

MNPS Small Grants Record of Awards

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Year	Awardee	Title	Abstract	Type of Project	Project Location	Kelsey report vol/date
1996	Robert Gough, MSU Extension	An examination of morphology and physiology of rhizomes on the Montana blue huckleberry (<i>Vaccinium globulare</i> Rydb.)	Little is known about the morphology and physiology of the Montana blue huckleberry. The blue huckleberry is the object of a booming local trade; it's fruit is widely harvested from wild stands and sold. Cultivation of the huckleberry would greatly decrease the pressure on the wild polulation from overharvesting and damaging types of harvesting. Since the species' primary means of propagation is through rhizome development, it appears reasonable to better characterize this portion of the plant.	Research	Bozeman	Winter 1998 by Robin Klein
1996	Richard Pohl, MSU prof. landscape architecture	Southwest Montana Native Plant/Low Water Use Demonstration Garden	The garden will be designed to demonstrate several techniques which are adaptable to local communities to reduce water consumption in the built environment such as soil amendmets, ground mulcnes, low use watering devices, hard-scape materials,terracing to reduce run-off, reduction of lawn areas, and selection of appropriate low wate consumptive plant species. (Requested \$300, no record of how much awarded - b.kuopat)	Garden	Bozeman, MSU Arboretum	
1997	Wendy Ridenour, UM graduate student	The Effects of Cryptogamic Soil Crusts on the Native Plants <i>Festuca idahoensis</i> and <i>Artemisia tridentata</i> in the Sagebrush Steppe of Western Montana	I propose to conduct laboratory, greenhouse, and field experiments to investigate the effects of cryptogamic soil crusts on the mineral nutrition (especially nitrogen) and water relations of the commonly associated native vascular plants of semi-arid sagebrush steppe communities of western Montana, <i>Festuca idahoensis</i> and <i>Artemisia tridentata</i> . The research will benefit native plant conservation by increasing our understanding of how cryptogamic soil crusts may facilitate native plant species in fragmented remnants of native sagebruch steppe communities.	Research, MS	Missoula, UM	Summer 1998
1997	Carla Wambach, Helena	Montana Native Plants interwoven through the Journey of Lewis and Clark OR Looking Back, Looking Forward educational trunk	Create an educational trunk to pique interest and pleasure in the subject of native plants, highlighting species collect by Lewis and Clark that are still thriving today. This device will reach out the child, the non-expert adult, the retiree with time to learn, the interested beginner of any age, the person who has never given any thought to plants, and draw them in to an awareness and appreciation of plants and plant habitat and the conservation practices necessary to habitat protection.	Education, trunk	Helena	Winter 1998
1998	Susan Palermo, Clancy	Natives are Nice - Understanding Native Plants and Native Plant Communities	Elementary school curriculum that will consist of six or seven indoor and outdoor activities for students. All of the activities in the unit will be based on scientifically accurate information. The unit will also contain easy to read and understand background infomation for the teacher. Final report erroneously says grant was 1997.	Education, curriculum	Helena	Winter 1999

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1999	Kathryn Warner and Carol Brewer, UM Biology Dept; Lisa Mills, MT Nat History Ctr	Native Plant Museum and Education Collection	The goal of this project is to develop a educational collection of native plantss for use in exhibits and as reference vouchers. This collection will be available at the Montana Natural History Center's Nature Center at Fort Missoula for use by students from local k-12 schools, teachers, and the general public. Note: requested \$364; awarded \$500 to implement additional recommendations.	Education, Herbarium	Missoula, Fort Missoula, MNHC	Summer/ Autumn 1999
2000	Pat Hurley, Salish & Kootenai College	Restoring Native Plant at the People's Center	Based upon the unfortunate effects of human encroachment and expansion on the Flathead Indian Reservation and the resuling decline of native plant species, a restoration project has been undertaken in Pablo, MT. Native plant species will be salvaged from a disturbed vegetative site and purchased from and organic native plant garden, that will be planted at a local cultural center know as 'The People's Center'. A team of Salish & Kootenai College nursery staff and volunteers will monitor the garden through propagation, germination, growth, and expansion for a period of five years. Restoring native plant species at the People's Center will assist the cultural center in the education of native plant used and identification.	Garden	Pablo	Winter/ Spring 2001
2000	Kathy Erickson, Bowdoin National Wildlife Refuge	Bringing Natural Beauties to Our Schools	The objective of this project is to increase knowledge and appreciation for native plants and wildlife by creating native landscapes at Malta High School, a city park, and Bowdoin Refuge headquarters.	Garden		na, project not completed
2000	Jan Metzmaker	Whitefish Central School Native Tree Project	The City of Whitefish constructed a new library adjacent to Central School in 1998, which eliminated the school playground. Property was purchased from BN Railroad for a new playground. Unfortunately, this site consisted of a flat, grassy field with the only view of railroad tracks and a blighted industrial area. With the help of other grants and donations, native trees were planted in a 300 x 40 foot boulevard. This project will add native wildflowers and shrubs from seeds collected and grown by students and puchased. The site will be used for foresty and botany units in biology class.	Garden	Whitefish, Central School	Summer 2000
2001	Jamie Belt, Glacier Institute	Noxious Weeds: The Bandits in Our Woods	A one-day educational workshop on July 11, 2001 in the Flathead Valley for up to 60 educators, land owners, land managers, recreationists, and others who are interested in learning about the importance of preserving Montana's native plant heritage by preventing and controlling the spread of noxious weeds.	Education	Kalispell, Lone Pine State Park	Winter 2002

