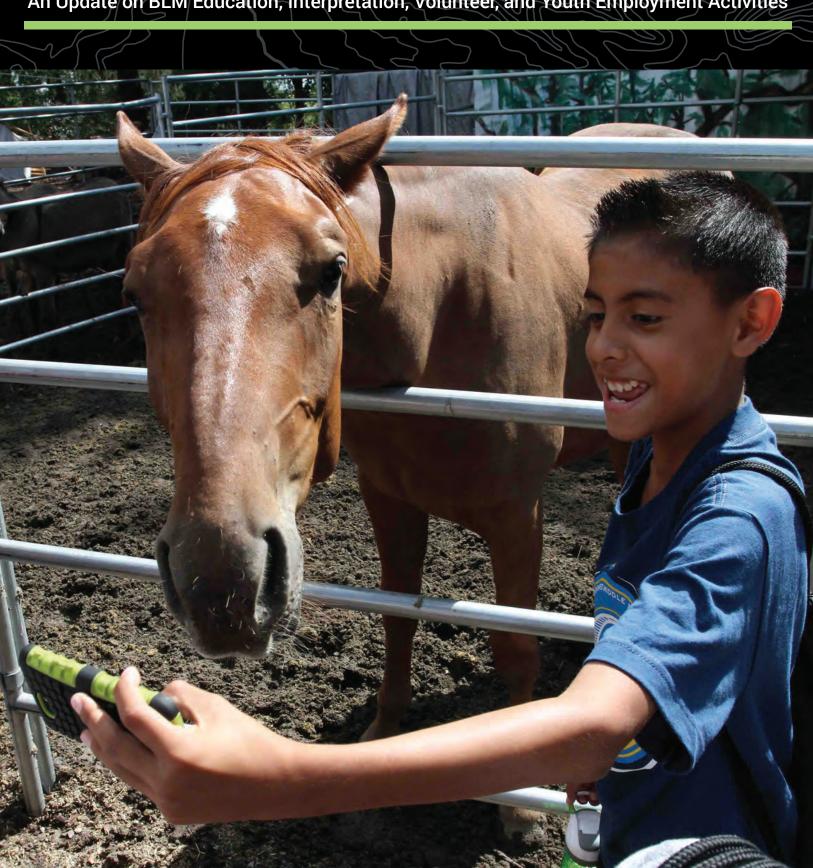


## Connecting People to Their Public Lands 2016

An Update on BLM Education, Interpretation, Volunteer, and Youth Employment Activities



The Bureau of Land Management's mission is to sustain the health, diversity, and productivity of America's public lands for the use and enjoyment of present and future generations.

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Additional copies of this publication may be obtained by calling (202) 912-7457 or by writing to:

BLM Division of Education, Interpretation, and Partnerships 1849 C Street, NW, Room 2134LM Washington, DC 20240

To view this publication online and to obtain more information on BLM's public engagement programs, visit www.blm.gov/education.



## FROM THE DIRECTOR

Young people who experience the bounty of nature at an early age will carry that passion and awe forward throughout their lives.

That's why the Bureau of Land Management launched its new Junior Ranger Program in October 2016. The Junior Ranger Program is the agency's vehicle for connecting young people to the natural world, fostering an interest in natural resource careers, and encouraging active stewardship of the land.

As this report demonstrates, BLM-managed lands include some of the nation's favorite places to go mountain biking, fishing, kayaking or participate in any number of other healthy recreational activities. And last year alone, our partners helped the BLM reach nearly 5 million Americans, volunteers contributed over 1 million hours of service, and more than 6,000 young people participated in work and training opportunities provided by the BLM.

The Junior Ranger Program allows us to expand these efforts and provide a clear link to public lands all across the country. We are excited to reach even more young people and to expand the already successful partnerships we have with federal, state, and private organizations as well as with local schools, teachers, and parents.

We look forward to working with you in the months and years ahead. Our goal, like yours, is to get more Americans to the public lands that they own and love.

Neil Kornze



In 2014, Interior Secretary Sally Jewell set an ambitious goal to engage the next generation of Americans in connecting to their public lands. The four pillars of the goal were simple: to increase ways to PLAY on public lands, to LEARN about these lands through education and interpretation programs, to **SERVE** as volunteers and active stewards of the land, and to **WORK** on public lands and pursue natural resource careers. In 2015, the BLM focused on these four pillars and, along with its partners, volunteers, educators, and families, found many ways to meet Secretary Jewell's goal.



The BLM's **Take It Outside! Program** encourages young people and their families to get outside and participate in fun recreational activities and informal learning experiences on public lands. In 2015, the BLM engaged more than 51,000 youth and family members in nearly 130 different outdoor activities, including mountain biking, horse camps, winter snow adventures, and planting native gardens. Some young people went camping for the first time, while

#### **BLM Take It Outside! Program, FY 2015**

State Office	Number of Participants
Alaska	1,098
Arizona	n/a
California	2,388
Colorado	374
Eastern States	6,516
Idaho	4,691
Montana/Dakotas	163
Nevada	1,515
New Mexico/Oklahoma/Texas/Kansa	s 583
Oregon/Washington	12,320
Utah	20,258
Wyoming	1,229
Total	51,135



others learned about migratory birds and astronomy as they viewed the stars in the night sky through telescopes.

The BLM's **stewardship program** helps to build appreciation of public lands by connecting people to the land through outdoor experiences, education, and volunteerism. The BLM has partnered with two organizations—Leave No Trace and Tread Lightly!—for more than two decades to help promote stewardship and teach outdoor ethics to the BLM staff and public land visitors. In 2015, 12 BLM staff members completed a 5-day training session to become Leave No Trace Master Educators. More than 45 Take It Outside! activities included Tread Lightly! or Leave No Trace outdoor ethics education, helping to ensure that participants recreated responsibly. Additionally, volunteer stewards of all ages provided more than 19,580 hours of their time to clear trails, pick up litter, and build structures.

The BLM relies on youth partner groups for support and funding to help provide outdoor play experiences for kids and families across the nation. In 2015, the BLM partnered with more than 225 organizations, businesses, and youth groups such as the Boy Scouts of America, Girl Scouts of the U.S.A., Boys and Girls Clubs, and National FFA (Future Farmers of America) Organization to engage youth in outdoor play and informal education. These generous partners contributed more than 8,000 hours of time and over \$210,000 in cash and in-kind donations.



#### "EVERY KID IN A PARK" EXPANDS OPPORTUNITIES TO VISIT AND ENJOY PUBLIC LANDS

 $\diamond$ 

September 2015 marked the launch of Every Kid in a Park, a White House initiative to connect our nation's youth to America's great outdoors. The initiative provides a pass for free entry for fourth graders and their families to more than 2,000 federally managed lands and waters nationwide for an entire year through August 31.

Interior Secretary Sally Jewell officially launched the initiative on \*\* EVERY \*\*
KID IN A PARK

September 2, 2015, at BLM's Red Rock Canyon National Conservation Area. Sixty-five fourth graders from Las Vegas area schools went on a hike with the Secretary and got their Every Kid in a Park passes. Other launch events took place across the country at sites managed by the BLM and other participating federal agencies. Since the launch, many agencies have been jointly sponsoring Every Kid in a Park events and coordinating outreach to schools. By working with the Department of Education, agencies are helping to ensure that fourth graders from Title 1 schools have the chance to discover their public lands and all they offer. Every Kid in a Park is slated

to continue with each year's group of fourth graders to inspire

successive generations to become responsible stewards of our nation's natural and cultural heritage.

#### LEARN





Educational programs and interpretation programs are essential for the BLM to achieve its mission. Public lands are significant resources for engaging learners of all ages about their cultural heritage and the natural world in which they live.

#### The BLM Expands Its Network of Classrooms and Teachers



Hands on the Land is a national network of field classrooms that connects students, teachers, and community volunteers to America's public lands. Hands on the Land coordinators work with schools and nonprofit partners to create hands-on experiences using local, natural, historical, and archaeological settings. Students form strong connections to the natural environment, learn about issues confronting 21st-century land managers, and become familiar with natural resource careers. In 2015, the BLM recruited 12 new Hands on the Land sites, for a total of 81 sites nationwide. Together, these sites hosted 1,865 days of outdoor classroom activities that engaged nearly 73,000 students, teachers, and parents, which were significant increases over the previous year.

Number

2

3

4

2

1

1

2

5

8

3

4

46

Number of

**Participants** 

11,024

18,559

1,615

3,358

2,023

7,989

7,663

15,568

1,725

2,487

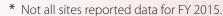
72,950

250

689

#### BLM Hands on the Land Program, FY 2015\*





Wyoming

Total



In 2015, the BLM expanded its partnership with the University of Colorado Denver to host 20 teacher "interns" through the **Teachers on the Public Lands program**, doubling the number from 2014. Teachers spent their summer breaks at Hands on the Land sites in their local communities, where they engaged in education projects, observed BLM resource management, and developed educational projects for use in their classrooms and by BLM

employees and volunteers. Teachers also participated in a 160-hour BLM field experience that included developing lesson plans and curricula. The teacher–staff partnerships created through the program contribute to strengthened connections between the BLM and local schools and communities.

## **Project Archaeology Celebrates 25 Years of Discovering the Past**

The national **Project Archaeology program** celebrated its 25th anniversary in 2015. Founded in 1990 by the BLM, the program has grown from its beginnings in Utah to include programs in 36 states and regional programs across the United States. Through a partnership with Montana State University, the BLM continues to expand the program, creating new products to reach secondary educators and their students and learners at informal venues such as visitor centers, museums, and youth group events.

