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Monitoring Montana Waters

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Archived Blog Posts From 2024

Published Posts: 01/11/2024 – 11/20/2024

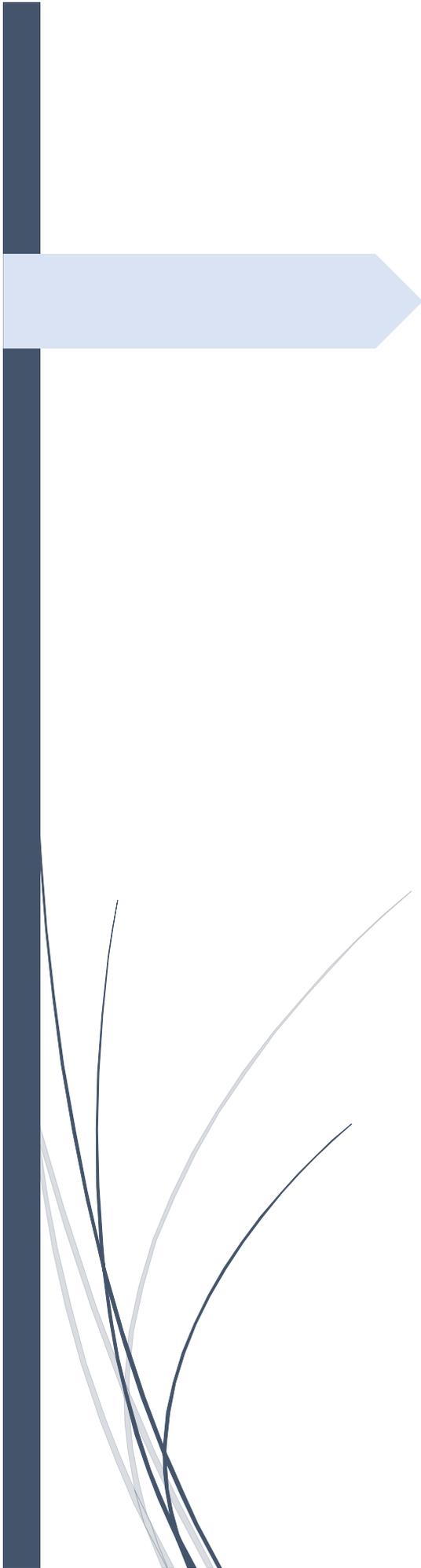


MONITORING
MONTANA WATERS

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January Blog

Funding Opportunity for Watershed Monitoring Groups!

Published 01/11/2024



As we progress into the new year, preparation for the 2024 monitoring season is underway! We are excited to welcome our newest Big Sky Watershed Corps member, Brianna Elizondo! Brianna will be helping to coordinate all aspects of the MMW program in 2024.

Monitoring Montana Waters (MMW) is heading into its fourth year of providing financial support to citizen-led watershed monitoring groups in Montana. MMW offers two different types of financial support to monitoring groups, including funds for sample analyses costs, as well as funds to help purchase sampling gear. If you are interested in strengthening the scientific capacity of your group, MMW offers up to \$7,000 per calendar year in lab analysis funding and up to \$1,500 in gear funding (which is available every 3 years). Lab analysis funding supports the cost of shipping samples and analyzing water quality samples.

In 2023, we funded ten different groups and supported many sampling events. In 2024 we are looking to continue to expand our funding to more watershed groups and continue to develop more outreach opportunities!

Applications are due March 1st, 2024. To be most competitive for funds, we strongly recommend that groups submit a draft Sampling and Analysis Plan (SAP) and Standard Operating Procedure (SOP) to MMW by Feb 1st. Check out the [Funding](#) tab on our website for more details.

February Blog

Hot Chili, Cold Beer, Clean Water Seminar

Published 02/12/2024



At the end of January, the MMW team made the trek over to Lewistown, Montana to attend the “Hot Chili, Cold Beer, Clean Water Seminar” sponsored by The Central Montana Resource Council, Big Spring Watershed Council, and MSU Fergus Extension. Postcards were sent out to community members, posters were placed around town, emails were sent, and word spread through local radio stations and the newspaper. The event ended up drawing in 75 attendees which included farmers, ranchers, landowners, DEQ, DNRC, and folks from along the Ross Creek Fork.

