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STANDARD PRACTICES, BEST MANAGEMENT PRACTICES, AND GUIDELINES FOR SURFACE DISTURBING ACTIVITIES

This appendix describes the practices utilized to mitigate adverse effects caused by surface disturbing activities.

Standard practices applied to surface disturbing activities are statements of guidelines and techniques for establishing statewide (or national) consistency in avoiding and mitigating environmental impacts and resource conflicts. These practices have been developed through field experience, through planning analyses, and from legal or regulatory directives. They emphasize the responsibility of the BLM to ensure that good construction practices are used on public lands, and they apply to all surface disturbing activities.

Best management practices (BMPs) are developed by State agencies in cooperation with Federal agencies to control nonpoint sources of pollution. Section 303(e) of the Clean Water Act and 40 CFR 130.5 require states to maintain a "Water Quality Management Planning Continuing Planning Process." The process must establish procedures for adoption and appeals which, among other items, address BMPs. BMPs are advisory rather than regulatory. BMPs are a key element in a State Nonpoint Source Management Plan with which the Federal Government must comply under Executive Orders 12088 and 12372, and Clean Water Act Sections 319(k) and 301(k). The standard practices in this document are designed to meet the intent of the State's BMPs, and may therefore be subject to revision when the State BMPs are finalized.

The State of Wyoming has released draft lists of BMPs which address silviculture and hydrology, and has issued a policy statement in lieu of BMPs for minerals and oil and gas. The State has not yet released a draft of BMPs for grazing. The State has adopted the policy that the rules and regulations promulgated for oil and gas exploration, mineral extraction, and underground storage tanks shall be considered as the BMPs for these activities.

The Wyoming BLM policy on reclamation assumes that an area can and shall be ultimately reclaimed, and requires that every surface disturbance on public lands receive attention for short-term stabilization and long-term reclamation. Mitigation measures reduce to the extent possible the amount of reclamation that ultimately must take place. The BLM must apply reasonable mitigation and provide guidance for all authorizations. The permit or authorization is the means provided for ensuring that mitigation measures are implemented. Compliance inspections during operations ensure that COAs and/or stipulations are being followed. Compliance inspections upon completion of work ensure that both surface and subsurface reclamation procedures have been properly followed.

Standard practices may develop through the NEPA process into stipulations prior to lease or grant issuance, or they

may serve as a basis for COAs. If these practices (or newly developed techniques) are already incorporated into plans for development submitted by a permittee, such plans may be approved without the addition of any COAs. The BLM would consider any project proposal, however the burden is on the applicant to describe the design and construction techniques. If a project's design, scheduling, and construction techniques can mitigate environmental concerns, construction may be allowed without any COAs.

STANDARD PRACTICES

The following are standard practices applied to surface disturbing activities. These practices are applied, when necessary, to reduce environmental impacts. Large projects may require construction use plans and/or erosion control, revegetation, and restoration plans (Appendix 5-3) which would incorporate these practices. The standard practices in this document are designed to meet the intent of the State's BMPs, and may therefore be subject to revision when the State BMPs are finalized.

Although the headings below address specific resources or types of development, these practices apply to all surface disturbing activities. These practices have been developed through experience working with surface disturbances in the Rock Springs District. Therefore, these are believed to be the best practices available to address a variety of surface disturbance problems. These are not stipulations, but represent concerns that must be addressed in any acceptable proposed surface disturbing activity. Operators are encouraged to review these practices, incorporate them where appropriate, and where possible develop better methods for achieving the same goals.

Air Quality

BLM actions must comply with all applicable air quality laws, regulations, and standards. As projects are proposed that include possible major sources of air pollutant emissions, air quality protection related stipulations are added to BLM permits and rights-of-way grants. In addition, the BLM coordinates with the Wyoming Department of Environmental Quality/Air Quality Division during the process of analysis. This coordination results in the technical review of applications for permits and/or identification of additional stipulations to be applied to these permits.