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2001	Dick Pohl, MSU arboretum	Native Wildflowers of the Gallatin	This project will rehabilitate the wildflower garden collection and create meaningful and informative displays about wildflowers of the region. Components include, inventory the existing species in the collection and purchase/collect plants to complete the display, control weeds and remove exotic species, prepare posters describing some of the plants in the area, and create a 3-D display case to simulate common wildflowers.	Garden, Education	Bozeman, MSU Arboretum	No?
2002	Linda Babcock, 5th grade teacher	Longfellow School Sculpture Native Plant Garden	Longfellow School is a neighborhood elementary school in the historic south side of Bozeman. The student made sculpture/sign is near a main entrance of the school. Students and parents will create a native plant exhibit surrounding the sculpture. To familiarize the students with native plants, Linda Babcock will use the teaching trunk "Montana Native Plants: Interwoven Through the Journey of Lewis and Clark" (created by Carla Wambach, funded by MNPS Small Grant).	Garden	Bozeman, Longfellow School	Winter 2003
2002	Tarn Ream, UM graduate student	<i>Trillium ovatum</i> in western Montana - implications for conservation	There is concern among conservationists and herbarists that market-driven, unsustainable harvest of this species could decimate populations in a very short time. Documenting the reproductive rate, as deduced from age class structure and mortality data, of <i>Trillium ovatum</i> in western Montana will provide critical information for conservation planning and sustainable use of this species.	Research, MS	W. MT.	Summer 2004 and Summer 2011
2003	Tarn Ream, UM graduate student	<i>Trillium ovatum</i> in western Montana - implications for conservation	There is concern among conservationists and herbarists that market-driven, unsustainable harvest of this species could decimate populations in a very short time. Documenting the reproductive rate, as deduced from age class structure and mortality data, of <i>Trillium ovatum</i> in western Montana will provide critical information for conservation planning and sustainable use of this species.	Research, MS	W. MT.	Summer 2004 and Summer 2011
2003	Marijka Wessner, Missoula County Weed District	The 10 Most Desired Native Plant Poster	The Native Plant Poster is designed to be used with the "10 Least Wanted" Noxious Weed Poster to raise awareness of the importance of desirable native vegetation in the surrounding open space in the Missoula Valley. The poster includes 5 native grasses and 5 native wildflowers that are dominant in the Missoula area.	Education	Missoula	Fall 2003 + 10 copies of each poster
2004	Lisa Beczkiewicz, C.S.Porter Flagship Program	Fort Missoula Conservation Nursery	The Flagship Program is a community - school partnership whose mission is to enhance the social, academic and cultural achievement of Missoula's young people. This project would fund greenhouse supplies for K-12 after-school learning programs focused on native plant conservation and education. Kids will use the "Natives are Nice" curriculum from the Montana Native Plant Society, and also grow native plants to be used in local restoration projects.	Garden, Education	Missoula, Fort Missoula, MNHC	Spring 2005

