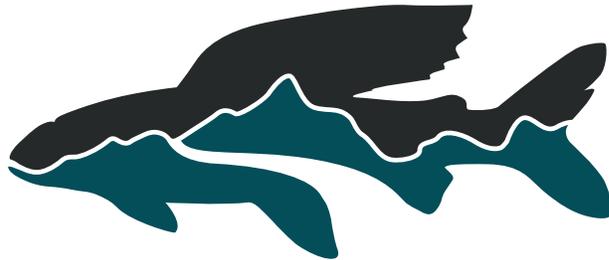


Free Flows

A Quarterly Publication



BIG HOLE RIVER
FOUNDATION

The Big Hole River Foundation's mission is to conserve, enhance and protect the free-flowing character of the Big Hole River, its unique culture, fish and wildlife.

Spring 2017

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CCAA 10 Years Later
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Kid's Day on the Big Hole
Road Cleanup

Upcoming Events

Kid's Day on the Big Hole -
May 6, 2017

Road Cleanup Divide -
May 10, 2017

Birding the Big Hole -
June 3 or 10. Call for info.

Big Hole River Day -
July 15, 2017

Big Hole River Day is Moving to Wise River!

Our annual Big Hole River Day, a fun event celebrating the Big Hole's communities, its fisheries, local artists and entrepreneurs, is set for Saturday, July 15th in Wise River.

While Big Hole River Day enjoyed many great years in Melrose, we were unable to secure a location to house the event for 2017. We are sad to leave our friends in Melrose and hope you all can still join us up the road in Wise River!

We will continue to offer the same fun and exciting events this year, including live music, a brewfest featuring several local breweries, a fly-casting competition, and local and regional artists and vendors. The day will culminate in an amazing prime rib dinner catered by the famous Wise River Club, along with the raffle of a custom Hyde drift boat!

The boat is at the Stonefly Fly Shop in Butte for several weeks and then moves to Sunrise Fly Shop in Melrose. It will be at several other locations throughout the spring and summer – come on by and check out this beauty! You can find the location of the boat on our Facebook page or call us at 406-560-7089 to get your tickets today!

Big Hole River Day is our largest fundraising event of the year, helping us to raise money for conservation projects and education programs – all which conserve, enhance, and protect the free-flowing character of the Big Hole River, its unique culture, fish, and wildlife.

We are also seeking businesses, individuals, and organizations to help sponsor Big Hole River Day, whether by volunteering your time, donating an item for our auction, or donating funds to help us offset costs. For more information on sponsorships, please contact Brittany at 406-560-6909 or brittany@bhrf.org.

Lodging and camping options are also available at the Wise River Club. The Club houses several cabins to rent for the day or weekend, as well as a camping/RV park – make sure to get your reservations today!

We are looking forward to another great year, meeting our new neighbors in Wise River, and raising money to help the Big Hole River! Hope to see you there!

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President's Message

It is déjà vu all over again. We are heading into spring with unseasonably warm weather, fast-disappearing snow cover on the valley floors and mountain shoulders, and no predictions for abnormally heavy moisture in the coming months. Remember the Big Hole River in your meditations so we have a river to enjoy this year.

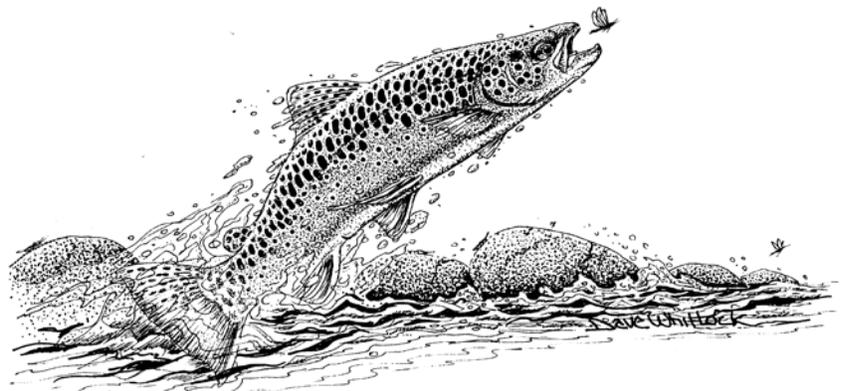
Much has changed in the months since I last wrote, due in part to our decision to forego the Winter edition of the newsletter. Our new Executive Director, Brittany Trushel, has been on the job for three months and is preparing our work plan covering the next two years.

