SUMMER 2022 NEWSLETTER

Collaborative conservation for the Big Hole River watershed since 1995.



P.O. Box 21 Divide, Montana 59727 406-960-4855 bhwc.org

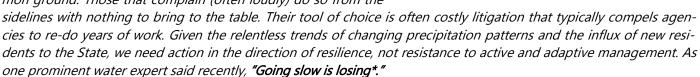
Every Drop Counts, Every Conversation Matters

Despite a colder and wetter April than usual, we're still on track for a poor year for water in the Big Hole. Drought undeniably brings stressful times and tough decisions for anyone whose livelihood depends on water. But times like these also create openings for us to find common ground on long-lasting solutions. It was times like these 27 years ago that catalyzed the formation of BHWC. The opportunity the current drought has created for us is to re-engage on water storage. As with ecological systems, human systems thrive with diversity. So, as we look to solve our water supply issues, instead of a single, silver bullet solution, we'll pursue a constellation of improvements throughout the land-scape that get us the consistent water supply needed for both fish and people.

The approach our founders chose—that of consensus and collaborative conservation—is more recognized and relevant now than ever. One of the messages resonating with people is the need to solve problems from the ground up.

There are, of course, hard realities that define limits to what we can do. Drought and water law are realities we won't be changing. Despite tremendous acts of water conservation by many landowners, and dozens of projects we've funded over the years, when headwater tributaries dry up as they did last year, there are no good options. Similarly, private property rights to use water are among the State's bedrock tenets.

Our door is always open to anyone in search of common ground. Those that complain (often loudly) do so from the



The work on our plate is to deepen and strengthen our partnerships. From these relationships we can build impactful projects. We've brought on a new board member with deep experience working with our forests; we have long-term agreements in place with multiple federal and state agencies and the support of county commissioners; and we're developing big projects at Pennington Bridge, Elkhorn Mine, the Eastern Pioneers, and the upper river. You'll soon see an announcement for the first Partner Businesses for our 1% for the River: Big Hole Conservation Fund, new signage at Fishing Access Sites, and a glorious new map of our watershed! There are plenty of seats at the table for anyone willing to do the work. Let's get to it.



*Kellyx Nelson, California Stewardship Network

Pedro Marques Executive Director, Big Hole Watershed Committee

Our Governing Board:

Randy Smith
Chairman, Rancher
Jim Hagenbarth
Vice Chair, Rancher
Steve Luebeck
Treasurer, Sportsman
Roy Morris
Secretary, George Grant
Trout Unlimited

Dave Ashcraft Rancher, Business Owner Sierra Harris The Nature Conservancy Peter Frick Rancher Jim Dennehy **BSB Cty. Water Utility Liz Jones** Rancher **Mark Kambich** Rancher Erik Kalsta Rancher **Dean Peterson** Rancher **Phil Ralston** Rancher John Reinhardt Rancher Kemph **Guiding/Outfitting** John Jackson **BVHD Cty. Commission Andy Suenram** Resident **Eric Thorson Guiding/Outfitting Paul Cleary** Resident **Mark Raffety** Rancher **Brian Wheeler Big Hole River Foundation Diane Hutton**

Our Staff:

Resident

Pedro Marques
Executive Director
Tana Nulph
Associate Director
Ben LaPorte
Program Manager
Chet Robertson
UBH Range Rider
Johnathan Costa
Wildlife Program Tech.

Our Focus Areas:

- Fish & Water
- Wildlife & Uplands
- People

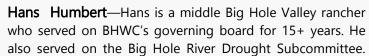
Member Spotlight: Coming and Going

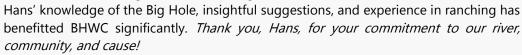
Getting to Know our Members

Our "Member Spotlight" features key board members, partners, and supporters of the BHWC and highlights their commitment to conservation and the Big Hole watershed. This edition features several incoming and outgoing board members.

