



The Explorer

The Official Newsletter of the Lewis & Clark Conservation District

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Newsletter Mailing List Update

With this issue of the newsletter, the CD is doing an audit on our hard copy mailing list. The newsletter costs the CD about \$10,000 per year to publish, and we feel that is money well spent, as long as the newsletter is going to the right people.

If you currently receive the hard copy of the newsletter and would prefer to be removed from the mailed copy and/or put on the emailed list instead, please email the CD at chris@lewisandclarkcd.org and I can edit appropriately. While we feel that publishing the newsletter in hard copy format is vital, we also want to be good stewards of the taxpayer funding that supports it.

New Face in the CD Office!

My name is Jessica Ramirez and I am a Big Sky Watershed Corp Member. I graduated from Our Lady of the Lake University (2014) with my Bachelor of Science in Biology and the College of Charleston (2018) with my Master of Science in Marine Biology.

My thesis was researching salt marsh restoration after oil spills and was performed at the NOAA Ecotoxicology lab in Charleston, SC.

This past summer I worked as a water and soil field technician on the EPA National Wetland Condition Assessment in Colorado.

I enjoy traveling with my partner and dog. In my free time, I like to play disc golf, soccer, hike, and read. I look forward to serving with Montana Conservation Corps, Lewis and Clark Conservation District, and Sun River Watershed Group.

Editor's note: Jessica starts at the CD Office on January 10th and her term will run through mid-November.



Look Ahead – Education Events in 2022

With 2021 wrapping up, Lewis & Clark Conservation District staff and board are busy reflecting on our past year and planning for the next. We're happy to announce our involvement with 11 educational events this year totaling over 240 participants reached. Through various field days, webinars, and a workshop we covered many natural resource topics like watershed health,

pollinator conservation, and riparian grazing. As we look forward to a new year, we are excited to introduce a new member to our team. Jessica will serve as our Big Sky Watershed Corps member during 2022 and help us run and expand our existing education opportunities as well as pursue new ones. Here are just a few opportunities and education goals LCCD has in the works:

- Selma Held Community Garden pollinator workshop and demonstration planting
- Summer Education Walk series
- Rain barrel workshop
- Continue to improve our website and social media resources
- Expand youth educational opportunities, specifically in the Lincoln, Dearborn, and Augusta communities

Keep an eye out for more news on these events on our website, social media, and newsletter! If you would like to be notified regarding specific events or have ideas on different opportunities you'd like to see from the CD, reach out to us at 406.449.5000 ext. 5 or at connor@lewisandclarkcd.org.

We'd love to hear from you!



Quick Report for 2021

The Conservation District's Annual Report for 2021 will be available soon and can be viewed on our website at www.lewisandclarkcd.org. We'll post a link on the CD's Facebook page and Twitter when it's completed!

In addition, the CD is seeking a new supervisor for the Dearborn residency area, roughly the Dearborn River Watershed. If you're interested, please let us know at chris@lewisandclarkcd.org.

Water Test Cost Share Program

The CD will reimburse landowners in Lewis and Clark County \$25 when they get their well water tested. Your first call should be to the Lewis and Clark County Water Quality Protection District at 406-457-8584 for recommendations on what tests would be best to run. They should also have test kits available from the Well-Educated program from MSU. Once you've gotten your results back, email a copy to us at chris@lewisandclarkcd.org or mail to LCCD, 790 Colleen Street, Helena MT 59601.

One More Attack on Montana's Streams

Jeff Ryan, Chair of the Lewis & Clark Conservation District



Record high temperatures, extreme drought, excessive sediment, dewatering and many more factors are hammering our world class Montana streams. So along comes one more problem that we could fix rather easily, but government being government, sometimes common-sense changes to regulation are very difficult to implement.

The problem I'm referring to is floodplain permitting. Not that pertaining to regulating development or placing structures in mapped floodplain areas. That element of the regulation is good. The problem is the very same rigorous regulation that applies to that, is also applied to stream restoration and simple stream bank restoration projects. That rigor typically involves

an in-depth engineering analysis, that can cost several to tens of thousands of dollars, to conclude that laying banks back and planting willows and or creating larger more efficient floodplains is a good thing for stream health. Because of these costs many small and some larger restoration projects are being abandoned across the state. Projects, that if implemented, could improve stream health dramatically and help counter many of the other attacks on our streams we have limited control of.

So, what can be done? Fortunately, this last Montana legislative session, with the almost unanimous approval of the Senate and House, a resolution was passed (SJR6) requesting FEMA to work with the DNRC Montana Stream Restoration Committee to try to develop flexibility in floodplain regulation for stream restoration projects. SJR6 was carried by Sen. Ellis at the request of the Lewis and Clark Conservation District.

That may have been the easy part. The Stream Restoration Committee will be again meeting and tackling the problem head-on. But even with the resolution we need to garner more of FEMA's attention. We need your help! The resolution was sent out to FEMA, our congressional delegation, all the conservation districts, the governor's office and DNRC. So if you have any contacts with any of these entities, please contact them and determine what they could do to get FEMA more engaged in the process.

