



Annual Report

FY 2021





Annual Report October 1, 2020–September 30, 2021

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The purpose of this report is to share FY 2021 partnership accomplishments of the intra-agency agreements between the Bureau of Land Management and the Intermountain West Joint Venture. Between FY 2016 and FY 2021, BLM Headquarters has provided \$7,033,237 to date to build sagebrush rangeland capacity in priority landscapes. These funds have been matched with \$5,087,286 by numerous partners.

The goal of our work is to scale up efforts to conserve intact and resilient sagebrush rangelands through proactive, science-based, landscape-scale management and restoration on public, Tribal, and private lands. Our work is a premier example of the [America the Beautiful Initiative](#) in action, supporting locally led efforts to conserve, connect, and restore the lands, waters, and wildlife on which we all depend.



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Executive Summary

The Bureau of Land Management (BLM) and the [Intermountain West Joint Venture \(IWJV\)](#) entered into a formal partnership in June 2016 to implement voluntary, incentive-based restoration and management of sagebrush rangelands across jurisdictional boundaries. We call this effort [Partnering to Conserve Sagebrush Rangelands](#). We are using an “all hands, all lands” approach to conserve this nationally significant sagebrush ecosystem.

We are making great strides in this multiyear partnership work. We are discovering that achieving durable conservation through collaborative partnerships is possible, especially for efforts focused on restoring sagebrush landscapes to resilience.

This 2021 Annual Report captures the major accomplishments of BLM, IWJV, and over 650 partners. The report summarizes activities of two intra-agency agreements. The first agreement was signed in June 2016 to deliver sage grouse and sagebrush habitat conservation that supported the [Memorandum of Understanding \(MOU\) between the BLM, Natural Resources Conservation Service \(NRCS\), and the U.S. Forest Service \(USFS\)](#) for the period FY 2016–2022. The MOU provided \$4,448,000 in federal funds and has been leveraged with \$3,666,671. The second intra-agency agreement was signed in August 2019 to expand upon the proven success of the BLM-IWJV partnership in achieving community-based sagebrush habitat conservation through diverse partnerships for the period FY 2019–2024. This second agreement provided federal funding of \$2,585,237, leveraged with more than \$1,420,555. State BLM offices have also contributed \$387,529. In sum, this capacity-building partnership has resulted in **\$12,507,992** in funding to support sagebrush rangeland conservation. These collaborative efforts have helped deliver **\$29,707,411** in projects, reported to BLM and other agencies.

The current agreement focuses on six priorities of the Department of the Interior and BLM:

- a. reduce catastrophic rangeland wildfires;
- b. prevent and control noxious and invasive weeds;
- c. restore wet meadow and riparian habitats;
- d. remove conifers that have expanded into sagebrush habitat;
- e. implement range structural improvements; and,
- f. coordinate habitat protection and restoration actions associated with big game migratory corridor efforts.

The core part of our work involves providing capacity to the field to help BLM and its partners to achieve conservation across boundaries. Notably, we’ve built relationships with 52 BLM State, District, or Field Offices to identify barriers to planning, implementation, and evaluation. We support BLM’s collaboration with partners on persistent, large-scale threats like invasive annual grasses, catastrophic wildfire, conifer encroachment, drought, and impacts of climate change on sagebrush rangelands. We also bring targeted communications, outreach, and technical transfer tools to address these challenges.

A conglomeration of partners—including private landowners, Tribal Nations, recreationists, conservation organizations, state fish and wildlife agencies, other federal agencies, universities, corporate entities, foundations, and more—are at this important table, helping BLM sustain the health, diversity, and productivity of public lands—along with neighboring lands—for the future.

FY 2018–2021 Accomplishments

198,641 acres of conifer removal
4,890 acres of fuels treatment
14,551 acres of annual/noxious weeds treated
101,836 acres of vegetation treatment/enhancement
73,891 acres of improved grazing practices
1,713 acres of wet meadows restored
776 mesic structures installed
408,504 acres impacted
18 field delivery capacity positions created



2021 Overview



New and Noteworthy Achievements

- ❑ Increased field delivery capacity positions from 15 to 18 to assist BLM offices across 10 states with implementing sagebrush habitat projects and treatments in collaboration with partners.
- ❑ Coordinated and assisted the Bi-State Tribal Natural Resource Committee in delivering the second Traditional Ecological Knowledge Summit, which included a tribally led field visit to the Mono Basin.
- ❑ Continued to deliver effective, team-oriented conservation across the West despite the challenges of year two of the pandemic.
- ❑ Completed the final field season of a 12-year study called “Outcome-based Evaluation of Conifer Removal in Lakeview, Oregon” that is answering important questions around sage grouse and conifer removal.
- ❑ Piloted a new Youth Employment Program in southern Montana.
- ❑ Upgraded the [Rangeland Analysis Program](#) with new datasets and additional enhancements in RAP 3.0 to provide simple, fast access to geospatial data characterizing western U.S. rangelands.
- ❑ Promoted management practices that protect existing carbon stored in rangelands via the [Protecting Carbon in Sagebrush Rangelands Report](#).



We need a movement to conserve the sagebrush biome for future generations. And this partnership is key to making that happen, given the BLM's responsibility in managing 78 million acres of sagebrush habitat. Together, we are helping conserve the Greater Sage-grouse and more than 350 other species in this nationally significant ecosystem. In addition, multiple cultural, economic, recreation, and other uses are inextricably linked to the strategic and proactive efforts of western conservation partners working to conserve sagebrush rangelands.

We use the latest research, science-based planning, and decision support tools to focus our efforts on creating field capacity that accelerates, coordinates, and streamlines conservation actions and treatments across fence lines. By engaging with BLM State, District, and Field Offices and communities, we identify needs such as staffing capacity, clearances and consultation, or planning tools, and create field-based support. Investments from BLM Headquarters in partner positions are leveraged with additional funding (federal, state, private, and corporate) to increase efficiency and outcomes—providing collaborative infrastructure.

Sage Capacity Team

As of FY 2021, funds in the BLM-IWJV partnership support 18 field positions in 10 states: Arizona, California, Colorado, Idaho, Montana, Nevada, New Mexico, Oregon, Utah, and Wyoming. These positions are referred to as the [Sage Capacity Team](#); they are non-federal positions that are hosted by non-governmental organizations or other institutions. Each position helps to coordinate rangeland health and wildlife projects across public and private boundaries; address challenges in rangeland conservation; track projects; facilitate multi-stakeholder dialogue and forums; and communicate success stories.

In 2018, the Secretary of the Interior signed [SO 3362](#), an order "Improving Habitat Quality in Western Big Game Winter Range and Migration Corridors." Three of the 18 field positions were created to support implementation of the order.



FY 2021 Accomplishments in the Field

The following table includes the cumulative accomplishments of the Sage Capacity Team.

<i>Overview of Capacity</i>		<i>Partnership Accomplishments</i>	
Total Projects Planned	57	Conservation Easements (acres)	2,094
Total Projects Completed	118	Conifer Removed (acres)	107,637
Total Acres Impacted	181,861	Annual/Noxious Weeds Treated (acres)	136
Total Project Funding	\$10,623,089	Vegetation Management/Habitat Enhancement (acres)	47,258
Partners Engaged	651	Prescribed Grazing (acres)	21,400
Landowners Engaged	129	Fence Modification (miles)	27
Meetings/Field Tours	119	Wet Meadows Restored (acres)	471
Outreach/Volunteer Events	33	Seedlings Planted	320,500
		Mesic Structures Installed	56

The following narrative details the accomplishments of each position (each number corresponds to the [Sage Capacity Team position map](#)).

Field Delivery Capacity Icon Key

- **Project Delivery**



- **Partnership Facilitation**



Each position provides “Project Delivery” or “Partnership Facilitation” services, and in some cases, both.

1 and 2. Southwest Montana Sagebrush Conservation Partnership Coordinator and Project Manager

Supports: Dillon BLM Field Office, Western Montana District Office
Established 2018; 2nd position created in 2021



Capacity Need:

- Enhance coordination among partners (e.g., schedule, organize, and facilitate meetings)
- Improve project management (e.g., define priorities and implement coordinated actions across jurisdictional boundaries)
- Build strategic outreach/communications (e.g., build external relationships to support SMSP, develop brochures for landowners, and communicate success stories)

Coordinator Sean Claffey helped members of the Southwest Montana Sagebrush Partnership (SMSP) coordinate and fund projects to restore and enhance sagebrush habitat and enhance field delivery of conservation actions across southwest Montana. In 2021, the SMSP exceeded its on-the-ground accomplishments from the previous year by 35%. The groundwork and systems put into place during Claffey's first three years were key to scaling up treatments.