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2004	Marijka Wessner, Missoula County Weed District	The 10 Most Desired Native Plant Poster	The Native Plant Poster is designed to be used with the "10 Least Wanted" Noxious Weed Poster to raise awareness of the importance of desirable native vegetation in the surrounding open space in the Missoula Valley. The poster includes 5 native grasses and 5 native wildflowers that are dominant in the Missoula area. This project would update and reprint the existing poster with better native plant pictures.	Education	Missoula	Posters in lieu of report
2005	Vicky Lawrence, Libby Revitalization, Inc.	Flower Creek Native Plant Demonstration and Riparian Restoration Project	A highly visible 260' length of Flower Creek, in the Libby Shopping Center is a knapweed infested eye-sore. The goal of the project is to demonstrate the use of native plants to restore the stream zone to a more natural condition, to conceal the unattractive riprap added for flood control, to provide a visual backdrop that compliments the adjacent businesses, and to educate the public about the uses of native plants in landscaping and restoration.	Garden, Restoration	Libby	Fall 2005
2006	Teresa Erickson, Northern Plains Resource Council	Jewels on the Plains Native Garden OR Home on the Range Native Garden	Jewels on the Plains is a highly visible garden in an urban setting featuring an assortment of native prairie plants found throughout central and eastern Montana.	Garden	Billings, Home on the Range office building entry	Fall 2007
2007	Jen Asebrook, Children's House Montessori School, Whitefish	Native Plant Garden at Children's House Montessori School, Whitefish, MT	Children's House Montessori School (CHMS) is a private, non-profit pre-school and kindergarten located in downtown Whitefish, MT where the subject of plants is an integrated theme in their curriculum. The project would involve the children and teachers in the creation of a native plant garden at their school to: 1) enhance their hands-on experience of planting and caring for a native plant garden as part of their curriculum; 2) provide an outdoor classroom for future classes to use for observation and learning; 3) offer the community and adjacent schools an opportunity for learning to see how native plants can be used for landscaping; and 4) improve the aesthetics of the entryway to the school which is currently barren. 165 plants would be installed in a 1,300-ft ² area to provide a low-maintenance, water efficient, educational, handicapped accessible garden for the schools and community.	Garden	Whitefish, CHMS	Winter 2008

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2008	Jennifer Palladini, UM PhD candidate	Indirect effects of a potent invader, leafy spruce (<i>Euphorbia esula</i>) on the pollination, persistence, and evolution of native plants	Invasive plants with large flowering displays can indirectly affect native plants through interactions with shared pollinators. Whether these indirect interactions between invasive and native plants are positive or negative may have important implications for the persistence and evolution of native plants in invaded areas. I will examine how a prolific invader of Montana’s grasslands, leafy spurge (<i>Euphorbia esula</i> , Euphorbiaceae), affects the seed production, population dynamics, and evolution of native plants through interactions with pollinators.	Research, PhD	grasslands	Spring 2009
2009	Tracy Dougher and Casey Delphia	Backyard Conservation: Evaluation of Montana native perennials for water savings and pollinator attraction	This project will provide both a basic research component and serve as a demonstration garden highlighting the benefits that Montana native perennials provide in home landscapes including reduced water use and attraction of insect pollinators. The project will continue for several years with this grant intended as ‘seed’ money for the initial establishment of the gardens. In addition, the data obtained from this project will be used to write research grants for continued support of native plant research.	Garden	Bozeman, MSU Horticulture Farm	Spring 2010
2010	Gina Raicovich, PEAS Farm	Native Planting Project	In order to enrich the curriculum of the educational programs hosted by Garden City Harvest at the PEAS farm, the farm will create a 120ft by 40ft native plant garden – the Native Planting Project. The goal of the Native Planting Project is to establish an educational native plant garden that will highlight the special adaptations of native plants, their uses, and ecological functions in landscaping. The native plant garden will be a featured stop on all tours of the farm. More than 2000 schoolchildren tour the farm each year on field trips, 100+ University of Montana students take classes on site, and more than 1000 adults visit the farm each year. The Native Planting project will expose all of these people to native plants. The Native Plant Project also contributes to the biodiversity of the farm, enhancing the PEAS farm’s commitment to ecological management.	Garden	Missoula, UM PEAS Garden	Summer 2011

