

From CHILDHOOD EXPLORATION to CONSERVATION LEADERSHIP:

An Update on BLM EDUCATION, ENGAGEMENT,
and YOUTH EMPLOYMENT Programs





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From the DIRECTOR

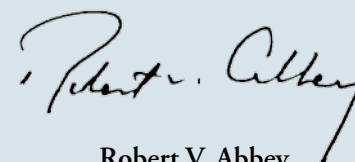
ON BEHALF OF THE STAFF at the Bureau of Land Management (BLM), I am pleased to present this overview of the BLM's accomplishments in the areas of education, interpretation, and youth involvement.

Our BLM public lands are truly “learning landscapes,” providing exceptional formal and informal education and engagement opportunities for students, “lifetime learners,” and the general public. While a report of this length can only highlight a small number of the BLM's outstanding programs for youth and adults, I hope it will give readers a sense of some of the superb education programs offered at BLM Hands on the Land (HOL) outdoor classrooms. Textbooks come alive on school field trips to Fish Slough, a desert wetland in central California, while resource management challenges become real to high school students monitoring riparian areas along the Agua Fria River near Phoenix. Hands-on field experiences are also helping college-age interns expand their skills and try out possible careers—by participating in activities ranging from assessing potential impacts of energy development in

Utah to developing interpretive exhibits for an archaeological site in Idaho. In addition, thousands of children and families are benefitting from outdoor opportunities provided through the BLM's Take It Outside programs.

Many of the initiatives described here attest to the important role partners play in these programs. A prime example is the BLM's success in employing young people as part of the Secretary's high-priority goal to increase youth employment throughout the Department. The BLM hired more than 3,100 youth in Fiscal Year 2010, nearly 1,700 of them through partner organizations. Working as youth corps crew members or as individuals through universities and other organizations, young people are participating in virtually every BLM resource program.

I am grateful to the agency staff, volunteers, and partners who have helped to make the BLM a nationally-respected leader in the fields of education, interpretation, and youth involvement. We know that the health and productivity of the public lands depend on citizens who are informed and willing to assist us in protecting and restoring America's natural and cultural legacy. We will continue to work together to cultivate that commitment to shared stewardship and to bring our programs to ever-expanding, increasingly diverse audiences.



Robert V. Abbey
Director, Bureau of Land Management





About the BLM

THE NATION'S LARGEST LAND MANAGER

The Bureau of Land Management (BLM), one of eight agencies within the U.S. Department of the Interior, may aptly be described as a small agency with a big mission: to sustain the health, productivity, and diversity of America's public lands for the use and enjoyment of present and future generations. The remnants of the vast, Federally-owned tracts that were once known as the public domain, BLM public lands comprise about 245 million acres of the United States—fully one-eighth of our nation's land area, located mostly in 12 western states, including Alaska. The BLM also administers 700 million acres of mineral estate across the country.

MULTIPLE USES AND WORKING LANDSCAPES

Managed for multiple uses, as mandated by the Federal Land Policy and Management Act of 1976, America's resource-rich public lands provide our nation with vital commodities as well as scarce open space and critical wildlife habitat. Public lands generate nearly \$5 billion in revenue for the nation each year, while also providing Americans with such necessities as coal, oil and gas, forest products, livestock forage, and—increasingly—renewable energy. At the local level, rural western communities benefit greatly from the economic fruits of such “working landscapes” through employment opportunities and tax revenue.

While commodity production and income generation are important, the public lands also host some of the nation's most remarkable landscapes, ecosystems, and heritage sites. Overall, the public lands are home to more than 3,000 species of wildlife and a wide array of plants, some of which are threatened or endangered. The BLM also manages an estimated 4 million archaeological and historic sites, from the dwellings of America's earliest human inhabitants to the historic ghost towns of the Old West. And paleontological resources abound; in fact, of the 700 dinosaur species known to science worldwide, seven were discovered on Utah public lands in 2010 alone.

THE BLM'S NATIONAL LANDSCAPE CONSERVATION SYSTEM

Many public lands are highly prized for their cultural, ecological, scientific, educational, wildlife, and aesthetic values, and in numerous regions play critical roles in habitat and resource conservation efforts. More than 850 units of such prime conservation lands, trails, and waterways are now included in the BLM's National Landscape Conservation System (NLCS). This system, created in June 2000, is an organized network of special places managed to ensure that their unique resources are conserved, protected, and restored for future generations. All areas included in the NLCS have been designated by Congressional Act or by Presidential proclamation.

CHALLENGES AND OPPORTUNITIES

Some of the most important 21st-century challenges facing the BLM are associated with managing public lands under the pressures of a fast-growing and ever-changing American West, where once-remote places are now within a short drive of population centers. With new challenges come new opportunities, however. Public lands that are “close to home” allow Americans to benefit more easily in “non-traditional” ways: as visitors forging connections through interpretive programs, as teachers and students taking their classrooms outside, as families pursuing active lifestyles, as volunteers “giving back,” as young people exploring resource careers. Public lands really do belong to all Americans, and by practicing good stewardship and sound conservation today, we can ensure that future generations reap those benefits—and maybe even some yet to be imagined.







BLM PUBLIC LANDS *are truly* “LEARNING LANDSCAPES”

THE 245 MILLION ACRES managed by the Bureau of Land Management offer myriad settings for place-based education. Students from pre-kindergarten to 12th grade and beyond can participate in a variety of educational experiences, from discovery hikes and hands-on exploration to service-learning projects and graduate-level research. The BLM’s multiple-use mission also offers students and teachers opportunities to engage in real-life learning about subjects ranging from archaeology to zoology. As living classrooms, BLM public lands promote a multidisciplinary approach to teaching and learning and help students develop critical thinking and problem-solving skills.

Partnerships with local schools, colleges, and universities, as well as with national and community organizations, contribute significantly to the success of BLM education programs. BLM resource specialists and other staff members are also essential to program effectiveness. Whether leading a field trip, mentoring a student intern, or participating in a career day at a local elementary school, BLM employees seize every opportunity to convey their extensive knowledge about—and passion for—public lands and resources. In doing so, they serve as role models for students considering natural or cultural resource professions and set the stage for the next generation of conservation leaders.

In 2010, thousands of students took part in BLM education programs nationwide. The following highlights represent just a sampling of these programs.





OUTDOOR Classrooms



HANDS ON THE LAND (HOL) is a network of outdoor classrooms supported by Partners in Resource Education (PRE), a coalition of six Federal agencies: the Bureau of Land Management, U.S. Fish and Wildlife Service, National Park Service, U.S. Forest Service, Natural Resources Conservation Service, and National Oceanographic and Atmospheric Administration (NOAA).

Having grown every year since its establishment, the network now includes approximately 110 sites from coast to coast, in effect making it America's largest outdoor classroom. All sites offer programs supporting school-based curricula correlated to local standards of learning.

Since the HOL network's earliest beginnings, the BLM has been a leader in the program. In partnership with local schools, the BLM's 38 Hands on the Land sites offer the premier formal education programs within the agency, reaching more than 11,000 students in Fiscal Year 2010 alone. As HOL is a featured component of the BLM's Youth Program, the agency is working to increase the number of participating field sites and enhance the quality of programming at existing venues.

The HOL program is demonstrating that with innovative thinking, an interactive website, and real-life experiences in the outdoors, children can reconnect to nature and learn in new and exciting ways.



"Our work as teachers is to give children a sense of place, to invite children to braid their identities together with the place where they live by calling their attention to the air, the sky, the cracks in the sidewalk where the earth busts out of its cement cage."

Ann Pelo,
American educator and author

HANDS ON THE LAND STUDENTS PARTICIPATE IN REAL-WORLD SCIENCE

... at Agua Fria National Monument

Approximately 40 miles north of Phoenix, Arizona, the BLM's 71,000-acre Agua Fria National Monument borders burgeoning residential communities and busy Interstate-17. The monument hosts a variety of biotic communities, including grasslands, chaparral, and Sonoran desert scrub. This diverse area is bisected by the canyon-bound Agua Fria River and its tributaries, which have created a green belt of precious riparian habitat. Ninety-five species of birds alone have been documented within the monument.

Agua Fria also has a long history of human use, as evidenced by the pueblos, artwork, and countless artifacts left behind over the 1,700 years the area was inhabited by various tribes. Even after its designation as a national monument, Agua Fria still encompasses portions of ten cattle ranches. Grazing and other activities such as off-road vehicle use must be monitored by the BLM in order to collect data on which to base management decisions.

Through the Hands on the Land program, Agua Fria has partnered with Audubon Arizona and several Phoenix high schools to engage students in these crucial monitoring efforts. The program allows urban young people to experience a natural world they may not have encountered before. They typically leave the Agua Fria HOL program with a wider understanding of Arizona's diverse ecology, an appreciation for riparian areas, and an interest in career opportunities related to BLM resource management.

... at King Range National Conservation Area

The BLM's King Range National Conservation Area in northern California has partnered with local, State, and national organizations on a project to monitor marine phytoplankton for harmful algal blooms. As a Hands on the Land network site, King Range facilitated the inception of this program, which engages local rural students in an applied scientific research project linked to education standards. The effort is a component of the National Oceanographic and Atmospheric Administration's Phytoplankton Monitoring Network.

