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Monitoring Montana Waters

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Archived Blog Posts From 2022

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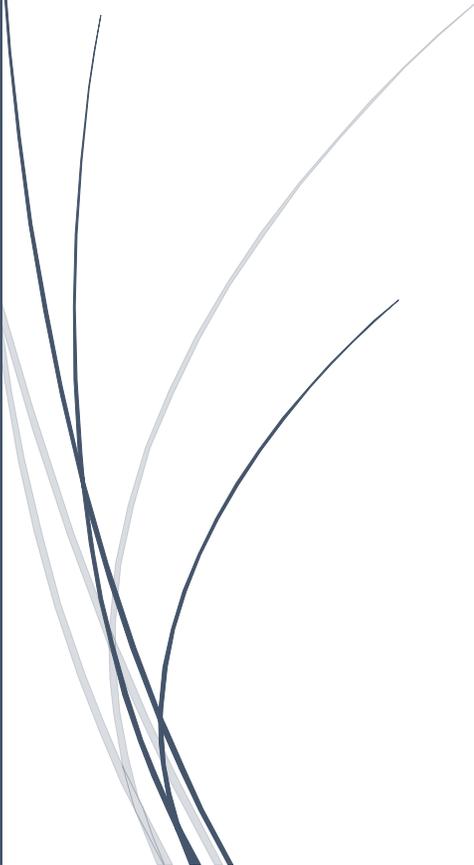


MONITORING
MONTANA WATERS

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April Blog

Spring is here, time to train!

Published 04/21/2022



Spring has arrived in Montana which means that groups funded in 2022 are starting to monitor their local watersheds. To ensure that all funded groups take quality samples, MMW provides training in the field. Thus far, MMW has trained the Kootenai Watershed Allies and the Students in Action groups in 2022. The Kootenai Watershed Allies training went well. We went over site selection and collection of unfiltered grab samples. For this type of sampling you just have to step into the stream, find a spot with moving and well mixed water, rinse the bottle and cap three times and then submerge the bottle to fill it with the final sample. We enjoyed getting to know the KWA team in person. A handshake feels much more personal than an email (or a zoom call). The Students in Action training involved training a group of high schoolers on taking filtered and unfiltered grab samples. Myself (Claire) and another BSWC member, Amanda Zelnis, gave a presentation on MMW, the Freshwater Research Lab, and the SOPs (Standard

Operating Procedures) for the monitoring. After that, we went to the monitoring site and did some training and sampling with the students. The students were excited to participate and make a difference in their community. Another moment that could not be captured via an email or phone call!

May Blog

Trainings Galore!

Published 05/18/2022



As stated in the last blog post, the monitoring season for MMW funded groups has now begun. In the month of May MMW has trained two more groups, the Rock Creek Watershed Group + Carbon County Resource Council and the Yaak Valley Forest Council. Based in Red Lodge Montana, the RCWG/CCRC monitors in South-Eastern Montana in the Rock Creek Watershed. This is a bit of a drive from the Flathead Lake Biological Station, 6 hours and 17 minutes to be exact. Although the drive was long, it was worth it to meet the monitoring crew for the group in person. The day started off foggy and cold. I (Claire) trained the groups on how to collect unfiltered and filtered samples, as well as field blanks and duplicates. After training at the first site, I tagged along to the 8 other monitoring sites along Rock Creek. It was great to see the volunteers so passionate about water quality and conservation. By the end of the day the sun was shining and everyone had been trained on the standard operating procedures. The RCWG/CCRC is off to a great start for 2022. MMW also made a trip up to Troy Montana to train the Yaak Valley Forest Council. We went to one of the many monitoring sites for the YFVC where we went over collecting filtered and unfiltered grab samples, as well as taking temperature measurements. After

reading the SOP, the four YVFC members each went through and demonstrated how to collect the samples. The current was fast and water level was high so samples were taken from the shore or close to it. Meeting with the Yaak Valley Forest Council was a great opportunity to connect face-to-face with the group as well as see the beautiful Yaak Valley. Both groups are planning to monitor at the end of May/early June and put their training into use!

June Blog

MMW Group Spotlight: CRC

Published 06/15/2022



Another group funded by MMW in 2021 and again in 2022 is the Clearwater Resource Council. This group focuses on the Clearwater watershed in the Seely Lake region. The Clearwater Resource Council monitors water quality in the Clearwater chain of lakes for the benefit of the environment and the local community members. In addition to this monitoring, the Clearwater Resource Council also improves water quality by working with individual property owners to collaborate on land management issues. Another issue impacting aquatic ecosystems in Montana is Aquatic Invasive Species, also known as AIS. The Clearwater Resource Council has started an AIS program to monitor for invasive species, which pose a big threat to the native species in Montana. They have worked to collect samples, provide AIS education, and remove these harmful species when

present. The Clearwater Resource Council works on terrestrial projects as well, one of which provides fuels management for the surrounding forests by conducting forest fuels assessments. The Southern Crown of the Continent Collaboratives Forest Restoration Project is another project the group is involved with. They collaborate with government, non-governmental organizations, local communities, and universities to work on ecosystem restoration in the region. Monitoring Montana Waters is happy to provide funding to groups like the Clearwater Resource Council. Their multi-faceted approach to conservation facilitates social and environmental change in western Montana. In 2022 the group is continuing their monitoring efforts on both lakes and streams to obtain baseline data on various nutrients as well as addressing septic leachate and algae blooms. Browse the **Clearwater Resource Council** website for more information on their conservation and land management efforts.

