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Bureau of Land Management

BLM

Farmington Field Office
Bare Soil Reclamation Procedures

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U.S. Department of the Interior
Bureau of Land Management
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It is the mission of the Bureau of Land Management to sustain the health, diversity, and productivity of the public lands for the use and enjoyment of present and future generations.

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1. INTRODUCTION

The Bureau of Land Management (BLM) Farmington Field Office (FFO) routinely processes requests and applications for a variety of proposed projects. Proposed projects may originate from FFO staff, business entities, or members of the public. Examples of internally proposed projects include habitat, watershed, and range improvements. Examples of externally proposed projects include applications for permit to drill (APDs), permits to mine, rights-of-way (ROW), communication sites, and water developments. The FFO authorization or permit approval may result in areas of bare mineral soil during the construction, operation, abandonment, or relinquishment phases of the authorized action. These areas of bare soil are required to be reseeded and stabilized.

The FFO Bare Soil Reclamation Procedure provides guidelines for the revegetation of bare soil that result from actions authorized by the FFO for projects that occur on surface lands managed by the BLM FFO, including Bureau of Reclamation (BOR) and Navajo Lake State Park lands included in the 1983 Interagency Agreement. This procedure provides the minimum information and operation standards that the FFO expects to be incorporated in to site-specific revegetation plans at the level of detail necessary for the FFO to assess the technical adequacy and conformance of revegetation practices proposed by a permit applicant.

The diversity of site characteristics (i.e., elevation, topography, precipitation, and soil type) that exists across the 1.4 million acres within the FFO favors a performance-based approach to revegetation rather than a one-size fits-all procedure-based approach. The FFO developed revegetation standards that are specific to the FFO and are intended to complement current revegetation guidance found in the "Surface Operating Standards and Guidelines for Oil and Gas Exploration and Development" (The Gold Book) and other FFO policy and guidance.

All surface disturbing activities approved on lands managed by the FFO will be subject to the FFO Bare Soil Reclamation Procedure. It is important to note that the revegetation criteria expressed in FFO Bare Soil Procedure are considered standards. However, the authorized officer may modify standards depending on site-specific reclamation challenges (i.e., physical or biological constraints beyond the operator's control). The FFO will consider authorizing well-designed revegetation experiments and trials outside established strategies that may serve as the basis for enhancing revegetation efficacy or efficiency consistent with the FFO's revegetation standards. The FFO will consider authorizing alternative vegetation reclamation standards developed from reference areas proposed by the permit applicant. All proposed reference areas must be developed by the permit applicant according to BLM-accepted Technical References and Instruction Memorandums, or accepted protocols developed by the National Resource Conservation Service (NRCS), the Society for Ecological Reclamation (SER), or other nationally accepted protocols for the establishment of reference areas.

The permit holder is not responsible for achieving full ecological reclamation of bare soil resulting from an authorized action. Instead, the permit holder is responsible for achieving the short-term stability, visual, hydrological, and productivity objectives of the FFO. The performance-based revegetation standards focus on using the desired end condition as the ultimate determinant of acceptable vegetation productivity. The attainment of the vegetation percent cover standards will fulfill the productivity objective of FFO and contribute to the stability of the site. If monitoring identifies significant erosion problems or other hydrological issues with the pad, the permit holder may be required to address those issues even after the vegetation percent cover standards have been attained.

The FFO makes no distinction between interim and final revegetation processes; the revegetation processes are the same for all revegetation activities. The revegetation standards are habitat specific and will be adhered to unless a written exception is granted by the authorized officer.

The FFO Bare Soil Reclamation Procedure contains requirements for the revegetation of disturbed lands and establishes standards for acceptable vegetation production, monitoring, documentation, and

reporting of monitoring data. The FFO specialists that developed the Revegetation Procedure evaluated the diversity of habitats that are managed by the FFO and condensed the approximately 24 potential plant community habitats into the 8 most common vegetation communities. FFO completed a written narrative of each of the eight vegetation communities and posted the descriptions on the New Mexico BLM web page (http://www.FFO.gov/nm/st/en/fo/Farmington_Field_Office/ffo_planning/surface_use_plan_of.html). Each of the eight vegetation community narratives contain a brief description of the vegetation community, a revegetation productivity standard stated as percent foliar cover, a menu based seed pick list, and recommendations for effective reclamation.

The menu-based seed pick lists contains plants that FFO considers to be the most appropriate and desirable plants that have the potential to become established in each of the vegetation communities. The FFO recognized that some sites to be reclaimed may be negatively impacted by either authorized livestock grazing, or unauthorized grazing due to wildlife, and wild or feral horses. The FFO established a menu-based Reduced Palatability Seed Mix that contains plants that are generally not preferred by grazing animals. The Reduced Palatability Seed Mix may be used when approved by the FFO in any of the eight vegetation communities where grazing impacts are documented and a temporary fence is not feasible. The percent vegetation cover standard listed in the appropriate vegetation community will still apply when the reduced palatability seed mix is used.

The following three procedures were developed to provide guidance for the revegetation of bare soil resulting from actions authorized by the FFO:

- **Vegetation Reclamation Procedure A**: applies to bare mineral soil in areas of less than one acre, but more than 0.1 acre during the life of the permit: does not require monitoring
- **Vegetation Reclamation Procedure B**: applies to areas of bare mineral soil in areas of one acre or larger; requires monitoring.
- **Vegetation Reclamation Procedure C**: applies to areas reduced to bare mineral soil that result from new authorizations that may be required for the continuing operation, maintenance, or relinquishment of an existing permit.

The size criteria for each of the procedures will not apply to FFO-approved working areas. Working areas include areas routinely used to operate and maintain facilities or improvements. The working area does not include areas occasionally used for parking or for temporary staging of equipment. The area of an approved working area will not count toward the size criteria; however, the FFO may require portions of an approved working area to be reseeded after initial construction. Areas of a seeded working area will be reseeded according to the original seeding requirements if reduced to bare soil during the life of the permit. Examples of working areas include the area of a well pad needed for routine operations, the portion of a communication site need for tower operations, or the area of a stock tank designed to hold water. The proponent may propose a working area in the permit application or proposed action for the project environmental assessment (EA). The FFO will analyze the working area proposal and approve, reject, or request modifications to the working area.

The vegetation percent cover standards were established with the goal that 95 out of 100 bare soil reclamation projects (95%) would have the biological potential to attain the standard if reasonable and prudent best management practices were followed during the reclamation process. After implementation of the Bare Soil Reclamation Procedure, if data suggests that standards are not 95% biologically attainable after reasonable reclamation efforts, FFO may adjust the standards. The exception process contained within the Bare Soil Reclamation Procedure will be followed for bare soil reclamation projects that may not have the biological potential to attain the standard. The Bare Soil Reclamation Procedure is a living document and other provisions of the procedure may be adjusted over time if data suggests that adjustments are needed.

1.1. Authority

1.1.1. Oil and Gas

The FFO is required by law to ensure that authorized actions are carried out in a manner that does not result in "permanent impairment of the productivity of the land or the quality of the environment" (Federal Land Policy and Management Act [FLPMA], 1976). In order to promote a consistent and science-based approach to reclamation, this protocol identifies minimum information and operational requirements and performance-based criteria that are expected to satisfy FFO's responsibilities under FLPMA.

The Mineral Leasing Act of 1920 (30 U.S.C. § 181-287), amended by the Federal Onshore Oil and Gas Leasing Reform Act of 1987, PL 100-203, among other things, authorizes the Secretary of Interior to regulate all surface-disturbing activities associated with any lease and to impose mitigation and reclamation measures in order to "conserve surface resources."

The 2003 Farmington Record of Decision/Resource Management Plan (ROD/RMP) specifies that industry is expected to fully comply with the surface protection and hazard reduction aspects of appropriate Onshore Orders, as well as conditions of approval (COAs) and Standard Stipulations.

BLM regulations established in 43 C.F.R. §3160 (i.e., Onshore Oil and Gas Order Number 1) require that a reclamation plan be submitted with the Surface Use Plan of Operations in the APD. Onshore Order Number 1, Section XII. B., in referencing Section III.D.4 (j), requires that surface reclamation plans must be designed to return the disturbed areas to productive use and meet the objectives of the land and resource management plan.

BLM Regulations established in 43 C.F.R. §3162.3-1(f), "The surface use plan of operations shall contain information specified in applicable orders or notices, including the road and drillpad location, details of pad construction, methods for containment and disposal of waste material, plans for reclamation of the surface, and other pertinent data as the authorized officer may require. A surface use plan of operations may be submitted for a single well or for several wells proposed to be drilled in an area of environmental similarity."

1.1.2. Rights-of-Way (ROWs)

The Federal Land Policy Management Act (FLPMA) of 1976, Public Law 94-579 Title III, Section 302(b) outlines the responsibilities of the BLM. "In managing the public lands the Secretary shall, by regulation or otherwise, take any consistent and science based approach to prevent unnecessary or undue degradation of the lands" In order to promote a consistent and science-based approach to reclamation, this protocol identifies minimum information and operational requirements and performance-based criteria that are expected to satisfy the FFO's responsibilities under FLPMA.

The MLA of 1920 (30 U.S.C. § 181-287), amended by the Federal Onshore Oil and Gas Leasing Reform Act of 1987, PL 100-203, among other things, authorizes the Secretary of Interior to regulate all surface-disturbing activities associated with any lease and to impose mitigation and reclamation measures in order to "conserve surface resources."

The FFO 2003 Record of Decision/Resource Management Plan (ROD/RMP) specifies that industry is expected to fully comply with the surface protection and hazard reduction aspects of appropriate Onshore Orders, as well as conditions of approval (COAs) and Standard Stipulations.

BLM Regulations for ROW under FLPMA established in 43 C.F.R. 2804.25(b) stipulate that the applicant may be required to submit additional information necessary to process their application. This information may include a detailed construction, operation, rehabilitation, and environmental protection plan, *i.e*. a "Plan of Development" and any needed cultural resource surveys or inventories for threatened and endangered species.

BLM Regulations for ROW's under the MLA established in 43 C.F.R 2884.11(c) (5) require an estimated schedule for constructing, operating, maintaining, and terminating the project (a Plan of Development).

1.1.3. Recreation

BLM regulations for Special Recreation Permits under FLPMA established in 43 CFR 2932.24 (a)(3) may require other information that BLM requests, in sufficient detail to allow us to evaluate the nature and impact of the proposed activity, including measures the applicant will use to mitigate adverse impacts. This information may include a proposed operating plan detailing the proposed project, hazard mitigation and reclamation.

Under 43 CFR 2932.41, stipulations may be placed on an application to meet management goals and objectives and to protect lands and resources and the public interest.

Under 43 CFR 2932.44, BLM may require a bond to cover your fees or defray the costs of restoration and rehabilitation of the lands affected by the permitted use.

1.1.4. Livestock Grazing

BLM regulations for Grazing Administration-Exclusive of Alaska (43 CFR Part 4100), Fundamentals of Rangeland Health and Standards and Guidelines for Grazing Administration (43 CFR Subpart 4180) and Range Improvements (43 CFR Subpart 4120, §4120.3) are the established regulations by which the Secretary of the Interior administers grazing use, inventory, monitoring and improvement of the public lands. For permitted actions such as range improvements which include but are not limited to fences, water developments and vegetation manipulation, funds shall be allocated in accordance with 43 CFR §4120.3-8(a) by the Secretary for the on the ground rehabilitation, protection and improvement of public rangeland ecosystems.

Subpart 4180-Fundamentals of rangeland health and Standards and Guidelines for Grazing Administration specifically states "the authorized officer shall take appropriate action (when grazing is found to be a causal factor for not meeting rangeland health) under subparts 4110, 4120, 4130, and 4160 of this part as soon as practicable but not later than the start of the next grazing year upon determining that grazing management needs to be modified to ensure that the following conditions exist:

- (a) Watersheds are in, or are making significant progress toward, properly functioning physical condition, including their upland, riparian-wetland, and aquatic components; soil and plant conditions support infiltration, soil moisture storage, and the release of water that are in balance with climate and landform and maintain or improve water quality, water quantity, and timing and duration of flow.
- (b) Ecological processes, including the hydrologic cycle, nutrient cycle, and energy flow, are maintained, or there is significant progress toward their attainment, in order to support healthy biotic populations and communities.
- (c) Water quality complies with State water quality standards and achieves, or is making significant progress toward achieving, established BLM management objectives such as meeting wildlife needs.
- (d) Habitats are, or are making significant progress toward being, restored or maintained for Federal threatened and endangered species, Federal proposed or candidate threatened and endangered species, and other special status species."

In accordance with 43 CFR Subpart 4180, §4180.2 the authorized officer shall take appropriate action to ensure the public lands meet and conform to minimum standards and guidelines. 43 CFR 4180.2 (d) states "At a minimum, state or regional standards developed under paragraphs (a) and (b) of this section must address the following: (1) Watershed Functioning; (2) Nutrient cycling and energy flow; (3) Water quality; (4) Habitat quality for endangered, threatened, proposed, Candidate 1 or 2, or special status species and (5) Habitat quality for native plant and animal populations and communities. At a minimum, State or regional guidelines….must address the following: (1) **Maintaining or promoting adequate amounts of vegetative ground cover, including standing plant material and litter, to support infiltration, maintain soil moisture storage and stabilize soils** (emphasis added).

Practices and activities subject to standards and guidelines include the development of grazing-related portions of activity plans, establishment of terms and conditions of permits, leases and other grazing authorizations, **and range improvements such as vegetation manipulation, fence construction and development of water"** (emphasis added).

