



(Science and Research continued from page 3)

BLM-WY's Lander Field Office and UC-Davis combined resources for long-term, multi-part research to determine noise effects from energy exploration and development on the breeding biology of Greater sage-grouse. Researchers are also investigating the role of diet quality and foraging behavior on breeding success among males. Males are radio-tracked to locate roosting and foraging locations, where scientists then study the nutritional quality of sagebrush, shrub height, and forb cover. They examine breeding behaviors by using robotic female sage-grouse to elicit courtship behaviors from males (*right*). UC-Davis' ongoing research provides a baseline for natural behaviors, helping BLM predict how Greater sage-grouse will respond to habitat changes and treatments conducted across their range.



Photo: Dr. Alan Krakauer

BLM-MT co-authored an academic journal article on Greater sage-grouse DNA with University of Montana, U.S. Forest Service Rocky Mountain Research Station, and partners from states, USFS and NRCS's Sage Grouse Initiative. The study looked at Greater sage-grouse populations in Priority Areas for Conservation (PACs), areas comprised of the habitat most critical for maintaining the bird's populations, and found that the genetic subpopulations of Greater sage-grouse are largely synonymous with existing PAC boundaries. Results showed five subpopulations that occupy different elevations and are surrounded by distinct dominant subspecies of sagebrush. The results from this study are important because validating the biological relevance of the existing PACs helps land managers plan conservation projects to more effectively manage Greater sage-grouse.

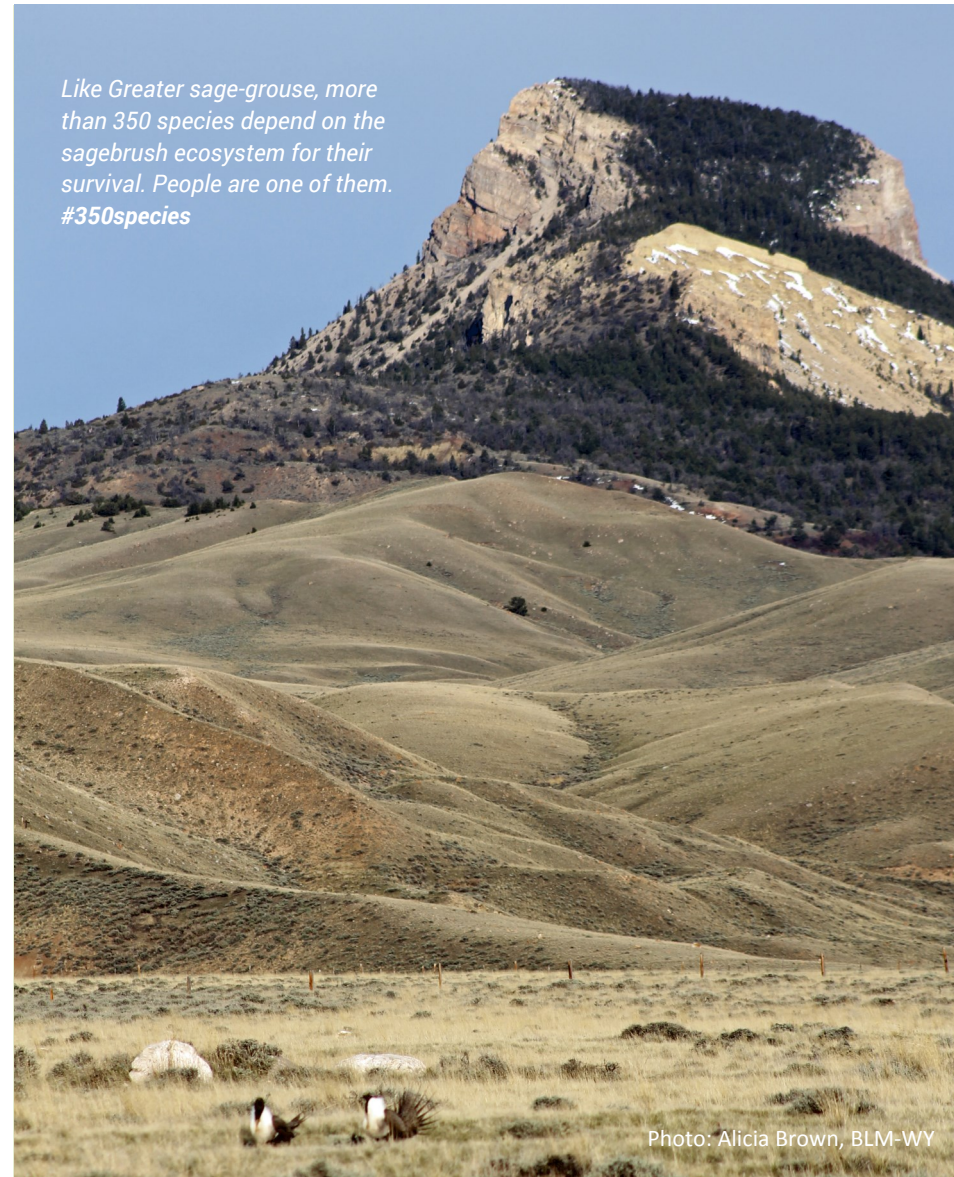
Read more: <http://bit.ly/2egjZL5>.