MMW Group Spotlight: YVFC

Published 06/29/2022



Another funded group that we are happy to highlight is the Yaak Valley Forest Council. YVFC is based out of Troy Montana, in Lincoln County. The organization is primarily working to conserve and protect the aquatic and terrestrial environments in the Kootenai National Forest. One of the programs the organization facilitates is water quality monitoring in the Yaak Watershed. Monitoring is conducted to understand how factors such as land use change, development, and climate change impact the conditions of the watershed. The group also works with the Yaak Headwaters Restoration Project to restore habitat connectivity in the area. This is of utmost important because the ecosystems support a diverse variety of wildlife and fish species, some with endangered or threatened status by the ESA. The group also works to conserve the old-growth forests of the Yaak National Forest through their Forest Watch program. Through this program the organization provides input when forest management and harvest projects do not account for climate change or the conservation of wildlife and their habitats. Other projects the group

supports include aiming to reroute the Pacific Northwest Trail out of critical grizzly bear habitat, as well as providing community education on bear safety, conservation, and recreation. In the upcoming sampling season, the group will continue to work with Monitoring Montana Waters on their monitoring efforts. The group will be monitoring for nutrients, total suspended solids, pH, and temperature to gain more baseline data on a variety of sites. The Yaak Valley Forest Council is a great example of how important conservation groups are to preserving the regions surrounding them. This organization uses a multi-faceted approach to both aquatic and terrestrial conservation of the Yaak Valley. For more information on the Yaak Valley Forest Council check out the **YVFC** website, and the MMW **storymap** on the 2021 monitoring efforts.

August Blog

MMW Group Spotlight: SIA

Published 08/03/2022



A new group that we are excited to fund in 2022 is the Students in Action group at Seely-Swan High School. Students in Action is a volunteer monitoring group that works with students attending Seeley-Swan High School. The group is monitoring a site on Morrell Creek, which is located in Missoula country, near Seeley Lake. The site is located just outside of the high school, conveniently within walking distance of the classrooms. This same site has been monitored for 11 years by the group. MMW is excited to

fund the SIA group to expand its capacity for water quality monitoring. SIA has been funded by various organizations, programs, and grants throughout their monitoring program and MMW funding this year is allowing more samples to be taken throughout the season. Monitoring by SIA not only helps gain important data on the quality of water in Morrell Creek but also creates opportunities for young people to get involved in the scientific process. Through SIA, the high-school students get hands-on experience with collecting water samples and will learn about data analysis. These experiences help to foster stewardship of our natural resources for the next generation. Check out the MMW **Story-Map** for SIA's 2022 monitoring season.

September Blog

MMW Annual Roadtrip

Published 09/08/2022



One of our priorities at Monitoring Montana Waters is to connect and build relationships with the groups that we fund. This can be difficult over email and phone calls, so meeting in person is important. To do this MMW

takes an annual road trip to visit as many of our funded groups as we can. Our road trip this year was delayed due to unforeseen circumstances. Rescheduling the trip meant that we had to shorten it and only visit groups based around the Missoula area. The first stop on our road trip was the Lee Metcalf wildlife refuge near Stevensville Montana. Here, we met with Michael Howell, the project team leader for the Bitterroot River Protection Association. We got to check out one of the monitoring sites and discussed how the sampling was going this year. Next, we headed to Hamilton, Montana to meet with Alex Amann, the Big Sky Watershed Corps member for the Bitter Root Water Forum. Here, we discussed monitoring on Skalkaho Creek and the restoration projects the group had done in the last year. We visited Skalkaho Bend Park in Hamilton and viewed the stream bank revegetation project the group had completed to help with river bank erosion. After meeting with the BRWF we drove back to Missoula and met with Elena Evans at the Missoula Valley Water Quality District. We discussed the impacts of development on the streams in and around Missoula and the next steps. Meeting with these three groups in person allowed us to form a stronger connection and learn more about challenges they are facing and how we can best assist them in their monitoring efforts.

