



# Centennial Valley Association October 2022



Kara Maplethorpe

## 2022 CVA Staff Thank You



CVA Staff

The Centennial Valley Association could not have been luckier to have eight staff join us for various parts of the field season. Without this spectacular Team, we would not have achieved nearly as much as we did! Help us thank Erika Nunlist, David Brigham, Taylor Jackson, Shannon Wilkey, Emma Fullerton, Mitchel Odden, Sara Drake, and Clare Ols for their efforts this year.

Erika led the Wildlife Program for her third season, with David and Taylor joining the Team for their first range riding season. Erika continued to provide knowledge and experience, effective communications, and support to research efforts at a large-scale, garnering vast support and trust for the program near and far. David and Taylor both jumped right into range riding, bringing great attitudes, knowledge, and abilities that built relationships within the community.

Shannon joined the Team through mid-August as the Field Technician, supporting CVA and The Nature Conservancy (TNC). Shannon coordinated and implemented the Invasive Species Management program and collected hydrologic data for the Water and Drought Awareness Program. We appreciated Shannon’s willingness to step into big roles and her great sense of humor.

Emma and Mitchel worked for Montana State University, providing support to Red Rock Lakes National Wildlife Refuge, TNC, and CVA projects. Both joined the CVA Team in October to assist with fall weed management efforts in priority wildlife habitat areas. We appreciate Emma and Mitchel’s drive and passion for the Centennial Valley landscape.

Sara rejoined the CVA Team as the Interim Field Coordinator for this fall and winter. We are excited to have Sara back for fall weed management efforts and a deep dive into the Water and Drought Awareness Program. We appreciate Sara’s dedication and adaptability to programs and projects, which will further develop of our water and drought data collection efforts.

Clare works remotely for CVA while attending law school at the University of Montana. Clare completed season preparations for weed management efforts, assisted with grants, and lent her talents to us whenever needed. CVA greatly appreciates Clare’s drive, support, and love for the Centennial Valley.

Finally, CVA would also like to thank James Waxe and Mac McCall, both with TNC, for their support this season. Mac assisted with invasive weed management and streamflow monitoring. James not only assisted on all of CVA’s programs, but he also added much needed capacity and a helping hand whenever needed. Thank you!!



CVA & Partner Staff

### *Giving Tuesday 2022 Fundraiser*

Reflecting on 2022, CVA has so much to be thankful for! We had an amazing Team that mitigated wildlife conflicts with people and cattle, reduced the spread and impact of invasive weeds on rangelands and wildlife habitat, monitored drought impacts, and produced newsletters and blogs to keep the community and visitors informed.

CVA wants to set up our Team and programs for success in 2023! We are participating in #GivingTuesday, an annual event that focuses on giving back to the people, communities, and organizations you care about. Funds raised go to the CVA Team and programs that support local, community-based efforts in the Centennial Valley.

On **November 29<sup>th</sup>**, please consider the CVA for your end-of-year contribution, whether it be your time, a donation, or gift. Please contact Kara at (715)681-0795 with questions or an idea to support CVA on #GivingTuesday. Enjoy the upcoming holidays!

### *Announcements*

- Our friend, Hannah Jaicks of Future West, had her book released in paperback! [“The Atlas of Conflict Reduction: A Montana Field-Guide to Sharing Ranching Landscapes with Wildlife”](#) features the people and wildlife of the Centennial Valley, Big Hole, Blackfoot, and other landscapes.
- The Lakeview and Jones Cemetery signs in the Centennial Valley are in need of restoration, as well as weeds and badger hole management in the summers. If you are interested in supporting restoration efforts, please reach out and we will get you connected with the Centennial Cemetery Board. Thank you!
- November is nearing, so please research and educate yourself on the issues, initiatives, and candidates on the ballot this mid-term and exercise your right to vote in local and state elections!