Thank you for your help. If you've got questions, please contact the Lewis and Clark Conservation District: (406) 449 5000 ext. 3884.

Winter Offers Wealth of Opportunity to Add Health to Your Farm's Soil

By: John Sitka, NRCS Retired

The end of the growing season for cash crops doesn't mean the end of the opportunity to build the productive capacity of your soil – and it's something you should be thinking about at the end of harvest.

The underground herd of microorganisms that drives the majority of nutrient cycling and soil aggregate formation can continue to be fed, and actively building soil, as the traditional growing season comes to a close. In northern climates, the dates for the average last frost in the spring and the first frost in the fall should not define the time your soil can host living roots that feed soil biology. There are a number of plants (such as hardy annuals, winter annuals, hardy biennials, or perennials) that may be able to sustain a living root in the soil for an extended period of time into late fall or early winter, or perhaps all winter long.

The first thing that can be done to help improve your soil in the fall of the year is perhaps the easiest. Do nothing. Do not disturb the soil with tillage in order to manage crop residues. Tillage degrades soil aggregates and results in a loss of soil organic matter. Crop residues may be chopped or grazed to help them cycle faster if you anticipate that an excessive amount of residue might be an issue at planting time for the next crop.

Another approach to address copious amounts of crop residues is to plant a low carbon-to-nitrogen ratio cover crop (such as one that might include legumes and/or brassicas) that can feed the soil with a living root and then help the soil biology break down crop residues. When nitrogen is released from a decomposing cover crop in the spring, that nitrogen allows soil organisms to consume carbon-rich residues more quickly.

Including such a cover crop in your system requires some thoughtful planning. First and foremost, one needs to determine the desired goal(s) the cover crop will serve. This will help determine the species that might be included in the mix. Then, one must consider the logistics of acquiring seed and getting it on the field at the point in time desired. Will the cover crop seed be applied prior to cash crop harvest, or immediately afterward, and how? Filling a gap in your cropping sequence with a cover crop is best planned a year or more in advance. While it might be too late to plant a cover crop this fall, it is the perfect time to plan to include one next time around.

It is also important to understand that most of the carbon that is retained in the soil as organic matter comes from sugars exuded by the root systems of plants while the plants are green and alive. The majority of the carbon contained in the crop residues left behind on the soil surface after harvest goes back into the air as carbon dioxide when soil organisms consume them and respire (breathe in oxygen and breathe out carbon dioxide) as they work to break those residues down. This does not mean that crop residues on the soil surface are wasted! There is no waste in nature.

Plant residues on the soil surface play an important role in protecting the soil from the impacts of rain and wind, reduce evaporation of water from the soil, catch and retain snow, and provide habitat for the organisms that live near the soil surface. However, it is living roots that feed the organisms below the soil surface that causes the most carbon to be retained in the soil and to develop the most stable soil aggregates. It is stable soil aggregates that help the soil take in water and allow for the exchange of gases with the atmosphere. This is how the combination of crop residues covering the soil and winter-hardy plants growing in the soil can both protect the soil from degradation and keep soil biology fed for an extended period of time.

Another very important “big picture” consideration for cropping sequences, as well as cover crops, is to maximize the diversity of plants grown in your system as much as possible. Many producers follow cropping sequences that include only a few species of plants. Adding a cover crop to the system can be an excellent opportunity to expose the community of organisms in the soil to several more species of plants they might not otherwise have an opportunity to be fed by. This type of biological priming can do wonders for nutrient cycling in the soil and possibly reduce the expense of supplemental nutrients from purchased fertilizer. Diversity of crops in a cropping sequence and diversity of species of plants in cover crops will also reduce pest pressure, conceivably reducing money spent for pest control measures.

Regardless of your location or cropping sequence, give some serious thought to the gaps of time when you currently do not have living roots in the soil. Consider filling those gaps with a new cash crop or cover crop in your overall cropping system plans. Oftentimes, the opportunity to add both diversity and living roots feeding the soil occurs during the fall and winter when cash crops are in the bin. This time of the year may also provide an opportunity to reflect on your entire cropping system and give you enough lead time to plan a change. Such a change could help build your soil’s capacity to help you produce more while spending less.

Jon Stika is a retired Natural Resources Conservation Service soil health instructor and current part-time professional at the North Dakota State University Dickinson Research Extension Center. He is also the author of “A Soil Owner’s Manual: How to Restore and Maintain Soil Health.”

PARTNER NEWS

2022 Montana Soil Health Symposium: How to Have Your Soil and Keep Your Bottom Line Too



The Montana Association of Conservation Districts is hosting the second annual Soil Health Symposium Feb. 9-10, 2022. This two-day event is centered around peer-to-peer conversations and experience-based presentations from many aspects of agriculture. We dive into the biological components of soil, managing productive land, tools and techniques that can enhance the nutrient value of your crop, and how to keep a healthy bottom line, too! You’ll hear from Montana producers and national technical experts like keynote speakers Dr. Allen Williams and Dan Kittredge. A pre-conference workshop on Feb. 8 features Jolene Brown leading an interactive session on the nitty gritty work of running a successful family agricultural business and ensuring that measures are in place for transitioning the business to the next generation.

