

Appendix E

Special Status Plant Species Conservation Measures

Graham's beardtongue (*Penstemon grahamii*)

In order to minimize effects to the federally proposed Graham's beardtongue, the Bureau of Land Management (BLM) in coordination with the U.S. Fish and Wildlife Service (Service) developed the following avoidance and minimization measures. Integration of and adherence to these measures will help ensure the activities carried out during oil and gas development (including but not limited to drilling, production, and maintenance) are in compliance with the Endangered Species Act (ESA) and will not result in a trend toward federal listing of the species. The following avoidance and minimization measures should be included in the Plan of Development:

1. Pre-project habitat assessments will be completed across 100% of the project disturbance area within potential habitat prior to any ground disturbing activities to determine if suitable Graham's beardtongue habitat is present.
2. All surface-disturbing activities having potential direct or indirect impacts on proposed critical habitat are prohibited.
3. Within suitable habitat, site inventories will be conducted to determine occupancy. Inventories:
 - a. Must be conducted by qualified individual(s) and according to BLM and Service accepted survey protocols,
 - b. Will be conducted in suitable and occupied habitat⁴ for all areas proposed for surface disturbance prior to initiation of project activities and within the same growing season, at a time when the plant can be detected (usually April 15th to May 20th in the Uinta Basin; however, surveyors should verify that the plant is flowering by contacting a BLM or FWS botanist or demonstrating that the nearest known population is in flower),
 - c. Will occur within 300' from the centerline of the proposed right-of-way for surface pipelines or roads; and within 300' from the perimeter of disturbance for the proposed well pad including the well pad,
 - d. Will include, but not be limited to, plant species lists and habitat characteristics, and
 - e. Will be valid until April 15th the following year.
4. Design project infrastructure to minimize impacts within suitable habitat²:
 - a. Reduce well pad size to the minimum needed, without compromising safety,
 - b. Limit new access routes created by the project,
 - c. Roads and utilities should share common right-of-ways where possible,
 - d. Reduce the width of right-of-ways and minimize the depth of excavation needed for the road bed; where feasible, use the natural ground surface for the road within habitat,
 - e. Place signing to limit off-road travel in sensitive areas, and
 - f. Stay on designated routes and other cleared/approved areas.
5. Within occupied habitat⁴, project infrastructure will be designed to avoid direct disturbance and minimize indirect impacts to populations and to individual plants:
 - a. Follow the above (#3) recommendations for project design within suitable habitats,

- b. Construction of roads will occur such that the edge of the right of way is at least 300' from any plant,
 - c. Roads will be graveled within occupied habitat; the operator is encouraged to apply water for dust abatement to such areas from April 15th to May 20th (flowering period); dust abatement applications will be comprised of water only,
 - d. The edge of the well pad should be located at least 300' away from plants,
 - e. Surface pipelines will be laid such that a 300 foot buffer exists between the edge of the right of way and the plants, use stabilizing and anchoring techniques when the pipeline crosses the habitat (exposed raw shale knolls and slopes derived from the Parachute Creek and Evacuation Creek members of the geologic Green River Formation) to ensure pipelines don't move towards the population,
 - f. Construction activities will not occur from April 15th through May 30th within occupied habitat,
 - g. Before and during construction, areas for avoidance should be visually identifiable in the field, e.g., flagging, temporary fencing, rebar, etc.,
 - h. Where technically and economically feasible, use directional drilling or multiple wells from the same pad,
 - i. Designs will avoid concentrating water flows or sediments into occupied habitat,
 - j. Place produced oil, water, or condensate tanks in centralized locations, away from occupied habitat, and
 - k. Minimize the disturbed area of producing well locations through interim and final reclamation. Reclaim well pads following drilling to the smallest area possible.
6. Occupied Graham's beardtongue habitats within 300' of the edge of the surface pipelines' right-of-ways, 300' of the edge of the roads' right-of-ways, and 300' from the edge of well pads shall be monitored for a period of three years after ground disturbing activities. Monitoring will include annual plant surveys to determine plant and habitat impacts relative to project facilities. Annual reports shall be provided to the BLM and the Service. To ensure desired results are being achieved, minimization measures will be evaluated and may be changed after a thorough review of the monitoring results and annual reports during annual meetings between the BLM and the Service.
7. Reinitiation of section 7 consultation with the Service will be sought immediately if any loss of plants or occupied habitat for the Graham's beardtongue is anticipated as a result of project activities.

Additional site-specific measures may also be employed to avoid or minimize effects to the species. These additional measures will be developed and implemented in consultation with the U.S. Fish and Wildlife Service to ensure continued compliance with the ESA.