Board Members on the Move

Ray Weaver—Ray is an upper Big Hole Valley rancher who served on BHWC's board for over 20 years. He was instrumental in advancing BHWC's focus on forestry stewardship, participated in the development of the Big Hole River's TMDLs, and took part in Land Use Planning. We appreciate the vast commitment Ray made to BHWC over the years. Thank you, Ray, for your service! We wish you all the best!





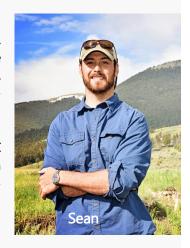


Sierra Harris—Sierra joined BHWC's board in 2019, representing The Nature Conservancy. Even prior to joining the board, Sierra was active in conservation and a familiar face to BHWC. She rarely missed a board meeting, always showed up with a smile, and was always eager to share her skills and knowledge with us. We will miss Sierra but know we will see her again in her new role as Climate Coordinator for the Greater Yellowstone Coalition. *Thank you, Sierra, and congratulations on your new adventure!!!*

New Board Members

Diane Hutton—Diane joined BHWC's board in April 2022. Now retired, she previously served for many years as Fire Management Officer for the Beaverhead-Deerlodge Natl. Forest. We are excited for the experience and unique perspective that she will bring to the board. *Welcome, Diane!*

Sean Claffey—Sean will be taking over Sierra's seat as TNC representative on BHWC's board. We have worked with Sean for some time in his role as Southwest Montana Conservation Coordinator for the Southwest Montana Sagebrush Partnership and know that Sean will be a great fit on our board! *Welcome, Sean, and thank you for joining us!*



Did You Know?

Big Hole events, plans, and updates

- BHWC's YouTube channel has experienced 591% growth in views and 232% growth in subscribers since the beginning of 2022!
- George Grant Trout Unlimited championed the Big Hole River in 2022 by paying \$4,050 for the operation and maintenance of three stream gages critical to monitoring the health of the river! Thanks, GGTU!
- 3. The Pintler Face project (USFS) will hit the ground this summer! Nearly **74,000 acres** will be treated using timber sales, prescribed burns and other non-commercial harvest, aspen enhancement, and weed treatments; grown-in roads will be closed.
- Western Rivers Conservancy purchased 200 acres along the Wise River with the goal of conveying it to the USFS. The bulk of the 11 cfs water right will be left in-stream.
- 5. The Basin Creek Fuels Reduction project aims to protect Butte's primary water source the Basin Creek Reservoir from the threat of wildfire posed by excess beetle-killed timber in the area. A wildfire could render the reservoir unusable for 10+ years, increasing Butte's dependence on Big Hole River water.
- Beaverhead County will hold
 13 volunteer weed spray days in the Big Hole this year.
- The Weedwhacker Ball is BACK: September 17th at the Wise River Community Center!

Activities & Events

Join Us in Divide or on Zoom

Monthly Public Meetings at the Divide Grange

Our monthly public meetings include committee reports, project updates, time for discussion, coffee & snacks, and special topic presentations. Please

join us at the Divide Grange or via Zoom!

June 15, 2022 — 7:00 pm BDNF Communications & Direction

BHWC does not meet in July

August 17, 2022 — 7:00 pm Topic: Bio-absorbent Mycelium Pilot Study

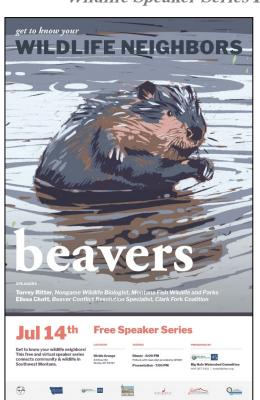
September 21, 2022 — 7:00 pm Topic: MFWP Wildlife/Sage Grouse Update

More info here: bhwc.org/monthly-meetings.



Burgers & Beavers in the Big Hole

Wildlife Speaker Series Back In-person



BHWC is excited to announce our 2022 Wildlife Speaker Series event. Our focus species this year is beaver. Mark your calendars for Thursday, July 14th, 6:00 pm at the Divide Grange! It's sure to be a fun, educational event!