# CVA Program Updates

## *Water and Drought Awareness Program*

Loran Laknar

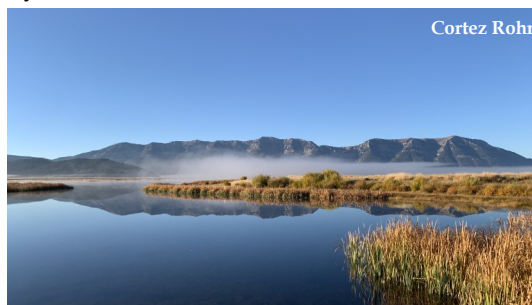


After some welcome precipitation during August and September, the valley has been relatively dry so far in October. We have been experiencing very mild temperatures with daily highs in the 50's and 60's and nightly lows in the mid-30's. This is quite a change from last year when the valley received over one foot of snow between October 10<sup>th</sup> and 11<sup>th</sup>! Currently, the Centennial Valley is experiencing moderate drought conditions. The future forecast is predicting below normal temperatures and above normal precipitation, however.

Throughout the summer, CVA gathered drought data from a variety of sources. CVA staff managed seven automated rain gauges to monitor precipitation across the valley floor. These rain gauges will be removed at the end of the month to prevent damage from freezing temperatures. Additionally, our partners at The Nature Conservancy and Red Rock Lakes

National Wildlife Refuge monitor CoCoRaHS rain gauges, the BLM has a RAWS station automatically collecting data, and CVA Members, Scott and Shane, share data from their automated rain gauge in Lakeview. CVA staff and partners also monitored streamflow sites throughout the valley during the summer months. Thank you to everyone who worked so hard this summer to collect drought data!

As we move into the winter months, water reports will shift to include information on snowfall. As of October 15<sup>th</sup>, Lakeview (south-central) has received 0.30" of rain and the Sandhills (northeast) has received 0.28" of rain for the month. In comparison, Lakeview received 0.90" of precipitation in August and 2.10" in September. The Sandhills received 0.92" of precipitation in August and 1.11" in September. Don't forget that October 1<sup>st</sup> marked the beginning of a new water year! If you have questions, suggestions, or want to subscribe to the Water Reports, contact [drought@centennialvalleyassociation.org](mailto:drought@centennialvalleyassociation.org).



Cortez Rohr

## *Invasive Species Management Program*



Native streambank wild hollyhock.  
Cydne Collins

Invasive weed management efforts in the Centennial Valley are still going strong! With the warmer weather, the CVA Team is out and about doing fall herbicide treatments on Canada thistle throughout the valley. In addition, the Team is focusing on late-season treatments, whether it be herbicide or seed removal, on Canada and musk thistles, houndstongue, and knapweed in many of our Wildlife Habitat Improvement Program (WHIP) grant areas. Priority areas for late-season management include the Wolverine, Alaska Basin, and Metzel Creek.

The Team will also conduct a fall reseeding treatment on Long Creek, in conjunction with the WHIP grant and funds received from the Montana Native Plant Society. Native grasses and forbs will be planted in areas where thistle management has been heavily implemented. Reseeding helps reduce the amount of bareground in an area, decreasing space for invasive weeds to thrive.

Finally, CVA would like to thank The Nature Conservancy for staff and vehicle support, Beaverhead County Weed District for providing herbicide at each spray day and match for the WHIP project, and our partners, volunteers, and landowners who helped this summer. Everyone's help is invaluable and greatly appreciated! Data from this season will be analyzed this fall and shared early winter.



Native monkeyflower.  
Cydne Collins

## *Wildlife Program*

The Team had a productive 2022 Range Riding season. Range Riders, Taylor, David, and Erika, rode regularly through participant herds, checking health, infrastructure, and predator activity since June. Robust forage conditions lent to happy and healthy cows, and reduced sickness and losses. The Team will continue riding through the end of October.

The game camera program continued this year. Twenty cameras were strategically placed throughout the valley to monitor wildlife activity and a handful more for temporary areas of interest, like carcasses. Unfortunately, about half-way through the season some of the cameras malfunctioned from many years of use. This reduced the wildlife activity we were able to capture, particularly on carcasses. Luckily, CVA received many new cameras recently that we are excited to have for next season.

As always, CVA would like to thank all our participants, producers, community members, and others for their continued interest and support in the Wildlife and Range Riding Programs. We couldn't do it without you. THANK YOU!