The Central Montana Resource Council (CMRC) kicked the seminar off following a tasty helping of hot chili, cold beer, and homemade cookies and brownies. CMRC is a grassroots nonprofit group of local citizens in Fergus, Judith basin, and surrounding counties. Their mission is to protect central

Montana's quality of water, viability of family farms and ranches, and the ability of people who live in central Montana to shape the public policies and decisions that affect their land, water, and lives.

Dr. Adam Sigler, Extension Water Quality Specialist and Assistant Professor from Montana State University began with a presentation on the historic roots of water quality law, water quality standards, point vs nonpoint pollution, impairment of Montana streams and rivers, and monitoring in the Judith basin. Assistant Research Professor and MMW program leader, Dr. Rachel Malison, spoke about the need for volunteer water quality monitoring in Montana. Malison explained how the MMW program operates, provided interested parties with resources, and addressed why people should be involved in volunteer monitoring. Clint Smith from Montana Fish, Wildlife & Parks discussed Watershed Restoration Plans (WRP), which are locally developed documents that manage, protect, and restore water resources on a watershed-wide scale. These documents can increase funding opportunities to restore impaired water.

The speakers gathered on stage along with Scott Brown from Montana Salinity Associates for a Q & A session with questions generated by audience members. The audience learned what makes a stream impaired and why they should be concerned to participate in water monitoring. Attendees were encouraged to get involved because the quality of water impacts us all! As Mark Udall once stated, "Ranchers need clean water for their stock, farmers need it for their crops, every employer needs it to stay in business, and every living thing needs it for life... The law needs to be clear to protect water quality and the rights of landowners." We're thankful for the invitation to join concerned and passionate citizens at this event, and for the opportunity to expand our presence to other parts of the state.

March Blog

MMW Group Spotlight: Rock Creek Watershed Group & Carbon County Resource Council

Published 03/26/2024



Monitoring Montana Waters (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. MMW has been supporting Rock Creek Watershed Group (RCWG) and the Carbon County Resource Council in their efforts to monitor the Rock Creek Watershed since 2022. The Rock Creek Watershed is a 55-mile tributary of the Clarks Fork of the Yellowstone River. RCWG is a citizen-led watershed group that was formed in 2022. The Carbon County Resource Council (CCRC) was formed in 1997 and has been advocating for sustainable resource use and growth ever since its

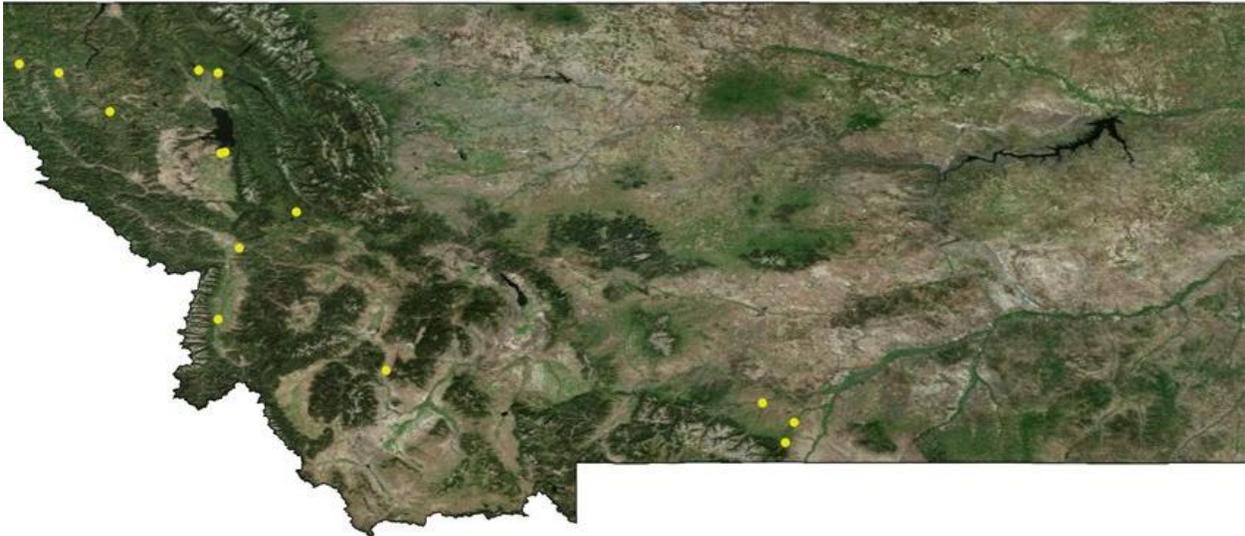
founding. CCRC has focused on oil and gas reforms, expanding clean energy, and increasing access to local foods.

