Eastern Nevada Landscape Coalition

LANDSCAPE NEWS

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2022 Annual Winter Weeds Conference

Eric Horstman

After a year's suspension due to Covid concerns, the 16th Annual Winter Weeds Conference was held January 19 and 20th at the Bristlecone Convention Center in Ely, hosted by the Eastern Nevada Landscape Coalition and Tri-County Weed Control. A total of 12 presenters discussed a variety of topics, ranging from Battalion Pro (a bioherbicide to help manage cheatgrass, medusahead and jointed goatgrass), carbon-based herbicide protection pods for native plant restoration, Rejuvra™, an herbicide to help improve forage crops, biocontrol studies in Nevada focusing on Rust and Canada Thistle, tracking weed issues on Great Basin disturbances to the interaction of roots, carbohydrate production and movement and herbicide control. Presenters came from throughout the West, including the Nevada Department of Agriculture, The Nature Conservancy, USDA Agricultural Research Service, Bayer Crop Science, Comstock Seed and the University of Nevada at Reno extension, among others. A total of 9 participants took the pesticide applicator exam given by the Nevada Department of Agriculture and Continuing Education Units were offered for Certified Pesticide Applicators. Over half the participants turned in the conference's first ever evaluation forms, with positive feedback on the diversity of topics covered and the quality of the speakers, along with valuable feedback for what they'd like to see in next year's

Bayer's Justin Hossfeld presenting on Rejuvra™.

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Eastern Nevada Landscape Coalition

Our Mission

The mission of the Eastern Nevada Landscape Coalition is to restore the dynamic, diverse, resilient landscapes of the arid and semi-arid West for present and future generations through education, research, advocacy, partnerships, and the implementation of on-the-ground projects.

Our Vision

We envision a future where the ecosystems of the arid and semi-arid West thrive. Functioning, diverse ecosystems will be the result of restoration achieved and maintained with naturally occurring disturbances such as fire, in combination with other management prescriptions, including traditional uses. The Eastern Nevada Landscape Coalition, a 501(c)(3) non-profit, will be a recognized contributor and leader in this effort for future generations of Americans.

Board of Directors

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Fall 2021 CWMA Meetings Recap

Susi Algrim

The Eastern Nevada Landscape Coalition (ENLC) oversees the organization, meeting facilitation, and fiscal management of nine Cooperative Weed Management Areas (CWMAs) encompassing more than 10 million acres in Eastern and Southern Nevada. CWMAs consist of a steering committee, a chairperson for each CWMA and volunteer landowners, agencies and other local organizations who work together to address the issues associated with noxious and invasive weeds in their areas. Coordinated efforts for noxious and invasive weed control increase the overall effectiveness of noxious weed infestation containment and eventual eradication. In addition, by participating in CWMAs, landowners and agencies can share resources with other members who are working towards similar goals in noxious and invasive weed management.

The nine CWMAs managed by the ENLC are: Newark/Long Valley, Pahranagat Valley, Railroad Valley, Snake Valley, Southern Nevada, Spring Valley, Steptoe Valley, Upper Meadow Valley, and White River Valley. Each CWMA has a steering committee, and these steering committees typically consist of the organizations and agencies that provide and/or manage CWMA funding, meeting facilitation, and on-the-ground weed control efforts. The CWMAs managed by the ENLC have a steering committee comprised of the ENLC, Tri-County Weed Control (TCWC), the Bureau of Land Management (BLM) and the US Forest Service (USFS), and other organizations. They held their quarterly CWMA meetings in person this fall for the first time since COVID-19 struck.

All the CWMA meetings were held in their corresponding areas and provided a location for CWMA members to discuss funding, in-kind logs, the 2022 Winter Weeds Conference, as well as organization and agency updates, upcoming events, EDRR species and guidelines, and goals for the 2022 weed season. All CWMAs had similar concerns with weed infestations, particularly along roadways and where soil had been disturbed, and at gravel pits. These are great examples of why CWMAs are important and benefit the most with CWMA member participation, as those landowners are the individuals who are on the land and who observe first-hand infestations and can report them before they become a wide-spread problem.

The spring 2022 CWMA meetings have been scheduled and are particularly geared towards available funding for inventory and treatment of noxious and invasive weeds, as well as community volunteer days, outreach, and education.

If you are interested in joining your local CWMA, please contact

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Winter Weeds Conference

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presentations. There is always room for improvement and we will incorporate the conference registrants' valuable feedback in the planning of future conferences. We are also working to increase participation from our CWMA members throughout the state. Our CWMA members are on the frontlines of noxious and invasive weed control. Events like these wouldn't be possible without the support of our generous sponsors: Nevada Gold Mines, Bayer Environmental Science, Spring Valley LLC, KGHM Robinson Mine, Corteva, SSR Marigold Mining, Wilbur-Ellis, Economy Drug, Mt. Wheeler Power, BioWest Ag Solutions, Economy Drug, Comstock Seeds, White Pine County Tourism and Recreation, White Pine Main Street, and the White Pine Chamber of Commerce. A special thanks to the U.S. Forest Service, USDA and the National Fish and Wildlife Foundation who provided additional grant funding through the ENLC.

