

Healthy Acres

A RESOURCE TO PROMOTE HEALTHY LANDS AND HEALTHY COMMUNITIES



Rocky Mountain Gardens & Exploration Center

Missoula County Weed District and Extension and Missoula Butterfly House and Insectarium break ground on new facility.

Board members, staff and representatives from the Missoula County Weed District and Extension and the Missoula Butterfly House and Insectarium, along with other community partners, grabbed shovels and garden hoes to ceremoniously break ground on the 29,000-square-foot Rocky Mountain Gardens & Exploration Center on Friday, May 14 at the Missoula County Fairgrounds. Expected to open in early 2023, Jackson Construction will begin construction of the center later this month.

The Exploration Center will be the premier center for scientific education and community-centered learning in the Rocky Mountain West and is the first major new building in the fairgrounds' revitalization efforts. The year-round destination will be home to Montana's first tropical butterfly house, 2.5 acres of premier education gardens, a demonstration

kitchen, greenhouse, plant lab and classrooms. Providing a one-of-a-kind, immersive scientific and cultural experience for people of all ages, the center will draw residents and visitors to Midtown Missoula.

"The Rocky Mountain Gardens & Exploration Center will be an invaluable resource to our community for generations to come," said Missoula County Commissioner Juanita Vero. "A place of education, exploration and wonderment, teaching people how to understand, respect and cultivate the rich resources throughout our region."

The Rocky Mountain Gardens & Exploration Center is the long-planned dream of the people behind the Missoula County Weed District and Extension and the Missoula Butterfly House. Jerry Marks, MC Extension Agent, has envisioned a center for hands-on community learning in Missoula since visiting an education gar-

Rocky Mountain Garden & Exploration Center

den in Wyoming in the early 1990s. The County Extension agent, who celebrated 50 years with the MSU Extension Office in 2019, has worked with his team at the Weed District and Extension, the



Missoula County Commissioners, the Missoula County Fairgrounds, the Healthy Acres Healthy Communities Foundation, the Missoula Butterfly House and Missoula Conservation District to create something bigger and bolder than he first witnessed — a place that connects all people to the land and builds lifelong stewardship for the Western Montana landscape and appreciation for the plants and insects that make it thrive. “Missoula has a long history of rural traditions

and innovation in farming practices and land management backed by a community that knows what we have here is precious,” said Marks. “Now, we get the opportunity to expand our educational programming with new generations of people right in urban Missoula.”

Likewise, Jen Marangelo, Missoula Butterfly House executive director, has dreamt of a tropical butterfly house in Missoula for more than 15 years. Working from the late 1990s to mid 2000s with Dr. Doug Emlen, renowned evolutionary biologist at the University of Montana, and the elementary students she visited as an expansion of their work, Marangelo saw how incredibly excited children were about insects. Her idea for a butterfly house and insect museum for Missoula hatched. Jen and Glenn Marangelo launched the Missoula Butterfly House and Insectarium non-profit in 2009, with the long-term goal to build a tropical butterfly house and insectarium.

“Insects make amazing subjects for teaching a wide range of scientific topics. As more people understand insects, the fear is erased and the fascination begins,” said Jen Marangelo. “Being able to teach children and adults inside the setting of a tropical butterfly house is life-changing to their understanding of the eco-system. Then they can go outside to the education gardens and see the vital role insects play in their own world.”

Jerry Marks commented, “The ground-breaking was a perfect celebration of my 80th birthday and my initial dream, now a community dream.”



Report Snapping Turtles in West-Central Montana

FWP News Release: May 19, 2021

Missoula – Montana Fish, Wildlife and Parks (FWP) is asking for help from the public in reporting snapping turtle sightings in west-central Montana.

In Montana, snapping turtles are a native species east of the continental divide, but they are non-native west of the divide and can cause significant harm to native populations of pond-dwelling species like frogs, turtles, snakes, ducks, and fish. Snapping turtles likely end up in waterways in western Montana through illegal releases of animals kept as pets.