This collaborative, with funding from Montana-Dakotas BLM, also added a Project Manager position to develop priority riparian and wet meadow restoration projects at a watershed scale, coordinate invasive annual grass treatments, and further efforts against conifer expansion, among other projects.

While the BLM and NRCS have been the major financial investors in SMSP, 2021 brought significant contributions from additional partners. The Rocky Mountain Elk Foundation invested \$54,000. The Montana Department of Natural Resources and Conservation also contributed \$150,000, a first-time investment! A growing partnership with the Beaverhead-Deerlodge National Forest also made huge strides this year, completing over 1,000 acres of conifer removal. Successes will be shared with USFS decision-makers to spark similar management on USFS lands.

An exciting way to engage youth in conservation work started with a new Youth Employment Program. In the program's inaugural season, they completed 7 projects, engaging 18 youth/young adults ranging in ages from 15 to 27 (including supervisors).

The SMSP has learned how to leverage funding; to foster innovation between private landowners, industry, and public land managers; and to improve the health of working rangelands for the good of people and nature. They have built a successful model of identifying problems and turning challenges into opportunities. To learn more about this thriving model, please read [Southwestern Montana: A Geography of Hope](#).

Overview

Total Projects Planned: 8
Total Projects Completed: 13
Partners Engaged: 17
Partnership Meetings/Field Tours: 10
of Landowners Engaged: 15
Total Acres Impacted: 6,625

Partnership Accomplishments

Conifer Removed: 6,625 acres
Mesic Structures Installed: 24
Mesic Structures Planned: 93
Total Project Funding Completed: \$848,814

3. Prineville & Vale Sage-Grouse Local Implementation Teams (LIT) Coordinator Supports: Prineville BLM District Office, Vale District Office, Malheur Field Office Established 2019



Capacity Need:

- Build effective collaboration at the local level to promote and support landscape-scale conservation planning
- Reinvigorate and provide support to two LITs (Prineville and Malheur)
- Work with BLM to create Comprehensive Threat Reduction Plans

In April 2019, the Sage-Grouse LIT Teams Coordinator was hired to support the Vale and Prineville Local Implementation Teams (LITs). Coordinator Julie Unfried facilitates collaborative efforts between these two LITs, provides progress reports, and communicates with partners, funders, and local media to highlight accomplishments.

In 2021, Prineville LIT partners began developing a local sage grouse [threats reduction plan](#). To showcase work being done across the landscape, participants were invited to attend a field tour of the Indian Creek Fire of 2020 (50,000 acres). Partners including staff from the Burns Paiute Tribe, Oregon Department of Fish and Wildlife, Oregon Department of State Lands, and BLM co-hosted the tour and showcased post-fire restoration efforts. The departments of Fish and Wildlife and State Lands partnered with Burns Paiute Tribe staff to develop a cross-boundary plan to acquire funds and resources to treat invasive annual grasses and rebuild fences that burned in the fire. Participants also heard from BLM staff about Emergency Stabilization and Rehabilitation funding efforts, including an overview of implemented and planned treatments. They used the Indian Creek Fire as a real-world example to think about how collaboratives like LITs could bolster fire-recovery and other efforts in the future.

Although other LITs are somewhat beyond Unfried's scope of work as the Vale/Prineville Sage-grouse LIT Coordinator, funding partners asked her to pursue grant funding to create a new Coordinator position for the Burns and Lakeview LITs. As a result of Unfried's efforts, these partners were awarded two grants that meet the funding needs to support an additional three-year LIT position that will be filled in FY 2022.

Moving forward, the Vale/Prineville LIT Coordinator will play vital roles in the threats reduction plans and in projects identified by these plans by leading periodic plan updates and revisions, providing support to obtain grant funding for projects, and serving as a liaison and communication link between partners

and efforts. In Oregon, the LITs are powerful conduits to support local sage grouse planning and implementation between the state, BLM, and multiple partners. Visit the [LIT webpage](#) and the [Prineville LIT webpage](#) to learn more.

Overview

Partners Engaged: 45

Partnership Meetings/Field Tours: 11

“ OREGON'S EFFORT TO MANAGE SAGE GROUSE AND TO AVERT A LISTING UNDER THE ENDANGERED SPECIES ACT IS A MONUMENTAL EFFORT THAT HAS BEEN POINTED TO AS A MODEL ACROSS THE WEST. MANY PARTNERS AT ALL LEVELS, LOCAL, STATE, REGIONAL, AND NATIONAL HAVE COME TOGETHER TO MAKE THIS HAPPEN. LOCAL IMPLEMENTATION TEAMS ARE A KEY PART OF TRANSFERRING THIS HUGE EFFORT TO THE GROUND IN THE MOST EFFICIENT, PRIORITIZED, TECHNICALLY AND PRACTICALLY EFFECTIVE, LANDOWNER-ACCEPTED MANNER POSSIBLE. ”

- JOHN O'KEEFFE, O'KEEFFE RANCH

4. Bruneau-Owyhee Sage Grouse Habitat (BOSH) Project Outreach Coordinator
Supports: Boise BLM District Office
Established 2020



Capacity Need:

- Provide range and wildlife technical assistance targeting conservation efforts on public and private lands to assist with BOSH project coordination, management, and success
- Enhance coordination among partners
- Implement strategic outreach/communications

This position was established in July 2020 to provide technical support to the BLM Boise District and the Bruneau-Owyhee Sage Grouse Habitat (BOSH) project. The position was established to strategically treat western junipers across 617,000 acres of sagebrush rangelands over a 14-year period. FY 2021 marked the first year of implementation, with 37,510 acres treated! Located in southwest Idaho's Owyhee uplands, this is one of the largest juniper removal efforts in the country. In Owyhee County, public land managers, private landowners, and numerous partners have come together to strategically remove encroaching conifers from horizon to horizon. Coordinator Connor White maintains open communication between these entities and serves as the primary contact for general issues.

Partners from across the sagebrush sea are working in the BOSH area to better understand how conservation practices impact wildlife, vegetation, and livelihoods across this project's landscape scale. In FY 2021, we produced a [NEW story map](#) to spotlight how people are utilizing the latest science and management practices to guide strategic conifer removal and restore this incredible region. For additional science, check out the [BOSH: Review of Current Science Report](#).

"WE'VE SPENT OVER A DECADE LIVING AND WORKING WITHIN THE LOCAL COMMUNITY TO STAND THIS PROJECT UP. WE WILL WORK FOR THE NEXT COUPLE OF DECADES TO MOVE IT FORWARD AND IMPLEMENT THE VISION WE'VE BUILT TOGETHER."
- SAL PALAZZOLO, IDAHO DEPARTMENT OF FISH AND GAME

Overview

Total Projects Planned: 5
Total Projects Completed: 5
Partners Engaged: 10
Partnership Meetings/Field Tours: 1
Total Acres Impacted: 38,744

Partnership Accomplishments

Conifer Removed (Completed): 37,510 acres
Conifer Removed (Planned): 30,818 acres
Fuel Breaks: 1,098 acres
Annual/Noxious Weeds Treated: 136 acres
Total Project Funding Completed: \$1,131,024

5. Outcome-based Grazing Coordinator

Supports: Nevada BLM State Office, Lakeview Oregon Field Office

Established 2018 and refilled in August 2021



Capacity Need:

- Provide support to the BLM National Outcome-Based Grazing Project Lead to create and archive the best management practices developed through the pilot phase of the Outcome-based Grazing Authorizations (OBGA) project
- Develop and integrate a national OBGA program
- Build relationships and provide technical assistance to BLM staff and permittees with program application and expansion
- Strengthen and facilitate communications and collaboration with stakeholders, partners, and the public

When OBGA Coordinator Duane Coombs resigned in January 2021, BLM, Pheasants Forever (the hosting entity), and the IWJV revised the position's scope of work to address important issues that emerged within the [National OBGA Demonstration Project](#) effort. This position supports BLM's efforts and vision for proactively addressing seasonal ecological changes while allowing for grazing partnerships to be sustainable into the future.

Adrienne Hoskins was hired as the Coordinator in August 2021. In the short few weeks in FY 2021, Hoskins initiated and developed relationships with BLM Rangeland Management Specialists and other key partners via monthly meetings.