2022 Winter Weeds Conference Sponsors

- Nevada Gold Mines
- Bayer Environmental Science
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- Economy Drug
- Mt. Wheeler Power
- Comstock Seed
- National Fish & Wildlife Foundation
- BioWest Ag Solutions

CWMA Meetings Recap

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the Eastern Nevada Landscape Coalition at 775-289-7974 ext. 4# or email Susi Algrim at salgrim@envlc.org.

With the funding we have available, the ENLC is required to report on in-kind CWMA member contributions, meaning that activities focused on noxious and invasive weed control and education that are conducted by CWMA members must be logged and reported to the ENLC by each member receiving funding.

Upcoming CWMA Meetings

CWMA	Meeting Date & Time	Meeting Location
Southern Nevada	Thursday, February 17, 2022 at 1:00p	TBD
Newark/Long Valley	Tuesday, March 15th at 10:00a	Eureka County Administration Facility Meeting Room
Steptoe Valley	Tuesday, March 15th at 5:00p	Tri-County Weed Control Shop
Spring Valley	Wednesday, March 16th at 2:30p	Yelland Ranch
Snake Valley	Wednesday, March 16th at 4:30p	Baker Community Center
Railroad Valley	Thursday, March 17th at 2:30p	Currant Community Center
White River Valley	Thursday, March 17th at 5:00p	Lund Community Center
Upper Meadow Valley	Tuesday, March 22nd at 11:30a	Ronda Hornbeck's House
Pahranagat Valley	Tuesday, March 22nd at 4:00p	Alamo Annex

BLM Seeds Eastern Nevada's Public Lands

ENLC's Lara Deresary participated in the Bureau of Land Management Ely District's aerial seeding of 5,858 acres of eastern Nevada's public lands in January. Objectives range from restoring and maintaining watershed health and improving wildlife habitat to protecting human life and property and repairing fire damage.

"Establishing perennial and forb species helps to stabilize soils and buffer against erosion, especially on bare or exposed soil and slopes. Perennial species are also able to successfully compete with invasive annuals, for example cheatgrass," Cody Coombs, Ely District supervisory natural resources specialist, said.

The helicopter lifts off with a broadcast seeder attached. (photo by Kellie Dobrescu)

The district seeded 433 acres in the Kern Mountain Range northeast of Ely in White Pine County. Likewise seeded were 489 acres in Duck Creek Basin on the west side of the Schell Creek Range, also northeast of Ely; 913 acres within Johnson Spring Basin on the west slope of the Cherry Creek Range northwest of Ely; and 1,160 acres along Ward Mountain just south of Ely. The seedings compliment mechanical pinyon-juniper tree-thinning treatments completed in December on the same number of acres.

"Woody biomass remaining from the mastication treatments was left onsite to degrade naturally and create a mulch layer for seed germination. Seed mixes differed for each project, depending on specific site characteristics and seed availability," said Ely District Fuels Specialist Kellie Dobrescu.

Both tree-thinning and seeding are components of larger landscape-scale projects intended to restore watershed health and improve wildlife habitat while reducing catastrophic fire risk. The Kern Mountains Landscape Restoration Project will ultimately treat up

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An equipment operator is pictured in December shredding, or masticating, a juniper tree on Ward Mountain south of Ely. (photo by Kellie Dobrescu)

Impacts of P-J Removal on Bird Species

Pinyon jay

The US Forest Service, Rocky Mountain Research Station, recently shared the results of a study by Katherine Zeller, research biologist with the Aldo Leopold Wilderness Research Institute housed within the Rocky Mountain Research Station. The study sought to identify the impacts of pinyon-juniper removal on both sagebrush associated and pinyon-juniper associated bird species. Findings from the study include the following:

- When modeling wholesale conifer removal across the Great Basin, suitable habitat increased by 6 percent (Brewer's sparrow) to 17 percent (sagebrush sparrow) for sagebrush associated bird species. However, pinyon-juniper associated species saw a habitat reduction of 11 percent to 41 percent, particularly for the pinyon jay, which is already experiencing declines and is a species of conservation concern.
- To increase suitable habitat for sagebrush associated species without decreasing pinyon-juniper associated species, managers could focus on removing conifer in areas where there isn't an overlap of these habitats.
- Maps from this study are available for managers seeking to identify potential areas where conifer removal would improve habitat for sagebrush species while mitigating unwanted negative impacts on pinyon-juniper species of conservation concern. Zeller can be connected at Katherine.Zeller@usda.gov for more information on maps.

BLM Seeding

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to 12,580 acres of a 15,725-acre project area. The Duck Creek Basin Hazardous Fuels Reduction and Habitat Improvement Project will treat 12,900 acres of a 30,000-acre project area. The Egan and Johnson Basins Restoration Project will treat 24,346 acres of an 84,675-acre project area and the Ward Mountain Restoration Project will treat 42,670 acres of a 100,000-acre project area.