In 2018, FWP received a report of a snapping turtle in a backwater at Milltown State Park just east of Missoula. In 2019, FWP responded to a reported snapping turtle in the Rattlesnake Creek area just north of Missoula but was not able to locate it. In 2021, FWP is ramping up its efforts to find and remove snapping turtles, and reports of turtle sightings from the public are critical for this effort to be successful.

FWP would like to get a better sense of areas where snapping turtles may be living so biologists and managers can work to minimize the potential negative impacts. FWP is primarily concerned with snapping turtle sightings in the

Clearwater, Bitterroot, and Blackfoot watersheds as well as the Clark Fork watershed upstream of the confluence with the Flathead River.

It is rare that FWP receives a report of a snapping turtle in these areas, but even a few reports can provide important information for planning and prevention.

If you see a snapping turtle or hear reports of one in those watersheds listed above, please contact FWP’s nongame wildlife biologist for west-central Montana, Torrey Ritter, at 406-381-2339 or email torrey.ritter@mt.gov as soon as possible.



New Faces at Lolo Mosquito



Hello!! My name is Sarah Holden, I was recently hired to work with the Lolo Mosquito Abatement District as their new Mosquito Abatement Coordinator. I have a degree from the U of M in Natu-

ral Resources. I am excited to work with the Lolo community to help bring awareness to mosquitoes and vector borne diseases and offer solutions. Years ago, in fact 16 years ago, I worked for the Extension service in the Plant Clinic and helped out with The Leave No Weeds Program. I am excited to be back working with the public and helping bring solutions to the community on mosquitoes. A bit about me, I am mom to two girls, we are happily raising our brood on 1 acre in Missoula. I am a total Plant Nerd, a master gardener, a botany teacher and a certified herbalist. My husband and I have owned a vegetation management company for the last 17 years! If you get to know me you will find me out in the woods; teaching and doing plants walks in the summers and spending too much time skiing at Snowbowl during the winter.

“I Need More Water”, and other things your tree is trying to tell you.

Patrick Mangan, MSU Missoula County Horticulture Agent

That tree in your yard, in the parking lot strip of your favorite store, or along the fence line of your property probably needs more water than it is getting this summer. A tree can't outright tell you it needs more water, but it could probably use more than it is getting through the sprinkler or drip irrigation.

Trees, like humans, use water for a variety of daily growth and maintenance processes. All plants use water as part of photosynthesis, the manufacturing of carbohydrates. Plants also use



water to cool down by evaporating water out of small pores found in the leaf surfaces, called stomata, much the same way we sweat. This process is called evapotranspiration.

Often times, a tree does not show outward symptoms of a moisture deficit until it is severely stressed. Deciduous trees will sometimes cup, or curl their leaves as a sign of moisture stress, but that isn't always the case. We usually see signs of moisture stress in trees when they are

well beyond the initial stages of deficiency. Evergreen trees can start to drop needles, or needles will turn orange at the tips. Deciduous trees can display leaves with scorched outer margins, or drop leaves all together.

Once these symptoms of moisture stress appear, it is too late to reverse the signs for the growing season. The best plan of action is to ensure your trees have adequate water throughout the whole growing season and into the fall.

While every species of tree is different, a good rule of thumb is to supply ten gallons of water per week for every inch in diameter of the trunk. As an example, the maple tree in my front yard, with a four inch diameter trunk, would need approximately forty gallons of water every week to maintain healthy conditions.

Most yard sprinkler and drip irrigation systems are not set to deliver that volume of water to yard trees. A lot of the water delivered by sprinkler systems is intercepted by grasses in the yard, leaving less moisture to infiltrate into the rooting zone of the trees. Your trees need supplemental water above and beyond what the yard sprinklers supply in order to be at their healthiest.

Use a slow and thorough strategy when considering supplemental water for your tree. A low-volume flowing hose placed under the dripline of the tree will allow water to soak into the soil to a target depth of twelve to eighteen inches. Move the hose around to different places along the dripline. The dripline is the imaginary line on the ground that follows the outer edge of the leaf canopy of the tree. Water all around the rooting zone of the tree, which can radiate out from the trunk as far as two-and-a-half times further than the dripline of the tree. A low pressure sprinkler placed around the rooting zone of a tree can do a similar deep watering of the area it is hitting. Leave the sprinkler in the same place to thoroughly water an area, and move it around occasionally from place to place, water-

“I Need More Water”

continued

ing all sides of the tree.