This program is transitioning from focusing on 11 pilot projects to implementing flexibility on a larger scale. The pilot projects are fully processed for authorization renewal, including

- A land health evaluation report (or the equivalent for that office)
- An environmental assessment with specific SMART objectives
- Identification of flexibilities to be implemented
- Analysis of a monitoring plan
- Issuance of a grazing decision

Through these demonstration projects, it became evident that flexibility needed to be implemented at a larger scale, such as on multiple allotments with a similar identified objective or issue (for example, in a watershed), rather than one permit renewal at a time.

In FY 2022, Hoskins will seek to scale up the OBGA program while continuing to build innovative outreach materials and communications, enable more transparent reporting, and work with partners and experts to build cohesive monitoring avenues for the program moving forward. To learn more about OBG demonstration efforts, [visit this link](#).

6. Idaho Rangeland Conservation Partnership (IRCP) Coordinator
Supports: Idaho BLM State Office, Owyhee Field Office
Established 2018



Capacity Need:

- Create an overarching entity that works across organizations with vision and focus
- Build consensus around needed rangeland management practices, research, and policies
- Leverage resources (e.g., ideas, knowledge, and financial capital) to implement conservation practices in sagebrush ecosystems

In FY 2021, Idaho Rangeland Conservation Partnership (IRCP) Coordinator Brenda Richards facilitated IRCP efforts across the state that addressed targeted grazing to support resilient landscapes, sustainable recreation, invasive annual grass treatments, and technical transfer of low-tech wet meadow restoration.

This partnership continues to support the BLM's multiyear [Soda Fire Targeted Grazing Program](#), a powerful Emergency Stabilization and Rehabilitation effort requiring cooperative monitoring and vegetation treatments, including 1,365 acres of fuel breaks. The program was awarded BLM's Environmental Stewardship Award in 2021.

The IRCP also continued outcome-based management and flexibility efforts with a focus on BLM permit renewals associated with University of Idaho Rinker Rock Creek Ranch. Its proposed alternative supported outcome-based management aimed at reducing fine fuel loads.

IRCP also brought partners together with two webinar sessions: 1) "30x30: America the Beautiful" with panelists addressing this initiative from a BLM perspective, and 2) "Recreation Conversations" addressing the challenges caused by growing recreational use of rangelands. See [Idaho Rangelands Recreation "10 Tips" brochure](#) and ["Know Where You Go—Before You Go"](#).

To further wet meadow restoration, IRCP partnered to host a hands-on session about Low-Tech Process-Based Riparian Restoration techniques, featuring five beaver dam analogues and two bank stabilization projects. IRCP also co-developed an [informational handout](#) with Idaho Fish and Game.

Richards actively communicates and facilitates between federal and state agencies and partners with strategic projects like the [Idaho Cheatgrass Challenge](#). This year, the Management Oversight Group and IRCP partners opted to extend and fund the Coordinator position for an additional three years at a ratio of 36 BLM:64 Partners. Visit [Idaho Rangeland Conservation Partnership](#) to learn more.

Overview

Total Projects Completed: 9
Partners Engaged: 51
Partnership Meetings/Field Tours: 35
of Landowners Engaged: 19
Outreach/Education/Volunteer Events: 11
Total Acres Impacted: 22,765

Partnership Accomplishments

Fuel Breaks: 1,365 acres
Prescribed Grazing: 21,400 acres

7. Burns and Lakeview Oregon Local Implementation Team (LIT) Coordinator
Supports: Burns BLM District Office, Lakeview Field Office
Established 2021



Capacity Need:

- Create an overarching entity that works across organizations with vision and focus
- Build consensus around needed rangeland management practices, research, and policies
- Leverage resources (e.g., ideas, knowledge, and financial capital) to implement conservation practices in sagebrush ecosystems

This position was created in 2021 to support the Burns and Lakeview, Oregon, Local Implementation Teams (LITs). Alex Dohman was hired in February 2022 to add further capacity. Dohman's position will oversee these LITs, to promote working land conservation and restore sage grouse habitat and populations in Lake and Harney counties, Oregon. This position will serve as a liaison between federal, state, and local governments and stakeholders, streamlining conservation efforts across interest groups and ownership boundaries. This position is hosted by Pheasants Forever, with supporting partners including the BLM, Oregon Department of Fish and Wildlife, and others.



8. Sage Grouse Initiative Range and Wildlife Conservationist
Supports: Twin Falls BLM District Office, Burley Field Office
Established 2018



Capacity Need:

- Support shared partnerships and projects that fulfill the intent of the NRCS-BLM-USFS MOU
- Deliver landscape-level conservation and habitat enhancement across private and public lands

The Sage Grouse Initiative (SGI) position in Burley, Idaho, is supported by NRCS and BLM. In July 2020, SGI Range and Wildlife Conservationist Connor White applied for and was hired as the new BOSH Project Outreach Coordinator (#4). Pheasants Forever and IWJV are working to refill the Burley position. During this gap, White retained contract and project responsibilities in Burley.

In FY 2021, additional cross-boundary conservation projects were completed within south-central Idaho. The position received broadscale support from local and state partners and continues to attract large project dollars to further assist the work being done.

In addition to NRCS and BLM, this SGI shared position collaborates with the Minidoka Ranger District of the USFS, Idaho Department of Fish and Game, Idaho Department of Lands, Idaho Governor's Office of Species Conservation, US Fish and Wildlife Service (USFWS), and Pheasants Forever. The position is critical for maintaining open lines of communication between these entities. Primarily, the work being completed by the position is Utah juniper removal. However, the position has also assisted with range seeding, sagebrush planting, annual grass treatment, and mesic restoration on various land ownerships.

Overview

Total Projects Planned: 10
Total Projects Completed: 7
Partners Engaged: 10
Partnership Meetings/Field Tours: 1
of Landowners Engaged: 15
Total Acres Impacted: 13,297

Partnership Accomplishments

Conifer Removed: 2,808 acres
Veg Management/Hab Enhanced: 10,489 acres
Seedlings Planted: 309,000
Total Project Funding Completed: \$1,199,036

9. Sage Grouse Initiative Range and Wildlife Conservationist
Supports: Lander BLM Field Office
Established 2018



Capacity Need:

- Support shared partnerships and projects that fulfill the intent of the NRCS Working Lands for Wildlife Initiative and local partnership efforts
- Deliver landscape-level conservation and habitat enhancement across private and public lands

The SGI position in Lander, Wyoming, is supported by BLM and NRCS. The position of Range and Wildlife Conservationist was refilled in June 2020. Jason LeVan was hired to focus on landscape-scale, partner-based, science-driven conservation efforts across both private and public lands. In addition to providing agricultural producers and private landowners with technical assistance, he works to deliver voluntary Farm Bill conservation programs which provide incentives to ranchers and farmers who implement various management efforts.

The Lander SGI position streamlines daily interactions between the NRCS and Popo Agie Conservation District while providing producers and landowners with technical assistance and guiding interested parties through voluntary conservation incentive programs.

LeVan took the opportunity to lead educational stations at three youth events (300+ students) about wildlife, ecosystems, and sagebrush steppe via visual aids and interactive activities.

LeVan also took part in a mesic meadow restoration workshop with numerous conservation-minded partners to employ low-tech, low-cost methods to restore wet meadows to public lands. [An article published by a local media outlet captured the project's efforts.](#) Working with partners to plan low-tech, process-based restoration projects across land ownership boundaries will provide a unique employment niche for contractors and new opportunities for educational outreach.

Overview

Partners Engaged: 15
of Landowners Engaged: 24
Partner Meetings/Field Tours: 4

Partnership Accomplishments

Total Acres Planned: 17,089
Total Project Funding Planned: \$324,793



10. Sagebrush Ecosystem Alliance Landscape Coordinator
Supports: Salt Lake City BLM Field Office, West Desert District Office
Established 2017; *sunset in 2022



Capacity Need:

- Increase field capacity for collaborative sagebrush conservation
- Improve cross-agency, cross-partner conservation and communication
- Increase efficiencies in managing public land uses and implementing restoration projects in sagebrush ecosystems

The Sagebrush Ecosystem Alliance was created in 2017—and represented the first investment in field delivery capacity to support the BLM-IWJV partnership. Landscape Coordinator Calee Garn provided support to BLM, the West Box Elder Coordinated Resource Management Group, Utah Watershed Restoration Initiative, Utah Department of Natural Resources, NRCS, Utah State University, and ranchers in West Box Elder County. She played a vital role in fostering relationships and building trust as well as increasing communication between landowners and office personnel. She also played an integral part in securing funds for numerous fire rehabilitation projects, fuels projects, and rangeland improvement projects.