We will be hearing from Torrey Ritter, Nongame Wildlife Biologist with MFWP and Elissa Chott, Beaver Conflict Resolution Field Technician with the Clark Fork Coalition. Torey will discuss beaver biology, and Elissa will provide an overview of tools and resources for landowners experiencing problems with "busy" beavers.

The event will include a potluck meal. Burgers donated by Hagenbarth Livestock. You bring a side or dessert. See you there!

BHWC in the Media

Collaborative Conservation as Relevant as Ever

BHWC was featured in:

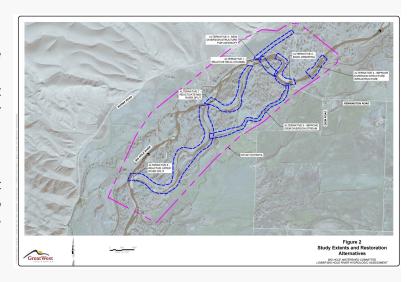
- Shared State: Water is for Fighting—Montana Public Radio podcast: When water is in short supply, how can there be enough for everyone?
- <u>Life in the Land: Big Hole Valley</u>—Stories for Action podcast: Rancher
 Jim Hagenbarth tells us what he wants the public to know about a
 rancher's role as a steward of the land, the success and challenges of
 collaborative work, and the impacts of droughts, not only to ranchers, but on the sustainability of open space and connected ecosystems.
- Life in the Land: Big Hole Valley—Stories for Action film:
 - 15-min. version shown at International Wildlife Film Festival
 - World Premiere: June 1, Depot Theatre in Dillon—6:00 pm
- River in Peril—Montana Standard articles series:
 - Part 1: Sharing the Big Hole River—Ranches, fish, and Butte brace for drought
 - Part 2: <u>Dreams, blood, a wild man and a flood—A history of the Big Hole</u>
 - Part 3: <u>Changing and adapting—Competing interests converge to help the Big Hole</u>
 - Part 4: <u>Tipping point territory—Development taking toll on Big Hole River</u>
- Montana Outdoors: All in for Water Conservation—Montana Fish, Wildlife and Parks article: Hank Worsech, Director
 of Montana Fish, Wildlife and Parks, summarizes impacts of the 2021 drought and highlights the Big Hole as a
 model watershed for collaborative conservation.

Weighing our Options at Pennington Bridge

With Full Support of Landowners & Stakeholders, BHWC Pursues Design Funding

BHWC and Great West Engineering convened local landowners on April 19th in Twin Bridges to discuss potential restoration approaches for the lower river. BHWC initiated this project in 2020 to address landowner and county concerns about stress to Pennington Bridge and the potential for a full bridge blow-out during high water.

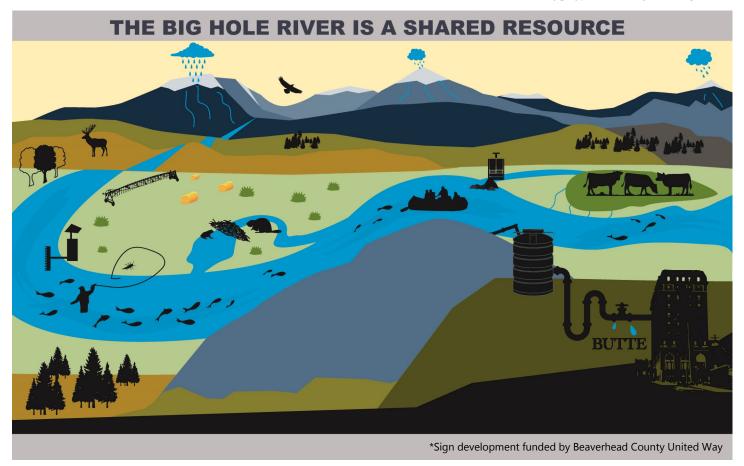
In 2021, Rowe Excavation removed 3,500 cubic yards of point-bar material to nudge the river over and decrease erosive bank stress. That was Phase I. We are now onto Phase II, with 6 discrete project concepts in hand. We will be pursuing funding for engineered designs in 2022, which will provide a more long-term, comprehensive solution to this issue.