Students begin the Phytoplankton Monitoring Program with a visit to the Pacific Ocean at King Range. There, they learn and practice proper phytoplankton collecting protocols, such as use of a phytoplankton net, thermometer, and refractometer. Back in the classroom, students study phytoplankton's life cycle, anatomy, and importance to the planet's ecosystem, as well as microscope operation and identification techniques for key diatom and dinoflagellate species. Each class monitors the King Range phytoplankton once or twice a month during the school year and is responsible for tallying species numbers for submission to national and State databases.

... when they "FIRE Up For Summer!"

In the summer of 2010, the Bureau of Land Management joined municipal, County, educational, and private organizations in Eagle, Idaho, to support the Field Inquiry Research Education program, better known as "FIRE Up for Summer!" This Hands on the Land partnership provides exemplary hands-on learning experiences for participating students and offers a glimpse into actual work done by natural resource professionals and land management agencies. The course is managed and taught by three to five BLM employees and six certified Idaho science, technology, and math teachers.

Last summer, twenty-four students conducted valuable

"Earth and sky, woods and fields, lakes and rivers, the mountain and the sea ... teach some of us more than we can ever learn from books."

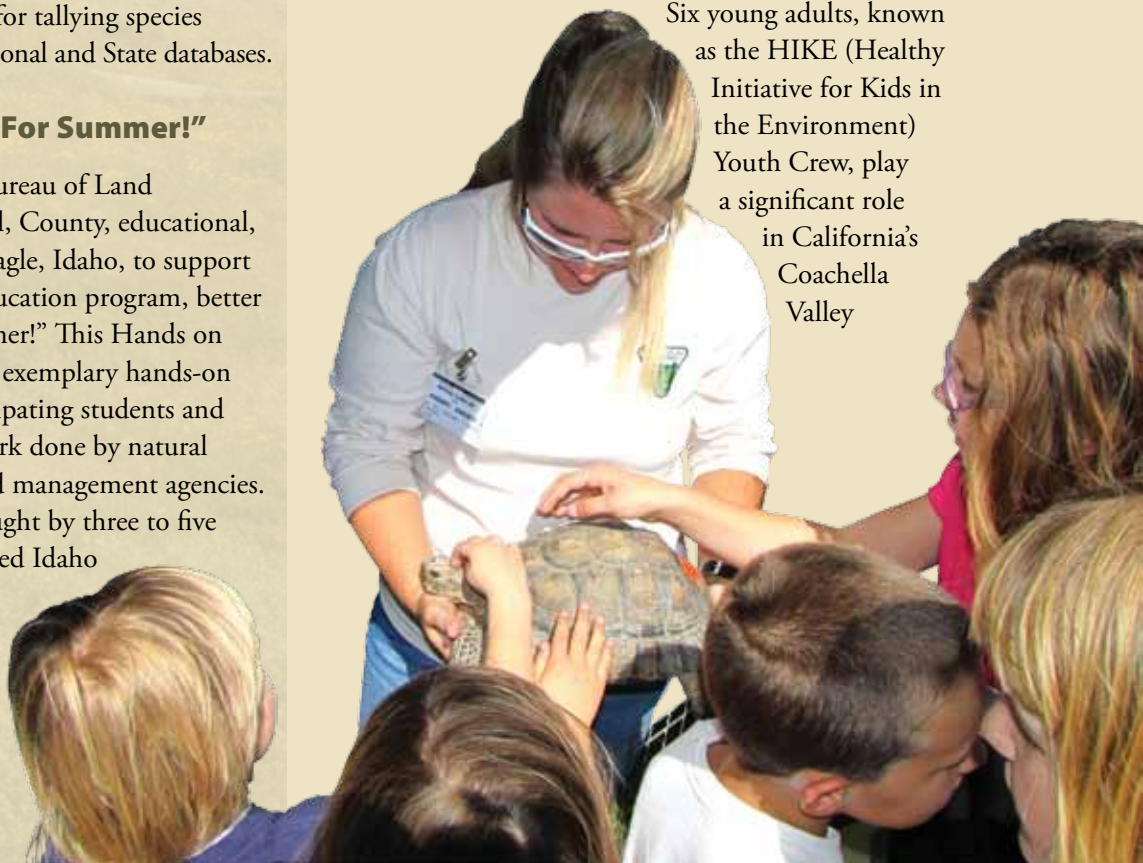
**John Lubbock,
British statesman**

field research, and educated local homeowners about protecting their properties from wildfire. Student research projects contributed baseline data to be used in restoring vegetation to a burned-over area of the Eagle foothills. Student teams surveyed 130 plots, each 0.001 acre in size, mapping and categorizing each area by soil type. They marked the centers of assigned test plots with monument posts to enable easy location of specific sites. At each plot a student team surveyed the interior vegetation of five one-meter hoops ten meters from the center PVC post. Vegetation type, percent cover, and vegetation height data was collected. Students then analyzed the data and presented their research project results to the BLM, participating partners, school district personnel, and family members during Student Showcase on the last day of the class.

HANDS ON THE LAND STUDENTS ARE CITIZEN STEWARDS

... thanks to the "HIKE" Youth Crew

Six young adults, known as the HIKE (Healthy Initiative for Kids in the Environment) Youth Crew, play a significant role in California's Coachella Valley





community through their volunteer work as HIKE educators. The Crew presents classroom lessons to local schools and conducts field trips in the BLM's Santa Rosa and San Jacinto Mountains National Monument. The young leaders promote hands-on learning in their programs for fourth-grade audiences. Prominent partners in the HIKE program are the U.S. Forest Service, Natural Science Collaborative, Agua Caliente Band of Cahuilla Indians, Friends of the Desert Mountains, and Leave No Trace.

HANDS ON THE LAND STUDENTS INVESTIGATE NATURE

... as HOL Kid Explorers

At the BLM's Campbell Creek Science Center in Anchorage, Alaska, an HOL site, the Kid Explorer program encourages elementary-school students to discover and enjoy the natural world. The program is being implemented in two basic formats: as part of local school curricula and as an after-school program. In both cases, students are provided with tools to explore the outdoors and activities to complete, while participating teachers receive supporting materials. In addition, after-school students are offered incentives for completing outdoor activities on their own.

The Kid Explorer program has been integrated with a social studies unit on Lewis and Clark. It also will be incorporated into a science module on Alaskan animals and additional after-school programs.

... on field trips to Fish Slough

Fish Slough is a rare desert wetland located in central California between the Mojave Desert and the Great Basin, an area that is home to endangered animals, endemic plants, and outstanding archaeological resources.

In partnership with the non-profit Eastern Sierra Institute for Collaborative Education, this HOL site has established a place-based and classroom program that allows area second- and fourth-graders to participate in field trips to Fish Slough. Most local kids visit Fish Slough for the first time through this program.

Students are introduced to the life cycle of the endangered Owens pupfish in order to illustrate ecosystem interactions that affect the survival of endemic species. Students in the field observe, measure, and investigate various aspects of the "mystery of the missing pupfish," and through guided critical-thinking exercises, analyze how each factor might have contributed to the species' decline.

While learning about plant communities, students are introduced to the impact of off-road vehicles on the fragile desert environment. Hands-on botany activities include identifying desert adaptations in leaves, taking soil temperatures, and comparing soils in desert scrub with those in alkali meadow plant communities. Older students learn about the formation and evolution of the area's outstanding landforms. Using visual aids and student-centered demonstrations, instructors explain the natural processes that shaped Fish Slough in the context of geologic time.





Activities consisted of artifact identification, archaeological methods, American Indian crafts, site recording, and photography.

... on a "Journey Through the Monument"

This educational program for seventh-grade students focuses on sites along Montana's Wild and Scenic Upper Missouri River within the Upper Missouri River Breaks National Monument. The 2½-day river float trip features an interdisciplinary curriculum and enables students and professionals from the BLM and other agencies to interact on public lands.

At planned stops along the river, students, teachers, resource specialists, and volunteer chaperones hike to and learn about unique geological formations, Native American tipi rings, homesteads, and Lewis and Clark historic sites. They also engage in journaling, art, aquatic ecology, invertebrate biology, and botany/plant identification, and learn relevant local history throughout their trip. Leave No Trace principles, canoe safety, and proper camping protocols are discussed and employed throughout the outing. Trip participants experience a sense of connection to their surroundings, the excitement of exploration, and a renewed joy in learning.

HANDS ON THE LAND STUDENTS EMBRACE THEIR HERITAGE

... at Utah's Black Ledges Archaeology Camp

Students from Cedar City's Enoch and Three Peaks Elementary Schools participated in an archaeology camp located at the Black Ledges, an uplift of volcanic rock overlooking the Great Basin valley. Staff from the Dixie National Forest, Three Peaks Elementary, and the BLM taught students about Native American cultures and worked with them to document and restore two rockshelters that had been looted. Students excavated looted backfill from the rockshelters to record and collect any remaining artifacts. The backfill was then moved back into the rockshelters to restore the surface to its former state.



OTHER BLM Formal Education Programs

NUMEROUS BLM FIELD SITES



outside the Hands on the Land network also sponsor a variety of programs in conjunction with local schools. Frequently, such efforts take the form of classroom presentations by BLM resource specialists, who consider community outreach a key component of the agency's mission. Presentations range from living history reenactments and live raptor demonstrations to fossil excavation simulations and water quality studies. Many topics

"Come forth into the light of things,
let nature be your teacher."

