohibit surface occupancy somewhere on a lease or a typical 320-acre well spacing unit.

Conditions for WEMs: Waivers, exceptions, or modifications could be granted in the event that a site existing at the time of lease issuance is totally abandoned or destroyed. The timing stipulation may be modified if topographic barriers or vegetative screening can be utilized to protect the value of the nest site. If the lessee demonstrates that the values can be maintained while conducting operations within the restricted times for an active nest, and analysis concurs, an exception may be granted.

**Resource: Wildlife (Critical Habitat)**

Stipulation: Timing

Big Game Production areas - No activity May 1 to July 30

Big Game Winter Range - December 15 through May 15

Greater Sandhill Cranes Nesting areas - May 1 through July 1

Grouse Breeding Complex - March 1 through June 30

Zones Found: 1, 2, 3, and 4

Justification: These timing stipulations are necessary to protect the breeding potential and winter survival of these species. Disturbances during critical times may place unnecessary stress on the particular species being protected and cause an increase in mortality.

Application Methodology: These critical habitats have been identified using Forest Service and Colorado Division of Wildlife data. The areas identified are the most important areas for production, nesting, and wintering of the particular species mentioned. In addition, the big game winter range timing stipulation would be applied to any area allocated to Management Area Prescription 5.41 (Deer and Elk Winter Range).

Conditions for WEMs: If the lessee demonstrates that operations can be conducted in a manner which protects the wildlife habitat values present, an exception would be feasible.

**Resource: Heritage Resource Sites over 40 acres (Park and Teller City Historic Mining Towns and Windy Ridge paleontological site)**

Stipulation: NSO

Zones Found: 3 and 4

Justification: Park and Teller City are historic mining towns. Windy Ridge is the site of a quarry for Indian tools. The significance of these sites is well documented. The sensitivity and density of the sites require the NSO stipulation for protection.

Less restrictive stipulations will not be adequate for protection of the sites.

Application Methodology: The stipulation will be applied around these three sites.

Conditions for WEMs: Waivers, exceptions, or modifications are not expected for this stipulation.

**Resource: Visually Sensitive Lands**

Stipulations: CSU - Modification to siting and design of development activities in order to meet the visual quality objectives.

Zones Found: 1, 2, 3, and 4

Justification: Areas on the Forest with high scenic and recreational values may require screening, buffering, or site relocation beyond that which is allowed under the standard lease terms.

Application Methodology: This stipulation is applied to areas allocated to Management Area Prescriptions 4.2 (Scenery and Major Transportation Corridors) or 4.3 (Dispersed Recreation) or other areas with a visual quality objective of partial retention. In order to meet the visual quality objective in areas of retention and/or partial retention or to maintain the recreational values, it may be necessary to modify the siting or design of proposed development activities. This stipulation gives the Forest Service the authority to relocate the site or modify the timing more than is permitted in the standard lease terms to meet the retention objective.

Conditions for WEMs: A waiver, exception, or modification to this stipulation may be granted if the analysis of proposed development shows that an activity will not violate the visual quality objective of retention.

**Resource: Sensitive Watersheds**

Stipulation: CSU - Best management practices (BMPs) are required to protect resource

Zones Found: 1, 2, 3, and 4

Justification: In watersheds identified as sensitive, further increases in water yield and sediment may cause adverse impacts. The CSU stipulation gives the lessor the ability to apply the necessary BMPs to prevent further degradation of these watersheds.

Application Methodology: The HYSED model has been used to determine watershed sensitivity.

Conditions for WEMs: Waivers, exceptions, or modifications would be considered if analysis of specific proposals discloses that watersheds are no longer sensitive. In this case, a waiver of the stipulation is feasible. No other waivers, exceptions or modifications are expected because the CSU stipulation gives the lessor more authority to require operational practices to protect the resource. If proposed activity does not require stricter operational guidelines, the initial guidelines would be approved, but the stipulation would not change.

**Resource: Fisheries - Colorado River Cutthroat Trout Habitat (CRCT)**

Stipulation: CSU - BMPs are required to protect known and suspected CRCT habitat. Surveys to identify remnant populations of the trout may be requested prior to issuance of a Permit to Drill.

Zones Found: 1, 2, 3, and 4

Justification: The CRCT is classified as a Federal Category II Candidate Species for listing as Threatened or Endangered and is classified by the state of Colorado as Threatened. Little is known about the specific habitat requirements of the CRCT or the present distribution and security of the remaining populations. It is suspected that other populations, unknown at this time, could be detected by surveys conducted in the analysis area prior to issuance of a Permit to Drill. BMPs must be used in areas where activity could potentially affect known and suspected populations of CRCT. These BMPs will be used to minimize erosion, prevent sediment from entering perennial and intermittent stream courses, avoid stream crossings, and ensure protection of floodplains, riparian zones, and water quality.

