

Utah's Adaptive Resources Management Greater Sage-grouse Local Working Groups 2020 Annual Report



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*Cover photo: Sage-grouse habitat area near East Canyon, in the Morgan-Summit Sage-grouse Management Area.
Courtesy of Lorien Belton.*

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Table of Contents

Introduction	3
Local Working Group Coordination	3
Statewide Coordination	4
Cost Savings from Virtual Format	5
LWG Participant Feedback on Shift to Virtual Format	6
Castle Country Adaptive Resources Management (CaCoARM) Local Working Group	9
Color Country Adaptive Resources Management (CCARM) Local Working Group	10
Morgan-Summit Adaptive Resources Management (MSARM) Local Working Group	11
Parker Mountain Adaptive Resources Management (PARM) Local Working Group	12
Rich County Coordinated Resources Management (CRM) Local Working Group	13
Southwest Desert Adaptive Resources Management (SWARM) Local Working Group	14
Strawberry Valley Adaptive Resources Management (SVARM) Local Working Group	15
Uintah Basin Adaptive Resources Management (UBARM) Local Working Group	16
West Box Elder Coordinated Resources Management (CRM) Local Working Group	17
West Desert Adaptive Resource Management (WDARM) Local Working Group	18
Figure 1 . Local working group (LWGs) members were asked to indicate of the topics provided those they felt their LWG should focus on moving forward, Utah Community-based Conservation Program Survey, 2021	8
Table 1 . LWG Meetings and Field Tours Summary	20

Introduction

Each of Utah's Sage-grouse Management Areas (SGMAs) is supported by an adaptive resource management local working group (LWG) coordinated by the Utah Community-Based Conservation Program ([CBCP](#)). The Utah CBCP is a long-term partnership effort with the [Utah Division of Wildlife Resources \(UDWR\)](#), [Utah State University Extension \(USU\)](#), and the [Berryman Institute \(BI\)](#). Because of this partnership, the LWGs have been a key drivers of local [research](#), and collaborative, coordinated rangeland and wildlife conservation efforts in the state for over two decades. The LWGs are an integral element in the success of the [Utah Conservation Plan for Greater Sage-grouse](#). Although largely focused on sage-grouse, these locally focused groups tackle a wide array of related topics, and work closely with the regional [Utah Watershed Restoration Teams \(WRI\)](#) teams to develop and implement management projects. In 2020, because of the COVID-19 pandemic, we followed State of Utah guidelines and implemented a virtual LWG meeting format. This report summarizes the groups' accomplishments for the year, as well as results of a March 2021 survey regarding effectiveness of the virtual format used during most of the year.



Local Working Group Coordination

The LWGs highlighted in this report focus on topics of key local interest that are also of state, regional, and national importance. Whether that be locally-sponsored research, partnerships with industry, or managing complex factors such as recreation management and hydrology, the groups provide a collaborative venue for exploring and sharing new ideas. Despite the challenges posed by the COVID-19 pandemic, the LWGs worked on a wide array of projects, from landscape scale planning of private lands projects, to exploring ways to enhance infrastructure and responsible tourism locally, and in-depth discussion of considerations on regional project proposals.

The LWGs are public forums for ideas, a generator for locally relevant research, a testing ground for policy ideas, a way for multiple partner organizations to stay apprised of one another's work and policy environments, and forum for networking. The LWGs work closely with regional WRI sub-teams to develop projects focused on local and state needs and also participate in the winter project review phase.

Utah's LWGs reflect the diversity and complexity of the mandates in the [Utah Conservation Plan for Greater Sage-grouse](#). As such, they play an important role in continuing to provide a venue for implementation of that plan at the local level. In that role, the LWG participants are always at the ready to provide feedback on in-development state-level policy (such as the state, Bureau of Land Management (BLM), and U.S. Forest Service (USFS) plans), as well as tools, including the improvements in seasonal habitat mapping. A summary of the meetings conducted by each LWGs can be found at the end of this report (Table 1).

Statewide Coordination

Key functions of the CBCP occur at a statewide level. In 2020, these included:

