

APPENDIX 15—FLUID MINERAL BEST MANAGEMENT PRACTICES

Best management practices (BMP) are innovative, dynamic, and economically feasible mitigation measures applied on a site-specific basis to reduce, prevent, or avoid adverse environmental or social impacts. BMPs are applied to management actions to aid in achieving desired outcomes for safe, environmentally sound resource development, by preventing, minimizing, or mitigating adverse impacts, and reducing conflicts.

REDUCING IMPACTS TO BIG GAME CRUCIAL WINTER RANGE

The following BMPs should be applied to reduce impacts to big game crucial winter range:

- Directional drilling
- Drilling of multiple wells from a single pad
- Remote well monitoring
- Piping of produced liquids to centralized tank batteries off site to reduce traffic to individual wells
- Transportation planning (to reduce road density and traffic volumes)
- Cluster development
- Compensation mitigation
- Seasonal restriction of public vehicular access
- Monitoring of wildlife populations during drilling operations and design and employment of additional best management practices whenever monitoring identifies undesirable impacts.

REDUCING IMPACTS TO SAGE-GROUSE HABITAT

The following BMPs should be applied to reduce impacts to sage-grouse habitat:

- Directional drilling
- Drilling of multiple wells from a single pad
- Seasonal restriction of public vehicular access
- Noise reduction techniques and designs
- Use of low profile well facilities and tanks
- Burying of power lines to avoid use of poles and other tall structures
- Transportation planning to align roads out of sight and sound of leks, and to schedule traffic to avoid sage-grouse activity periods
- Design of roads to minimum safe standard for intended use
- Partial reclamation of high-standard roads needed for project construction to lower standards necessary for maintenance operations
- Monitoring of wildlife populations during drilling operations and design and employ additional best management practices whenever monitoring identifies undesirable impacts
- Avoidance of surface disturbance or occupancy within ¼ mile of the perimeter of occupied sage-grouse leks
- Avoidance of human activity between 6:00 p.m. and 9:00 a.m. from March 1 through May 20 within ¼ mile of the perimeter of occupied sage-grouse leks (These times and dates reflect recommendations from Wyoming Game and Fish Department [WGFD] based on site-specific data for the Resource Management Plan Planning Area [RMPPA].)

- Avoidance of surface disturbance or other disruptive activity from March 1 through July 15, up to 2 miles from an “active” lek in suitable Greater sage-grouse nesting habitat (These dates reflect recommendations from WGFD based on site-specific data for the RMPPA.).

REDUCING IMPACTS TO WILDLIFE HABITAT

The following BMPs should be applied to reduce impacts to wildlife habitat:

- Seasonal restriction of public vehicular access
- Noise reduction techniques and designs
- Installation of raptor anti-perch devices
- Monitoring of wildlife populations during drilling operations and design and employment of additional best management practices whenever monitoring identifies undesirable impacts
- Implementation of the Wyoming Bird Conservation Plan from Wyoming Partners in Flight.

REDUCING IMPACTS TO VISUAL RESOURCE MANAGEMENT CLASS II AND III AREAS

The following BMPs should be applied to reduce impacts to visual resource management Class II and III areas:

- Burying of distribution power lines and flow lines in or adjacent to access roads
- Repeating of elements of form, line, color, and texture to blend facilities with the surrounding landscape
- Painting of all new facilities a color that best allows the facility to blend with the background, typically a vegetated background
- Final reclamation recontouring of all disturbed areas, including access roads, to the original contour or a contour that blends with the surrounding topography
- Avoidance of facility placement on steep slopes, ridge tops, and hilltops
- Screening of facilities from view
- Following of contours of the land to reduce unnecessary disturbance
- Recontouring and revegetation of disturbed areas to blend with the surrounding landscape
- Reclamation of unneeded roads to the original contour.

REDUCING IMPACTS FROM FLUID MINERAL CONSTRUCTION, OPERATION, AND RECLAMATION

The following BMPs should be applied to reduce impacts from fluid mineral construction, operation, and reclamation:

- Directional drilling
- Drilling of multiple wells from a single pad
- Transportation planning (to reduce road density and traffic volumes)
- Remote well monitoring
- Piping of produced liquids to centralized tank batteries off site to reduce traffic to individual wells
- Submersible pumps
- Belowground wellheads
- Bussing of workers (to reduce traffic volume)

- Flareless well completions
- Burying of distribution power lines and flow lines in or adjacent to access roads
- Design and construction of all new roads to a safe and appropriate standard, “no higher than necessary” to accommodate their intended use
- Reuse of old roads or pads
- Interim reclamation of well locations and access roads soon after the well is put into production
- Avoidance of facility placement on steep slopes, ridge tops, and hilltops
- Storage of chemicals within secondary containment in case of a spill
- On-site bioremediation of oil field wastes and spills
- Removal of trash, junk, waste, and other materials not in current use.