# Conserve Our Canyon

*A cooperative effort to protect the Gallatin Canyon from the threats of invasive species.*


The Upper Gallatin Watershed encompasses some of the most ecologically and economically important resources in our county, which provide vital habitat and water for fish, plants, wildlife, and the people who live and recreate in the area.

The presence of noxious weeds in the Gallatin Canyon is directly attributed to human activity, such as construction, recreation, and travel.

Conserve Our Canyon cooperative project aims to facilitate effective management of noxious weeds in the Gallatin Canyon to protect the natural resources to the benefit of all who live, visit, and rely upon them.

## Partners

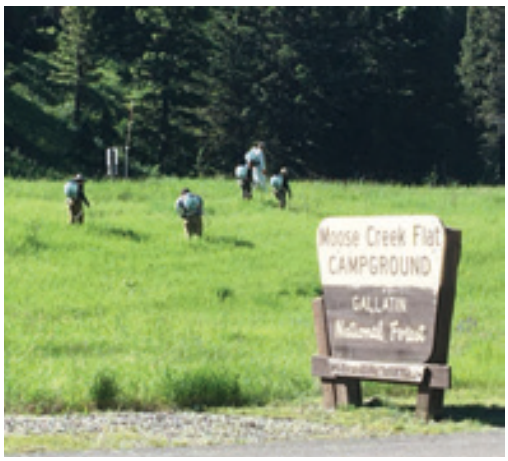
Gallatin Invasive Species Alliance
Gallatin National Forest
Montana Conservation Corps

## Funders

Big Sky Resort Tax
Cross Charitable Foundation
Gallatin Conservation District
Gallatin River Task Force
Gallatin Resource Advisory Committee
Madison Gallatin Trout Unlimited
Moonlight Community Foundation
NorthWestern Energy
Spanish Peaks Community Foundation
Yellowstone Club Community Foundation

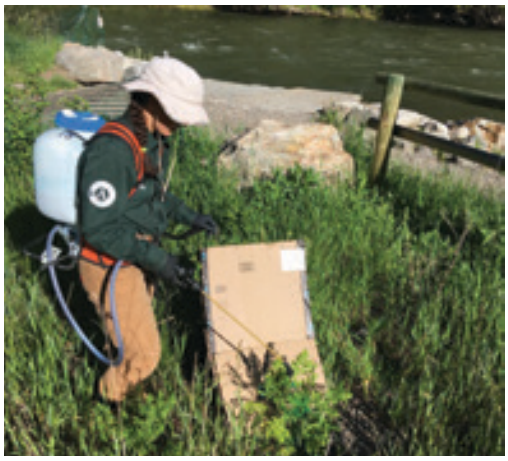
# 2021 Project Work

Montana Conservation Corps (MCC) Wildland Restoration Crews, Custer Gallatin National Forest crews and the Alliance worked in the Gallatin Canyon for the weeks of July 6 and July 26, 2021.



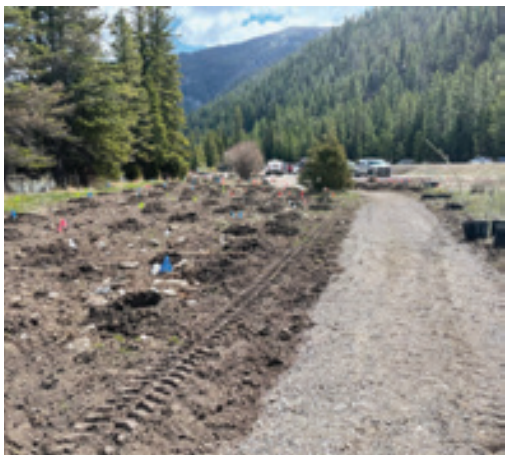

The Gallatin Invasive Species Alliance worked closely with the Gallatin National Forest to select sites with known infestations of noxious weeds, heavy recreation use, or critical wildlife habitat in the Gallatin Canyon. Sites of particular focus were river restoration projects and bighorn sheep habitat (southwest of Highway 191 and Lone Mountain Trail).

The team was comprised of 4 MMC crew (Sean Anzaldua, Oakley Strausser, Max Brown and John Navouze), Sherri Renck, Saige Jibben, and Hudson Keffer with Gallatin National Forest Service, and Jennifer Mohler with the Alliance.