Sandhill Crane.  
Xavier Rolet



## Partner Updates

### *Master Hunter Program*

One Montana's Master Hunter Program is accepting applications October 1<sup>st</sup> - November 30<sup>th</sup>, 2022 for the 2023 program. Classes will be held in Billings (March), Bozeman (April), and Missoula (May). Each class will consist of two 3-Day consecutive weekends (Friday - Sunday). A two-day weekend rendezvous in June is also required for qualifications, field exercises, and the final exam.

The Master Hunter Program (MHP) is an advanced education program for hunters who want to improve and hone their knowledge and skills, build relationships with landowners to aid their wildlife management goals, and be advocates for conservation and wildlife. By creating opportunities for landowners and sportsmen to connect to each other, the MHP helps to deepen knowledge and understanding about ranching and agriculture, and ultimately works to increase access opportunities for future generations.

To date, 291 hunters have successfully completed the program. Graduates belong to a community of likeminded hunters stretching from Whitefish to Miles City who hunt together, keep each other informed, and are knowledgeable voices on issues affecting sportsmen across Montana. To apply or learn more please visit <https://www.mtmasterhunter.com/how-to-apply>.



### *US Fish & Wildlife Service & Montana State University Cheatgrass Research*

Carol Bergstrom



This summer marked the sixth year of vegetation monitoring on south facing hillsides across the northern portion of the Centennial Valley by the United States Fish and Wildlife Service (USFWS) and Montana State University (MSU) researchers. Herbicide (Plateau®/imazapic) was applied by helicopter in the falls of 2017 and 2018, which resulted in an initial reduction of cheatgrass (*Bromus tectorum*) abundance. This summer (2022), we observed an increase in cheatgrass abundance for the first time since the 2018 application. Further analysis of vegetation community response is being conducted at both local and landscape scales and will be finished this winter. In conjunction with this project, MSU completed a two-year study funded by a Western Sustainable Agriculture Research and Education (WSARE) graduate student grant. The project analyzed the interactions between heavy cattle use, herbicide (imazapic/Plateau®), two restoration seed mixes (native and ruderal), and plant available nutrients, at stock tanks, to better understand rangeland restoration efficacy. Following a single herbicide application (Fall 2019), we broadcast seeded two mixes (spring 2020); a native seed mix containing bluebunch wheatgrass (*Agropyron spicatum*), green needlegrass (*Stipa viridula*), and prairie junegrass (*Koeleria macrantha*), and a ruderal mix containing triticale (*Triticosecale*), thickspike wheatgrass (*Agropyron dasystachyum*), and intermediate wheatgrass (*Agropyron intermedium*). Our initial analysis showed cheatgrass

suppression to be greatest in areas that were left open to cattle use and received an herbicide application, compared to those that were sprayed and fenced to restrict cattle use. The sterile wheat rye hybrid, triticale, was the only species to establish in the field. We attributed the lack of establishment of both seed mixes to drought conditions in 2020. The ruderal mix's superior competitive ability with cheatgrass in a greenhouse study, compared to the native mix, make it an ideal candidate for restoration seeding. One of the more surprising findings that came from this study was the greater abundance of plant available soil nutrients observed in areas that were sprayed compared to those that were not.

We would like to thank Andrew and Hilary Anderson, Daphne Chester, Kevin Crowe, and Allen and Yvonne Martinell for their continued support and interest in this research. A monumental thanks to The Nature Conservancy and Red Rock Lakes Wildlife Refuge, especially Emma Grusing, Aaron O'Harra, AJ Temple, and Abby Carroll for their help with vegetation surveys, and James Waxe for helping with all matters of logistics. If you're interested in the full report for the WSARE project, it can be seen at [WSARE.com](https://www.wsare.com) (pending final review), or feel free to reach out directly to Dr. Lisa Rew, Dr. Kyle Cutting, or Colter Mumford.

