

# High Country Conservation



JUNE 2020

LARAMIE RIVERS CONSERVATION DISTRICT

Summer Edition

## LRCD Continues to Serve During SARS-CoV-2 Restrictions

by Tony Hoch

Since the country started “locking down” in mid-March we at LRCD have been trying to carry on with business as usual as much as possible, with a few exceptions. Since we are co-located with the federal agency, the Natural Resources Conservation Service or NRCS, we are following their guidelines on field office operations. Specifically, the office is locked and we officially are seeing our cooperators by appointment only, but if people stop by and knock we will certainly come out and greet them. Employees are officially encouraged to telecommute, but LRCD and NRCS are doing our best to have one employee in the office during business hours.

Trish Penny, our Education Coordinator has been spending most of her time lately working in our community and school gardens preparing for the growing season. Instead of gardening classes for kids, Trish will be working with teachers and other school volunteers, through WY First Lady Jennie Gorden’s Hunger Initiative to put these gardens into production to help feed kids who would normally benefit from food offered by school programs.

Resource Specialist Martin Curry has been our anchor in the office since much of his work with ranchers and other cooperators requires the sophisticated mapping software on his office computer for project planning. He has also been around to work with the fairgrounds to successfully hold our annual tree sale and prepare for tree planting, which is happening as I write this article. Martin is also available for field visits with rural cooperators upon request.

District Clerk Laura McGinley has been handling much of the district business from her home office, including covering our human resources needs, outreach and advertising, and handling an occasional cost share application for low-water landscapes. Perhaps most important for the rest of us in the office Laura keeps our computer and information systems running smoothly.

Finally, as the director and water quality specialist, I worked out of my house 4 out of 5 days a week for 6 weeks, and have been back in the office since the May 1 tree sale. I’m handling contract logistics for several projects on private lands, am one of the main coordinators (in collaboration with the County Commissioners) on the Pilot Hill Land Exchange, along with ongoing work with the NRCS, Forest Service, Water Development Office, Fish and Wildlife Service and others. I can say with great confidence that even in times of “social distancing” that there is no shortage of meetings! But that is the nature of locally led conservation. What can we do to serve you?

## Regular Cost Share Program

Application can be found at [www.lrcd.net](http://www.lrcd.net)

50% or up to \$1000 contributed to

your qualifying project!

**\*Living Snow Fences/  
Shelterbelts**

**\*Raised bed vegetable  
gardens**

**\*Low-Impact  
Landscapes**

**\*Conserv. Education**

**\*Drip irrigation**

## LRCD Soil, Water, and Plant Analysis Cost Share Program

**\*Potable Water**

**\*Trace Minerals in water**

**\*Irrigation & Livestock  
water**

**\*Soil testing for gardens  
and for crops**

The SW&P Analysis Cost Share is a matching program

in which up to 50% of project costs may be reimbursed by the District up to \$500 total. Our knowledgeable staff can assist with understanding the different tests

that are available, where testing labs are located, and how to read results.

**VISIT US ON THE WEB**  
**@ [WWW.LRCD.NET](http://WWW.LRCD.NET)**

**Or on Facebook**

~ Laramie Rivers Conservation District

~ Laramie ReBuild

~ Laramie Grown Online Farmers Market

## ELIMINATING FIELD BINDWEED

By Laura McGinley

Bindweed is one of the most difficult weeds to get under control on your property. They pop up everywhere— all over the flowerbed, among the vegetables, throughout the lawn, on roadsides, in pastures, and wherever else it can take hold. Bindweed is a deceptive plant to many because the pretty little flowers that bloom are reminiscent of ornamental morning glories. Field Bindweed is within the Convolvulaceae family of plants, which contains many different species of trumpet shaped flowering plants but is a different Genus than the desirable garden flower *Ipomoea*. *Convolvulus arvensis* or Field Bindweed is a native of Europe and Asia that likely came to North America in contaminated grain as early as 1739.

Bindweed grows along the ground until it contacts other plants or structures and spreads over anything in its path. Much like pole beans, bindweed's stems rotate in a circular pattern until they attach to a solid structure (fence posts, other plants). The stems then wrap around the object as it grows.

### WAYS TO MANAGE BINDWEED

If you want to avoid using herbicides to control field bindweed, plan to pull out or plow up all the bindweed for three to five years. Diligence and dedication are needed to get rid of bindweed because any roots left in the soil after pulling will regenerate within two weeks.