Project Archaeology, FY 2015			
State	Number of Educators Certified	Number of K-12 Participants Receiving Direct Instruction	Number of Participants Receiving Other Instruction
Arkansas	26	0	0
Arizona	8	0	0
California	22	0	27
Colorado	5	70	60
Florida	326	172	0
Illinois	45	0	0
lowa	47	300	8
Kansas	23	996	27
Kentucky	14	1,775	1,970
Missouri	11	300	0
Montana	94	514	805
Nevada	37	189	0
New Mexico	17	24	0
Oklahoma	10	1,140	200
Tennessee	56	500	25
Texas	55	0	0
Utah	42	835	170
Wisconsin	0	0	0
Wyoming	2	33	0
National	2,039	457	0
Total	2,879	7,305	3,292







NATIONAL SUMMARY 5

In 2015, the BLM and the Oriental Institute of the University of Chicago collaborated on curriculum development and published "Project Archaeology: Investigating Nutrition," the second unit in a national curriculum series. In this unit, students trace the shift from hunting and gathering to the development of agriculture in the ancient world by examining sites on the upper Euphrates River. A new curriculum unit, "Project Archaeology: Investigating Rock Art," teaches the importance of protecting these unique archaeological resources, many of which occur on public lands. Archaeology educators can produce investigations of local rock art sites to customize the curriculum unit to their areas.



The Project Archaeology partners developed two new shelter studies. They launched "Investigating a North Slope Ivrulik," which examines an archaeological site near Barrow in Alaska, in January 2015. In June, they piloted "Investigating the Puzzle House Pueblo," which focuses on the Mesa Verde region in Canyons of the Ancients National Monument in Colorado.

In June 2015, the Edge of the Cedars State Park Museum hosted a Project Archaeology workshop for nine Blanding, Utah, elementary schoolteachers. In conjunction with the workshop, a BLM archaeologist from Monticello led a field trip to an important ancestral Puebloan site on Cedar Mesa outside of Blanding. Members of the Apache and Hopi tribes and a museum employee provided a Native American perspective on the archaeological site.

A total of 18 educators and archaeologists joined the sixth annual Project Archaeology Leadership Academy held on the Montana State University campus in Bozeman in June 2015. The leadership academy has expanded the network of Project Archaeology programs nationwide and helped bring archaeology stewardship education to new regions and states.



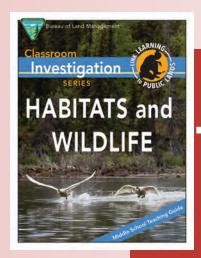


In addition to programs such as Hands on the Land and Project Archaeology, the BLM offers a suite of other education programs. In 2015, BLM staff members from all levels of the agency developed and participated in more than 300 educational programs and events that reached 107,000 students and adults. Efforts included classroom presentations, onsite activities and tours, and BLM-hosted collegiate field schools. In rural areas, BLM scientists and resource specialists continue to serve as valued role models, acting as judges for science fairs and advising students attending career days. Field offices also provide invaluable service learning opportunities to students and youth groups, helping to connect them to their public lands.

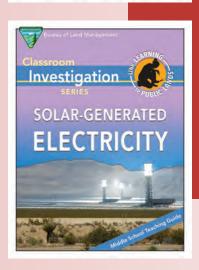
#### Additional BLM Education Programs, FY 2015\*

State Office	Number of Participants
Alaska	n/a
Arizona	3,353
California	2,122
Colorado	3,677
Eastern States	20,695
Idaho	16,372
Montana/Dakotas	3,035
Nevada	4,364
New Mexico/Oklahoma/Texas/Kansas	2,443
Oregon/Washington	25,890
Utah	7,614
Wyoming	17,651
Total	107,216

\* Does not include Hands on the Land Programs reported separately.



# Classroom Investigation SERIES NATIVE PLANTS



### THE BLM PROVIDES NEW TEACHING GUIDES AND ONLINE RESOURCES

#### **Classroom Investigation Series**

In 2015, the BLM produced two new teaching guides for grades 6–12, "Habitats and Wildlife," and "Native Plants." The guides provide information to students about resource management issues such as how to preserve greater sage-grouse habitat and balance diverse perspectives about multiple use and sustained yield. The BLM also developed the content for a third guide, "Solar-Generated Electricity." The unit describes how solar facilities on public lands work, examines the tradeoffs in detail, and illuminates the factors that affect decisions about where to build solar electricity plants. The guides are part of the Classroom Investigation Series, which gives teachers tools to engage their students in activities pertaining to public lands.

#### **Educator Resources Database**

The BLM's collection of new and archived online educator materials consists of nearly 100 classroom activities, theme-based units, and comprehensive curricula. The collection includes materials developed over the past several decades that were not always easy to find on the Internet. In 2015, the BLM created a complete database of the materials that users can search by school subject, grade level, BLM resource area, and keyword at <a href="https://www.blm.gov/teachers">www.blm.gov/teachers</a>.

#### Junior Ranger/Junior Explorer Series

During 2015, BLM state and field offices produced eight new Junior Ranger/Junior Explorer activity guides. The guides build awareness of the BLM and the importance of public land stewardship. The kid-friendly booklets provide activities and materials for elementary-age children on both national and site-specific topics. The series currently includes 50 booklets.

## Interpretation Programs Build Interest in the Public Lands

The BLM's interpretation program strives to connect visitors to America's public lands through information, orientation, and inspiration. Interpretation supports the BLM's mission by providing opportunities for enjoyable and meaningful visitor experiences and building interest in the public lands and their management. In 2015, almost 5 million visitors at 160 sites experienced

BLM Interpretive Programs, FY 2015			
State Office	Number of Programs	Number of Participants	
Alaska	1,222	215,926	
Arizona	1,001	123,331	
California	3,340	655,499	
Colorado	967	315,108	
Eastern States	3,057	110,136	
Idaho	583	62,684	
Montana/Dakotas	2,163	239,611	
Nevada	2,106	806,980	
New Mexico/Oklahoma/Texas/Kansas	473	182,074	
Oregon/Washington	5,235	1,323,800	
Utah	5,161	570,200	
Wyoming	1,663	314,750	
Total	26,971	4,920,099	

interpretive programs and demonstrations, walking tours, guided activities, wayside kiosks, exhibits, films, websites, and social media.



The BLM recognized two outstanding employees with the 2015 **Excellence in Interpretation or Education Award**. The winners were Ron Napoles of BLM California's Bishop Field Office and Nikki Grant-Hoffman of BLM Colorado's McInnis Canyons National Conservation Area. Both winners accepted their awards at the National Association for Interpretation's National Conference in Virginia Beach, Virginia.

#### **Artists in Residence Bring New Awareness**



In 2015, the BLM Artist-in-Residence program expanded to 12 BLM offices and sites in 9 states. The program encourages a new awareness of the exceptional places on public lands through art. The BLM provides opportunities for artists to use their talents to interpret the resources at the heart of the BLM's mission. The artists create images, objects, and performances that bring others enjoyment and a deeper understanding of the treasured landscapes and features on public lands.

Artists spend a minimum of 1 week exploring the unique landscapes and then use artistic media to share their perceptions and insights with others. Many of the artists exhibit their work at other venues, multiplying the opportunities to share their creations—and the public lands—with a greater audience. For 2015, the BLM showcased the work of Montana artist Paul Tunkis.

## THE BLM UNVEILS A NEW SERIES OF INTERPRETIVE PANELS

As part of the 15th anniversary of the National Conservation Lands, the BLM developed a new interpretive site near the Black Sands Beach parking area in California's King Range National Conservation Area. This location is the southern terminus for the BLM's segment of the Lost Coast Trail and provides parking for backpackers who hike the 24-mile stretch of coastline wilderness trail.

The site presented an opportunity to interpret what visitors see as they overlook the Lost Coast Trail. As part of one of the westernmost National Conservation Lands units in the contiguous

United States and one of the original BLM conservation areas, the site also presented an opportunity to describe the geography and history of the whole system of National Conservation Lands.

The BLM developed three interpretive panels using new templates. The panels were unveiled at the kickoff event for the 15th anniversary, which featured Interior Secretary Sally Jewell, BLM Director Neil Kornze, former Interior Secretary Bruce Babbitt, and other leaders who helped shape the BLM's conservation legacy.



### SERVE 🐼

#### **Volunteers Provide Vital Support to BLM Programs**

As America's largest land manager, the BLM relies on thousands of volunteers who offer their time, service, and skills to help manage the nation's natural and cultural resources. The BLM **volunteer program** engaged more than 25,000 volunteers in 2015. Volunteer contributions exceeded 1 million hours or the equivalent of 577 work years. This service has an estimated value of nearly \$24.5 million to the BLM. Volunteers contribute to a wide variety of BLM programs, including recreation, wild horses and burros, cultural and historical resources, and environmental education and interpretation. In 2015, almost one-half of the volunteers' hours occurred at national monuments, national conservation areas, national wild and scenic rivers, and other units of the BLM's National Conservation Lands.



In 2015, the BLM staff delivered several instructor-led volunteer administration training sessions at various locations, including the Campbell Creek Science Center in Anchorage, Alaska; Kanab, Utah; Vale, Oregon; and Sacramento, California. The sessions teach BLM employees (and partners) working with volunteers about the rules affecting volunteers. A new online course, developed in 2015, will supplement the onsite sessions and offer additional training options for BLM staff members who support the agency's volunteers.

## The BLM Presents "Making a Difference" National Volunteer Awards

The BLM's "Making a Difference" National Volunteer Awards took place on May 28, 2015. This year marked the 20th anniversary of the BLM's national awards program.