William Wordsworth,
English poet

touch on real-life land management issues and strategies. BLM personnel conduct similar programs in the field for visiting classes.

Teachers use the lessons, often tied to standards of learning, to enhance their mandatory course curricula. For many students, a classroom program by a BLM employee is their first exposure to the breadth and variety of natural and cultural resources as well as the possibilities for careers in those fields.

FOURTH-GRADERS VISIT PIEDRAS BLANCAS LIGHT STATION FOR HANDS-ON ACTIVITIES

Fourth-grade students visiting California's Piedras Blancas Outstanding Natural Area participated in a series of curriculum-based, hands-on activities on the cultural and natural history of this unique site. Prior to the students' visit, volunteers dressed in period U.S. Lighthouse Service uniforms delivered teaching chests of lighthouse-related items to the classrooms. The volunteers also briefed the students about what they could expect to see and do on their visit to Piedras Blancas.



On-site activities were conducted in several of the site's historic light station buildings and along its interpretive trail. In 2010, eleven fourth-grade classes from six regional elementary schools participated in the program.

IDAHO STUDENTS GEAR UP FOR A CAVE TOUR

Accompanied by their teacher, fourth-grade students from a Shoshone-area elementary school learned about lava-tube caves, cave life, cave conservation, and cave safety on a BLM-escorted field trip to the Tee-Maze cave system. Wearing caving gear, including hardhats and miner's lights, the class hiked through multilevel cave

passages, squeezed along narrow tunnels, and helped one another negotiate challenging ledges.

LAND OF THE YANKEE FORK INTERPRETIVE CENTER HOSTS ARCHAEOLOGY STUDY STATIONS

In honor of Idaho Archaeology and Historic Preservation Month, the BLM's Land of the Yankee Fork Interpretive Center in Challis hosted 85 elementary school students from the Challis, Mackay, Stanley, and Salmon school systems for a day of learning and hands-on activities. The event was co-sponsored by the BLM and the Idaho Department of Parks and Recreation.

With the Challis Bison Kill Site as a backdrop, each of the third- and fourth-graders worked through five activity stations dealing with various aspects of archaeology. Each station was staffed by resource specialists to assist with activities and answer questions.

Among other topics, students learned how bison were used by American Indians and investigated techniques for fashioning spears and arrowheads. Participants also had an opportunity to throw an atlatl, a prehistoric spear launcher that was used to extend the range of a thrown spear by increasing its speed.



EDUCATOR RESOURCES and Professional Development

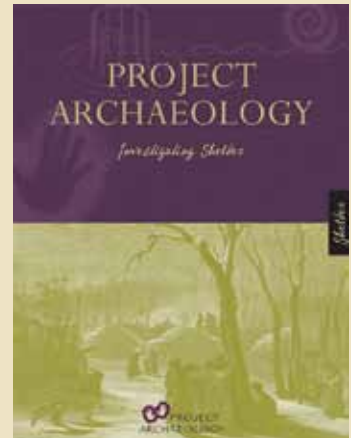
BLM PROVIDES A VARIETY of professional development opportunities for teachers across the nation. Workshops help educators connect natural and cultural resource topics to curriculum standards. Participation in hands-on field programs often gives teachers the confidence to offer similar experiences to their own students. BLM offers and supports teacher programs at both the national and local levels, frequently working in partnership with other Federal agencies, educational institutions, and private organizations.

Teachers can learn from natural and cultural resource experts at intensive field sessions or through workshops offered at regional and national teacher conferences. Educators may also take advantage of a wide range

of educational resources developed by the BLM. Available through BLM's "Learning Landscapes"

website, these include printed materials; distance learning programs, including satellite broadcasts and interactive e-fieldtrips; and web-based reference materials. BLM professional development opportunities and teaching materials provide educators with the training and information they need to incorporate natural and cultural resource education into their classrooms and curricula.

AWARD-WINNING HERITAGE EDUCATION PROGRAM BRINGS ARCHAEOLOGY INTO CLASSROOMS



In 2010, Project Archaeology, a joint program of the BLM and Montana State University, distributed heritage stewardship education materials and provided professional development programs to more than 800 educators nationwide.

In Nevada, for example, BLM teamed up with the Nevada State Museum to offer archaeology education to 60 museum docents and educators from across the state. Through a Challenge Cost Share grant, Project Archaeology trained a cadre of 18 master teachers from 12 states to provide professional development for their peers. In partnership with the Utah Museum of Natural History, Project Archaeology conducted two national online courses for teachers. And at the 2010 National Council for Social Studies conference, the BLM joined the Florida Public Archaeology Network to distribute teacher resources and conduct educator workshops on using archaeology to integrate social studies and science.

In 2010, the Society for American Archaeology (SAA), the nation's leading professional archaeological and heritage education organization, presented Project Archaeology with an "Excellence in Public Education" Award for the curriculum entitled *Project Archaeology: Investigating Shelter*. This creative and unique national curriculum uses archaeology to teach scientific inquiry, citizenship, personal ethics, and cultural understanding.





RIPARIAN EDUCATION MODULE INTRODUCES EDUCATORS TO THE “GREEN ZONE”

A wide range of partnerships is enabling young people and teachers to connect with riparian areas in their communities. With the BLM and other Federal agency partners, the Izaak Walton League of America (IWLA) is training teachers and youth program leaders in the use of BLM’s riparian education module, “Holding onto the GREEN ZONE.”

In 2010, the League also engaged hundreds of young people and adults in hands-on learning about stream ecology. Teenage youth program leaders proved to be particularly effective teachers of younger students. As part of this comprehensive education and service program, IWLA is developing an interactive “Creek Freaks” website, which will feature information and resources for program leaders, creek

tours, and opportunities for students to share data collected during their stream explorations.

GREAT BASIN TEACHERS HEAD TO SUMMER ARCHAEOLOGY “CAMP”

For 25 years, the BLM has worked with other Federal agencies and partner organizations to provide K-12 teachers in the Great Basin region with an intensive 40-hour summer workshop at Camp Success, a former Scout camp in Nevada’s Schell Creek Mountains.

Workshop themes rotate yearly among the topics of biology, archaeology, and geology of the Great Basin. Teachers develop observational skills, learn how to teach the scientific method and conduct scientific investigations, study sampling techniques, and pursue wildflower walks and native plant studies. The workshop also teaches the basics of biology, land use ethics, contemporary management issues, and the importance of preserving biological resources on public lands.

Thirty-seven teachers from 26 schools participated in the 2010 workshop, whose theme was archaeology. Working in small groups, workshop participants completed lessons from the new *Project Archaeology: Investigating Shelter* curriculum guide in order to familiarize themselves with the way their students would learn the material. The workshop also offered teachers the opportunity to use archaeological data to map the Dirty Shame Rockshelter, an important BLM-administered archaeological site in Oregon.



“It was great to connect learning with Navajo culture using place-based activities.”

2010
Bioregional Outdoor Education
Project participant

UTAH WORKSHOPS TEACH PLACE-BASED EDUCATION TECHNIQUES

In 2010, the BLM partnered with the Four Corners Environmental Education School to present a series of outdoor education workshops for K-8 teachers in San Juan County. Participants learned techniques to teach core curriculum using a hands-on, place-based approach. The workshop was offered twice a month over a period of nine months, with consistently positive feedback.

