



Colorado Water Board
Mosquito Range Heritage Initiative
Final Report

MRHI has done an immense amount of water education since our partnership began with the Colorado Water Board. Our programs were far more in number and reach than we initially promised. We have more than tripled our overall programs in the past two years. This grant provided an opportunity to open our eyes to all the ways we can incorporate water education whether it's discussing our importance as the headwaters during a full moonlight ski at the top of Hoosier Pass, building an accessible fishing pier, or squishing through a wetland searching for the tiniest invertebrates. We now incorporate some type of water lesson in nearly everything thing we do.

Unfortunately, we have also had a series of setbacks that put our reporting behind and for that we apologize. We lost two of our most active administrative volunteers due to health issues. Although we've hired two new people to assist in program administration, both also had to leave due to personal/family health issues. On a positive note, we've also had some fabulous opportunities that took extra time. Although they were not directly part of our work with you, they were water-related. One very large project included being part of the recent acquisition of nearly 300 acres of now-public land on Mt. Democrat (headwaters of the South Platte); another was the development of an accessible new fishing trail/platform in Happy Meadows. We are also tackling diversity gaps including adding bilingual educators as well as a pilot program to engage more children with special needs in our education programs and field projects.

It is our hope that our work speaks far more positively than our timing!

Expand Water-Focused Youth Programming

Youth water education programs have targeted both children and adults throughout the last several years. In the second half of **2022**, we reached 957 children and 119 adults with free nature science education programs including snow science, nature workshops, homeschool nature discovery hikes, and wetland discovery walks – mud included! Of all the offerings, 14 programs had a **specific water focus reaching 158 children and 61 adults.**

In **2023**, youth water education ramped up even more. We offered a wide range of programs and activities including class outings, homeschool programs, an Earth Day Art Competition and river cleanups. We offered fishing and snowshoeing classes for families too. The snowshoeing was even more popular than we expected so we held multiple workshops by request and included the activity as part of studying snow science. Five nature science kits were distributed to Edith Teter Elementary students and community residents via the library so that nature learning could continue at home. Our programs incorporated lessons from Project WET, Project WILD, Growing Up WILD. Out of nearly 1200 children and adults who participated in MRHI's youth nature science education, **726 children and 114 adults were part of water-specific education.**

At this point in 2024, we have nearly doubled our reach just for snow science compared to the previous years. We look forward to building our SnowSchool even more in the years to come. We've welcomed 99 children & 19 adults –and it's still snowing!

Deliverable: 800-1000 children & families, Actual: 983 children & 194 adults = 1177 reached.

Task 2 – Increase Awareness of Native Aquatic Plants

The Mosquito Range is an area with incredible biodiversity! That is critical in our minds as we work to educate and engage the public in our work for conservation and rare and native plants. To engage more residents in our citizen science opportunity for rare alpine plant studies, we held several hands-on workshops to learn how to search and monitor these special plants. Our focus was particularly high alpine areas with snow runoff and near some of our special fens.

One area we have struggled with is teaching new staff and volunteers about the plants we monitor and attempt to find in our high alpine areas. Most people we work with, even many botanists, are not familiar with many plants on our species list. We have been creating and editing a PowerPoint presentation that highlights each of the plants and related characteristics with accompanying photos to boost knowledge before heading into the field. It will be a great tool moving forward for improved education.

Rare alpine plant research, locating and mapping work continue, with annual reports provided to federal agencies. We offered expanded botany training for our rare plant team, and also launched a new rare plant volunteer program. Our study area is incredibly vast and often difficult to access. Our hope is that by engaging more local volunteers, we can cover more territory, better support our core team, and build a community understanding about the importance of rare and native plants. We had more volunteers than we expected with 16 people being trained and assisting us in our search last year. We hosted three noxious weed pulls in Fairplay and Placer Valley in both 2022 and 2023, and also helped sponsor/participate in a fourth, Wendy's Wildflowers in Alma.