The release of hazardous air contaminants, particularly the emissions from sour natural gas sweetening plants (a process used to remove H₂S from natural gas resulting in the emission of sulfur dioxide), is a public concern. BLM requires industry

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to prepare analyses of risks involved with the development of sour gas pipelines and treatment facilities. These analyses are designed to project impacts both to the public and to resource values. To aid in achieving air quality goals BLM would consult with the State of Wyoming, the U.S. Forest Service, industry, and the public to ensure that the most technically sound, environmentally balanced, and economically feasible decisions are made.

Additional Stipulations: The emission of fugitive dust shall be limited by all persons handling, transporting, or storing any material to prevent unnecessary amounts of particulate matter from becoming airborne to the extent that ambient air standards described in these regulations are exceeded. Control measures described as follows or any equivalent method shall be considered appropriate for such control:

- (i) Use, where possible, of water or chemicals for control of dust in the demolition of existing buildings, or structures, construction operations, the grading of roads or the clearing of land;
- (ii) Application of asphalt, oil, water, or suitable chemicals on dirt roads, materials stockpiles, and other surfaces which can give rise to airborne dusts;
- (iii) Installation and use of hood, fans and fabric filters to enclose and vent the handling of dusty materials; adequate containment methods shall be employed during sandblasting or other similar operations;
- (iv) Covering, at all times when in motion, open bodied trucks, transporting materials likely to give rise to airborne dust;
- (v) Conduct of agricultural practices such as tilling of land, application of fertilizers, etc. in such a manner as to prevent dust from becoming airborne;
- (vi) The paving of roadways and their maintenance in a clean condition;
- (vii) The prompt removal of earth or other material from paved streets onto which earth or other material has been transported by trucking or earth moving equipment, erosion by water, or other means (Wyoming Air Quality Standards and Regulations, 1989, Section 14, Control of Particulate Emissions).

Based upon improved modeling, reductions in nitrogen oxide emissions at the Naughton Power Plant near Kemmerer, and the timing, duration and magnitude of visibility impacts from the projected wells and compression, the cumulative effects of nitrogen oxide emissions (as modeled for the Pinedale Anticline Project EIS) will remain within visibility and lake acidity acceptable levels. Monitoring and emissions tracking for the protection of wilderness air quality related values of visibility and lake acidification will continue and reporting will be done on an annual basis.

The WDEQ-AQD emissions tracking will continue, on an annual basis, to report changes in permitted potential NO_x emission levels since January 1, 1996. In accordance with the Joint Agreement between the BLM, Wyoming DEQ, USDA Forest Service and the Environmental Protection Agency, in

maintaining diligence in the monitoring for the protection of wilderness air quality related values of visibility and lake acidification, the BLM, in consultation with the Wyoming DEQ-AQD, will track emissions for the Pinedale Anticline and the Jonah II projects on an annual basis. Any development within the Jack Morrow Hills Coordinated Activity Planning area will also be included in the tracking because of its proximity to the Bridger Wilderness area.

The construction and installation of compressors on BLM-administered lands will be coordinated with the Wyoming DEQ-AQD and all the Operators. Before right-of-way grants or sundry notices will be issued for any compressor site on BLM-administered lands, additional site-specific environmental analysis will be required to address site-specific surface resource concerns and mitigation of unnecessary and undue impacts (e.g., cultural, wildlife, visual, noise impacts at dwellings, sage grouse leks, etc.). Sites that are less than four miles from a dwelling will require additional hazardous air pollutant analysis.

Candidate Plants

Mitigation options to avoid or reduce impacts to rare plants may be limited due to specific habitat requirements, or lack of necessary biological information to make such an assessment. Most of the common techniques such as off-site compensation or habitat restoration have proven largely unsuccessful, although seedbanking is commonly performed in order to attempt off-site propagation. Mitigation plans for areas where impacts to these species cannot be avoided are designed to provide special management actions that minimize the overall impact to the species. However, due to the difficulties of providing successful mitigation options, impacts to candidate plants are considered less than significant only if no net loss of population size or habitat quality results. "No net loss" is intended to mean that BLM must "ensure that [actions authorized, funded, or carried out by BLM]...affecting the habitat of candidate species are carried out in a manner that is consistent with the objectives for managing those species. BLM shall not carry out any actions that would cause any irreversible or irretrievable commitment of resources or reduce the future management options for the species involved" (BLM Manual 6840).