Since January 2020, the West Box Elder Coordinated Resource Management Committee has been focused on revitalizing its strategic action plan. To identify needs, the committee met with numerous stakeholders, including federal and state resource agencies and many landowners from three different communities within the focus area. These fell into five main categories: socioeconomic, infrastructure, water, wildlife, and range. The pandemic halted subsequent meetings until March 2021. In FY 2021, the committee reviewed the brainstorming list, and committee chairs were assigned for each priority area. Next steps for these committees include identifying primary goals and objectives with the help of a new Coordinator. Garn’s assistance played a valuable role in this landscape, and her position will sunset in February 2022. IWJV will work with partners in Utah to identify other capacity needs in the future.

Overview

Total Projects Planned: 6
Total Projects Completed: 6
Partners Engaged: 50
Partnership Meetings/Field Tours: 2
of Landowners Engaged: 13
Total Acres Impacted: 53,652

Partnership Accomplishments

Conifer Removed: 28,907 acres
Veg Management/Hab Enhanced: 24,685 acres
Wet Meadows Restored: 60 acres
Mesic Structures Installed: 25
Total Project Funding Completed: \$981,967

**This position was discontinued in 2022 and does not appear in the graphic on page 25*

11. Bear River Wet Meadow/Sagebrush Specialist

Supports: NRCS

Established 2020



Note: This position was not funded by BLM, and is supported by the [IWJV's Water 4 program](#). In FY 2021, the Specialist joined the Sage Capacity Team for peer learning and networking, as well as to identify opportunities to increase on-the-ground sagebrush rangeland conservation.

Capacity Need:

- Provide technical assistance in developing and writing conservation project plans for flood irrigation infrastructure
- Build partnerships with agencies, landowners, and additional local and state partners to increase implementation and scale of wet meadow restoration practices

The Bear River Wet Meadows/Sagebrush Specialist was hired in October 2020 and has been meeting with producers to build relationships and trust. Funded in part by the Utah Association of Conservation Districts and ConocoPhillips (via IWJV funding), Rich County Conservation District, and Utah NRCS, this position supports private landowners and NRCS staff and programs.

In FY 2021, Specialist Ben Weston was key in creating a Special Funding Pool for flood irrigation infrastructure as a way to help sustain wet meadows. Thanks to the trust he had built with landowner partners, the funding pool was “flooded” with more than 50 project applications to be ranked for funding, primarily to improve flood irrigation infrastructure. One critical project already underway will reduce ditch loss and prevent a possible catastrophic future flooding situation by repairing a canal.



12. Buffalo-Skedaddle Sage-Grouse Working Group Project Coordinator
Supports: Bishop BLM Field Office
Established 2020



Capacity Need:

- Support the Buffalo-Skedaddle Sage Grouse Working Group with management and restoration efforts that promote the long-term conservation of sage grouse, the sustainability of sagebrush ecosystems, and working rural landscapes
- Use adaptive management to scale up on-the-ground projects
- Build locally based, effective collaboration that promotes landscape-scale conservation planning and enhances partnerships

The mission of this working group is to develop and implement effective conservation and land management strategies that provide long-term conservation of Greater Sage-grouse, sagebrush ecosystems, and working rural landscapes. Project Coordinator Janyne Little was hired in July 2020.

In FY 2021, the working group achieved the following important accomplishments:

- Implemented numerous spring and riparian improvement projects, juniper removal projects, and seedings. Specifically, juniper islands on private lands were treated to facilitate landscape-scale management within a larger BLM allotment.
- Launched a coordinated process to update the Conservation Strategy for the Buffalo-Skedaddle Population Management Unit
- Connected stakeholders of the working group to BLM archeological survey processes through a BLM-led field survey
- Assisted University of California, Davis Cooperative Extension staff in monitoring the effects on both annual grasses and native perennial species in two large aerial sprays of Indaziflam, and helped plan a research project for winter 2021 in which they will use carbon seed pellets that will be seeded in two different field locations to establish perennial species while controlling annual grass species with Indaziflam treatments

The Coordinator has provided holistic oversight of the working group's goals while significantly increasing its capacity to design, implement, and monitor projects to benefit Greater Sage-grouse.

Overview

Partners Engaged: 49

Partnership Meetings/Field Tours: 13

of Landowners Engaged: 3

Partnership Accomplishments

Conifer Removed: 160 acres

13. Results Oriented Grazing for Ecological Resilience (ROGER) Facilitator Supports: Nevada BLM State Office, Multiple District/Field Offices Established 2020

Capacity Need:

- Coordination and facilitation of the Results Oriented Grazing for Ecological Resilience (ROGER) group

The ROGER is a collaborative group that formed in 2016 to achieve land management objectives that improve overall ecological resilience, landscape health, and productivity, and that support ranching. The group works to:

- Develop a shared vision for landscape health and productivity
- Create a common understanding of what it takes to achieve outcomes
- Identify ways to provide ranchers needed flexibility with associated actions
- Document and share successes, failures, and lessons learned

The ROGER Facilitator position was filled in August 2020. Over the past year, Facilitator Katlyn Uhart has been key to keeping the ROGER stakeholders informed and connected through the ongoing pandemic. She has been instrumental in building and mending relationships between agencies and landowners. Areas of focus this past year for the ROGER group included outcome-based grazing permits, grazing as a fire management tool, and assessment and monitoring across the landscape. Uhart drafted the ROGER [Partnership Impact Model](#) to help define the group's success.

With a strong foundation of dedicated individuals, the group is now ready to move from planning to implementation. The group also plans to publicize information and lessons learned beyond active ROGER members to others within the Great Basin. Uhart collaborated with the IWJV to produce an [article on the ROGER collaborative](#) titled *The People Component of Land Management*.

Notably, the trust and relationships built through ROGER have helped create a working group that is focused on one of the pilot ranches participating in the BLM's [Outcome-Based Grazing Authorizations](#) program—the Winecup-Gamble Ranch.

Overview

Partners Engaged: 40

Partnership Meetings/Field Tours: 5



14. Bristlecone Project Coordinator
Supports: Bristlecone BLM Field Office, Ely District Office
Established 2020



Capacity Need:

- Provide range and wildlife technical assistance targeting conservation efforts on public and private lands to assist with overall project coordination, management, and success
- Enhance coordination among partners (e.g., schedule, organize, and facilitate meetings)
- Facilitate strategic outreach and communications

The Bristlecone Project Coordinator was hired in May 2020. Coordinator Kellie Dobrescu worked with BLM habitat biologists and fire management specialists to provide “boots-on-the-ground” assistance with a wide variety of vegetation treatments using mechanical and prescribed fire to address conifer encroachment. Having a mix of diverse public-private partnerships and pooled resources, she was able to expand efforts across the BLM Ely District area to treat encroaching conifers with several projects.

With these watershed-scale projects comes several immeasurable benefits to local communities' working lands. These projects protect local communities and natural resources by reducing the risks of catastrophic wildfires, improving working lands, and improving wildlife habitat. This is especially important in smaller mountain communities like Ely, where members have a strong connection to public land, wildlife, and hunting. Dobrescu continues to develop relationships with the community and partners to grow conservation coordination, awareness, and efforts having a full watershed-scale impact for wildlife and working rangelands. Several mesic projects depend on civic engagement and community members coming together for on-the-ground conservation. Perhaps the most significant socioeconomic impact to the local community in Ely was awarding contracts to work crews to benefit the local economy.

Dobrescu also worked closely with IWJV and BLM communication specialists to educate the public and promote the collaborative work of 23 conifer removal and prescribed burning projects via social media posts (Instagram, Facebook, Twitter), BLM, and local news outlets, and she created a feature article called [“Conifer Removal Restores Human and Wildlife Community Health”](#) for [PartnersintheSage.com](#).

Overview

Partners Engaged: 14
Partnership Meetings/Field Tours: 13
of Landowners Engaged: 8
Total Acres Impacted: 33,889

Partnership Accomplishments

Conifer Removed: 28,879 acres
Fuels Treatment: 203 acres
Veg Management/Hab Enhanced: 4,807 acres
Total Project Funding Completed: \$648,320

15. Northwest Colorado Sagebrush Conservation Partnership Coordinator
Supports: Grand Junction BLM District Office, White River Field Office
Established 2021



Capacity Need:

- Provide range and wildlife technical assistance targeting conservation efforts on public and private lands to assist with overall project coordination, management, and success
- Provide support to local BLM offices as part of an interdisciplinary team to complete rangeland health assessments, permit renewals, and sage grouse habitat improvement projects
- Expand local and state partner capacity to implement migration corridor projects at landscape scales and across ownership boundaries
- Increase project funding and cost-share opportunities through seeking habitat restoration grants
- Facilitate strategic outreach and communications

The Northwest Colorado Sagebrush Conservation Partnership Coordinator was created in 2021. Jamie Nogle was hired in January 2022 to assist Colorado BLM and partners with enhancing landscape-scale conservation and restoration efforts in crucial sagebrush steppe habitat for lands managed by the BLM Grand Junction and White River Field Offices as well as adjacent private and state lands. This position was created to support implementation of SO 3362, an order “Improving Habitat Quality in Western Big Game Winter Range and Migration Corridors.” The Mule Deer Foundation hosts the position, with supporting partners including Colorado Parks and Wildlife, USFWS Partners, Colorado State University, White River and Douglas Creek Conservation District, and other local and state partners.



