

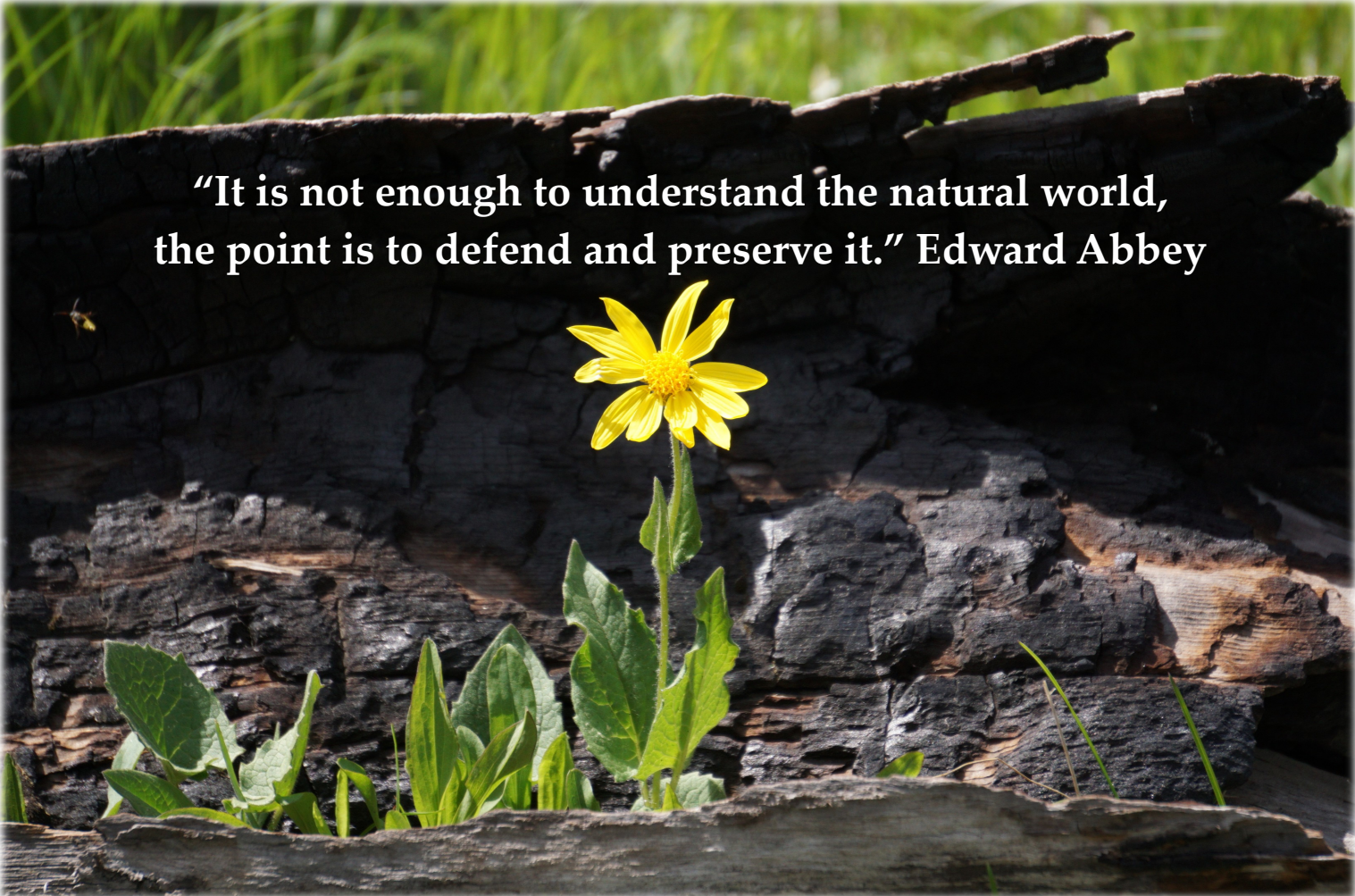


— GALLATIN —
INVASIVE SPECIES
— ALLIANCE —

The Gallatin Invasive Species Alliance is a 501c3 not-for-profit organization working to conserve native plants, wildlife habitat, and water resources through invasive species education and management.