It is best to direct sprinkler water off the foliage of trees when you are watering them. Water sitting on the foliage can promote the growth of bacterial and fungal pathogens, and lead to cosmetic and disease issues in your tree.

A tree that has adequate water is more likely to be healthy, and have fewer disease and insect challenges. This dry spring has not brought us much in the way of spring rains, which usually provide a couple inches of moisture onto the spring soil and charge up the subsoil with stored water. In some locations, trees may soon be looking for supplemental water to keep cool and healthy. So, get out there and monitor your subsoil moisture content, and be ready to give your trees the water they want and need throughout the summer, and enjoy a healthy tree through the rest of summer and the fall.



Montana Watercraft Inspector Appreciation Week

August 2nd - 6th

Make sure to thank a Watercraft Inspector for protecting Montana’s waters!



On May 9, 2021, the Healthy Acres Healthy Communities Foundation, the philanthropic partner of the Missoula County Weed District and Extension, and the Missoula Butterfly House and Insectarium announced their \$5 million capital campaign to help build the Rocky Mountain Gardens & Exploration Center, the premier center for scientific learning in Missoula. **Thanks to the generosity of a \$350,000 gift from the M.J. Murdock Charitable Trust and a \$1 million anonymous gift, plus the support of several other regional and local philanthropists, the organizations’ Join the Buzz campaign has raised \$3.7 million of its goal.** The nonprofit organizations have been quietly fundraising since 2019 and developed some creative ways to introduce the project to community members during the pandemic restrictions. They attribute their success to a team of local community leaders and organizations who believe in this project to create a unique destination for Missoula that will connect us with our natural world and each other. Fundraising efforts continue and expect to see the Join the Buzz campaign information displayed at local nurseries and businesses. We invite you to learn more about the project and how to contribute at [JoinTheBuzzMissoula.org](https://www.jointhebuzzmissoula.org). To show your support for the project, we also encourage you to post photos of plants, bugs and kitchen creations with hashtag #jointhebuzz.

Thank you for joining the buzz!

What's the Deal with Certified Weed Seed Free Products?



It's June in Western Montana which means that most of us will be outdoors enjoying the sunny weather and anxiously waiting for the tranquility of float season. To combat the day-dreaming brought about by meandering river trips, many of us find solace in exploring the various wilderness areas near Missoula County. Maybe it's the calming beauty of a mountain meadow inundated with Balsamroots that allows us to forget about life for a short moment. Possibly it's the shed hunting and elk scouting that makes these wilderness areas so special to us; or, and hear me out on this, maybe it's habitat nearly untouched by noxious weeds. If the latter gets your attention, then grab yourself a drink, take a seat, and let's chat about Certified Weed Seed Free Products.

What are Certified Weed Seed Free Products, and how do I get my products certified? As the name implies, Weed Seed Free Products are agricultural products that are devoid of weeds and portions of weeds that have the potential to form new plants. These fields and gravel pits have been meticulously inspected to ensure that noxious weeds are not persistent within the forage or gravel as they are transported outside of their original production area. Although the above may seem intimidating and arduous to achieve, the certification process is rather simple. The producer (forage or gravel owner) can start this process by reaching out to a certified inspector and requesting an inspection. The inspector, usually accompanied by the landowner, will then inspect the forage field

or gravel pit to ensure that the area is clean. If weeds are present within the defined boundary the producer and inspector will work together to not only avoid producing products from that contaminated area but to also create an effective management plan to eradicate the noxious weeds. Forage products are certified annually and forage producing fields must be inspected no more than ten days prior to the season's harvest. For gravel, the pits are inspected twice per year and usually include an early spring certification and a fall certification to ensure that the agreed upon management plans are effective in the fight against noxious weeds.

