



# The Explorer

The Official Newsletter of the Lewis & Clark Conservation District

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## Augusta Area Flood Recovery Workgroup



The Lewis & Clark Conservation District, in coordination with Lewis and Clark County, will be pulling together a work group to evaluate and coordinate long-term flood mitigation measures to assist landowners around and in the community of Augusta.

The Conservation District and County will be reaching out to the State Departments of Resource and Conservation (DNRC), Transportation (MDT), Environmental Quality (DEQ) and Fish, Wildlife and Parks (FWP) to be involved and assist in the

coordination efforts. They will also be reaching out to landowners and other stakeholders. The goal is to address current and future damages to agricultural lands, public lands and the town itself.

The Conservation District and other entities plan to coordinate the group and help find resources for the area. It will also seek landowners interested in leading the group. The plan is to look at landowner short-term needs, but more importantly, long-term potential solutions. There are no specific plans yet and it is unknown what the result will look like. However, the



goal is to help residents figure out a way to live with the stream, allowing for flood seasons with minimal negative impact.

As formation of the group moves forward, the Conservation District and others will consider and pursue funding options, including a DNRC grant to pay for a technical hydrologic assessment of Elk Creek, and potentially Smith and Ford Creeks. This information is needed prior to planning any projects to know what the resource looks like, where the problem spots are, and where potential solutions could present themselves in looking at long-term mitigation.

In the short-term, the Conservation District will work with individual landowners on stream permitting for culverts, crossings, bridges, headgates, irrigation diversions and other stream related projects done at the individual level. The CD also is paying for round one of water testing in the impacted area with over 70 tests coming through our office since Memorial Day weekend. 40 of those wells tested positive for Total Coliform bacteria and 20 of those tests were also positive for E. Coli. If your property ever floods, Don't Drink the Water until it's been tested!

If landowners or others are interested in being part of the work group or just being on a mailing list for information about activities, please contact the Conservation District office at 406-449-5000 ext. 5 or by emailing [lccd@mt.net](mailto:lccd@mt.net).

## **Less Utilized NRCS Programs**

Diane Fitzgerald, Helena Field Office

The Environmental Quality Incentives Program, or EQIP, is commonly used in Lewis and Clark County for irrigation, grazing, and forestry practices. The EQIP program also has some special and national subcategories you may not have heard of.

Honey Bee Pollinator Initiative – This initiative under the EQIP program assists with establishing early, mid-season, and late blooming plants for season-long sources of pollen and nectar.

National Organic Initiative – NRCS assists with conservation practices on ag operations related to organic production. Producers who are certified organic, transitioning to organic or National Organic Program exempt may participate.

High Tunnels – NRCS can assist with high tunnels for existing crops and gardens through EQIP to extend our short growing season. The high tunnel practice can be combined with other practices, such as a microirrigation system or a fertilizer plan. High tunnels are intended for crops in the ground, and not for potted plants on tables.

Conservation Innovation Grants, or CIGs are competitive grants through the EQIP program. They are awarded to private or non-federal public applicants for resource conservation. The intent is to develop cutting edge, creative tools and strategies apart from traditional, customary resource solutions. In Montana, the state CIG category is intended to fund projects that benefit a limited geographical area, while the national CIG can fund one to three-year projects through national competition. Proposals can be watershed based, regional, multi-state, or national in scope.

In addition to EQIP, there are other programs offered by NRCS that are not as widely used by our ag producers:

The Conservation Stewardship Program, or CSP, helps ag producers build on their existing conservation efforts to strengthen their operations. CSP plans are for working lands and can be built around goals to improve grazing, increase yields, or develop habitat. Contracts last five years and there is an option to renew at the end of the contract. Targeted resource concerns for Montana include degraded plant condition, inadequate habitat, erosion, and soil and water quality degradation. Please visit the national CSP website where enhancements and practices are listed.

Also visit the Montana NRCS website, as not all enhancements and practices are offered in Montana.