By directly assisting landowners and bringing federal, state, and local partners together, the Committee facilitates a successful, comprehensive, and cost effective campaign against invasive species in the greater Big Sky area.

2017 Annual Report



**“It is not enough to understand the natural world,
the point is to defend and preserve it.” Edward Abbey**

From Our Chair: New Name, Same Mission



As usual, 2017 was a very busy year for us. One important change we have made is in our name. We are excited to announce that the Gallatin-Big Sky Weed Committee is now the Gallatin Invasive Species Alliance.

Our Board feels the name change better reflects the issue of invasive terrestrial and aquatic plant and animal life threatening the resources surrounding Big Sky. It also better reflects the fact that a large part of our program is coordination between local private, state and federal resources. For now, our committee will continue to focus mainly on invasive non-native plants, but we will respond to whatever invasive species are a threat to the Big Sky area.

Residents of Big Sky know the upper Gallatin watershed is a real treasure. The watershed includes part of Yellowstone National Park, wilderness and wilderness study areas, blue ribbon fisheries, spectacular scenery, hundreds of miles of trails, big game winter range, and habitat for numerous important wildlife species with some designated as sensitive, threatened and endangered.

Non-native invasive species reduce property values, decrease biodiversity and disrupt ecosystem function, displace or eliminate native species that fish and wildlife require, increase soil erosion and bank failure and clog waterways, increase the severity and frequency of wildfires, and further threaten endangered and rare species. Left unchecked invasive species become cost prohibitive to treat.

Resource managers everywhere recognize that invasive non-native species are the biggest threat to the integrity and function of terrestrial and aquatic environments.

The Gallatin watershed is no exception. Over several decades of resources management, I have seen landscapes recover from every type of calamity but I have never seen a landscape recover from the introduction of invasive species.

Our goal continues to be coordinating resources to focus on the control and the prevention of the establishment of invasive species. Education is a huge part of this effort. Our annual weed education day with Ophir School's second grade class is a highlight. The enthusiasm of the kids energizes us and helps us remember we are doing this for future generations. Our annual weed pulls with community partners represent a decade's long effort to engage the community and improve beloved public parks, lands, and trails.

Over the past 13 years we have educated thousands of residents and visitors not just about the impacts of invasive species, but about the complex dynamics of the Greater Yellowstone Ecosystem and the role we play in it. We want everyone to do their part to protect the resources that make Big Sky such an extraordinary place to live and recreate. I would like to personally thank the continued support of the Big Sky Resort Tax Board and the citizens of the Big Sky community. Together we have made an enormous difference.

John Councilman, Gallatin Invasive Species Alliance Board Chair
Retired Gallatin National Forest Vegetation Management Specialist

GISA Board Members: At Work

For the past seven years, I've had the pleasure of serving as executive director for this organization. The effort to address invasive species is not an easy one, but as I reflect on this year, it's easy to say why I continue to be motivated about our mission: our board of directors! The dedication, enthusiasm, support, and engagement shown by this board is beyond inspiring.

What's more impressive, is that three board members have been involved with the organization for 13 years, since the start of our organization in 2004. I would like to extend my sincere appreciation to board members past and present for working so hard to protect native ecosystems - they do not get the recognition nor accolades they deserve.

Jennifer Mohler, Executive Director

**Even one board member's
"best friend"
works to eliminate invasive species
at community weed pulls!**



Board of Directors

John Councilman, 2017 Chair
Gallatin National Forest Vegetation
Management Specialist, Retired

Michael Jones, 2017 Vice Chair
Gallatin County Weed District
Assistant Coordinator/Foreman

Katie Coleman, 2017 Secretary
Administrative Assistant, Hammond
Property Management

Don McAndrew
Engineer & Hydrologist with the
Natural Resource & Conservation
Service, Retired