Fire

Guidelines for buffer areas (an area in which fire cannot spread) have been prepared to protect developed facilities and areas of highly erodible soils from the impacts of fire.

If the development is located in a grass community, a 15-foot buffer is recommended.

If the development is located in a sagebrush community, a 25-foot buffer is recommended.

In a juniper/tall brush community (serviceberry, aspen, cottonwood, willow), a 50-foot buffer is recommended.

In a conifer community (lodgepole, spruce fir), a buffer area of 25 feet plus the height of the surrounding trees is recommended.

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The emissions which may be created directly by BLM activities are mitigated by applying best management practices. For example, prescribed fires are conducted to reduce emissions by burning only at appropriate fuel moistures and wind speeds (among other factors) which reduce as much as possible the smoke created. All BLM activities that may potentially cause undesirable air quality impacts are also coordinated with the Wyoming Department of Environmental Quality, Air Quality Division (WDEQ,ADQ). Permits to conduct these activities are secured (where necessary) before the activity begins, to insure compliance with all Federal, state, and local air quality laws.

In support of prescribed fire activities, the BLM may temporarily close areas to facilitate operations and to provide for public safety.

Pipelines and Communication Lines

On ditches exceeding 36 inches in width, 6 to 12 inches of surface soil should be salvaged where possible on the entire right-of-way. When pipelines and communication lines are buried, there should be at least 30 inches of backfill on top of the pipe. Backfill should not extend above the original ground level after the fill has settled. Guides for construction and water bar placement are found in "Surface Operating Standards for Oil and Gas Exploration and Development" (USDI 1978). Bladed surface materials would be re-spread upon the cleared route once construction is completed. Disturbed areas that have been reclaimed may need to be fenced when the route is near livestock watering areas.

Existing crowned and ditched roads would be used for access where possible to minimize surface disturbances. Where possible, clearing of pipeline and communication line rights-of-way would be accomplished with the least degree of disturbance to topsoil. Where topsoil removal is necessary, it would be stockpiled (wind-rowed) and re-spread over the disturbance after construction and backfilling are completed. Vegetation removed from the right-of-way would also be required to be re-spread to provide protection, nutrient recycling, and a seed source.

To promote soil stability, the compaction of backfill over the trench would be required (not to extend above the original ground level after the fill has settled). Water bars, mulching, and terracing would be required, as needed, to minimize erosion. Instream protection structures (e.g., drop structures) may be required in drainages crossed by a pipeline to prevent erosion. The fencing of linear disturbances near livestock watering areas may be required.

Reclamation

Current BLM policy recognizes that there may be more than one correct way to achieve successful reclamation, and a variety of methods may be appropriate to the varying circumstances. BLM should continue to allow applicants to use their own expertise in recommending and implementing construction and reclamation projects. These allowances still hold the applicant responsible for final reclamation standards of performance.

BLM reclamation goals emphasize: 1) protection of existing native vegetation; 2) minimal disturbance of existing environment; 3) soil stabilization through establishment of ground cover; and 4) establishment of native vegetation consistent with land use planning.

All reclamation is expected to be accomplished as soon as possible after the disturbance occurs with efforts continuing until a satisfactory revegetation cover is established and the site is stabilized (3 to 5 years).

Only areas needed for construction would be allowed to be disturbed. Reclamation (by the lessee or grant holder) would be initiated as soon as possible after a disturbance occurs.

On all areas to be reclaimed, seed mixtures would be required to be site-specific, composed of native species, and would be required to include species promoting soil stability. A pre-disturbance species composition list must be developed for each site if the project encompasses an area where there are several different plant communities present. Livestock palatability and wildlife habitat needs would be given consideration in seed mix formulation. BLM guidance for native seed use is BLM Manual 1745 (Introduction, Transplant, Augmentation, and Reestablishment of Fish, Wildlife, and Plants), and Executive Order No. 11987 (Exotic Organisms).

Interseeding, secondary seeding, or staggered seeding may be required to accomplish revegetation objectives. During rehabilitation of areas in important wildlife habitat, provision would be made for the establishment of native browse and forb species, if determined to be beneficial for the habitat affected. Follow-up seeding or corrective erosion control measures may be required on areas of surface disturbance which experience reclamation failure.