IDAHO EDUCATORS GO “WILD” AT ANNUAL RAPTOR WORKSHOP

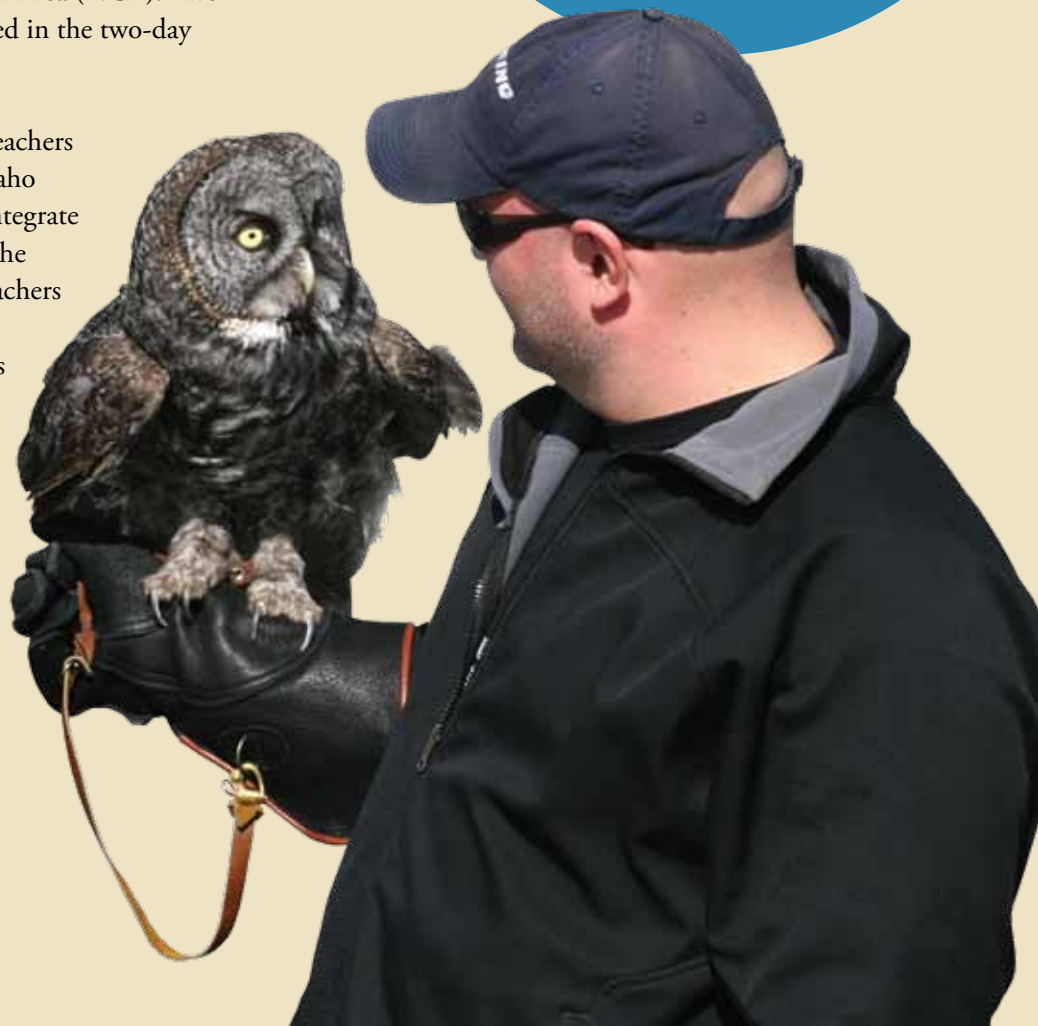
Idaho teachers participated in the eighth annual *WILD About Raptors* workshop, facilitated by The Peregrine Fund (World Center for Birds of Prey), Idaho Fish & Game, and the BLM Morley Nelson Snake River Birds of Prey National Conservation Area (NCA). Live birds and field specialists participated in the two-day workshop.

Over the course of the workshop, teachers learned about the adaptations of Idaho raptors and practiced activities to integrate into their classroom curricula. On the second day of the workshop, the teachers toured the Birds of Prey NCA in search of raptors. Among their finds were a great horned owl, red-tailed hawks, northern harriers, burrowing owls, a rough-legged hawk, bald eagles, prairie falcons, ferruginous hawks, and a nesting golden eagle.

“Working with the birds . . . helped me to understand the excitement that a student would feel in this situation. It clearly enunciated the power of getting actual wildlife into the classroom as a teaching tool.”

“Visiting the Birds of Prey area made me realize the importance of protecting this special habitat for our raptor friends . . . Our natural laboratory to observe and learn couldn’t have been any better.”

2010 WILD About Raptors workshop participants





STUDENT Internships

SECRETARY OF THE INTERIOR

Ken Salazar has committed Department of the Interior agencies to work with young people to build a highly skilled 21st-century workforce that reflects the diversity of our nation. BLM public lands offer the perfect training venue for such an effort, and strong partnerships with diverse organizations are helping to ensure its success.

The 245 million acres of public lands managed by the BLM provide high school, college, and post-graduate students with countless opportunities to expand their skill bases and enhance their knowledge with hands-on field experiences. Budding conservationists working with the BLM can even take those first steps down a career pathway in natural or cultural resources. Students can pursue their passions—or test out a possible career—through BLM seasonal employment, third-party internships, field schools, university research grants, volunteer work, or museum-sponsored projects, to cite just a few options.

Partners play a critical role in ensuring that BLM educational internship opportunities are available to students from diverse backgrounds. Partner organizations often furnish crew leaders and mentors, provide supplies and housing, offer a wide range of support services, and even match funds.

“A mind that is stretched by a new experience can never go back to its old dimensions.”

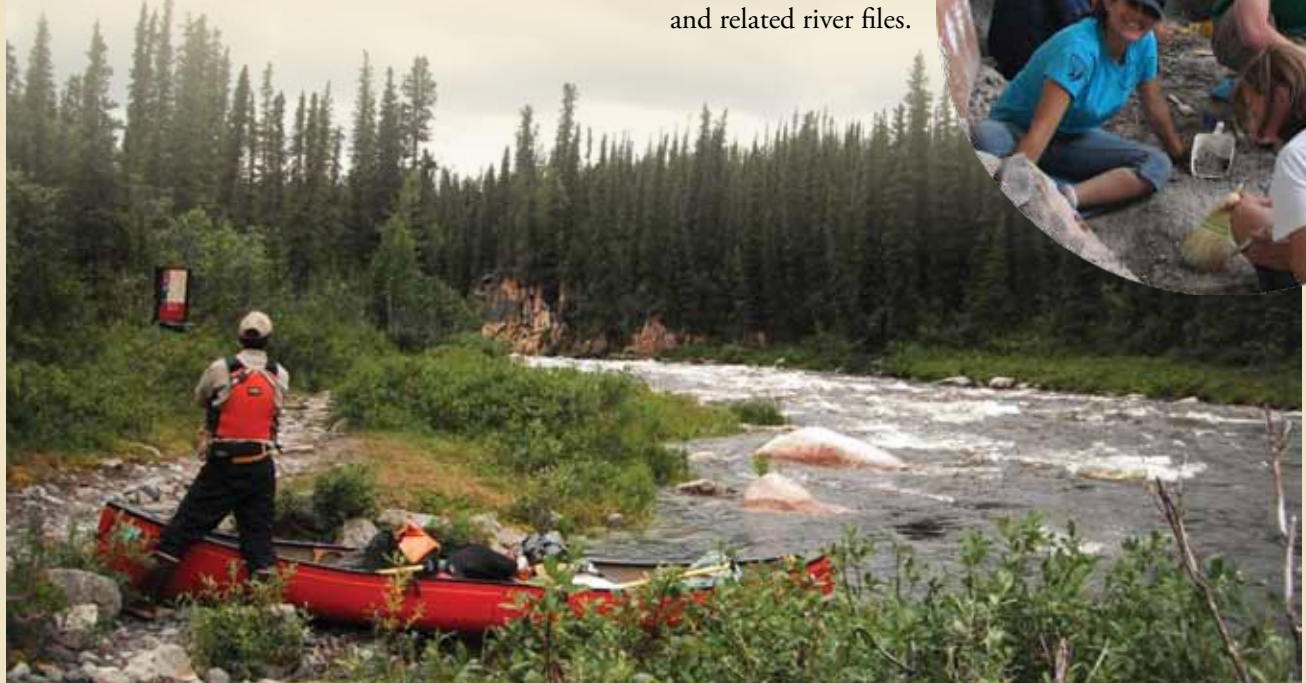
Oliver Wendell Holmes, American jurist

Through focused work with student interns, the BLM is helping to ensure that young people are prepared to take the reins as the next generation of conservation leaders.

ALASKA STUDENTS MANAGE WILD AND SCENIC RIVER RECREATION

In Alaska, three interns hired through the Student Conservation Association gained educational and hands-on river management experience along the Delta and Gulkana Wild and Scenic Rivers. The river ranger interns participated in the day-to-day management of the recreational river program and gained experience in resource inventory and river monitoring.

The interns' responsibilities included using watercraft to access and maintain trails and river facilities, communicating river rules and Leave No Trace information to visitors, and preparation and analysis of visitor use data. The interns also used Global Positioning Systems in describing trail conditions, documented river features using digital photography, compiled field notes, and developed maps and related river files.



NEW DINOSAUR SPECIES NAMED FOR TWIN GEOLOGY STUDENTS

In 2010, almost seven years after discovering unusual dinosaur remains on BLM lands near Green River, Utah, two former Temple University geology students—who also happen to be twin sisters—had the distinction of having a new species named for them. At the time of their discovery, they were pursuing graduate work on depositional environments on Utah public lands.

Geminiraptor suarezorum, literally “Twin Predatory Thief of the Suarezes,” is a raptor thought to have lived about 125 million years ago. The area of the students’ discovery, the Crystal Geyser Dinosaur Quarry, is now known as the “Suarez Sisters’ Quarry” in their honor.

ARIZONA NATIVE AMERICANS STUDY HISTORIC PRESERVATION TECHNIQUES

A partnership between the BLM and the National Park Service allowed youth from Native American communities around the BLM’s Grand Canyon-Parashant National Monument to connect with their heritage and explore career possibilities in historic preservation.

Building on skills that they had learned in high school shop classes and in construction jobs, interns studied preservation techniques and put them into practice by stabilizing historic structures within the monument. Not only did this project create local jobs in a region significantly affected by the economic recession, but it also helped to preserve deteriorating relics and resolve related public safety concerns.



ECOLOGY STUDENTS MONITOR STREAM CHANNELS IN THE HEADWATERS FOREST RESERVE

In 2010, students from California's Humboldt State University (HSU) studied stream channel characteristics in the South Fork Elk River as part of a Restoration Ecology class. The BLM integrated the students' data into the long-term monitoring effort required under the Headwaters Resource Management Plan, and the students used the data in their class project. HSU Geography students also contributed to BLM management objectives by collecting data on the area's decommissioned roads and vegetation succession.

UNIVERSITY STUDENT INTERPRETS IDAHO CULTURAL RESOURCES

Archaeologists have been conducting excavations at the Cooper's Ferry site along the Lower Salmon River for several decades. In 2010, the BLM hired an Oregon State University student to

follow through on public interpretation plans for the site.

