Appendix F
Integrated Pest Management Plan

Appendix F — Noxious Weeds and Integrated Pest Management Plan

Wyoming is experiencing rapid introduction and spread of noxious weeds throughout the state. The increased operations and surface disturbance associated with CBM development in the Powder River Basin have the potential for exacerbating this problem if not addressed. As such, an integrated pest management (IPM) plan is necessary within identified areas of infestation.

The IPM plan will encompass energy development and production activities and will include the following:

- A plan to control noxious weeds and weeds of concern within specific project areas
- Preventive practices to avoid the transport and spread of weeds and weed seed
- A strategy to educate field employees and contractors in noxious weed identification and awareness.

Noxious weed infestations can occur both directly and indirectly from energy and related development. Weeds and weed seed can be transported and spread with road surfacing and other construction and reclamation materials. Weed and weed seed can also be attached to equipment and vehicles and spread over great distances. Physical soil disturbance such as the construction of pipelines, access roads, well locations and water management structures, as well as the soil moisture and chemical alterations from produced water discharge, stream flow, and storage, create numerous opportunities for the introduction, infestation and spread of noxious and other weeds of concern.

To determine if an IPM plan is required for your APD or POD, consult the website, www.clearinghouse.info, to view identified areas of: (1) noxious weeds, (2) other weeds of concern and (3) biological agents insectaries in the area encompassed by the APD or POD. Additional data about noxious weeds and weeds of concern and their biological agents can be obtained from:

- Landowner, if not BLM surface
- County weed board data base and weed location information
- Inventory by knowledgeable person
- Bureau of Land Management, Natural Resources Conservation Service or other federal/state agency

Prevention and control of noxious weeds and weeds of concern should be incorporated into the design, layout and construction of access roads, pipelines, well locations and other facilities. It is important to note weeds are more commonly found along drainages and streams, areas with deeper, more productive soils, and in areas previously disturbed or overgrazed. Also, pipelines, access roads and drainages with flowing produced water can create corridors/conduits for weed spread and produced water storage structures (discharge points, reservoirs, off-channel containment structures, etc.) can harbor weeds and invasive plants.
Guidelines for IPM plan development are as follows:

A. Control noxious weed and weeds of concern during construction, production and reclamation using an integrated approach. Determine the best methods to treat weed(s), as they pertain to the specific situation; consider landscape, soils, desirable vegetation present, distance to open water/water table, land use and other pertinent factors using the most effective combination of the following methods.

- Cultural

  a. The prompt reseeding and revegetation of areas of disturbed soils with certified weed-free seed.
  b. Encourage the cleaning of equipment and vehicles prior to entering and leaving each worksite.
  c. Minimize soil disturbance, where possible.
  d. Use certified weed-free mulch for erosion control.

- Physical

  a. Consider mowing newly revegetated areas during the first season of establishment, prior to seed formation on the weeds of concern.
  b. Hand pulling of plants is encouraged if areas are small or infestations are new.

- Biological

  a. Use of domestic animals and approved biological agents may be utilized noting that biological agents are species specific and can take up to five years before any results may be detected. Considerations for use of domestic livestock include, but is not limited to, livestock kind, target weed species, necessary management of the livestock (fencing, water, herding, etc).

- Chemical

  a. Consider weed species, the site on which herbicide will be applied, and desired result when selecting appropriate herbicide for noxious weed control.
  b. Ensure selected herbicide is approved for weed(s) to be controlled, for type of application and that herbicide label is otherwise consistent with intended use.
  c. All herbicides must be applied by certified commercial applicator(s).

1. On BLM administered public lands, an approved Pesticide Use Permit (PUP) is required to apply chemical herbicide and an approved Biological Release Permit (BRP) is required for the release of biological agents. The necessary forms and direction will be included with the approved POD or APD and/or may be obtained from your local BLM office (see attached PUP and BRP forms). All herbicide applications must be applied by a certified commercial applicator(s).

- See current list of herbicides approved for application on Bureau of Land Management administered lands. Contact the BLM office.

2. On private lands consult the private surface owner as to the desired method(s) for the control/treatment of noxious weeds/invasive plants.

B. Incorporate weed prevention and control measures into environmental restoration and infrastructure maintenance activities.

1. Use only certified weed-free hay, straw and/or other organic mulches used for erosion control and other environmental restoration activities.

2. Use only road surfacing and other earthen materials for construction/maintenance that are certified weed-free.

3. Encourage the cleaning of all vehicles and equipment used in construction, drilling, restoration and maintenance activities by pressure washing, or other effective mans. This will ensure that all equipment/vehicles are weed-free prior to transporting into new areas of development.

4. Reseed all areas not utilized for production/maintenance immediately following construction and restoration activities.

5. Use only certified weed-free seed for the reclamation/restoration of areas disturbed by coal bed methane or related development/activities.

C. Initiate a weed education policy to assist contractors and field employees in the identification of noxious weeds and to create an awareness of the impacts that noxious weeds and invasive plants have on the environment.

1. Develop cooperative education and awareness programs with county weed districts, state and federal agencies and educational institutions.

2. Encourage contractors and employees to report new noxious weed infestations to company representative responsible for weed management and the appropriate county weed board/supervisor.

3. Distribute and review weed education material at onsite inspections and pre-construction conferences.