The BLM chose eight winners, including two youth winners (one individual and one group), three outstanding achievement winners, and three lifetime achievement winners. These award winners ranged in age from 18 to 80 and served thousands of hours across the country. The award recipients were:

- Eric Klammer (Outstanding Youth), Kremmling Field Office, Colorado
- Conservation Outdoor Recreation Education (CORE) Kids (Outstanding Youth),
   Wyoming State Office, Wyoming
- Ted Brummer (Outstanding Achievement), Bakersfield Field Office, California
- Amber Raoult (Outstanding Achievement), Uncompangre Field Office, Colorado
- Carol Chamberland (Outstanding Achievement), Rio Puerco/Socorro Field Offices, New Mexico
- Tim Cox and Doug Hancock, Lower Potomac Field Station, Virginia
- Tom and Bessie Evans (Lifetime Achievement), Butte Field Office, Montana
- **Jim Greene and Martha Vogt** (Lifetime Achievement), Upper Missouri River Breaks National Monument, Montana

#### **Volunteers Help Out on National Public Lands Day**

National Public Lands Day is the nation's premiere public lands volunteer workday. In 2015, the BLM coordinated projects at 195 BLM sites, representing nearly one-fifth of all federal sites participating in this service day, the largest single-day public lands volunteer event in the country.

These projects were hosted by 101 field offices and monuments and national conservation areas in 16 states. More than 10,000 volunteers participated in BLM enhancement and restoration activities. Social media posts about National Public Lands Day by the organizing partner, the National Environmental Education Foundation, reached over 3.5 million people.



National Volunteer Total Hours and Value of Work, FY 2015*			
Program	Volunteer Hours	Donated/ Hosted Worker Hours	Total Hours
Recreation	415,051	85,734	500,785
Biological Resources	57,528	26,573	84,101
Wild Horse and Burro	25,525	100,047	125,572
Cadastral Survey	1,415	0	1,415
Wilderness/Wilderness Study Area	22,320	22,279	44,599
Riparian/Watershed	14,366	6,782	21,148
Cultural/Historical	52,099	9,372	61,471
Minerals	5,285	1,919	7,204
Support Services	47,217	7,474	54,691
Environmental Education/Interpretation	65,029	33,567	98,596
Other	38,717	801	39,518
Total	744,552	294,548	1,039,100
Funds Expended	\$416,366	\$282,937	\$699,303
Value of Work**	\$17,541,645	\$6,939,551	\$24,481,196

<sup>\*</sup> The term "volunteer" as used in this report includes donated workers. Volunteers do not receive pay for their service to the BLM. They donate their time, and in some instances, equipment and money to assist the BLM with a variety of tasks. Donated or hosted workers, by contrast, receive compensation from another organization but work for the BLM at no charge.

<sup>\*\*</sup> Value based on 2015 Independent Sector value of volunteer time (\$23.56 per hour).



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Summary of B	LM State Offic	e Volunteer Con	tributions, FY 2	015
State Office	Hours	Value*	Work Years**	Number of Individuals
Alaska	30,401	\$716,248	16.9	2,184
Arizona	128,551	\$3,028,662	71.4	1,138
California	190,831	\$4,495,978	106.0	5,466
Colorado	198,775	\$4,683,139	110.4	3,875
Eastern States	20,693	\$487,527	11.5	966
Idaho	47,283	\$1,113,987	26.3	2,387
Montana/Dakotas	50,017	\$1,178,401	27.8	851
Nevada	58,975	\$1,389,451	32.8	1,683
New Mexico/Oklahoma/ Texas/Kansas	89,893	\$2,117,879	49.9	823
Oregon/Washington	110,996	\$2,615,066	61.7	3,769
Utah	92,600	\$2,181,656	51.4	1,673
Wyoming	18,602	\$438,263	10.3	666
National Operations Center	176	\$4,147	0.1	4
National Training Center	54	\$1,272	0.0	3
Washington Office	1,253	\$29,521	0.7	6
Total	1,039,100	\$24,481,196	577	25,494

<sup>\*</sup> Value based on 2015 Independent Sector value of volunteer time (\$23.56 per hour).

<sup>\*\*</sup> One work year is based on 1,800 work hours.



## WORK 🔼

In FY 2015, BLM offices worked with a wide range of partners to provide work and training opportunities for young people. Partners included schools, universities, and friends groups; youth-serving programs sponsored by government agencies; environmental organizations and research institutions; and local, regional, and national youth corps organizations, many of which are members of the 21st Century Conservation Service Corps (21CSC). In addition to state resource program funding, grants from the Developing the Next Generation of Conservationists program, launched by the National Fish and Wildlife Foundation, and from the Department of the Interior (DOI) provided vital support for 21CSC programs and projects. The DOI also funded six Volunteers in Service to America (VISTAs) who worked with BLM partners to create economic opportunities through education and volunteer projects in underserved communities in Colorado and New Mexico.

In June 2015, students from Eastern Arizona College (EAC), along with a Safford Field Office natural resource specialist, gave a presentation to the annual Partners Outdoors conference in Washington, DC. Through a longstanding partnership between the BLM and EAC, students

Payroll and Partner Youth Hires, FY 2015*			
State Office	BLM	Partner	Total
Alaska	229	436	665
Arizona	122	95	217
California	362	231	593
Colorado	247	331	578
Eastern States	43	17	60
Idaho	464	50	514
Fire and Aviation	68	0	68
Montana/Dakotas	279	89	368
Nevada	461	177	638
New Mexico/Oklahoma/Texas/Kansas	262	158	420
Oregon/Washington	689	606	1,295
Utah	309	207	516
Wyoming	264	60	324
Washington Office	92	17	109
National Operations Center	73	3	76
Total	3,964	2,477	6,441

<sup>\*</sup> Totals reflect FY 2015 metrics. Young people age 35 and under; more than 80 hours.

are engaged in rare plant surveys, springs inventory and assessment, and habitat restoration projects in the Gila District. The presentation highlighted how such partnerships can support priority work for the BLM while providing students with hands-on learning opportunities.

In FY 2015, youth crews continued to play an important role in building and maintaining trails, campgrounds, and other recreation facilities. Interns conducted visitor use surveys and provided valuable support for visitor services by leading hikes and interpretive programs as well as working with school groups. Latino interns engaged through Environment for the

Americas conducted shorebird research at several key locations and assisted with outreach to Spanish-speaking visitors and communities. Other interns and crews inventoried archaeological sites, assessed lands with wilderness characteristics, and monitored water quality. In addition, they monitored and improved sage-grouse habitat and participated in assessment, inventory, and monitoring projects in several states.

#### **Learn More About Us**

www.blm.gov/education





## HOW THIS REPORT WAS COMPILED

The BLM collected data for this report from more than 300 employees and partners who contributed more than 1,100 reports on education, interpretation, volunteer, and youth employment programs in BLM national, state, and field offices. Additional data and photographs were drawn from articles published in the BLM Daily, the online publication for BLM employees.



By the Numbers	
Education and Interpretation Program Participants	228,048
Volunteer Hours	30,401
Volunteer Contributed Labor	\$716,248
Youth Hires	665

Partnerships and deep community support are the common threads that run through all of BLM Alaska's efforts to invite people onto public lands to play, learn, serve, and work. Schools, tribal councils, businesses, and cooperative weed management organizations were among the key players who helped connect volunteers, students, veterans, and Wounded Warriors to their lands. The efforts paid off in benefits such as reduced invasive weeds, more success in fighting wildfires, and additional ideas for mitigating climate change.



#### **Wounded Warriors Snowmobile Their Way to Fun**

In partnership with the Valdez
Snowmachine Club, Steve Weeks and
Rhonda Williams of BLM Alaska invited
Wounded Warriors from Joint Base
Elmendorf–Richardson to the club's second
annual poker run and a day of fun on snow
machines. The event is called a "poker run"
because veterans stop at five checkpoints
and collect a playing card at each one.
The three veterans with the best poker
hands at the end receive prizes donated by
the community. Local residents lent their
snowmobiles, a hotel provided free lodging
to the participants, and three restaurants
donated meals for the event.

Steve and Rhonda serve as president and secretary of the Valdez Snowmachine Club. They and others in the club helped start the poker run in 2014 because, as Steve says, "Our Wounded Warriors have given so much of themselves for the security of our nation, they deserve to have some fun and leave the stress behind, even if it is just for a day. It's the least we can do."







#### **Service Learning Project Promotes Climate-Friendly Practices**

It is easy for kids to feel hopeless about a big problem like climate change, particularly in a state where the effects are so evident. As an antidote for these feelings, the Campbell Creek Science Center conducted a pilot program in partnership with the Chugach School District's Voyage to Excellence program. The Saturday session brought together 10 rural Alaska students to generate and carry out ideas to adapt to a changing climate. After a hands-on exercises about the carbon cycle, the teens discussed how climate change is affecting their communities and how they might spearhead efforts to cope with it.

students voiced concerns about worsening wildfires and floods, difficulty getting around by snowmobile in areas where snow melts sooner each year, and warming-related threats to local plant and animal species. Students formed groups and developed action plans to organize and publicize litter cleanups. They also planned social walking clubs to provide a friendly, safe, and pollution-free alternative to snowmobiling. By moving from understanding problems to carrying out solutions, the students will become more confident and hopeful in the face of serious challenges.





#### **Volunteers Step Up for Invasive Weed "Smackdown"**

European bird cherry. White sweetclover. These benign-sounding invasive weeds are on the most-wanted list in Alaska. Left alone, the weeds degrade salmon and moose habitat, so the BLM has cosponsored a weed removal "smackdown" annually since 2010. BLM Alaska works with Anchorage Cooperative Weed Management Area (CWMA) members to engage volunteers in pulling out the weeds. In 2015, 80 volunteers descended on Russian Jack Springs Park to tackle the two invasive ornamentals.