Using a garden fork or long blade shovel, dig as deep as possible and be aware that root fragments as small as two inches can generate new shoots. It will take repetitive removal throughout the growing season for at least three years to control it.

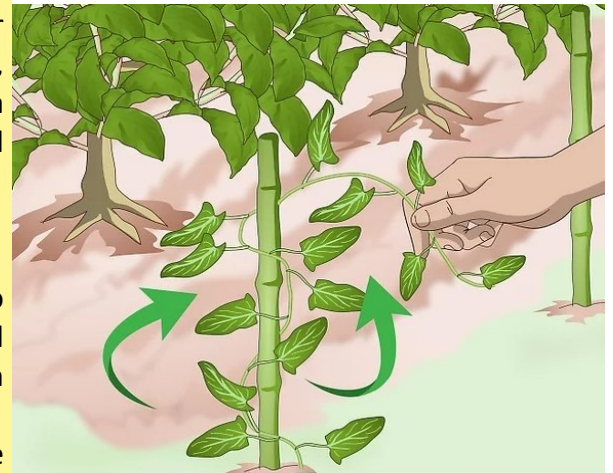
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If you are comfortable with using weed spray, which is far less labor intensive and a bit more successful in a shorter time, this wikiHow by Lauren Kurtz titled *How To Get Rid of Bindweed* includes a technique that isolates the bindweed before spraying it with Glyphosate (RoundUp). Note that in areas where bindweed is growing by itself, or among others weeds you are trying to control, you can just follow the spray instructions.

1) In Spring, stick bamboo cane, or other sticks you have on hand, in the ground in areas where bindweed is a problem. As the bindweed grows, direct it toward the cane/sticks so that it climbs the it instead of up vegetables, flowers, shrubs or across the lawn. This will allow you to spray or paint glyphosate on the leaves without harming surrounding vegetation.

2) The best time to plan applying herbicide is once the bindweed has flowers. Plan applications when the weather is calm; early morning and late evenings are best. If the spray drifts onto desirable plants, they may be injured or killed if not rinsed with water immediately. Spray the plant until the leaves are wet, but not dripping. Glyphosate is absorbed into the plant which pulls the chemical down into its roots blocking an essential pathway for plant growth.

3) Repeated applications of herbicide will be necessary to control bindweed. Its root system can be so long that not enough herbicide can be absorbed with a single application.





4) Let the plants die to ground level before pulling them out. Wait about 3 weeks the bindweed after spraying before removing the plants. Dig down as far as possible and remove as much of the root as possible.

5) Treat affected soil with pre-emergent herbicide like Preen for flower & vegetable or Ortho Weed B Gon MAX plus Crabgrass Control and Bayer Advanced™ All-In-One Lawn Weed and Crabgrass Killer for the best control in grass. Repeat the application every 10-12 weeks to prevent the bindweed from growing back.

6) Mulch heavily to discourage new growth. Bindweed loves sun and seeds can lay dormant for up to 50 years. Spreading several inches of bark, wood chips, or another heavy mulch to prevent sunlight from reaching the remnants of bindweed. Planting white or red clover as green mulch is an effective of controlling weeds, soil erosion, and supplying nitrogen to the soil.

7) Most often, the presence of weeds indicates soil that is missing key element of optimal health. Running soil tests and amending soil with needed nutrients will go a long way in preventing many weeds.

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A common but ineffective method for bindweed is using the mixture of vinegar, Epsom salts, and dish detergent. This approach will not work any better and it can cause unintended damage to the soil and the life in it. Vinegar is an acid and affects the above ground green growth only. It will kill the leaves but not touch the underground roots, seeds or shoots. Vinegar also changes the pH of the soil, which creates conditions that invite more weeds to take root. Epsom contain magnesium sulfate, which is a form of magnesium salt. This is not a typical deficiency in high plains soils and many plants will suffer from the excess salts. Dish detergent has been shown in studies to decrease the number of beneficial microbes, nitrogen fixing bacteria, and worms in the soil. So, overall, this is not a good way to deal with bindweed.

Some people have taught their chickens to eat bindweed with success, but they do not naturally like the bitter taste of the leaves. For this to work, owners must start feeding bindweed to the chicks and hope they acquire a taste for it. After that, they may dig it up when they find it.

On the whole, Field Bindweed is one of the most troublesome weeds to contend with. In badly affected areas, it may never be eradicated but with effort, you can keep it from overtaking your gardens and yards.