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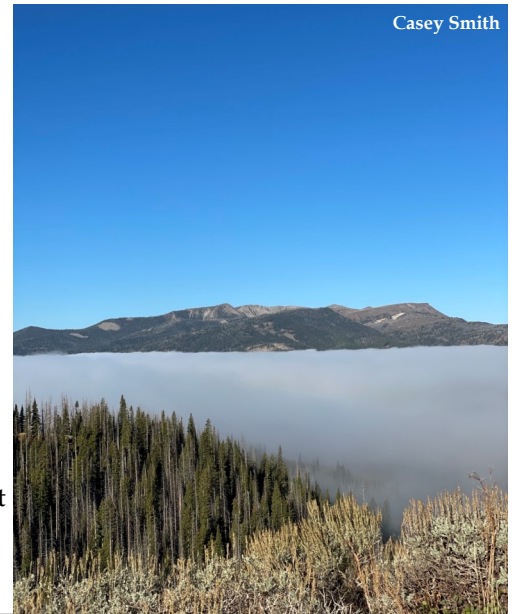


## Partner Updates (continued...)

### Beaverhead Watershed Committee

The Beaverhead Watershed Committee is still working with two different collaboratives, one regional, and one local. The Beaverhead County Collaborative met at the Dell Calf-A with local residents last month to show our draft recommendations for the Hidden Pasture Wilderness Study Area. We'll have more formal recommendations soon, then will move on to one of the other Study Areas in the county. Work with the Landscape Conservation Design collaborative is starting to show results. We saw some nice models and maps of the High Divide region, showing threats to sagebrush habitat. The goal is to get input from a wide variety of local groups, see what people's visions are for the future of the area, what threatens those visions, and hopefully come up with some solutions.

We're still working with irrigators on the Red Rock to help update water measurement. The FWP Fish & Wildlife Commission approved the transfer of Cornell Park into their Fishing Access Site program. We hope to see a new latrine this year, then bank restoration and general sprucing-up of the place next year. We put in a grant application to look at Junction Creek, to see if there's work that could be done upstream of Lima to help prevent winter flooding and hopefully increase irrigation season water supply.



### University of Utah – Taft-Nicholson Center



The Center is already busy planning for next season. Applications for all of our programs are available on our webpage. I wanted to give you an update on our partnership with SAGE, joining a worldwide network of sensor arrays. SAGE will build a national research infrastructure of new sensors that support programmable edge computers and machine learning within an interconnected cyberinfrastructure, spanning multiple major science instruments.

The Sage project is designing and building a new kind of national-scale reusable and reprogrammable cyberinfrastructure to enable AI at the edge. The Sage tower deployed in the RV lot at the Taft-Nicholson Center includes two Wild Sage Nodes (outdoor ready, edge-computing systems with ability to interface with existing and new sensors) and several sensors connected to them. The sensor set includes two sets of temperature, pressure, humidity, precipitation sensors and microphones, two sky-ward looking cameras for full hemispherical and zoomed selected portion view of the sky, a fully steerable (pan and tilt) Mobotix (MOBOTIX MX-M16TB-R079IP) thermal and visual camera that can detect heat signatures (-40C to +165C) and can overlay thermal data on visual images, a downward looking camera for vegetation, animal activity, and snow fall etc. detection, a fully steerable and zoom capable camera to estimate sky and ground conditions (Hanwha XNP-6400RW), and a PM 2.5 and PM 10 Particulate Matter sensor (Metone ES-642). All the sensors are connected to the two Sage nodes, and the data from the sensors can be readily processed on the Sage nodes to extract information and gain knowledge on the environment nearly instantaneously. The nodes use Starlink Satellite Internet for communication (sensor and inferred data, downloading new AI/ML models and system software and feature updates). All the data produced by the nodes are available from Sage portal. The nodes can in real-time be reprogrammed (<https://portal.sagecontinuum.org/apps/explore>) to perform different inferences and sensing functions on audio, visual, or thermal data depending on the context and scientific goals. To see the data from the nodes, click on the links below:

W06F: <https://portal.sagecontinuum.org/node/000048B02D3AE2F2>

W084: <https://portal.sagecontinuum.org/node/000048B02D3AE2F4>



### Bureau of Land Management– Dillon Field Unit



The Bureau of Land Management (BLM) has awarded the contract for dam repair/maintenance on the Monida Creek Ducks Unlimited ponds. The work is scheduled to be completed in Summer 2023 and completed prior to fall hunting season. These ponds, along with the Sand Creek Pond in the center of the Valley, have become successful Trumpeter Swan nesting territories. If you have questions or for more information you can contact the BLM Dillon Field Office at 406-683-8000.