Range improvements will also be done in accordance with the Standards for Public Land Health and Guidelines for Livestock Grazing Management in New Mexico (Memorandum 2001) specifically guidelines (4) Give priority to rangeland improvements and land treatments that offer the best opportunity for achieving standards and (5) Where livestock grazing management practices alone are not likely to achieve the desired plant community (including control of noxious weeds), land management practices including, but not limited to, prescribed fire, biological, mechanical and chemical land treatments should be utilized.

Range improvements will/are also done in accordance with the 1978 Public Rangelands Improvement Act (43 U.S.C. §§ 1901-1908) which establishes a national policy and commitment to improve the conditions on public rangelands, requires a national inventory and consistent federal land management policies, and provides funds for range improvement projects.

1.1.5. Solid Minerals

The following regulations apply to solid mineral development:

- Mining and reclamation plans**:** BLM may require you to submit mining and reclamation plans before we begin any environmental review or issue a contract or permit. You may combine these plans in one document (43 CFR 3601.40).
- What information must I include in my reclamation plan: If BLM requires you to submit a reclamation plan, it must include:(a) A statement of the proposed manner and time in which you will complete reclamation of the areas disturbed by your operations; (b) A map or sketch which delineates the area you will reclaim; and (c) Such other information as BLM may require (43 CFR 3601.42).
- What is the process for BLM to approve my mining and reclamation plans: (a) After reviewing your mining and reclamation plans, BLM will notify you of any deficiencies in the plans and recommend the changes necessary. BLM will notify you in writing when we approve your plan. You must follow BLM-approved mining and reclamation plans, which become part of the contract or permit. (b) Your operation must not deviate from the plan BLM approves, unless it is modified under §3601.44 (43 CFR 3601.43).
- How and when may my mining or reclamation plan be modified: (a) Either you or BLM may initiate a modification of an approved mining or reclamation plan to adjust for changed conditions or to correct any oversight. BLM will consult with you before requiring a modification. (b) If BLM notifies you that you must modify your plan, you must prepare the modification, or explain why you need more time, within 30 days. If you fail to modify your plan to BLM's satisfaction, BLM may order you to stop operations under your contract or permit. (c) When you ask to change an approved mining or reclamation plan for one of the reasons in paragraph (a) of this section, BLM will notify you in writing within 30 days whether we approve the modification, deny it, or require any changes in it (43 CFR 3601.44).

1.1.6. Other

All authorizations or permits issued by the FFO will follow the Bare Soil Reclamation Procedure according to the appropriate regulations the authorization or permit is issued.

2. VEGETATION RECLAMATION PROCEDURE A

The Vegetation Reclamation Procedure A refers to the revegetation of bare mineral soil areas that are less than one acre in size, but greater than 0.1 acre, resulting from any action authorized by the FFO. The Vegetation Reclamation Procedure A does not apply to areas approved by FFO as working areas necessary for the routine long term operation of an authorized site that were not required to be reseeded during the initial interim reclamation, but do apply to portions of working areas that were required to be reseeded during the initial interim reclamation. Disturbed areas less than 0.1 acre are expected to revegetate naturally from seed sources adjacent to the disturbance.

The FFO and the project proponent will work collaboratively to develop site-specific information during a pre-disturbance site visit. The information developed from the site visit will be incorporated into the permit application and associated EA. The permit application or EA will include photos of the proposed project site, the vegetation community that best represents the proposed project area, a seed mix developed from the appropriate vegetation community a description of any proposed water management features, and any techniques or methods that may be incorporated to promote successful vegetation restoration. A site-specific vegetation reclamation plan will be required in the permit application and associated EA.

The vegetation reclamation plan will reference potential revegetation requirements resulting from final abandonment or relinquishment activities. The proponent/permit holder is required to document to the FFO that the vegetation percent cover standards listed in the vegetation community description have been attained before the FFO will issue a final abandonment notice or a relinquishment.

The proponent is not required to monitor the revegetation of bare soil sites that are less than one acre in area. The FFO may visit revegetated sites after completion of the revegetation reclamation activities, and may request a conference with the effected parties to analyze issues that may have contributed to revegetation failure or lack of meaningful progress. The FFO may request the proponent to submit a remedy plan to address lack of success or to repair damage to revegetated areas. If the proponent fails to submit a remedy plan, the FFO may provide the proponent with remedy plan that includes required actions that may not have been required in the original vegetation reclamation plan.

3. VEGETATION RECLAMATION PROCEDURE B

Surface disturbing actions, grants, or permits authorized by FFO that result in bare mineral soil of an area greater than or equal to one acre, not including a FFO approved working area, will require the proponent or permit holder to initiate the Vegetation Reclamation Procedure B. The disturbance may occur during initial construction, any time during operating life of the permit, or during the abandonment or relinquishment of a permit. The proponent/permit holder is responsible for all areas revegetated per the Vegetation Reclamation Procedure B until the proponent/permit holder transfers, abandons, or relinquishes the permit according to accepted FFO protocol.

3.1. Monitoring Components

The following monitoring components are required for the Vegetation Reclamation Procedure B:

- Establish monitoring sites after seeding is completed
- Conduct annual monitoring starting two calendar years after seeding is completed
- Evaluate monitoring reports
- Compile and present documentation that percent vegetation cover standards have been attained
- Request concurrence from the FFO that percent vegetation cover standards have been attained
- FFO will provide concurrence (or not) that percent vegetation cover standards have been attained
- Develop remedy plans to correct impacts to revegetation that may prevent the revegetated area from attaining per cent vegetation cover standards.
- Conduct long term monitoring after per cent vegetation cover standards have been attained

The FFO authorizes actions under many different regulations that are pertinent to a particular program such as oil and gas development, ROW grants, grazing permits, and gravel mining permits. The FFO and the grant or permit holder will have different monitoring responsibilities according the regulations pertaining to the permit authorization. The FFO developed the Surface Use Plan of Operations Procedure (Appendix A) to define monitoring responsibilities to be included in an APD, and the ROW POD Procedure (Appendix B) to define monitoring responsibilities for a ROW grant. Monitoring responsibilities will be defined in the environmental assessment or a permit application according to appropriate regulations for other actions authorized by the FFO.

3.2. Vegetation Monitoring Techniques

Vegetation monitoring will consist of both qualitative and quantitative methods and includes photo points and line point intercept transects (transects).

3.2.1. Photo Points

Photo point monitoring will be required for authorized disturbances that trigger the FFO Vegetation Reclamation Procedure B. Photo point monitoring has been utilized extensively throughout the BLM and the FFO. Photo point monitoring is an accepted procedure to provide qualitative documentation of vegetation trend, water management effectiveness, and damage to reseeded areas.

The FFO will utilize global positioning system (GPS) to establish the location of all required photo points in NAD 83 Lat/Long decimal degrees during the earthwork and seeding inspection process. The FFO will take the initial photos and include the photos in the initial monitoring report submitted to the proponent. In preparation to conduct annual monitoring two calendar years after seeding, the proponent may reference the initial monitoring report for GPS locations of photo points and review the initial photos to reference the orientation (i.e., direction) that the initial photos were taken. The proponent will locate the initial photo points and take the photos in the same direction as the initial photos. The photos will be taken by a digital camera with 12 megapixel capability or of sufficient quality to produce an image that vegetation can be adequately analyzed by the FFO. If the quality of the photo monitoring presented to the FFO does not allow for a reasonable evaluation, the FFO may reject the monitoring and require resubmission.

3.2.2. Line Point Intercept Transects

The establishment of transects is required. Transects will be permanently marked by the operator by any means acceptable to the operator that ensures that the operator or FFO personnel can return to within one foot of the original transect location The intent of the transects is to document the percent foliar vegetative cover. The percent foliar vegetative cover data determined by reading the transects will be utilized to quantitatively document that the percent foliar cover vegetation standards established for the site have been attained. The transects will only be read in preparation to submit a request to FFO for concurrence that vegetation percent cover standards have been attained.

When reading the transects, all rooted vegetation will be recorded; rooted vegetation could be alive, dormant, or dead. Dormant or dead vegetation must be firmly rooted in the ground to be recorded. Un-rooted, loose vegetation or woody debris will not be recorded. Rooted vegetation will be recorded as desirable or undesirable. The FFO has compiled a list of undesirable plants and has attached the list to the line point intercept transect form (Appendix C). The total percent vegetation score for the transect may include up to 10 percent undesirable species. If any plants listed on the State of New Mexico noxious weed lists A or B as updated by the State are documented on the pad, the operator must contact the FFO weed coordinator for instructions to control the noxious weeds.

The individual scores for each line point intercept transect will be averaged together to arrive at an overall score for the site. Transects may be established collaborative by FFO and the proponent/permit holder. A minimum of one transect will be established in each site that requires monitoring under the guidance of Vegetation Reclamation Procedure B. Specific minimum requirements for the number of transects on well pads is established in the SUPO Procedure. The minimum requirements for the number of transects on a ROW grant is established in the ROW POD Procedure. FFO in collaboration with the proponent/permit holder will determine the number of transects required for all other authorized actions. Additional information about establishing and reading the transects is attached in Appendix C.

3.2.3. Vegetation Cage

The use of vegetation cage is optional. A vegetation cage may help document successful seed germination, and determine if livestock grazing is a contributing factor for failure to attain vegetation reclamation standards. If the proponent/permit holder decides to use a vegetation cage on the site, FFO will furnish the first cage and include the location and a photo of the vegetation cage in the initial monitoring report.

3.3. Implementation Process

3.3.1. Pre-Disturbance Site Visit

The FFO and the proponent will conduct a pre-disturbance site visit to the proposed project area to characterize the site. A weed survey will be conducted by the personnel present at the site visit. The FFO Pre-Disturbance Weed Management Procedure will be followed (Appendix D). The FFO in collaboration with the proponent will determine which of the eight vegetation communities developed by the FFO best represent the proposed project area. A seed mix will be developed using the menu based seed pick list in the appropriate Vegetation Community Description. The proponent will take photos of the proposed project site. If the soil conditions on the site appear to preclude the successful attainment of vegetation standards for the vegetation community that best represent the site, the FFO and the proponent may document those soil conditions on an onsite form. Soil conditions will not preclude reseeding the site, but soil condition documentation may be used as a basis for future exception consideration.

3.3.2. Revegetation Plan

A Revegetation Plan must be incorporated in the permit application or the environmental assessment for a proposed action. Information gathered from the pre-disturbance site visit will be incorporated into the

Revegetation Plan. The Revegetation Plan will apply to the authorized action during the life of the authorization from construction to abandonment or relinquishment.

The proponent may submit an alternative revegetation plan that meets the minimum requirements for percent cover and monitoring established in the FFO Bare Soil Reclamation Procedure to the FFO for approval. The Revegetation Plan may be modified during the life of the authorization with approval of FFO. The Revegetation Plan will include:

- Photos of undisturbed proposed project area.
- The vegetation community that most accurately represents the proposed project site.
- The proposed seed mix that was developed from the seed pick list located in the appropriate vegetation community description, or a proposed seed mix developed from other sources.
- A reference to monitoring and reporting requirements.
- A reference to the revegetation percent cover standards from the appropriate vegetation community description.
- A description of any soil amendments or other reclamation techniques that may be developed from the vegetation community description recommendations, or other techniques proposed by the proponent
- A reference to final abandonment or relinquishment. If one acre or more of bare soil results from earthwork required in preparation for final abandonment or relinquishment, the proponent/permit holder will follow the Vegetation Reclamation Procedure B. If final abandonment or relinquishment earth work results in less than one acre, but more than 0.1 acre of bare soil, the proponent/permit holder will initiate Vegetation Reclamation Procedure A**.**
- Revegetation percent cover standards must be attained and documented, or an exception granted before FFO will approve a final abandonment or relinquishment.

3.3.3. Post-Disturbance Monitoring Initiation

After the project is completed, during the earthwork and seeding inspection process, the FFO in collaboration with the proponent will determine site specific monitoring locations on the project site for:

- Photo Point Monitoring
- Line Point Intercept Transects

Locations of site specific monitoring will be documented by the FFO using GPS and recoded in North American Datum (NAD) 83, LAT/LONG decimal degrees. FFO will take initial photos of all monitoring locations and complete the initial monitoring report within 60 days of the earthwork inspection and approval process. The initial monitoring report will be available from the FFO.

3.3.4. Annual Monitoring

Two calendar years after the appropriate earthwork and seeding have been completed and approved, photo point monitoring of the permanent photo points established in the initial monitoring report is required. The FFO will allow monitoring to occur at any time during the year. A completed monitoring report of the permanent photo points will be submitted to FFO by December 31 of the year the site was monitored. The FFO will evaluate the photo point monitoring report and acknowledge that the report has been received and evaluated within 60 days after received. Annual Monitoring will continue until the revegetation percent cover standards are attained and approved by the FFO.

3.3.5. Attainment of Vegetation Reclamation Standards

When the vegetation on a reclaimed site appears to meet the required percent revegetation standard, the proponent may read the transect may to document that the percent vegetation standards for the site have been attained. A request for concurrence that the percent revegetation standards have been attained may be submitted to the FFO. The request for concurrence will include the transect data sheets and photos taken from all the initial photo points established in the initial monitoring report. The FFO will review the

request and either approve or deny the request within 60 days. If the FFO denies the request, the FFO may initiate a site inspection within 60 days of the denial to analyze the site and determine if remedy actions may be appropriate.

3.3.6. Long-Term Monitoring

The vegetation reclamation site will be photo point monitored every fifth year after the attainment of the percent vegetation cover standards to ensure the site remains productive and stable. The annual monitoring procedure will be followed and photos will be taken from all established photo points. The FFO annual monitoring form will be completed and submitted to the FFO by December 31 of the year monitored. The FFO will evaluate the monitoring reports submitted and acknowledging that the reports have been received and evaluated within 60 days after received.