Water quality monitoring has expanded the resource conservation this group performs. Both groups are concerned with how municipal growth and agriculture impact the water quality at Rock Creek. The groups are getting baseline physical, chemical, and biological data to assess water quality conditions in the watershed. The groups monitor nutrients, temperature, and total suspended solids over eleven sampling sites. The Rock Creek groups are dedicated to collecting three years of consecutive data to educate people and local governments about water quality and land use. MMW is proud of the groups' work over these past two years and looks forward to the future.

April Blog

MMW Group Spotlight: Newly Funded Groups!

Published 04/19/2024



Trained volunteers in Montana play a crucial role in monitoring water quality across the state to protect our rivers, streams, and lakes. High quality, scientifically credible data is required to support decision making regarding our water resources and it is collected using scientifically valid methods and protocols. MMW supports water quality monitoring efforts in Montana by providing scientific, technical and financial support to citizen-led watershed groups to help ensure that groups are using scientifically sound methodologies in all aspects of their monitoring efforts. In 2024, MMW is funding fifteen volunteer water quality monitoring groups. While many groups have been previously funded, we'd like to introduce some of our newcomers! MMW is excited to support these volunteer groups helping increase water quality monitoring capacity in the state.

Mission Bay Preserve HOA

The Mission Bay Preserve HOA (MBPHOA) is concerned about the water quality in a 3-acre pond fed by the Flathead Irrigation System. The pond is about 300 yards from Flathead Lake, and any overflow is discharged

through a natural riparian area. The concern was increased by a sudden algae event in September 2023. MBPHOA's goal is to collect baseline data, monitor changes in the pond water, and create a plan to improve the quality of the water to minimize negative impacts on water quality entering Flathead Lake.

Whitefish River Water Quality Team

Residents living near the Whitefish River, in the absence of other long term water quality monitoring, are volunteering to establish a long-term monitoring effort. The Whitefish River is one of several tributaries to Flathead Lake, flanked by the following land uses: agriculture, golf courses, a nearby lumber mill and houses with acreages, septic, and high-density housing on county sewer. The group hopes to determine how land uses are influencing changes in aquatic habitats. Approximately 28 miles of the Whitefish River will be monitored at three locations.

Thompson Chain of Lakes Stewardship Coalition

Thompson Chain of Lakes Stewardship Coalition (TCLSC)'s goal is to collect baseline water quality data on three of the eighteen lakes that make up the Thompson Chain of Lakes. These three lakes are important to monitor because they are closed basin spring fed lakes with no inlet nor outlet making them extremely vulnerable to contaminants. Many residents in this community get their only drinking water from the lakes. Those residents with wells, for the most part, have shallow wells of 50 feet or less. There is no water quality monitoring currently being done on any of these lakes and specifically there is no baseline data nor ongoing analysis of nitrogen or phosphorous levels. Baseline data can be used to justify the implementation of more intensive watershed studies and it can set the stage for formal water quality assessments to take place.

Stillwater Valley Watershed Council

The Stillwater Valley Watershed Council (SVWC) of Absarokee, Montana will be continuing their Stillwater-Rosebud Water Quality Initiative (SRWQI) with the support of MMW and DEQ. SRWQI is a multi-year monitoring program which began in September 2020 and is continuing indefinitely. The SVWC was officially formed in 2010 by local grassroots volunteers with a passion for ensuring the Stillwater Valley remain a pristine watershed. The SVWC's mission includes a Water Quality Goal which states, "Improve the quality and supply of water in the Stillwater River Watershed. Balance water needs and availability, both recreational and agriculturally, through shared sacrifice and water conservation and contamination prevention." SVWC will obtain scientifically valid water quality data at key sites in the Stillwater River-Rosebud Creek drainages which will support on-the-ground watershed improvements and landowner education projects over the long term.