BLM's Rocky Mountain Region is comprised of BLM states Montana/Dakotas, Wyoming, Colorado, and Eastern Utah. BLM's RMR states manage more than 25 million acres, or 37%, of the public lands that comprise Greater sage-grouse habitat. These public lands also support human livelihoods, supply energy resources, and provide home to more than 350 other species that depend on the sagebrush ecosystem for their survival. Learn more about BLM's Greater sage-grouse and sagebrush conservation efforts: www.blm.gov/sagegrouse.

In 2016, RMR states prepared implementation work on more than 1,000 acres, treated more than 40,000 acres with habitat improvement projects, and monitored more than 60,000 acres of Greater sage-grouse habitat.



Rocky Mountain Region 2016 Annual Report



Like Greater sage-grouse, more than 350 species depend on the sagebrush ecosystem for their survival. People are one of them. #350species

Photo: Alicia Brown, BLM-WY

Jamie's Note

In the Rocky Mountain Region, we lean in. We lean in and we work together. Greater sage-grouse conservation starts at the field level and amplifies across the range. We know that achieving landscape-level work, like Greater sage-grouse conservation, requires an All hands, All lands approach. We know that change is tough and transitions take time. With Greater sage-grouse, we're creating and adapting to a new way of managing natural resources. We are looking across traditional boundaries, working with partners, and finding ways to work both flexibly to address local conditions *and* consistently across the whole region to be the best public lands stewards of the sagebrush ecosystem that we can be. In RMR, we know that to achieve large-scale projects requires celebrating and reflecting on accomplishments along the way. That's why we've put together this synopsis of successes to show that from many "small" projects come steps towards our larger goal: a sustainable, working sagebrush ecosystem for people and wildlife. When it comes to Greater sage-grouse and the sagebrush landscape, together across the Rockies we are taking this challenge head on.

- Jamie Connell,
RMR Lead State Director

2016:

BLM's Rocky Mountain Region coordinated the five-year Program of Work prioritization with the BLM states within WAFWA management zones I, II, and VII. When considering projects, RMR continues to look for and enhance opportunities to work collaboratively with partners and across traditional work and geo-political boundaries. RMR provided assistance to BLM's Washington Office for overall BLM plan implementation, including strategic plan development, IM review, and as members of coordination team for April External Stakeholder Workshops (ESW) and Federal Family Trainings (FFT) on the Greater sage-grouse plans. The ESW and FFT had over 1,200 attendees and served as an opportunity to share and listen to questions about plan implementation. The Region shared BLM's Greater sage-grouse efforts through internal and external communication approaches, including publishing six regional BLM Daily articles, engaging in and helping develop the interagency sagebrush communication network, leading development of the interagency Greater sage-grouse annual report (<http://on.doi.gov/2d49PwG>) and story map (<http://bit.ly/SGStoryMap>) which highlight accomplishments of the last year since the Greater sage-grouse plans were signed, and building momentum for the #350species campaign to connect audiences to the overall significance of the sagebrush ecosystem for people and wildlife.



Throughout the states of the Rocky Mountain Region, BLM is working with partners to accomplish Greater sage-grouse priority work and to conserve and enhance contiguous stretches of habitat. In 2016, on-the-ground projects focused on removing conifers from sagebrush habitat, tagging fences to prevent in-flight collisions, establishing wildland fire preparedness, and supporting science and research of Greater sage-grouse behavior and habitat conditions. The following highlights a selection of BLM-CO, BLM-MT/DK, BLM-WY, and BLM-eastern UT's Greater sage-grouse accomplishments from 2016.

Habitat Improvements

BLM-CO's Colorado River Valley Field Office partnered with Rocky Mountain Youth Corps to maintain sagebrush habitat. The youth crew of 18- to 25-year-olds cut more than 16,000 young pinyon and juniper trees on 300 acres. The partnership gave the youth crew on-the-ground resource experience, while the entire landscape benefited from their hard work. According to Hilary Boyd, BLM wildlife biologist, "The youth crew's dedication and hard work bought us another decade in our efforts to maintain these important sagebrush areas."



