



# COOPERATIVE EXTENSION

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## Fact Sheet FS-03-59

### Measures to Prevent the Spread of Noxious and Invasive Weeds During Construction Activities

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Invasive weeds are plants that have been introduced into an environment outside of their native range, where they have few or no natural enemies to limit their spread. Invasive weeds affect us all—as homeowners, taxpayers, consumers, tourists, and land managers. Some invasive weeds are designated as noxious in Nevada state law, requiring control by the property owner or manager.

The spread of invasive and noxious weeds is a significant issue in construction projects that involve land disturbance. Earth moving activities contribute to the spread of weeds, as does the use of contaminated construction fill, seed, or erosion-control products. Permits for construction projects may now require that measures be incorporated to identify and manage these weeds.

Experience has demonstrated that prevention is the least expensive and most effective way to halt the spread of noxious and invasive weeds. Preventing the establishment or spread of weeds relies upon:

- Educating workers about the importance of managing weeds on an ongoing basis;
- Properly identifying weed species;
- Avoiding or treating existing weed populations; and
- Incorporating measures into projects that prevent weed seeds or other plant parts from establishing new or bigger populations such as certification of weed-free products.

A search was conducted of Internet sites and published permit requirements that incorporate weed prevention measures to determine appropriate practices to prevent weed spread during projects involving land disturbance. These measures may not be applicable or appropriate for all projects, but the list below should contain at least a few useful measures for any project. The weed management process should include education, weed identification, avoidance or treatment and reclamation of bare or disturbed areas. Following the list of management practices, we have provided sample suggested language for inclusion in contracts for projects that may be impacted by weed invasion.

## **Construction and Property Maintenance**

1. Incorporate a strategy of integrated weed management into construction layout, design, and project alternatives evaluation.
2. Remove or treat seed sources and other viable reproducing plant parts that could be spread by construction disturbance or by passing vehicles or foot traffic.
3. Avoid moving weed-infested gravel, rock and other fill materials to relatively weed-free locations. Gravel and fill should come from weed-free sources. Inspect gravel pits and fill sources to identify weed-free sources.
4. Identify existing noxious weeds along access roads and control them before construction equipment moves into a relatively weed-free areas.
5. Clean off-road equipment (power or high-pressure cleaning) of all mud, dirt, and plant parts before moving into relatively weed-free areas.
6. Minimize the removal of roadside vegetation during construction, maintenance and other ground-disturbing activities.
7. Use only certified weed-free straw and mulch for erosion control projects. Consider the use of weed-free fiber roll barriers or sediment logs.
8. Minimize contact with roadside sources of weed seed that could be transported to other areas.
9. Keep active road construction sites that are in relatively weed-free areas closed to vehicles that are not involved with construction.
10. Road maintenance programs should include monitoring and treatment for noxious weeds.
11. Provide training to management and workers on the identification of noxious weeds, the importance of noxious weed control and measures to minimize their spread.
12. Quickly treat individual plants or small infestations before they become established, produce seed or are able to spread..

## **Seeding and Planting**

1. Obtain soil components and mulches from weed-free sources.
2. Purchase and use only certified weed-free seed.
3. Reestablish vegetation on all bare ground (including areas denuded by fire) to minimize weed spread.
4. Ensure establishment and maintenance of vigorous, desirable vegetation to discourage weeds.
5. Minimize contact with sources of weed seed in areas not yet revegetated.
6. Monitor all seeded sites for weed infestation. Treat all weeds adjacent to newly seeded areas prior to planting and treat planted areas for weeds in the first growing season.
7. Mulch to minimize the amount of noxious weed seeds that will reach the soil surface and subsequently germinate.

## **Grazing and Livestock Management**

1. Refrain from grazing or moving cattle through populations of noxious weeds while they are setting seed or when fruit is ripened.

2. Purchase only weed-free hay and other feed.
3. Keep cattle and other livestock out of newly planted areas.
4. Employ rotational grazing and other management strategies that minimize soil disturbance.
5. Purge animals with weed-free feed for five days before moving them from infested to non-infested areas

### **General**

1. Identify and map noxious weed populations on lands that you own or manage. Provide mapping information using the protocol for your state's weed mapping efforts. Contact the Natural Resources Conservation Service, 775-784-5863 ext. 118, for Nevada's protocol.
2. Suppress fires that may impact native plant populations. Clean vehicles that may contribute to the spread of weeds during fire fighting activities.
3. Minimize soil disturbances caused by water, vehicle, and animal traffic in weed infested areas.
4. Minimize transport of weed seeds or reproductive weed parts by irrigation water.

### **Suggested Construction Contract Wording for Weed Prevention**

*Note: This section is provided as an example of language that can be included in construction contracts when appropriate to help prevent the spread of weeds. Nevada Revised Statutes Chapter 555 advises that the control of noxious weeds is the responsibility of every landowner or occupant. This suggested contract wording can be modified as needed to fit individual projects.*

Prior to any construction disturbance you will:

- Identify and map all noxious and invasive weed populations present in the project area
- Treat or contain any weed populations that may be impacted or disturbed by construction activity
- Flag all weed populations to be avoided
- Provide training to construction workers and equipment operators on the identification of weeds to be avoided
- Certify that all construction material sources used for supplies of sand, gravel, rock and mulch are weed-free prior to obtaining or transporting any material from them
- Obtain and use only certified weed-free straw or use fiber roll logs for sediment containment
- Wash and inspect all vehicles for weed seeds and plant parts prior to bringing them onto the job site
- Install stormwater Best Management Practices to prevent erosion of the job site and the potential transport of weedy material onto or off of the job site

During construction you will:

- Minimize ground disturbance and vegetation removal as much as possible and practical

- Wash, or using an air compressor, blow clean all vehicles (including tires and undercarriage) that may have entered weed-infested areas prior to entering uninfested areas of the job site
- Restrict vehicles or other traffic that may transport weed seeds or plant material from entering the job site unless they are first washed and inspected

After construction is complete you or the property owner will:

- Revegetate or otherwise prevent the establishment of weeds in all areas of the job site through a program of monitoring and post-construction weed treatment for the life of the project
- Revegetate using soil components and mulches obtained from non-weed infested sources
- Utilize seed and other plant materials that has been checked and certified as noxious weed-free and that has a weed content of 0.05 percent or less
- Revegetate using plant materials that have a high likelihood of survival
- Maintain all planted material and native vegetation located on the project site for the life of the project

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## References:

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