

Attachment 3

Detailed Minimization and Mitigation Measures for BLM/FFO Special Status Plant Species, Brack's Cactus and Aztec Gilia.

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Bureau of Land Management (BLM) New Mexico Farmington Field Office (FFO) Detailed Mitigation Measures for BLM/FFO Special Status Plant Species, Brack's Cactus and Aztec Gilia.

Introduction

Habitat loss and fragmentation are the primary direct threat to Brack's cactus and Aztec gilia. Habitat fragmentation could have a negative impact on the genetic diversity and vigor of the species due to restrictions of pollinator access and seed dispersal. The primary sources of habitat fragmentation are the increased number of access roads, pipeline and other utility ROW, anthropogenic topography, and long-term surface disturbance from well pads and associated facilities. Mitigating for impacts to BLM special status plant species (SSPS) during surface disturbing projects, helps to meet the BLM's multiple-use and sustained yield mission under the Federal Land Policy and Management Act, and reduces the likelihood of future listings under the Endangered Species Act. The management measures described here are consistent with BLM Manual 6840: (1) first, impacts will be avoided by altering project design, location, or declining to authorize the project; (2) then minimized through project modifications and permit conditions; and, (3) at the discretion of the Authorized Officer in consultation with the BLM New Mexico State Office (NMSO), only then mitigate for remaining unavoidable impacts after all appropriate and practicable avoidance and minimization measures have been applied.

The mitigation measures described here provide guidance for project proponents to develop specific mitigation actions tailored to specific project ground disturbing activities and the potential impacts to SSPS habitat, in coordination with the FFO. Not all mitigation measures are described here and project proponents are encouraged to develop specific mitigation actions within their lease that provide the greatest conservation benefit to SSPS habitat. Mitigation actions should consider Project Planning, Pre-surface Disturbance Field Work, Project Implementation, and Post-Project Monitoring.

A. Avoidance and Minimization Measures

Project Planning Phase

Proper planning is key to protecting sensitive plants while preventing unnecessary project expenses and delays. Project planning should begin at the earliest stages of a proposal to determine the path forward. Project proponents are encouraged to in advance of initiating surface-disturbing activities, accommodate sensitive plant survey timeframes and locate projects in areas with the least potential for impacts to sensitive plants, habitat, and other resources of concern. The following mitigation measures should be considered for inclusion during the project-planning phase:

1. Utilize sensitive plant maps and latest GIS data in initial project siting to avoid habitat. If necessary, relocate project (i.e. well pads, roads, pipeline corridors) within existing supporting infrastructure to eliminate potential issues. If avoidance cannot be achieved, minimize impacts to SSPS habitat by appropriate planning and use of Best Management Practices (BMPs). The

¹ *Minimizing impacts* - limit the degree or magnitude of the impacting action and its implementation on SSPS habitat.

BLM/FFO will provide an appropriate GIS habitat data model to help define areas of good to poor quality habitat to better project area placement.

2. Document and discuss project design with BLM lead, FFO specialists, stakeholders, and other pertinent personnel as early as possible to ensure minimization is achieved. Bio-survey results and any justification and minimization documentation should be submitted to FFO at time of application to BLM (i.e. NOS, APD, etc) so that the assigned project lead can consult with the field office biologist/botanist prior to the onsite.
3. Prior to selecting a project area or any project staking, design project infrastructure to avoid or minimize impacts to suitable habitat. This could include moving projects outside of SSPS suitable habitat or into less suitable habitat. Document actions taken to avoid or minimize impacts before submitting any application (i.e. NOS) and ensure this documentation is communicated to FFO project lead. Coordinate with BLM biologist, if necessary.
4. Any proposed project that does not demonstrate minimization of impacts may require mitigation. BLM may develop an alternative in the Environmental Assessment that would avoid or further minimize impacts to SSPS habitat.
5. BLM strongly encourages unit plans and plans of development that incorporate SSPS habitat avoidance/minimization.
6. For buried infrastructure (i.e. pipelines, power, etc.), bore under known populations to avoid destruction of sensitive plants.
7. Install temporary fencing and provide a minimum buffer of 30 meters, from all surface disturbing activities. The 30-meter buffer reduces the chance of impacts caused by dust and sediment transport, weed invasion, and unauthorized vehicular activities. It also reduces the chance of impacts to pollinators and their habitat.
8. Control weed populations that threaten the habitat integrity for SSPS. Avoid pesticide drift when applying pesticides. The FFO weeds coordinator will approve any spraying within SSPS suitable habitat, especially during the flowering season. Spraying is not recommended during sustained winds higher than 5mph.
9. Construct the smallest well pads and access road needed to safely develop the undertaking.
10. Avoid proposing any cross-country ROWs through suitable habitat. BLM does not consider two-tracks and many unimproved roads (eg. not authorized) existing infrastructure.
11. Establish a voluntary Habitat Conservation Area (HCA) in suitable/occupied habitat within a lease or unit. The BLM and permittee would agree that no (or minimal) ground disturbing activities would occur inside the HCA, thus preserving the habitat and plants contained therein.

B. Project Implementation Phase

The project implementation phase ensures that project actions will avoid and minimize impacts to sensitive plants and habitat to the greatest extent feasible. The following management measures (BMPs) should be considered for inclusion during the project implementation phase.