3.3.7. Cessation of Monitoring

Monitoring requirements remain in effect as long as the permit, grant, or authorization remains in force, and until all associated facilities or infrastructure is abandoned by established BLM procedure and a final abandonment notice (FAN) or relinquishment is issued by the FFO. If abandonment or relinquishment earthwork results in bare soil in an area greater than 0.1 acre, the Vegetation Reclamation Procedure A or the Vegetation Reclamation Procedure B will be followed depending on the area of bare soil resulting from the earthwork. The operator must document that percent cover standards have been obtained when submitting a request for a FAN or a relinquishment. If ownership of any portion of the permit, grant, or authorization is transferred to another entity, the revegetation and monitoring requirements for the portion transferred will be assumed by the acquiring entity.

3.3.8. Lack of Progress in the Attainment of the Standard

When monitoring reports indicate that bare soil reclamation is not successful, or the FFO identifies negative impacts within the reclamation area, the FFO or the permit holder/grantee may request a conference to analyze the issues that may have contributed to reclamation failure, or lack of meaningful progress. FFO will facilitate the conference and invite potential effected parties such as the permit holder, grantee, FFO surface staff, range staff, realty staff, recreation staff, grazing permittee, or other authorized users that may be operating in the vicinity. The members of the conference will discuss the potential causes that may have contributed to the nonattainment of the reclamation standards. The conference may result in the development of a remedy plan to address the lack of revegetation success, or to repair and reseed damage to reclaimed areas. In cases where the permit holder/grantee can demonstrate that the site does not have the biological potential to attain the standards, the conference may result in the initiation of the exception process.

3.3.9. Exception Request

A request for an exception to the vegetation percent cover standards may be submitted any time after two calendar years of completion of earthwork and seeding. For FFO to process the exception request, the following information must be submitted to the FFO:

- Photo point monitoring from the most recent monitoring conducted on the site
- An explanation of conditions that may preclude successful attainment of standards
- A summary of reclamation techniques performed on the site.

The FFO will analyze the exception request and either approve or deny within 60 days. If the FFO denies the request, the FFO will propose a conference with the effected parties to discuss the factors that may have contributed to the lack of revegetation success.

3.3.10. Dispute Resolution

The proponent may request a review of instructions or decisions issued by the FFO staff related to an authorized action. The proponent may submit the request for review including supporting documents to

the FFO Assistant Field Manager. The Assistant Field Manager will resolve the issue at the field office level. The proponent may also request an Administrative Review under 43 CFR 3165.3 of any instructions, orders, or decisions issued by the Authorized Officer. Such a request, including all supporting documents, must be filed in writing within 20 business days of receipt of the any instructions, orders, or decisions and must be filed with the State Director, Bureau of Land Management, P.O. Box 27115, Santa Fe, New Mexico 87502-0115. Such a request will not result in a suspension of the instructions, orders, or decisions unless the reviewing official so determines. Procedures governing appeals from the instructions, orders, or decisions are contained in 43 CFR 3165.4 and 43 CFR 4.400 et. Seq.

3.3.11. Revision of Revegetation Plan

The proponent may submit a request to revise the Revegetation Plan at any time during the life of the authorized action. The proponent will include justification for the revision request.

4. VEGETATION RECLAMATION PROCEDURE C

Vegetation Reclamation Procedure C applies to permits and grants authorized prior to of the implementation of the FFO Bare Soil Reclamation Procedure. When an activity on an existing permit or grant requires a new approved authorization from the FFO for maintenance, modification, abandonment, relinquishment, or other activity and results in areas of bare ground larger than 0.1 acre, those areas will be required to be revegetated and stabilized.

A vegetation reclamation plan will be required to be attached to an authorization application or Sundry Notice. The vegetation reclamation plan will include photos of the proposed project site, the vegetation community that best represents the proposed project area, a seed mix developed from the appropriate vegetation community, a description of any proposed water management features, and any techniques or methods that may be incorporated to promote successful vegetation restoration. The plan may also include a diagram of any working areas proposed to be left unvegetated.

The permit or grant holder is not required to monitor areas reclaimed under Vegetation Reclamation Procedure C. The FFO may visit revegetated sites after completion of the reclamation activities, and may request a conference with the effected parties to analyze issues that may have contributed to revegetation failure or lack of meaningful progress. The FFO may request the proponent to submit a remedy plan to address lack of success or to repair damage to revegetated areas. If the proponent fails to submit a remedy plan, the FFO may provide the proponent with remedy plan that includes required actions that may not have been required in the original vegetation reclamation plan.

The permit or grant holder is required to document to the FFO that areas revegetated under the Vegetation Reclamation Procedure C have attained the vegetation percent cover standards listed in the vegetation community description referenced in the vegetation reclamation plan before the FFO will issue a final abandonment notice or a relinquishment.

The FFO has authorized numerous oil/gas wells and ROW grants prior to the implementation of the FFO Bare Ground Reclamation Procedure. The FFO will honor all approved reclamation plans for existing wells and grants. If the original APD or POD does not contain an approved vegetation reclamation plan and a new authorization is required, the Vegetation Reclamation Procedure C will be followed.

The FFO has developed a process for well final abandonment and ROW relinquishment for wells and grants that do not have an approved reclamation plan in their respective APD or POD.

4.1. Final Abandonment Procedure

The following procedure will be followed for the physical plugging of a well bore and reclamation of associated disturbed areas (P+A) of a well site permitted by an APD that does not contain an approved reclamation plan:

- Lessee/operator will schedule an onsite visit to a well site proposed for final abandonment.
- During the onsite, the FFO and the lessee/operator will collaboratively complete a weed survey (Appendix D), agree on the dirt work requirements, the appropriate vegetation community, and the seed mix. The lessee/operator will use the seed mix required in the original APD permit, or at the discretion of the lessee/operator, a new seed mix may be proposed form the appropriate vegetation community seed pick list. The lessee/operator will take photos of the site.
- The surface reclamation plan will be developed by the lessee/operator from information gathered during an onsite visit in collaboration with the FFO. The reclamation plan will include the dirt work requirements, vegetation community that best represents the site, a seed mix, and a weed control plan if noxious weeds are found on the site.
- Lessee/operator submits a Notice of Intent (NOI) to plug the well bore and reclaim all disturbed areas and roads. The NOI will include proposed down hole procedures and a surface reclamation plan.

- FFO petroleum engineer, geologist, and surface protection specialist will analyze the NOI well bore plugging and surface reclamation proposal.
- FFO petroleum engineer approves NOI final abandonment proposal with any appropriate conditions.
- Well bore plugging, dirt work, and seeded are completed.
- Lessee/operator submits Subsequent Report notifying FFO that the well bore abandonment has been completed.
- Lessee/operator submits Subsequent Report notifying FFO that earthwork is completed and request earthwork inspection.
- FFO and lessee/operator conduct earthwork and seeding inspection.
- After approval of earthwork and seeding, FFO in collaboration with the lessee/operator will establish a line point intercept transect.
- After establishment of adequate vegetation, the lessee/operator will read the line point intercept transect and take photos of the site. The lessee/operator will include the data results from the line point intercept transect and the photos of the site with the submission of a request for a FAN.
- FFO will analyze the documentation of attainment of vegetation standards and either approve the FAN or initiate a field visit to the site with the lessee/operator. If FFO confirms during the site visit that the vegetation standards have been attained, FFO will approve the FAN. If FFO determines that the vegetation standards have not been attained, FFO may request the lessee/operator to submit a remedy plan.

4.2. ROW Grant Relinquishment Procedure

The following procedure will be followed for the final reclamation and relinquishment of a ROW grant that does not contain an approved reclamation plan in the POD:

- Holder/Lessee sends a written request to relinquish a portion of the right-of-way or the entire right-of-way.
- FFO Realty staff and Resource Specialists, if necessary, review the request.
- FFO Realty Staff and Holder, or their authorized representative, conducts a joint inspection of the facilities/project to determine the renovation standards and requirements in accordance to the appropriate vegetation community.
- The ROW holder completes the required work.
- FFO Realty Staff and Holder, or their authorized representative, will conduct a joint inspection of the completed work.
- After the completion and approval of required earthwork that results in less than 0.1 acre of bare soil, the FFO may issue a decision to relinquish the ROW at the discretion of the FFO.
- After the completion and approval of required earthwork that results in more than one acre of bare soil, the FFO will defer the decision to relinquish the ROW until the vegetation standards have been met.

APPENDIX A. SURFACE USE PLAN OF OPERATIONS (SUPO) PROCEDURE

A.1. Introduction

The Farmington Field Office (FFO) established procedures to define field office-specific expectations for a complete application for permit to drill (APD) related to Onshore Order #1, III.D.4, Surface Use Plan of Operations (SUPO), parts 2 (b) New or Reconstructed Access Roads, 2 (d) Location of Existing and/or Proposed Production Facilities, and 2 (j) Plans for Surface Reclamation, Parts: Seeding or other steps to reestablish vegetation, weed control, and vegetation final reclamation. The procedures apply to APDs submitted for projects that occur on surface lands managed by the Bureau of Land Management FFO, including Bureau of Reclamation (BOR) and Navajo Lake State Park lands included in the 1983 Interagency Agreement. All other practices established by the FFO related to the APD application process remain unchanged by this procedure.

The intent of the SUPO Procedure is to provide guidelines regarding the development and submittal of site-specific road, facility, and revegetation plans to be incorporated into the SUPO. This procedure provides the minimum information and operation standards that the FFO expects to be incorporated into the SUPO site-specific revegetation plans at the level of detail necessary for the FFO to assess the technical adequacy and Resource Management Plan (RMP) conformance of revegetation practices proposed by an operator.

The diversity of site characteristics (i.e., elevation, topography, precipitation, and soil type) that exists across the 1.4 million acres within the FFO favors a performance-based approach to revegetation rather than a one-size fits-all procedure-based approach. The FFO developed revegetation standards that are specific to the FFO and are intended to complement current revegetation guidance found in the “Surface Operating Standards and Guidelines for Oil and Gas Exploration and Development” (The Gold Book) and other FFO policy and guidance.

All surface disturbing activities approved by the APD process on the FFO lands administered by the FFO will be subject to the FFO Bare Soil Reclamation Procedure. It is important to note that the revegetation criteria expressed in FFO Bare Soil Reclamation Procedure are considered standards. However, the authorized officer may modify standards depending on site-specific reclamation challenges (i.e., physical or biological constraints beyond the operator’s control). The FFO will consider authorizing well-designed revegetation experiments and trials outside established strategies that may serve as the basis for enhancing revegetation efficacy or efficiency consistent with the FFO’s revegetation standards. The FFO will consider authorizing alternative vegetation reclamation standards developed from reference areas proposed by the operator. All reference areas proposed to FFO for authorization must be developed by the operator according to BLM accepted Technical References and Instruction Memorandums, or accepted protocols developed by the National Resource Conservation Service (NRCS), the Society for Ecological Reclamation (SER), or other nationally accepted protocols for the establishment of reference areas.

The operator is not responsible for achieving full ecological reclamation of bare soil. Instead, the operator is responsible for achieving the short-term stability, visual, hydrological, and productivity objectives of the FFO. The performance-based revegetation standards focus on using the desired end condition as the ultimate determinant of the level of vegetation productivity acceptable to the FFO. The attainment of the vegetation percent cover standards will fulfill the productivity objective of FFO and contribute to the stability of the site. If monitoring documents significant erosion problems or other hydrological issues with the pad, the operator may be required to address those issues even after the vegetation per cent cover standards have been attained.

The FFO makes no distinction between interim and final revegetation processes; the revegetation processes are the same for all revegetation activities. The revegetation standards are habitat specific and

will be adhered to unless a written exception is granted by the AO. There are numerous other sources of guidance (e.g., Best Management Practices) to aid operators in attaining the revegetation standards.

A.1.1. Authority

The FFO is required by law to ensure that authorized actions are carried out in a manner that does not result in "permanent impairment of the productivity of the land or the quality of the environment" (Federal Land Policy and Management Act [FLPMA], 1976). In order to promote a consistent and science-based approach to reclamation, this protocol identifies minimum information and operational requirements and performance-based criteria that are expected to satisfy the FFO's responsibilities under FLPMA.

The Mineral Leasing Act (MLA) of 1920 (30 U.S.C. § 181-287), amended by the Federal Onshore Oil and Gas Leasing Reform Act of 1987, PL 100-203, among other things, authorizes the Secretary of Interior to regulate all surface-disturbing activities associated with any lease and to impose mitigation and reclamation measures in order to "conserve surface resources."

The FFO 2003 Record of Decision/Resource Management Plan (ROD/RMP) specifies that industry is expected to fully comply with the surface protection and hazard reduction aspects of appropriate Onshore Orders, as well as conditions of approval (COAs) and Standard Stipulations.

BLM regulations established in 43 C.F.R. §3160 (i.e., Onshore Oil and Gas Order Number 1) require that a reclamation plan be submitted with the Surface Use Plan in the Application for Permit to Drill (APD). The Onshore Order Number 1, Section XII. B., in referencing Section III.D.4 (j), requires that surface reclamation plans must be designed to return the disturbed areas to productive use and meet the objectives of the RMP.

BLM Regulations established in 43 C.F.R. §3162.3-1(f). The surface use plan of operations shall contain information specified in applicable orders or notices, including the road and drillpad location, details of pad construction, methods for containment and disposal of waste material, plans for reclamation of the surface, and other pertinent data as the authorized officer may require. A surface use plan of operations may be submitted for a single well or for several wells proposed to be drilled in an area of environmental similarity.

