



# Missoula County Department of Ecology and Extension

ANNUAL REPORT 2025

## Missoula County Department of Ecology and Extension Staff

BRYCE CHRISTIAENS  
Department Director

PIRRIE DURKEE  
Financial Coordinator

CAMPBELL BARRETT  
MSU Extension 4-H Agent

KELLY MOORE  
MSU Extension Family &  
Consumer Science Agent

SYDNEY YOUNG  
Office Administrator

SARAH HOLDEN  
MSU Extension  
Horticulture Agent

NATALIE SULLIVAN  
MSU Extension  
Livestock Agent

SANDY PERRIN  
Plant Clinic Coordinator

PHOEBE KNIGHT  
4-H Administrator

JEAN JENKINS  
Foundation Coordinator

MARIROSE KUHLMAN  
Habitat Coordinator

While it may be hard to believe, **2025** was the first year that both the Exploration Center and the Rocky Mountain Gardens were fully open to the public, and it was marked by an explosion of growth across our program areas! We enjoyed the opportunity to work with literally thousands of new faces! From record breaking enrollment in 4-H to sold out classes in the Honeyberry Kitchen, and from over 1,500 hours of community volunteering in the gardens to almost 2,500 school kids learning about seed dispersal and pulling spotted knapweed – we did so much with you this year. So a heartfelt Thank You! from the staff of the Department of Ecology and Extension to you for joining us and learning with us this last year. Our programs are for you, and you are what makes them so successful. In the next couple of pages you can read all about some of those amazing volunteers and program experiences, but maybe more importantly, we look forward to seeing you this next year to add an experience or two of your own!



## PROGRAM OVERVIEW

**Missoula County Department of Ecology & Extension** strives to inspire and empower our community through hands-on education and the demonstration of sustainable practices in the areas of:

**Land Management:** Programs to support agriculture and livestock production, management of invasive species in Missoula County, and the promotion of pollinator, water and native plant community conservation. This includes onsite pasture/land evaluations, the active management of new invasive species populations, research and development for new biological weed control agents, and management of the Clearwater Watercraft Inspection Station.

**Gardening in Montana:** Programs focused on showcasing the parts and pieces of the living landscapes that surround us as well as inspire and assist you in reaching your gardening and landscaping goals. This includes Master Gardener, plant/pest/disease identification and recommendations, research trials and demonstration in the Rocky Mountain Gardens.

**Nutrition, Health & Wellness:** Programs to inspire confidence in the kitchen! Hands-on learning opportunities focused on conveying science-based information on all things related to food. Major program series include Cultivate & Cook, Food as Medicine, Intro to Canning, and Food Preservation.

**Home and Energy Resiliency:** Programs focused on improving the energy efficiency and comfort of the places we live while making utilities more affordable. Major program areas include the Home Upgrade Hub, a one-stop shop for resources on how to make your home more efficient, and the How to Retrofit Your Home Series.

**Youth Development:** Programs that provide mentorship and service-based learning opportunities in natural resources, agriculture, nutrition and community development. Major program areas include the Missoula County 4-H Program, Youth In Restoration, Young Chefs in the Kitchen, and a wide variety of in-school programs.

REBECCA DONALDSON  
Aquatic Invasive Species  
Coordinator

ZACH LEWIS  
Watercraft Inspection  
Station Supervisor

STEFFANY ROGGE  
Education Coordinator

JED LITTLE  
GIS Coordinator

LAYNE VON LANKEN  
IPM Coordinator

MELISSA MAGGIO  
Statewide Biocontrol  
Coordinator

MOLLY ANTON  
Rocky Mountain Gardens  
Coordinator

ALEX BROWN  
Rocky Mountain Gardens  
Program Development  
Coordinator

CLARISSA ORTON  
Aquatic Invasive Species  
Technician

CALLYE FOSTER  
Home Resiliency Educator

COREY DADDS  
Home Retrofit Project  
Manager



# Missoula County Pasture Evaluation Program

## ONE YEAR IN THE BOOKS

The Missoula County Pasture Evaluation Program brings relevant, unbiased information from the university extension system and local county resources directly to private or commercial farms and ranches of all sizes. This is a FREE service to Missoula County land stewards who want to make their properties and their animals more productive, safe, and healthy!



The pasture evaluation provided by the Missoula County MSU extension agent, Natalie Sullivan was extremely beneficial. She provided insight on how to better use rotational grazing and discussed how to effectively mow the pasture to improve production. In addition, she took soil samples, which ultimately indicated that we needed to significantly increase nitrogen for optimal production. Her advice resulted in changes to our approach of pasture and soil management.



