

STANDARD RECOMMENDATIONS FOR THE PROTECTION OF WILDLIFE AND WILDLIFE HABITAT IN CONJUNCTION WITH COALBED METHANE DEVELOPMENT

Roads, Pipelines, Drilling Sites and Powerlines

- Plan new roads and pipelines away from drainages to reduce erosion potential. Construct roads to minimum standards and avoid wetlands, prairie dog towns, raptor nests and grouse leks. Construction activities in big game crucial winter ranges should avoid the period November 15 to April 30. If roads or pipelines must cross drainages, sediment control practices should be used to avoid siltation and erosion. Local WGFD fisheries personnel should be contacted for additional guidelines to minimize aquatic impacts
- Consider placing roads adjacent to fences or other natural breaks in the landscape to reduce disturbance to wildlife.
- Avoid construction activities within ¼ mile of grouse leks from March through May 15. Fast moving activities such as pipelines or road construction can occur in proximity to grouse leks if conducted at least two hours after sunrise. However, activities in known nesting habitat (within 2 mile radius of leks) should be avoided until after the breeding season (July 15).
- Powerlines in proximity (1/4 mile) to grouse leks should be buried to prevent creating raptor perches and subsequent predation on grouse.
- To the extent possible, new roads, pipelines and powerlines should be sited in a common right-of-way. Where possible, existing right-of-ways should be used.
- If pipeline corridors must cross streams or riparian zones, crossing should be at right angles to minimize the area of disturbance. Minimize removal of riparian vegetation.
- It is preferable to discharge hydrostatic test waters into temporary sedimentation basins rather than directly into live streams (dry draws not a concern). Discharges should be to the same drainage (defined as 8-digit HUC watersheds) as where the water was obtained.
- Any above-ground powerlines should have a raptor-safe design to prevent electrocutions.
- Off-road travel should be avoided, if possible, especially during wet/muddy conditions.
- Speed limits should be restricted to minimize collisions with wildlife and to keep dust down. When appropriate, use dust suppression techniques to avoid reduction productivity and palatability of adjacent forage.
- All compressor engines/exhaust stacks should be adequately muffled to reduce noise impacts to wildlife, and exhaust stacks should be pointed away from any grouse lek. Compressor stations should be located far enough away from leks so that noise does not interfere with breeding activities (a minimum of ¼ mile is recommended). Compressor station doors should be kept closed to reduce noise.
- Where pipelines will be constructed across major stream courses or significant aquatic habitats, we recommend boring rather than trenching. Boring pits should

be located far enough from the channel so that stream bank stability is not compromised. Any instream activity should be done only during low flows.

- Riparian areas and floodplains should not be used as staging or refueling areas. All chemicals, solvents and fuels should be kept at least 150 feet away from streams, wetlands and riparian areas.
- For certain streams, instream restrictions to protect spawning habitat may be necessary. These restrictions will be identified in the Corps 404 permit. In these cases, the Department's local or Cheyenne fisheries personnel should be contacted.
- Any fencing needed in conjunction with CBM development should use designs that allow for wildlife movements, unless it is necessary to exclude wildlife from a hazardous area. Department fencing guidelines are available at any Game and Fish office.
- Areas disturbed for any CBM facilities should always be just the minimum needed.

Reclamation

- Pipelines constructed along steeper routes should have water bars placed on the slope to reduce erosion.
- Prompt reclamation is essential. Use only native grass/forb species palatable to wildlife.
- If hay or straw is used as a mulch, it should be certified weed free. Monitor reclamation for several years for noxious and other troublesome weeds and control needed.
- Topsoil removed for construction activities should be saved and spread over the disturbed area as soon as possible after disturbance to accelerate natural and artificial re-vegetation.

Wildlife Law Enforcement

- We encourage operators to have policies restricting firearms and dogs at job sites.
- We encourage operators to provide information to their employees and contractors about wildlife laws and regulations, wildlife-related recreational opportunities and about the sensitivity of wildlife to disturbance.
- As new roads are constructed on private lands to access well sites, compressor stations, etc. and when these roads connect with a public road, access points to the private lands should be clearly marked to lessen the chance of others straying onto private property.
- We encourage operators, their employees and contractors to report any wildlife violations to the local game warden.

CBM Water Discharges and Habitat Development/Enhancement

- On private lands, we encourage development of a water management plan to address issues of water discharge on solids, other private lands and aquatic

systems. Discharge reservoirs should be sited off-channel rather than within natural stream courses, unless significant benefits to fish and wildlife can be demonstrated for a within-drainage discharge reservoir. Ponds or reservoirs should be designed with proper discharge (out-flow) to prevent erosion of the land or stream channel below the pond or reservoir.

- Where the quantity and quality of CBM water discharge is adequate to create or enhance existing wetlands and ponds, the Department encourages this use and can provide advice on the design and location of such developments. When a pond is being developed for fish, the water must be of suitable quality and well aerated. We recommend that pipelines leading to such ponds should first discharge the water into a well-armored channel where it can aerate prior to entering the pond. When designing a pond to hold fish, local or Cheyenne fisheries personnel should be contacted. We recommend approximately 25% of the pond be deeper than 12 feet in order to provide adequate over-wintering habitat for fish. Guidelines for these developments can be found in brochures available at Game and Fish offices or from your local biologist or warden (or see WGFD at the CBM Coalition website: <http://cbmcc.vcn.com>).
- The Department has grant programs to assist with wildlife habitat development on private lands. The Department may provide matching dollars for fencing, water development, grazing management and wetlands development/enhancement. Contact your local Game and Fish office or any biologist or warden for additional information.
- The Department administers a Walk-In Access program that pays qualifying landowners up to \$1,200 per year for hunting access, including waterfowl and upland/small game hunting, and fishing. This program has an annual renewal period so there will be the option of participating from year to year. The Department would sign the property and closely monitor the lands for compliance. We encourage operators to work with private landowners and the Department to develop wildlife habitat that could be made accessible to the hunting and fishing public.
- Impoundments created by CBM discharge water should be fenced to control livestock use, with off-site water facilities developed separately for livestock.