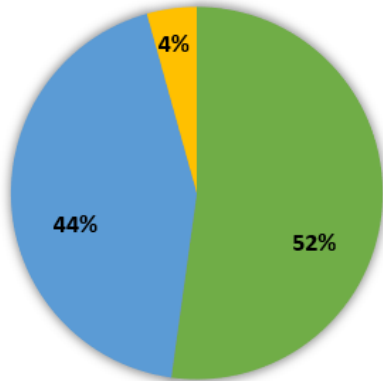
Larry Holzworth
Adjunct Instructor at Montana State
University, Plant Materials Center
Manager & Specialist with Natural
Resource Conservation Services,
Retired

Lorri Lagerbloom
Horticulturalist, Wild Onion Gardens
LLC

Daniel Jones
Gallatin County Weed District
Program Assistant

**The individuals who serve
on the board represent a
combined 160 years of
involvement and expertise
in natural resources and
invasive species.**

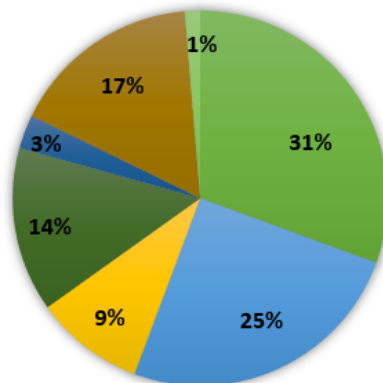
Revenues by source



- In Kind
- Grants
- Donations & Fundraising

Total \$113,838

Expenses by Program



- Community Program
- Education & PR Program
- Habitat Improvement Program
- Landowners Assistance Program
- Mapping/Monitoring Program
- Management & General
- Fundraising

Total \$113,515

Financial Report: What are our natural resources worth?

In Montana, outdoor recreation generates...
\$7.1 billion in consumer spending
71 thousand Montana jobs
\$2.2 billion in wages and salaries
\$282 million in state and local tax revenue

Source: Outdoor Industry Association



The value of what we bring to the community:

\$24,890 The value of cooperative treatment efforts in Big Sky initiated in 2013

\$22,002 The amount of partner / sponsor support of our two annual weed pulls

\$61,007 Matching funds by agency partners, expert assistance, and materials towards bighorn sheep winter range improvements

\$1.44 7 year average match of in-kind to grant funding

\$4,928 The amount of donations we received in our second year of fundraising efforts



Not only does our work aim to preserve our native ecosystems, but it protects the economic engine that drives Big Sky and the surrounding communities.

Community Program:

Raising awareness and educating the public about invasive species and their impact on the ecosystem through community events, partnerships, and programs.



GISA board members never waste an opportunity to help public lands and trailheads. While waiting to lead an educational hike, we collected multiple bags of noxious weeds at Deer Creek trail head.



Wildflower & Weed Hike
at Beehive Basin:

“I never knew there were so many wildflower species! I have a renewed appreciation for how diverse and unique this landscape is!” Lisa K

Play Clean Go station during the Ophir School second grader’s field trip: Recreationalists and trail users of all kinds are a main source and vehicle for noxious weed spread. Kids were tasked with illustrating both the modes of recreation, and the animals and plants negatively impacted by the spread of invasive species.



2017 Community Events

Interagency Weed Managers Meeting

Gallatin County Farm Fair

MSU Extension Class for Small Acreage Landowners - Noxious Weeds Class & Tour

7th Annual Gallatin Gateway Noxious Weed Education Event

7th Annual Bighorn Range Treatment

9th Annual Gallatin River Weed Pull

5th Annual Big Sky Community Park Weed Pull

8th season of Wildflower & Weed Educational Hikes

5th Annual Cooperative Treatment Day in Big Sky

Big Sky Community Corporation’s Kids Camps

Camp Moonlight at Jack Creek Preserve

2 Realtor Continuing Education Courses

Big Sky Farmers Market

An Aquatic Invasive Species Adventure with Gallatin River Task Force and Big Sky Community Organization

Big Sky Owners Association Annual Meeting

Ophir School Weed Education Event

Pesticide Recycling Program

Community Program Spotlight: *Noxious Weed Pulls*



Community Noxious Weed Pulls

9 Years of community weed pulls on public lands, trails, public parks, trail heads, and river access sites

13,795 Pounds of noxious weeds collected

907 The number of volunteers

1,854 The number of volunteer hours

13 The number of partners who support and assist with our community weed pulls

- . Big Sky Owners Association
- . Big Sky Resort Tax
- . Bridger Brewing Co.
- . Gallatin County Weed District
- . Gallatin National Forest
- . Madison-Gallatin TU
- . Montana Conservation Corps
- . Mystery Ranch
- . Rotary Club of Big Sky
- . Simms
- . Sola Café
- . Yellowstone Club