A.2. Procedure for New or Reconstructed Access Roads

In response to Onshore Order #1, Part 2 (b) New or Reconstructed Access Roads, this procedure provides the minimum information and operation standards that the FFO expects to be incorporated in to site-specific road design at the level of detail necessary for the FFO to assess the technical adequacy and conformance of the road design proposed by a permit applicant.

During the onsite inspection, the FFO and the operator, or the operator's representative (operator) will collaboratively determine if the intended use of a proposed newly constructed or reconstructed road is a resource road, local road, or collector road as defined in the Surface Operating Standards and Guidelines for Oil and Gas Exploration and Development, 2007 (Gold Book). The operator will design the proposed road construction following the Basic Design Requirements for Constructed Roads from the Gold Book. The operator will follow guidelines from Onshore Order #1, Surface Use Plan of Operations, 2 (b), and submit to the FFO all the information required by section 2 (b). As referenced in the Gold Book (Road Maintenance), the operator will submit a road maintenance plan for proposed newly constructed or reconstructed roads. The maintenance plan will include an inspection schedule that establishes how often the operator will inspect the road, who the operator will utilize to inspect the road, and how road inspections are documented. The maintenance plan will include the operator's general procedures to correct or repair the roadway and ineffective water control structures such as culverts, ditches, silt traps, road crowns, or other site specific water control structures.

A.3. Location of Existing and/or Proposed Production Facilities

In response to Onshore Order #1, Part 2 (d) Location of Existing and/or Proposed Production Facilities, this procedure provides the minimum information and operation standards that the FFO expects to be incorporated in to site-specific facility layout at the level of detail necessary for the FFO to assess the technical adequacy and conformance of the facility layout proposed by a permit applicant.

The operator is required to submit a map or diagram of facilities planned either on or off the well pad that shows, to the extent known or anticipated, the location of all production facilities and lines likely to be installed if the well is successfully completed. If the operator has not developed information regarding production facilities, it may defer submission of that information until a production well is completed, in which case the operator will follow the procedures in Section VIII of Onshore Order #1.

The operator will have the option to include a delineation of the anticipated well pad working area on the map or diagram submitted either with the application for permit to drill (APD), or with form 3160-5 in accordance with section VIII of Onshore Order #1, subject to approval by the FFO. The delineated working area will be used to determine the FFO Reclamation Plan requirements that apply to subsequent ground disturbing activities during the life of the well. The FFO considers the working area to include sufficient level areas routinely used by the operator and service workers to operate and maintain the well facilities, and level areas needed for a workover rig and to park equipment (Gold Book page 45). If the operator chooses not to delineate a working area, the FFO will only acknowledge the area within the tear drop as the working area.

A.4. Surface Reclamation Plan

In response to Onshore Order #1, Part 2 (j) Plans for Surface Reclamation Parts: Seeding or other steps to reestablish vegetation and weed control, this procedure provides the minimum information and operation standards that the FFO expects to be incorporated in to site-specific Surface Reclamation Plan at the level of detail necessary for the FFO to assess the technical adequacy and conformance of the Surface Reclamation Plan proposed by a permit applicant.

The FFO Bare Soil Reclamation Procedure contains requirements for the revegetation of disturbed lands and establishes standards for acceptable vegetation production, monitoring, documentation, and reporting of monitoring data. The FFO specialists that developed the Revegetation Procedure evaluated the diversity of habitats that are managed by the FFO and condensed the approximately 24 potential plant community habitats into the 8 most common vegetation communities. FFO completed a written narrative of each of the eight vegetation communities and posted the descriptions on the New Mexico BLM web page (http://www.FFO.gov/nm/st/en/fo/Farmington_Field_Office/ffo_planning/surface_use_plan_of.html). Each of the eight vegetation community narratives contain a brief description of the vegetation community, a revegetation productivity standard stated as percent foliar cover, a menu based seed pick list, and recommendations for effective reclamation.

The menu-based seed pick lists contains plants that FFO considers to be the most appropriate and desirable plants that have the potential to become established in each of the vegetation communities. The FFO recognized that some sites to be reclaimed may be negatively impacted by either authorized livestock grazing, or unauthorized grazing due to wildlife, and wild or feral horses. The FFO established a menu-based Reduced Palatability Seed Mix that contains plants that are generally not preferred by grazing animals. The Reduced Palatability Seed Mix may be used when approved by the FFO in any of the eight vegetation communities where grazing impacts are documented and a temporary fence is not feasible. The per cent vegetation cover standard listed in the appropriate vegetation community will still apply when the reduced palatability seed mix is used.

The vegetation percent cover standards were established with the goal that 95 out of 100 well pads (95%) would have the biological potential to attain the standard if reasonable and prudent best management practices were followed during the reclamation process. After implementation of the SUPO Procedure, if

data suggests that standards are not 95% biologically attainable after reasonable reclamation efforts, FFO may adjust the standards. The exception process contained within the SUPO Procedure will be followed for pads that may not have the biological potential to attain the standard. The SUPO Procedure is a living document and other provisions of the SUPO Procedure may be adjusted over time if data suggests that adjustments are needed.

The SUPO Revegetation Plan will refer to the appropriate vegetation reclamation procedure (A or B):

- **Vegetation Reclamation Procedure A**: applies to areas authorized by an APD that are disturbed to bare mineral soil in areas of less than one acre, but more than 0.1 acre during the life of the well; does not require monitoring
- **Vegetation Reclamation Procedure B**: applies to areas authorized by an APD that are disturbed to bare mineral soil in areas of one acre or larger; requires monitoring.

The size criteria for each of the procedures will not apply to FFO-approved working areas. Working areas include areas routinely used to operate and maintain facilities or improvements. The working area does not include areas occasionally used for parking or for temporary staging of equipment. The area of an approved working area will not count toward the size criteria; however, the FFO may require portions of an approved working area to be reseeded after initial construction. Areas of a seeded working area will be reseeded according to the original seeding requirements if reduced to bare soil during the life of the permit. The FFO will analyze proposed working areas and approve, reject, or request modifications to the working area.

A.4.1. Vegetation Reclamation Procedure A

The Vegetation Reclamation Procedure A refers to the revegetation of bare mineral soil areas that are less than one acre in size, but greater than 0.1 acre, resulting from any action authorized by the APD. The Vegetation Reclamation Procedure A does not apply to areas approved by FFO as working areas necessary for the routine long term operation of an authorized site that were not required to be reseeded during the initial interim reclamation, but do apply to portions of working areas that were required to be reseeded during the initial interim reclamation. Disturbed areas less than 0.1 acre are expected to revegetate naturally from seed sources adjacent to the disturbance.

A site-specific vegetation reclamation plan will be required in the SUPO and associated EA. The FFO and the operator will work collaboratively to develop site-specific information during a pre-disturbance site visit. The information developed from the site visit will be incorporated into the vegetation reclamation plan. The revegetation reclamation plan and EA will include photos of the proposed project site, the vegetation community that best represents the proposed project area, a seed mix developed from the appropriate vegetation community, a description of any proposed water management features, and any techniques or methods that may be incorporated to promote successful vegetation restoration.

The vegetation reclamation plan will reference potential revegetation requirements resulting from final abandonment or relinquishment activities. The operator is required to document to the FFO that the vegetation percent cover standards listed in the vegetation community description have been attained before the FFO will issue a final abandonment notice or a relinquishment.

The operator is not required to monitor the revegetation of bare soil sites that are less than one acre in area. The FFO may visit revegetated sites after completion of the revegetation reclamation activities, and may request a conference with the effected parties to analyze issues that may have contributed to revegetation failure or lack of meaningful progress. The FFO may request the proponent to submit a remedy plan to address lack of success or to repair damage to revegetated areas. If the proponent fails to submit a remedy plan, the FFO may provide the proponent with remedy plan that includes required actions that may not have been required in the original vegetation reclamation plan.

A.4.2. Vegetation Reclamation Procedure B

Any surface disturbing activity within the boundaries of the area authorized for use by the APD during the life of the well including the plug and abandon process that results in bare mineral soil in an area greater than or equal to one acre, not including the FFO approved working areas, will require the operator to initiate the Vegetation Reclamation Procedure B. The operator is responsible for all areas revegetated per the Vegetation Reclamation Procedure B until the proponent/permit holder transfers, abandons, or relinquishes the permit according to accepted FFO protocol.

Monitoring Responsibilities

The operator is responsible for the following:

- Conducting annual monitoring starting two calendar years after approval of required earthwork and/or seeding, and continuing until the vegetation percent cover standards have been attained, or an exception has been issued by the FFO. The FFO monitoring form will be completed and submitted to the FFO by December 31 of the year monitored.
- Reading the line point intercept transects in preparation to present documentation to FFO that vegetation percent cover standards have been attained.
- Requesting concurrence from the FFO that vegetation percent cover standards have been attained.
- Participate in conferences with the FFO and other effected parties to analyze issues contributing to unsuccessful reclamation. Participate in the implementation of remedial actions developed during the conference process as necessary.
- Conducting long term monitoring (every fifth year) after vegetation percent cover standards have been attained during the life of the well.
- Maintain and monitor all areas authorized by the APD until the operator transfers the permit, or abandons the project and obtains a Final Abandonment Notice (FAN) from the FFO.

The FFO is responsible for the following:

- Establishing monitoring sites in collaboration with the operator during the required earthwork and/or seeding inspection, and submit to the operator the initial monitoring report within 60 days of earthwork and/or seeding inspection approval.
- Evaluating annual monitoring reports submitted by the operator, and acknowledging to the operator that the reports have been received and evaluated within 60 days after received from the operator.
- Providing concurrence (or not) to the operator that the vegetation percent cover standards have been attained, and rational for the determination within 60 days of receiving the request for concurrence.
- Participating in conferences with the operator and other effected parties to analyze issues contributing to unsuccessful reclamation. Participating in the implementation of remedial actions developed during the conference process as necessary.

4.2.1. Vegetation Monitoring Techniques

Vegetation monitoring will consist of both qualitative and quantitative methods and includes photo points and line point intercept transects (transects).

Photo Points

Photo point monitoring will be conducted on the well pad, access road, and the well tie pipeline if the well tie pipeline is owned by the operator. Photo point monitoring has been utilized extensively throughout the BLM and the FFO. Photo point monitoring is an accepted procedure to provide qualitative documentation of vegetation trend, water management effectiveness, and damage to reseeded areas. The FFO will utilize global positioning system (GPS) to establish the location of all required photo points in NAD 83 Lat/Long decimal degrees during the earthwork and seeding inspection process. The FFO will take the initial photos and include the photos in the initial monitoring report submitted to the operator. In preparation to conduct annual monitoring two calendar years after seeding, the operator may reference the initial monitoring report for GPS locations of photo points and review the initial photos to reference the

orientation (i.e., direction) that the initial photos were taken. The operator will relocate the initial photo points and retake the photos in the same direction as the initial photos. The photos will be taken by a digital camera with 12 megapixel capability or of sufficient quality to produce an image that vegetation can be adequately analyzed by the FFO. If the quality of the photo monitoring presented to the FFO does not allow for a reasonable evaluation, the FFO may reject the monitoring and require resubmission.

Line Point Intercept Transects

The establishment line point intercept transects (transects) is required. Transects will be permanently marked by the operator by any means acceptable to the operator that insures that the operator or FFO personnel can return to within one foot of the original transect location The intent of the transects is to document the per cent foliar vegetative cover. The percent foliar vegetative cover data determined by reading the transects will be utilized to quantitatively document that the percent foliar cover vegetation standards have been attained. The transects will only be read in preparation to submit a request to FFO for concurrence that vegetation percent cover standards have been attained.

Two transects will be established on the well pad collaboratively by FFO and the operator during the earth work inspection process. When reading the transects, all rooted vegetation will be recorded; rooted egetation could be alive, dormant, or dead. Dormant or dead vegetation must be firmly rooted in the ground to be recorded. Un-rooted, loose vegetation or woody debris will not be recorded. Rooted vegetation will be recorded as desirable or undesirable. The FFO has compiled a list of undesirable plants and has attached the list to the line point intercept transect form (Appendix C). The total percent vegetation score for the transect may include up to 10 per ent undesirable species. If any plants listed on the State of New Mexico noxious weed lists A or B as updated by the State are documented on the pad, the operator must contact the FFO weed coordinator for instructions to control the noxious weeds.

The individual scores for each well pad line point intercept transect will be averaged together to arrive at an overall score for the pad. Additional transects may be established collaborative by FFO and the operator on the well tie pipeline if the well tie pipeline is owned by the operator. If more than one transect is established on a well tie pipeline, the score from individual transects on the well tie pipeline will be averaged to arrive at an overall score for the well tie pipeline.

Vegetation Cage

The use of vegetation cage is optional. A vegetation cage may help document successful seed germination, and determine if livestock grazing is a contributing factor for failure to attain vegetation reclamation standards. If the operator decides to use a vegetation cage on the site, the FFO will furnish the first cage and include the location and a photo of the vegetation cage in the initial monitoring report. After the cage is set, the cage will become the property of the operator. If the cage is lost or damaged, it is the proponent’s responsibility to replace the cage in the original location.