MMW Group Spotlight: BHRF

Published 09/15/2022



MMW funds a number of water quality monitoring groups dedicated to improving the health of streams and lakes in Montana. Each organization MMW funds has specific goals and objectives for water quality monitoring and conservation. The Big Hole River Foundation focuses on monitoring the Big Hole River and its associated tributaries. By monitoring in this region, the group will contribute to providing long-term data that can impact management and policy decisions in the state. BHRF is passionate about protecting the river from environmental degradation related to nutrient pollution and warming temperatures. Not only does the group carry out meaningful water quality monitoring samples and work in conservation, but they also emphasize the importance of community outreach and education. The Big Hole River Foundation had quite the year in 2021, the first year they were funded by MMW. The group shared that “MMW support in both lab

analysis & technical expertise has been critical for sustaining and growing our project. Thanks to this partnership we were able to add two new sampling sites in the upper Big Hole River, including at the headwaters. We now monitor nutrients & sediment at 10 sites along 150 miles of river." Partnerships between organizations like MMW and BHRF build stronger monitoring programs and communities. The work being done by BHRF is not only of the utmost importance today but also for the future of water quality and conservation in Big Sky Country. MMW is proud to highlight the Big Hole River Foundation for its work in the 2021 season and to be funding them again for sampling in 2022. Browse the **Big Hole River Foundation** website for more information and check out our BHRF and MMW **story map** on our website.

MMW Group Spotlight: Bitter Root Protection Association

Published 09/30/2022



Another group funded by MMW is the Bitter Root Protection Association. This group focuses its efforts on protecting, and enhancing water quality and quantity in the Bitterroot River Watershed. BRPA is based in Hamilton Montana and leads a water quality collaborative called the Bitterroot Health Check. Groups involved in this collaborative are the Bitterrooters for Planning, Bitterroot Trout Unlimited, Montana Watershed Coordination Council, Clark Fork Coalition, Bitterroot National Forest, the Bitterroot College, and the UM's Watershed Health Clinic. The BRPA is also a waterkeeper organization meaning they fight for clean water in the Bitterroot Watershed for their community through political and scientific activism. This organization has over 260 other waterkeepers, so as members of the organization BRPA is a part of a larger movement. With MMW funding the group will continue their Sapphire Front monitoring project. The Sapphire Front project is an extension of the monitoring the group does on the Bitterroot River. Started in 2018, the Sapphire Front project monitors 6 streams that flow from the Sapphire Mountains to the Bitterroot River. MMW is happy to continue assisting with the Sapphire Front Project. The BRPA is passionate about preserving water quality in Montana. Check out the [BRPA](#) website for more information on the group.

October Blog

What's Next?

Published 10/18/2022



Fall is in the air. The leaves are changing color and the temperatures are dropping. People are carving pumpkins and eating candy corn. The season of fall often also marks a change in water quality monitoring. After a busy summer in the field, the fall is often a slower season. October and early November are the final months that MMW-funded groups collect samples to be analyzed at our Freshwater Research Laboratory here at FLBS. Soon the process of data management, analysis, and upload will be the focus for

groups funded by MMW and DEQ. For groups who have not yet received funding, fall also marks the perfect time to begin the process of planning to monitor for the next year, even though MMW applications are not due until March of next year. Though this seems far away, life is complicated, and so is planning for volunteer-led water quality monitoring. To be successful in the monitoring process, groups must first define the goals and objectives of their monitoring. Do you want to obtain baseline data in your watershed or perhaps you are interested in obtaining data for restoration efforts? These are important questions to ask and will help you define your overall goal. The objectives include more specific details about what can and will be measured. Establishing roles and responsibilities early in the planning process is another crucial step for successful monitoring programs. When roles are clearly defined groups can accomplish more since the workload of planning and implementing a water quality plan is divided. It's also good to note that determining roles helps to match up members' strengths with their responsibilities so that the program runs smoother. Goals, objectives, and roles are just part of the planning process, but they are a great place to start! Starting now will help to make sure that by March the application is filled out and ready to submit. Check out the Starting a Volunteer Monitoring Program for more details and help! And as always, please reach out to us with any questions.

November Blog

MMW Group Spotlight: KWA

Published 11/04/2022



The Kootenai Watershed Allies (KWA) is a newly formed group for the 2022 monitoring season. Since January MMW has been collaborating with the owners of Kootenai Canyon Anglers, a fly-fishing outfitter from Troy Montana, to help them start a monitoring program. Kootenai Canyon Anglers offers guided trips in the Kootenai watershed in NW Montana and Idaho and they are concerned about water quality in the area. A need to monitor tributaries in the Kootenai watershed was identified to provide more data in the overall effort to address selenium entering the Kootenai system from mining in British Columbia. KWA is interested in measuring selenium and nutrient concentrations in tributaries throughout the watershed. The group monitored 15 tributaries of Lake Koocanusa, and 15 tributaries of the Kootenai River in 2022. MMW is excited to be assisting the group with training and funding to conduct this monitoring. As fly-fishing guides, KWA understands the importance of having healthy watersheds. Healthy

watersheds have good water quality that support healthy populations of fish whereas polluted watersheds often have less abundant or less diverse populations. This group offers a unique perspective in citizen science as they rely on water resources for their livelihood. MMW is glad to support the work of the Kootenai Watershed Allies and learn more about the water quality of the tributaries. Check out the MMW [Story-Map](#) detailing KWA's 2022 monitoring season.