2017 Statistics

Gallatin River Weed Pull

9 Number of years held

48 Number of volunteers - a record #!

880 Number of pounds pulled

Big Sky Community Park Weed Pull

5 Number of years held

37 Number of volunteers - a record #!

720 Number of pounds pulled

Rotary Club of Big Sky Weed Pull

2 Number of years held

7 Number of volunteers

265 Number of pounds pulled at Twin Cabin trail head

Public Lands & Trails Weed Pull

7 Number of volunteers

260 Number of pounds pulled at GVLТ's conservation easement & BSCO's Hummocks trail

Education Program:

Raising awareness and educating the public about invasive species and their impact on the ecosystem through various public relations outlets.

CLEAN DRAIN DRY

This year, we teamed up with the Gallatin River Task Force to launch a comprehensive aquatic invasive species education campaign in Big Sky.

The project sought to address and mitigate the spread of aquatic invasive species (AIS) through human activity in the Upper Gallatin watershed with an educational campaign focusing on CLEAN DRAIN DRY principles. CLEAN DRAIN DRY is a nationwide educational campaign that is widely recognized and promoted and used by a multitude of agencies and organizations, including Montana Fish, Wildlife, and Parks.



The comprehensive PR campaign included:

- Advertising in the local newspaper
- Distribution of an AIS educational card and sticker to all recreational and fly fishing shops in Big Sky, Four Corners, and Bozeman
- Social media campaign spreading the word
- Trainings of river guides
- Promotion of operational boot cleaning stations.

Because this threat is ever present, we will continue to work with the Gallatin River Task Force to improve and maintain this effort.

PLAY CLEAN GO

Trail users of all kinds are a main source and vehicle for noxious weed spread throughout the Big Sky area.

GISA aims to promote “clean recreational habits” so that what we love so much about this land is not destroyed in our pursuit to experience it. Our community values this landscape for its unparalleled natural resources and we must act as guardians of the sanctuary.

With a grant from the Moonlight Community Foundation, GISA is:

- Installing new signs in the Gallatin Canyon
- Installing trail kiosks with Big Sky Community Organization next spring
- Promoting the Play Clean Go message via social media, newspaper advertising, and community events.



Look for our new, upgraded website in early 2018!

www.gallatininvasivespecies.org



Find us on Facebook for informative, frequent, and timely updates!

Bighorn Sheep Winter Range

According to Montana Fish, Wildlife, and Parks
"most impacts on wildlife habitats are human induced."



Abundant native forage is the critical factor in bighorn sheep survival during winter months.

Listed as a threatened species, bighorn sheep face a multitude of threats to their winter range:

- Habitat loss due to human development and sprawl
- Spread of invasive species (noxious weeds)
- Conifer encroachment
- Overgrazing
- Climate change
- Competition with other grazing animals (both domestic and wild)



Habitat Improvement Program:

Protecting and enhancing vital and/or compromised habitat for plants, fisheries, and wildlife within the Committee's project area in partnership with pertinent organizations, groups, or agencies.

Spanish Peaks Bighorn Sheep Winter Range Efforts

6 Partners Gallatin County Weed District, Gallatin National Forest, Montana Department of Transportation, Natural Resources Conservation Service, Wild Sheep Foundation, and Montana Fish, Wildlife, and Parks.

7 Years With the help of our partners, we have been leading the effort to manage extensive populations of noxious weeds on bighorn sheep winter range.

\$61,007 Matching funds by agency partners, expert assistance, and materials towards bighorn sheep winter range improvements.

2015 The year GISA established vegetation test plots to determine what native plants (grass and forbs) could compete on the shallow soils and steep hillside.

5 Years With the help of partners, GISA will monitor the test plots for 5 years to learn what native species can compete against invasive species and support the local herd of bighorn sheep.