Clarks Fork Yellowstone Partnership

MMW is supporting Clarks Fork Yellowstone Partnership (CFYP) by providing gear funding to purchase a Secchi tube, turbidity meter and combined SC/pH meter. This gear will allow CFYP to continue data collection on the Clarks Fork Yellowstone River and Bridger Creek. This sampling effort will augment data collected by the CCD/NRCS/FWP during the 2019 through 2021 seasons and by CFYP during 2022 and 2023. One of the goals of CFYP is to facilitate the eventual development of a watershed restoration plan. Detailed water quality data will be a critical component of that effort. These data may be able to aid farmers and ranchers with decisions about timing, quantity, and type of fertilizer to apply to their land. This monitoring may also highlight opportunities to address causes and timing of sediment runoff to the river.

May Blog

Training Events Begin for 2024 Sampling Season

Published 05/30/2024



April and May have been a busy couple of months for the Monitoring Montana Waters (MMW) team with final preparations for the 2024 monitoring season fully underway. Each year MMW offers funded groups with the opportunity to participate in on-the-ground training provided by MMW personnel. To ensure that funded groups are following correct procedures and collecting quality samples, the MMW team travels to different watersheds and provides training in the field. Although many of our groups are already familiar with the sampling process it's a great way to refresh everyone's memory after a long winter and continue to build on our relationships.

Thus far, MMW has trained a total of seven funded groups and traveled near and far. MMW started spring off by traveling down to Hamilton to train the Bitterroot River Protection Association alongside Abbie Ebert, Water Quality Scientist from MT DEQ. The team then traveled a short distance to Mission Bay Preserve HOA in Polson. We went over unfiltered and filtered grab sample procedures and demonstrated how to use a YSI meter. The group was able to ask questions and get assistance with site selection. MMW also headed to Troy to meet with Yaak Valley Forest Council. It was great to hear how the crew is doing and meet some of their new members. Big Sky Watershed Corps members, Brianna Elizondo and Jared Glass then made the longer trip to Red Lodge to sample with Rock Creek Watershed Group/Carbon County Resource Council. We had such a fun morning getting to know the group and seeing how well they work together.

Along with these groups, MMW personnel also provided in person training for Clearwater Resource Council, Flathead Rivers Alliance, and the newly formed Whitefish River Water Quality Team. Groups are mainly trained on how to collect unfiltered and filtered samples, as well as field blanks and duplicates. However, MMW also covers how to pack coolers with samples, fill out Chain of Custody forms, the importance of different analytes, what the effects of different nutrients would have on the water quality, and what you might want to look for if you're worried about different problems in the watershed. We're very appreciative of all the hard work our groups put into protecting Montana's water quality!

June Blog

MMW Group Spotlight: Missoula Valley Water Quality District

Published 06/17/2024



Since 2021, MMW has provided funding to the Missoula Valley Water Quality District (MVWQD) to support their volunteer-led surface water quality monitoring program to gather water quality data and cover lab analysis costs. The MVWQD is a division of the Missoula Public Health Department that focuses on protecting and improving water quality (both surface and groundwater) in the Missoula valley. The group educates the public on pollution prevention, inspects businesses for hazardous waste contamination, has a household hazardous waste collection program, and reviews state and federal cleanup sites in Missoula County.

When it comes to water quality monitoring, MVWQD implements both a well monitoring program along with a volunteer-led surface water quality monitoring program. The volunteer monitoring program has focused their

monitoring on the tributaries of the Clark Fork and Bitterroot River. Monitoring on these tributaries is important for understanding how increasing development and land use changes impact the quality of surface waters in the watershed. The group hopes that by collecting this data they can understand where restoration efforts need to be concerted and communicate these needs with the Montana Department of Environmental Quality. The group is a great asset to MMW, and we look forward to continuing partnering with them as they collect the baseline data necessary to protect water quality in and around Missoula.

