You Can Help Fight the War on INVASIVE WEEDS IN SOUTHERN NEVADA

Hoary cress Cardaria draba
Saltcedar Tamarix ramosissima
Puncturevine Tribulus terrestris
White horsenettle Solanum elaeagnifolium

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The Problem with Invasive Weeds

Invasive weeds are a growing concern to Nevadans. Ranchers, farmers, environmentalists, recreationists, local, state, and federal government officials are alarmed. Invasive weeds are like wildfire in slow motion. Cheatgrass (Bromus tectorum) was first found in Elko, Nevada in 1906. Now it dominates roughly a third of Nevada's rangeland, reducing forage and habitat for livestock and wildlife. Red brome (Bromus madritensis) has the same potential to spread across southern Nevada as cheatgrass has in northern Nevada. Centaurea species such as Russian, spotted, squarrose and diffuse knapweeds and yellow and malta starthistle, tall whitetop, leafy spurge and many others are invading Nevada. They can spread rapidly, taking over an area in just a few years.

Weeds have always been a problem in agriculture and horticulture. They increase costs or are a nuisance in landscapes and crop production. In contrast, invasive exotics are causing significant environmental harm. These species are highly adapted to widespread environments. They outcompete native plants, significantly decreasing the native plant and animal diversity. This change results in loss of forage, wildlife habitat and recreational uses, which decreases resource value.

The transportation of contaminated hay, seeds, flower arrangements and other apparently harmless purchases has introduced invasive weeds into Nevada. Weed parts and seeds hitchhike on vehicles, sports equipment, and animals, including pets. Invasion is not limited to moving, burning, mulching, hand pulling, grazing and cultivation.

What You Can Do to Help Fight the War on Weeds

**PREVENT SPREAD**
- Stay out of infested areas.
- Check vehicles, gear and clothing when leaving an infested site.
- Be cautious when moving dirt, compost, or equipment as seeds can be viable in the soil for years.

**Early detection and control is the main element of weed control.**

**WEED CONTROL STEPS**
- Identify the weed to be controlled.
- Write down the location and size of the infestation.
- Determine control method and timing.
- Re-establish desired plant species after control method is used.
- Continually monitor for reinfestations.

**TACTICS OF CONTROL METHODS**
- Cultural: Includes but is not limited to moving, burning, mulching, hand pulling, grazing and cultivation.
- Chemical: Chemicals are available as:
  - Pre- and post-emergence products.
  - Selective and non-selective products. Always read label directions before using any herbicide.
- Biological: Specific predator or disease for a specific weed.
  - Usually insects are the control mechanism.
  - Results will not be noticeable for several years.
- Is compatible with most cultural practices.

Address. Place a moist paper towel around the roots, place the entire plant in a plastic baggie or grocery bag, seal loosely, and mail in a box or padded envelope. Keep fresh samples in an ice chest or insulated cooler until delivered or mailed.

Dry samples must be pressed open or flat. Include the stem and roots or describe rooting habits-of-clump, fibrous, taproot, rhizome, stolons, etc. Press within 24 hours of collection between sheets of newspaper weighted down with any heavy object. To mail, leave samples in pressing paper and enclose between 2 pieces of cardboard to keep the plant intact during mailing. Seal mailing containers well to avoid the possibility of spreading the weed through loss of seeds, etc.

Samples should be delivered or mailed to:

The Herbarium
Biology Department, White Hall, Room 305
University of Nevada, Las Vegas
Box 454004
4505 Maryland Parkway
Las Vegas, NV 89154-4004
Phone: 702-895-3251

The Herbarium
University of Nevada, Reno
920 Valley Road
Reno, NV 89512
Phone: 775-784-1105

**SURVEYS FOR MAPPING**

You can help the state monitor the location of individual invasive weeds by reporting the location and area of infestation to Dr. Wayne Johnson. Invasive Plants in Nevada: An Identification Handbook, SP 96-03, contains color pictures and survey forms. Copies are available at Nevada...
humans, from infested areas to uninfested sites. Most people are not aware that they could create a new plant infestation or disrupt native vegetation by bringing in even one plant or seed. When a plant is introduced from a foreign habitat, its natural pests that keep it from spreading normally do not come with it.

Control or management is easiest and least expensive if done when weeds are first identified in an area. If they become established and reproduce, their control becomes difficult and very expensive. Cultural, chemical and biological control methods are available for many invasive plants. Invasive weeds are sufficiently competitive that multiple management tools are necessary for a reliable, sustainable control program.

States have a legal process for designating invasive weeds as "noxious" when they have been shown to be detrimental to the environment and/or economy, and be difficult to control. Owners or occupiers of land have a legal obligation to control "noxious" weeds. All invasive weeds have the potential to be designated as "noxious." Most of the weeds pictured or listed in this publication are "noxious" weeds. Those that are not could be added to the list if they become sufficiently damaging.

Weeds are everyone's problem. Failure to contain or eradicate small infestations wherever they occur leads to exponential growth, a problem with great economic and ecological costs and no reasonable solutions.

Control is an annual task—not a one-year miracle.

WEEDS OF CONCERN

In addition to the weeds pictured on the reverse, other weeds of concern in southern Nevada include:

Annual sow-thistle - *Sonchus oleraceus*
Bull thistle - *Cirsium vulgare*
Canada thistle - *Cirsium arvense*
Camelthorne - *Alhagi pseudalhagi*
Fleabane - *Cuscuta campestris*
Fringed loosestrife - *Bassia hyssopifolia*
Halogenet - *Halogonet glomeratus*
Mayweed chamomile - *Anthemis cotula*
Malta Starthistle - *Centaura melitensis*
Red brome - *Bromus madritensis*
Russian thistle - *Salsola iberica*
Scotch thistle - *Onopordum acanthium*
Spotted knapweed - *Centaura maculosa*

IDENTIFICATION

The Herbaria at UNLV and UNR receive, identify, and catalog specimens that you collect and send to them. Positive identification generally requires all parts of the plant, particularly the flower. Collect two fresh specimens. Include flowers, stems, leaves, root, seed or fruit (or written description of parts not included).

Information to include: Where collected (city, county, state, habitat [near river, meadow, foothills, valley, mountain, or both], location, drainage, elevation—as precise as possible], abundance, flower color, soil type, total height and width of plant, date collected and collector's name and

Cooperative Extension or Bureau of Land Management offices.

For additional information contact:
Your local University of Nevada Cooperative Extension Office:
Clark County-Las Vegas - 702/222-3130
East Clark County - 702/397-2604
746-7215
Lincoln County - 775/726-3109
Southern Nye County - 775/727-5532

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