16. Bi-State Local Area Working Group Coordinator
Supports: Bishop BLM Field Office
Established 2018



Capacity Need:

- Increase effectiveness and efficiency in meeting reporting and accountability needs
- Broaden outreach within the Bi-State community
- Add agency capacity to implement priority projects on-the-ground
- Coordinate actions across ownership boundaries for seamless conservation

The Bi-State LAWG Working Group Coordinator position was established in 2018 to support the Bi-State Local Area Working Group (LAWG) with its work in eight counties along the border of California and Nevada. The position was charged with building the group's partnerships and capacity, managing organization logistics, coordinating conservation efforts, and championing the success of this unique collaborative.

Coordinator Amy Sturgill works across jurisdictional boundaries to monitor Bi-State Sage-Grouse populations and improve sage grouse habitat. This collaborative conservation network contains a diverse group of stakeholders, including federal, state and local government agencies; tribal members and representatives; nonprofit organizations; and private landowners.

This year, the Management Oversight Group and the Bi-State partners opted to extend and fund the Bi-State Coordinator position for an additional three years at a ratio of 40 BLM:60 Partners. Maintaining this position will support the Bi-State LAWG's continued and growing efforts to sustain sage grouse populations and habitat in the Bi-State Area.

Accomplishments include:

- Coordinating and assisting the Bi-State Tribal Natural Resource Committee to plan and host the second Traditional Ecological Knowledge Summit. The Summit included two days of virtual presentations, followed by a tribally led field visit to the Mono Basin.
- Participating in a podcast about Bi-State efforts to conserve the Greater Sage-grouse on [episode 5 of The Interpreter](#)
- Collaborating with the IWJV to write an [article on the use of Integrated Population Models](#) that breaks down population dynamics and explains how this tool informs conservation management action for the Bi-State Sage-grouse
- Completing the [2020 Bi-State Sage-Grouse Accomplishment Report](#)
- Creating a [Bi-State Basics](#) informational magazine

Overview

Total Projects Completed: 71
Total Acres Impacted: 6,517
Partners Engaged: 331
Partnership Meetings/Field Tours: 21
Outreach Events: 19

Partnership Accomplishments

Conifer Removed: 2,748 acres
Wet Meadows Restored: 410 acres
Conservation Easements: 2,094 acres
Veg Management/Hab Enhanced: 1,065 acres
Seedlings Planted: 11,500
Fuels Treatment: 100 acres
Fuels Break: 100 acres
Total Project Funding Completed: \$4,316,768

17. Arizona Strip Wildlife Biologist/Habitat Planning and Implementation Specialist
Supports: Arizona Strip BLM District Office
Established 2020



Capacity Need:

- Provide range and wildlife technical assistance targeting conservation efforts on public and private lands to assist with overall project coordination, management, and success
- Enhance coordination among partners (e.g., schedule, organize, and facilitate meetings)
- Implement strategic outreach/communications

This position is one of three that have been created to support implementation of SO 3362, an order “Improving Habitat Quality in Western Big Game Winter Range and Migration Corridors.” Hired in June 2020, Specialist Kaitlyn Yoder helps maximize financial resources to develop substantive project proposals for improving wildlife habitat, increasing the economic viability of permit holders, and building cross-boundary relationships that will enable landscape-level restoration of sagebrush and strengthen the conservation ethic in the communities on the Arizona Strip. Building relationships with cooperating agencies enables large-scale coordination in this remote northwestern corner of Arizona between Grand Canyon and the Utah state boundary line.

Yoder stepped into several roles this year, including serving as a co-project lead on a 10,000-acre NEPA document, fulfilling the role of interim Integrated Vegetation Management Coordinator until the position was permanently filled, and acting as project lead on the Assessment Inventory and Monitoring (AIM) project. In that role, she led a diverse team of BLM specialists in developing a 20-year monitoring design for the district. Relationships fostered during the AIM design process helped ensure funding promised in the past that was not received was given to the district to install 10 fire AIM monitoring sites.

Planning and restructuring over the last fiscal year is helping partners to prepare for large-scale implementation in the future. Yoder developed a Habitat Priority Area analysis that considers region-wide concerns such as agricultural conversion, conifer encroachment, cheatgrass invasion, big game winter range and migration corridors, and upland bird distribution, and state-specific concerns such as riparian restoration, sensitive wildlife, and education/outreach.

Overview

Total Projects Completed: 1
Total Projects Planned: 5
Partners Engaged: 5
Total Acres Impacted: 6,212

Partnership Facilitation

Veg Management/Hab Enhanced: 6,212 acres
Total Project Funding Completed: \$1,454,299

18. New Mexico's Coordinating Wildlife Biologist/Habitat Planning and Implementation Specialist

Supports: New Mexico BLM State Office, Farmington and Albuquerque District Offices, Taos and Farmington Field Office
Established 2021



Capacity Need:

- Improve communication, cooperation and collaboration among key agencies in the land management and wildlife management areas
- Improve outreach to and engagement of members of the public, including landowners, interested stakeholders, and non-governmental organizations
- Connect landowners and stakeholders with agencies, projects, and research that can assist them in creating better habitat
- Improve habitats along the migration corridors in New Mexico on both private and public lands

Hired in January 2021, New Mexico's Coordinating Wildlife Biologist has proven instrumental in re-establishing relationships between BLM, USFS, and New Mexico Department of Game and Fish, facilitating important data-sharing from the state fish and wildlife agency's wildlife corridor study. Sharing of resources between agencies is critical to maximizing finite resources in wildlife and land management. This position was created to support implementation of SO 3362.

In looking for new, innovative approaches to noxious weeds, rotational grazing, and habitat projects, Coordinator Kathy McKim created a network of organizations and people (landowners, ranchers, researchers, and land management agencies) that she can connect to create better habitat.

In an effort to develop her capability as a community resource, McKim has become a part of the San Juan Chama Watershed group, which discusses private land possibilities and other issues. She is also assisting with identifying key players for a developing Four Corners Pronghorn Antelope Working Group.

Overview

Partners Engaged: 13

Partnership Meetings/Field Tours: 2

of Landowners Engaged: 14



SAGE CAPACITY TEAM



Sean Claffey
Southwest Montana
Sagebrush Conservation
Partnership Coordinator
-Dillon, Montana



Adrienne Hoskins
Outcome-base Grazing
Coordinator
-Pocatello, Idaho



Kelli Dobrescu
Bristlecone Project
Coordinator
-Ely, Nevada



Jason LeVan
Sage Grouse Initiative
Range and Wildlife
Conservationist
-Lander, Wyoming



Katlyn Uhart
Results Oriented Grazing
for Ecological Resilience
Facilitator
-Reno, Nevada



Ben Weston
Bear River Wet
Meadow/Sagebrush
Specialist
-Randolph, Utah



Alex Dohman
Burns and Lakeview Oregon LIT
Coordinator
-Lakeview, OR



Brook Morgan
Sage Grouse Initiative Range
and Wildlife Conservationist
-Burley, ID



Brenda Richards
Idaho Rangeland
Conservation Partnership
Coordinator
-Murphy, Idaho



Amy Sturgill
Bi-State Local Area
Working Group
Coordinator
-Bishop, California



Julie Unfried
Sage-Grouse Local
Implementation Teams
Coordinator
-Hines, Oregon



Connor White
Bruneau-Owyhee Sage-
Grouse Habitat Project
Outreach Coordinator
-Boise, Idaho



Kaitlyn Yoder
Arizona Strip Wildlife
Biologist-Habitat Planning
& Implementation
Specialist
-St. George, Utah



Janyne Little
Buffalo-Skedaddle Sage
Grouse Working Group
Project Coordinator
-Susanville, California



Kathy McKim
New Mexico's Coordinating
Wildlife Biologist - Habitat
Planning and Implementation
Specialist
-Chama, New Mexico



Heidi Anderson
Southwest Montana Sagebrush
Partnership Project Manager
-Dillon, MT



Jamie Nogle
Northwest Colorado Sagebrush
Conservation Partnership
Coordinator
-Grand Junction, CO



In FY 2021, the *Partnering to Conserve Sagebrush Rangelands* communications shop leaned into supporting the field-based capacity positions and advancing technical transfer of sagebrush rangeland science and research. We also ventured outside our comfort zone with reaching new audiences on different topics than those previously explored by this partnership, such as recreational management.