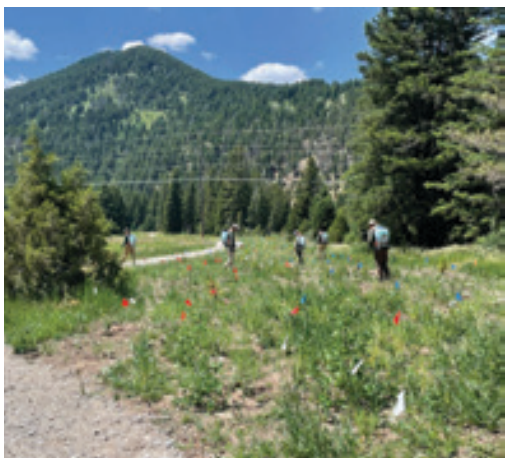
The season was a hot and dry one, which allowed crews to be efficient in covering ground. Noxious weed species treated included hoary alyssum, musk thistle, poison hemlock, spotted knapweed, oxeye daisy, Canada thistle, houndstongue, yellow toadflax, and common mullein.

## River Restoration Sites



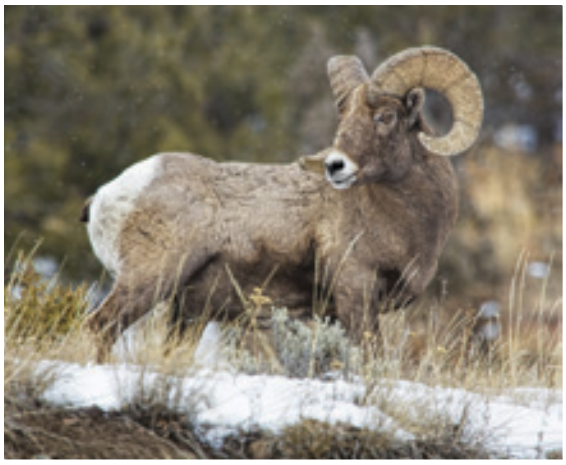
**Moose Creek** - site was restored in 2017. Noxious weeds benefitted from disturbance, and new species were brought to the site during construction via topsoil. Noxious weed species (common in the area) were Canada thistle, musk thistle, oxeye daisy, houndstongue and wooly mullein. Poison hemlock, likely brought in via topsoil, was the primary concern as it was abundant and increasing throughout the restored area, including along side native plantings. This was the second season treating this site.

**Upper Deer Creek** (Beatis Alley) - major restoration efforts occurred in the fall of 2020 and again in the spring of 2021. Work included building parking areas, concrete boat launches, accessible fishing access, and pedestrian trails. The site experienced a lot of disturbance from the build, and revegetation efforts included planting nearly 400 shrubs and trees.



In 2020, the Alliance joined GRTF to map existing noxious weeds in June prior to construction, and found few and sparse noxious weed populations. In 2021, the Alliance led treatment of noxious weeds throughout the entire restoration site.

# Bighorn Sheep Winter Range



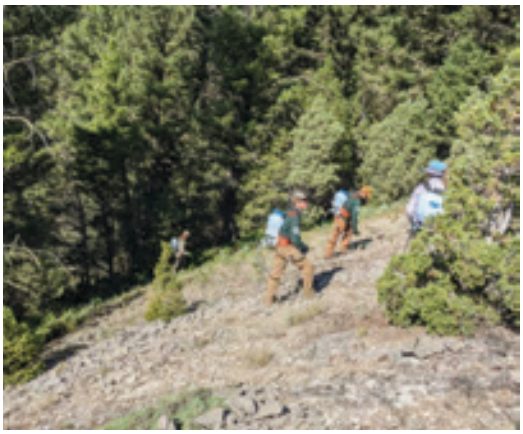
Weeds like spotted knapweed are known as "habitat transformers" because they change the physical structure and forage availability in habitats, eventually pushing resident wildlife out.

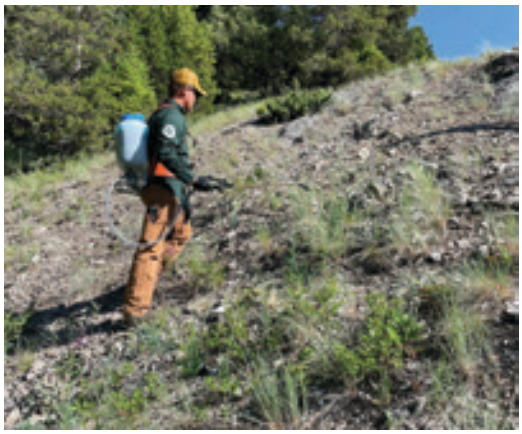
In 2010, The Alliance identified the winter range of the Spanish Peaks bighorn sheep herd as critical wildlife habitat compromised by invasive species. Montana Fish, Wildlife and Parks lists bighorn sheep as a "species of conservation concern," meaning those species for which population viability is threatened as evidenced by a significant downward trend in population or a significant downward trend in habitat capacity.

