UMOWA
Upper Missouri Watershed Alliance

SUMMER 2021

VOICE OF THE MISSOURI

Mission Statement

To understand, conserve, and enhance the unique ecological and recreational resources of the Upper Missouri River Watershed.

Board of Directors

Board Chair
Sherry Meador
Helena, Montana

Vice Chair
Dr. Alan Shaw
Big Sky, Montana

Board Secretary
Pat Hunter
Wolf Creek, Montana

Board Treasurer
Bill Ryan
Butte, Montana

Executive Committee
Bailey Sory
San Francisco, California

Joe Kerkvliet
Corvalis, Oregon

Jay Erickson
Helena, Montana

UMOWA's Work Continues

Photo credit: Mark Raisler

Welcome to our summer newsletter. This is my first newsletter as Board Chair and I'd like to give a tremendous thank you to Alan Shaw for providing such a great foundation. We're looking forward to an active year on the Missouri with new and continuing projects.

Below are some announcements and upcoming activities:

1. We are happy to introduce our new board member, Jay Erickson, of Helena. Jay brings a wealth of knowledge to our conservation efforts from his work at Montana Land Reliance, Pat Barnes Chapter of Trout Unlimited, and the Montana Fish and Wildlife Conservation Trust.

2. We are very excited to introduce our first membership/outreach coordinator, Jess Raty, who has quickly demonstrated her skills in grant writing, social media and knowledge of resource conservation marketing.

3. UMOWA has partnered with RO Drift boats for our first summer drift boat raffle. $100 Tickets are available to purchase now. Please contact Alan Shaw at (406) 995-2792 or ashaw@umowa.org. Drawing date is July 17th.

4. Importantly, we will be expanding our water quality testing sites to include eight tributaries feeding into Canyon Ferry and Toston Reservoirs to identify sources of increased nutrient levels.

5. On August 21st, UMOWA will be participating in the Missouri river clean-up project – Bashin' Trash – with Cascade Conservation District, TU, and other local watershed groups.

continued from page 1

6. We're very excited to have received a $28,000 Noxious Weed Trust Fund grant to treat weeds from Holter Dam to Craig. There is more detail about this in my article below.

7. We will be working with Melissa Muradian, MS, Ecosa Consulting, to build an interactive data map to aggregate a comprehensive overview of river health.

UMOWA needs your continued support. If you are not a member please consider joining and supporting us by donating at the website - www.umowa.org. Please feel free to contact me directly with any questions or suggestions. Together we can keep the Missouri River a healthy, vibrant ecosystem.

Sherry Meador, Board Chair
smeador@umowa.org | (406) 431-7638. ■

UMOWA's Membership and Outreach Coordinator

by Jessica Raty

My name is Jessica Raty, and I am the Upper Missouri Watershed Alliance (UMOWA)'s Membership and Outreach Coordinator. I have been lucky enough to fish, float, and camp along the Missouri River, and each time I become a more devoted advocate for its protection. I was drawn to this position by the opportunity to make a positive impact on one of Montana's most important watersheds by engaging members and promoting river advocacy.

Growing up along the Yellowstone River in Billings, Montana, is where I developed an appreciation for the complex and intricate role rivers play within our landscapes and communities. My love of rafting has always attracted me to rivers. Over the years I have come to understand how vital the Yellowstone River is to an ecosystem's health and my community's prosperity. After experiencing a crude oil spill contaminate the Yellowstone river, I was motivated to work for an organization such as UMOWA that put river conservation as its top priority.

As a Resource Conservation and Political Science graduate from the University of Montana, I am particularly interested in the use of science to drive conservation decision-making. I believe making valid scientific data accessible to the public is the most effective way to positively influence river ecosystems' health. This is why I am excited to help conserve the Missouri River watershed by being a part of the UMOWA's team.

As a Membership and Outreach Coordinator, you can find me writing grants, developing marketing and fundraising strategies, and being the voice behind UMOWA's social media posts. I currently live in Missoula with my dog, Indy, and I spend my free time working as a whitewater raft guide on the Clark Fork River's Alberton Gorge.

We are ramping up our social media activity so please follow us via facebook.com/umowa.org and Twitter @umowaorg. Feel free to contact me directly with any questions or suggestions: jraty@umowa.org. ■

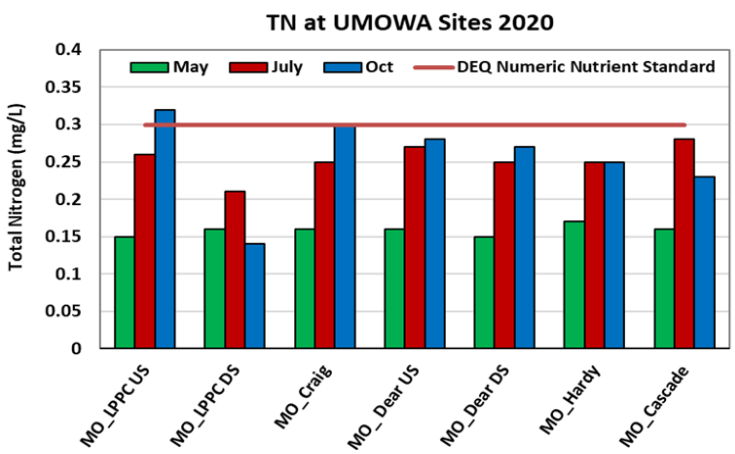
Nutrient Trends Slightly "Better" During 2020 Missouri River Water Quality Study

by Dave Stagliano, Montana Biological Survey

UMOWA has been out collecting water chemistry (WQ) samples on the Missouri River again in 2020 (5th year) at 7 sites from Wolf Creek to Cascade. We have collected rigorous data on Total Dissolved Solids (TDS), Total Suspended Solids (TSS) and nutrients (Nitrogen {TN} and Phosphorous {TP}) during a variety of river conditions, from low discharge years (2016) to one of the highest (2018) recorded in 20 years. WQ Samples are collected seasonally in May, July and October to coincide with irrigation seasons.