- **New initiatives for statewide research, policy, and management**
 - Beginning in 2020, we offered several statewide zoom [presentations](#) on topics of interest to many working groups. The first topics were:
 - Considerations for sagebrush treatments in sage-grouse habitat
 - Pinyon-juniper removal cost-benefit assessment modeling tool
 - These webinars enabled the CBCP to initiate conversations in a timely manner with interested participants from all LWGs, then have more focused conversations at the local working group level as appropriate to local situations when the smaller groups meet in person.
 - Utah State University, BYU, and the UDWR entered into a Memorandum of Agreement to create a permanent and protected state repository for all sage-grouse radio-telemetry movement data. These data will be available soon for authorized users to view historical and current sage-grouse locations and movement via Utah Wildlife Tracker.
 - The CBCP LWGs published four articles based on research completed in Utah. The title of the articles and a link to each of them is provided below.
 - Howell, R.G., R.R. Jensen, S.L. Petersen, and R.T. Larsen. 2020. Measuring Height Characteristics of Sagebrush (*Artemisia* sp.) Using Imagery Derived from Small Unmanned Aerial Systems (sUAS). *Drones* 2020, 4, 6.
<https://www.mdpi.com/2504-446X/4/1/6>
 - Simona Picardi, T. Messmer, B. Crabb, M. Kohl, D. Dahlgren, N. Frey, R. Larsen, and R. Baxter. 2020. Predicting greater sage-grouse habitat selection at the southern periphery of their range. *Ecology and Evolution* DOI: [10.1002/ece3.6950](https://doi.org/10.1002/ece3.6950).
 - David C. Stoner, T. A. Messmer, R.T. Larsen, S.N. Frey, M.T. Kohl, E.T. Thacker, and D.K. Dahlgren. 2020. Using satellite-derived estimates of plant phenological rhythms to predict sage-grouse nesting chronology. *Ecology and Evolution* DOI: [10.1002/ece3.6758](https://doi.org/10.1002/ece3.6758).
 - Chelak, M.S., A.A. Cook, D.D. Frame, and T.A. Messmer. 2020. Aspergillosis in an augmented greater sage-grouse (*Centrocercus urophasianus*) population in central Utah: a case report. *Western North American Naturalist* [80\(4\):547-550](#).
 - In 2021, we expect to continue the webinar series on sage-grouse habitat management. These will be informed by results from the survey conducted in March 2021. Likely future topics include those listed and many others:
 - Livestock grazing and sage-grouse interactions
 - Soil crusts in restoration, and
 - Response of sage-grouse to habitat treatments.
- **Adaptations for Covid-19:**
 - We facilitated an overall shift to virtual meetings to ensure that collaboration and communication continued to occur throughout the pandemic.
 - Regular introductions of new faces in the meetings, with a focus on position turnover updates has been particularly useful in the absence of the casual meetings where those introductions might normally occur.

- We made a strategic shift to bringing in more individuals for presentations at small meetings. Normally their presentation at a small group meeting would never justify the cost of an out-of-state presenter giving a 20-minute talk, but we now we can look farther afield for specifically relevant expertise. We will continue this beyond the pandemic, because most professionals are now comfortable with, and prepared for, remote presentations in a way they weren't just a year ago.
- **Partnership and product development**
 - Although separate funding supports these initiatives, the CBCP working groups benefit from the close connections with other efforts of the BI, USU, USFS, BLM, UDWR, and BYU, such as:
 - Pinyon-juniper (PJ) cost-benefit model tool being developed by Dr. Simona Picardi and Dr. Justin Small <https://utahcbcp.org/presentations/>
 - Seasonal maps developed jointly by USU, BLM, and UDWR for the BLM Habitat Assessment Framework (HAF) (in development, will be available online soon)
 - Dr. Dave Dahlgren's work on sagebrush treatment considerations in sagebrush habitat areas. Visit <https://www.usugrouserange.com/resources-videos>
 - USU Range Extension's work on livestock grazing, led by Dr. Eric Thacker <https://extension.usu.edu/rangelands/>
 - Graduate research projects on sage-grouse and grazing in [Rich County](#)
- **Newsletter and listserv updates**
 - The [CBCP quarterly newsletter](#) goes out to all the participants in the local working groups, but also reaches a wider audience of county commissioners/council members, statewide officials with interest in sage-grouse issues but who do not have reason to attend specific LWG meetings, and a variety of other stakeholders around the state and region. The newsletter often includes:
 - Policy change summaries, intended for a general audience
 - Straightforward research summaries, with information on applicability to management decisions
 - Guest columns from agency partners with pertinent program news
 - Previews of new research being conducted, so the public can be aware of research long before the lengthy peer-review process has produced formal results
 - Case histories on LWG projects
 - Listserv updates are sent periodically to the wider list of interested individuals as well. These updates frequently include:
 - Time-sensitive opportunities to comment on developing policies
 - Learning opportunities, such as statewide zoom presentations
 - Short research updates and links to new research

Cost Savings from Virtual Format

The Covid-19 pandemic created innumerable complexities, and no doubt slowed some collaborative work due to the difficulty of working in person on planning, particularly at the outset. However, shifting to a virtual format for the year also came with some clear cost savings, shared across the many agencies and individuals who participated. Although every group is different due to location and composition of participants, we took a generic meeting and calculated the potential cost savings of conducting it online.

For a generic meeting with 17 participants, we estimate that:

- 5 might come from 5-10 miles away (local landowners, and agencies with nearby offices)
- 5 might come from 25-30 miles away (regional agency offices)
- 5 might come from 70-100 miles away (regional or state-level offices, often carpooling)
- 2 might come from up to 250 miles away (facilitator, guests or special speakers)

At that number of miles driven (approximately 1000 total) per meeting, at a \$0.55/mile cost, that is \$550, spread across multiple entities. With an average of perhaps 20 total hours of transit time across the meeting attendees, that amounts to a half week of personnel time saved by having the meeting virtually. Clearly, there are pros and cons to that travel time not accounted for in this rough calculation, such as meeting time in vehicles when carpooling, food or even hotel expenses for longer trips, etc. However, it is clear that the expenses from personal time dedicated to travel, and the costs of mileage in both monetary and carbon emissions values, were substantially different in 2020.