Not only did the student develop an on-site interpretation program, she also documented the site excavation process through photography and videos and even established a blog to track both the excavation and backfilling at the end of the season.

The student benefited from learning on-site interpretation techniques and gained skills in photography, videography, web design, and website management.

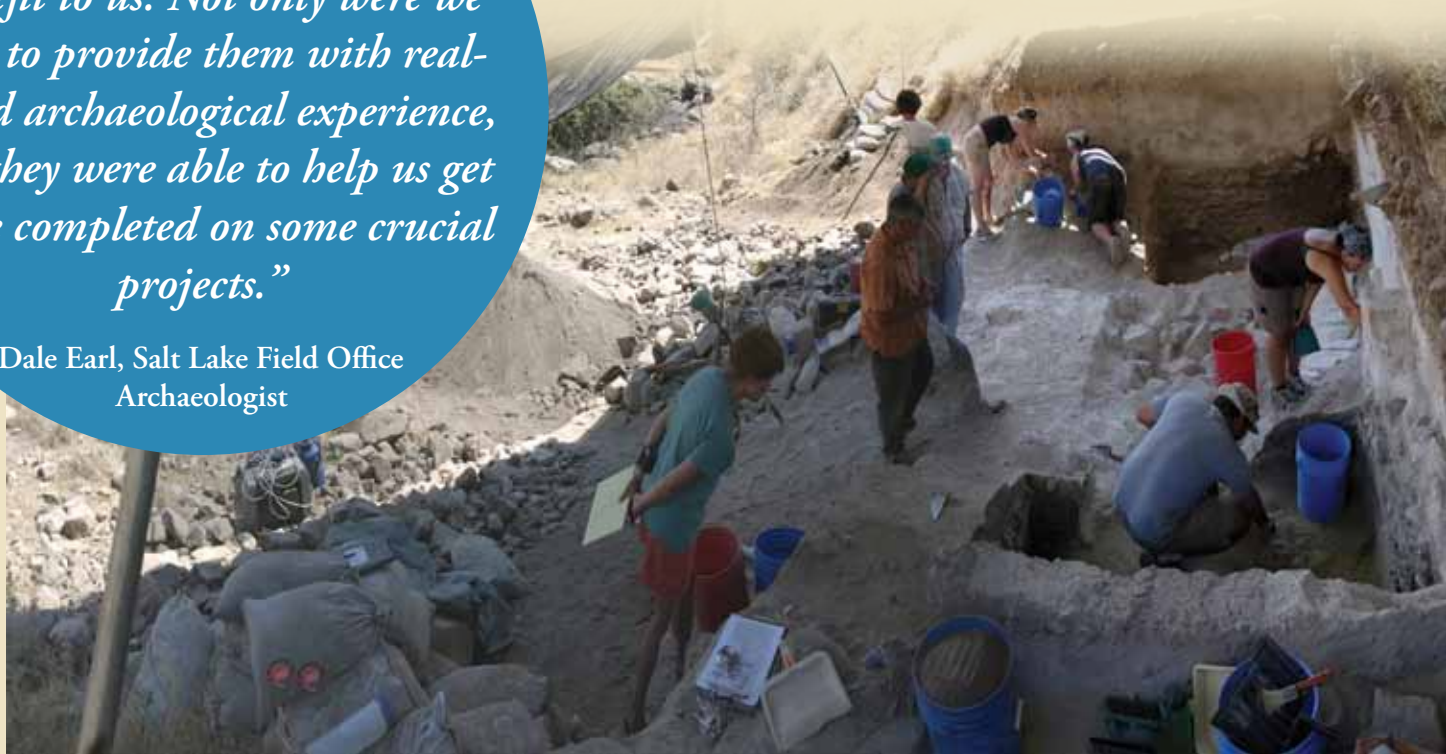
BLM ARCHAEOLOGISTS ENGAGE CULTURAL RESOURCES INTERNS IN UTAH WORK PROJECTS

The BLM and partner Western Washington University recruited archaeology students nationwide to perform fieldwork as part of BLM-Utah's Cultural Resources Internship Program. The program engages university students in cultural resource management and exposes them to Federal career opportunities in that discipline.

BLM archaeologists trained and mentored the students as they participated in compliance surveys, inventory,

"The interns that we were able to hire have been a great benefit to us. Not only were we able to provide them with real-world archaeological experience, but they were able to help us get work completed on some crucial projects."

Dale Earl, Salt Lake Field Office
Archaeologist



monitoring, site recording, and other activities. The internships, which averaged 8-10 weeks each, garnered positive feedback from all participants. Besides relieving the BLM State cultural resources program lead's workload, the program also provided a financial benefit to the BLM: the students effectively completed several important projects that typically would have required the use of contractors.

"CONSERVATION AND LAND MANAGEMENT" INTERNS ASSIST WITH FIELD OFFICE RESOURCE PROGRAMS

In cooperation with the Chicago Botanic Gardens, the BLM hired more than 137 Conservation and Land

Management (CLM) interns to assist with programs around the nation. In Buffalo, Wyoming, for example, three interns supported range, wildlife, and recreation program objectives. They assisted BLM field specialists with a variety of tasks, including data recordation and allotment inspections. The interns also provided environmental education and outreach to community groups.

In California, CLM interns assisted several field offices with natural resource projects ranging from wildlife monitoring to Seeds of Success, a nationwide native seed collection program. In Vernal, Utah, an intern worked in both sagebrush and riparian habitats, assessing potential impacts of energy development and monitoring invasive species.



"The work I have been able to do so far has provided the data for my [BLM] co-workers to make informed decisions . . ."

CLM Intern,
Vernal, UT



SERVICE Learning

MONITORING

THE HEALTH of Wilderness Study Areas, creating interpretive materials for their local communities, and assisting with dune restoration on the Pacific coast: these are just a few of the ways youth participated in service projects benefiting the BLM's National System of Public Lands.

The BLM is actively working to promote the integration of service projects with classroom learning as a way to involve youth in the management and stewardship of public lands. Service learning can involve a single student or group of students, a classroom or an entire school. Participation allows young people to build character as they work with members of their school and community.

PARTNERSHIP LAUNCHES A NEW PLACE-BASED PROGRAM ABOUT THE IDITAROD TRAIL

In 2010, Alaska's Campbell Creek Science Center joined forces with several partners to launch Iditarod Trail to Every Classroom, a new place-based, service learning and education initiative. The program is designed to teach Alaska's students about the National Historic Iditarod Trail, engage them in learning about where they live, and get them involved in service projects to benefit their communities. Eighteen teachers from eight communities from Seward to Nome gathered in early August 2010 to formally launch the program.

EIGHT HUNDRED FOURTH-GRADERS RESTORE DUNES ON OCEAN DAY

In Arcata, California, the non-profit Friends of the Dunes and BLM staff hosted over 800 fourth-graders at the Mike Thompson Wildlife Area/South Spit Humboldt Bay Cooperative Management Area for Ocean Day.

Ocean Day is an annual celebration and call to action for the protection of the world's oceans. Students assisted with dune restoration by pulling European beachgrass (*Ammophila arenaria*) and collecting garbage they found on the dunes and wave slope.

After restoration efforts were completed, students were seated on the beach in an aerial art pattern that represented a sea turtle. In collaboration with the Malibu Foundation for Environmental Education, California Coastal Commission, and Spectral Q Aerial Art, students up and down the Pacific Coast were assembled in the same formation.

NATIONAL OUTDOOR LEADERSHIP SCHOOL STUDENTS MONITOR WILDERNESS STUDY AREAS

Lander, Wyoming, students enrolled in a semester-long program of the National Outdoor Leadership School (NOLS) conducted Wilderness Study Area (WSA) monitoring at the Split Rock and Miller Springs Wilderness Study Areas. Traveling in small groups, students hiked the WSAs to monitor and document the characteristics of the areas.

The participants' photos and reports will be used as the basis for long-term monitoring efforts. Students in a second NOLS program assisted in rehabilitating several campsites located near a historic cabin in the Split Rock WSA.

The student groups also learned about the functions and responsibilities of the BLM Recreation Program and how citizens can get involved in the management of their public lands.





STUDENTS PRODUCE INTERPRETIVE MATERIALS IN FARMINGTON

Students on staff-escorted field trips to the BLM's Angel Peak Scenic Area and Simon Canyon Recreation Area investigated the plants, animals, and geology of public lands near Farmington, New Mexico. They collected and pressed plant samples; photographed plants, animals, and animal habitat; and documented the area's geologic and paleontological features.

After returning to their schools, the students continued working with BLM specialists to create interpretive materials from their samples and photographs. The items were mounted in Plexiglass "flip" panels the size of standard office paper. The finished panels will also include student-produced text about each plant specimen and photograph. The interpretive displays will ultimately be used to educate visitors to local BLM recreation areas.

COLORADO PARTNERS COORDINATE "ALTERNATIVE SPRING BREAK" SERVICE LEARNING PROJECTS

For nine students from the University of Missouri, Spring Break 2010 involved a week of service and stewardship in and around southwest Colorado's remote Disappointment Valley. For the ninth year, the San Juan Mountains Association (SJMA), a long-time BLM partner organization, coordinated a service learning project for college students in conjunction with the Dolores Public Lands Office.

