

USGS Sagebrush Science

A quarterly report from the USGS Sagebrush Working Group

April–June 2026

News

Watch the USGS Sagebrush Ecosystem and Fire Science 2026 Webinars!

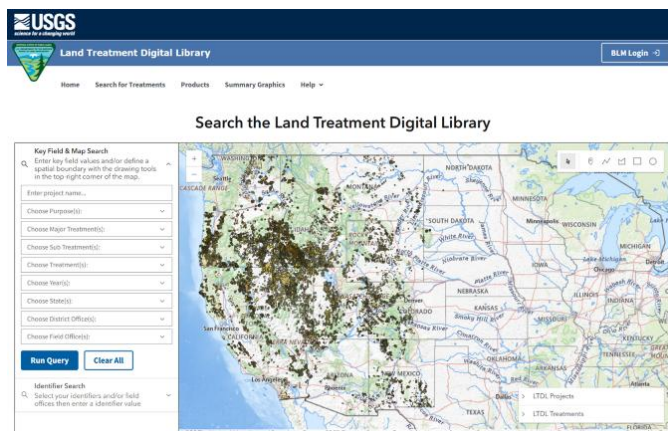
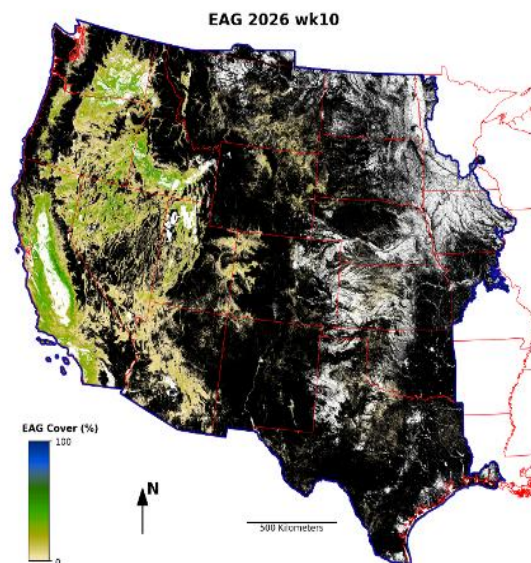
In June, the USGS Land Management Research Program and the Great Basin Fire Science Exchange teamed up to present updates in sagebrush, fire, invasives, wildlife, and monitoring related research. Each 90-minute webinar was comprised of multiple manager-focused presentations. Recordings of the five webinars are now available on the [Great Basin Fire Science Exchange Website](#).

Weekly data releases of herbaceous and exotic annual grass (EAG) cover for the Western US

Weekly cover maps will be released in near-real-time during the growing season of February–September, in addition to historical weekly maps for 2016–present, with annual maps released following the completion of each mapping season. For all available weekly RCMAP-EAG data see the RCMAP Viewer - [Next Generation Viewer](#) or MRLC for [download](#).

A new generation of RCMAP (Rangeland Condition, Monitoring, Assessment, and Projection)

Fractional component time-series data spanning 1985–2025 are now available for [download](#) and on the [rangelands viewer](#) at www.mrlc.gov and will soon be available on [ArcGIS Online](#) and Google Earth Engine “Awesome Community Catalog”.



Updates to the Land Treatment Digital Library and Exploration Tool

USGS recently launched updated versions of the [Land Treatment Digital Library](#) and [Land Treatment Exploration Tool](#) to improve user experience, include additional data, and enhance Bureau of Land Management access. Learn more about application updates:

[Land Treatment Digital Library 2.0 Launch](#)

[Land Treatment Exploration Tool 3.0 Launch](#)

New Products

Sage-Grouse

TYPE	TITLE & URL	SUMMARY
PUBLICATION	Changes in spatial distribution and abundance together determine potential for population persistence for greater sage-grouse	Researchers evaluated changes in population abundance and distribution for greater sage-grouse (<i>Centrocercus urophasianus</i>) within the Bi-State Distinct Population Segment, a genetically distinct and isolated population straddling the border of Nevada and California.
PUBLICATION	Interspecific brood parasitism of a greater sage-grouse brood by chukar in Nevada	Researchers describe an observation of a live chukar chick that parasitized a sage-grouse nest and brood, the first documented case of brood parasitism of a sage-grouse brood by a chukar.
PUBLICATION	A comprehensive inventory of communication tower infrastructure across the range of greater and Gunnison sage-grouse	An new product that allows users to visualize, assess, and analyze tower locations and duration (i.e., including date of construction through date of dismantlement) on western landscapes within the sagebrush ecosystem.