Ideally, in the coming year, a hybrid model of some online participation and some in-person collaboration will continue to see such cost savings into the future.

LWG Participant Feedback on Shift to Virtual Format

In March 2021, we completed a short, 11-question internet survey of participants in the LWGs to determine how 2020's year of virtual meetings went for them, and what ideas they had for the future. The 75 respondents were relatively evenly split across the state of Utah, with somewhat higher representation from the southern LWGs.

First, we asked participants to share how they felt about different aspects of the shift to virtual working group meetings. A majority (60%) listed the reduced travel time and the ability to attend multiple meetings in a day as positives. The ability to share screens was noted as positive by 52%. The dominant negative, felt by 71% of respondents, was the reduced social time at the end of meetings. Although the data contained no surprises, it was interesting to note that only 52% felt that the ability to share screens was positive (rather than neutral, 37%), suggesting that there is still room to improve the group information sharing value of the conversation by incorporating more people's screens, as no doubt many people in conversations had maps, data, or images that could have been shared but were not.

Over three-quarters of the respondents felt that future meetings should have a regular virtual/zoom component. A few people noted that this would be worth doing so long as certain conditions were in place, such as

- sound systems were adequate to allow all conversations to be heard by all participants
- people in general making the meetings in person when possible, since the remote format skips the critical networking portion and makes more complex conversations challenging.

Conversely, the majority felt that that trying to add a virtual component to field tours was not a good idea. Only 15% were supportive of that suggestion.

Other observations and ideas for improving the general experience of virtual meetings included:

- Better use of the break-out group function would allow for better discussion options.

- Presentations via zoom are relatively easy and work well. However, having longer or more involved discussions, or handling situations where conflict management is needed is better in in-person meetings.
- The all-virtual format has been helpful and went more smoothly than people anticipated, but many are eager to return to in-person meetings for the networking and joint project planning that takes place in the less formal in-person setting.

We also asked about future presentation topics of interest to the groups. Nearly every topic we proposed received a strong level of interest. Topics of “sage-grouse response to vegetation management projects,” and “livestock grazing and sage-grouse” garnered most interest. However, the wide interest across many topics – from pollinators to predators to usage of new technologies and maps – suggests that continuing to provide opportunities to learn a diverse set of information applicable to the work done in the LWGs should be a priority.

Respondents were asked to choose whether statewide presentations or those at a local level were preferable for informational presentations. Nearly 70% felt that statewide was better, but the fact that 30% chose “local” suggests that information is clearly worth discussing as it applies to local scales, something which can be achieved by providing both statewide presentations virtually, but also local opportunities to discuss and apply the information.

The LWGs cover a wide array of topics, from policy updates to project planning. When asked whether we should do more, less, or the same, the vast majority suggested the same or more of nearly everything (Figure 1). This suggests that the diversity topics all add their own value, and are appreciated by the participants. The topics with the most interest in increasing the focus were “applied research presentations” and “project planning (including WRI).”

When asked to express where people saw the value from LWGs, the two highest ranked topics were “connections with colleagues I might not otherwise get” and “opportunities to collaborate on projects,” underscoring the focus noted earlier that people are eager to return to in-person meetings and resume the ability to connect in person and develop joint projects in that informal setting. Information on “new research” followed closely behind as a key value participants get from their LWG involvement.