For information on agricultural and wetland easements, and other programs offered by NRCS, please visit:

[www.nrcs.usda.gov/wps/portal/nrcs/mt/programs/](http://www.nrcs.usda.gov/wps/portal/nrcs/mt/programs/)

or contact the local NRCS field office in Helena at 406-449-5000 Extension 3.

## Update on the Sun

The Sun River Watershed Group has two big events happening this summer: the annual Sun Canyon Weed Whacker Rodeo and our 25th Anniversary celebration.



On July 13, volunteers will help SRWG remove knapweed and other invasive weeds in Sun Canyon. We will meet at the Beaver Creek turnaround at 8:30 am and pull weeds until noon. At noon, SRWG will host a BBQ and give out awards and door prizes. This is a family-friendly event, so bring your parents, your children or your friends!

SRWG began in 1994 as a

working group to address issues on Muddy Creek - expanding over the next 25 years to protect and restore the resources of the Sun

River watershed and its communities. On August 24th, SRWG will celebrate our silver anniversary with a watershed tour that starts and ends in Fairfield, and an evening event at Sun Canyon Lodge. The tour is free, but RSVP is required as seats are limited. Reserve your spot at [www.eventbrite.com](http://www.eventbrite.com). The evening event is \$20, which includes your meal and a drink ticket. We'll have live music, yard games, and a silent auction. Kids 12 and under are free. Tickets are available at [www.eventbrite.com](http://www.eventbrite.com), or at Greenfields Irrigation District and Montana Valley Irrigation.

SRWG is still looking for volunteers, sponsors, and prizes for both events. Contact Tracy at (406) 214 2868 or at [sunriverwatershed@gmail.com](mailto:sunriverwatershed@gmail.com) to help. More information can be found on our Facebook page and at [www.sunriverwatershed.org](http://www.sunriverwatershed.org).



## A Different Way to do Diversions-Infiltration Galleries

Typical construction of an infiltration gallery involves placing perforated pipes in the streambed and connecting them to a collection area. Water seeps into the perforated pipes and flows to the sump where it is pumped out (or flows by gravity thru a ditch) for immediate use. The size, length and depth to place the perforated pipes depends on several factors, including the size of the stream, rate of diversion needed, the nature of the gravel at the site and the depth to which bed scouring will occur during high flows. The perforated pipes are usually placed at least four feet deep within a bed of clean gravel at least 1.5 feet thick on all sides. The gravel, in addition to a fabric filter placed on top of the gravel layer, prevents the perforations from becoming clogged with sediment. If sedimentation is a problem, these wells can be designed with a reverse flushing feature. Depending on the site conditions and streamflow, infiltration galleries require approximately one square foot of perforated pipe surface for each gallon per minute of pumping.

Infiltration galleries offer several advantages over other diversion methods, including eliminating the impacts of dams on natural stream dynamics and avoiding the risk of fish entrainment. The relatively low impact of this method can allow for diversions at any time of year.

A significant challenge to infiltration galleries in certain streams is preventing the perforated pipes from becoming blocked with fine sediment. Although many infiltration galleries are equipped with a reverse pumping feature to flush out sediments, sediment can still pose problems. Caution must be taken to ensure that pumping rates do not reduce surface flows or water tables to the point of harming aquatic habitat or riparian vegetation. In addition, infiltration galleries will not work at all sites.

Characteristics that could preclude the use of infiltration galleries include:

- “Armored” gravels on the streambed that would indicate poor percolation rates;
- Limited thickness or absence of gravel substrate that could prevent the placement of perforated pipes at depths adequate to protect them from scouring;
- Streambed made up of fine-grained soils such as clays, silts and sands that would continually clog the perforations; and
- Stream reaches with unstable banks that can migrate significant distances from their original locations, thus separating infiltration galleries from the water source.

The cost of infiltration galleries depends primarily on the amount of water to be diverted, which would dictate the size of the perforated pipes, amount of excavation and gravel for backfilling and the cost of pumps, if needed. Costs can range from as little as \$10,000 to more than \$1 million depending on project characteristics.