A.4.3. Implementation Process

Pre Disturbance Site Visit

The FFO and the operator will conduct a pre disturbance site visit to the proposed project area to characterize the site. A weed survey will be conducted by the personnel present at the site visit. The FFO Pre-Disturbance Weed Management Procedure will be followed (Appendix D). The FFO in collaboration with the operator will determine which of the eight vegetation communities developed by the FFO best represent the proposed project area. A seed mix will be developed using the menu based seed pick list in the appropriate Vegetation Community Description. The operator will take photos of the proposed project site. If the soil conditions on the site appear to preclude the successful attainment of vegetation standards for the vegetation community that best represent the site, the FFO and the operator may document those soil conditions on an onsite form. Soil conditions will not preclude reseeding the site, but soil condition documentation may be used as a basis for future exception consideration.

Revegetation Plan

A Revegetation Plan must be incorporated in the SUPO. Information gathered from the pre-disturbance site visit will be incorporated into the Revegetation Plan. The Revegetation Plan will apply to the authorized APD during the life of the well: construction, operation, and abandonment.

The proponent may submit an alternative revegetation plan that meets the minimum requirements for percent cover and monitoring established in the FFO Bare Soil Reclamation Procedure to the FFO for approval. The Revegetation Plan may be modified during the life of the authorization with approval of FFO. The Revegetation Plan will include:

- Photos of undisturbed proposed project area.
- The vegetation community that most accurately represents the proposed project site.
- The proposed seed mix that was developed from the seed pic list located in the appropriate vegetation community description, or a proposed seed mix developed from other sources.
- A reference to monitoring and reporting requirements.
- A reference to the revegetation percent cover standards from the appropriate vegetation community description.
- A description of any soil amendments or other reclamation techniques that may be developed from the vegetation community description recommendations, or other techniques proposed by the proponent
- A reference to final abandonment. If one acre or more of bare soil results from earthwork required in preparation for final abandonment, the operator will follow the Vegetation Reclamation Procedure B. If final abandonment or relinquishment earth work results in less than one acre, but more than .1 acre of bare soil, the operator will initiate Vegetation Reclamation Procedure A**.**
- Revegetation percent cover standards must be attained and documented before FFO will approve a final abandonment notice.

Initial Monitoring

The following initial monitoring will be completed by the FFO:

- One photo from each corner of the pad.
- Two photos of each required access road photo point: one photo looking toward the pad and one photo looking away from the pad.
- One photo of each well pad line point intercept vegetation transect standing at one end of the transect and looking down the length of the transect to towards the other end, and one photo standing at one end of the transect and looking straight down to the ground.
- Two photos of each well tie pipeline transect location: one photo looking toward the pad and one photo looking away from the pad (if well tie pipeline is owned by the operator).
- Initial monitoring form of which a copy will be submitted to the operator within 60 days of earthwork and/or seeding approval.

Annual Monitoring

The operator will conduct the following annual monitoring beginning two years after seeding or as indicated on the initial monitoring report:

- One photo from each corner of the pad in direction indicated on the initial monitoring report.
- Two photos of each required road photo: one photo looking toward the pad and one photo looking away from the pad as indicated on the initial monitoring report.
- Two photos of each well tie pipeline transect location: one photo looking toward the pad and one photo looking away from the pad as indicated on the initial monitoring report (if well tie pipeline is owned by the operator).
- Operator will complete the monitoring report form and submit to the FFO before Dec. 31 of the year monitored.

Attainment of Vegetation Reclamation Standards

The operator may request FFO concurrence that vegetation percent cover standards have been attained any time after two calendar years of completion of earthwork and seeding. The operator will submit the following in a request for concurrence that vegetation percent cover standards have been attained:

- The overall percent foliar cover score for the well pad and well tie pipeline if owned by the operator.
- The line point intercept transect data sheets.
- One photo from each corner of the pad in direction indicated on the initial monitoring report.
- One photo of each well pad line point intercept vegetation transect standing at one end of the transect and looking down the length of the transect to towards the other end as indicated on the initial monitoring report. One photo taken of each well pad transect from one end of the transect looking straight down to the ground.
- Two photos of each well tie pipeline transect location: one photo looking toward the pad and one photo looking away from the pad as indicated on the initial monitoring report. One photo taken of each well tie pipeline transect from one end of the transect looking straight down to the ground (if well tie pipeline is owned by the operator).
- The operator will submit a request for concurrence that the per cent cover standards have been attained. FFO will reply to the operator to confirm concurrence (or not) with a rational for the determination within 60 days of receiving the request.

Long -Term Monitoring

The operator will monitor the site every fifth year after attainment of vegetation percent cover standards to insure the site remains productive and stable. The operator will submit the following:

- One photo from each corner of the pad in direction indicated on the initial monitoring report.
- Two photos of each required road photo point: one photo looking toward the pad and one photo looking away from the pad as indicated on the initial monitoring report.
- Two photos of each well tie pipeline transect location: one photo looking toward the pad and one photo looking away from the pad as indicated on the initial monitoring report (if well tie pipeline is owned by the operator).
- Operator will complete the monitoring report form and submit to the FFO before Dec. 31 of the year monitored.

Cessation of Monitoring

The operator is responsible for all revegetation and monitoring requirements until all associated facilities or infrastructure is abandoned by established BLM procedure and a FAN is issued by the FFO. If the plug and abandon earthwork results in bare soil, the Vegetation Reclamation Procedure A or B will be followed depending on the area of bare soil resulting from the earthwork. The operator must document that per cent cover standards have been obtained when submitting a request for a FAN. If ownership of any portion of the APD site is transferred to another entity, the revegetation and monitoring requirements for the portion transferred will be assumed by the acquiring entity.

Lack of Progress in the Attainment of the Standard

When monitoring reports indicate that bare soil reclamation is not successful, or the FFO identifies negative impacts within the interim reclamation area, the FFO or the operator may request a conference to analyze the issues that may have contributed to reclamation failure, or lack of meaningful progress. FFO will facilitate the conference and invite potential effected parties such as: the operator, FFO surface staff, range staff, realty staff, recreation staff, grazing permittee, or other authorized users that may be operating in the vicinity. The members of the conference will discuss the potential causes that may have contributed to the nonattainment of the reclamation standards. The conference may result in the development of a remedy plan to address the lack of revegetation success, or to repair and reseed damage to reclaimed areas. In cases where the operator can demonstrate that the well pad does not

have the biological potential to attain the standards, the conference will result in the initiation of the exception process.

Exception Request

The operator may request an exception to the vegetation percent cover standards any time after two calendar years of completion of earthwork and seeding. For FFO to process the exception request, the operator must submit the following information to the FFO:

- Photo point monitoring from the most recent monitoring conducted on the site
- An explanation of conditions that may preclude successful attainment of standards
- A summary of reclamation techniques performed on the site.

The FFO will analyze the exception request and either approve or deny within 60 days. If the FFO denies the request, the FFO will propose a conference with the effected parties to discuss the factors that may have contributed to the lack of revegetation success.

Site Stabilization Plan for Wells Not Drilled within 120 Days of Pad Construction

If an operator has not initiated drilling operations on a pad within 120 days after the pad was constructed, the operator must submit a site stabilization plan to the FFO for approval. The intent of the stabilization plan is to reduce soil erosion, prevent the establishment of undesirable weeds, and establish short term productivity to the site. The plan may include seeding a short lived or sterile cover crop such as Quickguard, the installation of temporary soil stabilization mats, or other stabilization techniques that the operator may propose. If the operator requests an extension of the of the two year APD authorization, FFO will review the stabilization plan before approving the extension.

Dispute Resolution

The operator may request a review of instructions or decisions issued by the FFO staff related to the SUPO Procedure Update. The operator may submit the request for review including supporting documents to the FFO Assistant Field Manager. The Assistant Field Manager will resolve the issue at the field office level. The operator may also request an Administrative Review under 43 CFR 3165.3 of any instructions, orders, or decisions issued by the Authorized Officer. Such a request, including all supporting documents, must be filed in writing within 20 business days of receipt of the any instructions, orders, or decisions and must be filed with the State Director, Bureau of Land Management, and P.O. Box 27115, Santa Fe, New Mexico 87502-0115. Such a request will not result in a suspension of the instructions, orders, or decisions unless the reviewing official so determines. Procedures governing appeals from the instructions, orders, or decisions are contained in 43 CFR 3165.4 and 43 CFR 4.400 ET. Seq.

Revision of Revegetation Plan

The operator may submit a request to revise the Revegetation Plan at any time during the life of well in accordance to the Gold Book page 44. The operator will utilize the Sundry Notices and Reports on Wells Form 3160-5 and include justification for the revision request.

APPENDIX B. RIGHTS-OF-WAY PLAN OF DEVELOPMENT (ROW POD) PROCEDURE

B.1. Introduction

The Bureau of Land Management (BLM) Farmington Field Office (FFO) established procedures to define office specific expectations for a complete right-of-way (ROW) application pursuant to 43 C.F.R 2804.12, and 43 C.F.R. 2884.11 BLM Manual Sections 2804, Applying for Federal Land Policy and Management Act (FLPMA) Grants, and BLM FLPMA ROW Manual Section 2884, Applying for a Mineral Leasing Act (MLA) Grant or a Temporary Use Permit (TUP). These regulations and handbooks suggest, and in most cases require that a Plan of Development (POD) be submitted with the application. The ROW POD will allow the agency to evaluate the scope of the project, the level of National Environmental Policy Act (NEPA) analysis required and the potential impacts of the project on federal resources.

The intent of the ROW POD Procedure is to provide guidelines regarding the development and submittal of site-specific revegetation plans to be incorporated into the POD and establish site-specific revegetation attainment standards. This procedure provides the minimum information and operation standards to be incorporated into the POD. The POD will provide site-specific revegetation plans at the level of detail necessary for the FFO to assess the technical adequacy and Resource Management Plan (RMP) conformance of revegetation practices proposed by an authorization holder.

The diversity of site characteristics (i.e., elevation, topography, precipitation, and soil type) that exists across the 1.4 million acres of land managed by the FFO favors a performance-based approach to revegetation rather than a one-size fits-all procedure-based approach. Revegetation standards are specific to the FFO and are intended to complement current revegetation guidance found in the “Surface Operating Standards and Guidelines for Oil and Gas Exploration and Development” (The Gold Book) and other FFO policy and guidance.

All surface disturbing activities approved on lands managed by the FFO will be subject to FFO Bare Soil Reclamation Procedure. It is important to note that the revegetation criteria expressed in the FFO Bare Soil Reclamation Procedure are considered standards. However, the authorized officer may modify standards depending on site-specific reclamation challenges (i.e., physical or biological constraints beyond the holder’s control). The FFO will consider authorizing well-designed revegetation experiments and trials outside established strategies that may serve as the basis for enhancing revegetation efficacy or efficiency consistent with the FFO revegetation standards. The FFO will consider authorizing alternative vegetation reclamation standards developed from reference areas proposed by the operator. All proposed reference areas must be developed by the permit holder according to BLM-accepted Technical References and Instruction Memorandums, or accepted protocols developed by the National Resource Conservation Service (NRCS), the Society for Ecological Reclamation (SER), or other nationally accepted protocols for the establishment of reference areas.

The permit holder is not responsible for achieving full ecological reclamation of a ROW. The holder is responsible for achieving the short-term stability, visual, hydrological, and productivity objectives of the FFO. The performance-based revegetation standards focus on using the desired end condition as the ultimate determinant acceptable vegetation productivity. The attainment of the vegetation percent cover standards will fulfill the productivity objective of FFO and contribute to the stability of the site. If monitoring identifies significant erosion problems or other hydrological issues within the ROW, the permit holder may be required to address those issues even after the vegetation percent cover standards have been attained.

The FFO makes no distinction between initial and final revegetation standards; revegetation standards are the same for all revegetation activities. The revegetation standards are habitat specific and will be adhered to unless a written exception is granted by the authorized officer.

The FFO Bare Soil Reclamation Procedure contains requirements for the revegetation of disturbed lands and establishes standards for acceptable vegetation production, monitoring, documentation, and reporting of monitoring data. The FFO specialists that developed the Revegetation Procedure evaluated the diversity of habitats that are managed by the FFO and condensed the approximately 24 potential plant community habitats into the 8 most common vegetation communities. FFO completed a written narrative of each of the eight vegetation communities and posted the descriptions on the New Mexico BLM web page (http://www.FFO.gov/nm/st/en/fo/Farmington_Field_Office/ffo_planning/surface_use_plan_of.html). Each of the eight vegetation community narratives contain a brief description of the vegetation community, a revegetation productivity standard stated as percent foliar cover, a menu based seed pick list, and recommendations for effective reclamation.

The menu-based seed pick lists contains plants that FFO considers to be the most appropriate and desirable plants that have the potential to become established in each of the vegetation communities. The FFO recognized that some sites to be reclaimed may be negatively impacted by either authorized livestock grazing, or unauthorized grazing due to wildlife, and wild or feral horses. The FFO established a menu-based Reduced Palatability Seed Mix that contains plants that are generally not preferred by grazing animals. The Reduced Palatability Seed Mix may be used when approved by the FFO in any of the eight vegetation communities where grazing impacts are documented and a temporary fence is not feasible. The percent vegetation cover standard listed in the appropriate vegetation community will still apply when the reduced palatability seed mix is used.

The size criteria for each of the procedures will not apply to FFO-approved working areas. Working areas include areas routinely used to operate and maintain facilities or improvements. The working area does not include areas occasionally used for parking or for temporary staging of equipment. The area of an approved working area will not count toward the size criteria; however, the FFO may require portions of an approved working area to be reseeded after initial construction. Areas of a seeded working area will be reseeded according to the original seeding requirements if reduced to bare soil during the life of the permit. Examples of working areas include the area of a well pad needed for routine operations, the portion of a communication site need for tower operations, or the area of a stock tank designed to hold water. The proponent may propose a working area in the permit application or proposed action for the project environmental assessment (EA). The FFO will analyze the working area proposal and approve, reject, or request modifications to the working area.