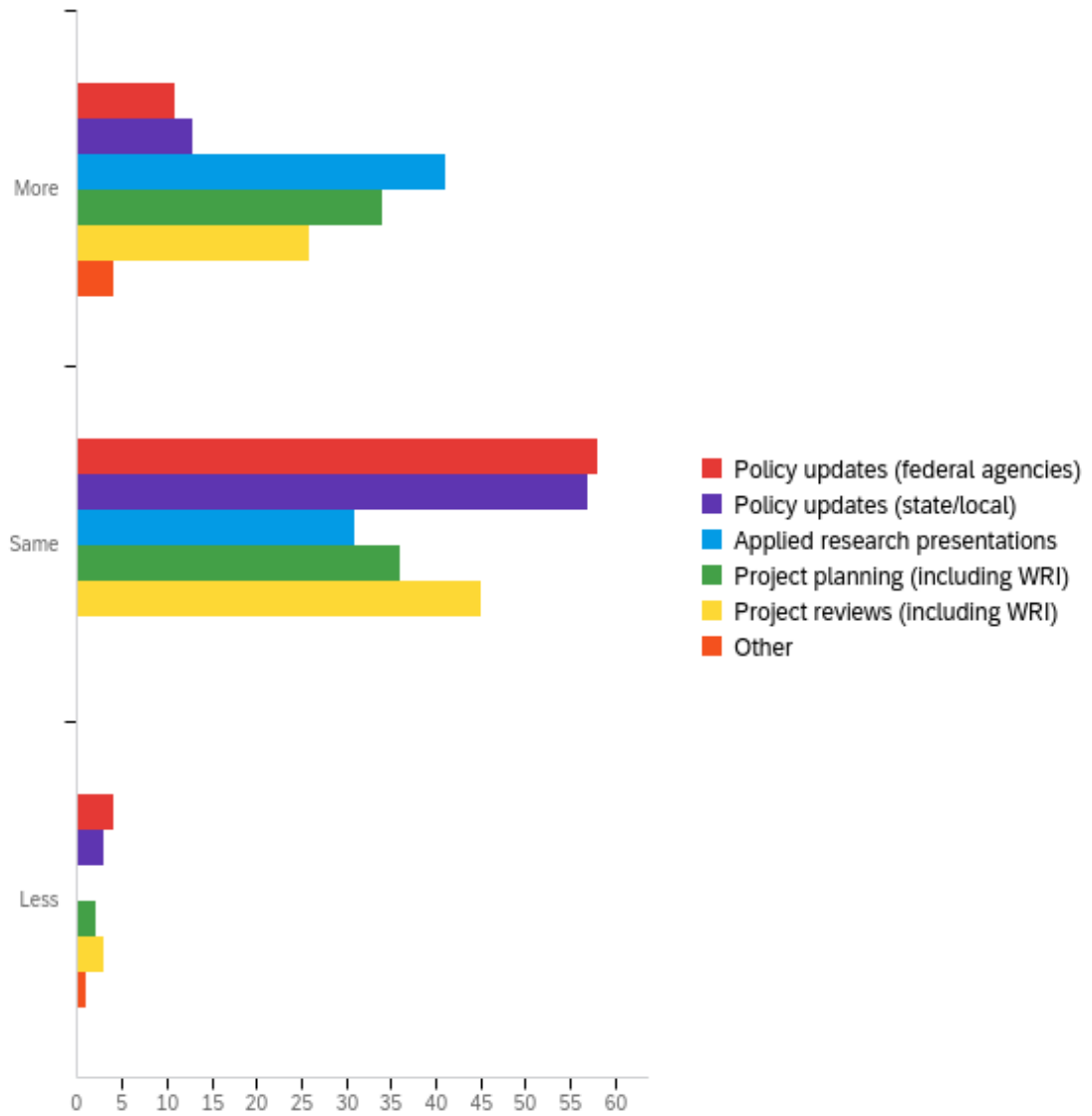


Figure 1. Local working group (LWGs) members were asked to indicate of the topics provided those they felt their LWG should focus on moving forward, Utah Community-based Conservation Program Survey, 2021.

Castle Country Adaptive Resources Management (CaCoARM) Local Working Group

The [CaCoARM](#) covers the Carbon SGMA, which includes portions of Sanpete as well as Carbon counties. The Tavaputs Plateau, although not in a state SGMA, is also in the groups' area.



Key Issues for 2020

The Carbon LWG has focused in three key areas:

- Habitat projects, including beaver dam analogues (BDAs) and sagebrush treatment considerations
- Railroad proposal discussions, including potential impacts and mitigation on sage-grouse and related supporting habitat areas
- Policy and mapping updates

Project, research, and partnership highlights in 2020

- Discussion of the proposed Uinta Basin Railway occupied a substantial amount of the group's bandwidth this year. Both before and after publication of the Draft Environmental Impact Statement (EIS), the group considered questions regarding water resources, fencing and tall structures, noise, train timing and speeds mitigation feasibility, agriculture and recreation access changes, and habitat removal/mitigation. A representative of HDR, Inc. provided the group with information on the biological survey work done, and how data was collected. The group discussed the challenges of commenting on the draft EIS released in the fall, due to the lack of specificity and open-ended language found throughout the document.
- Particularly because of the rail line proposal, the group has discussed the implications of the changing policy environment on that complex project, particularly with regard to BLM plan amendment challenges in court.
- Despite the challenges posed by Covid-19, the group continued with a virtual project planning sub-team meeting in early 2020. Joint project proposals to benefit sage-grouse habitat in the area were discussed for development and submission to WRI later in the year.

Upcoming year plans

Commenting on and continuing to follow the railroad proposal, as developments occur, has already been a part of the 2021 calendar year. In addition, the group is planning to improve communication and coordination between agencies, and outreach to landowners specifically regarding sagebrush treatments. A similar initiative will focus on explaining and promoting BDAs to landowners (private and agency) to improve watershed health in sage-grouse habitats. As we emerge from Covid-19, the group plans to visit BDAs, wet meadow improvements, and other WRI-funded projects.

Color Country Adaptive Resources Management (CCARM) Local Working Group

The [CCARM](#) covers Garfield, Kane, Iron, and Piute Counties. Which comprises the Panguitch SGMA.