Trees, shrubs, and ground cover (not to be cleared from rights-of-way) would require protection from construction damage. Backfilling to preconstruction condition (in a similar sequence and density) would be required. The restoration of normal surface drainage would also be required.

Any mulch used would be free from mold, fungi, or noxious weed seeds. Mulch may include native hay, small grain straw, wood fiber, live mulch, cotton, jute, synthetic netting, and rock. Straw mulch should contain fibers long enough to facilitate crimping and provide the greatest cover.

The grantee or lessee would be responsible for the control of all noxious weed infestations on surface disturbances. Aerial application of chemicals would be prohibited within 1/4 mile of special status plant locations, and hand application would be prohibited within 500 feet. Control measures would adhere to those allowed in the Rock Springs District Noxious Weed Control EA (USDI 1982a) or the Regional Northwest Area Noxious Weed Control Program EIS (USDI 1987). Herbicide application would be monitored by the BLM authorized officer.

Roads

Roads would be constructed as described in BLM Manual 9113. New main artery roads would be designed to reduce

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sediment, salt, and phosphate loading to the Green River. Where necessary, running surfaces of the roads would be graveled if the base does not already contain sufficient aggregate.

Existing roads would be upgraded where necessary.

Recognized roads, as shown on the Rock Springs District Office Transportation Plan, would be used when the alignment is acceptable for the proposed use. Generally, roads would be required to follow natural contours; provide visual screening by constructing curves etc.; and be reclaimed to BLM standards.

To control or reduce sediment from roads, guidance involving proper road placement and buffer strips to stream channels, graveling, proper drainage, seasonal closure, and in some cases, redesign or closure of old roads would be developed when necessary. Construction may also be prohibited during periods when soil material is saturated, frozen, or when watershed damage is likely to occur.

On newly constructed roads and permanent roads, the placement of topsoil, seeding, and stabilization would be required on all cut and fill slopes unless conditions prohibit this (e.g., rock). No unnecessary side-casting of material (e.g., maintenance) on steep slopes would be allowed. Snow removal plans may be required so that snow removal does not adversely affect reclamation efforts or resources adjacent to the road.

Reclamation of abandoned roads would include requirements for reshaping, recontouring, resurfacing with topsoil, installation of water bars, and seeding on the contour. The removal of structures such as bridges, culverts, cattleguards, and signs usually would be required. Stripped vegetation would be spread over the disturbance for nutrient recycling, where practical. Fertilization or fencing of these disturbances would not normally be required. Additional erosion control measures (e.g., fiber matting) and road barriers to discourage travel may be required.

Main artery roads, regardless of primary user, would be crowned, ditched, drained, and surfaced with gravel to reduce sediment, salt, and phosphate loading to the Green River.

Road closures may be implemented during crucial periods (e.g., wildlife winter periods, spring runoff, and calving and fawning seasons).

Soils

If clay soils are used as pit lining, they should have a liquid limit greater than 30 and a Plasticity Index of at least 20. Assuming that bentonite in drilling fluids would sufficiently seal a pit is not good procedure because the bentonite would not be compacted, and uniform coverage and density would not be achieved. Bentonite is also subject to cracking if it is not designed properly.

Uncontrolled or designed settlement of clay particles does not provide a consistently adequate seal on a pit liner. Compaction or permeability testing should be used to determine pit characteristics.

Current objectives focus on soil conservation planning for surface disturbance actions. Soil conservation should be addressed during the initial phase of any surface disturbing action, thereby maintaining soil productivity and stability levels through the use of existing guidelines and techniques. Some areas may require more thorough soil management practices than others, however, this is dependent on the type and duration of the action and the effect on site-specific soil characteristics.

Some examples of standards applied throughout the Field Office area based on soil management criteria are:

1. Closures due to saturated soil conditions when soil resource damage would occur due to wheel rutting or compaction on wet soils.
2. Salvage and subsequent replacement of topsoil whenever possible on surface disturbing activities.
3. Limiting disturbance on slopes greater than 25 percent.

Emphasis should continue to be placed on the reduction of soil erosion and sediment into the Green River Basin watershed. Of particular importance would be those areas with saline soils such as the Little Colorado Desert or those areas with highly erodible geology and soils such as Red Creek drainage.