The BLM is also a partner in the Copper Basin CWMA, where dozens of volunteers of all ages removed more than 1,300 pounds of white sweetclover along area roadways. Public engagement events like the Anchorage and Copper Basin "smackdowns" help limit the spread of invasive plants on public lands.



#### **Veterans Battle Wildfires with Team Rubicon**

After the Haiti earthquake in January 2010, former marines Jake Wood and William McNulty founded Team Rubicon. The group comprised other military veterans and civilian first responders who wanted to support disaster relief. The veterans set out to use their military skills and experiences, such as teamwork, decisive leadership, risk mitigation and management, logistics, and emergency medicine, for a good cause. They realized they could use these skills in the BLM fire program, providing an opportunity for themselves and other veterans to acquire jobs and develop interests in careers with the BLM.



"I think our presence here is a natural evolution from our [Team Rubicon] mission," said Marc Gonzalez, a Navy reservist who lives in Colorado Springs, Colorado. "Veterans have a unique skill set, unique training, and a unique way to be able to manage diverse situations that require a lot of on-your-feet training."



By the Numbers	
Education and Interpretation Program Participants	127,381
Volunteer Hours	128,551
Volunteer Contributed Labor	\$3,028,662
Youth Hires	217

With more than 128,000 volunteer hours reported in FY 2015, Arizona has one of the BLM's busiest volunteer programs. From urban areas around Phoenix to desert regions to the shores of Lake Havasu, BLM volunteers do everything from removing trash to creating inventories of priceless cultural treasures. Many volunteers are on duty during the winter months, when "snowbirds" crowd into the state's recreation sites.

BLM Arizona offers one of the premier work-study programs through Phoenix College. The state office also provides education programs and created nearly a dozen Junior Ranger and Junior Explorer booklets to engage students of all ages.

being burned based off colors and thickness."



#### The BLM, City of Kingman Host Mountain Bike Race



Nearly 50 mountain biking enthusiasts gathered in April for the third annual noncompetitive race at the Cerbat Foothills Recreation Area (CFRA). The CFRA trail system is a popular three-season destination for hikers, mountain bikers, and equestrian users. By steadily expanding its trails over the last 20 years, the CFRA now offers 32 miles of trails for nonmotorized uses. The BLM and partners are currently constructing an additional 9.5 miles of trail, furthering the connectivity between existing trails and making it possible to welcome even more of the community to the CFRA for recreation events.



#### **BLM Partnership Supports Police and Fire High School**

For 12 years, BLM Arizona and the Phoenix Union High School District have partnered to provide hands-on career education to local students. Thirty-one students graduated from Franklin Police and Fire High School in 2015, completing a BLM-sponsored type 2 firefighters course and earning eligibility for entry-level federal employment. The course blends 40 hours of classroom training with a tough field day during which students handle drip torches, practice survival in shelters, and hike long distances uphill.

Israel Vega, a freshly minted graduate, is pursuing an associate's degree in fire science. He noted that the type 2 course taught him "about the incident command system and how to effectively approach wildland fires." Vega said, "I also gained the ability to read smoke and to tell what kinds of fuels are

Alumnus Kelly Castillo, who now works in the BLM fire program, spoke at the graduation ceremony. He said, "I can't wait for you all to apply for positions with the BLM. Hopefully one day I'll see you out there on the fire line!"





#### **Volunteers** Remove 13 Tons of Trash from Table Mesa

As part of the Respected Access in Arizona campaign, more than 200 people volunteered to help clean up the BLM-administered Table Mesa Recreation Area, 40 miles north of Phoenix. They removed about 13 tons of trash, including a pile of "trigger trash," as part of the annual springtime event.

The 12,000-acre Table Mesa Recreation Area is popular with recreational target shooters, hikers, off-highway vehicle riders, campers, hunters, mountain bikers, and equestrians. Unfortunately, some who enjoy the area also mistreat it, which is why the BLM partners with Tread Lightly! (a nonprofit outdoor ethics organization) to conduct the cleanup.



The event served as a teachable moment for recreational shooters about the effects of irresponsible shooting. The 1-day cleanup, which is promoted by BLM Arizona, the Arizona Game and Fish Department, and Tread Lightly!, is one part of a broader strategy to educate recreational shooters.







#### High School Interns Explore Law Enforcement Careers

Through an innovative internship program between BLM's Tucson Field Office and a nearby school, students gain exposure to public lands law enforcement at the federal, state, and local levels. San Miguel High School places interns with the BLM law enforcement program to illustrate the role and importance of a law enforcement unit within a natural resource agency like the BLM in terms of employee and visitor safety.

Gila District Law Enforcement Officer Wes Davis mentored the students. Davis said, "We wanted to give the high school interns a comprehensive understanding of what the BLM's mission is, the jobs covered by BLM law enforcement, and the way we work with other federal agencies. This was a great experience for these high school interns who have never visited public lands."

By the Numbers	
Education and Interpretation Program Participants	678,617
Volunteer Hours	190,831
Volunteer Contributed Labor	\$4,495,978
Youth Hires	593

In 2015, BLM California provided a wide array of opportunities for children and adults to discover the coast and also discover the desert. Public education and outreach were as diverse as the state itself. From Archaeology Day with the Susanville Indian Rancheria to a wildflower festival in Palm Desert, from Sheep Appreciation Day at Fort Ord National Monument to lighthouse tours of the newly reopened Trinidad Head Lighthouse, the BLM and its partners helped thousands of people come to appreciate the many facets of California public lands.

Through day camps and night hikes, overnight campouts, and more, young people learned about the natural and cultural resources found on public lands. Many shared their newfound knowledge with others. They created murals and sang songs about the wilderness at the Desert Discovery Center and designed signs for an interpretive trail near Bishop.

Along the northern California coast, more than 1,000 students took a "stand in the sand" as part of Kids Ocean Day celebrations. This annual activity is coordinated along the shores of Humboldt Bay by the BLM Arcata Field Office and numerous partners. Partners and volunteers also took part in festivals, fairs, and wild horse adoptions as well as trash cleanups and invasive species removal.

For those young people exploring possible career pathways, the third annual Youth Summit brought together more than 500 students and nearly 50 organizations focused on engaging the next generation in natural resources and the outdoors.



#### Families Find Night Adventures at the Monument

Daytime summer heat did not keep people from discovering the wonders of the Santa Rosa and San Jacinto Mountains National Monument in 2015. They pursued their exploratory adventures after dark, thanks to a series of family nights held by the BLM Palm Springs Field Office in partnership with the Friends of the Desert Mountains. Families had the option of going on "dune discovery" hikes or on scorpion hunts. Most nights as the sun was setting, bats began circling and star-filled skies greeted participants, who used ultraviolet lights to search for scorpions, tarantulas, lizards, owls, and other desert creatures. By the time the summer adventure series was over, nearly 400 people from the Palm Springs area had a new appreciation for the nighttime desert.





#### **Students Monitor Salamanders at Headwaters**

Headwaters Forest Reserve in northern California has been a Hands on the Land site since 2005. Students from local schools learn about old growth forest ecosystems as well as the logging history of the area. In the summer of 2015, the Arcata Field Office hosted a Teacher on the Public Lands from Eureka's Winship Middle School. With support from the BLM staff, teacher Hart Ford developed curriculum units on watershed health and salmon restoration as well as salamander monitoring. As the school



year began, students from six different classes were able to work with the BLM staff on the "real experience" of monitoring salamanders. As one student said, "When you can see a real salamander, you can see how it moves and you can see that it's moist. You can't see that when you just read it in a book."



#### **Generation Green Looks to the Future**

An innovative partnership between the BLM and U.S. Forest Service brought the Generation Green crew from Grant Union High School in Sacramento to serve on a variety of projects for the Mother Lode Field Office. During 2015, Generation Green team members assisted with habitat restoration and upgrades to trails and other facilities at Cosumnes River Preserve—after honing their skills at paddling canoes along local waterways. Later in the summer, they enjoyed rafting along the American River before building a stairway along the Greenwood Creek Trail nearby. The team



also participated in Camp Smokey at the California State Fair, teaching children and the public about fire prevention and safety indoors and outdoors. The BLM selected five team members, incoming high school juniors, for internships in the state office, further nurturing their interests in natural resource careers.



#### **Partners Research Effects of Drought on Carrizo Plain**

The Carrizo Plain National Monument is the site of an ongoing collaborative effort involving the University of California, Berkeley; the BLM Bakersfield Field Office; and other partners to study the complex relationships among plant and wildlife species within the Carrizo ecosystem, with a particular emphasis on the endangered giant kangaroo rat. The ongoing drought in California has made understanding these relationships, and the impacts of management decisions on grazing and other uses, critically important. With additional funding from the National Science Foundation's Research Experiences for Undergraduates program, two wildlife interns conducted surveys to determine the potential for burrow counts as a population index by determining whether a relationship exists between the number of active burrows in an area and the number of giant kangaroo rats actually living there.



By the Numbers	
Education and Interpretation Program Participants	320,909
Volunteer Hours	198,775
Volunteer Contributed Labor	\$4,683,139
Youth Hires	578

The BLM partners with many environmental education providers, state and federal agencies, and local schools and universities to bring quality education to teachers and the citizens of Colorado. The focus is to provide information on outstanding natural and cultural resources on the 8.3 million of acres of public lands statewide. In February 2015, President Obama designated Browns Canyon National Monument, adding to the Canyons of the Ancients National Monument and three other national conservation areas in the state. These National Conservation Lands provide vast resources for learning and playing.