Thank you to our project partners: Great West Engineering, Applied Geomorphology, Madison County, MWCC, MFWP, NRCS, BoR, Rowe Excavation, Geum Environmental, and local landowners.



Summer 2022



Give back to the river that sustains us!

We will put your contributions to work on important conservation and restoration projects on the Big Hole River

Donate Online: Point your phone's camera at this QR code or visit bhwc.org

Donate by Text: "BigHole" to 26989 to donate from your phone

Donate by Mail: Send checks to P.O. Box 21, Divide, MT 59727

Donate Livestock: Click for more information: bhwc.org/giving/livestock

Give 1% extra to partner businesses where you see the logo to the right

Contact us: to donate items for auction or raffle.





Building Drought Resilience in the Big Hole

Summer 2022 Streamflow, Snowpack & Climate Forecast

-Matt Norberg, Hydrologist, Montana Dept. of Natural Resources and Conservation

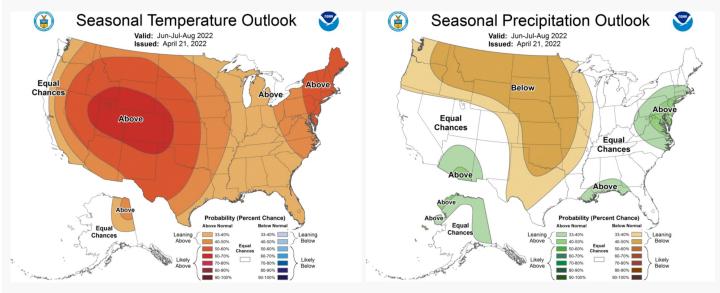
Drought Status: As of May 19, 2022, the Big Hole drought status ranges from D1 to D3, with the majority of the watershed in D2 status. (Scale ranges from D0-D4 with D4 being the driest.)

Seasonal Outlook: The June, July, and August outlook predicts a transition to above normal temperatures and below normal precipitation. The remaining summer months are predicted to become increasingly warmer and drier. Water users should expect shortages during the late spring/summer months which is all dependent upon air temperatures and precipitation. While current conditions are trending in the right direction the prolonged forecast could mimic last year's hot/dry conditions.



ENSO Alert System Status: La Niña Advisory (from NOAA)

Synopsis: Though La Niña is favored to continue, the odds for La Niña decrease into the late Northern Hemisphere summer (58% chance in August-October 2022) before slightly increasing through the Northern Hemisphere fall and early winter 2022 (61% chance).



Helpful Resources

- BHWC River Conditions webpage: https://bhwc.org/river-conditions/
- DNRC Stream and Gage Explorer (StAGE): https://gis.dnrc.mt.gov/apps/StAGE/
- MFWP Current Water Body Restrictions: https://fwp.mt.gov/news/current-closures-restrictions/waterbody-closures
- US Drought Monitor Montana: https://droughtmonitor.unl.edu/CurrentMap/StateDroughtMonitor.aspx?MT

Building Drought Resilience in the Big Hole

Native Fish Weathering the Drought

Arctic Grayling Resilient Thanks to CCAA Efforts, Enrollees

The Candidate Conservation Agreement with Assurances (CCAA) program is a 20-year program that provides legal protection to enrollees in exchange for participation in site-specific plans for riparian management, vegetation recovery, weed treatments, irrigation improvements, fish passage, and flow maintenance. Each landowner plan is monitored and results are reported annually.