Application Methodology: Certain 4th order watersheds on the Forest are known to harbor populations of CRCT. Surveys to detect additional populations within these watersheds and elsewhere on the Forest are ongoing. If a Permit to Drill is requested in an area that has not been surveyed, the Forest will need to complete a survey to determine if CRCT exist in the zone of influence of the proposed project. This survey will also identify the anticipated effects of the proposed action on CRCT or its habitat. The zone of influence of oil and gas exploration activities can only be determined when an analysis is conducted on the surface use plan of operations submitted when a lessee applies for a Permit to Drill. If the time and funds are not immediately available for the Forest to conduct the survey, the lessee may be requested to assist in the survey or face a delay in the issuance of the permit. If the survey of potential CRCT habitat determines that the proposed action may have an adverse effect on CRCT even if BMPs are followed, additional restrictions or denial to the lessee's proposal may result.

Conditions for WEMs: In some cases, BMPs in CRCT habitat may not be required if the proposed development will not directly or indirectly impact any streams within the watershed. If surveys for CRCT occurrence have already been completed in the analysis area of the proposed action, no further survey will be requested, although BMPs may still be required.

**Resource: Shorty/Cataract Unique Natural Area**

Stipulation: CSU

Zones Found: 1

Justification: This area contains unique species richness and diversity, an abundance of riparian vegetation and associated species, and numerous ponds and beaver-enhanced wetlands.

The CSU stipulation is needed in this area to ensure that this unique ecosystem is protected through the use of nontraditional site design, access design, or site location practices. The BMPs that will prevent destruction of this ecosystem and its components will be required. These practices may include such things as restricting road development to areas that have already been impacted by past road construction, restricting roads to locations less than 40% slope, not approving road construction on hydric soils or where soils are susceptible to mass movement, etc.

Application Methodology: This unique area exists on approximately 6,000 acres in Zone 1. The CSU stipulation will not prohibit surface occupancy somewhere on a 320-acre well spacing unit.

Conditions for WEMs: Waivers, exceptions or modifications to this stipulation are not expected.

**Resource: Eligible Wild and Scenic Rivers**

Stipulation: NSO

Zones Found: 1 and 4

Justification: The NSO stipulation is required to maintain the river segment in a condition that makes it eligible for wild and/or scenic designation. This can be accomplished with the NSO stipulation.

Application Methodology: This stipulation is applied to areas allocated to management area prescriptions 1.5 (National River System - Eligible Wild Rivers) and 3.4 (National River System - Eligible Scenic Rivers). This stipulation would not prohibit surface occupancy somewhere on a 160 well spacing unit.

Conditions for WEMs: This stipulation may be waived if sometime after the lease is issued, the river segment is declared unsuitable for wild and/or scenic designation.

**Resource: Research Natural Areas**

Stipulation: NSO

Zones Found: 4

Justification: The NSO stipulation is required to protect the natural condition for which an area has been proposed as a Research Natural Area. Activities other than research and study are limited to those which do not destroy the natural vegetation. Roads and facilities are not allowed within the Research Natural Area. NSO is appropriate because it will not allow occupancy in these natural areas, thereby protecting areas for study. Standard lease terms or other stipulations would be inadequate because occupancy would be allowed, disturbing and impacting the natural functions of the ecosystem.

Application Methodology: This stipulation is applied to areas allocated to Management Area Prescription 2.2 (Proposed Research Natural Area).

Conditions for WEMs: Waivers, exceptions, or modifications to this stipulation will be considered only at the time operations are proposed and will be subject to the forest plan in effect at the time of consideration. Granting of a WEM should not be expected in these areas.

**Resource: Backcountry Nonmotorized and Motorized Recreation**

Stipulation: NSO

Zones Found: 1, 2, 3, and 4

Justification: The NSO stipulation is required to protect the backcountry nature and experience within these undeveloped areas. Backcountry prescriptions areas are generally unroaded, natural-appearing, and have little evidence of recent human-caused disturbance. The NSO stipulation would be the most appropriate stipulation to protect these backcountry values. Surface disturbances of any kind would affect the nature and recreation potential of these areas. Standard lease terms, CSU, or timing stipulations would all allow occupancy, but would not protect the backcountry experience. NSO allows these lands to be leased, while protecting and maintaining their undeveloped settings.

Application Methodology: This stipulation is applied to areas allocated to Management Area Prescriptions 1.32 (Backcountry Recreation - Nonmotorized) and 3.31 (Backcountry Recreation - Motorized).

Conditions for WEMs: Waivers, exceptions, or modifications to this stipulation will be considered only at the time operations are proposed and will be subject to the forest plan in effect at the time of consideration. Granting of a WEM should not be expected in these areas.