Spring and Summer TN and TP levels in the Missouri were relatively low in 2020 as the river volume was large (dilution) and aquatic plant growth was in full swing (taking nutrients from the water column). During the fall (low flows and slow plant growth), TN concentrations upstream of Little Prickly Pear Creek and TP levels at 4 of our 7 sites on the Missouri exceeded the recommended levels set by MDEQ (Figures 1 and 2).

Figure 1. Total Nitrogen levels across the UMOWA sites in 2020.



This has been the pattern since the initiation of this study in April 2016 and every fall since with nutrient concentrations (TN and TP) exceeding the MDEQ nutrient standards across most sites (Figure 3).

So, although the Missouri River nutrient levels exceeded the recommended levels this fall, they are not as high as they have been in previous years (Figure 3). Phosphorus is the limiting nutrient for plant growth in the Missouri--the more you add, the more plant growth will occur.

Figure 2. Total Phosphorus levels across the UMOWA sites in 2020.

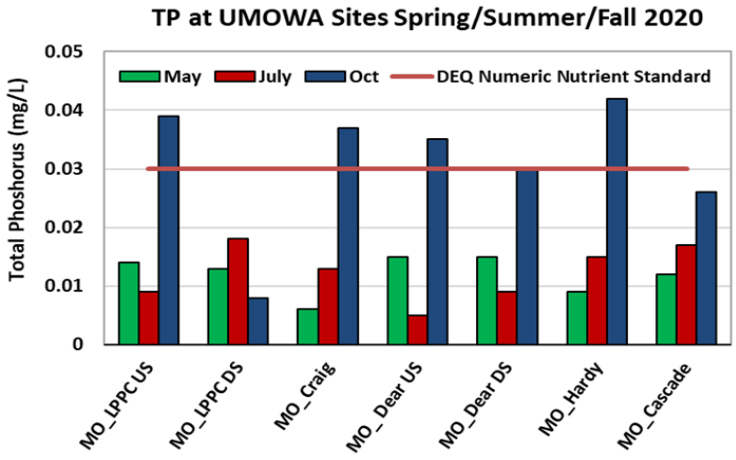
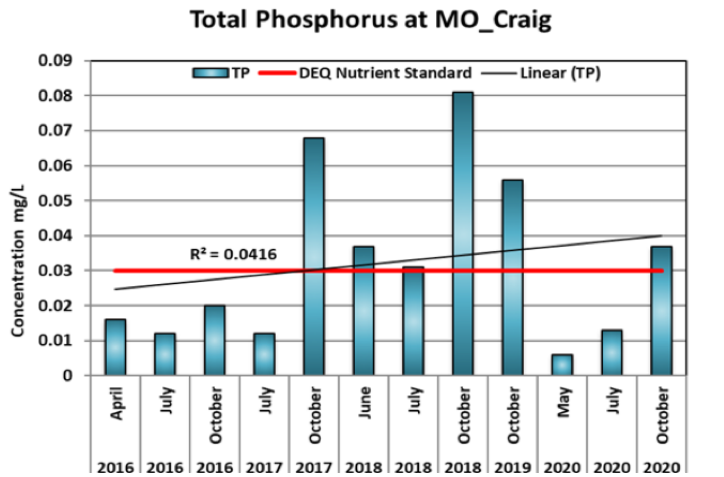


Figure 3. Total Phosphorus levels at the UMOWA site near Craig from 2016 to 2020.



It is critical that UMOWA continue to monitor WQ parameters in 2021 to track nutrient concentrations and evaluate upstream watershed management actions (i.e., riparian vegetation buffers, cattle fencing) that may keep sediment and nutrients out of the Missouri River. ■

Upper Missouri Watershed Alliance

PO Box 377
Helena, MT 59624

www.umowa.org

<Smart Addressee>
<Address Line 1>
<Address Line 2>
<City>, <State>, <Postal Code>

UMOWA Wins Noxious Weed Grant

by Sherry Meador

This year, UMOWA received a Noxious Weed Trust Fund grant through the MT Department of Agriculture (DOA) to treat weeds from Holter Lake Reservoir to Craig. As part of the grant, UMOWA, completed an environmental assessment evaluating potential impacts on wildlife, vegetation, water, soil, and air quality. In addition, DOA and Lewis and Clark and Cascade County Weed Districts reviewed and approved the proposed integrated weed management practices including herbicides, biocontrol and mechanical methods to be used.

Twelve landowners on both sides of the river, including FWP, agreed to treat over 2,000 acres in the initial project area. They will receive matching funds of 25% and will participate in monitoring and weed education with UMOWA. UMOWA received a generous donation from Skip Avansino to match funds needed to treat the islands between Holter and Craig. FWP will help fund weed treatment on Eagle Island below Craig. UMOWA will work with Nigel Davis of West River Land Management Company, to access and treat islands by boat in an effective and environmentally safe method.

The weed project area includes land on either side of the Missouri down to Cascade, 3 miles up the Dearborn River and 12.5 miles up Stickney Creek. This will provide an opportunity to treat areas that feed weeds into the Missouri River and spread throughout the watershed. After a full inventory and mapping of weeds in the project area, subsequent grants will include additional landowners. In the meantime, UMOWA will facilitate educational opportunities on effective weed management practices for all landowners. ■