Why should I get my forage or gravel certified? Certified forage is a requirement for any livestock entering into Wilderness areas, the same principle applies to most roads that traverse our public lands. This means that both the gravel and forage entering these areas must be certified before it can be used for road improvement projects or when it is used as feed for horses and other livestock. Currently, there is a high demand by federal agencies for these Certified Weed Seed Free Products so the sooner you reach out to become certified the better!

For more information on the certification process, standards, or additional information contact:

Chris Mascari

406-258-4218

(c) 812-230-8180

cmascari@missoulacounty.us

Planning on Canning - Plant for Success!

Kelly Moore, MSU Missoula County Family and Consumer Sciences Agent



Some of the shortages in seeds and canning supplies we experienced last season, have made those of us who dream of producing bountiful baskets of garden-fresh veggies and flowers, begin our strategic march to the garden early on with arm loads of soil, seeds, gardening tools, and enthusiasm.

Whether you garden in a greenhouse, on five acres, in raised beds, or in pots on your deck—choosing what to plant, how much to plant, and what you want to preserve must be considered before your hands ever touch the rich soil. (Visit your local County Extension Office for research-based horticulture information and Master Gardener Classes).

If you are a beginning canner, your best bet is to start small. Being overwhelmed by a mountain of tomatoes in August can be prevented, for example, by planting just enough tomatoes for salsa and adding to fresh salads. The National Center for Home Food Preservation www.uga.edu/nchfp is a great resource for all things canning! It reports that 35 lbs. of tomatoes yield on average about 7 quarts or 9 pints of tomato sauce. Of course, it's difficult to determine how many pounds each plant will produce in any given year due to plant variety, changing weather, and soil conditions. If you are determined, for example, to enter your famous salsa in the county fair, you should also consider growing other plants in your garden as well, such as peppers, onions, cilantro, oregano, garlic, etc. Will these plants be grown from seed or purchased

from a greenhouse or local nursery? What is the harvest date on your seed packets? Harvest or maturity date is usually defined as, the average number of days from planting until time to harvest—dependent upon conditions.

Do you have the appropriate equipment, space, and knowledge to safely can your harvest? A boiling water canner is used for canning fruits, jams, jellies, and some pickles. A pressure canner is needed to safely can low-acid vegetables, meats, fish, and poultry. Pressure gauges need to be tested annually (a “no-cost” test in my office is quick and easy with an appt.) Canning jars, and non-damaged screw-bands can be re-used. The canning lids should not be used again except for storing leftovers in the refrigerator. Hopefully, they won't be in such short supply this year!

Never to be underestimated, is the importance of following reliable, updated canning instructions, correct processing times, (making altitude adjustments), and following science-based recipes. Mont-Guides are available for free download at www.msuextension.org (click on publications).

Low sugar or salt (alternative) canning recipes available from reputable sources, can allow you to accommodate special dietary restrictions.

There is nothing more rewarding than seeing the fruits of your labor go from seed to salad,



tomato to salsa, apricot to jam— in one delicious bite!

You can find great salsa recipes at <https://aces.nmsu.edu>

In versus out? Livestock Fence Laws

Jeff Mosely, MSU Extension Range Management Specialist, explains whether you need a livestock fence, who is responsible for maintenance, and the origins of the Montana livestock fence laws.

Understanding the legal rights and responsibilities of land ownership is an important part of rural land stewardship in Montana. Weed control laws and water rights, for example, are two common topics where lack of understanding can lead to unnecessary conflicts with neighbors. Livestock fencing laws are another potential source of misunderstanding.

Every rural Montana landowner should know whether they are responsible for fencing their land to keep their own livestock within the confines of their property, or whether they are responsible for fencing their land when they want to prevent other people's livestock from roaming onto their property. In other words, "Do I need to 'fence in' my livestock, or do I need to 'fence out' other people's livestock?" The answer depends on whether the land is legally classified as "open range" or "closed range."