# New Invader Spotlight

## RUSH SKELETONWEED

The Montana Department of Transportation (MDT) and the Missoula County Department of Ecology work collaboratively to manage rush skeletonweed along the I-90 corridor through a coordinated approach that crosses jurisdictional boundaries. MDT plays a key role in monitoring highway rights-of-way during routine maintenance activities, identifying and reporting suspected infestations, and providing essential funding to support control efforts. Because major transportation corridors like I-90 serve as primary pathways for the spread of invasive species, MDT's surveillance and early detection efforts are critical for rapid response and prevention.

Once infestations are identified, the Department staff lead the on-the-ground treatment and long-term management work. This includes site verification, mapping, treatment implementation, and follow-up monitoring to ensure effective control and limit spread into neighboring public and private lands. By combining MDT's monitoring capacity and financial support with the Department of Ecology's field expertise and local coordination, the partnership ensures consistent, effective management of rush skeletonweed across jurisdictional boundaries along the I-90 corridor.

## 21 sites in Missoula County



## 294 total hours monitoring

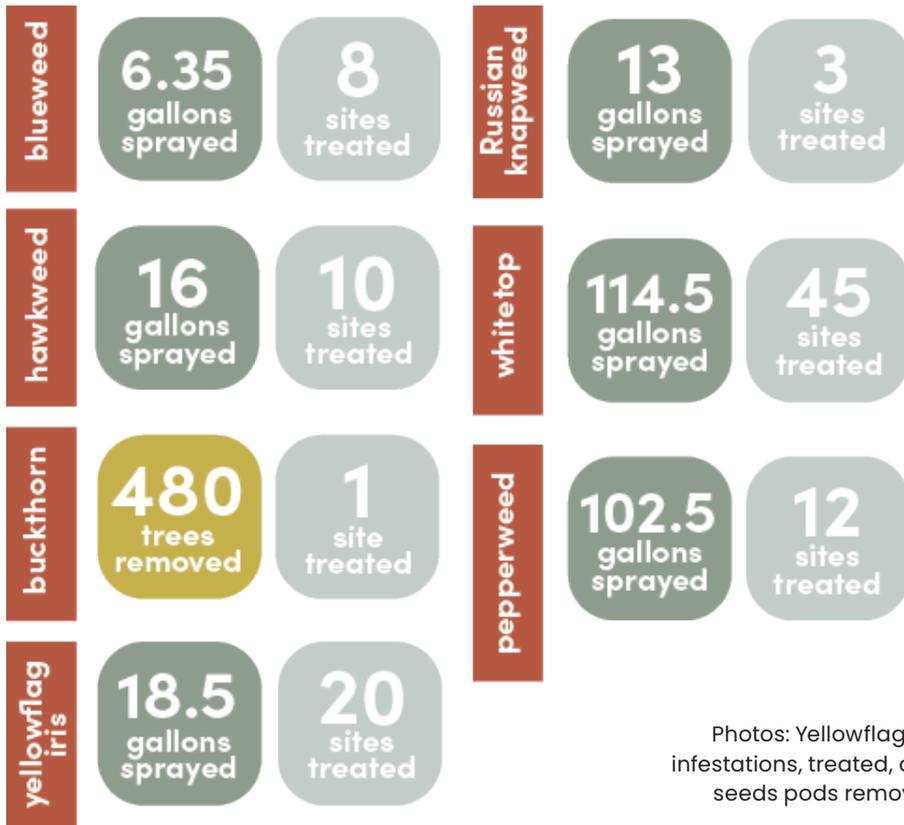


# New Invader Program

Missoula County works diligently to identify and control small infestations of noxious weeds classified as new invaders by the Missoula County Noxious Weed Management Plan.

## TWO MAIN CATEGORIES OF WORK

- The treatment and eradication of known infestations of new invader species in Missoula County
- The prevention of the establishment of new invader species by identifying sites that have a high risk of invasion and systematically monitoring them.



