Invasive and Noxious Weed Definition and Characteristics

Invasive weeds are not native to the United States. The invasive weeds threatening Nevada come from neighboring infested states but they originated in Europe or Asia. In their native ecosystems these weeds are held in check by competing plants, diseases, and natural predators. In Nevada there are no naturally occurring enemies to control invasive weeds; therefore, we are at great risk of experiencing tremendous growth in their populations.

Noxious weeds are defined by the Nevada Revised Statutes as, "any species of plant which is liable to be detrimental or destructive and difficult to control or eradicate," Nevada Department of Agriculture (NDOA) has jurisdiction, management, and enforcement of the noxious weed law. They review troublesome plants and determine whether or not a particular plant should be declared noxious. Weeds on the state's noxious weed list are to be controlled on private and public land. If they are not, then the NDOA can treat them and bill the property owner for the costs incurred. Many invasive weeds are also on the state's noxious weed list. Weeds can be added to the state's list by petitioning NDOA and explaining why a particular plant should be considered noxious.

Characteristics of invasive and noxious weeds are:

• **Highly competitive** - They are able to compete very effectively with cultivated and native plant species for sunlight, water, and nutrients. They are highly adaptable and have few natural competitors.

• **Exotic** - Most are not native to Nevada, they have been introduced.

• **Highly aggressive** - They are able to displace native species, even in undisturbed sites because they can flourish in a wide variety of habitats and often alter the habitats they invade.

• **Cause economic losses** - These weeds have little or no economic value as forage or wildlife habitat. Some are toxic or physically damaging to animals. Their management is very expensive in time and money, and once well established they can be nearly impossible to eradicate. Their detrimental economic costs are widespread and well documented.

• **Cause environmental degradation** - Among other negative impacts, these weeds reduce bio-diversity, increase soil erosion, and reduce water quality and quantity.

• **Easily spread** - Most spread by seed and vegetative reproduction, meaning they can grow from pieces of stem and roots. Many move into infested areas by unsuspecting people who think the flowers are beautiful. Others are carried as seed or plant parts by animals, vehicles, equipment, and clothing to new locations.
LANDER COUNTY WEED TEAM

In late 1997 a group of interested agencies and individuals led by the Lander County Conservation District (LCCD) formed to address the local invasive and noxious weed problem. The group decided to meet in February and September of each year in Battle Mountain. One of the group's first activities was to develop and sign a "Cooperative Agreement for Noxious Weed Management in Lander County." Among other things, the Cooperative Agreement lists the purpose, objectives, and authority of the entire group (referred to as the TEAM) and also what each TEAM member intends to contribute to the local weed control effort. The group began to develop an action plan after the Cooperative Agreement was signed by all TEAM members.

Members of the TEAM are:

- Lander County Board of Commissioners
- Lander County Conservation District
- Nevada Department of Transportation
- U.S. Bureau of Land Management
- Nevada Cooperative Extension
- Nevada Division of Agriculture
- Nevada Division of Wildlife
- U.S. Forest Service

In 1998 an "Action Plan for Management of Noxious Weeds in Lander County" was developed and signed by all TEAM members. Components of the Action Plan are an Introduction, Purpose, Goals and Objectives, Integrated Weed Management Strategy, Scope of Lander County's Noxious Weed Management Action Plan, Authority, Noxious Weed List, Signatures, and an Addendum. Only two of the above mentioned sections will be further discussed in this Fact Sheet. The entire Action Plan can be reviewed at the LCCD office located at 815 North Second Street in Battle Mountain.

Noxious Weed List

Those plants identified as "noxious" in the Action Plan are included in the publication "Weeds of the West" published by the Western Society of Weed Science, Newark, California. This publication is considered the standard reference for noxious weed species. For purposes of the local action plan, noxious weeds are divided into two categories. Category 1: These are species targeted for immediate management actions because of the highly serious nature of their current ecological or economic impact and/or the potential for immediate and effective control. Category 2: These are species that meet the above definition of "noxious" but which pose a lesser immediate economic or ecological threat. Plant species may be moved between categories and/or added or deleted from either list by consensus of the TEAM. The species in each category are given below.

Category 1
- Knapweeds (Russian, Squarrose, Spotted, Diffuse)
- Tall Whitetop
- Hoary Cress (Whitetop)
- Tamerisk (Salt Cedar)
- Musk Thistle
- Scotch Thistle
- Canada Thistle

Category 2
- Bur Buttercup
- Puncture Vine
- Curly Dock
- Cockle Bur
- Poison Hemlock
- Leafy Spurge
- Medusahead

Addendum

The addendum is a very important part of the Action Plan because it states each agency's commitments and planned weed control actions for the present and following calendar year. The addendum is updated by each agency at the February TEAM meeting. One of the LCCD's actions in 1999 was to develop and implement a weed control demonstration project, and one of the Lander County Cooperative Extension Office's 1999 actions is to educate the public about the local weed control program. This Fact Sheet fulfills part of those commitments.