Ungulates

TYPE	TITLE & URL	SUMMARY
PUBLICATION	Ungulate migrations of the Western United States, volume 6	This report showcases the migrations of 23 ungulate herds in the Western United States.
PUBLICATION	The interplay of habitat quality and temperature shape demographic patterns of mule deer (<i>Odocoileus hemionus</i>) in North America	This study describes drivers (habitat suitability, drought, winter severity) of change in mule deer age ratios over 20 years in Wyoming.
PUBLICATION	Estimating GPS-based social aggregation metrics using collar data	Researchers examined the minimum sample size necessary for reliable calculations of three aggregation metrics. They used GPS collar data from the Jackson and West Green River elk herds (<i>Cervus canadensis</i>) in western Wyoming, USA.
PUBLICATION	Ecology of reintroduced Rocky Mountain bighorn sheep in Dinosaur National Monument	Researchers assessed the demography and disease dynamics of Rocky Mountain Bighorn Sheep to inform rangeland and recreation management decisions for the Monument, a sagebrush ecosystem with multiple invasive species. This paper also develops a method to estimate subpopulation sizes from fecal pellets and spatial capture-recapture models.
PUBLICATION	Modeling Chronic Wasting Disease transmission risk in mule deer related to habitat characteristics	Researchers used data from GPS-collared mule deer from the South Converse Mule Deer Herd in Wyoming that were CWD-tested annually to construct models predicting annual probability of disease transmission contingent on environmental properties extracted from GPS use points.

Invasive Annual Grasses & Sagebrush Restoration

TYPE	TITLE & URL	SUMMARY
PUBLICATION	Loss of ecosystem resistance to invasive after wildfire facilitated by a pulse of soil nitrogen availability: experimental evidence in the burned sagebrush steppe	A 30-year precipitation- and vegetation-manipulation study in multiple representative sagebrush steppe ecosystem types burned in a wildfire, providing a unique opportunity to study the effects of historical climate and contemporary weather on the resistance to invasion after fire.

PUBLICATION	Breaking the grass-fire cycle: modeled effects of post-fire treatments on risk of reburning, relative to fire-weather effects	Researchers asked how fuels were affected by post-fire treatments, including drill seeding with perennial grasses, aerial shrub seeding, or herbicide spraying. They also considered how the resulting landscape changes affected the probability of reburning under different weather scenarios.
PUBLICATION	A site prioritization tool for invasive species management: integrating diverse spatial data to improve decision making	The site prioritization tool for invasive species management (https://rconnect.usgs.gov/site-prioritization-tool/) is an interactive website that allows managers to view and combine diverse spatial data layers to estimate cumulative invasion risk based on user-specific needs. This manuscript describes the spatial layers developed for the web tool and demonstrates its use by prioritizing sites for invasive plant monitoring in the sagebrush steppe of the Greater Yellowstone Ecosystem.
PUBLICATION	Eco-evolutionary context modifies a destructive plant invader's response to climate	Scientists conducted a replicated common garden experiment (4 sites × 2 yr) with 96 genotypes (n = 22,492 individuals) of the invasive annual grass <i>Bromus tectorum</i> (cheatgrass) to understand how eco-evolutionary context mediates this important relationship.
DATA	Effects of vegetation and soils surface disturbance and reclamation on invasive annual grasses: an annotated bibliography	This data release includes citation details, abstracts, and results of a semi-automated content analysis for 171 publications we identified on the topic of the potential effects of vegetation and soils surface disturbance and reclamation associated with oil and gas development on invasive annual grass establishment and spread.

About the USGS Sagebrush Working Group

The USGS Sagebrush Working Group, coordinated by the USGS Land Management Research Program, includes over 50 scientists from a range of USGS centers, programs, regions, mission areas, and cooperative units. Decades of experience investigating and developing solutions for natural resource management issues in sagebrush ecosystems have made the group a go-to resource for partners.

Learn more about the group and explore ongoing projects across the biome on our website:

[USGS Sagebrush Working Group](#)

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