On "open range" the property owner is responsible for fencing neighboring livestock out. On "closed range," the livestock owner is responsible for fencing livestock in. Contact the county sheriff or county commissioners to find out the range designation in your area. Also be sure to review any subdivision covenants that may apply to your property or your neighbors. For example, rural subdivision covenants often require lot owners to confine their livestock within their lot boundaries. However, if the rural subdivision is adjoined by open range, it is the responsibility of the subdivision lot owner to fence their property boundary if they don't want

livestock from the open range area roaming onto their lot.

Construction of a new home within open range, or in a subdivision adjoined by open range, is a potential source of conflict among rural residents. Most homeowners would be horrified to find livestock seeking shelter within their under-construction dream house, or to discover livestock rubbing against unprotected water or propane pipes and electrical outlet boxes. Such conflicts can be avoided while a home is being built by inquiring with neighboring ranchers about the timing of livestock grazing in the area and by installing permanent or temporary fences during construction. Ranchers should also keep apprised of new construction in the area and alert neighbors when roaming livestock may be near the construction site.

Most of Montana is classified as open range, but closed range exists within all incorporated cities and towns. Closed range also exists within unincorporated, rural areas designated as "herd districts." Montana fence law allows county commissioners to create herd districts when a majority of land ownership in the proposed district petitions the county commissioners in favor of the new designation.

Within open range, one exception to fencing responsibility occurs with federal land boundaries. Livestock owners are responsible to prevent livestock from illegally trespassing onto federal land, including lands administered by the U.S. Forest Service and Bureau of Land Management. Therefore, if your rural property



Livestock Fence Laws *continued*

adjoins federal livestock grazing permit or lease, you must fence the boundary or otherwise prevent your livestock from roaming onto federal land. Most landowners in open range are not compelled by law to exclude livestock from their property. In fact, some landowners purposely do not fence out livestock from some or all of their property so that livestock grazing can reduce the threat of wildfire and so that fences do not impede wildlife travel or detract from aesthetics. Fencing along railroads, however, is required within open range. Montana law requires railroads to build and maintain fences along tracks to keep livestock out, and the railroad must pay fair market value for any livestock that get through the fence and are hurt or killed by trains. Where highways pass through open range, the Montana Department of Transportation has the option to construct fences along the highway rights of way where livestock may present a road hazard.

Finally, who owns and who maintains the boundary fence between you and a neighbor? If the fence is located on the property boundary, ownership and maintenance is shared equally. Each landowner is responsible for maintaining one half of the boundary fence. The portion designated for you to maintain is determined by standing at the midpoint of the shared boundary and looking toward your neighbor's property. You maintain the half that is to your right.

ORIGIN OF MONTANA'S OPEN RANGE FENCE LAW

To understand the reasons behind Montana fence laws, it is necessary to consider how the land came to be owned by the United States and how it came to be occupied by livestock. The area encompassed by present-day Montana became part of the United States via wars, treaties, and purchases. The Louisiana Purchase from France in 1803 provided the land east of the Continental Divide, and a treaty with Great Britain, the Oregon Compromise in 1846, provided the land west of the Continental Divide. Subsequent wars, treaties, and purchases from Native American Indian tribes further secured the land into the control of the United States government.

From the beginning, the federal govern-

ment allowed its citizens to roam their livestock freely on the public domain. This began in the 1840s with Jesuit missionaries in the Bitterroot Valley and in 1850 when Richard Grant and his sons, Johnny and James, drove cattle northward from the Oregon Trail into the Beaverhead Valley of southwestern Montana. The range livestock industry continued to expand during the next 36 years, booming in the 1880s, and relying almost exclusively on the unfenced public domain for year-round grazing. Everything changed when severe weather during the "Hard Winter of 1886-1887" caused tremendous numbers of livestock to die. This disaster taught large numbers of stockmen the value of harvesting hay for winter feed, which subsequently spawned the need to use fencing to exclude free-roaming livestock from hayfields so that hay could be grown and harvested. The need also arose to decide whose responsibility it was to build and maintain new fences that separated hayfields from the open range of public domain.