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



Landowner Assistance Program:

Educating landowners about the ecological impacts of invasive species, and providing information and guidance on invasive species management.

On-Site Landowner Assistance

- 707** Number of landowners GISA has provided one-on-one assistance to since 2008
- 9,020** Number of acres assisted by GISA since 2008
- 21** Number of landowners GISA helped in 2017
- 121** Number of acres assisted by GISA in 2017

Landowner feedback:

I'm a homeowner in Big Sky and recently had the opportunity to enlist your representative's help in identifying the plant life on my property. We contacted (GISA) after receiving a referral from a neighbor that had used her services in the past. Jen came right out and was quick to outline the good and bad plants on our property. She also followed up with a detailed report, recommended course of action, and a list of service providers to address the noxious weeds on our lot. With Jen's help, in less than 2 hours we were able to get a solid grounding in the native plant and noxious weed varieties of the area and outline a direction to address the weeds that should be removed. Thank you for making this service available to our community. Scott O

Unfortunately, our love of wilderness and wildlife can have a direct impact on their health, and working to address the negative effects of our actions is a reflection of our core community values.



Most common noxious weed species identified in 2017:

1. Canada thistle
2. Oxeye daisy
3. Hoary alyssum
4. Houndstongue
5. Musk thistle
6. Spotted knapweed
7. Bull thistle
8. Common tansy
9. Poison hemlock
10. Yellow toadflax



What's the primary way landowners learn about us?

Big Sky Farmers Market!

30% of site visits conducted in 2017 resulted from meeting landowners at the summer long event.

Mapping & Monitoring Program:

Maintaining ecological health and diversity by assisting and supporting partner agencies responsible for invasive species management in early detection of and rapid response to noxious weed populations in GISA's project area.

New Invader Alert!

In 2017, GISA discovered two new noxious weeds previously not found in the area during landowner site visits. GISA quickly notified partners, and began an educational effort to alert the community of these new invaders.

Yellow Flag Iris



Identified among cattails in a private pond in the Beaver Creek area, the non-native Yellowflag iris (*Iris pseudacorus*) has bright yellow blooms, grows 3 to 5 feet tall, roots and shoots are toxic, and rhizomes contain black sap.

Impacts: Yellowflag iris forms dense monotypic colonies in riparian areas, crowding-out native species. This can alter riparian function and reduce habitat for wildlife, birds, fish and pollinators. Yellowflag iris is considered poisonous due to large amounts of glycosides in the leaves and rhizomes.

Spread: Once established, it reproduces by seed and vegetatively through rhizomes. Unfortunately, when it goes to seed, the seeds almost all produce new plants, as they are 99% viable.

Field Scabious



Identified on a property in the Gallatin Canyon, field scabious (*Knautia arvensis*) is a tap-rooted perennial that reproduces entirely by seed and grows 2-5 feet tall. Covered with fine white hairs, deeply lobed leaves, each stem produces a single, clover-like flower.

Impacts: Field Scabious has shown itself to be a very aggressive invader in riparian areas and irrigated fields, displacing native and desirable vegetation, and has been described as being difficult to eradicate once it is established.

Spread: Field scabious reproduces only by seed. It is a prolific seed producer, with each plant capable of producing up to 2,000 seeds, and the seed bank is reported to be persistent.

Mapping & Monitoring Spotlight: How mapping resulted in treatment on public lands in the Gallatin Canyon

\$5,000 Gallatin Resource Advisory Council Grant

Our organization was founded by 2 citizens who observed the spread of spotted knapweed in the Gallatin Canyon and wanted to see that addressed. Since 2004, we've been focused on invasive species management in the canyon, starting with an intensive mapping effort in 2009.

When armed with maps and inventory information, invasive species managers can develop strategies, prioritize treatment areas, and work with partners to efficiently implement management practices to make the most of limited resources.

In 2014, Highway 191 in the Gallatin Canyon underwent major road construction, a power line upgrade, and underground cable installation in the right of way, creating a prime opportunity for noxious weed establishment and spread. The following year, we observed an explosion of noxious weeds along sections disturbed by construction.