LANDER COUNTY DEMONSTRATION WEED CONTROL

In March, 1999 an invitation to bid on the Lander County Demonstration Weed Control project was issued by the LCCD. The project calls for various noxious weeds at specific sites to be sprayed (according to label rates and all applicable laws) between the spring and fall of 1999. The project was made possible by funding and/or the donation of materials by the LCCD; Lander County Board of Commissioners; the U.S. Bureau of Land Management, Battle Mountain District; the N-6 Grazing Board; DuPont Agri Products; and the American Cyanimid Company. The bid was awarded to Ron's Seed and Supply, Winnemucca, NV in April, 1999 and spraying began in May, 1999. Following is a list of each spray site as well as information on target species.
• **Site: Mt. Lewis Road**

Funded By:
Lander County
N-6 Grazing Board
Bureau of Land Management
Funded By:
Lander County
N-6 Grazing Board
Bureau of Land Management

Target Species: Russian Knapweed
This site will test the effectiveness of Plateau herbicide for the control of Russian Knapweed. Treatment will be done in August, 1999. Treatment area is approximately 4 miles along Mt. Lewis Road where weeds occur.

• **Site: Miller Pit**

Funded By:
Lander County
N-6 Grazing Board
Bureau of Land Management
LCCD

Target Species: Scotch Thistle
This site will test the effectiveness of a tank mix of Tordon and 2,4-D herbicides for the control of Scotch Thistle. Treatment was done in May, 1999. A followup treatment was also done in July, 1999. Treatment area is approximately 2.4 acres.

• **Site: Crum Canyon**

Funded By:
Lander County
N-6 Grazing Board
Bureau of Land Management
LCCD

Target Species: Whitetop
This site will test the effectiveness of Rodeo and Escort herbicides for the control of Whitetop. Rodeo was applied near the stream in accordance with state and federal regulations. Escort was applied away from the stream. Treatment was done in May, 1999. Treatment area is approximately 3.6 miles in Crum (Hilltop) Canyon where Whitetop occurs.

• **Site: Grass Valley Road**

Funded By:
Lander County
N-6 Grazing Board
Bureau of Land Management
LCCD

Target Species: Musk Thistle
This site will test the effectiveness of Rodeo herbicide for the control of Musk Thistle. Treatment was done in May, 1999. Treatment area at this location is within the county road right-of-way.

• **Site: Lander County Road 214**

Funded By:
Lander County
N-6 Grazing Board
LCCD

Target Species: Salt Grass
At this site Salt Grass and other weeds will be controlled by the application of Arsenal herbicide in August, 1999. Treatment area is 4.6 miles on both sides of the road.
- **Site: Lander County Road 211**
  
  Funded By:
  
  Lander County  Bureau of Land Management  
  N-6 Grazing Board  LCCD  
  Target Species: Salt Grass and Gum Weed  
  This site will test the effectiveness of Arsenal herbicide for the control of Salt Grass and Gum Weed on the shoulder area of Lander County Road 211. Treatment area is 1.4 miles on both sides of the road.

- **Site: Cawrse Road**
  
  Funded By:
  
  Lander County  LCCD  
  Target Species: Whitetop  
  At this site a tank mix of 2,4-D, Round-Up, and Diuron herbicides was applied in May, 1999 on both sides of the road for ½ mile.

- **Site: Edgeman Road**
  
  Funded By:
  
  Lander County  Du Pont Agri Products  
  Work at this site was not part of the spray contract.  
  Target Species: Annual and perennial weeds  
  At this site Diuron herbicide was applied in April, 1999 on the south side of 1 mile of road.

- **Site: Miller’s Lane**
  
  Funded By:
  
  Lander County  Du Pont Agri Products  
  Work at this site was not part of the spray contract.  
  Target Species: Scotch Thistle  
  At this site a tank mix of Milestone and Round-Up herbicides was applied in April, 1999 on the south side of 1½ mile of road.

All sites will be monitored during the 1999 growing season. At the conclusion of the growing season each site will be evaluated to determine the effectiveness of the treatments. Results will be summarized in report form for distribution to interested parties.

For more information about this program and/or specific project sites contact the Lander County Conservation District at (775) 635-5565.

Mention of businesses and trade names within this Fact Sheet does not imply endorsement of any kind by the University of Nevada, Reno.