*To preserve traditional ranching as a way of life in the Centennial Valley, and to maintain quality open space, wildlife habitat, water quality, and wildlife migration corridors as they exist today for future generations.*



## Partner Updates (continued...)

### *Ruby Valley Conservation District*

Ruby Valley Conservation District (RVCD) has been enjoying the beautiful Fall weather and foliage by getting out in the field for some monitoring work. RVCD is wrapping up our sixth season of our volunteer water quality monitoring program. After some monitoring site maintenance due to spring flooding, RVCD staff and 8 volunteers regularly measured stream discharge, temperature, and stage at 24 monitoring locations throughout the Lower Ruby watershed. This water quality data is used to understand water availability and water temperature in the Ruby River and its tributaries. This information can indicate where new projects could be implemented to improve the Ruby watershed including identifying and treating dewatered stream sections and mitigating high temperatures in problematic tributaries. In the coming weeks, we will be collecting our data loggers before the winter freeze to officially wrap up the season. Next up - data organization and analysis!



Big Sky Watershed Corps Members measuring stream discharge. -Ben Masters

Along with stream monitoring, RVCD has also been busy monitoring past restoration projects. RVCD has completed several projects in recent years: from small-scale, low tech tributary improvements, to large scale river restoration, to invasive weeds spraying. After these projects hit the ground, however, there is still more work to be done. Most restoration projects require some degree of monitoring and maintenance, often for several years after project implementation is complete. This is necessary to ensure that the goals of a project, whether they be floodplain connection, sediment reduction, or habitat improvement, are being met. These parameters can be compared to pre-implementation measurements to track success of the project. If goals are not being met, contingency or maintenance plans can be put into place.

This year, we wrapped up our fifth year of monitoring on the Ramshorn Creek restoration project. This project included reducing sediment loading from erosive banks, and reconnecting the floodplain to promote revegetation. Our monitoring efforts have shown an increase in native plant species, willow growth along bank lines, and sediment being trapped behind wooden structures placed in the stream. In our first year of monitoring on our California Creek project, we saw increased vegetation density, and an increase in sediment being deposited due to induced meandering structures. We also rebuilt some beaver dam analogs and post assisted log structures that help reduce erosion and reconnect the floodplain. Along with our stream restoration work, we have been busy in the Upper Ruby monitoring reductions in noxious weeds thanks to WHIP (Wildlife Habitat Improvement Project) weed spraying efforts. Whether its streams, restoration projects, or weeds, monitoring is a crucial tool to track success, and a big part of our year at the Ruby Valley Conservation District.

### *Red Rock Lakes National Wildlife Refuge*

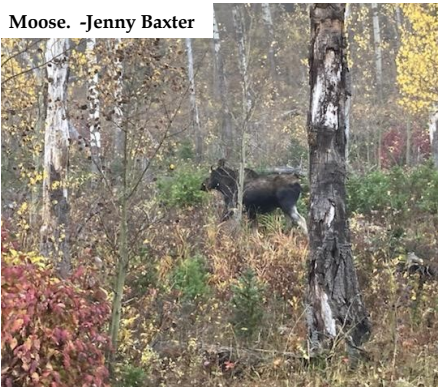
The 2022 summer field season at the Refuge has come to a close with significant amounts of work having been accomplished. Some of the many notable accomplishments this field season include:

- An invasive plant species program targeting spotted knapweed, houndstongue, Canada and musk thistle, field bindweed, common tansy, black henbane, dame's rocket, smooth brome, hoary alyssum, and cheatgrass. In excess of 200-acres were monitored, and 122-acres and 20+ miles of roadways were treated.
- An 18+ mile long mountain bluebird nest box trail, that has 90 nest boxes, produced 201 mountain bluebird fledglings and 250 tree swallows.
- A camera trap inventory and survey that captured numerous carnivores and other animal species, providing valuable insight into forest health through presence of species diversity and richness.
- A willow browse survey entailing 345 willows that were measured and surveyed between 60 transects and three exclosures, quantified the level and intensity of browse the Refuge's willow community endures from ungulates - notably the burgeoning moose population, and which it will use to make informed management decisions.