Key Issues for 2020

- Research on restored sage-grouse habitat
- Coordination with SWARM research
- WRI project reviews



Project, research, and partnership highlights in 2020

- We continue to collaborate with Coal Valley Mine (Alton Coal, LLC) to monitor sage-grouse in Alton-Sink Valley. A graduate student, Ben Donnelly initiated a new project in this area in 2020, despite COVID-19 travel and meeting guidelines. The project will study the vegetation characteristics of 'restored' sagebrush habitat 10-15 years post tree-removal to determine if it meets Utah habitat guidelines and to determine in which season sage-grouse use these areas. The project is using global-positioning system (GPS) telemetry, bird-dog surveys, and sage-grouse pellet counts to determine sage-grouse use. Ben is comparing vegetation characteristics of vegetation plots that were studied from 2005-2009; he will compare the vegetation data collected 3 years post-treatment, to that of 2020-2021 (13-15 years post treatment), as well as 'intact' sagebrush that has not been treated in the last 20 years.
- As a benefit of virtual meetings, with Heather Talley, UDWR Upland Game Coordinator, in attendance, we were able to discuss the planned beaver translocations to Mill Creek and Bear Valley. Incorporating these translocations into the strategies for proposed WRI projects in these areas strengthens the projected benefits to the project.
- [Aiden Beers](#), a PhD student, is completing his data analysis and dissertation. Aiden used GPS data collected by Dr. Frey's projects (funded by UDWR, BLM, and Alton Coal, LLC) from 2013-present to model small-scale spatial decisions.

Upcoming year plans

- Mr. Beers' models will help explain the movements and habitat use by sage-grouse that we often document that are outside of "normal" behavior. Combined with Utah habitat guidelines, these data will aid managers to make site-specific restoration projects for grouse populations on the edges of their distribution (i.e. southern Utah). Mr. Beers also collected temperature and light data across Buckskin Valley. This data will help us understand the temperature gradients within different habitat types, and how temperature variability can impact grouse habitat use. In the coming year, Dr. Frey's graduate students will present their results to the LWG.

Morgan-Summit Adaptive Resources Management (MSARM) Local Working Group

The [MSARM](#) covers the sage-grouse habitat areas of Morgan and Summit counties in northern Utah, which comprise the southern portion of the Rich-Morgan-Summit SGMA.

Key Issues for 2020

The Morgan Summit LWG is always seeking ways to contribute in meaningful ways to private lands conservation in the two-county area. Discussions include:

- Wet meadow improvements on private land
- Coordination between USU Extension and Natural Resources Conservation Service (NRCS) watershed coordinator to increase interest in private lands conservation projects beyond the normal constituency of NRCS
- Raven predation, following additional interest generated from the bird damage management conference in February 2020
- Large-scale landscape planning in coordination with local land trusts
- Preliminary discussion of WRI projects in the area (this group has historically had very few due to the percentage of private lands in the MSARM coverage area).



Project, research, and partnership highlights in 2020

- Summit Land Conservancy, a local land trust, has been very active in the MSARM group for many years, coming to the group for vetting of ideas, input on potential new partnerships, and in search of resources for improved landscape-scale planning
- [Hailey Peatross Wayment](#), a USU graduate student, presented to the group about sage-grouse and grazing study being conducted in Rich County by USU researchers.
- A large Regional Conservation Partnership Program (RCPP) grant was awarded to a partnership effort lead by Trout Unlimited and Summit Land Conservancy, and the group provided input and numerous partnership connection ideas to further the potential impact of the project funding.
- The group is very interested in how the finalized HAF maps can be applied to large-scale conservation planning. Due to the delays in map finalization, the group was not able to implement use of the maps yet, but discussed opportunities in the future.
- Although much of the land is private, USFS representatives and UDWR staff generally attend MSARM meetings to learn about updates to federal and state policies and resources.

Upcoming year plans

In 2021, the group will increase its focus on wet meadow restoration efforts, targeted to Extension audiences, with collaboration from the Coalville NRCS office. Field tours will focus on private lands projects and ideally serve as demonstrations of wet meadow and other habitat restoration techniques. In addition, starting with information about non-game avian species, the group will serve as a venue for expanding the discussion for other habitat and species interactions.

Parker Mountain Adaptive Resource Management (PARM) Local Working Group

The [PARM](#) covers the areas of the Parker Plateau, Grass Valley, north to Fish Lake and bordering Interstate 70.

Key Issues for 2020

- Finishing Mytoge Mountain project and looking for add-on opportunity areas
- Designing and proposing a sagebrush treatment strategy for the Parker, specifically on the School and Institutional Trust Lands Administration (SITLA) block, with related water development work



Project, research, and partnership highlights in 2020

- Field tour: planning for sagebrush treatments; group looked at potential treatment areas
- GPS-marked grouse tracked using treatment areas on the Mytoge Mountain project area and Dog Flat
- The Parker Mountain group provided coordination for BLM NEPA process for future conifer removal and other projects, adjacent to the Mytoge Mountain and other areas
- Continued brood count efforts using bird dogs to supplement and predict lek counts and learn more about the efficacy of the technique

Upcoming year plans

- Continue to meet virtually and in-person when available
- Conduct PARM Lek counts in coordination with UDWR
- Prepare WRI Proposal for sagebrush treatments on Parker Mountain

Rich County Coordinated Resource Management (Rich CRM) Local Working Group

The [Rich CRM](#) covers all of Rich County, which forms the northern portion of the Rich-Morgan-Summit SGMA.