Photos: Yellowflag iris infestations, treated, and seeds pods removed

# Aquatic Invasive Species

## CLEARWATER WATERCRAFT INSPECTION STATION PROGRAM

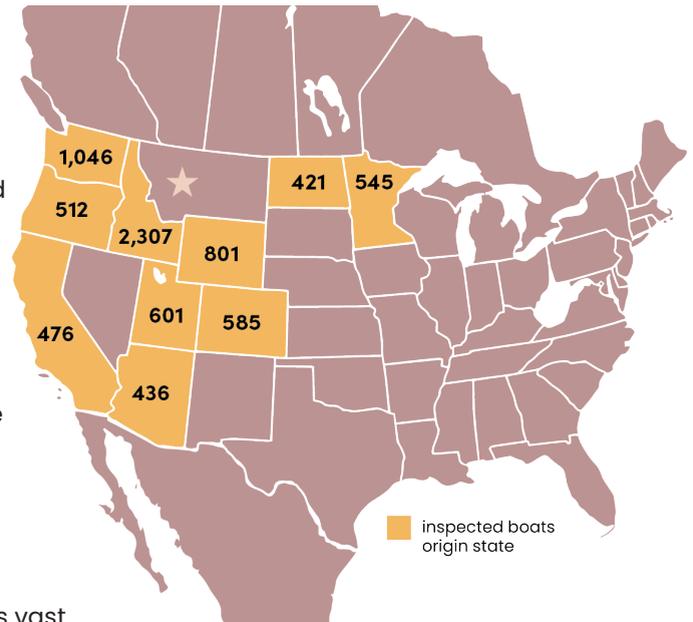
2025 marked the 9th season of Missoula County's partnership with Montana Fish Wildlife and Park to staff and operate the Clearwater Watercraft Inspection Station. And it was another busy season! From April through mid-October, our inspectors conducted **27,293** inspections! We are so grateful for all the hard work our inspectors, and inspectors across the state, do to help protect Montana's water from invasive species. Don't forget to say hi next time you pass by the station and stay Clean, Drain, and Dry!

## FRAGRANT WATER-LILY (FWL) MONITORING AND MANAGEMENT

Since the introduction of FWL to Salmon Lake in the 1930s, its vast spread across the Clearwater watershed earned it a designation as a noxious weed in 2020. Our current management plan of FWL involves monitoring projects, mapping, and eradication efforts.

In 2025 we worked closely with the Forest Service to map populations of FWL along Holland Creek. We also coordinated a pull day at Holland Lake (the uppermost population in the Swan Watershed) that involved the Montana Conservation Corps, the FS Region 2, our very own Youth in Restoration Crew, our staff, and volunteers. It was a great effort resulting in the removal of hundreds of pounds of invasive lily.

## Out-of-State Boats Inspected



# Whitetop Biocontrol

Approved in 2019, the whitetop mite (*Aceria drabae*) is the first biocontrol agent released in the U.S. targeting whitetop – and the first releases were made in Montana. These microscopic mites attack whitetop by forming galls on the stems and flowers, turning the plants into something that look more like broccoli than whitetop. The results? significantly stunted plants and far fewer seeds produced.

Dr. Jeff Littlefield (Montana State University) leads this effort, with the Montana Biocontrol Project jumping in to help with collection and distribution in 2025. This past year, we released mites at 7 sites across Montana, including 3 sites in Missoula County. One Missoula site showed the **best first year establishment** of any releases so far! We'll keep monitoring these sites and expand releases in Missoula as needed.

## Biocontrol Staff

JILLIAN LEBLOW  
Biocontrol Technician

CARVER BUTTERFIELD  
Biocontrol Crew

TYLER BRETT  
Biocontrol Crew

Whitetop is a Montana state listed noxious weed that creates dense monocultures because of its extensive root system.



# Biocontrol by the Numbers

## PARTICIPATION

**16** In-person Workshops/  
Presentations

**6** Virtual Workshops/  
Presentations

Outreach 

Created **48** sets of resins, updated the website, created printable biocontrol agent handouts, and co-chaired the NAISMA Biocontrol Summit

**50**  
Days Spent  
Collecting



**350**  
Collection Day  
Participants

**19,653**  
Miles Traveled  
for Workshops  
and Collections



## INSECTS

**8**  
Species  
Released

**8**  
Species  
Collected

**10,650** Acres  
Treated

  
**78**  
Sites  
Monitored

  
**41**  
Counties  
Received  
Insects

  
**14** States & **4**  
Tribal Nations  
Received Insects

**1.4 million** Insects  
Distributed

  
**\$354,200**  
Market Value  
of Insects

## 2025 BREAKDOWN

  
**5%**

Out-of-State  
Coordination



**8%**  
Fundraising



**26%**  
Collection &  
Distribution

**18%**  
Education

**31%**  
Monitoring

  
**12%**

In-state Coordination



# Master Gardener Spotlight

AMY ZANZIG

## Which volunteer activity or project has been most meaningful to you, and why?

I love that the Rocky Mountain Gardens have a dahlia and cut flower area and that we try to share those magnificent flowers with the public. Last year we made bouquets and took them to the YWCA Women's Shelter. It's nice to share the joy.