Colorado's volunteer program is the largest in the BLM, with nearly 4,000 individuals contributing close to 200,000 hours, worth more than \$4.6 million. BLM Colorado teams up with Volunteers for Outdoor Colorado, which maintains a comprehensive clearinghouse for outdoor opportunities. A partnership with the Outdoor Stewardship Institute provides training for volunteers and leaders.



#### Archaeology, Paleontology Come to Life at Kids' Day Camp

The Museums of Western Colorado (MWC) and BLM Grand Junction Field Office teamed up to bring the Archaeology and Paleontology Kids' Day Camp to 30 underserved students. The

3-day camp opened up BLM museum collections and educational experiences to students from Mesa County Valley School District 51. The goal of the camp is to foster stewardship on public lands and inspire interest in sciences such as geology and archaeology.

Held during District 51's spring break, the camp included behind-thescenes tours of MWC's network of museums, which house archaeological and paleontological collections. The camp's outdoor component focused on the proper collection and care of archaeological and paleontological collections, both in the field and in the museum laboratories.



#### First Whitewater Park Opens on BLM Land

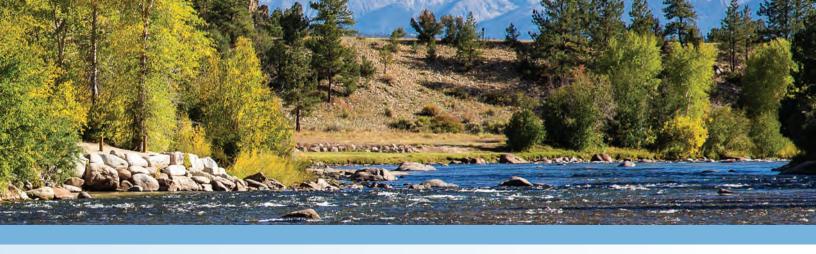
The Gore Canyon Whitewater Park, located at BLM's Pumphouse Recreation Site on the upper Colorado River, was opened to the public in July 2015. It combines boulders and concrete structures underwater to create a whitewater wave.



Grand County worked with a variety of entities to secure water rights to protect the park's waterflows, which benefits fishing

and recreational boating. The Kremmling Field Office conducted an environmental assessment (EA) of Grand County's right-of-way application, adding several mitigating features, including an area for fish navigation. "The Whitewater Park provides a unique recreational experience for the 60,000–70,000 people who visit this rec area each year," said Stephanie Odell, Kremmling Field Manager. "We have an excellent working relationship with Grand County, which made the EA process go smoothly," Odell added.







#### Teamwork Creates Natural Classroom at McInnis Canyons

It took an AmeriCorps VISTA intern, a Hands on the Land grant from the National Environmental Education Foundation, the science, technology, engineering, and math (STEM) program at the Dual Immersion Academy, BLM Colorado, and the Colorado Canyons Association to turn McInnis Canyons Natural Conservation Area (NCA) into a natural classroom for academy students in grades K-3. In a dual immersion school, half the students speak English as a first language, half are native Spanish speakers, and instruction occurs in both languages. Ryan McConnell, the VISTA intern, is primarily responsible for promoting diversity within the BLM, connecting the community to their public lands, and teaching the public about stewardship. He hosted the students on three trips to McInnis Canyons NCA and visited classrooms as part of the project. His lessons focused on native plant and animal species, geology, weather, history, and fossils.

"When the kids ask important questions about the natural world around them, it awakens my own curiosity and wonder," said McConnell. "It was great to hear children learning about the NCA resources in Spanish," said NCA manager Collin Ewing, "I think I learned as

much as the kids did!"



#### Rocky Mountain Youth Corps Inventories Wilderness

The Rocky Mountain Youth Corps (RMYC) provided intensive support to the BLM Colorado River Valley Field Office by inventorying its vast and rugged wilderness areas. It took three RMYC crews 4 weeks to inventory about 20,000 acres at the base of the Roan Plateau and at King Mountain. Teams of corps members hiked grids across rugged terrain and noted evidence of human activity.

"The Rocky Mountain Youth Corps work crews made a task that seemed insurmountable possible," said Kimberly Leitzinger, outdoor recreation planner for the BLM field office.

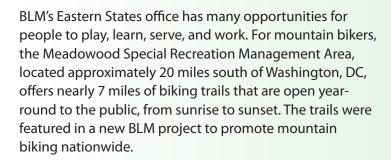


"Those young adults were able to cover a lot more ground in a small timeframe than the BLM would have been able to do on our own."

"Our goal was to scout for evidence of human activity, whether it be a structure, tires or other trash too big to pick up, fences, built trails, or noise," said Katie Caulfield, one of the participating Youth Corps members. "I was able to use GPS units in the field, giving me real life experience in my area of study, which was an amazing opportunity few encounter so early in their career!"



By the Numbers	
Education and Interpretation Program Participants	146,280
Volunteer Hours	20,693
Volunteer Contributed Labor	\$487,527
Youth Hires	60



Eastern States also has an extensive program for volunteers. There are opportunities at district offices in Jackson, Mississippi, and Milwaukee, Wisconsin, and at the Lower Potomac Field Station at Meadowood in northern Virginia.

Meadowood offers environmental education programs for homeschoolers, public and private schools, Boy Scouts and Girl Scouts, and community youth agencies. Programs and activities consist of flora and fauna studies, watershed monitoring, fishing, hiking, biking, volunteer service projects, and many other outdoor environmental education activities. Partners range from local elementary and middle schools to universities in the Washington, DC, area and regional youth groups.

Education programs continued to expand at the Jupiter Inlet Lighthouse Outstanding Natural Area in Florida. Students have contributed more than 10,000 hours of volunteer service and conducted environmental monitoring and invasive plant removal at the site since 2004.



## **>**

#### **Story Map Explores Wisconsin Islands**

Recreation along the rivers in Wisconsin got easier in 2015, when the BLM Eastern States office released an interactive map showing approximately 400 islands that are available for fishing, boating, and camping. Many of these islands have been inaccessible and hard to identify. Using modern mapping technology, the BLM staff created an online "story map" showing 21 major waterways across the state, the islands within those waterways, and other details, including the acreage of the island, county, and allowable uses for the island. The development of this map is the first of two phases of a media strategy intended to help citizens locate and use the islands. The second phase involves a crowd-sourcing application that allows citizens to "check in" on islands and report any number of activities or observations. In 2015, the BLM staff attended the "Canoecopia" in Madison, Wisconsin, to promote the recreational uses of the islands.



## FARN W

#### **Kindergartners Visit Meadowood**

In June 2015,
26 kindergartners
from Ross
Elementary
School, located
in Washington,
DC, visited
Meadowood
Special Recreation
Management Area
in Lorton, Virginia.
The children were
joined by parents,
teachers, and
volunteers who



all spent a fun day exploring the outdoors. They went fishing, took part in a habitat hike, and played games to learn about the environment. They even discovered the weather station recently installed on the property as part of an ongoing project the BLM has with American University in Washington, DC.



#### **Interns Create a Mile-Long Trail**

In September 2015, the Southeastern States District Office in Jackson, Mississippi, hosted an American Conservation Experience youth crew at the Jupiter Inlet Lighthouse Outstanding Natural Area in south Florida. The seven-member crew arrived from Asheville, North Carolina, ready to work. Their focus was on clearing and stabilizing a mile-long administrative access trail that ultimately will become part of the publicly accessible trail system within the area.



While the crew's labor mainly consisted of clearing and grubbing an existing trail bed, they also assisted with exotic invasive vegetation control and resolving a few erosion and stability issues along the trail. Although the crew had only sand to work with, the lack

of stone, rock, and mud didn't slow them down. They were able to repurpose some of the dead and downed Australian pine—an exotic invasive tree that another crew eradicated from the site during the previous year's exotic invasive removal project.



#### Y

#### **Volunteers Promote Wild Horses and Burros**

The BLM Northeastern States District's wild horse and burro crew in Milwaukee, Wisconsin, recognized BLM volunteers Phil and Chriscinda "Chris" Jamison for contributing their time and effort supporting the wild horse and burro program

for 15 years. Phil and Chris have performed numerous tasks to help the BLM, including promoting the program by serving as media contacts and ambassadors, assisting with all aspects of adoption events, fostering dozens of mustangs and finding good homes for them, conducting routine compliance inspections, and responding any time an animal was in need.





By the Numbers	
Education and Interpretation Program Participants	83,997
Volunteer Hours	47,283
Volunteer Contributed Labor	\$1,113,987
Youth Hires	514

Throughout 2015, BLM Idaho provided the public many avenues for interaction with their public lands. At the Eastern Idaho State Fair, youth involved in 4-H trained wild horses, increasing the likelihood of auction or adoption for the animals. At BLM Idaho's Desert Discovery Days, hundreds of students met and learned about raptors and the desert habitat that supports them.

Volunteers and partner organizations pitched in to overturn the decades-long practice of dumping trash at Hub Butte. The Idaho National Guard, the Twin Falls County Sheriff's Office, and the BLM worked with volunteers to clean up the area and send the signal that it was not a garbage dump. "The cleanup is just the beginning," said Twin Falls County Sheriff Tom Carter. "We need to continue to get the message out that it is not okay to dump on our public lands."

The BLM Idaho staff took their expertise to classrooms across the state. For example, State Office GIS Specialist Bernadette Hoffman prompted girls to consider careers in science, technology, engineering, and math (STEM). BLM Idaho also used the Hands on the Land program to bring 52 eighth graders to the Craters of the Moon National Monument, where retired Brigham Young University-Idaho professor Ed Williams taught them about geology, recreation ethics, safety, and public lands management.