The district seeded an additional 310 masticated acres neighboring private property in the Mill Creek area of the Snake Range northwest of Baker, also in White Pine County, as part of a Wildland Urban Interface project and 2,553 acres in the North Pahroc Range northeast of Hiko in Lincoln County to help stabilize and rehabilitate BLM-administered lands burned in last year's 4,446-acre Big Rocks Fire. "The latter seeding was a component of an emergency stabilization and rehabilitation plan designed specifically for the Big Rocks Fire. The seed mix was determined by multiple factors, including burn severity, soil type, elevation, slope, annual precipitation, and pre-existing vegetation," said Sheryl Post, Ely District natural resource specialist.

The treated acres will be monitored to ensure that management objectives are met. Objectives include soil protection, forage and protective cover, and overall ecological and watershed improvement.

Soil & Carbon Sequestration Benefits of Grazing Sheep Under Solar Panels

John Fitzgerald Weaver

Reprinted from PV Magazine, 2-7-2022

Researchers from Temple University have found that managed sheep grazing on an acre of recovering agricultural soil with native plants installed may sequester one ton of carbon per year, which may accumulate for 12 to 15 years before reaching saturation.

In a recent presentation, titled Managed Sheep Grazing Can Improve Soil Quality and Carbon Sequestration at Solar Photovoltaic Sites, researchers from Temple University investigated the effects of periodic sheep grazing on soil properties. Micro and macro nutrients, carbon storage, and soil grain size distribution at six commercial solar PV sites were compared to undisturbed control sites.

The authors point to existing studies which show biomass production of forage species under shade (e.g Pang et al, 2019 Agroforest Syst (2019) 93:11–24) Data from the: Horticulture and Agroforestry Research Center (HARC), New Franklin, Missouri. One of the more interesting findings of this research describes the relationship between levels of shading and the biomass production of various plants, shown in the chart below. The analysis found that the 'meaningful forage productivity' of most of their chosen ruminant appropriate species significantly increased under 45% shade, while most plants under 80% shade saw a marked decrease in biomass volume.

The results align with prior research from the University of Oregon, which found that solar panels altered the microclimate variables of mean air temperature, relative humidity, wind speed, wind direction, and soil moisture. This improved water efficiency, allowing for much greater biomass growth, drove a 90% increase in grasses for sheep and cows.

The extensive list of plants examined is a definite positive, as the rate of installation for ground-mount solar power accelerates. Efforts are currently being made by the U.S. Department of Agriculture's National Institute of Food and Agriculture and University of Illinois to determine which row crops, foraging crops, and specialty crops are best to couple with solar panels in agrivoltaic settings.

For entire article, visit: https://pv-magazine-usa.com/2022/02/07/grazing-sheep-increase-carbon-sequestration-up-to-80-while-also-benefiting-fixation-of-soil-nutrients-under-solar-panels/

National Focus on Helping Farmers Fight Climate Change

On February 7, the U.S. Department of Agriculture announced plans to spend $1 billion on agricultural projects and practices to help curb greenhouse gas emissions and to capture and store carbon. According to the Environmental Protection Agency, the agricultural sector accounts for more than 10% of U.S. carbon emissions. The spending will occur through grants to public and private entities, including state, local and tribal governments, nonprofits, small businesses and colleges.

"We're trying to incentivize the creation of climate-smart commodities that hold higher value in the marketplace that farmers can generate additional profit from," said USDA Secretary Tom Vilsack, adding, "This is about creating domestic markets that will provide American agriculture and forestry with the resources to do what they know to do best — to feed the world, while serving as great stewards of our land and water."

Some specific focus areas will include conservation practices such as no-till, use of cover crops, and rotational grazing. Funding will be provided through the USDA's Partnerships for Climate-Smart Commodities (https://www.usda.gov/climate-solutions/climate-smart-commodities) through a grant application process. Applications are now being accepted.

USDA Forest Service Pest Alert: Oystershell Scale

Oystershell scale (*Lepidosaphes ulmi L.*) is an invasive armored scale insect whose shape resembles that of an oyster or mussel shell. The insect resides under the scale and feeds on fluids extracted from the cells of plant stems. Widely distributed throughout North America, oystershell scale is known to affect urban forests, ornamental trees, and orchards. Oystershell scale has broad host associations, but its transition into natural aspen (*Populus tremuloides*) stands and potential impact to aspen in Region 4 is of great concern. Aspen's thin bark allows populations to build up on the tree bole and branches causing branch dieback and tree mortality.

Signs and Symptoms of OSS infestation on aspen inclue:

- Presence of oystershell scale on tree bole or branches. May be hard to find at low density.
- Loss of tree vigor. Aspens are more susceptible to damage due to its thin and less protective bark.
- Branch dieback leading to tufts of foliage remaining at the ends of branches.
- Aspen mortality among all age classes.

Oystershell scale on aspen branch

Contact Justin Williams, Forest Health Protection, Ogden Field Office, at 801-510-9632 or justin.williams3@usda.gov for more information or to report a potential OSS infestation.

Eastern Nevada Landscape Coalition

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