Management of the soil resource would continue to be based upon the following: 1) Evaluation and interpretation of soils in relation to project design and development; 2) Identification and inventory of soils for baseline data; and 3) Identification and implementation of methods to reduce accelerated erosion.

Evaluation and interpretation involves identification of soil properties which would influence their use and recommendations for development while minimizing soil loss. Projects would be examined on a site-specific basis, evaluating the potential for soil loss and the compatibility of soil properties with project design. Stipulations and mitigating measures are provided on a case-by-case basis to ensure soil conservation and practical management. Projects requiring soil interpretations include: construction of linear right-of-way facilities (i.e., pipelines, roads, railroads, and power transmission lines); construction of water impoundments; rangeland manipulation through fire or mechanical treatments; construction of plant site facilities, pump stations, well pads and associated disturbances; and reclamation projects.

The current Order 3 soil survey is designed to update general soils information and provide data to those areas lacking soil inventories. A baseline soil inventory is ongoing to provide information on productivity, soil engineering properties, and soil erosion potentials. Proposed "I" category allotments and areas impacted by oil and gas projects receive priority in the soil survey process.

Identification of critical erosion condition areas would continue during soil surveys, monitoring, site specific project analysis, and activity plan development for the purpose of avoidance and special management.

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Before a surface disturbing activity is authorized, topsoil depth would be determined. The amount of topsoil to be removed, along with topsoil placement areas, would be specified in the authorization. The uniform distribution of topsoil over the area to be reclaimed would be required, unless conditions warrant a varying depth. On large surface-disturbing projects (e.g., gas processing plants) topsoil would be stockpiled and seeded to reduce erosion. Where feasible, topsoil stockpiles would be designed to maximize surface area to reduce impacts to soil microorganisms. Stockpiles remaining less than two years are best for soil micro-organism survival and native seed viability. It is recommended that stockpiles be no more than 3 to 4 feet high. Areas used for spoil storage would be stripped of topsoil before spoil placement. The replacement of topsoil after spoil removal would be required.

Temporary disturbances which do not require major excavation (e.g., small pipelines and communication lines) may be stripped of vegetation to ground level using mechanical treatment, leaving topsoil intact and root mass relatively undisturbed.

In support of the BLM's mission, soil management is committed to sustaining the productivity of soils.

Watershed

The entire land surface should be considered for nonpoint pollution control with specific attention being given to areas where the flow of water is concentrated, including roads, well pads, and stream channels.

Stream sediment, phosphate, and salinity load would be reduced where possible.

In areas where ground water exists 20 feet or less from the surface (Wyoming Oil & Gas Commission), produced water from oil and gas operations would be disposed of in an approved closed storage system or by other acceptable means complying with Onshore Order #7.

Where depth to groundwater is less than 100 feet and soil permeability is more than 0.1 foot/day, plants, mills, or associated tailings ponds and sewage lagoons would not be allowed.

To protect watershed resources during wet periods, vehicle travel, particularly large or heavy truck traffic, would not be allowed unless travel occurs on roads that are graveled for all-season use.

Crossings of ephemeral, intermittent, and perennial streams associated with road and utility line construction would generally be restricted until after spring runoff and normal flows are established.

Vegetative buffer strips of at least 100 feet should be left intact next to a perennial stream during controlled burning.

The inner gorge of intermittent and ephemeral drainages should be burned in such a manner as to leave unburned patches of vegetation. At no time should the burn consume more than 50 percent of the cover within the inner gorge area.

The use of herbicides for vegetative manipulation should proceed with great care when done in the proximity of willows, cottonwoods, or aspens so as not to damage such stands unless the prescription actually calls for such removal.

Herbicide loading sites would be located at least 500 feet from live water, floodplains, riparian areas, and all special status plant locations and would be utilized in accordance with the guidelines in Appendix 9-2. Treatments would adhere to all label directions.

Floatable stream stretches should be managed so that there is no more than a 10 percent increase in fecal coliform count.

Vegetative buffer strips should be maintained between developed recreational facilities and live water.