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2010	Eva Masin, UM graduate student, St. Ignatius	Can Sheep Control Leafy Spurge without Compromising Efforts to Restore Native Plants?	Land managers, local citizens and researchers are increasingly interested in native plant restoration. In the Great Plains Bioregion, invasive weeds may be the most significant source of degradation and leafy spurge, (<i>Euphorbia esula</i>) is one of the most damaging. Prescribed sheep grazing is a management strategy used to control invasive plants, particularly leafy spurge. However, the efficacy of sheep grazing as a restoration tool depends on both its effective control of undesirable plants and ability to promote the native species that provide key ecosystem goods and services. Towards this end, I propose to test the response of native plants to sheep grazing.	Research, MS	Missoula, Waterworks Hill	Winter 2011
2011	Bonnie Streeter, Glacier High School Science Teacher	Glacier High School Native Plant Garden	My request for a grant from the Native Plant Society is for replacing native plants in Glacier High School's native garden that were damaged during the early freezes in October of 2009.	Garden	Kalispell, Glacier High School	Winter 2012
2011	Edith Dooley, UM graduate student	Does blister rust infection severity affect mountain pine beetle productivity in whitebark pine?	Whitebark pine, the keystone, treeline species in the Northern Rockies is currently threatened by mortality from mountain pine beetles (MPB) and the exotic fungus-caused disease, white pine blister rust (WPBR). Outbreaks of mountain pine beetles are proceeding very rapidly in whitebark pine and within the past decade in the Greater Yellowstone Ecosystem, 70% to 80% of whitebark have been killed by MPB. This study addresses the interaction of the two disturbance agents and aims to determine if they act synergistically or independently to kill whitebark pines. This study has already been initiated in the Tom Miner Basin near Gardiner, Montana. Twenty-five trees with blister rust infections spanning an infection severity rating scale from uninfected to highly infected have been baited with mountain pine beetle attractant pheromone to determine how beetle productivity is affected by the blister rust infection severity in whitebark pine.	Research, MS	Gardiner, Gallatin NF	Spring 2013
2012	Sarah Dawe, Forest Service	Native Plant Pollinator Garden	The White Sulphur Springs Ranger District, along with its partners, is constructing a native plant pollinator garden at the District office. This garden will serve to educate the public on the importance of pollinators to the survival of native plant communities. Phase one of garden construction was completed in 2011 and included site preparation. In order to complete phase two of garden construction, the District is requesting funding to purchase native plants, so the garden can be planted and the project completed.	Garden	White Sulphur Springs	Fall 2012

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2012	Chantelle Gournay, Leah Grunzke, Linda Lyon, UMW	The Native Plant Learning Garden	The goal of this project is to develop a children's Native Plant Learning Garden (NPLG) within the UMW Campus Community Garden, (CCG) is to foster curiosity and understanding of the uniqueness and importance of Montana's native plants. UMW has several well-established programs that bring pre-school and K-12 students and their teachers to the campus on a regular basis to work with our science and education students in a variety of programs. Over the past year, the CCG has been a platform for this interaction through site-specific projects and by providing an open green space for their use. The NPLG will include the science and folklore surrounding native plants, broadening the learning opportunities for student groups and all visitors to the site.	Garden	Dillon, UMW	Winter 2013
2013	Kathy Hefferran, Sentinal High School Teacher	Waterworks Hill Weed Control/Native Plant Recovery Study	Sentinel High School "alternative" biology students will research knapweed and leafy spurge control methods in collaboration with conservation easement managers. Students will identify native plants and exotic invaders, and will monitor the relationship between weed control and plant populations. Using their own research and local experts, students will choose to treat study plots with pulling, cutting, biocontrols, seeding with native plants, and other non-chemical controls. Students will share findings with the general public by writing short articles.	Research, Education	Missoula, Waterworks Hill	Winter 2014
2013	Mandy Slate, UM PhD candidate	Bryophyte Study	Our understanding of how primary producers form communities and affect ecosystem function is overwhelmingly based on studies of vascular plants. However, bryophytes form a large component of primary producers in many ecological systems and the physiology of these non-vascular plants indicates that their effects on ecosystems may be quite unique. During rehydration, bryophyte cell walls break and solutes rich in carbon and nitrogen leak out. My research will quantify the effect of bryophyte leakiness on resource pulses and how these pulses affect interactions among other organisms. My research will improve our understanding of the intricacies of interspecific interactions within ecosystems mediated by bryophytes thereby furthering an awareness of the significance of this often overlooked group of native plants.	Research, PhD	Missoula, U of M	Winter 2014