The Board recently spent a day with consultant John Carreon from Thomas P. Miller & Associates to make the final decisions on our strategic plan. The Foothills Foundation covered the cost of that process. I admit that I was skeptical of the cost and benefit of the process, but having been through it I am now a firm believer. John kept the all-day discussions on track and helped us to address the specific aspects of what we wish to accomplish with our work plan.

Things are looking very good. I am more confident in a productive and beneficial future for both the Foundation and the River than at any time since I returned to the board. We would not be in this position without the help and support you have given us over the last few years. Thank you!

As always, we want to know what you think of what the Board is doing and the direction the Foundation is taking. Please take a moment to give us the benefit of your thoughts and insights.

Tom



Executive Director's Message

We live in a world vastly different than the generations before us. Our world is affected by changes in demographics, climate, ideologies, and in many ways, cooperation. While some believe we are more polarized than at any time before – I do not see it this way. I see people striving to leave ample economic opportunities, while passing on a legacy of stewardship and success to our future generations.

The Big Hole Valley is already deeply entrenched in shaping just such a legacy. Residents of the Big Hole have worked together for well over a decade to stave off the federal listing of an at-risk fish species, the fluvial Arctic grayling. People have also worked together to actively combat low-water levels and high water temperatures during summer months. The Big Hole communities have supported smart development policies. These are no nominal feats or small victories

The work of the Big Hole Valley can and should serve as a success story and model for what is possible when people from different backgrounds and livelihoods come together for a common purpose – to protect and keep our legacy intact and be stewards for the land, fish and wildlife, and water resources that we are lucky enough to have. I can think of only a few examples of such successful cooperative efforts.

Fish, water, wildlife, land, nutrients, plants - these are all resources, they are finite, and we need them to maintain our status quo. The Big Hole communities have fostered an environment of collaboration, cooperation, inclusivity, and shared sacrifice. This has taken years of respect, trust, authenticity, and solidarity.

These attitudes and history of success are what I have inherited as the new executive director of the Big Hole River Foundation – and I will work relentlessly to foster and promote these ideals and continue that success.

The Big Hole River Foundation is planning a new and exciting path forward. We will continue to support the educational outreach projects, community events, and restoration projects we always have, and we will also look for ways to make long-lasting conservation impacts in the Valley. And we will do this in several ways:

- Support research efforts to learn more about the Big Hole and fill in information gaps
- Engage community members and user groups to inform our conservation programs
- Ensure the diverse voices and users of the Big Hole are heard, respected, and considered
- Work to preserve the Big Hole's culture through advocacy, policy, and outreach
- Listen and learn from the generations of on-the-ground knowledge and experience to effectively protect the legacy of the Big Hole Valley

Using my experience as an aquatic scientist and community organizer, I will build upon the stellar track record of cooperation and respect within the Valley. I will work to preserve and protect the Big Hole's guiding principles and heritage that communities have worked tirelessly for generations to maintain.

In our drastically changing world, respect, cooperation, and collaboration may be finite – but not in the Big Hole. The Big Hole has been modeling these principles for generations. And I am excited to see what we will accomplish in the years to come.

Brittany

Thank You

We are grateful to the following members and donors who have renewed or made recent contributions and gifts in support of our mission as of March 25, 2017

Every effort has been made to maintain accuracy in our donor lists. If we have made any errors, please call 406-560-7089 or email bhfr@bhfr.org.

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Steele's~Wal-Mart Charitable Foundation

Long time member and donor passes away.

Louis Douglas 'Doug' Barba, loving husband, father, grandfather and friend, died peacefully, surrounded by his loving family, at his home in Norwich, Vermont on Sunday, February 26, 2017. Doug was 69 years old.



Doug's adventurous spirit included sailing in Nantucket and Rhode Island, skiing in Stowe, Vail and Alta, fly fishing on the Big Hole River in Melrose, MT, cycling across Texas, photography, family vacations and planting thousands of beautiful unique daffodils, "for Betty" he would say.

His mother and father, Jean and Lou Barba, precede him in death. He is survived by his wife Betty, his four siblings, his children Jenny Barba and husband, Christopher Coughlin, of Norwich, VT, and Ryan Barba (Sunrise Fly Shop in Melrose) and wife, Katie Barba, of Dillon, MT, and his four delightful grandchildren: Silas, James, Charles and Amelie.

Foothills Foundation Challenge

A little over two years ago the Foothills Foundation offered us another challenge. That challenge would be three years in length and for each year that we raised \$25,000 in new or increased donations, the Foothills Foundation would match it 1:1.