FY 2021 also brought significant shifts in IWJV’s sagebrush communications capacity. Early in 2021, IWJV’s communications team experienced a vacancy, and staff worked to reallocate responsibilities and backfill by hiring a new part-time sagebrush communications specialist whose position will grow to be a full-time role beginning in FY 2022.

A focus on video production this fiscal year yielded exciting results. The film “Playing with Fire” was released, highlighting important messages related to sagebrush habitat conservation as relevant to recreation-oriented audiences. See more outcomes from this video below. An in-house video was created called [“Embark on a Virtual Tour of Eastern Nevada”](#) that brought people together in the field virtually when a large event was canceled in the Elko region due to pandemic-related travel restrictions. This video received 1,300 views and was made purely from content collected and shared by Nevada partners! We also focused on preproduction, planning, and field-based shooting for three new, professionally produced videos about the restoration of Dixie Cree (Nevada), outcome-based grazing (Oregon), and field capacity positions (Idaho). These videos will be released in FY 2022. We can’t wait to report on communications outcomes.

In summary, we produced engaging and educational content that those in the sagebrush conservation community found highly valuable for awareness and implementation. More than ever, we are reaching a wide array of audiences, including those involved in recreation across sagebrush rangelands as well as those unfamiliar with the incredible value and beauty of this iconic western landscape. Here is a highlights reel of our most significant accomplishments and products released in FY 2021.

Website metrics for October 1, 2020 to September 30, 2021

Total website unique page views ([PartnersintheSage](#)):
34,846 (35% growth from FY 2020)



Top-performing Sagebrush Communications Projects

Video Project “Playing with Fire”

In July 2021, in the midst of the fire season, we launched [Playing with Fire: Recreating Safely with Invasives in Sagebrush Country](#). The goal of this video was to touch the emotions and reach the intellect of sagebrush-country recreators to encourage and empower them to:

- A) **Learn more** about the invasive weeds fueling rangeland wildfires and the associated impacts to sagebrush habitat
- B) **Understand that recreation spreads weeds** and starts fires
- C) **Promote the value** of sagebrush rangelands within their communities
- D) **Become invested in the health** of this unique ecosystem
- E) **Support land managers** in the conservation and management of this landscape

Results: This video’s landing page attracted 1,922 views, with the film receiving 1,625 views. A paid-promotions plan was established to boost this film’s views. This video was an example of an attempt to reach new audiences outside our sagebrush conservation community. Many BLM wildlife managers tell us they face growing problems in travel management and recreational use impacting Greater Sage-grouse populations, making this video’s messages even more relevant for the future.

SageWest landing page and 2021 workshop

The online presence of [SageWest](#) lives on via our website and continues to draw interested individuals into the network as well as our *Partnering to Conserve Sagebrush Rangelands* effort. We also co-hosted the [2021 SageWest Communicators Workshop](#), an interactive, virtual event with 66 communications professionals working in sagebrush country to build communications capacity. They participated in presentations, panels, and breakout discussion groups on the topics of evaluating conservation communication impacts, studying sagebrush organizational networks, podcasting, and communicating with diverse audiences.

Results: The SageWest landing page has been viewed 905 times this year and is one of our top pages without significant effort being invested to frequently direct traffic there.

Key Feature Posts and Stories

Web Portal Post: We supported the release of Part 1 of the Sagebrush Conservation Strategy via this news post: [Just Released: WAFWA Sagebrush Strategy, Part 1 + Webinar](#). This strategy highlights the importance of the sagebrush biome to people and wildlife, challenges to sagebrush conservation, and adaptive management and monitoring needs. The Western Association of Fish and Wildlife Agencies (WAFWA) has limited communications capacity, so we provided our platform to house this content and promote the webinar, resulting in 576 views on the post.

Second Annual Collaborative Forum: Called [“Strengthening Collaboration Through a Changing Environment.”](#) this forum enhanced the toolkit for the Sage Capacity Team, their BLM colleagues, and dozens of other partners. The forum was kicked off with John Ruhs, former Idaho BLM State Director, and other BLM decision-makers discussing successes, challenges, and opportunities relating to outcome-based grazing, conifer removal, and fire management in sagebrush ecosystems. The audience gained a better understanding of BLM sagebrush

operations both internally and externally, as well as how to support local efforts. “Collaboration should be our mindset,” said Ruhs during one of the sessions. “Call it partnership, being friends, being a good neighbor. Let’s work together to get results on the ground.” A blog post after the event (linked above) provided resources and recordings from those who presented.

Wildfire, Invasives, and Climate Change: A new fact sheet called “[Restoring America’s Sagebrush: Rangeland Wildfire, Invasives and Climate Change](#)” was produced for the Sagebrush Conservation Committee, the action-oriented arm of the WAFWA Sagebrush Executive Oversight Committee.

Partnerships in Action: This [Partnerships in Action](#) landing page features sagebrush conservation–focused partnership efforts we have written stories about. Individually, we promote each story via their unique URL, yet continued traffic to this landing page remains high without active promotion. In 2021, 433 viewers sought out this landing page specifically. We will continue to add stories of collaborative sagebrush conservation that support locally led and designed efforts and outcomes.

Other Top-performing Posts

A Hub for Conservation and Ranching	September 10, 2021	272 views
The People Component of Land Management	August 9, 2021	358 views
Conifer Removal Restores Community Health	July 12, 2021	402 views
The Dodo of the Desert	March 30, 2021	281 views
What are Integrated Population Models?	March 8, 2021	318 views
Collaboration in a Changing Environment	February 12, 2021	202 views
Hope After Rangeland Fire	January 6, 2021	471 views
The Conifer Conundrum	November 12, 2020	359 views
FAQ on Outcome-based Grazing	October 7, 2020	387 views





Funding from the initial intra-agency agreement supported science projects coordinated by NRCS Working Lands for Wildlife Science Advisor Dr. David Naugle at the University of Montana, a team of scientists, and cooperating universities. [See the list of legacy science products funded from this partnership here.](#) The overall goal was to conduct science-based evaluations to spatially prioritize conservation treatments, measure the biological response of sage grouse and sagebrush obligate species to conservation treatments, monitor collective efforts to determine outcomes, and support adaptive management of conservation programs and projects. In FY 2021, science efforts focused on quantifying trends in rangeland health using the Rangeland Analysis Platform and on outcome-based evaluations of conifer removal in Lakeview, Oregon.

Ecosystem Services: Quantifying Trends in Rangeland Health

The [Rangeland Analysis Platform](#) (RAP) provides simple and fast access to geospatial data characterizing western U.S. rangelands. Funded (in part) by the BLM-IWJV partnership, the tool was developed to provide landowners, resource managers, conservationists, and scientists access to data that can inform land management planning, decision-making, and the evaluation of outcomes. Its datasets allow users to monitor trends and changes at the pasture, landscape, or regional scales from 1986 to present. BLM staff across the West have been using RAP outputs for range and wildlife habitat assessments. The RAP team continues to work with BLM to improve outreach and training for BLM staff so as to identify best practices and additional modifications to the tool to meet specific BLM needs.



In FY 2021, research and development became a priority, exploring new algorithms, methods, and outreach capabilities. These efforts resulted in the release of a new version of datasets and additional advancements:

- **RAP version 3.0: The following changes were made:**
 - Reprocessing of the vegetation cover and production datasets to include Landsat Collection 2
 - The addition of the National Park Service Northern Colorado Plateau Network monitoring data for cover training
 - The incorporation of agriculture, development, and water into cover modeling
 - Expansion of geography to include the continental United States
- **Additional apps and tools: In addition to the primary web application, the RAP now hosts smaller apps and tools to assist managers and practitioners in sustainable rangeland management:**
 - [Production Explorer](#): Easily visualize and compare production trends anywhere in the U.S.
 - [Cheatgrass](#): Combined effort between University of Montana and the U.S. Geological Survey (USGS) to provide annual herbaceous cover across the sagebrush biome
 - [Great Basin Fire](#): Probability of where large fires are most likely to occur given an ignition
 - [Historical Imagery](#): Visualize historical and modern imagery side by side (in Montana, Idaho, and Wyoming)

RAP Google Analytics: October 1, 2020–September 30, 2021

- 18,217 unique users; 32,073 sessions; 65,251 page views
- Average session duration is 2:13; use of the actual app averages 5:19
- 60% of users directly type the URL, 24% search online, 11% are referrals, 3% are social media.