## What inspired you to become a Master Gardener volunteer?

I was fortunate to be able to share my love of growing dahlias at the Rocky Mountain Gardens, and because of that, I learned of all the other opportunities at Ecology & Extension. There's a lot going on there! It's been a very fulfilling experience.



## How has being a Master Gardener changed or expanded your gardening knowledge or skills?

It has refocused me on the ecosystem as a whole. What I put in the soil not only affects how my plants grow, but it also affects the pollinators that visit. I've always known this, but I'm more focused on it.

# Horticulture

In 2025, the Missoula County Extension Horticulture program continued to strengthen community horticulture education through robust Master Gardener training, expanded volunteer engagement, and strategic partnerships across the county. A total of **55 new Master Gardeners** were trained, significantly increasing volunteer capacity! Master Gardeners played a central role in establishing a new seed library at the Exploration Center, installing a native plant education garden in collaboration with Big Sky High School, and planting additional native plant learning gardens at Hellgate Elementary.

Outreach efforts included recurring Ask a Master Gardener booths at the Western Montana Fair and the Clark Fork River Market, monthly programming in the Nine Mile community, and presentations on gardening and horticulture topics to 13 community interest groups. The program also deepened partnerships with Garden City Harvest, Five Valleys Seed Library, and supported statewide efforts through continued involvement with the Montana Herbal Festival. Collectively, these efforts advanced hands-on education, strengthened volunteerism, and reinforced our role as a trusted horticultural resource in our community.





# Phlox Fest

Rocky Mountain Gardens held its first annual spring opening celebration, Phlox Fest!

With live music, food trucks, partner organizations, and plant vendors, Phlox Fest was a fantastic way to kick off our first full season of being open to the public. The sun was out and attendance far exceeded expectations!

## ReWild Missoula

The theme for 2025 was “ReWild Missoula”, promoting public awareness around habitat conservation and creation. Tabling staff and partner organizations provided attendees with ideas and information about actions to take in their own yards, gardens, patios, and outdoor spaces to support wildlife.

## Give a Phlox

Phlox Fest is timed to coincide with the blooming of Missoula Phlox (*Phlox missoulaensis*), a species of concern that has been found only in Missoula County. Rocky Mountain Gardens chose the unassuming Missoula Phlox for our logo to highlight its special link to Missoula, and as a reminder of the importance of native plant conservation.





# Rocky Mountain Gardens

"It was great to learn, after many years of doing it badly, how to grow tomatoes."

"I look forward to Wednesday mornings working in the gardens. It is a joy to volunteer with others to create and support such natural beauty."



**Expanded Volunteer Roles**  
Garden Specialists  
Garden Ambassadors  
Weekly Public Volunteer Events



**1,540**  
volunteer  
hours



**97**  
volunteer  
events



**24**  
educational  
programs

## Paste Tomato Trial

Compared for flavor, hardiness, and overall yield

Fruits used for MCDEE culinary programming and donated to Sentinel High School for classroom use



**12**  
varieties



**641**  
pounds  
produced





# ReWild Your Yard!

The goal of ReWild Your Yard is to help homeowners practice “backyard conservation” by incorporating native plants into their home landscapes. Many people may feel intimidated or unsure how to get started, and ReWild Your Yard breaks down those barriers by offering practical support, clear guidance, and hands-on expertise. Equally important, it also provides the “why” by sharing information about how native plants support pollinators, beneficial insects, and other wildlife and songbirds.

Workshops combine presentations with hands-on learning opportunities. Presentations cover topics like native plants and pollinators, their importance in urban and suburban landscapes, turf removal techniques, and different mulch types. Participants also have an opportunity to explore the Rocky Mountain Gardens, where they learn about native plants and supportive landscape features such as bee hotels and “bug snug” brush piles that can provide habitat for pollinators. The program wraps up with advice from local gardening consultants with practical tips and design considerations for getting started with native plant gardening.

Each participant has the option to pre-order a reduced-price native plant starter pack available upon completion of the workshop—helping them take the first step in their own native plant journey.