Prior to installing toilet facilities associated with recreation, ground water protection would be provided for.

Installation of instream structures for fisheries, watershed, or irrigation enhancement must be completely engineered if the high flow for the stream exceeds 10 CFS (cubic feet/second).

Floodplains by their very nature are unsafe locations for permanent structures. With an inundation of flood waters, soils disturbed by construction could experience a rate of erosion greater than undisturbed sites. There is an additional concern over the potential for flood waters to aid in the disbursement of hazardous materials that may be stored within such structures. Therefore, floodplains should have no permanent structures constructed within their boundaries unless it can be demonstrated on a case-by-case basis that there is no physically practical alternative. In cases where floodplain construction is approved, additional constraints could be applied.

Section 2.a.(2) of Executive Order 11988 states in summary that "...if the HEAD OF THE AGENCY finds that the only practicable alternative consistent with the law and with the policy set forth in the Order requires siting in a floodplain, the agency shall, prior to taking action, 1) design or modify its action in order to minimize potential harm...and 2) prepare and circulate a notice containing an explanation of why the action proposed is to be located in the floodplain.

Also, Section 3 of Executive Order 11988, in reference to Federal real property and facilities states that agencies shall, if facilities are to be located in a floodplain (i.e., no practicable alternative), flood protection measures are to be applied to new construction or rehabilitate existing structures, elevate structures rather than fill the land, provide flood height potential markings on facilities to be used by the public, and when the property is proposed for lease, easement, right of way, or disposal, the agency has to attach restriction on uses in the conveyance, etc., or withhold from such conveyance.

Disturbances to the soils, such as roads and well pads, can easily concentrate the flow of water increasing its erosive potential. A 500-foot buffer provides an opportunity for such flows to be disbursed before they reach a stream and often precludes construction in riparian zones. Therefore, there should be no construction within 500 feet of a stream unless

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it can be demonstrated on a case-by-case basis that there is no physically practical alternative. In cases where construction within the 500-foot zone is approved, additional constraints could be applied.

All surface disturbance, permanent facilities, etc., shall remain a minimum of 500 feet away from the edge of surface waters, riparian areas, wetlands, and 100-year floodplains unless it is determined through site specific analysis and the Field Manager approves in writing, that there is no practicable alternative to the proposed action. If such a circumstance exists, then all practicable measures to mitigate possible harm to these areas must be employed. These mitigating measures would be determined case by case and may include, but are not limited to, diking, lining, screening, mulching, terracing, and diversions.

To minimize long-term surface disturbances within the vegetated sand dunes under this alternative, options such as directional drilling, smaller well pads, and surface lines should be considered. To enhance reclamation success through surface stability, techniques to reduce wind erosion should be considered as standard procedures within this area. These methods could include snow fences, soil tackifiers, and erosion control matting.

Well Pads and Facilities

Dumping of produced water on roads would not be allowed unless TDS is less than 400 mg/l (State standard for the Colorado River drainage) and the water does not contain hazardous material. No produced water would be allowed on roads in Sublette County.

Both produced water and reserve pits should be constructed to ensure protection of surface and ground water. The review to determine the need for installation of lining material should be done on a case-by-case basis and consider soil permeability, water quality, and depth to ground water. Oil-based muds used for drilling operations should be environmentally acceptable.

Pits would be fenced as specified in individual authorizations. Any pits with harmful fluids in them shall be maintained in a manner that would prevent migratory bird mortality.

Abandoned sites must be satisfactorily rehabilitated in accordance with a plan approved by the BLM. Soil samples may be analyzed to determine reclamation potential, appropriate reseeding species, and nutrient deficits. Tests may include: pH, mechanical analysis, electrical conductivity, and sodium content. Terraces or elongated water breaks would be constructed after slope reduction. Disturbances should be reclaimed or managed for zero runoff from the location until the area is stabilized. All excavations and pits should be closed by backfilling and contouring to conform to surrounding terrain. On well pads and larger locations, the surface use plan would include objectives for successful reclamation including: soil stabilization, plant community composition, and desired vegetation density and diversity.