B.1.1. Authority

The Federal Land Policy Management Act (FLPMA) of 1976, Public Law 94-579 Title III, Section 302(b) outlines the responsibilities of the BLM. “In managing the public lands the Secretary shall, by regulation or otherwise, take any consistent and science based approach to prevent unnecessary or undue degradation of the lands” In order to promote a consistent and science-based approach to reclamation, this protocol identifies minimum information and operational requirements and performance-based criteria that are expected to satisfy the FFO’s responsibilities under FLPMA.

The MLA of 1920 (30 U.S.C. § 181-287), amended by the Federal Onshore Oil and Gas Leasing Reform Act of 1987, PL 100-203, among other things, authorizes the Secretary of Interior to regulate all surface-disturbing activities associated with any lease and to impose mitigation and reclamation measures in order to “conserve surface resources.”

The FFO 2003 Record of Decision/Resource Management Plan (ROD/RMP) specifies that industry is expected to fully comply with the surface protection and hazard reduction aspects of appropriate Onshore Orders, as well as conditions of approval (COAs) and Standard Stipulations.

BLM Regulations for ROW under FLPMA established in 43 C.F.R. 2804.25(b) stipulate that the applicant may be required to submit additional information necessary to process their application. This information may include a detailed construction, operation, rehabilitation, and environmental protection plan, *i.e*. a

"Plan of Development" and any needed cultural resource surveys or inventories for threatened and endangered species.

BLM Regulations for ROW's under the MLA established in 43 C.F.R 2884.11(c) (5) require an estimated schedule for constructing, operating, maintaining, and terminating the project (a Plan of Development).

B.2. Right-of-Way Plan of Development (ROW POD)

The applicant is required to submit a ROW POD that adequately describes the plans for construction, operation, reclamation, and relinquishment of the project. PODs are specific to each type of project (i.e. pipelines, power lines, and roads) and should adequately address all the elements of the project. Sample PODs for the most common ROW authorizations are available upon request.

The plan of development will at a minimum include the following information:

- Purpose and Need of the Facilities
- Location
- Facility Design Factors
- Road Design and Maintenance
- Additional Components Associated with the ROW
- Participating Agencies Involved
- Proposed Facilities
- Resource Values and Environmental Concerns
- Noxious Weed Control
- Revegetation Plan for Initial and Final Reclamation including Soil Preparation and Seeding
- Operation and Maintenance
- Relinquishment

The applicant will identify in the ROW POD any areas that will be used as working areas for the operation and regular maintenance of the project which will be subject to approval by the FFO. The delineated working area will be used to determine when the FFO Bare Soil Reclamation Procedure requirements would apply to subsequent ground disturbing activities during the life of the project. The FFO considers the working area to include areas routinely used by the applicant and service workers to operate and maintain the rights-of-way, related facilities, and appurtenances. The FFO does not consider a working area to include areas occasionally used for parking or temporary staging. If the applicant chooses not to delineate a working area, the FFO will only acknowledge existing appurtenances and related structures.

The POD must contain a Revegetation Plan. The plan will include information gathered from the pre disturbance onsite visit. The Revegetation Plan will apply during the life of the ROW including: initial reclamation, long-term operations, and the final relinquishment process. The holder may submit an alternative revegetation plan that meets the minimum requirements for percent cover and monitoring established in the FFO Bare Soil Reclamation Procedure to the FFO for approval. The plan may be modified during the life of the grant with approval of FFO.

The Revegetation Plan will include:

- Photos of the undisturbed proposed project area.
- The vegetation community that most accurately represents the proposed ROW. The Revegetation Plan may assign vegetation communities to separate portions of a ROW that is longer than .5 miles and passes through different vegetation communities.
- The proposed seed mix developed from the seed pick list located in the appropriate vegetation community description, or proposed seed mix proposed from other sources.
- References to the revegetation cover standards from the appropriate vegetation community description.
- Reference the appropriate vegetation reclamation procedure (A or B).

- A description of any soil amendments or other reclamation techniques that may be developed from the vegetation community description recommendations, or other techniques proposed by the holder
- A reference to final relinquishment. Documentation of the attainment of the vegetation percent cover standards must be submitted before FFO will approve a final relinquishment.

The Revegetation Plan will be included in the POD, and will be appended to the environmental assessment (EA). The FFO Bare Soil Reclamation Procedure will provide established standards and requirements for acceptable revegetation production of disturbed lands and will provide the holder guidance for producing projects Revegetation Plans.

FFO specialists, that developed Vegetation Reclamation Procedure A & B, evaluated the diversity of habitats managed by the FFO and condensed all of the approximately 24 potential plant community habitats into the 8 most common vegetation communities. FFO staff completed a written narrative of each of the 8 vegetation communities and posted the descriptions on the BLM State web page: (http://www.FFO.gov/nm/st/en/fo/Farmington_Field_Office/ffo_planning/surface_use_plan_of.html).

Each of the 8 vegetation community narratives contain a brief description of the vegetation community, a revegetation productivity standard stated as percent foliar cover, a menu based seed pick list, and recommendations for effective reclamation.

The menu based seed pick lists contains plants that FFO considers to be the most appropriate and desirable plants that have the potential to become established in each of the vegetation communities. The FFO recognized that some sites to be reclaimed may be negatively impacted by either authorized livestock grazing, or unauthorized grazing due to wildlife, or wild or feral horses. The FFO established a menu based Reduce Palatability Seed Mix that contains plants that are generally not preferred by grazing animals. The Reduced Palatability Seed Mix may be used when approved by the FFO in any of the 8 vegetation communities where grazing impacts are documented and a temporary fence is not feasible. The per cent vegetation cover standard listed in the appropriate vegetation community will still apply when the reduced palatability seed mix is used.

Vegetation percent cover standards were established with the goal that 95 percent of a linear ROW's would have the biological potential to attain the standard if reasonable and prudent best management practices were followed during the life of the ROW. After implementation of ROW POD Procedure, if data suggests that vegetation attainment standards are not 95 per cent biologically attainable, FFO may adjust the standards. The exception process contained within the ROW POD Procedure may be followed for areas of a ROW that may not have the biological potential to attain the standard. The ROW POD Procedure is a living document and other provisions of the procedure may be adjusted over time if data suggests that adjustments are needed.

The POD Revegetation Plan will utilize the following procedures contained in the FFO Bare Soil Reclamation Procedure:

- **Vegetation Reclamation Procedure A**: applies to areas authorized by a ROW grant that are disturbed to bare mineral soil in continuous areas of less than one acre, but more than 0.1 acre during the life of the ROW; does not require monitoring.
- **Vegetation Reclamation Procedure B**: applies to areas authorized by a ROW grant that are disturbed to bare mineral soil in continuous areas of one acre or larger: requires monitoring.

B.3. Vegetation Reclamation Procedure A

The size criteria for each of the procedures will not apply to FFO-approved working areas. Working areas include areas routinely used to operate and maintain facilities or improvements. The working area does not include areas occasionally used for parking or for temporary staging of equipment. The area of an approved working area will not count toward the size criteria; however, the FFO may require portions of an approved working area to be reseeded after initial construction. Areas of a seeded working area will be reseeded according to the original seeding requirements if reduced to bare soil during the life of the

permit. The proponent may propose a working area in the permit application or proposed action for the POD. The FFO will analyze the working area proposal and approve, reject, or request modifications to the working area.

The Vegetation Reclamation Procedure A refers to the revegetation of bare mineral soil areas that are less than 1 acre in size, but greater than 0.1 acre, resulting from any action authorized by the FFO. The Vegetation Reclamation Procedure A does not apply to areas approved by FFO as working areas necessary for the routine long term operation of an authorized site that were not required to be reseeded during the initial interim reclamation, but do apply to portions of working areas that were required to be reseeded during the initial interim reclamation. Disturbed areas less than 0.1 acre are expected to revegetate naturally from seed sources adjacent to the disturbance.

The FFO and the project proponent will work collaboratively to develop site-specific information during a pre-disturbance site visit. The information developed from the site visit will be incorporated into the permit application and associated EA. The permit application or EA will include photos of the proposed project site, the vegetation community that best represents the proposed project area, a seed mix developed from the appropriate vegetation community a description of any proposed water management features, and any techniques or methods that may be incorporated to promote successful vegetation restoration. A site-specific vegetation reclamation plan will be required in the permit application and associated EA.

The vegetation reclamation plan will reference potential revegetation requirements resulting from final abandonment or relinquishment activities. The proponent/permit holder is required to document to the FFO that the vegetation percent cover standards listed in the vegetation community description have been attained before the FFO will issue a final abandonment notice or a relinquishment.

The holder is not required to monitor the revegetation of bare soil sites that are less than one acre in area. The FFO may visit revegetated sites after completion of the revegetation reclamation activities, and may request a conference with the effected parties to analyze issues that may have contributed to revegetation failure or lack of meaningful progress. The FFO may request the holder to submit a remedy plan to address lack of success or to repair damage to revegetated areas. If the holder fails to submit a remedy plan, the FFO may provide the holder with remedy plan that includes required actions that may not have been required in the original vegetation reclamation plan.

B.3.1. Responsibilities

The holder is responsible for the following:

- The holder is responsible for all areas authorized by the ROW until the holder assigns the ROW, or relinquishes the project through established policy. The percent vegetation cover standards must be attained or an exception granted prior to relinquishment.
- Submit Proof of Construction within 90 days of project completion.
- Seed ROW within 90 days of completion of construction. If the holder is unable to reseed within this timeframe the holder will confer with the FFO to establish an approved time frame for seeding.

The FFO is responsible for the following:

- Conduct initial surface compliance inspection of the ROW after submittal of the Proof of Construction (90 days after construction).
- In collaboration with the holder, develop remedial actions if negative impacts to the vegetation reclamation are identified.
- Collaboration with holder when a request for relinquishment of the ROW’s is submitted.

B.4. Vegetation Reclamation Procedure B

Surface disturbing grants authorized by FFO that result in bare mineral soil of an area greater than or equal to 1 acre, not including a FFO approved working area, will require the holder to initiate the Vegetation Reclamation Procedure B. The disturbance may occur during initial construction, any time

during operating life of the permit, or during the abandonment or relinquishment of a grant. The holder is responsible for all areas revegetated per the Vegetation Reclamation Procedure B until the holder transfers, abandons, or relinquishes the grant according to accepted FFO protocol.

B.4.1. Responsibilities

The holder is responsible for the following:

- Preparation of a Revegetation Plan to be included in the ROW POD.
- Construction of project in accordance with approved ROW POD.
- Filing of Proof of Construction or schedule a final construction inspection within 90 days of project completion.
- Seeding the ROW within 90 days of completion of construction. If the holder is unable to reseed within this timeframe the holder will confer with the FFO to establish an approved time frame for seeding.
- Maintaining the integrity of the vegetation and the condition of the site for the life of the ROW or until the FFO approves a relinquishment request.
- Collaborating with FFO to prepare remedy plans (when necessary).
- Completion of components assigned to the holder by the remedy plan.
- All areas authorized by the ROW until the holder assigns the ROW, or relinquishes the project through established policy. The percent vegetation cover standards must be attained or an exception used prior to relinquishment.

The FFO is responsible for the following:

- Conduct initial surface compliance inspection, establish monitoring sites, and complete the initial monitoring report after reclamation and seeding has been completed. FFO will make the initial monitoring report available to the holder within 60 days of compliance inspection. The holder may participate in the process; participation is voluntary.
- Conducting annual vegetation monitoring starting two calendar years after seeding and continuing until the vegetation percent cover standards have been attained. The FFO monitoring form will be completed with 60 days and made available to the holder.
- Preparation of documentation that vegetation percent cover standards have been attained.
- Requesting a conference to analyze the issues that may have contributed to vegetation reclamation failure, or lack of meaningful progress If the FFO identifies negative impacts within the vegetation reclamation area.
- Developing remedial actions in collaboration with the holder if vegetation percent cover standards are not being attained.
- Conducting long-term monitoring (photo points) every five years after vegetation percent cover standards have been attained. These annual inspections will continue till relinquishment of the ROW.

B.4.2. Vegetation Monitoring Techniques

Monitoring will consist of both qualitative and quantitative methods and includes photo points and line point intercept transects.

Photo Points

Photo point monitoring will be conducted on the revegetated portions of the ROW. Photo point monitoring has been utilized extensively throughout the BLM and the FFO. Photo point monitoring is an accepted procedure to provide qualitative documentation of vegetation trend, water management effectiveness, and damage to reseeded areas.

The FFO will utilize global positioning system (GPS) to establish the location of all required photo points in NAD 83 Lat/ Long decimal degrees during the reclamation and seeding inspection process. The FFO will take the initial photos and include the photos in the initial monitoring report. In preparation to conduct

annual monitoring two calendar years after seeding, the FFO may reference the initial monitoring report for GPS locations of photo points and review the initial photos to reference the orientation (i.e., direction) that the initial photos were taken. The FFO will locate the initial photo points and take the photos in the same direction as the initial photos. The photos will be taken by a digital camera with 12 megapixel capability or of sufficient quality to produce an image that vegetation can be adequately analyzed.

Line Point Intercept Transects

The establishment line point intercept transects (transects) is required. Transects will be permanently marked FFO or the holder by any means acceptable to the holder that ensures that the FFO personnel can return to within one foot of the original transect location. The intent of the transects is to document the per cent foliar vegetative cover. The percent foliar vegetative cover data determined by reading the transects will be utilized to quantitatively document that the per cent foliar cover vegetation standards have been attained. The transects will only be read in preparation to document that vegetation percent cover standards have been attained. The number of transects established on a ROW will be determined by the FFO. Additional information about establishing and reading a transect is attached in Appendix C.