Spotted knapweed taproot. Kelsey Loverink

Moose. -Jenny Baxter



As the leaves begin to change color and blanket the ground, the green plants senesce to brown, the colorful songbirds migrate away to warmer places, and the elk and deer form herds in preparation to leave the valley for the winter, we pause to think of the spring and summer that was and the current autumn that is upon us now. We think of the partnerships and the friendships we enjoy here and depend on, and that make our life's toils easier and more fulfilling. While some of our objectives and missions may differ, we all share a common affinity for this valley where we live, or work, or both. As winter approaches and the valley embraces the sounds of silence, we're reminded of how lucky we are to live in a state known often as "the last best place", and even luckier to live in the last best place of the last best place - the mighty Centennial Valley. The Refuge would like to give thanks to its many partners, cooperators, friends, and neighbors of and within the Centennial Valley, and wishes you all peace and prosperity as the holiday season approaches.



## Hunting Season 2022

Hunting season is underway in Montana. Waterfowl season began on October 1<sup>st</sup>, and pronghorn antelope began on October 8<sup>th</sup>. General deer and elk season opens on October 22<sup>nd</sup> and runs through November 27<sup>th</sup>. The Centennial Valley community encourages ethical hunts, and appreciates neighborly courtesy. Please remember the following this hunting season:

- ☛ Sign in at all Block Management boxes, even if you are just passing through.
- ☛ Leave gates as you find them, or follow the directions on a posted sign nearby (i.e. shut the gate behind you).
- ☛ Do not corral game species with vehicles.
- ☛ Only travel with vehicles, including all-terrain vehicles, on roads that are marked open for travel.
- ☛ Be conscientious of where you are shooting.
- ☛ Take the time to identify animals that have young, and consider not harvesting those prior to winter migration.
- ☛ Thank a private landowner!



Kara Maplethorpe

If you have questions or an issue to report, please contact Kerry Wahl, FWP Game Warden, at (406)490-0956 or Robby Pohle, FWP Game Warden, at (406)579-3549.



Moose silhouette. -Jenny Baxter

Much of southwest Montana, including the Centennial Valley, is grizzly bear territory. Being prepared to hunt in bear country starts at home, and continues throughout the hunt. Here are some safety recommendations to know before you go:

- ☛ Let someone know where you are going and when to expect your return. Hunting with another person is also recommended.
- ☛ Carry bear spray in an accessible spot and know how to use it.
- ☛ Though making noise is not an option for hunters pursuing game, compensate by staying alert for bear activity (i.e. bears are active at dawn and dusk, look for tracks and scat, etc.).
- ☛ If you make a kill and need to return for another trip, hang meat away from the gut pile, upwind if possible, and preferably in a location that can be viewed from a distance.

For more information about how to be Bear Aware during hunting season, please check out the Interagency Grizzly Bear Committee's website: <https://igbconline.org/be-bear-aware/>

### Friends of the CVA

CVA strives to build and utilize working relationships with numerous agencies and organizations, such as:

- ☛ Federal, State, and County Agencies
  - ☛ The Nature Conservancy
  - ☛ Taft-Nicholson Center
  - ☛ Future West
- ☛ Heart of the Rockies Initiative
  - ☛ USFWS Partners Program
- ☛ Montana Watershed Coordination Council
  - ☛ Cross Charitable Foundation
  - ☛ Greater Yellowstone Coalition
  - ☛ Defenders of Wildlife
  - ☛ Livestock Loss Board
- ☛ Western Sustainability Exchange
- ☛ Missouri Headwaters Partnership
- ☛ Friends of Red Rock Lakes National Wildlife Refuge and the Centennial Valley
- ☛ Fish, Wildlife and Parks WHIP Program
  - ☛ Montana Native Plant Society
  - ☛ Western Landowners Alliance
  - ☛ And Many Others!

Cortez Rohr



### CVA Board Members

Yvonne Martinell, Chairwoman	Scott Huntsman
Peggy Dulany & Andrew Anderson (Proxy)	Ed Wolfe
Kevin Crowe & Tassi Duffner (Proxy)	Mel Montgomery
Jerry Scheid (Advisory)	Mark Bergstrom (Advisory)
Jim Berkey (Advisory)	Bill West (Advisory)

### CVA Committees

Weeds: Scott Huntsman  
Wildlife: Yvonne Martinell, Bill West  
Hunting: Jerry Scheid, Scott Huntsman