Key Issues for 2020

- Strategic planning and development leading to an updated CRM plan
- Project coordination among CRM partners
- Leadership shifts within the group (Sim Weston became a new county commissioner and chair of the CRM; Dallen Smith is a new county Extension faculty and is helping facilitate the group)
- Three-Creeks Project Approved
- Sage-grouse responses to livestock grazing



Project, research, and partnership highlights in 2020

- Continued development of infrastructure on Three Creeks, led by the Utah Grazing Improvement Program (GIP)
- Continued [research on sage-grouse response to grazing](#) on Deseret LL and Three Creeks
- Three Creeks Project finally approved!
- The group is the point of communication where multiple partners coordinate natural resource management issues and projects
- Began development of the strategic plan with a goal to complete in 2021
- Four private producers added to the CRM Board

Upcoming year plans

- Finish an updated strategic plan for CRM
- Implementation of Three Creeks Project (led by GIP and the grazing association)
- Continue to coordinate information and projects for all CRM partners
- [Codi Backen](#) has been hired as a graduate student to continue the long-term study on sage-grouse response to livestock grazing. Dr. Justin Small, has been hired as a post-doc to summarize the 10 years of grazing research. This work will be completed in 2023.

Southwest Desert Adaptive Resource Management (SWARM) Local Working Group

The [SWARM](#) covers Iron and Beaver counties, which includes the Hamlin Valley and Bald Hills SGMA's.

Key Issues for 2020

- Several ongoing research projects
- WRI project discussions and feedback through virtual working group conversations
- Coordinate on habitat restoration and research proposals.



Project, research, and partnership highlights in 2020

- Dr. Nicki Frey's PhD student, Aidan Beers, is completing his data analysis and dissertation. Mr. Beers used GPS data collected by Dr. Frey's projects (funded by UDWR, BLM, and Alton Coal, LLC) from 2013-present from Ely, Nevada, to Alton, Utah, to model small-scale spatial decisions. These models will help explain the movements and habitat use sage-grouse that we often document that are outside of "normal" behavior.
- Raven study began, in the Bald Hills and Buckskin Valley, in collaboration with the BLM, to study the impact of common ravens on sage-grouse habitat use and movements.
- We were unable to have a field tour this year, so we improvised and watched a presentation about habitat restoration, created by NRCS.

Upcoming year plans

- Data from Aidan Beers' dissertation, combined with Utah habitat guidelines, will aide managers to make site-specific restoration projects for grouse populations on the edges of their distribution (i.e. \southern Utah). Mr. Beers also collected temperature and light data across Buckskin Valley. This data will help us understand the temperature gradients within different habitat types, and how temperature variability can impact grouse habitat use. He will present his data results to the group at our summer meeting.
- The raven study will continue, with the BLM trapping and monitoring ravens via cellular telemetry. In addition, Dr. Frey and her graduate student, [Zoe Moffett](#), in partnership with BLM staff, will be conducting raven point counts, monitoring raven activity on leks, and measuring raven nest depredation in restored (recent tree removal) and unrestored (i.e. intact sagebrush) habitat. This project began in January 2021; updates and results will be provided to the local working group at least twice a year.

Strawberry Valley Adaptive Resource Management (SVARM) Local Working Group

The [SVARM](#)'s focus area covers the Strawberry SGMA, which includes predominantly USFS land around Strawberry Reservoir and continues down toward Fruitland at lower elevations.

Key Issues for 2020

The Strawberry sage-grouse group has focused in three key areas:

- Research findings from BYU graduate students
- Project and weed management needs
- Policy and mapping updates



Project, research, and partnership highlights in 2020

- The partnership with the SVARM group and BYU graduate students is very strong. During 2020, Ryan Howell, a graduate student working on a variety of sage-grouse and sagebrush research areas, finished his studies and presented his findings both to the local working group directly and by inviting the group to his thesis defense. Long-term partners interested in the population status and improvement in habitat management, such as UDWR, NRCS, and the Mitigation Commission, were able to hear about drone imagery techniques for estimating sagebrush height, among other useful information to emerge from Ryan's graduate work.
- Wasatch County, USFS, and others coordinate on weed management in part via the working group. As weed containment is an important part of all project planning and implementation, the forum the group provides is helpful for identifying issues and working collaboratively in innovative ways, such as considering grazing management as a tool, to address them.
- Policy updates relating to BLM and especially USFS are a key component of the SVARM group's work. This year, BLM policy updates on HAF seasonal habitat mapping and also the progress on supplemental EIS progress (related to the court injunction from the past) helps federal agency managers on the ground stay up to date with high level policy changes.

Upcoming year plans

The coming year will involve bringing the new graduate student from BYU into the group, and learning together via that partnership. As Covid-19 guidelines change, more project planning, design, and submissions will likely increase from this group this year. Finding ways to re-invigorate the group and re-engage private landowners in the discussions of protecting habitat will be important as well. Fire management is likely to become an increasingly relevant topic for the group.