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2014	Lisa Bickell, Montana Natural History Center	Native Plant Garden at Fort Missoula	MNHC worked with UM to rehabilitate the Native Plant Garden at Fort Missoula over ten years ago converting it from a knapweed field and a garden shed into a thriving native plant teaching and demonstration garden and a three season classroom. In 2012 we worked with community partners to convert the shed into a functional and attractive meeting space for volunteer events, evening programs, teacher workshops, school field trips, and summer camp programs. Each year we welcome nearly 1000 children and adults to the garden for various programs and events. The Montana Natural History Center maintains and provides programming at the Native Plant Garden at Fort Missoula in cooperation with the University of Montana Natural Areas Program. We respectfully request \$850 in funding for program supplies and the rental costs of a portable toilet which are necessary to operate quality programming for kids and adults at the garden.	Garden operations	Missoula, Fort Missoula, MNHC	Winter 2015
2014	Elizabeth Pansing, Graduate Student Department of Integrative Biology, University of Colorado, Denver, CO	Whitebark Pine Regeneration in Two Subalpine and Treeline Locations: Examining the Role of Microsite Type and Rodent Seed Theft	I am conducting the first experimentally rigorous test of “direct seeding”, a largely untried restoration technique for whitebark pine (<i>Pinus albicaulis</i> Engelm.) that could significantly reduce project cost, time, and labor. I sowed whitebark pine seeds in both subalpine and treeline forest in common microsite types, simulating the caches made by Clark’s nutcracker (<i>Nucifraga columbiana</i>), the main seed disperser. In 2013, I monitored for germination and seed loss caused by rodents, and trapped rodents to determine which species eat seeds. In 2014 I will monitor for second year germination and first year survival, and determine whether rodents recache seeds in sites suitable for germination.	Research, MS	Glacier NP and near Yellowstone NP	Summer 2015
2015	Michelle Flenniken, PhD, Department of Plant Sciences and Plant Pathology, MSU, Bozeman	Montana State University’s Pollinator Garden: a Showcase for Montana Native Plants	The Pollinator Garden at Montana State University will engage MSU students and community members in generating a Hub for Pollinator Health at MSU. The garden will consist of a Pollinator Garden featuring Montana native bee friendly plants, a structure for storage of equipment and instructional materials, honey bee colonies, and a honey bee observation hive. The Pollinator Garden at MSU will serve as a field laboratory and community outreach and integration center. Funds from the Montana Native Plant Society will be used to purchase soil and nursery stock, and educational signage.	Garden, Education	Bozeman, MSU Horticulture Farm	Fall 2015 by Gretchen Rupp

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2015	Christine McManamen, UM BS student	Increasing the Efficacy of Herbicides: Revegetation and the Native Seedbank	I am requesting funds from the Montana Native Plant Society's small grants program to study the duration and degree to which herbicides negatively affect native plants when they are sown in chemically treated soil. In addition, I will investigate chemical effects on the native and exotic soil seedbank and whether the presence of a duff layer during chemical application changes the effects of herbicides on the seedbank. This study will be among the first to address the importance of timing when combining herbicide applications with reseeded to promote the restoration of native plant communities.	Research, Undergrad	Missoula, U of M	Winter 2018
2015	Michael Simanonok, MSU PhD student	The assembly of pollination networks after wildfire	Historical fire suppression in the Northern Rocky Mountains has resulted in larger, higher severity fires which have unknown impacts on many species interactions. I am investigating the assembly of pollination networks after wildfire across four wildfires which span from 1 to 25 years post-burn in the Absaroka Mountains of Southwest Montana. This work will provide knowledge on how complex ecological networks assemble after disturbance, as well as give managers essential information regarding how native plants and pollinators respond to fire. The goal of this project is to assess the assembly of pollination networks after wildfire, i.e., how the interactions between native bee species and wildflowers return during succession after wildfire. I am performing this research across a gradient of time (1-25 years since burn) as well as comparing different fire severities (natural "mixed" severity fires vs. altered high-severity fires).	Research, PhD	Bozeman, Absaroka Mtns.	Fall 2016
2015	Trinity Pierce, MT Audubon Center	Wildflower and Pollinator Discovery program	The <i>Wildflower and Pollinator Discovery</i> program will engage children by providing opportunities to plant, experiment and observe the full life cycle of Montana wildflowers. Activities will include: soil testing, seed sowing, plant care, and seed collection and storage. Additionally, the children will observe and record information related to our honey bees (in our soon to be created bee keeping area) which will be in the vicinity of our wildflower patches.	Garden, Education	Billings, MT Audubon Center	Fall 2016
2016	Andrea Pipp, Botanist, MT Natural Heritage Program,	Moss & Lichen Inventory on Milton Ranch, Mussellshell County, Montana	In Montana 423 moss and 1,074 lichen taxa are documented; however, Mussellshell County has no documented occurrences. This project uses a regional team of lichenologists and bryologists to systematically survey, identify, and document mosses and lichens on the Milton Ranch in Mussellshell County. This project will populate the MTNHP website and database, provide specimens to MONTU, and contribute to management for the Milton Ranch.	Research, Inventory	Mussellshell County	Spring 2017