1. Prior to the initiation of construction, pre-work meetings should be held between the FFO botanist/biologist, project proponent, and contractors to discuss required procedures associated with the project terms and conditions of approval.
2. Provide a monitoring plan, if required.

3. Perform frequent and timely inspections of construction and operation sites to ensure that mitigation measures are followed and to identify areas of potential conflict. Inspections of sensitive plant occurrences should be performed by a botanist or other qualified personnel.
4. Restrict motorized travel to designated roads and trails. Routes should be designated and marked prior to construction.
5. Apply fresh water for dust abatement. Dust abatement applications should be comprised of fresh water only, with **no** use of **magnesium chloride** around SSPS habitat unless otherwise authorized by FFO
6. Wash vehicles and other equipment prior to entering location to reduce the spread of noxious weeds from other areas. Use portable wash stations in areas of heavy oilfield traffic and in areas where noxious weeds are known to occur.
7. Stockpile topsoil for use in final reclamation. Topsoil should be stored separately from other fill materials. If topsoil is stored for longer than six months, it should be stabilized with a cover crop and clearly marked.
8. Conduct lease or unit wide SSPS habitat surveys to define the quality of SSPS habitat in areas of future development.

C. Mitigation, Transplanting

The BLM requires mitigation for affects to specific resources identified in 2003 Resource Management Plans and associated projects or activities, and may include BLM sensitive plants. Mitigation follows the hierarchy identified in BLM Manual 6840; if impacts cannot be avoided, then impacts will be mitigated through project modifications and permit conditions if there are appropriate and practicable measures.

1. For any project that minimizes impacts to Brack's cactus habitat to FFOs approval, mitigation measures may include site-specific management measures to decrease or eliminate impacts to SSPS habitat. If the Authorized Officer deems transplanting is appropriate, the transplant plan would be approved in coordination with the NMSO. A transplant plan with all the pertinent details would be submitted to FFO prior to the approval of any transplant effort. Monitoring of transplants may be required depending on, number of transplants, magnitude of proposed project and suitable habitat removed.
2. Transplanting Aztec gilia will not be approved.
3. While transplanting is not recommended as a mitigation measure because it is very difficult to ensure long-term survival of individual, transplanted sensitive plants, there may be cases where this mitigation measure is appropriate.
4. All transplant operations must be overseen by a BLM approved horticulturist. This horticulturalist will be identified in the transplant plan.

5. Mitigation plans can be at the plan of development level or site-specific projects. Mitigation plans should demonstrate a good faith effort to conserve SSPS habitat within their PPA or planning area. Research efforts, additional data collection, seed collection to grow for future transplant efforts, seed collection and planting within suitable habitat are some examples of mitigation measures.
6. BLM may consider the voluntary establishment of an HCA to be a form of mitigation.

D. Post-Project Monitoring Phase

The monitoring phase is vital to assessing the success of required mitigation measures to SSPS habitat. Monitoring will consist of the following:

1. Collect baseline data prior to any sensitive plant and habitat impacts. The establishment of baseline conditions is essential for tracking changes in sensitive plants and habitat and determining the success of mitigation actions.
2. If required, monitor effects from surface-disturbing projects on sensitive plants and habitat. If impacts persist beyond what was anticipated during the project planning and implementation phases.
3. Monitor the long-term success of any revegetation or seeding efforts to ensure the successful establishment of desired species and detect any noxious weed infestations. If revegetation was unsuccessful, reevaluate the site characteristics and continue efforts to establish desired species in disturbed sites, if feasible.
4. Any transplanting that requires monitoring will be monitored for a minimum of 5 years following transplanting efforts or until the BLM relieves the proponent from monitoring responsibilities.
5. The monitoring of mitigation measures will continue for 5 years. Monitoring length and intervals may be adjusted depending on mitigation measure. The objective of monitoring is to ensure success with mitigation actions and not to impose an overly burdensome monitoring requirement on project proponents.

E. Additional Recommendations

1. Rigorously monitor and control all infestations of noxious weeds (refer to the New Mexico State Noxious Weed Management Act of 1998) and other non-native invasive plant species in occupied and suitable habitat for sensitive plants.
2. Monitor project areas for new weed infestations. Noxious weeds in close proximity to sensitive plants should be the highest priority for control.
3. Ensure that the sensitive plants are protected from undue damage resulting from weed control efforts.
4. When timely natural regeneration of the native plant community is not likely to occur, carefully select and use site-specific native species that will not compete with or exclude botanical resources for revegetation efforts. Bare sites should be seeded with native plant species as soon as appropriate to prevent establishment of undesirable plant species. Grass species, especially cultivars, can be aggressive by nature and they should be limited if sensitive plants do not

compete well with grasses. Document efforts and considerations in reclamation plans, the Surface Use Plan of Operations (SUPO) or Plan of Development (POD) submittals.

5. Consult with FFO when determining appropriate seed mixes. Selection of appropriate species for revegetation is site-specific, and seed recommendations are beyond the scope of this document.
6. Close and rehabilitate roads quickly once they are no longer needed within SSPS habitat
7. Protect cut-and-fill slopes against erosion with the use of water bars, lateral furrows, or other appropriate measures. Biodegradable straw matting, bales or wattles of weed-free straw or weed-free native grass hay, or well-anchored fabric silt fence should be used on cut-and-fill slopes and along drainages to protect against soil erosion. Use biodegradable anchors or pins for anchors.