“ This program helped me learn enough so I can explain to my neighbors why we’re doing what we’re doing with our yard instead of planting a traditional lawn. ”



# Plant Clinic

## PLANT AND PEST IDENTIFICATION, GARDENING SUPPORT, AND DIAGNOSTICS

The Plant Clinic offers expert assistance with plant and pest identification, helping community members understand and address unfamiliar insects, plant diseases, and other landscape concerns. Experienced staff provide practical guidance on gardening and landscaping, helping create healthy, resilient outdoor spaces. Using integrated pest management principles, the Clinic delivers science-based diagnostics and recommendations that help residents effectively manage pests while minimizing environmental impacts.



**900**  
total contacts



**55**  
plant ID requests



**300**  
horticulture & gardening calls



**250**  
insect ID & management recommendations



**71**  
diagnosed diseases



**83**  
soil recommendations



**16**  
hours co-hosting radio show



**84**  
KGVO educational segments on horticulture program

# A Taste of Missoula's Finest

## A SOLD OUT SUCCESS

In 2025, the Healthy Acres, Healthy Communities Foundation brought our community together to celebrate culinary creativity, local talent, and shared generosity at Taste of Missoula's Finest—and what a night it was! We were thrilled to welcome a sold-out crowd for an evening filled with delicious food, lively conversation, and inspiring community spirit.

The real stars of the evening were our incredible local chefs, who wowed guests with their artistry and flavors. A heartfelt thank-you to **Nate Keller, Abe Risho, Dominic Glenna, Bert Gahagan, and Gretchen Taylor**, as well as the **Blackfoot Valley Cattlewomen**, for lending their time, talent, and passion to make this event truly unforgettable.

Together, we celebrated not only Missoula's vibrant food scene but also the mission behind it all—supporting the programs of our **Honeyberry Culinary Classroom**. These programs connect people of all ages with the joy of cooking, nutrition education, and community learning.

Thanks to the generous support of our attendees, sponsors, and auction donors, we are proud to share that **\$44,000** was raised to continue growing these opportunities.



# Honeyberry Demonstration Kitchen

The Honeyberry Kitchen has become a destination for all ages and abilities to explore and experience a variety of interactive culinary educational activities. Learning more about how local food is grown, harvested, prepared, and preserved allows participants to increase their food knowledge while embracing new cooking techniques, flavors, textures, and ingredients.

Beyond the ongoing cooking demonstrations and recipe testing happening regularly in the Honeyberry Kitchen, we offered **27 classes** with a combined total of **468 participants**.



**Young Chefs in the Kitchen** = Kids just having fun cooking together — pizza, breakfast burritos, omelets, cookie decorating, gingerbread chalets.

This year, Rocky Mountain Gardens provided an amazing array of tomatoes, peppers, garlic, onions, and herbs to use in the Honeyberry Kitchen classes.



## Guest Chefs in the Kitchen

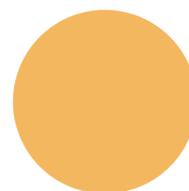
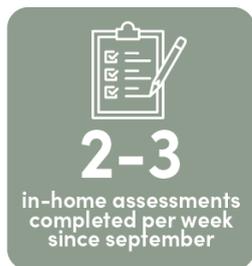
**Roy Graham** - blending and cooking with your own spices.

**Josh Slotnick**- amazing, locally grown produce for dinner.

**Bert Gahagan (above)** - composing a summer salad of local tomatoes, peaches, Dixon melon, and burrata

**Charlotte Iverson**-home pressure canning locally sourced meat for quick meals.

# Home Upgrade Hub



## FOUR-WEEK RETROFIT SERIES

The Home Upgrade Hub (HUH) debuted their annual Energy Efficiency Home Retrofit Workshop Series in Spring 2025. The series covered an array of topics focused on the steps any Missoula County resident can take to improve their home's comfort, energy efficiency, and energy cost savings.

The series provides attendees with baseline knowledge and skills on how to assess their home's energy usage and identifying air leaks, common retrofit products and projects, average costs, budgeting basics, and financing options.

What has now become the HUH's flagship event, the 2026 series will include a Resilient Homes Tour, in collaboration with Climate Smart Missoula. Attendees will have the opportunity to learn from Missoula County homeowners who have implemented energy efficient retrofit projects.

Thank you for the excellent job you did on the workshop series. So valuable! I learned a lot and it felt good to be part of a community cohort interested in working on upgrades. Your expertise is already valuable...and growing! Keep up the good work. The money you helped me save on my taxes is going into some more solar panels in three weeks.