According to Jarrett Payne, Riparian Ecologist with Montana Fish, Wildlife and Parks and one of the Upper Big Hole Arctic Grayling CCAA program's key partners, 2021 was the most difficult year yet in terms of drought in Upper Big Hole watershed. But it could have been worse. Last year, CCAA enrollees gave up even more water than they had agreed to in their written plans! According to Jarrett, "This sacrifice is why the river remained flowing in Wisdom, where it went dry in 1988." This helped to maintain crucial rearing habitat for graying young-of-the-year. Jarrett added, "... the landowners enrolled in the CCAA program remain very engaged and supportive of grayling conservation. Their efforts and sacrifice have kept grayling on the landscape at greater abundances than when the program first started in 2006, even after last summer's harsh conditions."

So what will 2022 bring for Arctic grayling? Hopefully abundant precipitation, but if it ends up being another record-



Mural by Stella Nall for 2022 Earth Day event, Patagonia Outlet

dry, record-hot summer, at least we know the CCAA crew (Jarrett; Jim Magee, USFWS—Partners for Fish and Wildlife Program; Matt Norberg, Montana DNRC; and Ryan Kreiner, Tim Gander, and Cassandra Kohler with MFWP) will work tirelessly with landowners, agencies, and NGOs to conserve grayling for future generations!

Circling the Wagons for Big Hole Water

BHWC Renews Focus on Drought

In 2022, BHWC is getting back to our roots—the catalyst for the organization's creation—drought. In response to feedback from water users and input from the Big Hole River Drought Subcommittee and the 2021 water year, we have intensified our focus on communications related to drought, including updating the Big Hole River Drought Management Plan to make it more user-friendly and to improve communications in the Big Hole around drought and water supply. Be on the lookout for weekly water supply/drought updates via email and text message during the water year.

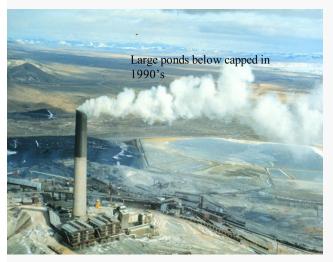
Text "Drought" to 26989

to sign up for weekly river condition & water supply updates

Fish & Water

Headwaters Remedy Nearing EPA Approval

Eleven Years Restoring Smelter and Mining-Impacted Lands



BHWC and partners are still busily restoring smelter and mining-impacted lands in the Anaconda Uplands Superfund site, where aerial emissions from early 20th-century smelting activities released hazardous contaminants that led to large-scale vegetation loss and soil erosion in the Deep Creek and Mill Creek drainages.

After 11 years of study, design, and hard work, the Natural Resource Damage Program (NRDP) and BHWC are nearing the finish line for remediation of these 5,000 acres. We are now working to maintain and enhance past work and to show the Environmental Protection Agency that the restoration/remedy projects we have completed are working.

The performance monitoring we completed last year clearly showed that we are retaining sediment on the landscape and promoting healthy native vegetation. Work this year will

include continued performance monitoring, project maintenance and enhancement, and weed control.

Thank you to our project partners, which include, but are not limited to: MFWP, NRDP, Watershed Consulting, WET, Montana Tech. Restoration Biology Program, and Pioneer Technical.

A Whole New Stream

BHWC Builds on 2019 Project to Complete Full Restoration of Oregon Creek

Our Upper Oregon Creek restoration project will begin this spring. Just upstream of our 2019 Oregon Creek project, this one will address the last known upland sediment source created by aerial emissions from smelting activities in Anaconda. The 2019 project created a sediment capture reach out of a placer-mined area but did not address the continual upland sediment sources.

Like our work with NRDP described above, this project will aim to capture sediment, establish vegetation, and restore riparian function. Over 25 acres are slated to be seeded and fertilized on the bare slopes, copious gully plugs and in-stream structures will be built, and 11 acres of the floodplain will be reconnected. Another important impact of this project will be the removal of a perched culvert that is creating a barrier to fish passage to half a mile of cold-water habitat. This project will take two years to complete but when finished, and in conjunction with our 2019 project, will mean a complete, ecological makeover for Oregon Creek!

