Hello from the Humboldt Watershed CWMA! The HWCWMA was developed to address the invasive weed problem and subsequent decline in water quality within the entire 16,843 square mile watershed, which covers most of Northern Nevada. The primary function of HWCWMA has been to provide land managers, owners and weed control groups assistance in the areas of funding, agency and weed group coordination and cooperation.

This month we would like to introduce you to one of Nevada’s state listed noxious weeds, spotted knapweed (*Centaurea biebersteinii*). Spotted knapweed is native to Europe and was first introduced to the U.S. in the late 1800's as a stow-away in alfalfa or hay seed. Spotted knapweed is now a serious problem in the range and croplands of the western States.

Spotted knapweed is a short-lived perennial plant that grows 2-4 feet tall. It forms a rosette the first year and then sends up a flower stalk the second year. The leaves, which are rather sparse on a hard and woody stem, have a pale green color. The weed blooms in mid-summer, and the flowering bud is about 3/4-inch long. The blooms are pink to purple in color and rather attractive. The roots of this weed produce a toxin that kills other plants within its root zone. The weed reproduces solely by seeds, and the weed is a prolific seed producer, with 1000 or more seeds per plant. Once established, seeds accumulate in the soil, often exceeding 5000 per square foot. The seeds remain viable for at least eight years.

Spotted knapweed is a highly adaptable plant. It can be found at various elevations, in moist or dry conditions, is shade tolerant but can be commonly found in sunny areas and prefers well drained or gravel/sandy soils. If it has a preference, it will thrive in sunny, arid conditions in course soil and especially in disturbed areas. Landowners are advised to be watchful for spotted knapweed, and keep it in check while it is only along roads and not out in pastures. If not controlled, it can rapidly invade pastures and fields and cause a serious decline in forage and crop production.

**Prevention of Spread of Spotted Knapweed**

Preventing spotted knapweed from spreading is extremely important. Mowing during or after flowering can cause the seeds to spread. The plant can also spread in hay and under vehicles. People need to be careful of using hay from road ditches of main roadways, or hay purchased from known infested areas. If a small population of this plant is found, you can easily pull it by hand when the ground is damp and be sure to pull the entire root. Flowering plants should be bagged and removed from the site if possible. Individual plants or small populations of knapweed must be treated before they become large populations which are harder to control in the long-run.

**Herbicides Approved for Controlling Spotted Knapweed**

The following herbicides may be used by landowners. Other products labeled and registered for use on this noxious weed in Nevada may be used in accordance with label directions. Be sure to follow all label directions and precautions.

* Dicamba (Banvel, Clarity, Vanquish): Application shall be at the early bud stage in the spring and fall on pastures, rangeland and non-cropland.
* Picloram (Tordon 22k): Spring at rosette to mid-bolt growth stages; or fall. Restricted use pesticide.
* Transline: Spring after all shoots have emerged, rosette to early bud growth stages; or fall. Use higher rate for older or dense stands.
* Milestone: Spring at rosette to bolting growth stages; or fall. Use higher rate for older or dense stands; Milestone may be used to edge ponds or streams.

**Biological Control for Spotted Knapweed**

Many insects are being evaluated for biological control of diffuse and spotted knapweeds. Several insects are available in Nevada from the Nevada Department of Agriculture. These insects consume knapweed seeds and up to 100 percent of seeds may be destroyed in an infested seedhead. When larval development is complete, larvae pupate then emerge from the seedhead as adults and consume foliage of spotted knapweed until they enter the litter and soil to overwinter.

As always, please notify the HWCWMA if you see spotted knapweed growing within the Humboldt River Watershed. We have an opportunity to stop invasive species from spreading if we act quickly and our [staff](http://www.kingcounty.gov/environment/animalsAndPlants/noxious-weeds/program-information/who-we-are.aspx) can provide the property owner or appropriate public agency with site-specific treatment options for these plants. The HWCWMA also maps and monitors heavily infested sites in the watershed which allows the HWCWMA the ability to provide educational and financial assistance to land owners and groups in their management efforts, ultimately improving all of the qualities of the land and water in our watershed.

The HWCWMA has also developed a website to serve as a clearinghouse for information on invasive weeds in the Humboldt Watershed. Our website (http://www.humboldtweedfree.org) contains fact sheets for state listed noxious weeds in Nevada, Board of Director’s information, funding partner’s links, and many more features including a detailed project proposal packet that you can print, fill out and mail back to us at your convenience. We are looking to expand our project area outside of the Humboldt River and always welcome new funding opportunities.

If you have any questions, please feel free to contact Andi Porreca, HWCWMA Coordinator at (775) 762-2636 or email her at aporreca@humboldtweedfree.org. You may also speak with Rhonda Heguy, HWCWMA Administrator at (775) 738-3085, email: hwcwma@gmail.com.