Data download statistics: June 24, 2019–January 24, 2021

- 23,046 unique visitors
- 290.15 terabytes of data downloaded
- 30,584,672 total requests

Peer-Review Science

- *Manuscript*: Allred, B. W., et al. 2021. [Guiding principles for using satellite-derived maps in rangeland management](#). Rangelands.

- *Manuscript*: Pastick, N. J., et al. 2021. [Rapid monitoring of the abundance and spread of exotic annual grasses in the western United States using remote sensing and machine learning](#). AGU Advances 2.
- *Manuscript*: Allred, B. W., et al. 2021. [Improving Landsat predictions of rangeland fractional cover with multitask learning and uncertainty](#). Methods in ecology and evolution.
- *Manuscript*: Jones, M.O., et al. 2021. [Annual and 16-Day rangeland production estimates for the western United States](#). Rangeland Ecology & Management 77:112–117.

Outcome-based Evaluation of Conifer Removal in Lakeview, Oregon

The BLM Lakeview District Office initiated a radio-telemetry study of Greater Sage-grouse east of Lakeview, Oregon, in the south Warner Mountains in 2009 to collect baseline data on demographics and habitat use. The decline of the Greater Sage-grouse across its North American range, and the identification of conifer encroachment as a threat to sage grouse populations, led to a desire to study the potential effects of western juniper (*Juniperus occidentalis*) on this imperiled game bird. In 2018, the Applegate Field Office of the BLM Northern California District Office, expanded the radio-telemetry study into northwest Nevada and northeast California, along the Oregon-Nevada border and east of Fort Bidwell, California (the Vya region). The focal area for trapping and monitoring sage-grouse in Oregon eventually developed into the Treatment, an area where encroached juniper was removed from 2008 to 2017. A Control area (i.e., an area without juniper treatments), also located in Oregon with similar physiographic characteristics to the Treatment, was established in 2010. Juniper removal began in the Vya in 2013.

University of Idaho conducted fieldwork from 2012 through the summer of 2014, with the objective of assessing the effects of juniper encroachment and juniper removal on sage grouse. This work included extensive habitat surveys in both the Treatment and Control areas, and radio-telemetry of hens marked with VHF transmitters. Lakeview BLM supported two technicians to monitor radio-marked sage-grouse during the fall and winter of 2014.



In 2015, Oregon State University began to administer the research and transitioned from VHF radio collars to GPS platform terminal transmitters, which provide highly accurate location data on fixed time schedules with the support of BLM funding. The primary objective of Oregon State University's research was to assess longer-term sage grouse population dynamics and habitat selection in response to conifer removal. Additional research in the project area has focused on the thermal microclimates of sage grouse brood locations in 2018 and 2019 and the effects of juniper removal on the understory plant and invertebrate communities within the sagebrush steppe ecosystem. The final field season for the Oregon portion of this study was in 2021. With 12 years of data collected, analysis is ongoing, and there is tremendous opportunity to answer a variety of additional important questions around sage-grouse and conifer removal with this rich dataset.

In addition to producing five peer-reviewed publications on sage grouse (and one publication on sagebrush songbirds, supported by NRCS), this project provided valuable, management-relevant insight into the response of sage grouse to encroaching conifers. Conifer removal was empirically demonstrated to increase available habitat for sage grouse, benefit important vital rates like survival and nest success, and ultimately increase sage grouse population growth rates by 12%. This is a rare and encouraging example of an imperiled species responding positively to active management. [Learn more about this multiyear research here.](#)



In FY 2021, technical transfer efforts were a prominent focus of the BLM-IWJV partnership. Technical transfer represents the approaches we use to inform habitat conservation by providing partners with enhanced **access, interpretation, and application** of science, local and Traditional Ecological Knowledge, and practices in order to strengthen on-the-ground outcomes. Through our continued partnership and collaboration with numerous partners, including BLM, NRCS Working Lands for Wildlife, USGS, Bio-Logic Inc., the University of Montana, University of Nevada Reno Extension’s Living with Fire Program, and the Sage Capacity Team, we continued to put science into action and strengthen conservation outcomes and our partnerships across the West.

A part-time IWJV Technical Transfer Specialist position was created in FY 2021 to provide support for projects that bridge the gap between science and implementation, including those outlined below. Through this position, we’ve greatly increased our capacity to design and implement technical transfer projects from previous years. This position is hosted by the University of Montana and is partially funded by the National Science Foundation INTERN Program.

Pinyon Juniper Encroachment Education Platform

Format: Online Educational Web Page

Date(s): FY 2021

Audience: Agency partners (BLM, NRCS, USFWS, Sage Capacity Team, state partners, etc.), general public, private landowners, and other interested stakeholders

Product: The website is in the final stages of development and will be released by summer 2022

In FY 2020, NRCS, BLM, and other partners pointed out some specific [barriers to putting science into action](#) for pinyon-juniper habitat conservation, including the fact that there was no one-stop shop where land managers, practitioners, the public, and other stakeholders could access information. So in FY 2021, we partnered with NRCS Working Lands for Wildlife and the University of Nevada Reno Extension’s Living with Fire Program to develop a collaborative, stakeholder-driven extension program to provide science-based resources on conifer encroachment in sagebrush rangelands, infuse current science into land management actions, and improve public perception of those actions. In FY 2021, we:

- Developed the website layout with peer review of specific fact sheets, interactive graphics, and content, in collaboration with the web developer
- Developed artistic drawings of a healthy sagebrush ecosystem and a pinyon juniper–encroached system
- Completed a literature review of scientific resources housed in the “see the science” tab
- Consulted stakeholders and partners throughout the process to inform the end product, including incorporating feedback from BLM staff in Colorado and Idaho

Low-Tech Wet Meadow Restoration Module Webinar

Format: Webinar

Date(s): August 4, 2021

Audience: Wyoming Land Managers and Partners (BLM, NRCS, Wyoming Game and Fish, The Nature Conservancy, Conservation Districts, USFWS)

Product: [Recorded Webinar Modules](#)

In this one-day virtual workshop, participants were introduced to: reading the landscape to recognize meadow conservation opportunities, various low-tech “Zeedyk” structures (e.g., one-rock dams, Zuni bowls), and project planning, implementation, and monitoring. Regional instructors (NRCS, IWJV, Bio-Logic’s Shawn Connor) shared tips and lessons learned from implementing low-tech meadow restoration projects across the West, while Wyoming conservation partners (NRCS, USFWS, BLM, Wyoming Game and Fish) discussed local opportunities, considerations, and lessons learned. This webinar effort was hosted in partnership with NRCS Working Lands for Wildlife.



More than 180 people registered to attend and over 100 attended live. The webinar’s landing page acted as a Save-the-Date, registration sign-up, and housing platform for all recordings and resources after the event and has been visited 1,382 times. The modules, which were broken down into four sections and posted to YouTube, have been viewed more than 450 times.

Due to increased demand from land managers for resources and training on this type of low-tech wet meadow restoration, this webinar was formatted to be a four-part module available via YouTube. Although this webinar was tailored to Wyoming, the format was developed so that it could be shared via our webpage to partners and land managers across the West interested in this type of collaborative restoration.

[Module 1: Background and Purpose](#)

- Why and What is Low-Tech Restoration?
- Context of Wet Meadow Restoration in Wyoming
- Wyoming Landscape Restoration Activities

[Module 2: Reading the Landscape to Recognize Opportunities](#)

[Module 3: Low-tech Structures for Riparian and Wet Meadow Restoration](#)

[Module 4: Planning, Implementation and Monitoring](#)

- Where Should We Work?
- Project Implementation
- Monitoring and Maintenance
- Resources and Reference Materials

Riparian and Wet Meadow Restoration: Place-based Technical Assistance and Support

Format: Field-based technical training and consulting

Date(s): August 17–18 and September 22, 2021

Audience: 32 Wyoming Land Managers and Partners (including 17 BLM staff) on August 17 and 18, and 13 participants (8 BLM staff) on September 22

Product: Local and state partners increased their technical skills via hands-on training

In 2018, BIO-Logic, Inc., a natural resource consulting firm, was contracted to provide technical assistance to BLM, NRCS, and local partners seeking to launch projects using Zeedyk and other restoration techniques. These services were targeted in priority landscapes where partners are working collaboratively to address mesic habitats to benefit sage grouse and sagebrush ecosystems. Following a site visit in FY 2019 to Deep Creek (tributary to the Sweetwater River in Fremont County, Wyoming), BIO-Logic’s Shawn Conner, NRCS Sagebrush Ecosystem Specialist Jeremy Maestas, and IWJV’s Sagebrush Collaborative Conservation Specialist Mandi Hirsch worked with local partners to organize, plan, and conduct a two-day technical, hands-on training at the Deep Creek site. This workshop increased local and state partners’ technical skills and expertise in reading a landscape, planning a project, and implementing various low-tech structures throughout Deep Creek. Following the workshop, local partners conducted several site visits to examine the current state of other wet meadow and/or mesic areas and begin initial planning for restoration efforts in the upcoming year.