Our first two years of the three-year challenge have gone by and we are extremely thankful to our many new and recurring donors who helped us succeed in raising \$25,000 in years one and two.

We are now three months into our third year of the challenge and our faithful donors have not let us down. We are halfway to our goal!

Thank you and please consider a new donation or an increase in your normal donations to help us finish up year three of the challenge with a bang.

Planning for Climate Change in the Big Hole River Watershed, Part 2

by Michael Cooperman, PhD, BHRF Board Member

In the last issue of “Free Flows,” I addressed the anticipated impacts of climate change on the Big Hole Watershed in the coming years. In summary, expect average air temperatures to be about 3oF higher than present, winter precipitation to increase by about 5% but more of it will be as rain and less as snow, and late summer stream flows will decline from current norms because of the combination of less snow pack and earlier run-off. Collectively, these changes present a notable challenge to the Big Hole’s world class cold-water trout fishery and native species conservation efforts, with the primary threat being a function of late summer water availability and temperature. The question is: what can be done to help minimize the threat? In most cases, the answer is good, old-fashioned watershed stewardship.

First and foremost, we need to protect (or restore) riparian zones, particularly in headwater streams. Riparian zones provide many benefits to the river system, including shading the water from the sun and thereby limiting “thermal loading,” a primary source of warming. The emphasis on headwater streams stems from the dual realities that the narrower channels of small headwaters are more comprehensively protected from thermal loading than the relatively wide channel of the mainstem river. Also, headwater streams, despite their small individual sizes, collectively account for a large percentage of total stream surface area. When headwater streams are kept cool, the benefit flows downstream into the mainstem.

Closely related to protection of riparian zones, is the proper management of livestock grazing. When livestock graze next to, or in, a stream channel, they tend to break down the stream bank resulting in a wide, shallow river channel. Wide channels have larger surface areas than narrower channels, and therefore, are subject to increased thermal loading. Controlling

access to sensitive areas like river banks via fencing, managing the grazing load on any specific location via rotating stock among different locations, and the provision of off-channel water sources are all well-proven, low-cost techniques for limiting the unintended and undesirable consequences of grazing.

We also need to ensure that when water is removed from the river system (i.e., for irrigation) it is used as efficiently as possible, thereby limiting the total amount that is withdrawn. Wherever feasible, it would benefit the river to ensure irrigators use high efficiency techniques such as drip irrigation as opposed to flood or sprinkler irrigation. Programs such as ditch-riders, to ensure irrigation ditches are operating as designed, and ditch lining to limit leakage are also excellent means to ensure water is not wasted.

Another critically important part of protecting the Big Hole from the impacts of climate change is to ensure continued application of the Big Hole’s Drought Management Plan. This plan provides a framework for different river user groups (e.g., irrigators, commercial outfitters, private recreationalists, etc.) to work together to protect the river ecosystem at times of high stress, such as in late summer and during low-flow years. Recently, the Drought Management Plan has become a source of tension amongst the various user groups, and resolving these issues via equitable agreement should be a priority for all parties within the watershed.

Each of the above points are, and will continue to be, pillars of our Foundation’s efforts to protect the river ecosystem. They have been proven effective, are relatively inexpensive, and have broad support from the full suite of user groups present in the watershed.



Riparian area in upper Big Hole

Arctic Grayling Conservat

by Emma Cayer, FWP Arctic

We are lucky here on the Big Hole River, to have one of the few native Arctic grayling populations in the lower forty-eight United States – where it resides primarily on private land owned by traditional ranching families.

The decline of the Big Hole River Arctic grayling began in the late 1980's after several years of severe drought. The rapid decline of grayling raised awareness among ranchers (who rely solely on flood irrigation for livestock hay and pasture) that they shared a precious resource with a rare fish species – water, and unless they started working together, they might have an Endangered Species on their property.



USFWS Director Dan Ashe traveled to Montana to announce the Arctic Grayling decision to over 100 private landowners, non-government groups and agency partners on August 19th

It has been over 10 years already since Big Hole valley ranchers, state and federal agencies, and local working groups developed a Candidate Conservation Agreement with Assurances (CCAA) program for Arctic grayling in the Big Hole valley – a conservation program designed to prevent a species from being listed on the Endangered Species Act (ESA) by proactively addressing the threats they face.