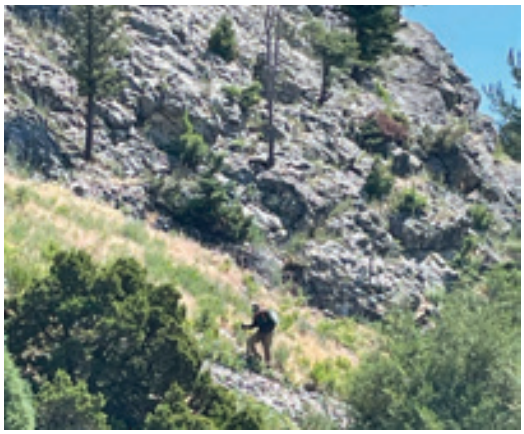
Abundant native forage is the critical factor in bighorn sheep survival during winter months, and the presence of noxious weeds results in fewer resources and space for native grass and forb production. The combination of compromised habitat and a species at risk prompted the Alliance to take action to improve the winter range of our local and beloved herd of bighorn sheep.

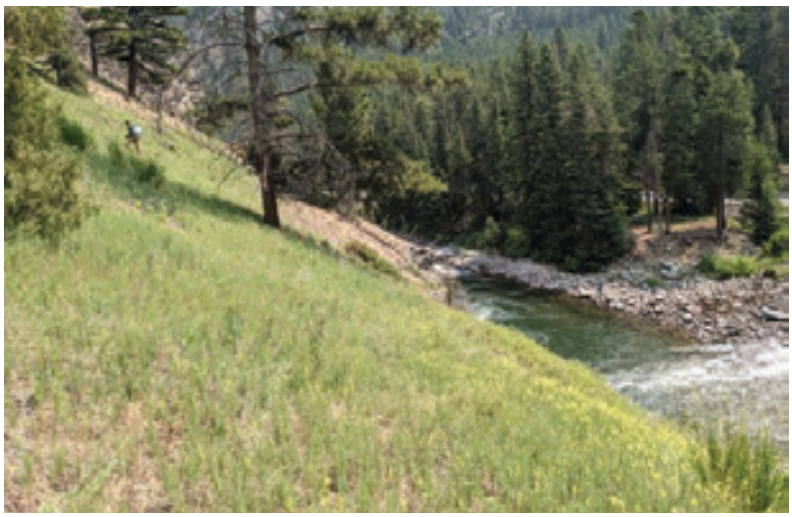
This year, the Alliance led project partners, Gallatin County Weed District, MCC, and Gallatin National Forest crews in treating invasive plants on the steep and unrelenting terrain of the winter range.

Our eleven year investment of $12,883 has been matched by partners in the amount of $161,476 which is over a 1:12 match. The combined effort has made a marked impact over the years, resulting in the reduction of noxious weeds and the return of native grasses and forbs to the benefit of the Spanish Peaks bighorn sheep herd.









# Treatments

## Week 1 (July 6-9)

Locations: 8
Acres Covered: 184
Treated Acres: 42
Gallon Herbicide: 110

Bighorn winter range, Upper Deer Creek, Portal Creek flats, Moose Creek flat, campground & trailhead, Deer Creek powerline, and Karst trailhead & ROW west of bridge.

## Week 2 (July 26-29)

Locations: 13
Acres Covered: 243
Treated Acres: 73
Gallon Herbicide: 307

Rat Lake trailhead & lower campground, Rat Lake upper trailhead, Storm Castle campground, Shenango, Elkhorn trailhead, Porcupine flats & trailhead, Kirk Hill, Indian Ridge trailhead, Lava Lake trailhead, Storm Castle boat launch, Buck Ridge trailhead, and Twin Cabin trailhead.

## Total

| Treatment Days | Locations | Acres Covered | Treated Acres | Gallons of Herbicide |
|---|---|---|---|---|
| 8 | 21 | 427 | 115 | 417 |

# Project Costs

| Conserve Our Canyon Project | Cost |
|---|---|
| GISA Program Coordination & Field Work | $2,975 |
| MCC Wildland Restoration Crew week 1 | $2,700 |
| *backed by COC project funders | |
| **TOTAL** | **$5,675** |

2021
GISA $ : Matching Funds

$5,675 : $10,794

| Matching Funds | |
|---|---|
| Gallatin RAC Funding for week 1 of MCC | $1,500 |
| Northwest Energy Funding for week 2 of MCC | $4,200 |
| GNF Staff, Equipment & Supplies, Travel, and Contract Management | $2,536 |
| Gallatin County Weed District Contributions | $2,558 |
| **TOTAL** | **$10,794** |

2019-2021
GISA $ : Matching Funds

$7,214 : $39,404