When reading the transects, all intercepted rooted vegetation will be recorded when reading the linear transect. The rooted vegetation could be alive, dormant, or dead. Dormant or dead vegetation must be firmly rooted in the ground to be recorded. Rooted vegetation will be recorded as desirable or undesirable. The FFO has compiled a list of undesirable plants and has attached the list to the line point intercept transect form (Appendix C). The total percent vegetation score for all transects may include up to 10 percent undesirable species. If any plants listed on the State of New Mexico Noxious weed lists A or B, as updated by the State, are documented on the ROW, by either the holder of the FFO, the holder must contact the FFO weed coordinator for instructions to control the noxious weeds. The individual scores for each ROW line point intercept transect will be averaged together to arrive at an overall score for the ROW. The resulting score will be used to determine compliance or non-compliance with percent of vegetation cover on the ROW.

Vegetation Cage

The use of vegetation cage is optional. A vegetation cage may help document successful seed germination, and determine if livestock grazing is a contributing factor for failure to attain vegetation reclamation standards. If the FFO decides to use a vegetation cage on the site, the FFO will furnish and maintain ownership of the cage and include the location and a photo of the vegetation cage in the initial monitoring report.

4.2.2. Project Implementation Process

Pre Disturbance Site Visit

The FFO and the holder will conduct a pre-disturbance site visit to the proposed project area to characterize the site. A weed survey will be conducted by the personnel present at the site visit. The FFO Pre-Disturbance Weed Management Procedure will be followed (Appendix D). The FFO in collaboration with the holder will determine which of the eight vegetation communities developed by the FFO best represent the proposed project area. A seed mix will be developed using the menu based seed pick list in the appropriate Vegetation Community Description. The holder will take photos of the proposed project site. If the soil conditions on the site appear to preclude the successful attainment of vegetation standards for the vegetation community that best represent the site, the FFO and the holder may document those soil conditions on an onsite form. Soil conditions will not preclude reseeding the site, but soil condition documentation may be used as a basis for future exception consideration.

Initial Monitoring

Initial monitoring completed by FFO after the establishment of monitoring locations will include:

- Photos from each established photo point.

- Two photos of each ROW line point intercept transect location: one photo looking each direction along the ROW and one photo looking straight down.
- FFO will complete the initial monitoring form and place the monitoring report in the appropriate project file.
- A copy of the initial monitoring form will be supplied to the holder upon request.

Annual Monitoring

Annual monitoring conducted by the FFO beginning two years after seeding will include:

- Photos from each established photo point.
- Two photos of each ROW line point intercept transect location: one photo looking each direction along the ROW.
- FFO will complete the annual monitoring form and place the monitoring report in the appropriate project file.
- A copy of the annual monitoring form will be supplied to the holder upon request.

Attainment of Vegetation Percent Cover Standard

FFO will read the line point intercept transects when the vegetation appears to have the potential to attain the standard. The holder may also request FFO staff to repeat a linear transect with a representative of the holder present if the holder believes the standard may be attained. The FFO will compile the following information to document that the percent vegetation cover standards have been attained:

- The overall percent foliar cover score from the linear transects for the ROW.
- The line point intercept transect data sheets.
- Photos from each established photo point.
- Two photos of each ROW line point intercept transect location: one photo looking each direction along the ROW. One photo taken of each transect from one end of the transect looking straight down to the ground.
- The FFO will prepare a notice to the ROW file that the percent cover standards have been attained.
- A copy of the notice will be supplied to the holder upon request.

Long-Term Monitoring

Long-term monitoring will be conducted by the FFO every fifth year after vegetation percent cover standards have been attained. Long-term monitoring will include:

- Photos from each established photo point
- Two photos of each ROW line point intercept transect location: one photo looking each direction along the ROW.
- FFO will complete the long term monitoring form and place the monitoring report in the appropriate ROW file.
- A copy of the long term monitoring form will be supplied to the holder upon request.

Cessation of Monitoring

The ROW holder is responsible for all revegetation and reclamation requirements for the life of the ROW or until the FFO approves a relinquishment request. If abandonment earthwork results in bare soil, the holder will follow Vegetation Reclamation Procedure A or B depending on the area of bare soil resulting from the earthwork. The holder must document that percent cover standards have been obtained when submitting a request for a relinquishment. If ownership of any portion of the APD site is transferred to another entity, the revegetation and monitoring requirements for the portion transferred will be assumed by the acquiring entity.

Lack of Progress in the Attainment of the Standard

When monitoring reports indicate that bare soil reclamation is not successful, or the FFO identifies negative impacts within the initial reclamation area, the FFO or the permit holder may request a conference to analyze the issues that may have contributed to reclamation failure, or lack of meaningful progress. FFO will facilitate the conference and invite potential affected parties such as: the permit holder; FFO resource specialists, the grazing permittee; or other authorized users that may be operating in the vicinity of the ROW. The members of the conference will discuss the potential causes that may have contributed to the nonattainment of the reclamation standards. The conference will result in the development of a remedy plan to address the lack of revegetation success and what methods to implement to achieve the attainment of percent vegetation cover standards to damage or reclaimed areas. In cases where the holder can demonstrate that the ROW, or portions of the ROW, does not have the biological potential to attain the standards, the conference may result in the initiation of the exception process.

Exception Request

The holder may request an exception to the vegetation percent cover standards at any time once two calendar years have passed following the filing of proof of construction and/or the final construction inspection by the authorized officer. In order for FFO to process the exception request, the following information must be provided by the FFO and/or by the holder:

- Photo point monitoring from the most recent monitoring conducted on the site.
- An explanation of conditions that may preclude successful attainment of standards.
- A summary of reclamation techniques performed on the site.

Dispute Resolution

The holder may request a review of instructions or decisions issued by the FFO staff related to the ROW POD Procedure. The holder may submit the request for review including supporting documents to the FFO Assistant Field Manager. The Assistant Field Manager will resolve the issue at the field office level.

This decision may be appealed to the Interior Board of Land Appeals (IBLA), Office of the Secretary, in accordance with the regulations contained in 43 CFR Part 4. Any appeal must be filed within 30 days of this decision. Any notice of appeal must be filed Gary Torres, Field Manager, Farmington Field Office, 6251 College Boulevard, Suite A, Farmington, NM 87402. The appellant shall serve a copy of the notice of appeal and any statement of reasons, written arguments, or briefs on each adverse party named in the decision, not later than 15 days after filing such document (see 43 CFR 4.413(a)). Failure to serve within the time required will subject the appeal to summary dismissal (see 43 CFR 4.413(b)). If a statement of reasons for the appeal is not included with the notice, it must be filed with the IBLA, Office of Hearings and Appeals, U. S. Department of the Interior, 801 North Quincy St., Suite 300, Arlington, VA 22203 within 30 days after the notice of appeal is filed with Garry Torres, Farmington Field Office Manager.

Revision of Revegetation Plan

The holder may submit a request to revise the Revegetation Plan at any time during the life of the ROW. Revision requests should be submitted to the FFO ROW staff for analysis and approval.The permit holder will include justification for the revision request.

APPENDIX C. LINE POINT INTERCEPT TRANSECT PROCESS AND FORM

This appendix provide general guidelines for establishing a line point intercept transect (transect) if the proponent/permit holder. Establishing the transect should begin with selecting a beginning point and driving an 18-inch piece of rebar approximately 12 inches into the ground. A 100-foot tape should be attached to the rebar support and extended to the 100-foot mark. A second piece of rebar should be driven into the ground about 4 inches beyond the 100-foot mark. Both of these rebar locations will be identified using a GPS with the coordinates in NAD 83, UTMs.

C.1. Photo Data

A color photograph should be taken while standing directly over a rebar looking toward the rebar at the opposite end of the transect. The photo should provide good detail of the vegetative stand along the transect line. Two additional photos of each rebar will be taken from standing directly above the rebar looking straight down at the rebar. These photos will provide a visual estimate of the percentage of bare ground in the transect area.

C.2. Reading the Transect

The intent of the line point intercept transect is to collect foliar/canopy vegetative cover. The actual data collection process involves the observer (Figure 1) moving along the suspended tape and extending a pin flag or other similar pointed device (e.g., a sharpened ¼ inch dowel) that has a point no larger than 1/16 inch at each one foot increment. The pointer should extend directly down beneath the number on the tape. Each point has the potential for multiple foliar canopies such as shrub and grass. This concept is easier to grasp if one visualizes a drop of rain falling from the sky and what it encounters before it reaches the ground.

Figure 1. Reading the Transect

Line Point Intercept Transect Data Form

Date _____ Operator _____ Project Name/# _____
API #_____ ROW #_____ EA or Lease #_____
Location Township, Range, Section _____ Veg Community _____
Veg Cover % Standard _____ Date Seeded _____ Monitor Name _____

Pt. #	Desirable	Undesirable	PT.#	Desirable	Undesirable	Pt.#	Desirable	Undesirable	Pt.#	Desirable	Undesirable
1			26			51			76		
2			27			52			77		
3			28			53			78		
4			29			54			79		
5			30			55			80		
6			31			56			81		
7			32			57			82		
8			33			58			83		
9			34			59			84		
10			35			60			85		
11			36			61			86		
12			37			62			87		
13			38			63			88		
14			39			64			89		
15			40			65			90		
16			41			66			91		
17			42			67			92		
18			43			68			93		
19			44			69			94		
20			45			70			95		
21			46			71			96		
22			47			72			97		
23			48			73			98		
24			49			74			99		
25			50			75			100		

For each point, record only live vegetation in the boxes to the right of the point #. More than one species may be intercepted at each point; record all species intercepted. If no live vegetation is intercepted at a point, leave the boxes blank. Record the species symbol in the appropriate box if the species is known. If the species is unknown, record UG for unknown grass, UF for unknown forb, US for unknown shrub in the desirable box, and UU for unknown undesirable plant in the undesirable box. For % totals, Record the number of entries in the Desirable column, record the number of entries in the undesirable column, and add the Desirable plus the Undesirable and record the Total:

% Desirable Foliar Vegetation _____ % Undesirable Foliar Vegetation _____ %

Score: Desirable Foliar Cover _____ % + Undesirable Foliar Vegetation (10% Maximum)_____% = Total Score _____%

C.3. Line Point Intercept Transect Plant Symbols

Plant	Scientific Name	Symbol
Grass		
Alkali muhly	Muhlenbergia asperifolia	MUAS
Alkali sacaton	Sporobolus airoides	SPAI
Arizona fescue	Festuca arizonica	FEAR2
Blue bunch wheatgrass	Pseudoroegneria spicata	PSSP6
Blue grama	Bouteloua gracilis	BOGR2
Bottlebrush squirreltail	Elymus elymoides	ELEL5
Pleuraphis jamesii	Galleta	PLJA
Giant dropseed	Sporobolus giganteus	SPGI
Indian ricegrass	Achnatherum hymenoides	ACHY
Inland saltgrass	Distichlis spicata	DISP
Mountain muhly	Muhlenbergia montana	MUMO
Mutton grass	Poa fendleriana	POFE
Needleandthread	Hesperostipa comata, H. neomexicana	HECO26, HENE5
Prairie junegrass	Koeleria macrantha	KOMA
Purple threeawn	Aristida purpurea (var. longiseta and var. purpurea)	ARPU9, ARPUL, ARPUP6
Sand dropseed	Sporobolus cryptandrus	SPCR
Sandhill muhly	Muhlenbergia pungens	MUPU2
Siberian wheatgrass	Agropyron fragile	AGFR
Sideoats grama	Bouteloua curtipendula	BOCU
Slender wheatgrass	Elymus trachycaulus	ELTR7
Spike dropseed	Sporobolus contractus	SPCO4
Western wheatgrass	Pascopyrum smithii	PASM
Unidentified grass		UG
Common Undesireable Plants		
Broom snakeweed	Gutierrezia sarothrae	GUSA2
Bull thistle	Cirsium vulgare	CIVU
Careless weed	Amaranthus palmeri	AMPA
Cheat grass	Bromus tectorum	BRTE
Cocklebur	Xanthium strumarium	XAST
Field bindweed	Convolvulus arvensis	COAR4
Kochia	Bassia scoparia	BASC5
Russian thistle	Salsola tragus	SATR12

Plant	Scientific Name	Symbol
Forb		
Annual sunflower	Helianthus annuus	HEAN3
Blanket flower	Gaillardia pulchella, G. aristata	GAPU, GAAR
Blue flax	Linum lewisii	LILE3
Globemallow (Scarlet, Small-flower)	Sphaeralcea coccinea, S. parvifolia	SPCO, SPPA2
Golden crownbeard	Verbesina encelioides	VEEN
Hairy false goldenaster	Heterotheca villosa	HEVI4
Penstemon spp	P. angustifolia, P. barbatus	PEAN4, PEBA2
Prairie or tansyleaf aster	Machaeranthera tanacetifolia	MATA2
Rocky Mtn. bee plant	Cleome serrulata	CLSE
Small Burnet	Sanguisorba minor	SAMI3
Sulphur buckwheat	Eriogonum umbellatum	ERUM
Tailcup lupine	Lupinus caudatus	LUCA
Utah sweetvetch	Hedysarum boreale	HEBO
Wyoming Paintbrush	Castilleja linarifolia	CALI4
Unidentified forb		UF
Shrub		
Antelope bitterbrush	Purshia tridentata	PUTR2
Fendler bush	Fendlera rupicola	FERU
Fourwing saltbush	Atriplex canescens	ATCA2
Fringed sage	Artemisia frigida	ARFR4
Greasewood	Sarcobatus vermiculatus	SAVE4
Mormon tea	Ephedra viridis	EPVI
Mountain mahogany	Cercocarpus montanus	CEMO2
Rubber rabbitbrush	Ericameria nauseosa	ERNA10
Shadscale saltbush	Atriplex confertifolia	ATCO
Winterfat	Krascheninnikovia lanata	KRLA2
Wyoming big sagebrush	Artemisia tridentata (ssp. wyomingensis)	ARTRW8
Unidentified shrub		US