Thank you to our project partners: MFWP, DEQ, Trout and Salmon Foundation, and NRDP.





Fish & Water

Connecting the Dots (and Streams) for Native Fish

BHWC Projects Facilitate Grayling, Cutthroat Reintroduction in French Gulch

After two years of planning, coordinating, and fundraising, we will be implementing our Upper French Gulch Fish Passage project this year! Historic mining from the 1860s-1900s created a 30-foot cascade (i.e., waterfall), that effectively prevents fish from accessing the uppermost 1.7 miles of French Gulch. This summer, BHWC and partners will replace the existing cascade with a linear step-pool structure. It will include roughly 25 steps that the fish will need to jump over to finally reach the top, but we know they can do it! The structure incorporates long, deep resting pools to give fish a break and a better chance of success on their long journey! This project comes at a perfect time, as MFWP will soon be reintroducing Arctic grayling and Westslope cutthroat trout into the French Creek drainage. Along with our earlier project completed in 2016, this effort will provide a fully functional and connected French Gulch tributary for the first time in over 140 years!

Thank you to our project partners: MFWP, Deer Lodge Valley CD, DNRC, and Morrison-Maierle.

We're "Quaking" with Excitement

About Releasing Aspen Stands from Encroaching Conifers

In conjunction with MFWP, BHWC will be implementing a large-scale forestry project this year! This summer, 220 acres of threatened quaking aspen will be treated in the Mount Haggin WMA in the California and Oregon Creek drainages. All fir trees and lodgepole pines will be removed from aspen stands to allow for recruitment (i.e., sprouting) and regeneration of aspen clones.

So why care about aspens? Aspen groves maintain snowpack on the landscape for longer periods of time, provide protection for soil, act as hubs of plant and animal diversity, and provide forage for wild and domestic ungulates. They also provide nesting habitat for birds and thermal cover/hiding security for wildlife. Aspen stands make up a very small percentage of our watershed, so enhancing them is essential.



Thank you to our project partner, MFWP, for your dedicated stewardship of public lands in the Big Hole.

Eyes on the Eastern Pioneers: Cutting Trees to Save Water

Addressing Conifer Encroachment

BHWC is partnering with the Southwest Montana Sagebrush Partnership (SMSP) and the BLM to restore aquatic and riparian resources in the Eastern Pioneer foothills. We will be working together to restore stream reaches in Trapper Creek, Browns Gulch, and Lost Creek — both on public and private land. The work will mainly consist of the installation of low-tech, processed-based, in-stream structures such as Beaver Dam Analogs and Post-assisted Log Structures as well as the removal of conifers from riparian areas. This project aims to



improve stream function and both instream and riparian habitat conditions. Project work will continue into next year.

Thank you to our project partners: TNC, SMSP, NFWF, and BLM for helping us restore these vital habitats.

Fish & Water

Measuring the Mine Waste

BHWC, Partners Gather Data at Elkhorn Mine and Mill to Design Future Remedy



We are looking forward to another field season at the Elkhorn Mine and Mill. A century of underground hard rock mining and milling at the abandoned Elkhorn Mine & Mill has resulted in degraded fish habitat, water quality impairments, and hazards to public health and safety. Since 2020, BHWC has been coordinating a team of experts and the United States Forest Service (USFS): Beaverhead-Deerlodge National Forest to characterize the site and sources of acid mine drainage and provide data-driven information needed for restoration planning.

We will continue planning efforts this year by characterizing the remaining contaminated soils around the site. Subcontractor Pioneer Technical will dig test pits and measure the volume and extent of mine waste still present. The resulting data will summarize mine waste (i.e., tailing deposits) and estimate

the volume of material to be removed. This effort is crucial for development of conceptual remedial designs by year's end, as the results will inform the development of the soils excavation and removal design. Partners listed below.