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2016	Lisa Bickell, Montana Natural History Center	Nature Adventure Garden	The Montana Natural History Center (MNHC) will partner with Willard Alternative High School teachers and students to create a Nature Adventure Garden for children. This garden will be situated on the east end of our property at 120 Hickory Street in Missoula. With \$1500 in funding, MNHC will purchase necessary materials including boulders, plants, and appropriate substrate for the space. Willard students will learn about project management, the importance of nature-based play, and how to effectively use native plant landscaping. The garden will be open for public exploration and play and we anticipate adding interpretation over time to ensure that the space meets our mission for education.	Garden, Education	Missoula	Winter 2017
2017	Jeff Copeland, Environmental Consultant	Burke Park Vegetation Monitoring	Complete a vegetation monitoring survey during the spring/early summer of 2017 on Peet's Hill, a remnant native sagebrush steppe habitat in a Bozeman City Park. Our project would continue monitoring efforts undertaken in 2004 and 2013, in order to assess the impacts of exotic species and noxious weed management on the diversity and abundance of plant species over time.	Research, Inventory, Monitor	Bozeman	Summer 2018
2017	Karen McCathy, Youth Empowerment Services, Anaconda	YES Native Plant Garden	YES plans to turn an unused, barren area, currently with little to no vegetation, outside their center into a native plant garden to be enjoyed by both center participants and community members. This project will serve two purposes: first, to develop a peaceful, beautiful area in town where citizens, young and old, can enjoy plants native to our state and 2) to help youth develop work skills necessary to create and maintain such a space while cultivating an appreciation for nature.	Garden, Education	Anaconda	na, project not completed
2017	Dr. Mirabai McCarthy, Botany Professor, Flathead Valley Community College	Promoting Botanical Literacy in a Mountain Community	The Whitefish trail system offers an extensive network of multipurpose, non-motorized trails that are utilized throughout the year for recreation and educational programs. Despite the dynamic opportunities available on these trails, there are limited resources for local plant identification. The primary goal of this project is to create a pictorial plant guide that will serve as an educational resource for the community.	Education, brochure	Whitefish Trail	Spring 2018

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2017	Heidi Fleury, Lake Co. Conservation District	Riverfront Stewardship Workshop	The Riverfront Stewardship Workshop will address basic concepts of riparian health, riverbank stability, and river and natural resource stewardship. Workshop activities will include a seminar-style overview of these basic concepts highlighting specific strategies to address bank stability, riparian health, and native vegetation on riverfront properties. The topics will be presented by restoration and stewardship professionals from local natural resource agencies and organizations. Following the seminar, participants will engage in a hands-on river restoration project at a county park site that will help address current bank erosion and stabilization issues with the use of native plants, trees, and shrubs. This demonstration project will serve to teach participants specific strategies to improve riparian health and bank conditions that can be implemented on their own properties. (BK note: the demonstration site is on the Swan River.)	Education Workshop, Garden	Lake County, Swan River	Spring 2018
2018	Dr. Julie Etersson, Dr. Erin Espeland, Sophia Green, U of Min. Duluth	Does cultivation of MT wildflower species on native seed farms cause unintended evolution?	Regeneration of native vegetation depends increasingly on seeds harvested from plants raised in crop-like conditions on native seed farms [1]. Commercial production is valuable because it increases seed availability for gardeners and restoration ecologists and obviates the need to repeatedly harvest from wild populations, which may increase extinction risk. However, there is growing concern that cultivation itself may inadvertently select for “domestication” traits that are not adaptive when the seeds are planted back into nature [2]. Here, in partnership with Native Ideals Seed Farm, LLC in Arlee MT1, we will test whether or not <i>Cleome serrulata</i> , Rocky Mountain bee plant, is evolving by comparing populations before and after cultivation. This academic-government-small business collaboration is important because it will help us identify ways to effectively increase native seed availability in MT without compromising the genetic integrity of material that is planted back into nature. Here, we request travel funds for this work.	Research	Arlee, MT and Duluth, MN	na, project not completed
2019	Hailey Graf, Asst. Conservationist, Flathead Conservation District	Outdoor Education Center and Demonstration Garden	The Outdoor Education Center and Demonstration Garden will address a growing need to educate the local community on the benefits and importance of native plants. The population and development of Flathead County is rapidly expanding (2nd fastest rate in Montana) with much of the increase due to an influx of out of state residents. The Flathead Conservation District has the opportunity to create an Outdoor Education Center and Demonstration Garden, focusing on teaching conservation practices to the growing local community.	Garden, Education	Kalispell, Flathead Conservation District office	Summer 2020