Early bird registration is open now, including special pricing for students and interns enrolled in agricultural programs. Registration is limited and on a first come-first serve basis. Get more information and see the full agenda at www.mtsoilhealth.org.



Montana Leopold Conservation Award Seeks Applicants

Know a Montana rancher, farmer or forestland owner who goes above and beyond in the stewardship and management of natural resources? Nominate them by March 15 for the 2022 Montana Leopold Conservation Award®. Given in honor of renowned conservationist Aldo Leopold, the award recognizes landowners who inspire others with their dedication to land, water, and wildlife habitat management on private, working land.

Sand County Foundation and national sponsor American Farmland Trust present the Leopold Conservation Award to private landowners in 23 states for extraordinary achievement in voluntary conservation. In Montana, the \$10,000 award is presented with the Montana Department of Natural Resources and Conservation's Rangeland Resources Committee. Nominations may be submitted on behalf of a landowner, or landowners may nominate themselves. The application can be found at www.sandcountyfoundation.org/ApplyLCA.

Montana Soil Outreach



From September 2021 through July 2022, the Montana Association of Conservation Districts, Montana Watershed Coordination Council and partners are reaching out across the state to ask: What more might be done to better support farmers and ranchers in managing soils in Montana?

The purpose is to increase the pace and scale at which land stewards implement voluntary practices and systems to maintain and improve soil health, and thereby the long term economic and ecological vitality of agriculture in Montana. In August of 2022 a report will be shared on what was learned along with any recommendations that seem to emerge. All responses will be kept confidential and anonymous.

[Learn how to participate.](#)

Contact FSA Today to Apply for Livestock Forage Program

Livestock producers in all 56 Montana counties are eligible to apply for 2021 Livestock Forage Disaster Program (LFP) benefits on dryland grazing acres, including native pasture, improved pasture, annual ryegrass, grain, and forage sorghum.

LFP provides compensation if you suffer dryland grazing losses for covered livestock due to drought on privately owned or leased land or fire on federally managed land.

County committees can only accept [LFP applications after notification is received by the National Office of qualifying drought](#) or if a federal agency prohibits producers from grazing normal permitted livestock on federally managed lands due to qualifying fire.

Producers must complete and sign an LFP Application and provide the required supporting documentation **no later than January 30, 2022**, for 2021 losses. Required supporting

documents include, but are not limited to land leases and livestock inventory documents. It is important to begin the application process earlier rather than later in case additional documentation is required.

For additional information about LFP, including eligible livestock and fire criteria, contact the local USDA Service Center and/or visit www.farmers.gov and/or fsa.usda.gov/mt.

2021 recap and looking to next year in the Sun River watershed

By Tracy Wendt, SRWG Executive Director

Happy Holidays from the Sun River Watershed Group!

The Sun River Watershed Group (SRWG) completed some important work in 2021. The Sun River Channel Migration Zone Report was expanded and now includes 14 miles of Elk Creek, as well as 51 miles of the Sun River. We installed a bridge on Muddy Creek, removing old, decaying culverts, and started work on a Master Plan for that drainage. In 2021, over 150 volunteers helped with SRWG projects that included the Weed Whacker Rodeo, AIS messaging painted on boat ramps, and the Bashin' Trash River Cleanup.

SRWG is looking forward to big things in 2022! We have big planning efforts underway on Muddy Creek and at the Sun River avulsion site near Adobe Creek. We'll be working on these plans and pursuing construction funding next year. We are also excited to be sharing a Big Sky Watershed Corps member with Lewis & Clark Conservation District. Jessica Ramirez will begin her term January 10 and will be supporting both organizations, including helping to plan a multi-location rain barrel workshop, anticipated to take place in Helena and Great Falls. SRWG looks forward to having Jessica help us learn more about how we can partner with the conservation district and serve Lewis & Clark County in our watershed.

SRWG is partnering with the Missouri River Flyfishers Trout Unlimited Chapter to host **Winter Riverfest** on February 19 to celebrate the Sun and Missouri Rivers. This is a new event that will include fly fishing films, an art and experience auction, bucket raffle, and ending with a performance by 50 Watt Sun. The event will be held at Great Falls' newest venue, The Newberry,



at 420 Central Ave. Tickets go on sale soon – follow Sun River Watershed Group's Facebook page and check the website www.sunriverwatershed.org for more information.

Thanks to everyone who volunteered, donated, or partnered with SRWG in 2021. We look forward to seeing you all next year!

Photo caption: SRWG staff and Board of Directors

Check out our website at www.lewisandclarkcd.org. We're also on [Facebook](#), [Instagram](#) and [Twitter](#).
If you prefer to get this newsletter via email, sign up at www.lewisandclarkcd.org or give us a call at 406-449-5000 x5.



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