**Resource: Municipal Watersheds**

Stipulation: NSO

Zone Found: 4

Justification: The NSO stipulation is required to protect the high quality water that is produced in the watershed. Surface disturbances of any kind would affect the quality of water supplied to the Steamboat Springs area. Standard lease terms, CSU, or timing stipulations would all allow occupancy but would not protect the high quality water values. NSO allows these lands to be leased, while protecting and maintaining the high-quality water that is produced in the watershed.

Application Methodology: This stipulation is applied to areas allocated to Management Area Prescription 3.23 (Municipal Watersheds - Water Quality Emphasis).

Conditions for WEMs: Waivers, exceptions, or modifications to this stipulation will be considered only at the time operations are proposed and will be subject to the forest plan in effect at the time of consideration. Granting of a WEM should not be expected in these areas.

**Resource: Special Interest Areas**

Stipulation: CSU

Zones Found: 1, 3, and 4

Justification: Areas on the Forest that have unique settings or unusual characteristics may require screening, buffering, or site relocation beyond that which is allowed under the standard lease terms.

Application Methodology: This stipulation is applied to areas allocated to Management Area Prescription 2.1 (Special Interest Area). In order to protect the attributes that led to the designation of special interest area, it may be necessary to modify the siting or design of proposed development activities. This stipulation gives the Forest Service the authority to relocate or modify the site more than is permitted in the standard lease terms.

Conditions for WEMs: Waivers, exceptions, or modifications to this stipulation will be considered only at the time operations are proposed and will be subject to the forest plan in effect at the time of consideration. Granting of a WEM should not be expected in these areas.

**Resource: Residential Interface**

Stipulation: CSU

Zones Found: 1, 2, 3, and 4

Justification: Areas of forest ownership intermingled with private lands may require screening, buffering, or site relocation beyond that which is allowed under the standard lease terms.

Application Methodology: This stipulation is applied to areas allocated to Management Area Prescriptions 7.1 (Residential/Forest Interface). In order to protect the private residences from being impacted by oil and gas development, it may be necessary to modify the siting or design of proposed development activities. This stipulation gives the Forest Service the authority to relocate or modify the site more than is permitted in the standard lease terms.

Conditions for WEMs: Waivers, exceptions, or modifications to this stipulation will be considered only at the time operations are proposed and will be subject to the forest plan in effect at the time of consideration. Granting of a WEM should not be expected in these areas.

**Lease Notices**

Lease notices may be used to inform the potential lessee of existing laws, lease terms, regulations, operational orders, or any information that may be useful or important for the lessee to know prior to purchasing a lease. Lease notices are not an enforceable attachment to the lease like a stipulation is. The lease notice does, in many cases, describe other laws or limitations that are enforceable, either under the law cited or under the standard lease terms. The following resources will be handled through lease notices:

- **Special-Uses** - Special-uses such as communication sites, outfitter/guide camps, snowmobile trails, or any permitted special-use. Standard terms and conditions of the lease form (section 6) require that operations be conducted to minimize the impacts to other Forest users.
- **Threatened and Endangered Species** - A lease notice will be attached to new leases where site-specific surveys show the presence of wildlife, fish, or plant species listed as federal threatened and endangered species. The lease notice will require consultation with the Fish and Wildlife Service prior to the approval of any ground-disturbing activities. NSO may be allowed if occupancy will be detrimental to the population or its habitat.
- **Active or Planned Timber Sale Areas** - In order to protect the rights of timber purchasers and to reduce conflicts, lease notices will be used when sale activities are planned for areas within prospective leases. The lease notice will require that any surface use plan of operation submitted by the lessee must minimize potential conflict with timber purchasers operations to the satisfaction of the Forest Service Contracting Officer.

- Conditions Of Approval

A Condition of Approval (COA) is generated at the time of site-specific analysis when a Surface Use Plan of Operations has been received. Plans are received for geophysical exploration, exploratory drilling, and production. These plans may be submitted separately or as a comprehensive package. COAs may not unduly hinder or preclude the lessees opportunity to exercise valid existing lease rights. COAs may only be applied if they are consistent with the lease terms or are the result of information that was unknown at the time of leasing.

The review of the Proposed Surface Use Plans of Operations will be disclosed in an environmental analysis and decision document. The mitigation measures in this appendix provide examples of post-lease environmental protection the Forest Service may require at the time of APD. Any COA listed here may, and will, be adjusted to meet the needs of the site-specific analysis.

COAs may be applied to all oil and gas activities including associated rights-of-way. The Authorized Forest Officer may select from or adjust the COAs to mitigate or avoid environmental impacts. New COAs may be developed at the time of APD if currently unforeseen impacts are identified and the new COAs conform with the rights of the lessee and are consistent with this plan and subsequent amendments.