Video Link - <http://irrigationtoolbox.com/WebPages/VideoPages/Video007.html>

\*\*\*Article taken from Beyond Dam: Options & Alternatives – International Rivers  
([https://www.internationalrivers.org/sites/default/files/attached-files/beyonddams.water\\_.pdf](https://www.internationalrivers.org/sites/default/files/attached-files/beyonddams.water_.pdf))

## Pull Your Share

The CD recently had the pleasure of helping the Great Falls School District out with a mini grant through DNRC. “what are you doing getting a grant for the Great Falls School district?” I hear you asking. For good reason, since most of our activities are limited to Lewis and Clark County. This group though, started a weed pull project several years ago and have expanded it to Lewis & Clark County. So, the Board figured that it was appropriate. Below is the “thank you” from the organizer and some photos.





Thank You!!!!!!! I want to thank everyone who helped make the 2019 Pull Your Share weed pulls a success! It is truly collaboration at its best. The weed pulls were a joint effort by Great Falls High School, C.M. Russell High School, United States Forest Service, Montana Fish, Wildlife and Parks, Sun River Water Shed Group, Cascade County Weed Division, Lewis and Clark Conservation District, Cascade Conservation District, Montana Department of

Natural Resources and Conservation and Sun Canyon Lodge.

The Pull Your Share Project is not only sustainable, it is growing every year. The first year, 1 teacher and 2 students participated. The second year, 67 students and 5 teachers participated and this year, 190 students and 8 teachers participated.



In addition, 10 Pull Your Share signs have been



installed at campsites, trailheads and a boat launch at Giant Springs State Park and on Forest Service Lands to encourage all recreationists to pull their share of knapweed.



Additional teachers are showing interest in the Pull Your Share Project, I believe we will see additional growth next year.

Please see attached photos.

Dan Wilkins and Matt Krahe -Teachers Great Falls High School

## District Report

The most pressing news of the past quarter is the flooding in the northern part of Lewis and Clark County. For a second year in a row, the area around Augusta received above average precipitation, in some cases on several inches of snow, and experienced another year of devastating flooding. The CD is working hard with several groups and landowners in the area to address that, with a planned stream assessment and of course stream permitting.

In addition to those activities, members of the board remain active on the Missouri River CD Council, the Water Quality Protection District, Lake Helena Watershed. Supervisors are also involved in the Stream Restoration Committee which is working to make Floodplain Permitting less of a financial road block to landowners and other entities who are doing stream projects which will benefit streams in the state of Montana.

Also in the past quarter, actually the month of May, the CD collaborated with the local NRCS Field Office on Community Planning meetings to try to assess the projected needs of county landowners in regard to natural resources. Turnout at the meetings was slim, but those in attendance presented a pretty good cross section of the community and the group felt like they got some very good information. Moving forward with that process, the Lewis & Clark Conservation District will convene the Local Work Group for the county after the July 11 board meeting at the Dearborn Community Center. The meeting will begin at 10:30 am and the public is welcome to attend that meeting to give further feedback on natural resource concerns in Lewis & Clark County.

In the next quarter, we will be meeting in the Dearborn Community Center (July 11 and August 8) and Lincoln at Lambkins Restaurant in September. Supervisors and staff will be working on 310 permits, emergency notices, the Flood workgroup and all of the other activities that we have going on. The CD will also begin work on a stream project on Spokane Creek with a landowner who had some flood damage in 2018. This project will help with determining minimum standards for engineering for floodplain permitting.

## Keep your Eyes Peeled

We have regular updates on our website <http://www.lccd.nacdnet.org>, and our Facebook page [www.facebook.com/lewisandclarkcd](http://www.facebook.com/lewisandclarkcd),



but Chairman Jeff Ryan has been working with a number of folks on willow related stream projects. We'll be updating the website and Facebook pages, but he will also be putting a longer article together for the October newsletter.

In the meantime, here are a few photos.





# LEWIS & CLARK CONSERVATION DISTRICT

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To update your mailing address, contact Chris Evans at 406-449-5000 ext. 5 or email [lccd@mt.net](mailto:lccd@mt.net). If you would rather receive this via email, let me know!