To interest the broader community in water issues as part of our annual meeting in 2023, we held a film festival curated by the Winter Wildlands that focused included outdoor stewardship, grassroots policy and advocacy work, backcountry adventure and the increase of users, and snow/water conflicts. It was extremely well received! 55 people attended. We provided current newsletter and opportunities for people to sign up as volunteers to help with trail and habitat restoration projects.

We invited author Ben Goldfarb for a community presentation on his book *The Surprising, Secret Life of Beavers and Why They Matter*, winner of the PEN/E.O. Wilson Literary Science Writing Award. His presentation included the importance and potential risks to the sustainability riparian species and plant communities, and the importance of the beaver in that environment. 54 people attended. We plan to have him back this summer for a field workshop about beavers and riparian restoration near Fairplay.

Deliverable: 8-10 Community Members-Rare Plants, Actual: 16.

Deliverable: 200 Citizens Reached Climate/Water/Tourism: Actual: 221

Task 3 – Provide Community Engagement Opportunities

Community outreach was accomplished in a wide range of methods and activities. We hosted recreational events with educational messaging including the annual MRHI Poker Glide and Poker Ride. The “glide” included water conservation messaging, while the “ride” provided tips on reducing wildlife impacts while riding mountain trails. With the help of Park County Search & Rescue, we offered free community avalanche awareness workshops that included both classroom and outdoor practice in safety techniques (1 in 2023, 2 in 2024). We launched a series of “moonlight ski events” that were both popular and incredibly beautiful. We also offered summer social hikes and bikes to connect community members and spread “leave no trace” and conservation education messages. Additional messaging was sent regularly via social media including wildfire prevention, reducing wildlife impacts, encouraging native plants, reducing noxious weeds, conserving water, and more.

It’s important to note that all our recreation events include an educational component as well. Our messages focus on simple acts people can do to make a difference in conservation. For instance, our mountain bike ride included educational messages at each bicycle stop about how to reduce impacts on wildlife when recreating in our mountain range. Our Poker Glide in Beaver Creek included messaging on beavers and the critical habitat we work to protect along with volunteer project opportunities. The Full Moon Ski events included discussions about our area being the headwaters of the Upper South Platte and a critical source of our drinking water. We provided free Nalgene water bottles to fall 2023 event participants to encourage even further bringing and refilling water bottles. We asked folks coming to events to bring their own cup and plate to reduce the use of plastic water bottles and paper/Styrofoam. Leave no trace concepts are included throughout.

Five trail events in 2022 involved community members including a Denver church group, local church, Boys & Girls Club, and area individuals. Each included a water component, particularly erosion to the adjoining stream or lake. In 2023, community volunteers did an Earth Day clean up at Fairplay Beach, cleaned up the Alma Cemetery and Magnolia Mill site and removed downed wood to reduce fire risk. We pulled well over 500 pounds of scrap lumber and garbage from our public lands – even a homemade outhouse! Other community action events to engage local residents included trails clean-up, noxious weed pulls, and native wildflower planting. The middle and high school vocational agriculture/FFA class students were part of our biggest community volunteer project, restoring an area near the trailhead of Pennsylvania Mountain.

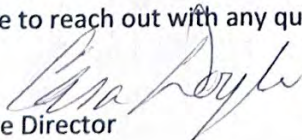
Deliverable: 300 Community Members Gain Deeper Understanding

Actual: 288 Members, more than 1300 hours education.

Finally, I see a real lasting difference as to how we view our programming and ways our staff have shifted. It is now extremely rare that water education does not enter the picture. Our seasonal staff have embraced the concept and learned so much in the process. Already, we are planning a variety of water education programs including Project WET and an exciting new teen fishing program for the upcoming summer season. We are truly grateful.

Please feel free to reach out with any questions!

Cara Doyle
MRHI Executive Director



MRHI Community Education - Water



Avalanche awareness



Exploring snow layers



Discovering invertebrates



Creating water turbines



Experimenting with beaver dam creation



Beach clean up with Boys & Girls Club



WILD Workshop – Wetland crossing



Edith Teter Elementary Art Contest Winners – WATER



1st Place Art Contest – Noble



Community Moonlight Ski



Rare alpine plant study.



Pennsylvania Trailhead Restoration – So Park HS Vo-Ag Class