The CCAA (a USFWS program administered through Montana Fish, Wildlife and Parks(FWP)) is a watershed scale approach to

addressing threats to grayling, while providing private landowners assurances that if the fish became listed, they would not be asked to do more than they agreed to in their Site-Specific Plan conservation plan (SSP). The SSPs are developed for each enrollee that address the 4 threats to grayling on their property: 1) instream flows, 2) degraded riparian and channel habitat, 3) habitat fragmentation and 4) entrainment (grayling lost to the population in irrigation ditches).

Currently, the CCAA for Arctic grayling in the Big Hole valley has 162,000 acres and 33 non-federal landowners enrolled making it one of the largest CCAA in the United States in terms of number of participants. There are 30 completed and signed SSPs under implementation.

The goal of the CCAA is to increase distribution, abundance and resiliency of Big Hole grayling by improving habitat and connectivity. Because the majority (90%) of grayling habitat in the Big Hole watershed is on privately-owned ranch lands,

working relationships between state and federal agencies and the private ranchers has been essential.

On August 19th, 2014, the USFWS announced Montana Arctic grayling were not warranted for listing under the ESA. FWP worked closely with the USFWS providing all the best available scientific information about grayling in Montana for their Status Review, updating it from 2010. This information, along with new genetic work, and private lands conservation efforts like the Big Hole CCAA, resulted in the decision that will allow the state of Montana to continue managing Arctic grayling in Montana. This is great news for Montana – a state that takes pride in their native species and has worked for many years to conserve and restore this species.

The work is not over though. Increasing trends in most populations is a positive sign that conservation and management actions are working. FWP and partners will continue to reintroduce grayling to historic habitats, improve grayling habitat, and monitor populations throughout the historic range of grayling.

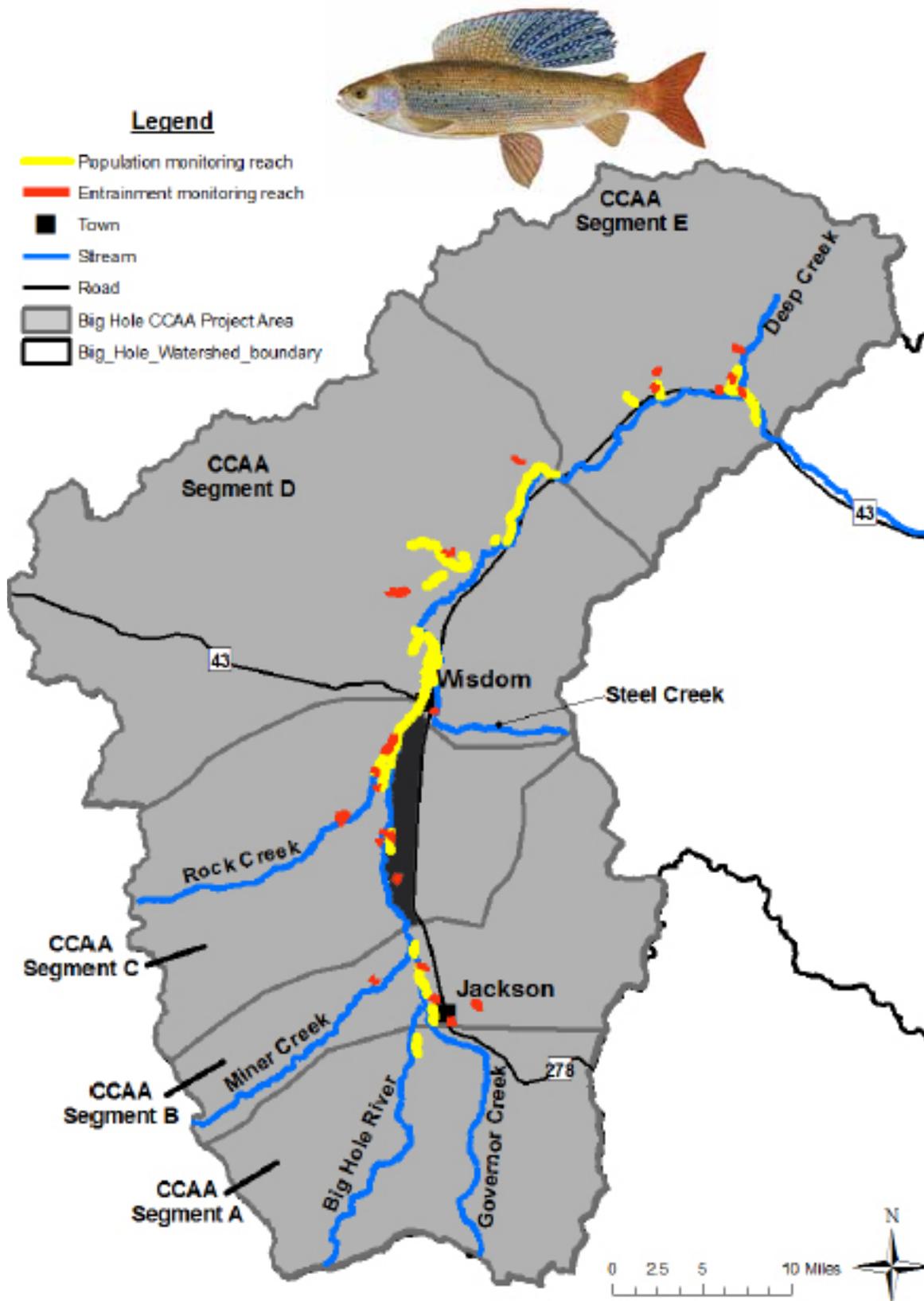
Today, in the Big Hole valley, the CCAA program is thriving...a strong commitment from landowners and partners has been essential to keep forward momentum. Habitat improvement projects, streamflow agreements, drought management, research and other grayling related activities are in full swing.