Uintah Basin Adaptive Resource Management (UBARM) Local Working Group

The [UBARM](#) covers sage-grouse areas in the Uintah Basin, largely overlapping with the Uintah SGMA but also on Anthro Mountain.

Key Issues for 2020

The Uintah Basin sage-grouse group has collaboratively worked in several areas:

- Mining proposals under discussion
- Policy and mapping updates
- Research updates, particularly local tracking on GPS-collared sage-grouse
- Habitat projects, a close working partnership with the regional WRI team
- Railroad proposal discussions



Project, research, and partnership highlights in 2020

- A representative of the Utah Division of Oil, Gas, and Mining has kept the group apprised of permit applications that are being proposed in or near sage-grouse habitat. Although no action is required, the topics may come up in the future when further discussion is needed, and the group has been very grateful for the venue to learn informally about the upcoming projects.
- Discussion of the proposed Uinta Basin Railway has been relatively brief, given that many of the largest impacts to grouse would likely be in other SGMAs, but the UBARM group has stayed up to date and discussed general observation and questions raised.
- The shift to virtual meetings during the pandemic created an opportunity felt most clearly in the farther-from-Salt-Lake groups like UBARM: regular attendance by statewide agency personnel allowed greater interaction and more frequent updates from those entities (UDWR and BLM particularly).
- The sage-grouse group works closely with the regional WRI team, including sending Lorien Belton as a representative of USU and the sage-grouse group on the project ranking team.
- Although project development slowed somewhat due to COVID-19 guidelines, the NRCS team has been working on a number of projects, and there has been considerable interest in demonstration projects for wet meadow restoration techniques.
- UDWR biologists in the area were particularly helpful in the HAF habitat mapping development review process undertaken by BLM, USU, and UDWR.

Upcoming year plans

The coming year of 2021 will hopefully see re-emergence of in-person events, at a minimum for the field tour. The group has already made use of the virtual format to invite a presentation relevant to reclamation and project planning. Additional external expert presentations on other topics will be a part of upcoming meetings. These will allow the group to expand the range of considerations and incorporate more complexity into project planning and implementation.

West Box Elder Coordinated Resources Management (CRM) Local Working Group

The [West Box Elder CRM](#) group covers the rural western portions of Box Elder County. The West Box Elder CRM is a community-led group process driven in large part by the local Conservation District.

Key Issues for 2020

The West Box Elder CRM began 2020 with two meetings to kick off a new strategic planning process, which was significantly delayed for the remainder of the year due to COVID-19 guidelines. Key work done by the group despite the setbacks:



- Community meetings in January 2020 in Park Valley and Grouse Creek to review the past CRM plan's progress and chart a path forward
- Development of sub-teams and focus areas for future plan revision processes
- Review and discussion of WRI projects in the area
- Dr. Justin Small completed research on CRM member participant perceptions of the CRM process that will be used to guide the CRM's plan update. His [dissertation](#) is now available.
- Dr. Small and Dr. Simona Picardi worked to complete a conifer habitat prioritization tool which will allow managers to prioritize new projects to maximize cost-benefits for sage-grouse.

Project, research, and partnership highlights in 2020

- The strategic planning process involved large in-person community meetings at the end of January. These were well attended by many community members. It included a review of the goals from the existing plan, and progress against them. The group was engaged in brainstorming how to move forward. Key areas identified in the ensuing discussion include infrastructure needs, wildlife management concerns, water development, weeds and range (to include fire), and economic/tourism development needs. The local Conservation District identified potential sub-team chairs who would be responsible for leading future discussions to narrow down objectives for the five areas.
- The CRM is very involved in reviewing habitat projects to be submitted to WRI; the November meeting includes project presentations and discussion by the group.
- The conifer habitat prioritization tool will be published and presented to manager in a webinar.

Upcoming year plans

A primary focus for the year will be to re-invigorate the strategic planning process, with the goal of having a new CRM plan developed, at least in draft format, by the end of 2021. Initial progress on some of the objectives is likely to be made even before the plan is formalized. Project reviews will also continue as a key function the group serves.

West Desert Adaptive Resource Management (WDARM) Local Working Group

The [WDARM](#) focuses on the Sheeprocks mountains west of Salt Lake City and the Ibapah SGMA on Utah's western border

Key Issues for 2020

The West Desert group has a broad array of focus areas:

- Research on wild horses and sage-grouse, via BYU
- Wrapping up of the [Melissa Chelak](#)'s USU PhD project on sage-grouse translocations, predator monitoring, recreation research, etc.
- Review and discussion of the BLM casual factors report
- Understanding the relationship between recreation and sage-grouse, a multi-partner effort which was set back by the pandemic
- Hydrology research on the effects of conifer removal on groundwater and other elements of the hydrologic system, funded by WRI, continued during 2020.
- Ongoing project planning and coordination