Several projects were undertaken, including cleanup and repair work in the BLM's Spring Creek Wild Horse Area and trail work within Canyons of the Ancients National Monument. Students also participated in the documentation and preservation of a historic cabin built by a local trapper and prospector in the late 1800s.

Working with BLM and SJMA archaeologists, students created photos and drawings of the cabin to record and document the site. They also built a brush fence to protect the cabin and surrounding artifacts. Finally, they created a fence to protect the original cabin owner's grave and grave stone.





GETTING OUT, *Getting Active,* GETTING INVOLVED

EDUCATIONAL

PROGRAMS AND MATERIALS are effective means of reaching selected segments of the population, schoolchildren in particular. The BLM also pursues myriad other approaches to involve diverse audiences in engaging with their public lands through visitor programs, volunteer work, and recreation.

From “fireside chats” to Junior Explorer guides, bird walks to Kids’ Fishing Days, BLM public lands offer engaging activities for almost any visitor. Even those who can’t get out there in person can take advantage of “virtual” visits and tours featured on the “Learning Landscapes” website at <http://www.blm.gov/education> as well as social media sites. And the BLM is pursuing new approaches for enhancing visitor experiences as technological applications become available.



New BLM mascot "Seymour Antelope" encourages kids to get outside

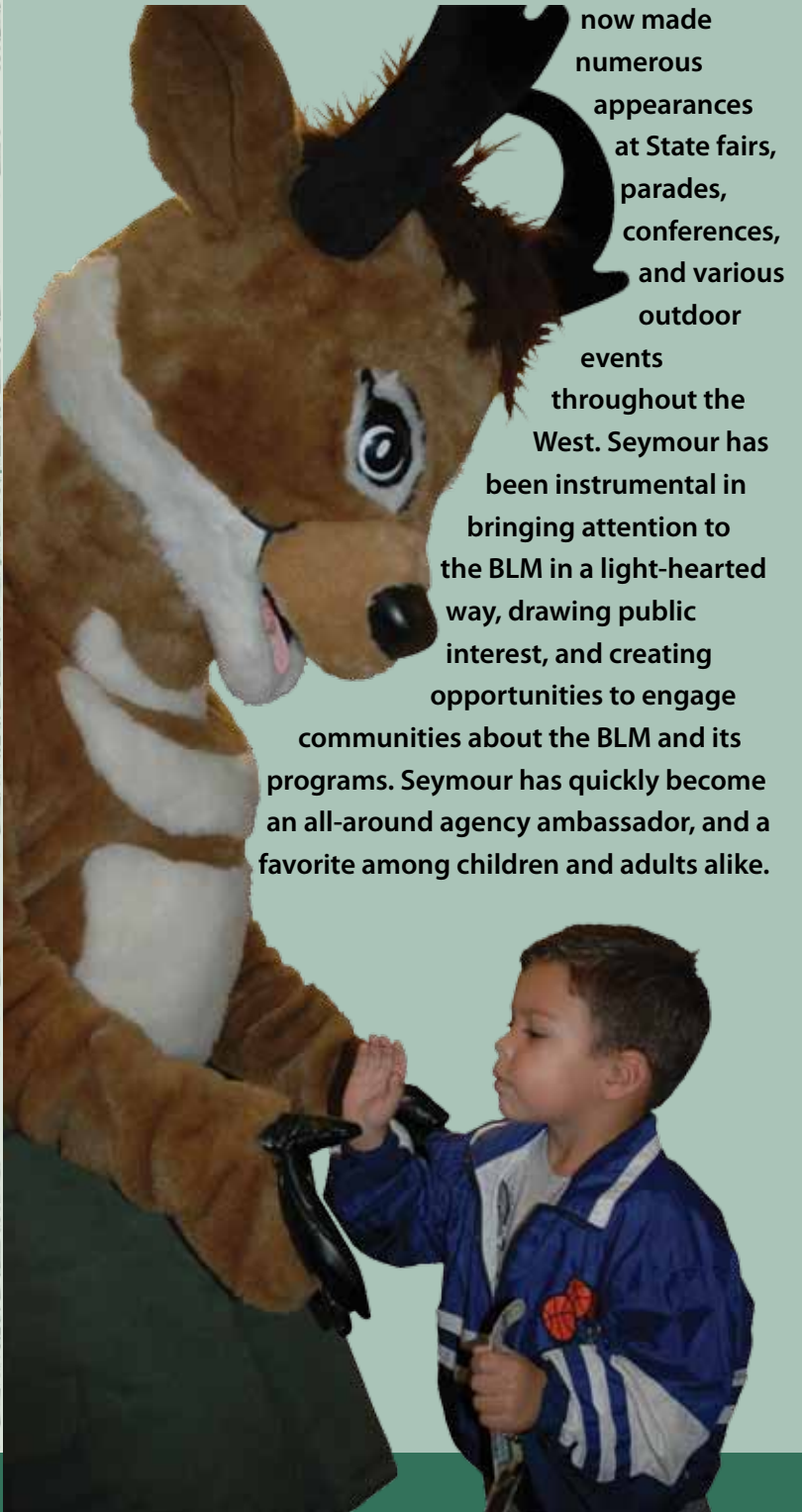
In May 2010, costumed character "Seymour Antelope" was announced as BLM's new National Youth Program mascot, "his" primary purpose being to encourage children and their families to "See More. Do More. Explore Your Public Lands."

Introduced originally in New Mexico, Seymour has

now made numerous appearances at State fairs, parades, conferences, and various outdoor events

throughout the West. Seymour has been instrumental in bringing attention to the BLM in a light-hearted way, drawing public interest, and creating opportunities to engage

communities about the BLM and its programs. Seymour has quickly become an all-around agency ambassador, and a favorite among children and adults alike.



TAKE IT Outside



"As you sit on the hillside, or lie prone under the trees of the forest or sprawl wet-legged by a mountain stream, the great door, that does not look like a door, opens."

Stephen Graham, English nature writer

THE BLM TAKE IT OUTSIDE (TIO) program promotes and provides outdoor physical activities and experiences on the public lands. The program strives to improve the health of our nation's children, families, and communities, while at the same time developing the next generation of public lands stewards.

Since 2008, nearly 300 TIO projects have provided outdoor activities and experiences to thousands of kids and their families. The TIO umbrella program is now an integral component of the BLM Youth Program.

The BLM continues to strengthen connections between Take It Outside and Let's Move Outside, the outdoor piece of the First Lady's Let's Move! initiative to end childhood obesity. Take It Outside events focus on getting children outdoors and increasing connections with the natural world, in support of the four pillars of Let's Move Outside: health, family, fun, and stewardship.

SOUTHERN PAIUTE YOUTHS COMMUNE WITH ANCESTRAL LANDS

The third annual Yevingkarere Camp was held in September 2010 on traditional Paiute lands within Arizona's Grand Canyon-Parashant National

Monument. Paiute youth were immersed in activities centering on Mount Trumbull, an area of great significance to Southern Paiute people.

The three-day, two-night field excursion offered interactive programs to teach participants about their ancestral ties to the area as well as their responsibility to be good stewards. Tribal elders conducted lessons on methods for recording petroglyphs, preservation of rock art sites, appropriate behavior at heritage sites, and the cultural impacts of petroglyph vandalism near Mt. Trumbull.

On local BLM lands where collecting is permitted, elders demonstrated techniques for selecting plant materials for baskets, building snares, gathering traditional food items, and identifying and cultivating sacred tobacco.

MEADOWOOD CAMPOUTS OPEN A NEW WORLD FOR URBAN KIDS

As part of the Take It Outside program, the BLM has partnered with a diverse group of organizations, including the Washington, D.C., Mayor's Office on Latino Affairs, to bring urban Latino youth to the Virginia outdoors. In 2010, participants enjoyed a series of outings and overnight camping trips at the BLM's Meadowood Recreation Area and on segments of the Appalachian Trail.

The outdoor experiences are intended to teach urban young people about the recreational and cultural values of public lands and the importance of pursuing active, healthy lifestyles. In addition, this effort benefits the students by providing them with real-world examples of science





concepts they are learning in school and demonstrating the importance of higher education. These experiences

also help to cultivate stewardship ethics, with benefits for families, communities, and the local environment.

“SALMON SURFERS” EXPLORE THEIR BACKYARD

One continuing TIO project, the Salmon Surfers, was founded in 2008 as a kids’ outdoor adventure club with an emphasis on exploring Idaho’s Salmon River Corridor. Participants are introduced to Leave No Trace ethics and opportunities to discover the vast public lands and waterways in their own backyard. The club is open to children aged 12-18 in Idaho County, which

features one of the largest percentages of public land in the state, including a significant portion of the Lower Salmon River corridor.

For the 2010 season, the Salmon Surfers partnered with the McCall Outdoor Science School (MOSS) and the Wild Science Explorers (WSE) for an extended wilderness experience. The MOSS summer program was underwritten by a National Science Foundation grant to support hands-on, inquiry-based science for middle and high school students from populations typically underrepresented in the sciences.

Students engaged in authentic research centered on the theme of “Water Resources in a Changing Climate.” Students met with scientists who are actively investigating this topic and planned and conducted their own scientific investigations based on the work of the researchers.