The overwhelming participation in the CCAA program has provided the opportunity to complete over 450 habitat improvement projects over the last 10 years, putting approximately 6 million dollars on the ground.

The CCAA has provided private landowners and agencies a proactive conservation approach to address grayling threats at a large scale. All enrolled ranches sacrifice a little (whether its water, grass, or time) – but the shared sacrifice across 33 landowners has produced amazing results, not only for grayling but for their ranch. Many ranchers can't afford the infrastructure needed to improve habitat for grayling. The CCAA program has been able to provide funds to implement the necessary habitat restoration projects. It has also helped to form an extremely unique relationship built on a foundation of trust - between agencies and ranchers in the Big Hole Valley. Grayling have been the catalyst for instream flow and riparian habitat improvements in the Big Hole Valley – but hundreds of other native fish and wildlife species as well as the local ranching community continue to benefit from this collaboration.

tion in the Big Hole Valley

Grayling Recovery Biologist



2017 Rocky Mountain Skiff Raffle Early Bird Special

Order \$100 worth of tickets during the month of April and receive 7 tickets instead of 6.

But hurry, your ticket order must be received no later than April 30, 2017.

Just write "EARLY BIRD" on ticket stub below.



Thanks to Hyde Drift Boats, we have a beautiful red, white and blue Rocky Mountain Skiff for our 2017 raffle. Tickets are \$20 each or 6 for \$100 and are available in area shops and by phone or mail.

Sorry but we cannot sell raffle tickets online.

Package includes, boat, seats, braces, anchor system, oars, and trailer.

Big Hole River Foundation Drift Boat Raffle Ticket Order Form

Name

Address

City, State Zip

Phone

**RAFFLE TICKET ORDER
FORM**

Mailed tickets must be received in our office no later than July 13, 2017

Kid's Day is Saturday, May 6th in Melrose, Montana



Every spring, the BHRF hosts Kid's Day, a day of fun and educational events to get local youth involved in river stewardship and fly fishing. This year the tradition continues on Saturday, May 6th at Meriwether Ranch located just north of beautiful Melrose!

The children move through several learning stations, including fly-casting and fly-tying, aquatic insect and fish identification, sampling demonstrations by area biologists, boating and safety training and a short float trip down the river with professional guides. Lunch and snacks are provided.

The Big Hole River Foundation partners with southwest Montana area guides, Meriwether Ranch, Wal-Mart, Montana Fish Wildlife, & Parks, Clark Fork Watershed Education Program, and many others to offer this annual event. A huge thank you to the organizations and individuals that make this event possible every year!

The event is free and open to 75 area youth, ages 7-13. Kid's Day fills up quickly, so be sure to sign your children up today, by contacting Corky at bhrf@bhrf.org or 406-560-7089. Flyers and registration forms are available in all watershed schools.

You and your children are sure to have a fun and educational time!

Volunteers Welcome for Annual Highway Cleanup in Divide on May 10th!

Many years ago, the Foundation adopted a 2-mile stretch of Highway 43 in Divide and our annual right-of-way cleanup is scheduled for Wednesday, May 10th.

The BHRF's board members and staff will meet at the Divide Bridge fishing access at 5 pm. Cleanup typically lasts about two hours.