Mushrooms and Mine Waste

Cleaning Contaminated Water with Science, Nature

BHWC is working with Montana BioAgriculture Inc. (MBAI) to design and install a pilot bio-absorbent mycelial (i.e., mushroom) filtration system to treat acid mine drainage seeping out of the 1000' adit (horizontal mine shaft) at Elkhorn Mine. In April, we visited MBAI's lab in Missoula to review the latest milestones. Initial results indicate that the metals in the AMD from the historic Elkhorn Mine are binding to the Rhizopus fungal culture (i.e., the mycelial mass), and water is coming out clean after several cycles through the filter! MBAI will continue to refine the lab study in order to install an on-site filtration system later this summer.



Thank you to all of our Elkhorn project partners: MBAI, BoR, USFS, DNRC, MFWP, MBMG, MDEQ, Montana Tech, Montana Watershed Coordination Council, Beaverhead Conservation District, Pioneer Technical, and WindenWater LLC.

Wildlife & Uplands

Share the Landscape and Protect the Livestock

BHWC Picks Up, Composts Livestock Carcasses for Free

Did you know that BHWC picks up and composts livestock carcasses to prevent predators from being attracted to local ranches? We do it each spring from March through May with a dump truck on loan from Red Rock Lakes NWR, who pays for fuel for the program.

In 2022, we have picked up and composted a total of 61 carcasses (28 cows, 32 calves, and one horse). With wolves and black bears active on the landscape—and more grizzly sightings reported in the Big Hole each year—managing carcass attractant is becoming increasingly important. Call John Costa to arrange for carcass removal: 209-628-2225 or email info@bhwc.org for more info.





Speaking of Grizzlies ...

Remember to Be "Bear Aware"

It's early summer, which means bears are waking up from their winter slumber—and they are HUNGRY! Here are a few recommendations to help you stay safe while working or recreating in bear country:

- Carry bear spray
- Travel in groups when possible
- Make noise

Reach out to BHWC or People and Carnivores for recommendations and resources to make your operation more bear-resistant.

Findings for the Farm Bill

BHWC Participates in Range Rider Study

We've mentioned before that BHWC is part of a colossal, multi-state coalition that received funding from the NRCS through their Conservation Innovation Grant to reduce conflicts between people and predators—especially grizzly bears and wolves.

As part of that grant, BHWC is participating in a range rider study conducted by graduate students from Utah State and Colorado State Universities. Our range rider, Chet Robertson, will perform his usual duties (monitoring USFS grazing allotments for livestock condition and predator activity) while also completing daily data sheets and submitting GPS information to the research team. Landowner participation in the study is optional.

Resulting data from the project—along with several other case studies in both Montana and neighboring states—will support the coalition's ultimate goal: to make the case that non-lethal tools like range riding, carcass composting, and electric fencing should be eligible for funding under the USDA Farm Bill and to create payment scenarios for legislators to consider.



Big Hole Watershed Committee P.O. Box 21 Divide, MT 59727

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Conservation Through Consensus Since 1995

Mission: To seek understanding and agreement among individuals and groups with diverse viewpoints on water use and management in the Big Hole River watershed of Southwest Montana.

Established in 1995, the Big Hole Watershed Committee (BHWC) is a collaborative organization representing diverse regional interests, including ranchers, sportsmen, conservationists, tourists, and community members. For two decades, BHWC has taken a leadership role in enhancing the vitality of the Big Hole River, the surrounding watershed and communities, and the diverse and rare wildlife that inhabits the Big Hole Valley. The Big Hole River is the lifeblood for the surrounding area's natural and agricultural legacies, and the foundation for the region's economy. By proactively working to conserve this precious resource, BHWC is enriching one of Montana's last, best places for local residents and visitors from around the world.

BHWC is a consensus-driven, multi-stakeholder entity that works closely with other conservation organizations as well as local, State, and Federal agencies on watershed restoration and management plans.

The Big Hole Watershed Committee is a non-profit, tax-exempt charitable organization under Section 501(c)3 of the Internal Revenue Code. Donations are tax deductible as allowable by law. *Our tax identification number is 11-3737644*.