July Blog

MMW Group Spotlight: Central Montana Resource Council

Published 07/17/2024



Central Montana Resource Council (CMRC) is a new group being funded by the Monitoring Montana Waters (MMW) program in 2024. CMRC is a community organization of concerned citizens who are dedicated to the sustainability of water, land, and food productions for future generations. Based in Fergus, Judith Basin, and Wheatland counties, CMRC focuses on protecting family ranches, building a vibrant localized food system, increasing accessibility of clean energy, and protecting water resources.

After many months of developing a Sampling and Analysis Plan with the guidance of MMW personnel and MT DEQ, CMRC is ready to begin monitoring the Ross Fork Creek! Ross Fork Creek is a tributary of the Judith River and consists of 64.23 river miles running from its headwaters in the Big Snowy Mountains through Fergus and Judith Basin Counties. This area supports a variety of land use and management practices, including traditional ranching and farming operations, Concentrated Animal Feeding Operations (CAFOs), recreation, and fish and wildlife habitat. Ross Fork Creek is currently listed as a Category 5 impaired stream by the Montana Department of Environmental Quality (DEQ) in its 2020 Integrated Report, for alterations in stream-side/littoral vegetative covers, excessive nitrate-nitrite concentrations, physical substrate habitat alterations, and sedimentation (Final Water Quality Integrated Report, MT DEQ, Feb. 2021).

At the end of June, Big Sky Watershed Corps members **Brianna Elizondo** and **Jared Glass** traveled to Lewistown, MT to meet the members of CMRC in person for on-the-ground training. Members were shown where to sample within the stream, standard operating procedures for unfiltered and filtered grab samples, and handheld meter operation. Members had a chance to get their feet wet and get their questions answered. It was a beautiful sunny day and a great opportunity to spend quality time with one another. To read more about CMRC's training day check out the **article** that was published in Lewistown News Argus!

August Blog

University of Montana Incoming First Year Student Trip

Published 08/22/2024



This past weekend, the Flathead Lake Biological Station welcomed in a group of 16 incoming freshman from the University of Montana to Yellow Bay. The group was able to get out and enjoy one of Montana's last Saturdays before school starts, while also learning about the Flathead Watershed.

The Monitoring Montana Waters (MMW) team engaged students in stream macroinvertebrate sampling at Yellow Bay Creek. The group received hands on experience in collection of macroinvertebrates and identification. Dr. Rachel Malison, program leader of MMW and assistant research professor, demonstrated kick netting technique for macroinvertebrate collection. A kick net consists of a mesh net with a pole handle that is used to collect aquatic macroinvertebrates in a stream. The stream bed upstream of the net is disturbed using a kicking motion to dislodge organisms that will float into the net. The samples collected were taken back to the Bio Station for further classification using microscopes and dichotomous keys.

The students spent the afternoon learning about Monitoring Montana Waters and the importance of volunteer water quality monitoring in the state of Montana. Many of the students are new to the state and don't know how water is protected in Montana, what issues our waters face, and how we protect our waters. It was a great chance for them to hear about the work citizens put into keeping their waters clean. They then had the chance to learn how to collect unfiltered and filtered grab samples and operate a multi-parameter probe just as our volunteers do. We hope the students have a great time attending the University of Montana and have a chance to participate in some water quality monitoring in the future!

September Blog

Sun River Watershed Tour

Published 09/24/2024



Last week the Monitoring Montana Waters team had the opportunity to travel to Great Falls and join the Montana Watershed Coordination Council (MWCC) and Sun River Watershed Group (SRWG) for the 2024 Watershed Tour. The Watershed Tour allows partners to share, learn, and network as we tour on-the-ground projects that demonstrate the unique resources, challenges, and diverse conservation partnership strategies implemented in the Sun River Watershed.

The first stop on the tour was Wadsworth Pond, this stop highlighted a community project with many partners. The park is managed by Great Falls Parks and Recreation in cooperation with Great Falls Flood District. Montana Fish, Wildlife & Parks, along with Trout Unlimited and Walleyes Unlimited, host a Kids' Fishing Day here each year and are continuing to improve the park. Next up was Big Sky Bison, where SRWG contracted with the landowner to replace some old culverts. The property along Muddy Creek has deep eroded banks and with grants from US Bureau of Reclamation, DNRC, and other sources, partners are implementing projects to restore the streambank. J-Wasteway, another stop along Muddy Creek demonstrated how water quality is impacted by livestock and how return flows from irrigation operations start feeding into the creek causing higher than natural flows and large fluctuations that cause erosion. The last stop for the day was Spring Coulee Creek Farm, a site that included organic alfalfa farming, cattle grazing leasing, and three generations of restoration to the creek and riparian vegetation.