In 2016, Gallatin Resource Advisory Council awarded GISA \$5,000 to address the explosive growth of noxious weeds in the Gallatin Canyon. In 2017, GISA was joined by Karen Kitchen, Gallatin National Forest, and 5 Montana Conservation Crews to treat several high priority areas along Highway 191 and highly used public trailheads, important wildlife habitat areas, and public access sites along the Gallatin River.



Above: Poison Hemlock in 191 right of way at Greek Creek in 2015

Pulled noxious weeds at:

- **Big Sky Community Organization's Hummocks Trail**
- **Gallatin Valley Land Trust's easement along the Gallatin River**

Treated noxious weeds on public lands (Gallatin National Forest):

- **Between Spur Trail and Lone Mountain Trail**
- **Bighorn sheep winter range**
- **Flats south of Deer Creek**
- **Newly constructed river access parking area at mile marker 49, and trails leading down to the river**
- **Flats south of Dudley Creek**
- **Portal creek flats**
- **Moose creek campground and river access site**
- **35 mph bridge**
- **Greek Creek Campground and highway right of way**
- **Swan Creek parking area and road**
- **Shenango Ranger Station**



Fundraising Program:

Inviting all who care about the greater Big Sky area to support our efforts to protect and preserve the ecological integrity of this beloved place.

2017 marks the second year the Alliance has undertaken fundraising efforts. While we understand the impact of invasive species, many do not fully understand how invasive species can be “habitat transformers,” impacting the complex and dynamic relationships between all species in an ecosystem. We sincerely thank all those who support our effort to preserve this unique landscape for generations to come.

Thank you donors!

- \$4,928** The amount of donations we received in our second year of fundraising efforts
- \$1,748** Donations from Gallatin Valley Give Big
- \$3,180** Donations from individuals

Thank you funding partners!

- Big Sky Resort Area District
- Gallatin County Weed District
- Gallatin National Forest Resource Advisory Committee
- Madison County Weed Board
- Moonlight Community Foundation
- Yellowstone Club Community Foundation



A special thanks to Resort Tax for funding us since 2004!

The health and prosperity of Big Sky are intimately and irrevocably linked to the health and prosperity of the surrounding ecosystem.



Leveraging Assistance through Partnerships

The Alliance spends significant time and effort toward its goal of coordinating efforts and working cooperatively with various federal, state, and local agencies in noxious weed education and control within in the project area. Their commitment and willingness to participate are major contributors to the successes the Alliance has achieved over the past thirteen years.

Partner Spotlight: Gallatin National Forest

Our project area encompasses some of the most ecologically and economically important resources in the state. Outdoor recreation is now the single most important contributor to Montana's economy, and public lands are the driving force behind it. Working to preserve those lands in partnership with Gallatin National Forest has been a priority for us since we started. For 13 years, personnel from GNF have assisted us with community events and weed pulls, education and outreach, noxious weed treatments, and logistical support.



Portal Creek Flats has been a focus for noxious weed treatment and weed pulls since 2008. This section of public lands is highly used by both recreationalists and wildlife, including this cow moose and her twins.



Committee Partners:

- Big Sky Community Corporation
- Big Sky Natural Resource Council
- Big Sky Owners Association
- Big Sky Resort
- Big Sky Resort Tax
- Bridger Brewing Company
- Jack Creek Preserve
- Gallatin County GIS Department
- Gallatin County MSU Extension
- Gallatin County Weed District
- Gallatin River Task Force
- Gallatin Valley Land Trust
- Greater Gallatin Watershed Council
- Greater Yellowstone Coordinating Cmte
- Madison County Weed District
- Moonlight Basin
- Moonlight Community Foundation
- Montana Conservation Corps
- Montana Department of Agriculture
- Montana Department of Transportation
- Montana Fish, Wildlife and Parks
- Montana Noxious Weed Control Assoc.
- Montana State University
- MT Statewide Noxious Weed Campaign
- Multiple Big Sky HOA's
- Natural Resources Conservation Service
- Ophir School
- Simms
- Spanish Peaks Mountain Club
- Sola Café
- Trout Unlimited
- U.S.F.S., Gallatin National Forest
- Yellowstone Club
- Yellowstone Club Community Foundation
- Wild Sheep Foundation