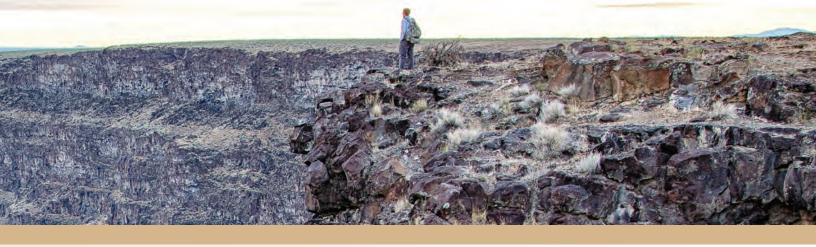


#### Kids' Day Field Trip Blends Learning, Fun

Think back to the best field trips you experienced as a student. Odds are that much, if not most, of the learning was camouflaged by fun. So it was when BLM's Salmon Field Office hosted their annual Kids' Day Field Trip in the spring for 60 second-grade students from Pioneer School in Salmon, Idaho, At the Public Lands Center, the students saw firefighting tools and MREs (meals ready to eat), toured the fire dispatch center, and learned how to prevent the spread of noxious weeds. They also had the chance to climb on and spray water from the BLM's fire engine. At the Salmon Air Base, they toured the Forest Service rappel base, watched firefighters rappel from the training tower, and crawled through the shell of a training helicopter. At BLM's Shoup Bridge Campground, on the banks of the Salmon River, they held live fish, learned how to play disc golf, and talked about responsible recreation and camping practices. The day's excitement prepared them to enjoy visiting public lands safely and responsibly.









#### Sixth Graders Provide Hands-On Help for Pollinators

What can sixth graders do to help meet the important local and national goal of protecting pollinators? In May, students at Bruneau, Grand View, and Roosevelt Elementary Schools, all located in southwest Idaho, observed and collected data on pollinators in the schools' native gardens.

BLM Idaho's Bruneau Field Office partnered with the schools to help students build pollinator habitat out of wood blocks for solitary native bees, mix native seed into "seed bombs," and create pollinator art.

BLM Wildlife Biologist Joe Weldon, who helped host the events, commented,



"Insect pollinators are so naturally captivating to children that they are eager to learn about their habitat and conservation."



## Volunteers Pitch In to Reconstruct Fire-Damaged Trails The PLM Sheehene Field Office in Idaha part

The BLM Shoshone Field Office in Idaho partnered with the International Mountain Bicycling Association and the Blaine County Recreation District to reconstruct the Croy Creek Trail System last spring and summer. A series of volunteer events was organized to improve trails that were damaged during the 2013 Beaver Creek Fire.

"For safety reasons, we have found it necessary to keep the trails closed while construction was in progress. As the trails are interconnected, it simply did not allow for segments to be opened until construction of the project was entirely complete," said BLM Outdoor Recreation Planner John Kurtz. "We are grateful for the support of our partners and the patience of those who enjoy using this trail system."







#### **Youth Crew Constructs Nearly 3,000 Feet of Fence**

Last fall, staff from the BLM Idaho's Challis Field Office partnered with the Student Conservation Association (SCA) and Youth Employment Program to build a wildlife-friendly jack leg fence across the Chilly Slough Wetland Conservation Project Area. Chilly Slough is one of the few remaining examples of a natural, high desert, spring-fed wetland. Nine SCA members completed a total of 2,940 feet of new fence and cleaned up other old fence materials that threatened wildlife. The fence serves as a property boundary between private, state, and BLM land.



## MONTANA/DAKOTAS

By the Numbers	
Education and Interpretation Program Participants	246,245
Volunteer Hours	50,017
Volunteer Contributed Labor	\$1,178,401
Youth Hires	368

BLM Montana/Dakotas engages volunteers and partners to help achieve its mission. Annually, volunteers contribute hundreds of thousands of dollars' worth of labor. In addition, the BLM establishes numerous formal partnerships with state agencies, conservation and industry groups, Indian tribes, and many other organizations and individuals. Through some of these partnerships, the BLM recruits and trains students for possible future employment. One internship program with the Salish Kootenai College allows students to gain valuable work experience and earn college credit while helping the BLM accomplish necessary field work.

A key partner, the Montana Conservation Corps, supplied work crews on projects across Montana and the Dakotas. Overall, 368 young adults were hired to work on forestry projects and recreational improvements and to assist on National Conservation Lands.

Montana is also the home of the Project Archaeology program, a collaboration between the BLM and Montana State University. The national program certified 94 Montana teachers in secondary education programs on archaeology.

#### **Ice Fishing Prompts Warm Feelings**

In February, students enjoyed a day on the ice during the annual Nelson Reservoir Kids' Ice Fishing Day in Malta. Kathy Tribby, outdoor recreation planner for the BLM HiLine District, said that the event "fits in with several state and national initiatives, such as BLM's Take It Outside! initiative, which focuses on programs that engage children and families in outdoor activities."

Students from Whitewater School were among the kids who learned to fish on a frozen lake through the combined efforts of the BLM, U.S. Fish and Wildlife Service, Malta Chapter of Walleyes Unlimited, and Montana Fish, Wildlife and Parks. Walleyes Unlimited members taught about the more common fish species in Nelson Reservoir and how to use ice fishing gear.









### Kids College Features BLM Wildfire Workshop

At Montana Tech's summer Kids College, the BLM partnered with the Montana Department of Natural Resources and Conservation to bring wildland fire education to students in grades 1–6. The workshop covered the natural role of fire in western Montana forests, prevention of unwanted wildland fires, fire safety, and the proper use of recreational campfires. These topics are especially relevant to youth in western Montana, a region that is historically no



stranger to wildfires.
The workshop also
taught and reinforced
key science literacy
concepts such as
properties of matter,
ecosystem fluctuations
and cycles, plant and
animal habitat, and
human interactions
with ecosystems.



#### Scout Plans a Batty Path to an Eagle Badge

In the spring, Dylan Johnson, a Life Scout in the Boy Scouts of America, met with Kelly Bockting, a wildlife biologist with the BLM Montana Dillon Field Office, to propose working with his father and another scout to place bat houses on public lands for his Eagle Scout project.



Enthusiastic BLM staff members quickly determined that the Henneberry homestead would be the best location for the project. Established in 1883, the Henneberry homestead is one of the best-preserved examples of early homesteading activities on public lands in Beaverhead County. The cabin itself was built in 1905 on the banks of the Beaverhead River, near waterfowl production ponds that create great mosquito-breeding habitat. Because a single bat can consume more than 1,200 mosquitos per hour, cabin renters are likely to welcome the bat houses. The Dillon Field Office purchased the materials for construction of the six bat houses that Dylan and his crew built and installed near the cabin.





#### **Conservation Corps Team Improves Sage-Grouse Habitat**

Conserving the habitat for the greater sage-grouse is a top priority for the BLM. To support the effort, the Montana Conservation Corps (MCC) Central Divide Team enhanced habitat in north-central Montana for the BLM Havre Field Office. The project included clearing young age classes of ponderosa pine and Rocky Mountain juniper in valuable greater sage-grouse nesting and winter habitat. Not only was sage-grouse habitat improved, but herbaceous vegetation is expected to increase. The six-person MCC team battled smoky conditions from wildfires in western Montana and the Pacific Northwest. The crew used chainsaws to accomplish most of the treatment, but on the final day, with saws overworked, they used hand tools. The MCC is a nonprofit organization that inspires young people through hands-on conservation service to be leaders, stewards of the land, and engaged citizens who improve their communities.





By the Numbers	
Education and Interpretation Program Participants	821,074
Volunteer Hours	58,975
Volunteer Contributed Labor	\$1,389,451
Youth Hires	638

BLM Nevada seems to attract visitors—and lots of them. In 2015, the BLM hosted Interior Secretary Sally Jewell for the official launch of Every Kid in a Park at Red Rock Canyon and the BLM, along with its partners, welcomed some 70,000 visitors to the Black Rock Desert for the Burning Man Festival, the largest single permitted event on public lands.

In the Carson City District, tribal youth learned about ethnobotany and played Native American games at the Pyramid Lake Paiute Tribal Youth Camp, while at a Hands on the Land site along the Truckee River, fourth and fifth graders learned about conservation and river and wetland ecosystems. Students and teachers in the Elko District learned about hydrology, wildland fire, and wild horses and burros or explored regional history through exhibits, hands-on activities, and a Junior Explorer booklet at the California Trails Interpretive Center. More than 300 fourth graders from schools in and around Winnemucca participated in the annual Lovelock Cave Days, which included a visit to the Marzen House Museum and presentations along the trail to the cave. At Red Rock and Sloan Canyons, rangers led hikes on topics such as fossils, archaeology and history, birds, and the geology of the area. Nighttime Astronomy in the Park events, held at Red Rock Canyon in partnership with the Las Vegas Astronomical Society, attracted more than 600 people.

Partners and volunteers contributed to a wide range of activities—from archaeology education at the Great Basin Teachers Workshop to Artists-in-Residence receptions at Red Rock Canyon and Black Rock Desert–High Rock Canyon National Conservation Areas, to National Public Lands Day events throughout the state. At Sloan Canyon, a Veterans Conservation Corps crew was honored for their months of work repairing trails and restoring habitat and for training additional volunteers.



#### Summer Exploration Camps Promote Interactive Learning

During the summer of 2015, more than 130 youths, ages 8 through 17, participated in Summer Exploration Camps developed in partnership with the Great Basin Naturalists, a program of the Great Basin Institute. Campers joined a discovery-based team facilitated by BLM resource specialists. Activities included service learning opportunities, extended-day outdoor adventures, leadership experiences, learning self-reliance, and making new friends. This summer's experience featured 8 weeks of fun, educational, hands-on discovery of natural wonders.