After a week of instruction at the MOSS campus, the Salmon Surfers embarked on a five-day journey down the Lower Salmon River with the Wild Science Explorers, which specializes in overnight river trips. This unique learning/wilderness experience allowed participants to use the scientific skills they’d acquired at MOSS in a real-world setting.



MEANINGFUL

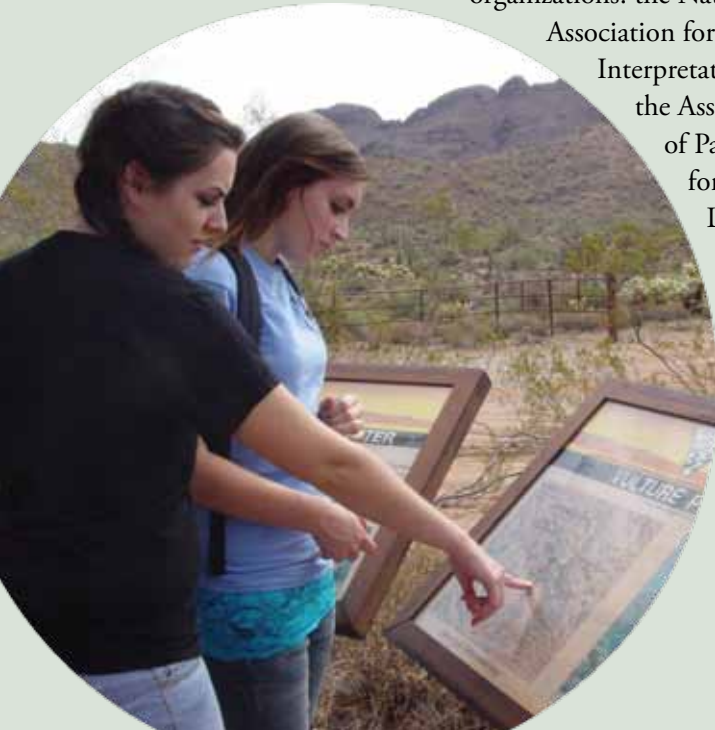
Connections

INTERPRETIVE

PROGRAMS offer opportunities for enlightenment and inspiration, allowing public lands visitors—whether in-person or “virtual”—to forge unique relationships with natural and cultural resources. In providing professional, high-quality outreach, resource information, and site orientation through face-to-face programs and other interpretive mechanisms, the BLM helps to facilitate enjoyable and safe recreational experiences, increase visitor knowledge of resources and management issues, and encourage responsible outdoor behavior.

In 2010, the BLM Interpretive Program reached more than 3 million people through youth engagement activities, visitor center facilities and materials, interpretive structures, and printed and interpretive materials posted at kiosks and waysides and on BLM websites.

The BLM is a member of the Federal Interagency Committee on Interpretation (FICI). The group is comprised of interpretive program leads from seven Federal land management agencies as well as representatives from two non-profit partner organizations: the National Association for Interpretation and the Association of Partners for Public Lands.



“Take time to listen and talk about the voices of the earth and what they mean—the majestic voice of thunder, the winds, the sound of surf or flowing streams.”

Rachel Carson,
American biologist and environmentalist

FICI members meet quarterly to advance the field of interpretation within the Federal government and to discuss topics such as best practices for friends groups, visitor facility construction, standardization of government interpretive job descriptions, and recognition of professional excellence.

KING RANGE “JUNIOR INTERPRETERS” GET TO KNOW THE LOST COAST

At California’s King Range National Conservation Area (NCA), the Lost Coast Education Center hosts a summer Junior Interpreter Program to teach junior-high students about the natural and cultural resources of the NCA. The program is coordinated by the King Range NCA Interpretive Specialist and conducted by a college Interpretation major hired through the BLM’s Student Educational Employment Program (SEEP).

“Train-the-trainer” instruction by BLM staff and other local resource professionals will ultimately enable student employees to teach interpretive approaches to other students from outside the vicinity, e.g., the San Francisco Bay area.





"The purpose of learning is growth, and our minds, unlike our bodies, can continue growing as long as we live."

Mortimer Adler,
American educator and philosopher

BUDDING RANGERS MEET THE "NEIGHBORS" AT ARKANSAS HEADWATERS

The Arkansas Headwaters Recreation Area's 2010 BLM Junior Ranger Program focused on children between the ages of 4 and 8. Led each week by a Colorado State Park interpreter, kids identified animal tracks in the "Who Am I?" segment, learned about local birds in "Come Fly With Me," investigated the area's geology in "Rock Hounding," and got acquainted with snakes and other slithery friends in "Creepy Crawlers." "Graduates" each received a Junior Ranger badge.

INTERPRETERS GUIDE SIXTH-GRADERS THROUGH A "RANGER STATION TAILGATE SESSION"

Near Grants, New Mexico, a "Ranger Station Tailgate Session" brought out the entire sixth-grade class of Los Alamos Middle School for a day-long outdoor

learning experience. Interpreters stationed along a 1½-mile-long BLM nature trail represented various government agencies and professions and discussed subjects from volcanoes and fossils to alternative energy and water erosion.

IDAHO KIDS CREATE WILDLIFE INTERPRETATION MATERIALS

In Coeur d'Alene, the Wildlife Education Center provided a two-phase, hands-on program for Idaho youth to learn interpretive techniques. In the first phase, the kids worked with written materials, trail guides, interpretive signage, and taxidermy displays, and even edited a guide to the BLM's nearby Mineral Ridge Scenic Area. They then worked with BLM staff to plan and write text for five interpretive signs. In the second phase of the project, six of the participants designed, constructed, and installed a wetlands habitat exhibit for the Wildlife Education Center.



BLM STAFF PREPARE FOR THE GILA BOX “JUNIOR RANGER” CREW

BLM staff at Arizona’s Gila Box Riparian National Conservation Area (RNCA) developed a Gila Box Junior Ranger Booklet and accompanying Junior Ranger Badge for use with young people at on-site programs. The booklet contains interactive and interpretive activities to engage children, individually or in groups, in understanding, appreciating, and caring for the resources of the Gila Box RNCA. “Successful” Rangers will earn a badge in recognition of their newfound knowledge. The program will be implemented on the ground in 2011.

UTAH FOSSILS HIT THE ROAD

In cooperation with the Grand Staircase-Escalante Partners (GSEP), the BLM’s Grand Staircase-Escalante National

Monument in southern Utah added three new fossil reproductions to its array of traveling exhibits: casts of *Gryposaurus monumentensis* and *Diabloceratops eatoni* dinosaur skulls, and a replica skull of *Deinosuchus hatcheri*, a newly discovered species of ancient crocodile. For most of the summer and fall, the *Gryposaurus* replica was on display at Ruby’s Inn, a hotel near Bryce Canyon National Park, to the delight of area residents and travelers alike.

CHILDREN’S MUSEUM EXHIBIT STRESSES RESPECT FOR ROCK ART

The BLM partnered with Salt Lake City’s Discovery Gateway Children’s Museum to present “Utah’s Rock Art,” an exhibit that focused on archaeology, rock art and artifact protection and preservation, and BLM careers in archaeology. A special feature was a traveling photographic display entitled, “Sacred Images: A Vision of Native American Rock Art.” The exhibit’s interactive components included a full-size replica of an Anasazi granary and a reproduction of an archaeological dig pit, complete with “artifacts.”



The "Best of the Best"

BLM programs succeed because of the superb contributions and support provided by "the best of the best" employees, volunteers, and partner organizations. The BLM strives to acknowledge excellence in all three categories.

The BLM administers several agency-wide award programs, and regularly solicits and organizes agency nominations for Department of the Interior and outside award programs. The BLM's 2010 winners in two such award competitions are described below.

2010 BLM "EXCELLENCE IN INTERPRETATION OR EDUCATION" AWARD WINNERS

BLM hosted three "Excellence" award winners at the Federal Agency Awards ceremony in conjunction with the National Association for Interpretation's 2010 National Workshop in Las Vegas. The awards recognize accomplishments and contributions of BLM employees in the fields of interpretation or education. The 2010 winners were:

- Rachel Sowards-Thompson, Outdoor Recreation Planner with the BLM's King Range National Conservation Area in California. Rachel developed a remarkable variety of education and outdoor ethics programs that engaged audiences ranging from student groups to families.

- Matthew "Matt" Christenson, a Public Affairs Specialist with the BLM Oregon State Office. Matt was the driving force behind *Northwest Passage*, a quarterly magazine about BLM Oregon/Washington resources, programs, policies, and activities.
- Joyce "Joya" Szalwinski, Park Ranger in El Centro, California. Joya created a 25-card activity set for families to use at Imperial Sand Dunes to learn about safe off-highway vehicle riding.

2010 BLM "PUBLIC LANDS PARTNERSHIP EXCELLENCE" AWARD WINNER

At the annual convention of the Association for Partners of Public Lands (APPL), the primary umbrella organization for interpretive associations and friends groups, the BLM presented its "Public Lands Partnership Excellence" award to recognize exceptional support for the BLM's interpretive, educational, and/or public outreach programs.

The 2010 award recipient was Alaska's Friends of the Campbell Creek Science Center, a group founded in 2005 to support the BLM's Campbell Creek Science Center as a regional resource for science and environmental education. The friends group has involved local businesses, organizations, and citizens in the cause; raised nearly \$150,000 for program support; offered scholarships to economically-disadvantaged youth; and established an endowment to address the long-term financial sustainability of the Center.