Project, research, and partnership highlights in 2020

- The group provided substantial input to the design of the BYU research on horse/sage-grouse interactions in the area, asking numerous questions about feasibility, providing referrals to information sources of possible value, and considering what questions would be of most value to the group.
- The Sheeprocks SGMA and surrounding areas continue to be a focus of significant habitat treatment projects, largely pinyon-juniper removal. The group is working off long-term plans developed within the group for progressive treatment of key areas. Projects are discussed with the group throughout the year, both during planning phases and as implementation occurs. Changes recommended by participants are frequently used to improve or refocus projects to be more beneficial to sage-grouse.
- Coordination between researchers, UDWR biologists, landowners, and USDA-Wildlife Services ensures that predator control, particularly for ravens, is targeted and responsive on relevant short-term timelines, such as near known sage-grouse nest predations.
- Due to the large area and overlapping jurisdictional boundaries, the group serves as a key point of partner coordination between agencies. New employees are introduced or staff changes at partner agencies are announced at nearly every meeting, facilitating ongoing opportunities for continuing programs and project coordination despite turnover. For example, at one meeting in 2020, the departure of a key project proponent was the topic of an impromptu brainstorm to ensure that no projects were forgotten, and continuation plans were developed.
- The WDARM group has been particularly receptive and innovating when it comes to incorporating new ideas or complexity into the sage-grouse management equation. Over the years, the group has heard from outside experts on pollination, seed coatings, and other topics of possible relevance. This open approach continued into 2020, as the group expressed interest

in learning about soil crusts. (The topic was actually presented in early 2021 but discussions leading to it occurred in 2020.)

- The hydrology research continues, and is adaptively responding to changing land ownership and project timelines in the area. The researcher also communicates with local landowners, making efforts to learn from them locally and also alert them to things on the landscape of interest or concern, such as damaged fences or vandalism.
- UDWR biologists have been very proactive and worked with a wide team of partners, through the WDARM, to implement BDA projects in key areas with the management area where water resources are likely critical to sage-grouse. The group is also discussing possible pilot wet meadow restorations, led by BLM project planners.
- USU published a [new paper documenting a case of Aspergillus](#) in a translocated sage-grouse. This was an isolated incident but was documented for future reference.

Upcoming year plans

In 2021, as the conifer treatment long-term plan continues to move forward, WDARM's focus will likely shift to applying early lessons from the research projects (BYU, USU, USGS) to a next round of project planning. Innovations in wet meadow restoration techniques will likely be of considerable interest in this arid environment as well, and learning opportunities – online, in-person, and in the field – will be a focus in the coming year. Future field tour plans will likely take up similar topics as the cancelled events were going to highlight, including BDA project development and hydrology research updates. As always, the group will be kept apprised of policy considerations. As updates or changes are relatively likely for USFWS, BLM, and USFS, the groups will stay informed and respond as needed.



Table 1. LWG Meetings and Field Tours Summary

The following is a record of the formally scheduled elements of the LWGs in 2020. It does not include the innumerable additional coordination opportunities and collaborations that arise between LWG participants throughout the year.

West Box Elder CRM

- January 28, 2020 (in-person community meeting)
- January 30, 2020 (In-person community meeting)
- July 2020: Conservation district meetings where next steps were discussed
- November 17, 2020 (virtual meeting)

CaCoARM (Carbon)

- January 14, 2020 (combined in-person and virtual meeting)
- March 16, 2020 (virtual meeting, project planning subteam)
- December 1, 2020 (virtual meeting)
- No field tour was held in 2020 due to covid-19 concerns.

CCARM (Color Country)

- January 8, 2020 (in-person, discussion of WRI projects)
- September 9, 2020 (virtual meeting)
- January 12, 2021 (virtual, a reschedule of December 2020 meeting)

MSARM (Morgan-Summit)

- March 30, 2020 (virtual meeting)
- November 3, 2020 (virtual meeting)
- No field tour was held in 2020 due to covid-19 concerns.

PARM (Parker Mountain)

- June 22, 2020 (virtual meeting)
- August 25, 2020 (in-person field tour; COVID Approved USU Extension)

Rich County CRM

- July 2, 2020 - CRM Strategic Plan meeting (county commissioners, GIP, and USU Extension)
- Field tour plans cancelled due to COVID
- October 29, 2020 (virtual)

SWARM (Southwest Desert)

- January 7, 2020 (in-person, discussion of WRI projects)
- September 8, 2020 (virtual meeting)
- December 12, 2020 (virtual meeting; WRI project discussion)

SVARM (Strawberry)

- April 2, 2020 (virtual meeting)
- September 9, 2020 (all LWG members invited to attend BYU thesis defense)
- November 23, 2020 (virtual meeting)
- No field tour was held in 2020 due to covid-19 concerns.

UBARM (Uintah Basin)

- February 5, 2020 (in-person joint WRI project review meeting)
- March 17, 2020 (first virtual LWG meeting)
- October 28, 2020 (virtual meeting)

- No field tour was held in 2020 due to covid-19 concerns.

WDARM (Sheeprocks and Ibapah)

- February 10, 2020 (in person meeting)
- April 30, 2020 (virtual meeting)
- Sept 22, 2020 (virtual meeting)
- November 16, 2020 (virtual meeting)
- No field tour was held in 2020 due to covid-19 concerns.