On the last day of the tour, the group started at Lowery Bridge to discuss local town problems relating to local flooding and the emergency actions landowners and municipalities took to protect infrastructure and crops. More problems were discussed such as the threat of aquatic invasive species, low trout numbers, high stream temperature, and the work that is being done to mediate future risks. The tour concluded at Arnold Coulee; the long drive allowed participants to see the Pishkun Supply Canal and see how important the area is to recreation, irrigation, infrastructure, and private homes and land. The group also learned about low tech process-based restoration and saw examples of a few different structures.

October Blog

Fall Education & Outreach Events

Published 10/25/2024



Montana State Parks and Flathead Lake State Park hosted their annual Fall Fest on Saturday, October 12th. The event celebrates the coming of fall and all of the changes it brings to Flathead Valley. Big Sky Watershed Corps Member Brianna Elizondo, with Monitoring Montana Waters, and Kelly Minear, Education Coordinator at Flathead Lake Biological Station, participated in the event and had a table representing the Bio Station.

The FLBS table provided event attendees with family friendly activity books relating to Flathead Lake and aquatic invasive species. Kelly and Brianna interacted with parents telling them all about FLBS and also taught the kids about where Phytoplankton live within the water column and what they look like under the microscope. Kids then had the chance to compete to create their own Phytoplankton that would sink slowly through the water. It was so fun to see how competitive the kids were to win this reverse race. The event also included crafts such as mask designing and face painting, prizes, wagon rides, games, stories, and a fire to roast hot dog and s'mores. The whole family was able to have fun with their community at this event.

MMW also participated in the Fall 2024 Teacher Workshop hosted by the Flathead Community of Resource Educators and the Flathead Lake Biological Station. Teachers learned what resources are available to their classroom and had the opportunity to explore a variety of educational trunks from Audubon, CSKT, U.S. Forest Service, Hockaday Art Museum, and Glacier National Park. Teachers also heard from the MMW team about how we monitor waters in Montana and how citizen scientists are playing an essential role in keeping Montana's waters healthy. They received hands-on practice in stream sampling through kick netting and macroinvertebrate ID. They also learned about dynamic equilibrium beaches from a Flathead Lakes State Park ranger. This workshop provided teachers with the chance to get some lessons to share with their students!

November Blog

Funding Opportunity & Important Dates

Published 11/20/2024



October signals the end of the sampling season for most of our funded groups. We are so appreciative of all the hard work that our volunteers put into protecting our waters. Citizen-led watershed groups greatly increase the capacity of water quality monitoring in our state. If you are interested in strengthening the scientific capacity of your group, MMW offers two different types of financial support. Each year volunteer water quality monitoring groups can apply for a maximum of \$7,000 in laboratory analyses funding, and up to \$1,500 available every 3 years in gear funding.

The main components of our program include assistance with designing monitoring plans, writing Sampling and Analysis Plans, selecting standard operating procedures, funding for laboratory analyses and gear, on the ground training in methodologies, and assistance with data analysis. To be eligible for support from MMW citizen-led watershed groups must be monitoring or plan to start monitoring freshwater in Montana. Groups must also complete a SAP and SOP, sign a MOU with FLBS's MMW program, and complete a short annual report.

We recommend that groups turn in a draft SAP by **February 1st** to have an approved SAP on file by the funding application deadline. On February 28th data from the previous year must be uploaded to the MT-DEQ database by **February 28th**. A short final report must be submitted to MMW by **February 28th** as well. Funding applications are due for the MMW Laboratory Analyses Funding and MMW Gear Funding on March 1st. Priority will be given to groups that have a completed SAP on file at the time of submission. To get started groups should first contact the MMW program (mmw@flbs.umt.edu or 406-872-4518) to discuss their needs. MMW is here to answer whatever questions groups may have!