Photo: David Boyd, BLM-CO

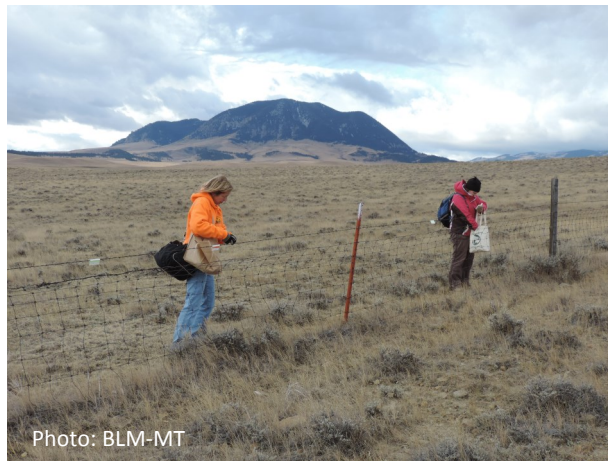


Photo: BLM-MT

BLM-MT/DK's Central Montana District planned approximately 3,000 acres for conifer removal, converted nearly 200 acres of crested wheatgrass to native species, collected sagebrush and forbs to grow at Special K nursery, focused grazing management on more than ten allotments (over 40,000 acres) to improve habitat and Greater sage-grouse nest success, and marked more than 80 miles of high collision risk fences near 22 leks (photo left). In 2015, these leks had more than 400 male Greater sage-grouse. It is expected that the treated areas will be used more by Greater sage-grouse due to increased quantity and quality of habitat, increased forbs, decreased raptor perches, and fewer collisions with fences.

BLM-UT has been active in improving the quality and quantity of Greater sage-grouse habitat throughout Utah independently and through its long-term working relationship with the state of Utah and its Watershed Restoration Initiative. In 2016 in eastern Utah, over 5,700 acres of habitat were improved, with an additional 11,400 acres prepared for work. These landscape-level vegetation projects create a mosaic of habitat providing for yearlong habitat needs as well as connectivity for Greater sage-grouse populations. GPS telemetry studies, including those conducted on over 60,000 acres in eastern Utah, have shown these treatments are readily used by grouse and increase movement between usable habitats throughout these areas. Photos from before (top) and after (bottom) a treatment in the Vernal Field Office show how removal of encroaching juniper can create usable Greater sage-grouse habitat in one season.



Photo: BLM-UT

BLM-WY initiated more than 30 habitat improvement projects, including fence markings or modifications, surveys of winter habitat and range, travel and transportation management planning in priority habitat, native seed collection through the Seeds of Success program, AIM project implementation, and field staff trainings on AIM and HAF. Photo demonstrates a soils portion of the AIM training in Buffalo. Through a partnership with the Wyoming Game and Fish Department, Wyoming Landscape Conservation Initiative, and the Natural Resources Conservation Service (NRCS), BLM-WY also restored and reclaimed habitat by treating weeds in Priority Habitat Management Areas (PHMA) and removing conifers encroaching in sagebrush habitat used by Greater sage-grouse.



Photo: Dustin Kavitz, BLM-WY



Photo: Bryan McKenzie, BLM-WY

Wildland Fire Preparedness

BLM-CO: The Beaver Creek Fire in northwest Colorado burned 15,000 acres on BLM-managed public lands. The fire called in a NIMO team, cost over \$30 million, and managed serious firefighter safety concerns in a beetle-kill pine landscape. While only 66 of those acres were in PHMA, BLM resource experts prepared the team to aggressively integrate Greater sage-grouse and sagebrush protection priorities into managing this complex fire.

Science and Research

BLM-MT/DK's Glasgow Field Office is in the second year of a West Nile Virus surveillance partnership with Montana State University (MSU). The effort is centered in the newly designated Sagebrush Focal Area, partially located in southern Valley County. Positive test results for West Nile Virus have proven this year's monitoring efforts to be fruitful. According to MSU Professor of Veterinary Entomology Gregory Johnson, West Nile Virus surfaced in Lake, Phillips, Prairie and Valley counties in 2016. Future plans for an expanded BLM and MSU partnership include increasing the surveillance area in Valley and Phillips Counties and investigating which waterbody-types in sagebrush habitat are more prone to produce the *C. tarsalis* mosquito. Since this species is dependent on more permanent water bodies for breeding, this information could enable BLM to take prescribed management actions that would limit their production.



Photo: Jonathan Moor, BLM-MT

Nate Wold, BLM-MT/DK, collects mosquitos at a West Nile Virus monitoring site near Whitetail Reservoir in the Glasgow Field Office area.