#### References:

[www.wikihow.com/Get-Rid-of-Bindweed](http://www.wikihow.com/Get-Rid-of-Bindweed)

[www.extension.oregonstate.edu/news/bidding-farewell-dreaded-bindweed](http://www.extension.oregonstate.edu/news/bidding-farewell-dreaded-bindweed)

[www.gardenmyths.com/homemade-weed-killer-roundup-vs-vinegar-vs-salt/](http://www.gardenmyths.com/homemade-weed-killer-roundup-vs-vinegar-vs-salt/)



# Gardening Tips

By Trish Penny



## Successful gardening

**in Laramie, Wyoming.** We have our challenges, some alkaline soils, elevation, cooler temperatures, shorter growing seasons, minimal rain fall, wind, and hungry critters. But, if you are willing to experiment and adapt to the conditions, you can grow successfully in Wyoming. The information below is designed to make your gardening experience more enjoyable.

**Location:** Select a garden space that has a gentle slope for excess water run-off facing south, south east or south west for maximum sun exposure and heat. Most vegetables need 6-8 hours of sun. Clean space of debris. Loosen soil to 8 inches deep.

**Soils:** Most soils in Wyoming are lacking in organic matter. Spread at least two inches of quality organic matter across the garden and till in at a minimum of six inches deep. A soil test can provide detailed information what other nutrients is lacking and guidelines for fertilizer applications. Most plants and microbes prefer a pH range from 5.5 to 7.5 or slightly acidic to neutral. Never add sand to clay soil.

**Crop Selection:** Laramie's Hardiness Zone is 4B\*. Try to select vegetables that are included in zone 3. Because of our limited growing season, select vegetables that mature in a short amount of time. Cooler weather crops that do well in our climate are: peas, beets, carrots, lettuce, cabbage, onions, radish, spinach, pak choi, kale, kohlrabi, Swiss chard and broccoli. [\*planthardiness.ars.usda.gov]

Warm weather crops include tomatoes, peppers, eggplants, summer and winter squash, cucumbers, green beans and sweet corn and take more time to mature. Some will need to be started as transplants and additional climate protection may be needed.

**Garden Planning:** Perennials are plants that will grow year after year. Place these plants in an area of your garden where they will not be disturbed from regular tilling, etc.

Taller plants should be planted on the north side of your garden to prevent the other plants from being shaded.

**Planting:** Use new seed. Older seed will loose germination vigor. Sow according to package instructions. Plant transplants after danger of frost is over. Keep the soil evenly moist until seedlings have emerged or transplants are established. Thin as needed.

**Irrigation:** Drip or soaker hose set next to the base of the plants is a preferred method of irrigation. This method will use less water, helps keep the foliage dry and allows the water to penetrate down to the roots.

**Wind Barriers:** Protect your plants from high winds by planting shrubs on the wind side of the garden or build a fence.

**Season Extenders:** There is approximately 90 days of growing time. It is important to protect your plants from an early or late frost and reduced temperatures by using fabric row blankets, plastic tunnels, walls of water, hot kaps, portable cold frames, or milk jugs with the bottoms cut off used at cloche. Growing in a greenhouses or a hoop houses will extend your growing season.

**Good bugs, bad bugs:** Be able to identify good bugs so you are not killing those that help your garden. Chemical remedies should be the last resort. Toxins in pesticide kill both the beneficial and non-beneficial insects, affect good bacteria and other microorganisms that are the food source for good insects. Inspect your garden weekly.

Beneficial insects include pollinators, predators, and parasitic. Examples of beneficial insects are: ground beetles, lady bugs, lace wings, and hover flies. Harmful insects include: aphids, spider mites, Colorado potato beetle and caterpillars.

**Animal Control:** Use good tall woven fence around your garden. If using raised beds, add minimum of 3 inches of crushed gravel before adding soil.

**Weeding:** An essential. Weeds can rob your vegetable plants of necessary water, nutrients, and light. Pull them by hand, cultivate them with a hoe or cultivator, or use a mulch to inhibit their growth. Chemical herbicides are not recommended in vegetable gardens.