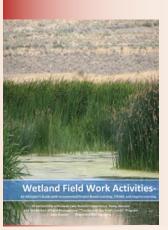




## Z M

## Teachers on the Public Lands Expand Learning Opportunities

Teachers on the Public Lands (TPL) served at two Nevada Hands on the Land sites during the summer of 2015. In the Carson City District, the TPL worked with the staff to identify field sites that are suitable for expeditionary learning opportunities for middle and high school students. Outdoor classrooms are great places to learn about science, technology, engineering, art, and math (STEAM). The office developed an interactive map designed to show the different wetland sites, while the teacher developed a field activity guide with four STEAM-based activities. The Hands on the Land site at Red Rock Canyon also engaged a teacher who designed professional development workshops to meet Clark County School District requirements. While ranger-led education programs at the national conservation area



remain a
popular
choice for
local teachers,
training them
to lead their
own field trips
offers expanded
opportunities
for enhanced
learning.



National Public Lands Day Volunteers
Support the Black Rock Desert

National Public Lands Day was just one of several volunteer events sponsored by the Winnemucca District in 2015. During the weekend of September 25-27, approximately 125 volunteers camped on the Black Rock Desert Playa, along with staff members from the BLM Winnemucca District, Black Rock Field Office, and partnering organizations,



including Friends of Nevada Wilderness, Friends of Black Rock, and Nevada Outdoor School. During the celebratory weekend, one group of volunteers removed ¼ mile of trespass fencing in the Hualapai Valley, while another group used rakes, shovels, and magnetic tools to clean up 4,600 pounds of debris at the base of Razorback Mountain. The weekend also included Nevada Outdoor School's popular kid's camp, which provided fun and educational activities for younger participants.



#### **Crew Plants 32,000 Trees in 6 Days**

A Nevada Conservation Corps (NCC) crew found themselves operating chainsaws and swinging hoedads for fire rehabilitation, fuels reduction, and wildlife enhancement projects. The fire area was 30 acres of BLM-owned land and 51 acres of Alpine County land near a local airstrip.

The NCC crew also managed to plant 32,000 1-year-old Jeffrey pines in only 6 days through partnerships with the local county and American Forests, which supplied



a grant to fund the installation of mulch mats around each seedling. A previous crew had planted in the area 2 years ago, but due to drought and competition from other vegetation, only about 10 percent of the plants survived. The crew was assisted by a Great Basin Institute research associate, with another 500 trees planted by Sierra Front Field Office interns from the Chicago Botanic Garden.

## NEW MEXICO/ OKLAHOMA/TEXAS/ KANSAS

By the Numbers	
Education and Interpretation Program Participants	195,255
Volunteer Hours	89,893
Volunteer Contributed Labor	\$2,117,879
Youth Hires	420

BLM New Mexico connects people to the public lands with an assortment of programs to educate, engage, and employ youth from early childhood through young adulthood. The BLM reached more than 195,000 participants with interpretive and education programs in 2015.

At El Malpais National Conservation Area, a Hands on the Land site, a series of more than 100 programs reached over 3,500 youths. The variety of natural features, including a historic lava flow and a billion-year-old plate boundary, matches the variety of the students—who spoke five languages from five cultures within partner schools—learning the stories of hundreds of millions of years of life.

The Prehistoric Trackways National Monument staff sponsored trips, afterschool programs, and outreach events, including a STEM festival and a science fair. A Teacher on the Public Lands—Mark Dwake—created a virtual tour of the monument.

Volunteers in New Mexico contributed nearly 90,000 hours on projects at sites ranging from Dripping Springs Natural Areas to the remote Chama River Canyon in northern New Mexico. Key partners included New Mexico Volunteers for the Outdoors, which focuses on improving and maintaining trails throughout the state.



LAY

#### Roswell Hosts 6-Day Endurance Ride

The BLM Roswell Field Office hosted an American Endurance Ride Conference (AERC) event at the Fort Stanton–Snowy River Cave National Conservation Area. Almost 200 horseback riders took part in the 6-day event; each day, participants could choose to ride across 35 or 65 miles of the national conservation area, which includes 73 miles of sustainable trails—among the most within a BLM-managed area.

Several months prior to the event, the AERC worked with the Roswell Field Office on a trail condition assessment. An environmental assessment was written and trail work was prioritized. The trail crews were comprised of youth hires from AmeriCorps and EcoServants (Lincoln County).





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#### **BLM Participates in Friends Rendezvous**

The Conservation Lands Foundation invited the BLM to participate in the Friends Rendezvous in Las Cruces, home of the BLM's Organ Mountains–Desert Peaks National Monument. Attendees installed newly designed signs at the monument. The annual event is a gathering of stewards, advocates, and general fans of National Conservation Lands. In 2015, there were close to 200 participants, representing the bulk of the 58 organizations in 11 states that make up the Friends Grassroots Network.

One group of about 40 volunteers helped clear vegetation from Ice Canyon behind the Dripping Springs Visitor Center. This area is a popular location for picnics, birdwatching, and educational and interpretive programs, but it had become overgrown with

vegetation. The volunteers helped clear out the area with impressive speed, making the area usable in time for spring field trips.





#### **Cross Bar Ranch Hosts Day Camp**

In May, the BLM Amarillo Field Office hosted a hands-on day camp for Caprock High School students at the Cross Bar Ranch. The camp covered subjects such as habitats, conservation, land management challenges, and physiology. Cross Bar's 12,000 acres are managed by the BLM because of their ecological, recreational, and educational values.

The BLM Roswell Field Office supported this year's outdoor classroom by bringing an inflatable mock cave to teach kids about natural cave structures, the geologic process that leads to their formation, and their fragility and irreplaceable beauty. The staff also gave students a primer on the importance of prescribed fire in managing wildland ecosystems and taught them about using radio telemetry to track and study wildlife.

Key partners in this Hands on the Land youth initiative included West Texas A&M University, the Texas Parks and Wildlife Department, and the BLM Roswell Field Office. Each partner organization provided student or professional volunteers to deliver expert instruction.





## WORK WORK

#### New Mexico Offices Hosts 19 Direct Hire Authority Interns

In 2015, BLM New Mexico recruited interns through the Direct Hire Authority for Resource Assistant Internship Program. Of the 61 interns who participated in the program bureauwide, 19 worked with BLM New Mexico. The BLM recruited each intern through one of its designated partner organizations: the Hispanic Association of Colleges and Universities, American Conservation Experience, Southern Utah University's Intergovernmental Internship Cooperative, and Geological Society of America.

Justina Thorsen interned in the Las Cruces
District Office as a natural resource specialist
in the abandoned mine lands program. During
her internship, she learned about the risks that
abandoned mines pose to public safety and
practiced her project management skills and
interdisciplinary teamwork.

Cody Howard interned in the Las Cruces
District Office as a wildlife technician while
pursuing a degree from New Mexico State
University. Some of the projects he worked on
included installing water catchment units for
desert bighorn sheep and elk and performing
surveys for Chiricahua leopard frogs, fish, and
prairie dogs.

Bridget Guiza worked as the National Environmental Policy Act and Planning (NEPA) intern at the Farmington Field Office. She learned about the complexities involved in the NEPA process, facilitated weekly NEPA meetings, and followed both large and small projects through a portion of the NEPA process.

## OREGON/WASHINGTON

By the Numbers	
Education and Interpretation Program Participants	1,377,578
Volunteer Hours	110,996
Volunteer Contributed Labor	\$2,615,066
Youth Hires	1,295

Oregon/Washington BLM continues to expand connections to the public lands for students and visitors thanks to thriving education and interpretation programs. Several BLM offices partnered in long-running Salmon Watch programs, providing thousands of students across Oregon with opportunities to witness spawning salmon, learn about watershed conservation, and dissect fish. Several offices also hosted Leave No Trace Traveling Trainers, providing the public with information about outdoor ethics as well as recreational opportunities on BLM lands.

The BLM established a new Hands on the Land site in the San Juan Islands National Monument, while several other Hands on the Land sites took advantage of the Teachers on the Public Lands program. New publications and websites were developed at the National Historic Oregon Trail Interpretive Center and at Yaquina Head Outstanding Natural Area, and several popular products were translated into Spanish.

In June, the Wenatchee Field Office hosted more than 300 youths and support staff for a 4-day historical reenactment of the Mormon pioneers' journey west. Native American youth also celebrated their traditions on Root Day. During this annual event, participants help harvest roots and then present them to the elders for use in the Spokane Tribe's Culture Week—a week focused on teaching tribal youth about their history, language, culture, and traditions.

Young people in Oregon also had the opportunity to participate in several unique internship opportunities thanks to the National Fish and Wildlife Foundation's Developing the Next Generation of Conservationists grant program. In the Coos Bay District, two high school students served as Hutton Junior Fisheries Biology Program interns, while at Yaquina Head Outstanding Natural Area, Latino interns from Environment for the Americas conducted shorebird surveys and outreach to Spanish-speaking visitors and community members.



#### **Kids Think Like a Salmon**

The Wenatchee River Salmon Festival is held each fall to celebrate the return of the salmon to the Wenatchee River in central Washington. The BLM was one of many natural resource agencies to host a booth at this 3-day festival. The BLM display featured an obstacle course, highlighting the journey of a salmon up the river. Some 3,000 "salmon," played by kids visiting the display, had to avoid fishing hooks, climb a fish ladder, swim through fire, splash through a fish-friendly culvert, and lay their eggs in a gravelly pool at the end.