Scaling up low-tech riparian restoration across the region will continue to be an important emphasis of our collaborative work in the sagebrush ecosystem.

Protecting Carbon in Sagebrush Rangelands

Format: Report

Date(s): Completed summer 2021

Audience: Managers, policymakers, landowners, and the public

Products: [Protecting Carbon in Sagebrush Rangelands Report](#), synthesizing current science on carbon storage in rangelands and the impacts of conservation actions; [Protecting Carbon in Sagebrush Rangelands Synthesis](#), summarizing our full report in two pages

Western rangelands and grasslands are being recognized for their ability to store carbon long into the future. Rangelands are vast and store over 25% of carbon found in western ecosystems. As the climate warms and the West experiences more extreme weather events like drought and fire, as well as landscape-scale changes like conifer expansion and land-use conversion, it is more important than ever to promote management practices that protect existing carbon stored in rangelands.

In order to get this important science into the hands of managers and decision-makers, the IWJV produced several resources to help individuals across the West understand how management actions affect carbon sequestration and stored carbon. Resources included are the full “Storing Carbon in Western Rangelands” report and a two-page synthesized version.

WAFWA Sagebrush Biome Conservation Strategy and Comprehensive Greater Sage-Grouse Conservation Strategy Implementation

Format: Conservation Strategy and associated outreach actions

Dates: FY 2021

Audience: Policymakers, managers, and implementers across the sagebrush biome

Product: [WAFWA Sagebrush Conservation Strategy Part I: Challenges to Sagebrush Conservation](#)

WAFWA received funding in FY 2021 from BLM through Partners in the Sage to implement the Sagebrush Biome Conservation Strategy and Comprehensive Greater Sage-Grouse Conservation Strategy. Through this agreement, WAFWA completed and published [Part I of the Sagebrush Conservation Strategy](#) in March 2021 and introduced it to the sagebrush conservation community via a webinar. Part I is an overview and assessment of the challenges facing land managers and landowners in conserving sagebrush ecosystems. WAFWA also coordinated progress on Part II of the Strategy, which will summarize conservation needs at ecoregional scales, provide an analysis of barriers and impediments to successful conservation of the sagebrush biome at those scales, and present nonregulatory strategies developed through a stakeholder engagement process to overcome these challenges.

WAFWA also worked with the Udall Foundation and numerous stakeholders to explore the concept of a sagebrush network governance structure. As part of these efforts, the John S. McCain III National Center for Environmental Conflict Resolution conducted a situation assessment ([Sagebrush Biome Partnership Governance Assessment](#)) to identify the needs, issues, priorities, and obstacles associated with a sagebrush biome partnership. WAFWA participated in work groups meetings and developed and edited communications products.

Additional sagebrush conservation work included promotion of the [Western Weed Action Plan](#), sagebrush conservation communications, and coordination of the conservation effort. Funding was also provided for several researchers to evaluate seasonal habitat use by sage grouse. These data were provided to BLM.



Unprecedented challenges require strategic and durable investments in public, private, and Tribal partnerships.

The power of this multiyear work is that we are creating relationships with BLM and its partners across jurisdictional boundaries to implement sagebrush habitat restoration and management. And those relationships take time to build trust and demonstrate results.

Thanks to BLM’s investments in landscape-scale science and investments in *Partnering to Conserve Sagebrush Rangelands*, we are proving that collaboration to support resilient lands and communities is possible!

In FY 2021, we continued to build a series of collaborative efforts (as described above) by working with 52 BLM State, District, and Field Offices and >650 partners! These field-based efforts create opportunities for inclusive and action-oriented implementation of sagebrush habitat conservation. Most importantly, they are key to “reading the landscape” and helping identify specific technical and financial resources to address priority threats. This Sage Capacity Team is becoming a powerful and coordinated network with learning, cooperation, and shared vision that is helping to scale up conservation.

Here’s a powerful look at how this partnership is making a difference across the sagebrush biome. (Note: the barriers referenced below were identified in the Sagebrush Partnership Model Development effort prepared by the National Center for Environmental Conflict Resolution in coordination with WAFWA, BLM, USFWS, and IWJV.)

Barrier	Action
Insufficient funding and staffing	Eighteen positions have been created, helping target \$30,000,000 in project funding across jurisdictional boundaries.
Communication silos and jurisdictional boundaries	These positions serve as partnership liaisons coordinating across their state, landscape, or community as well as across fence lines (Local Implementation Teams, partnerships, sage grouse working groups, etc.).
Data and monitoring limitations	Investment in technical transfer is a primary emphasis of this partnership, along with key

	communications to support data-sharing; the focus ahead will be on marrying remote sensing and AI tools with the BLM AIM Strategy and field-based monitoring efforts.
Wasteland perception	Priority investments in communications with “stories on the land” are created to share about the national importance of the sagebrush biome and reach nontraditional audiences (see examples here!).
Funding structures	The intra-agency agreements between the BLM and IWJV provide important mechanisms to allocate funding across multiple years under the approval of the Management Oversight Group, providing the time and flexibility to address the bottlenecks identified by the field.
Inconsistent and insufficient priority	Thanks to this partnership, the sagebrush biome has become identified as a national priority for conservation investment. We meet with BLM partners and interested stakeholders, including non-governmental organizations, foundations, and corporations, to create a public-private funding portfolio for the future.
Threats to the biome	Together with federal agencies, state fish and wildlife agencies, the Western Governors’ Association, Tribal Nations, the Sagebrush Executive Oversight Committee, and IWJV Sagebrush Conservation Committee, we are coordinating on priority threats. See www.PartnersintheSage.com .

Our partnership network grows by working together to develop innovative approaches to landscape conservation that produce ecological, social, and economic outcomes for communities. Here is a snapshot of the funding that has been leveraged through the intra-agency agreements.



FY 2016–2021 Funding Accomplishments

New funding was added to support field delivery, communications and outreach, technical transfer, and other aspects of our work.

Source	Amount
BLM Headquarters	\$7,033,237
BLM State Offices/Other	\$387,529
Partner Contributions	\$5,087,226
(Including corporate investments)	\$1,675,000
Capacity Total	\$12,507,992
Partnership Leverage (BLM: partners)	59:41
Total Project Funds reported by other agencies	\$29,707,411
Grand Total	\$42,215,403

For budget information, see *Appendix B: Financial Overview*.

In Summary,

We have developed a powerful record of accomplishments by working together to build capacity and achieve impact. As we look toward future years, our goal is to continue to meet the needs of the BLM by addressing internal and external barriers, inspiring partnership spark and success, and most importantly, addressing high-priority threats to sagebrush rangelands, especially focused on invasives and wildfire, conifer encroachment, and mesic conservation. BLM's creative and entrepreneurial investment through the IWJV and our collaborative DNA is making a difference in communities across the West for the future of conservation.



APPENDIX A

List of Acronyms

AIM	Assessment Inventory and Monitoring
BLM	Bureau of Land Management
BOSH	Bruneau-Owyhee Sage Grouse Habitat
FY	Fiscal Year
IRCP	Idaho Rangeland Conservation Partnership
IWJV	Intermountain West Joint Venture
LAWG	Local Area Working Group
LIT	Local Implementation Team
MOU	Memorandum of Understanding
NRCS	Natural Resources Conservation Service
OBGA	Outcome-based Grazing Authorization
RAP	Rangeland Analysis Program
ROGER	Results Oriented Grazing for Ecological Resilience
SGI	Sage Grouse Initiative
SMSP	Southwest Montana Sagebrush Partnership
USFS	U.S. Forest Service
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
WAFWA	Western Association of Fish and Wildlife Agencies