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2019	Viktoria Wagner, Ph.D, Univ. of Alberta	Plant diversity in bedrock meadows of north-western Montana	Although globally renowned for its forests, the Interior Pacific Northwest is also home to natural meadows that occur interspersed in its mid-elevational zone. This habitat type occurs on shallow and periodically seepy soils over dense bedrock, in mountain ranges from north-western Montana to north-eastern Washington, and displays a rich native flora, including rare annual, bulbous, and taprooted plants. In contrast to their forest counterpart, these meadows have never been described in the scientific literature and hence, overlooked in science, environmental decision-making processes, and education. Research in my lab aims to explore the plant diversity and species composition of this habitat type. The requested funds will support my lab’s field research in north-western Montana, in summer 2019, and in the long-term, help us to increase awareness of this unique habitat type.	Research, Inventory	NW MT	Spring 2020
2019	Robyn King, Exec. Dir., Yaak Valley Forest Council	Yaak Valley weed control, revegetation, and monitoring; AND huckleberry monitoring after timber harvest	The Yaak Valley Forest Council (YVFC) Headwaters program partners with the U.S. Forest Service (USFS) in long-term efforts to promote re-vegetation of native plants through weed abatement in the Yaak watershed. Our projects are implemented by annual fieldwork including hand pulling, non-toxic weed spraying, and installations on weed mat to discourage growth of invasive species such as hawkweed, oxeye daisy, Canada thistle, knapweed, reed canary grass, and St. John’s wort. Native plant re-vegetation is encouraged by weed abatement and re-planting with native grasses. We also partner with the USFS on our Terrestrial Habitat Restoration Initiative for Vegetative Enhancement (T.H.R.I.V.E.) long-term huckleberry shrub monitoring project to promote post-timber harvest huckleberry restoration.	Restoration	Yaak Valley	Summer 2020
2020	Paulette Epple, Consevarion Chair, Sacajawea Audubon	Plants for Birds Demonstration Garden at Story Mill Community Park	Sacajawea Audubon Society (SAS) wishes to install a “Plants for Birds Demonstration Garden” highlighting native plants that can be used in landscaping to attract birds, pollinators and other wildlife. The design would include interpretive signs to educate visitors and generate enthusiasm for providing habitat in yards and gardens throughout the community. Signs would identify specific plants, emphasize the benefits of using native plants, and recommend best planting practices such as habitat layering and planting in clusters. We have an excellent opportunity to site this garden within the “Learning Garden” of the exciting new 60-acre Story Mill Community Park in Bozeman, Montana. We plan to use this demonstration garden and the nearby community center as a place to give presentations and classes promoting landscaping for birds for years to come.	Garden, Education	Bozeman	Winter 2021

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2020	Kathe Gabel, Huntley Project Museum of Irrigated Agriculture	Huntley Project Museum Native Plant Memorial and Education Gardens	Goals of this project are 1) to promote knowledge of native plants discovered by Meriwether Lewis and William Clark during their treks through Montana, 2) to educate the public how to identify and incorporate bird and pollinator friendly native plants into their gardens, and 3) to identify native grasses and crops grown on the Huntley Project (HP). Homesteader Memorial Native Plant Garden and educational gardens are located on the HP Museum grounds, which are near Pompeys Pillar, a national monument on the Lewis and Clark trail.	Garden, Education	Huntley	Summer 2021
2020	Clare Ols, Invasive Species Coordinator and Kara Maplethorpe, Exec. Dir., Centennial Valley Assn.	Reestablishing native plant communities post-herbicide treatment in the Centennial Valley	Noxious weed invasions negatively impact wildlife habitat by reducing forage value, outcompeting native vegetation, and contributing to soil erosion. Reseeding native grasses and forbs, following successful herbicide treatment of invasive species, promotes intact and healthy plant communities that can support diverse wildlife species and habitat. Objective: The Centennial Valley is relatively pristine when compared to other areas throughout the west, however, it is not immune to noxious weed invasions. This project seeks to reseed a bare ground site that has undergone herbicide application in order to reestablish a healthy and intact native plant community and prevent the reestablishment of noxious weed species and invasive grasses, such as cheatgrass.	Garden, Restoration	Monida	Spring 2021
2020	Colette Werk, Nonpoint Source Pollution Cood., Fort Belknap Envir. Protect. Dept., Fort Belknap Indian Community	Revitalizing Sweetgrass for the Fort Belknap Indian Community	Cultural revitalization, self-sustainability, research, conservation, and educational efforts are priorities for the Fort Belknap Indian Community. Strengthening our connection to the land and culture is healing for both Tribes that call Fort Belknap home. The proposed project for the Montana Native Plant Society Small Grants Program, for Fort Belknap, is to revitalize sweetgrass on the Reservation for cultural, education, and ecological sustainability. Sweetgrass is rarely found in the wild on the Fort Belknap Indian Reservation but was historically present. Repopulating sweetgrass on the Fort Belknap Indian Reservation will be holistically beneficial for community health, education, culture, and watershed restoration.	Restoration, Education	Hays	Summer 2021