#### **Yaquina Head Updates Curriculum**

The Hands on the Land program at Yaquina Head Outstanding Natural Area reached more than 3,500 K–12 students in 2015 and engaged the services of a Teacher on the Public Lands. At the area's famous tide pools, K–3 students learned about animal adaptations, while older students engaged in observations and hands-on learning about intertidal zonation and biological diversity. Erin Price, the 2015 Teacher on the Public Lands, updated the existing curriculum to meet Common Core standards and created a new lighthouse program for 3rd–5th graders, featuring an interactive role-playing game focused on western expansion and maritime history.



E R R

#### San Juan Islands Celebrate Biodiversity

Earth Day at San Juan Islands National Monument featured a competitive Great Island Cleanup and an awesome celebration of biodiversity. More than 100 volunteers and partners from a number of community organizations fanned out to 20 project sites, collecting more than 2,100 pounds of trash from roadsides and beaches. A dedicated sorting team was able to recycle almost 700 pounds of that trash. Following the cleanup, about 150 costumed participants of all ages creatively celebrated the diversity of life in a "Procession of Species" from around the world.







#### **Youth Corps Improves Habitat**

In the Coos Bay District, over 100 members of the Northwest Youth Corps engaged in a variety of projects to improve habitat for wildlife and benefit visitors at some of the district's popular recreation sites. Corps members pulled beachgrass from the North Spit of Coos Bay to improve habitat for the western snowy plover and removed shore pines from meadows at the New River Area of Critical Environmental Concern to maintain the rare coastal meadow habitat. Crews also worked on trails at New River and completed light maintenance at Loon Lake Campground prior to its opening day.



By the Numbers	
Education and Interpretation Program Participants	600,844
Volunteer Hours	92,600
Volunteer Contributed Labor	\$2,181,656
Youth Hires	516

BLM Utah invited people onto the public lands through numerous programs designed for diverse audiences. In August, Secretary of the Interior Sally Jewell came to Salt Lake City to announce an ambitious 2-year initiative to connect urban youth to Utah's great outdoors and career paths in natural resources. Escalante High School students responded to the Secretary's invitation by combining learning and service through the BLM's Take It Outside! initiative, providing hands-on opportunities for local students to strengthen their science, technology, engineering, and math skills.

Eighty Girl Scouts of all ages took part in Project Archaeology's Investigating Shelter program. They examined Utah's rich cultural heritage and learned about science-based careers. A Goshute elder taught the scouts an indigenous perspective of land use and encouraged them to pursue higher education.

At Nature High Summer Camp, high school students experienced "a day in the life" of a natural resource professional and learned about the complexities of public land management. They also conducted a service project. The BLM sponsored scholarships for ten Latino youth to attend the week-long camp.



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#### Camp Engages Latino Youth in Outdoor Fun

Over the summer, BLM Utah teamed up with Splore, an outdoor adventure organization, and Latinos In Action (LIA) to launch a successful new youth program, Camp LIA. The camp's goal is to create exciting opportunities for urban Latino youth to discover all there is to do in Utah's great outdoors.

The summer adventure camps included rock climbing, canoeing, and a ropes challenge course. The students learned about college and career paths, natural resources, and healthy lifestyles and picked up trash at the Jordan River and Little Cottonwood Canyon sites, emphasizing the spirit of service.













#### American Indian Youth Attend Science and Culture Camps

BLM Utah and its federal and state partners hosted two Earth Connections Camps for American Indian youth during the summer, one focusing on science and the other on culture. Campers rotated among multiple stations led by American Indian educators and agency scientists. Activities included dam construction, engineering, hydrology, archaeology, history, language, and art. Youth also learned about careers in public land and water management at the day-long camps, held at Red Butte Garden in Salt Lake City and the Youth Garden in Moab.

BLM Utah teamed up with the Utah State Board of Education to create the camps. In southern Utah, Camp Kwiyamuntsi welcomed Paiute youth for 4 days of fun and learning on their traditional homelands. Middle school students from five Paiute bands came together to celebrate their natural and cultural history and traditions.













#### Artists in Residence Contribute to a Golden

**Anniversary Celebration** 

Central Utah artists Anne Kaferle and Charles Callis unveiled their new landscape paintings featuring the Cleveland Lloyd Dinosaur Quarry's (CLDQ's) natural beauty and unique paleontological resources.



"The landscape of the CLDQ has a quiet power," said Kaferle.

"The mechanics of erosion are very evident there, and it parallels my painting process in the cyclical way that I build and destroy, leaving visible evidence of the painting's history. Rolling, monochromatic barrenness gives way periodically to outcroppings of dramatic angularity, color, and geologic history. It's a privilege to bear witness to the beauty of this Utah treasure."



#### Conservation and Recreation Both Win with Trails Project

Dozens of workers gathered in the desert just outside of St. George to complete a project that will save both an endangered plant species and one of the area's most popular mountain biking trails.

Avid mountain biker Lukas Brinkerhoff notes that 90 percent of the trails in the area are on public lands managed by the BLM. "If it wasn't for BLM open space, we wouldn't have the trails we have," he said. Brinkerhoff's biking advocacy group has enjoyed a positive working relationship with BLM staff members, who keep them updated on the necessity and progress of the dwarf bearclaw poppy conservation project. Brinkerhoff supports the BLM's efforts, in turn, by sharing trail updates and trail etiquette with other riders. "Education is the best tool to try to keep people on trail and avoid constructing illegal trails," Brinkerhoff said.



By the Numbers	
Education and Interpretation Program Participants	336,152
Volunteer Hours	18,602
Volunteer Contributed Labor	\$438,263
Youth Hires	324

Wyoming's vast and varied resources provided ample opportunities in 2015 to connect people of all ages with the public lands—through recreational activities, education and interpretation, and volunteer and work experiences. From Kids Fishing Day in Pinedale to a National Trails Day hike coordinated with community partners near Cody to avalanche safety training for Worland High School students, BLM employees made sure that Wyoming residents could play outside no matter what the weather. Boys and Girls Club members from Casper got to "Take It Outside!" during an Environmental Education Day along the Platte River. They learned about wildlife species in the region and about Native American customs and planted more than 500 trees and shrubs along the river.

The BLM and other partners enabled 140 students from Baggs, Wyoming, to participate in Trout Unlimited's Adopt-a-Trout program. The students helped the Rawlins Field Office staff tag and study the fish. Staff members also visited classrooms and hosted 3 field days where students learned about riparian areas and planted willows as part of a stream restoration project.

In Kemmerer, high school students assisted with waterfowl surveys, while students from Boise State University worked with the BLM's Cody Field Office to gather habitat data and locate nests of the long-billed curlew, a shorebird that mates and nests in the Intermountain West.





#### **Pirate Teaches Navigation to Youth**

The Conservation Outdoor Recreation Education (CORE) Kids partnership between the BLM and the Self Help Center in Casper, Wyoming, has been in existence for the past 15 years. CORE kids, aged 8 to 18, many of whom are underprivileged and atrisk, participated in 3- to 5-day overnight outings in Buffalo, Rawlins, Rock Springs, and Cody. During their trips, they learned about natural and cultural resources, performed volunteer service, and enjoyed recreation opportunities offered at the site. For one outing, Jo Foster, outdoor recreation planner in the Rock Springs Field Office, donned a pirate costume to teach about celestial navigation. At night, the youths practiced their new stargazing skills. They used star charts and brass instruments similar to those used on ships and on overland expeditions. Students were able to compare results from a modern sextant, an old brass sextant, and a sextant they made themselves from a protractor and a fishing weight.





#### **Students Learn from Insects**

The Buffalo Field Office staff worked with several partners to teach first grade students about insects and their importance. Nicole Schmidt, Buffalo's Teacher on the Public Lands, coordinated the project. Through various stations set up by five federal and state agencies, students learned about insects and how they directly affect the community in which the students live and about how to control the populations of some insects, such as mosquitoes. Students also learned about water quality and how to protect the watershed. In addition, the students were able to create and defend their own opinions about how to protect the



beneficial insects and how to keep invasive and harmful insects from invading the community they love.



#### **Partnership Improves Sage-Grouse Habitat**

The BLM Buffalo Field Office, Wyoming Conservation Corps (WCC), and Devon Energy's Gillette Field Office worked together for a 10-day preservation, restoration, and education project in Burnt Hollow in the Powder River Basin. The WCC and BLM employees thinned juniper to improve sage-grouse habitat in the North Gillette Core Area, part of a multiyear effort across the northern Powder River Basin.

The project also included a Devon Energy volunteer day during which 20 staff members from the company's Wyoming and Oklahoma City headquarters worked alongside 9 WCC crew members and 10 BLM staff members. This was the eighth year that Devon, the WCC, and the BLM have partnered to improve Wyoming's

public lands.





## /OUR

#### **Crew Preserves Rock Art and Connects with Ancestors**

The BLM Lander Field Office and the Montana Conservation Corps (MCC) partnered in July on a project that helped protect the Castle Gardens Petroglyph Site. The mission of the MCC is to empower young people through hands-on conservation service and education. Two 12-person MCC crews, made up of high school students from the Wind River Indian Reservation, worked with BLM staff for 3 days to move a half-mile of fence, improving access and protecting the world-class rock art site from damaging vehicle traffic.



While at the site, BLM archaeologists gave the crews a tour of the rock art, where they learned about the petroglyphs, the history of the site, and how their work would help protect the site from vandalism. Most of the crew members were Native Americans and were excited to make the personal connection of knowing that their ancestors created, inhabited, and interacted with this sacred place.