# 4-H Member Spotlight

STELLA TRUZZOLINO



I can build healthy relationships with figures of authority, teachers, family members, and my peers, because 4-H has shown me what that looks like and has given me the capability to accomplish it.... Now that I have 4-H forever on my side, I am excited to see where I will end up in the next few years. I can't wait to achieve my goals and overcome my challenges.

Stella had a big year in 2025. On the heels of attending National 4-H Congress in the fall of 2024, she was chosen to speak at the 4-H Legislative Breakfast event in Helena in front of Montana Legislators and 4-H members from across Montana, she was selected to serve as a youth member on the Montana 4-H Foundation Board, and she had perfect attendance at school with a 4.28 GPA to match. Rewind to 2021 and Stella was struggling in school with Cs Ds and Fs, tardy 60 times, and absent 30 days. She was directionless and unmotivated.

What changed? To quote Stella's speech from Legislative Breakfast, "...It's not that the teachers got nicer or the curriculum got easier, ...I had no idea that one decision would change the course of my life, goals and pursuits forever. That one decision was to join 4-H." Stella credits 4-H with giving her the skills, capabilities and confidence to become ready to lead, to serve, and to conquer all the challenges that were coming her way through the teenage years and into adulthood. She now feels fully capable and confident to lead any project or group she needs to, and she credits the people in 4-H with making the difference. Caring adults, volunteers focused on positive youth development, were kind, helpful, and represented the person 4-H could help her become.



## MISSOULA COUNTY 4-H RECENTLY WRAPPED UP 2025 IN RECORD-BREAKING STYLE

This year's fair was a true success; cooler temperatures kept both animals and exhibitors comfortable, and even a few surprise rainstorms and barn flooding couldn't dampen the energy and community spirit. The fair highlighted the dedication, hard work, and growth of our members, and we're already looking ahead to next year's event with excitement.



# Nature's Travelers

## THE WONDERS OF SEED DISPERSAL

As part of a larger education strategy to provide consistent exposure to plant ecology, youth education crew was busy capturing the attention and minds of area 1st graders. Beginning with building the basics of seed dispersal, it all starts with a question: How do plants make more of themselves?

**Nature's Travelers: The Wonders of Seed Dispersal** is a hands-on, inquiry-based program that introduces students to the fascinating ways seeds move through the environment. Using the book "A Seed is Sleepy" as a foundation, students explore wind, water, and animal dispersal through storytelling, observation, and creative problem-solving. Spirited students investigate real seeds in the Rocky Mountain Gardens, examine burs and biomimicry through Velcro comparisons, experiment with wind-blown seeds, and design exploding and floating seed models to test how form influences movement.

The experience concludes with each student creating a "seed pop" to take home and plant, reinforcing real-world connections to seasonal growth. Through playful exploration and hands-on discovery, Nature's Travelers builds early understanding of plant ecology while fostering curiosity, creativity, and meaningful connections to the natural world.

Wow! Wow! Wow! What an amazing experience at the garden! Your lessons were highly engaging, well-managed, and connected to our curriculum. My first graders are focused and excited for the entire duration. In all honesty, this field trip was one of the best experiences in my 20 years of education!

Amy Stemple – 1st grade teacher,  
Russell Elementary



# Youth Development

## seeds to stewards

Thanks for letting us go to your garden. We loved it! My favorite part was the walking seeds because they were creepy. I will visit again. Thank you!

Love, Sharon

510

seed dispersal participants



23

exploding seed experiments

473

purpose of plants participants



505

edible flowers built

249

3rd grade nature walk week participants

## earth stewardship

262

7th graders



131

native plant haikus written

lots of:  
mapping, Leave No Trace principles, macroinvertebrates, sawing cookies, sling shotting rocks, and being exposed to the possibilities outdoors

## education staff

ANNE RAZNOFF  
Education Assistant

AVERY ADAMS  
Youth in Restoration  
Crew Lead

## leave no weeds

ample dirty faces

838

5th graders



3

scraped knees



54

longest knapweed roots

## youth in restoration

highlight:  
donut fire takes on  
Bob Marshall roads

4

person crew



15

partnering agencies



6

days backpacking



43

days in the field



100+

pounds fragrant water lily removed



**MISSOULA COUNTY**  
DEPARTMENT OF ECOLOGY & EXTENSION

1075 SOUTH AVE W, MISSOULA, MT 59801  
P: 406.258.4200 | [www.missoulaeduplace.org](http://www.missoulaeduplace.org)