We are proud and committed to help keep the Big Hole River area roadways free of trash and debris.

If you are available to participate and would like more information, please contact Brittany at brittany@bhrf.org or at 406-560-6909.

We hope to see you there!



BHRF Merchandise

The Big Hole River Foundation has books, logo fishing shirts, vests and hats for sale. To order, please visit our website at www.bhrf.org.

Montana's Last Best River: The Big Hole and it's People by Pat Munday.
George Grant signed edition \$59.95 + S&H
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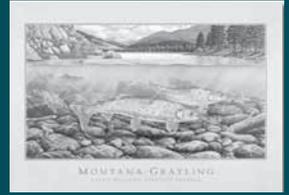


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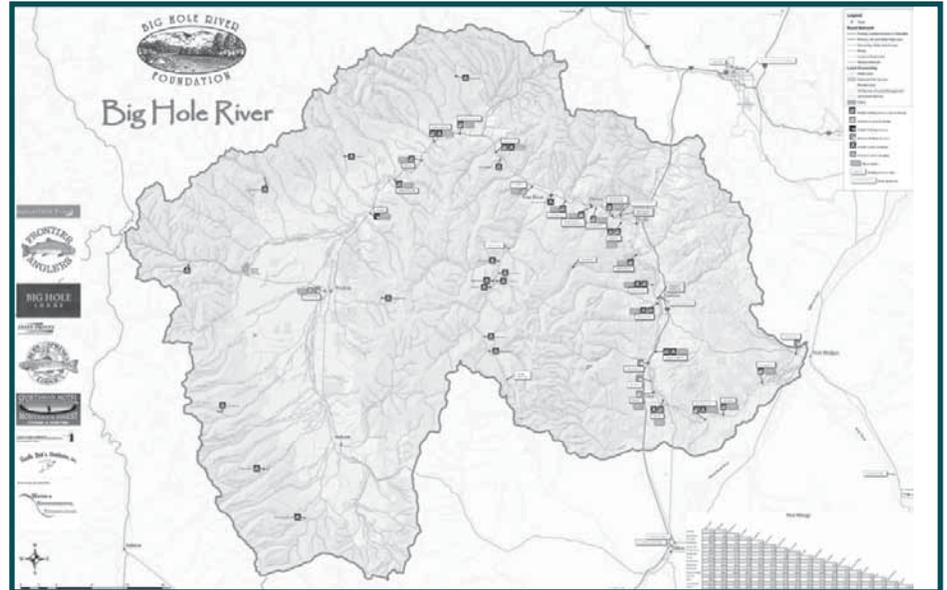


Hats
Black, Charcoal & Sage with logo
\$20 + S&H

Montana artist Monte Dolack's "Montana Grayling" posters
These beautiful posters of Arctic grayling are worthy of fine framing
\$25 each plus S&H



Big Hole River Maps available in local shops or order online at www.bhrf.org for \$9.95 + S&H

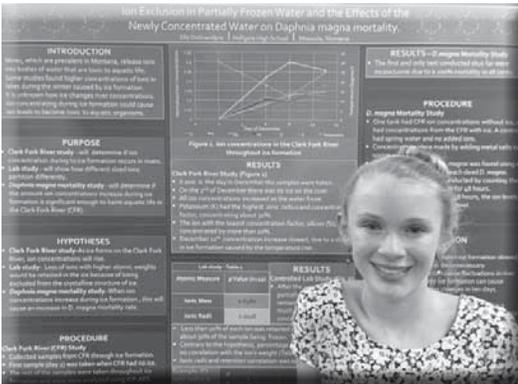


Newsletter and Corporate Sponsors - Thank you!



32nd Annual Montana Tech Regional Science Fair - 2017

Board member Sheila Youngblood and Executive Director Brittany Trushel judged the 2017 Montana Tech Regional Science Fair recently. Two middle school and one high school project were our top picks this year for a cash award and a one-year membership to the Big Hole River Foundation.



10th grade Hellgate High School
Ella DeGrandpre

Project: Ion Exclusion in Partially Frozen Water and the Effects of the Newly Concentrated Water on *Daphnia magna* Mortality

7th grade Townsend Middle School
Bailey Taves

Project: Macro Mania



6th grade Ophir Middle School
Jessica Bough and Kate King

Project: Look Out Below

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If you would prefer to receive this newsletter in digital PDF format only, please drop us an email at bhrf@bhrf.org with the subject line GO GREEN

And don't forget to sign up for our periodic on-line version of Free Flows at www.bhrf.org



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