On producing locations, operators would be required to reduce slopes to original contours (not to exceed 3:1 slopes). Areas not used for production purposes should be backfilled and blended into the surrounding terrain, reseeded, and erosion control measures installed. Erosion control measures would be required after slope reduction. Facilities would be required to approach zero runoff from the location to avoid contamination and water quality degradation downstream. Mulching, erosion control measures, and fertilization may be required to achieve acceptable stabilization.

Reserve pits would not be located in areas where groundwater is less than 50 feet from the surface and soil permeability is greater than 10^{-7} cm/hr.

Produced water from oil and gas operations would be disposed of in accordance with the requirements of Onshore Oil and Gas Order #7.

Any produced water pit or drilling fluids pit that shows indications of containing hazardous wastes would be tested for the Toxicity Characteristic Leaching Procedure constituents. If analysis proves positive, the fluids would be disposed of in an approved manner. The cost of the testing and disposal would be borne by the potentially responsible party.

No surface disturbance is recommended on slopes in excess of 25 percent unless erosion controls can be ensured and adequate revegetation is expected. Engineering proposals and revegetation and restoration plans would be required in these areas.

No sour gas lines would be located closer than one mile to a populated area or sensitive receptor. The applicants must use the best available engineering design (e.g., alignment, block valve type and spacing, pipe grade), and best construction techniques (e.g., surveillance, warning signs) as approved by the Authorized Officer to minimize both the probability of rupture and radius of exposure in the event of an accidental pipeline release of sour gas. A variance from the one-mile distance may be granted by the Authorized Officer based on detailed site-specific analysis that would consider meteorology, topography, and special pipeline design and/or construction measures. This analysis would ensure that populated areas and sensitive receptors would not be exposed to an increased level of risk.

Wilderness

A controlled surface use stipulation would be applied for activities within 1/4 mile or the visual horizon of the WSA boundary. Actions within or adjacent to the WSAs would be evaluated on a case-by-case basis to determine if appropriate mitigation would be necessary.

Wildlife

Mountain Plover (proposed for listing)

Surveys will be conducted within suitable plover habitat by a qualified biologist in accordance with USFWS guidelines (a copy of the guidelines may be obtained from the USFWS, BLM, or WGFD). Surveys will be conducted to determine the

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presence or absence of breeding plovers (i.e., displaying males and foraging adults).

Surveys to determine presence or absence of plovers should be conducted between May 1 and June 15 throughout the breeding range.

The survey type chosen for a project and the extent of the survey area (i.e., beyond the edge of the construction or operational right of way) will depend on the type of project activity being analyzed (e.g., construction, operation) and the users intent. Some techniques common to each survey method are:

Surveys will be conducted during early courtship and territorial establishment. Throughout the breeding range, this period extends from approximately mid-April through early June. However, the specific breeding period depends on latitude, elevation, and weather.

Conduct surveys between local sunrise and 10:00 a.m. and from 5:30 p.m. to sunset (periods of horizontal light to facilitate spotting the white breast of the adult plovers).

Drive transects within the project area to minimize early flushing. Flushing distances for mountain plovers may be within 3 meters (9 to 10 feet) for vehicles, but plovers often flush at 50 to 100 meters (164 to 328 feet) when approached by humans on foot.

For all breeding birds observed, conduct additional surveys immediately prior to construction activities to search for active nest sites.

If an active nest is located, an appropriate buffer area should be established to prevent direct loss of the nest or indirect impacts from human-related disturbance. The appropriate buffer distance will vary, depending on topography, type of activity proposed, and duration of disturbance. For disturbances including pedestrian foot traffic and continual equipment operations, a 200-meter (656-foot) buffer is recommended.

Where nesting plovers are found, activity within 636 feet would be restricted from April 10 to July 10.

Surveys would be conducted prior to and as close to the actual date of construction initiation as possible, but no more than 14 days prior to the date actual ground-disturbance activities begin. If more than one survey is required, they would be made at least 14 days apart, with the last survey no more than 14 days prior to start-up date.

Where roads or well pads have been constructed prior to the mountain plover nesting season and use of these areas has not been initiated for development action, the BLM would require site investigations of these areas prior to use to determine whether mountain plovers are using these areas. In the event that mountain plover nesting is occurring, the BLM may require delays in planned activities until nesting is complete.