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2021	Sarah Klaus, Education & Outreach Coordinator, Lake County Conservation District	K. William Harvey Pollywog Park Restoration	In the middle of the Mission Valley, on the Flathead Reservation, in small town Ronan you'll find an interpretive park located behind K. William Harvey Elementary School (KWH). This park, Pollywog Park, was first established 20 years ago as a place for students to connect and familiarize themselves with native plants of Montana. The park was a wonderful teaching tool for about 10 years before it was abandoned for unknown reasons. Currently, there is a community-wide effort to restore the park as a permanent feature to KWH. The Lake County Conservation District (LCCD) will be working along with the school's FoodCorps Service Member, KWH staff, and AmeriCorps members to rejuvenate Pollywog Park. Grant funds would go directly to the purchase, planting, and establishment of native seeds, starters, and shrubs, as well as restoring and updating the walkways and signage.	Garden, Education	Ronan	
2021	Bonnie Sachatello-Sawyer, Executive Director, Hopa Mountain	Experiencing the Prairies through Hopa Mountain's <i>StoryMakers</i>	Working through 100+ rural and tribal volunteers across Montana, Hopa Mountain's StoryMakers program offers parents of 11,000+ children ages 0-10 high-quality books and other early learning resources to create home environments that give children the best chances for success throughout their lives. Through this initiative, Hopa Mountain seeks to offer Montana children exposure to the grassland ecosystem through distribution of an informational prairie picture book that will be distributed in under-served rural and tribal communities. This book will be combined with a bookmark featuring simple tips for sharing the book and engaging children. Funding from MNPS would be used to purchase 300 books to be distributed to Montana families with few reading resources. Families will be encouraged to read this book together and children will be able to keep the book as part of their home library. The book is <i>The Prairie That Nature Built</i> by MaryBeth Lorbiecki and Cathy Morrison.	Education	Bozeman	
2021	Emily Marlow, AmeriCorps Member at Tongue River Reservoir State Park	Montana Native Plants and Pollinators Summer Interpretive Program at Tongue River Reservoir State Park	This project will focus on educating visitors of Tongue River Reservoir State Park about native plants and pollinators and about the effects of invasive plant species. The project will consist of two different educational programs, one focused on native plants and one on native pollinators, that will each be given twice this summer at the park. These programs will feature information about the topics, hands-on learning experiences, and take home projects.	Education	Decker	Spring 2022

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2022	Jennifer Mohler, Executive Director, Gallatin Invasive Species Alliance	Gallatin Invasive Species Alliance's Education Trailer	The Gallatin Invasive Species Alliance is building an education trailer to educate the public on native plants, invasive species, and clean recreation practices. With the explosive development and recreational use in our project area, this trailer will be a highly visible attractant that will educate the public about our natural resources, inspire appreciation for them, and demonstrate ways to mitigate our impact on them.	Education	Gallatin County	
2022	Kara Maplethorpe, Executive Director, Centennial Valley Association	Restoring intact, native plant communities post-herbicide treatment in the Centennial Valley,	Noxious weed invasions displace native vegetation which impairs ecosystem structure and negatively impacts landscape connectivity, wildlife habitat and forage, and water quality. While herbicide treatment effectively reduces noxious weed infestations, it can leave areas of bare ground that are vulnerable to disturbance and future invasion. Reseeding native grasses, forbs, and shrubs following successful herbicide treatment of invasive species promotes the establishment of intact plant communities that are resilient against invasive species and support healthy ecosystem function.	Restoration	Dell	
2022	Sean Hoy-Skubik, MSU graduate student	The Future of Montana's Forests: Resistance of Native High-Elevation Conifers to Climate Change-Type Stressors	Whitebark pines (<i>Pinus albicaulis</i>) and Limber pines (<i>Pinus flexilis</i>) are both currently facing grave threats as a result of global change. A primary conservation strategy for mitigating these threats is the outplanting of seedlings in sites exhibiting high mortality, however, the success of this strategy is dependent on the selected seedlings level of resistance to future climate-type stressors. It is therefore vital to the persistence of these trees that we understand and identify traits associated with heat and drought stress resistance, as well as the heritability and adaptive capacity of these traits. This research project will serve to further the understanding of future responses of these trees to climate change induced stress, as well as the viability of outplanting efforts as a conservation strategy within the Montana's high-elevation ecosystems.	Research	Bozeman, MSU	