**Harvesting:** Pick your produce at the right time of maturity preferably during the early morning hours.

*Enjoy your success!*





# Friend or Foe: Which Insects Benefit Your Garden?

Say yes to these helpful bugs ✓

Keep these pests out ✗

Bees



Ladybugs



Tomato Horn Worms



Cabbage Worms



Spiders



Green Lacewings



Cabbage Moths



Mites



Praying Mantis



Ground Beetles



Slugs and Snails



Cutworms



Small Pirate Bugs



Predator Flies



Flea Beetles



White Flies & Aphids



Parasitic Wasps



Centipedes



Carrot Rust Flies



Squash Vine Borers



Earwigs



Ants



Mexican Bean Beetles



Parsley Worms



**Reduce the amounts of pest and avoid using toxic controls by:**

- ✿ Building healthy soil
- ✿ Attract healthy
- ✿ Predators
- ✿ Monitor your garden
- ✿ Mechanical Solutions
  - 🐜 Hand pick insects
  - 🐜 Floating row covers
  - 🐜 Traps
  - 🐜 Water pressure sprays
  - 🐜 Insect vacuums
  - 🐜 Diatomaceous Earth
  - 🐜 Insecticidal Soaps
  - 🐜 Horticultural Oils
- ✿ Use plants in borders that naturally repel Insects
- ✿ USDA Approved Chemicals
  - Use when pollinators are least active



# Do You Want to Build a Rain Garden?

By Fred Harrell, NRCS-Wyoming Public Affairs Specialist

As our communities grow and develop, storm-water runoff becomes a problem. Impervious surfaces like parking lots, streets, sidewalks and buildings can accumulate pollutants. The runoff collects these pollutants and can remain unfiltered as it flows to streams and reservoirs. It then becomes our drinking water and makes up our recreation areas. The runoff can also increase flooding potential. One way to combat this problem is the creation of rain gardens. Rain gardens in critical locations will collect and filter stormwater runoff through natural processes



In late 2017, the idea to create a rain garden near the Gillette College Technical Education Center's parking lot began. One inch of rainfall on the 3.1-acre parking lot is equal to 82,152 gallons of water. The water runoff then collects contaminants and flows into the Donkey Creek watershed. Those contaminants include not only chemicals from the parking lot, but also *E. Coli* strains likely from animals that walk along or feed in that area such as dogs, geese, and others

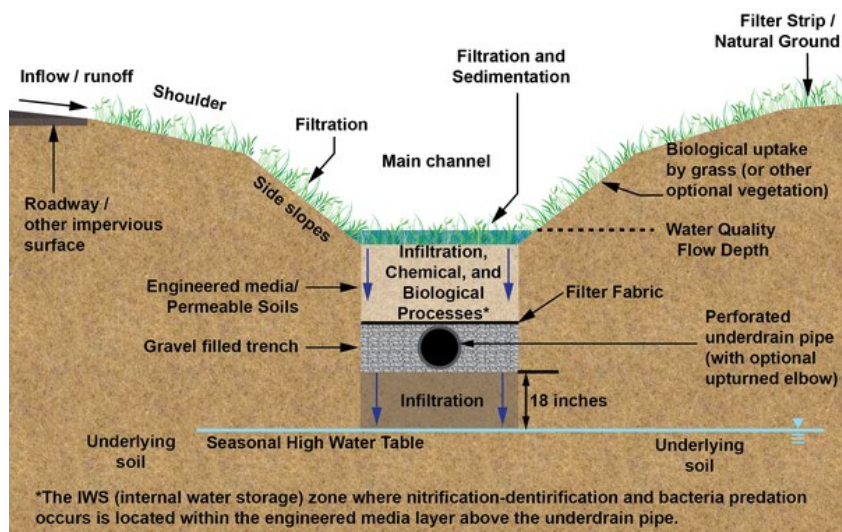
"The water quality of this watershed has been impaired for several years," said Jennifer Hart, district manager for the Campbell Country Conservation District. "Unfortunately, it's not a point source pollution where we can just plug up a pipe."

The Donkey Creek watershed is a source for the Gillette Fishing Lake in Dalbey Memorial Park which is heavily utilized by the community. The water continues to flow downstream to Keyhole Reservoir which is also a popular recreational site.

Mark Andersen, the facilities director at the college, said "The Campbell County Master Gardeners approached the college to talk about what a rain garden is and how it can benefit the community, the watershed, and the college. We had a good location along 4-J road that would be public for people to see so they can learn and understand what a rain garden is as well."

The master gardeners and Gillette College then partnered with the conservation district to create a plan and identify funding sources for the project.

