

Noxious and Invasive Weed Management Plan for Oil and Gas Development Areas

Introduction Weed Management Plan

Noxious and invasive weeds can occur both directly and indirectly from energy development as well as other development activities that cause disturbance. Weeds and weed seed can be transported and spread with road surfacing and other construction related events including reclamation activities. Weeds and weed seed can be attached to equipment and vehicles thus having the potential to be spread over large areas. Physical disturbance of the soil from pipelines, well locations, road development and other construction, as well as soil moisture and chemical alterations from produced water discharge, and stream flow / storage will also create opportunities for the introduction, infestation and spread of noxious and invasive weeds.

Prevention and control of noxious and invasive weeds should be incorporated into the design, layout and construction of access roads, pipelines, and well locations as well as other facilities. Discharge points for water including reservoirs, off-channel containment structures, drainages for runoff, etc. can harbor weeds and other invasive plants.

Control of noxious and invasive weeds during construction, production and reclamation using an integrated approach is most beneficial. Consideration of landscape, soils, and desirable vegetation, open water, water table locations, and land use must be considered.

The spread of weeds to off location / adjacent areas, and other pertinent factors should be addressed using the most effective combination of any or all of the following methods.

- **Cultural**
 - a. The prompt seeding and revegetation of areas of disturbed soils with certified weed-free seed.
 - b. Encourage the cleaning of equipment and vehicles prior to entering or leaving each management area. (Pressure wash in a designated area)
 - c. Minimize soil disturbance, where possible.
 - d. Use certified weed-free mulch/straw for erosion control.

- **Physical**
 - a. Mowing of weeds in newly revegetated areas during the first season of establishment, prior to seed formation of the weeds in the revegetated area. *Care will be taken to encourage seed formation and growth of new native plants.*
 - b. Hand pull and remove weedy plants in areas that BLM sensitive species are found and newly seeded areas.

- **Biological**
 - a. Use of domestic animals and approved biological agents may be utilized. ***NOTE: biological agents are species specific and can take up to five years before any results may be detected. Biological agents also require prior approval; see "Policy 1. (c)".**
 - b. Use of domestic livestock include, but is not limited to, livestock species/ breed; targeted weed species and necessary management/care of livestock that is used (i.e. fencing, water, herding, etc.) **Use of Livestock require prior approval; see "Policy 1. (b)".**

- **Chemical**
 - a. Consider weed species, the site on which the herbicide will be applied, method of application, and desired result when selecting the herbicide for treatment and control of noxious/ invasive weeds.
 - b. Ensure selected herbicides are BLM approved for weed(s) that are to be controlled, and chemical label applications are followed.
 - c. ALL herbicides are required to be applied by a certified commercial applicator(s).

Goals

1. Prevent new infestations of noxious weeds in and around the project area(s), provide inventory, monitoring, and control methods of existing infestations. Including the areas that are affected off pad or (lease).

2. Implement an integrated weed management plan to eradicate/manage noxious weeds populations, including areas that may be affected off pad. ***NOTE** weeds are to be mapped and reported by lease; weeds that are off pad but located on lease will be treated.
3. Maintain weed inventory, herbicide and mapping records by lease.

Policy

1. On BLM administered public lands
 - a. An approved Pesticide Use Permit (PUP) is required to apply chemical herbicide.
 - b. Approval and proper permitting for domestic livestock is required prior to implementing this as a weed control method.
 - c. An approved Biological Release Permit (BRP) is required for the release of biological agents.
 - d. Upon completion of any pesticide application, a Pesticide Application Record (PAR) will be completed within **24 hours**. The PAR will be *kept for 10 years*.
2. **ALL** herbicide applications on BLM administered public lands are required to be applied by a certified commercial applicator(s).
 - a. See current list of herbicide approved for application on Bureau of Land Management administered lands. Contact the BLM, Pinedale Field Office.
 - b. Weed list for Wyoming and Sublette County. www.wyoweed.org, or contact the BLM, Pinedale Field Office.

BLM Wyoming Sensitive/ Threatened & Endangered Species

1. Before a chemical pest control program may be initiated, a survey of the area for Threatened and Endangered Species/ BLM Wyoming Sensitive Species will be made (BLM Manual sec. 6840).
 - a. Contact the Pinedale BLM Field Office for a list of plants that may be located in your Management Area.

Incorporate Weed Prevention and Control Measures

- a. Use only certified weed-free hay, straw and/or any other materials used for erosion control and other reclamation activities (as required by the Jonah ROD).
- b. Use only certified weed-free gravel and earthen materials for road surfacing and maintenance.
- c. Cleaning of equipment and vehicles used in the construction drilling or reclamation activities prior to entering or leaving a management area. (Pressure washing or other means in a designated area).
- d. Reseed all areas immediately following construction, drilling or other restoration activities. (Jonah ROD requires..."The initiation of interim reclamation will commence within 30 days after the last well scheduled on a pad is put into production." A-7 #1.)
- e. Use only certified weed-free seed for the reclamation/restoration of areas disturbed by related development activities.

Initiate a Weed Education Policy

- a. Develop cooperative education and awareness programs within your company in conjunction with State, County and Federal Agencies. (i.e.: Extension Agents, County Weed and Pest personnel and Local BLM Field Office Representative (s)).

- b. Designate a Company representative, who is responsible for weed management and will be a liaison for the company with State, County and Federal Agencies.
- c. Encourage contractors and employees to report new noxious/ invasive weed infestations to a designated company representative who is responsible for weed management.
- d. Review and make available weed education material at onsite and pre-construction meetings and offices.

Weed Management Plans Will Include

1. **Prevention and Detection:** The most important component to controlling noxious weeds. Early detection and proper identification of a new weed infestation is critical to any successful weed management plan. This management plan will include *how* noxious/invasive weeds will be detected.
2. **Inventory and Mapping:** Maintaining accurate records aids in tracking weed infestations over time and will aid in the overall management decisions made over time in the weed management area. This will also include locations of any BLM Wyoming Sensitive Species. Provide an annual map with identified weed locations and associated control methods. *This map will be included with the annual reclamation reports provided to the BLM and JIO January 31 of each year.*
3. **Reporting:** Maintain a weed inventory, mapping (GPS) and pesticide application data for tracking weeds on public lands and other reporting as necessary, and then reported annually to the BLM, Pinedale Field Office. **Inclusion of an ArcGIS shape file with the report that contains polygons of weed infestations recorded with a GPS unit is required.*
4. **Weed Control:** After weeds have been inventoried and mapped they must be treated with the best available weed control techniques with consideration of any

BLM Wyoming sensitive species. Contact the BLM, Pinedale Field Office for assistance.

5. **Long Term Monitoring and Retreatment:** Many weeds have seeds that remain viable in the soil for many years. Thus weed management must be viewed as a long-term process and commitment to the land in order to achieve positive management of the management area. A long term monitoring plan will be submitted as part of a weed management plan.

6. **Spread of Weeds from Pad to undisturbed BLM:** Weeds can and will spread to locations located off of well pads and other construction/development areas to other leases, BLM lands, and other adjacent lands including private lands . A coordination plan between all entities involved, including various operators and agencies will be included as part of any weed monitoring program.