Line Point Intercept Transect Data Form

Date 10-10-12 Operator Burlington Project Name/# King #3

API # 30-045-34456 ROW # EA or Lease # 078207

Location Township, Range, Section Sec. 22 30N 10W Veg Community Sage/grass

Veg Cover % Standard 35 Date Seeded 2008 Monitor Name Wagenor, Wirth, Williams, Liess

Pt. #	Desirable	Undesirable	PT.#	Desirable	Undesirable	Pt.#	Desirable	Undesirable	Pt.#	Desirable	Undesirable
1	—	—	26	—	—	51	AGCR		76	—	—
2	ORHY		27	—	—	52	—	—	77	ORHY	
3	—	—	28	AGCR		53	ATCA		78		SATR
4	—	—	29		SATR	54	ATCA		79	—	—
5	ORHY		30	—	—	55	ATCA ORHY		80	—	—
6		SATR	31	—	—	56	ATCA ORHY		81	Forb	
7		SATR	32	—	—	57	AGCA		82	—	—
8	—	—	33	—	—	58	—	—	83	—	—
9		SATR	34	—	—	59	—	—	84	—	—
10	—	—	35	—	—	60	ATCA AGCR		85	ORHY	
11	AGCR		36	AGCR		61	ATCA		86	AGCR	
12	—	—	37	AGCR		62	AGCR		87		SATR
13	AGCR		38	—	—	63	AGCR		88		SATR
14	—	—	39	—	—	64	—	—	89	—	—
15	—	—	40		SATR	65	—	—	90	—	—
16	—	—	41	—	—	66	ATCA AGCR		91		SATR
17	—	—	42	—	—	67	ATCA AGCR		92	—	—
18	—	—	43	AGCR		68	—	—	93	—	—
19	CHNA		44		SATR	69	—	—	94		SATR
20	—	—	45		SATR	70	—	—	95		SATR
21	ORHY		46	—	—	71	—	—	96	AGCR	
22	—	—	47	—	—	72	—	—	97		SATR
23	—	—	48	—	—	73		SATR	98	—	—
24	AGCR		49		SATR	74	—	—	99	—	—
25	AGCR		50	—	—	75	—	—	100	—	—

For each point, record only live vegetation in the boxes to the right of the point #. More than one species may be intercepted at each point; record all species intercepted. If no live vegetation is intercepted at a point, leave the boxes blank. Record the species symbol in the appropriate box if the species is known. If the species is unknown, record UG for unknown grass, UF for unknown forb, US for unknown shrub in the desirable box, and UU for unknown undesirable plant in the undesirable box. For % totals, Record the number of entries in the Desirable column, record the number of entries in the undesirable column, and add the Desirable plus the Undesirable and record the Total:

% Desirable Foliar Vegetation 29 % Undesirable Foliar Vegetation 16 %

Score: Desirable Foliar Cover 29 % + Undesirable Foliar Vegetation (10% Maximum) 10 % = Total Score 39 %

APPENDIX D. WEED SURVEY FORM

D.1. Pre Disturbance Weed Management Procedure and Form

During the onsite inspection, the FFO and operator's representative(s) will survey the proposed action area for noxious weeds listed on the New Mexico Department of Agriculture's A and B list (attached). If no weeds on the A or B list were observed, the FFO will indicate on the standard onsite check list form that no noxious weeds were observed within the proposed project site. If noxious weeds are found, the FFO will fill out the Onsite Noxious Weed form (attached). The FFO representative and the operator's representative will sign the form, and the FFO representative will submit the completed form to the FFO weed coordinator.

The FFO weed coordinator will review the form and analyze the noxious weed issues. The FFO weed coordinator will electronically submit to the operator within 30 days of the onsite, specific requirements and instructions for weed treatments. The requirements and instructions will include the time frame of treatment, approved herbicides that may be used, required documentation to be submitted to the FFO after treatment, and any other site specific instructions that may be applicable. Due to the seasonal nature of effective weed treatment techniques, the operator may be required to treat before ground disturbance, or may be required to treat the area after ground disturbance to avoid unreasonable delays to the operator's drilling program.

D.2. Class A Species

Class A species are currently not present in New Mexico, or have limited distribution. Preventing new infestations of these species and eradicating existing infestations is the highest priority.

Common Name	Scientific Name
Alfombrilla	*Drymaria arenariodes*
Black henbane	*Hyoscyamus niger*
Camelthorn	*Alhagi psuedalhagi*
Canada thistle	*Cirsium arvense*
Dalmation toadflax	*Linaria dalmatica*
Diffuse knapweed	*Centaurea diffusa*
Dyer's woad	*Isatis tinctoria*
Eurasian watermilfoil	*Myriophyllum spicatum*
Giant salvinia	*Salvinia molesta*
Hoary cress	*Cardaria spp.*
Hydrilla	*Hydrilla verticllata*
Leafy spurge	*Euphorbia esula*
Oxeye daisy	*Leucanthemum vulgare*
Parrotfeather	*Myriophyllum aquaticum*
Purple loosestrife	*Lythrum salicaria*
Purple starthistle	*Centaurea calcitrapa*
Ravenna grass	*Saccharum ravennae*
Scotch thistle	*Onopordum acanthium*
Spotted knapweed	*Centaurea biebersteinii*
Yellow starthistle	*Centaurea solstitialis*
Yellow toadflax	*Linaria vulgaris*

D.3. Class B Species

Class B species are limited to portions of the state. In areas with severe infestations, management should be designed to contain the infestation and stop any further spread.

Common Name	Scientific Name
African rue	*Peganum harmala*
Chicory	*Cichorium intybus*
Halogeton	*Halogeton glomeratus*
Malta starthistle	*Centaurea melitensis*
Musk thistle	*Carduus nutans*
Perennial pepperweed	*Lepidium latifolium*
Russian knapweed	*Acroptilon repens*
Poison hemlock	*Conium maculatum*
Teasel	*Dipsacus fullonum*
Tree of heaven	*Ailanthus altissima*

Onsite Noxious Weed Form

If noxious weeds are found during the onsite, fill out form and submit to FFO weed coordinator
Operator _____ Surveyor(s) _____
Well Name and Number _____ Date _____
Location: Township, Range, Section _____
Location of Project NAD 83 Decimal Degrees _____ _____

Class A Noxious Weed – Check Box if Found

	Alfombrilla		Diffuse knapweed		Hydrilla		Purple starthistle		Yellow toadflax
	Black henbane		Dyer's woad		Leafy spurge		Ravenna grass		
	Camelthorm		Eurasian watermilfoil		Oxeye daise		Scotch thistle		
	Canada thistle		Giant salvinia		Parrotfeather		Spotted knapweed		
	Dalmation toadflax		Hoary cress		Purple loosestrife		Yellow starthistle		

Class B Noxious Weed – Check Box if Found

	African rue		Perennial pepperweed		Russian knapweed		Tree of heaven
	Chicory		Musk thistle		Poison hemlock		
	Halogeton		Malta starthistle		Teasel		

Comments:

FFO Representative: _____
sign and date
Operator Representative _____
sign and date

APPENDIX E. GLOSSARY

Abandonment: The physical abandonment of a well bore

Attainment of Standards: The reclamation standards are established in the FFO Vegetation Management Plan habitat descriptions. Each of the 8 habitat descriptions includes a reclamation standard as defined by a required percent of plant cover consisting of grasses, forbs, or shrubs that FFO determined was sufficient to provide a minimum level of soil stability and forage productivity. A line point intercept transect must be established. To attain the standard, the foliar, or foliar plus basal cover data collected from the line point intercept transect must meet or exceed the standards established in the habitat description.

Authorized Action: all actions authorized by FFO from any multiple use program that may impact the soil surface and result in bare mineral soil.

Bare mineral soil: soil that has been disturbed resulting in a loss of vegetation, viable roots, organic material, and biological crusts.

Collector road: arterial roads usually double-lane, graded, drained and surfaced, with a 20 to 24 foot travel way. They serve large land areas and are the major access route into development areas.

Dispute Resolution: The proponent may request a review of instructions or decisions issued by the FFO staff related to the Surface Use Plan of Operations Procedure Update.

Earthwork inspection: An inspection conducted by the BLM in collaboration with the proponent after interim or final reclamation has been completed. The inspection focuses on the reclamation of the cut and fill slopes, water management ditches, diversions and/or silt traps and seeding of disturbed areas of the well site. The FFO approves (or not) all these finished construction activities. During the earthwork inspection process, the FFO in collaboration with the proponent will determine site specific monitoring locations on the well pad, access road, and well tie pipeline if owned by the proponent.

Final Abandonment Notice (FAN): notice of completion of the physical plugging of a well bore and the successful reclamation of associated disturbed areas.

FFO Bare Soil Reclamation Procedure: An office wide plan to establish standards and guidelines for habitat improvement and the revegetation of soils that are reduced to bare mineral soil due to an action authorized by FFO. The plan includes monitoring requirements for both habitat improvement projects and revegetation of bare mineral soil. The plan includes descriptions of the 8 most common vegetation habitat types within lands managed by the FFO. The 8 habitat descriptions include management goals, desired plant community definitions, reclamation standards, and suggestions for techniques to attain reclamation standards.

Final Construction Inspection: A surface compliance inspection conducted by the BLM in collaboration with the holder after construction has been completed. The inspection focuses on surface compliance with required standards established in the POD for reclamation of the project. The FFO approves (or not) all these finished construction activities. During this inspection process, the FFO in collaboration with the holder will determine site specific monitoring locations on the project authorized to the holder.

Grazing: Grazing refers to all animals that may graze on a revegetated site including authorized livestock and wildlife. The proponent is not relieved of revegetation responsibilities because of grazing. If grazing is identified as an impediment to the attainment of revegetation standards, the proponent or FFO may initiate a conference to collaboratively develop a remedy plan to address the grazing issue.

Holder: The holder is the company that the ROW grant is issued to. A duly authorized representative acting on behalf of the company can performs the duties and responsibilities of the holder.

Invasive/undesirable plants: An invasive/undesirable plant is defined as a plant that can be non-native or native which has the potential to become a dominant species on a site where its presence is a detriment to revegetation efforts or the native plant community. Examples of Invasive species include cheatgrass, Russian thistle, kochia, and in some instances rubber rabbitbrush and greasewood.

Local road: collector roads may be single or double-lane with travelways 12 to 24 feet in width and are normally graded, drained, and surfaced. These roads provide access to large areas and are for various uses.

Noxious weed: all plants on the A and B list of the New Mexico Noxious Weed List (April 2009), developed by the New Mexico Department of Agriculture.

P+A: the physical plugging of a well bore and the reclamation of associated disturbed areas

Proponent: the proponent may be any person or entity that proposes an action that must by authorized by FFO

Reclamation suggestions: reclamation suggestions are techniques, procedures, and methods that may help to achieve more effective reclamation success. The Vegetation Community Descriptions contains a section of reclamation suggestions.

Remedy: A remedy is a plan to correct impacts or impediments to the attainment of revegetation standards. The proponent or FFO may request a conference when an issue that precludes the attainment of the revegetation standard is identified. The proponent in collaboration with the FFO will develop and submit a plan to remedy the issue within a time frame agreed to by the FFO and the proponent. If the proponent fails to submit a remedy plan to the FFO, a mandatory remedy plan may be issued to the proponent. If the proponent does not agree with the remedy plan, the proponent may follow the Dispute Resolution process.

Resource road: resource roads are generally low-volume, single-lane roads. They normally have a 12 to 14 foot travelway with “intervisible turnouts” as appropriate. These roads connect terminal facilities, such as a well site, to collector or local roads. They serve low average daily traffic, and are located on the basis of the specific resource activity need rather than travel efficiency.

Revegetation Plan: A plan for the reestablishment of vegetation on bare ground areas that result from the construction, operation, and abandonment of an authorized action. A Revegetation Plan is a required element of the Environmental Assessment or permit application.

Surface Reclamation: surface reclamation refers to the on the ground process of revegetating and stabilizing disturbed areas that are over one acre in size, that have been reduced to bare mineral soil, that occur from any FFO authorized action. This process is guided by the Vegetation Reclamation Plan that establishes specific reclamation success criteria and monitoring minimum requirements. FFO makes no distinction between interim and final vegetation reclamation; the process and success standards are the same.

Vegetation Restoration Procedure A: Applies to areas disturbed to bare mineral soil in areas of less than one acre, but more than 0.1 acre that result from an authorized action.

Vegetation Reclamation Procedure B: Applies to areas disturbed to bare mineral soil in areas of one acre or more that result from an authorized action.

Working Area (FFO Bare Soil Reclamation Plan): FFO considers working areas to be areas necessary for the routine long term operation of an authorized site. A proponent of an action may submit a plat of a proposed working area in an Environmental Assessment, permit application, or sundry notice for FFO approval. The AO may, or may not require working areas to be reseeded depending on the purpose of the working area. Portions of approved working areas that are required to be reseeded may be

redisturbed during the operational life of the authorized action. Any seeded working areas that are redisturbed during long term operations will be repaired and reseeded.

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