"We were able to fund the project with assistance from Clean Water Act Section 319 Funds from Wyoming Department of Environmental Quality, as well as water quality funding from the Wyoming Department of Agriculture," said Hart.



The college, as well as other volunteers, contributed a nearly 40% match in funding. The total cost of the project was about \$42.2k.

"With the help of engineering support through the Natural Resources Conservation Service's Conservation Technical Assistance, an agreement for the project was created in July 2018," said Hart.

NRCS delivers conservation technical assistance through its voluntary Conservation Technical Assistance Program. CTA is available to any group or individual interested in conserving natural resources and sustaining agricultural production.



"The challenge with this project was bringing our agriculture expertise into an urban environment," said Chris Campton, a civil engineering technician with NRCS. "Since this would be a very public and visible project, we wanted to make sure it was aesthetically pleasing while still meeting the water quality requirements set forth in the grant. Based on these conditions, we decided a filtration system, such as a rain garden, was the best option."

Once the plans were approved, the rain garden construction began in July 2018.

"We chose materials and vegetation that would filter and detoxify the contaminated water as it ran through the rain garden," said Campton. "We had a lot of support from the college, the conservation district, and others. There is a maintenance aspect of this project as well. As the years go on, the rain garden will evolve as plants and materials are switched out to maintain the necessary filtration and detoxifying qualities."

Local support for the project was critical to its construction.

"We had a lot of community members volunteer to help install the rocks, plants, and trees to create this rain garden," said Andersen. "As we went through the process, we learned quite a bit of how much contaminated water actually comes off of our campus and flows into Donkey Creek."

Educating the community about the benefits of a rain garden was another goal of this project.

"Any opportunity we have to provide education on how the community can do its part is always beneficial," said Hart.

With the help of numerous volunteers, the project was completed in the summer of 2019.

"Not only did we end up with a rain garden, but we ended up with a lot of education on what we can do to better prevent the contaminants from getting into Donkey Creek," said Andersen.

The project also included the installation of interpretive signs that provide further education about the project. These signs explain the purpose of a rain garden and how it is made.

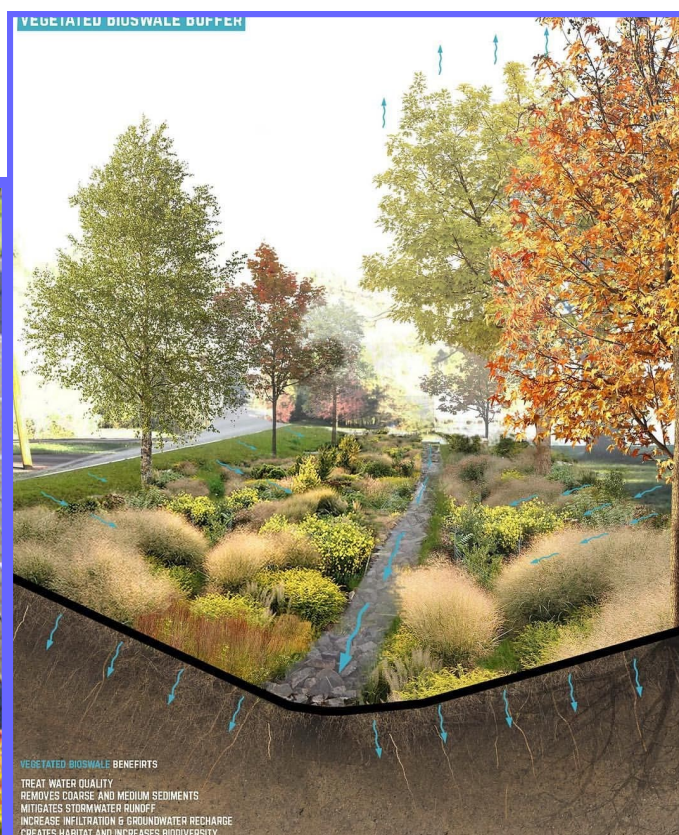
"Rain gardens such as these are beneficial to communities in many ways," said Hart. "As more of these rain gardens are created, the greater impact they will have on improving the quality of water supplied to our communities. It's going to take a lot of these smaller projects to really make an impact on the watershed."

Visit the rain garden at the Gillette College Technical Education Center located at 3251 S 4-J Rd, Gillette, WY 82718. For more information on NRCS Conservation Technical Assistance, visit our website at [www.nrcs.usda.gov](http://www.nrcs.usda.gov) or contact your [local NRCS service center](#)

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