In 1887, two years before statehood, the Montana Territorial Legislature passed the law declaring that the stockman who separated the hayfield from the public domain would have the responsibility of fencing to exclude all free-roaming livestock. Twelve years later, when large numbers of homesteaders began entering Montana and separating their farm fields from the public domain, the fencing law was already clearly established. Homestead farmers not wanting free-roaming livestock to access their crop fields had the same responsibility to fence out the livestock as did the stockmen wishing to fence out the livestock from their hayfields. The same approach continues today, that landowners wishing to separate their land from open range are responsible for constructing and maintaining the fence.

Credit: Lives & Landscapes, Winter/Spring 2021, msuextension.org/magazine/

Aspen Alternatives for Montana Landscapes

It's tree planting season which means there are choices to be made in yards all across the state. But which tree should you choose?



Today's tree-in-question - the aspen. So many of us want one in our yard to watch those 'fluttering' leaves. From the beautiful white bark to the perfectly shaped and uniform green leaves, or maybe it's the fall color or rustling sound that you just have to have! Before you go out and buy an aspen to plant in your home landscape, I urge you to reconsider if you don't live next to a stream. These native trees are only native to the higher elevations, the mountains and foothills in gullies or ravines where there is plenty of moisture.

Aspens have a few needs that just can't be met down at lower elevations. For one, the soil is much different than that of the higher elevations it's higher in clay content, more alkaline and drier. The temperatures get much hotter in the summer at lower elevations than what the aspens prefer which can lead to stress. Once an aspen tree is stressed, it can invite other insect and disease problems like oyster shell scale, Marssonina leaf spot, cytospora canker or the poplar borer.

Finally, aspens want to reproduce via suckers and create groves and many home landscapes are just

not big enough to accommodate a grove of aspen trees. If you plant an aspen in a small yard, you've probably just planted an aspen for all of your neighbors, too!

So, instead of choosing an aspen tree for your yard, here are a few interesting alternatives. They won't be exactly the same, but they have similar qualities with much less caution required.

1. Serviceberry

Serviceberry trees are great for smaller landscapes. They can be purchased in multi-stem form, giving them that 'grove' look without the suckering. They also offer a few things that aspens don't - spring flowers, summer edible fruits and nice fall color. The 'Standing Ovation' cultivar is a taller form, giving it more of that aspen look, whereas the 'Autumn Brilliance' has an intense orange-red fall color.



2. Tatarian Maple

Tatarian maple is another tree that can be bought as single or multi-stemmed. The 'Hot Wings' type has guaranteed bright-red summer seed pods creating the appearance of flowering. This

Aspen Alternatives for Montana Landscapes

tree is better suited to the harsher conditions and low-water or xeric settings once established.



The heart-shaped leaves turn an outstanding gold in the fall. It features subtle clusters of fragrant yellow flowers with tan bracts hanging below the branches in early summer. It is very adaptable to both dry and moist locations, and should do just fine under average home landscape conditions. It is not particular as to soil type or pH. It is highly tolerant of urban pollution and will even thrive in inner city environments.

3. Greenspire Littleleaf Linden

Greenspire Linden is a magnificent shade tree with a strong, spire-like shape throughout its life and fragrant yellow flowers in early summer when few trees bloom. It is very tidy and low-maintenance, adaptable, and makes an excellent lawn or street specimen, or by a pool or deck. Greenspire linden has dark green foliage throughout the season.



4. Oakleaf Mountain Ash

If you want something ‘mountainy’, the oakleaf mountain ash has ‘mountain’ in its name! It has low to moderate water needs and has a uniquely shaped leaf, pretty flowers, red berries and nice orange-red fall color. It’s not a true ash, so it is not under threat by the Emerald Ash Borer. In fact, it is not known to have any serious insect or disease issues.

Upcoming Events:

Weeds of the Nine Mile Area: Identification, Status, and Management

July 14th, 5 - 9 pm

Ninemile Community Center

Contact Steffany with questions:

406-258-4211

**Preserving Strawberries -
“Jammin, Freezing, and Drying”**

August 31st, 6 - 7:30 pm

Missoula County Extension Office

Contact Kelly Moore @ 258-4206 to register, \$5

Sign-up to receive our quarterly newsletter @
<http://www.missoulaeduplace.org/newsletter>