A MODEL VISITOR CENTER OPENS AT RED ROCK CANYON

In 2010, Nevada's Red Rock Canyon National Conservation Area opened the doors of a new state-of-the-art visitor center, certified by the U.S. Green Building Council as a "Leadership for Energy

and Environmental Design" (LEED) building. A unique outdoor exhibit area, landscaped with native

plants, hosts interpretation and orientation programs on the area's recreational opportunities, wildlife, wild horses and burros, vegetation, geology, and cultural resources. More than one million people visit Red Rock Canyon each year to hike, bike, and explore the site's many cultural and natural resources.



PARTNERS BRING A PIONEER TRAIL TO LIFE

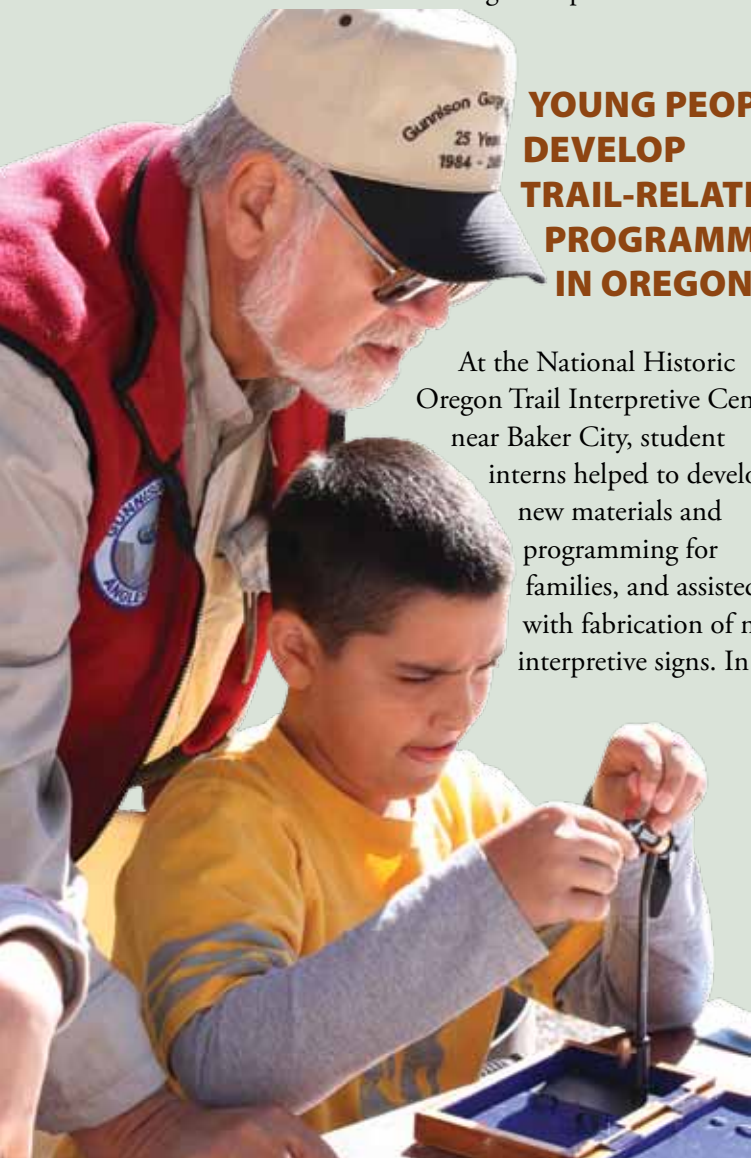
A successful partnership among the BLM, the Southern Nevada Conservancy, and other organizations was responsible for the completion and opening of the new California National Historic Trail Center near Elko, Nevada. The facility complements other BLM historic trail centers, which focus on diverse facets of westward migration and migrants in 19th-century America. The center has already hosted special exhibits as well as screenings of films related to the 2010 National Cowboy Poetry Gathering.

The Southern Nevada Conservancy continues to assist BLM with development of exhibits, delivery of interpretive programs, and management of the center's gift shop.



YOUNG PEOPLE DEVELOP TRAIL-RELATED PROGRAMMING IN OREGON

At the National Historic Oregon Trail Interpretive Center near Baker City, student interns helped to develop new materials and programming for families, and assisted with fabrication of new interpretive signs. In



addition to historical interpretation programs, the center offered daily activities and guided hikes focusing on local wildlife ecology, geology, and botany. Materials for self-guided geology hikes were also developed, and informative "Pioneer Packs" enabled families to explore historic trail segments on their own.

ROCK SPRINGS WELCOMES VISUALLY-IMPAIRED VISITORS

Wyoming's Rock Springs Field Office aims to be a leader in offering visitor services to underserved populations. A recently issued field office policy calls for all new interpretive sites within the jurisdiction to have Braille panels installed along with standard signs. Two such sites were constructed in 2010.



THE BLM NATIONAL LANDSCAPE CONSERVATION SYSTEM CELEBRATES “A DECADE OF DISCOVERY”

A standout among a crowded calendar of events celebrating the 10th anniversary of the NLCS was a five-day science symposium held in Albuquerque, New Mexico. More than 130 presenters highlighted significant research that had occurred on NLCS lands over the previous ten years. Scientists addressed diverse topics that included the Colorado Plateau as an analogue to the landscape of Mars, dinosaur track site discoveries, restoration of native plant communities, and involvement of citizens in science on the public lands.

“If we want children to flourish, to become truly empowered, then let us allow them to love the earth before we ask them to save it.”

David Sobel,
Education philosopher and writer

Participants attended oral presentations, poster sessions, and field trips to local NLCS units, including BLM national monuments, national conservation areas, and wilderness study areas. “Interpretation and Education” was one of fifteen categories of

science addressed by symposium presenters. Abstracts are available online at http://www.blm.gov/wo/st/en/prog/blm_special_areas/NLCS/science.html, as are feature stories about scientific activities at selected NLCS sites.



HANDLE *with Care*

THE BLM IS DEDICATED to promoting and supporting land stewardship and outdoor education. In collaboration with numerous partner organizations, BLM Stewardship and Outdoor Ethics Program staff strive to educate the public about responsible outdoor recreation. Volunteer events and activities designed to improve and enhance the public lands—"stewardship in action"—are important components of such outreach.

Whether recreation takes the form of hiking in the backcountry or riding off-highway vehicles, the BLM encourages all visitors to take the time to learn the outdoor ethics associated with their favorite activities. Informed citizen stewards help the BLM to care for the public lands and resources, keeping them in good condition for current and future generations.

"LEAVE NO TRACE" AND "TREAD LIGHTLY!" ENCOURAGE RESPONSIBLE OUTDOOR BEHAVIOR

The BLM supports a variety of programs that teach outdoor ethics to youth and adults. In 2010, BLM Master Trainers taught thousands of Boy Scouts and Girl Scouts, school groups, underserved youth, and adults the principles of Leave No Trace and Tread Lightly!, which address non-motorized and motorized activities, respectively.

Trainers emphasize the importance of being good stewards of the public lands. In 2010, more than 5,000 children, teens, and adults learned about safety and ethics through classroom lessons and activities at BLM sites.





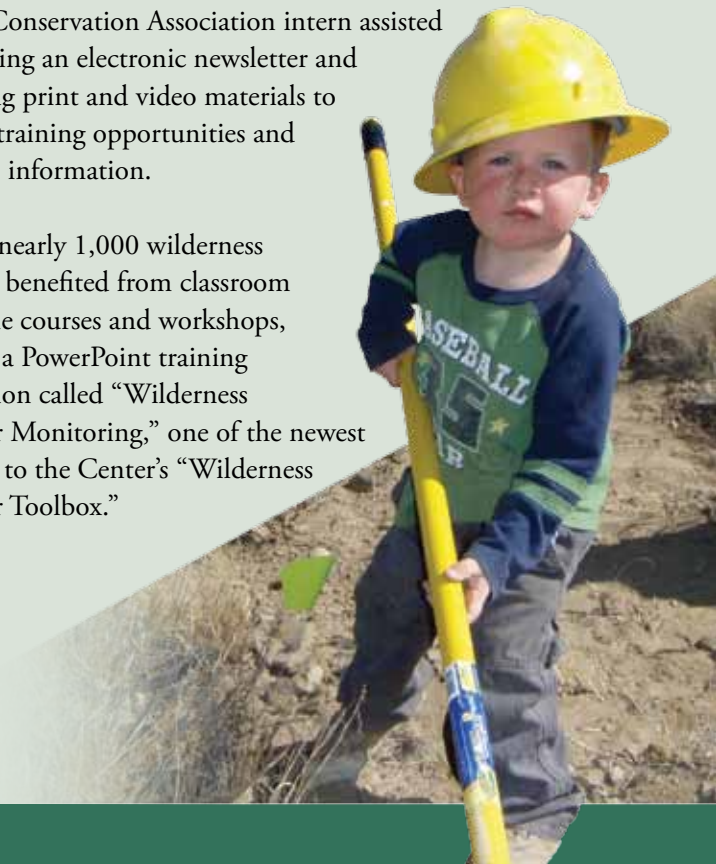
Additionally, the BLM works in partnership with the nonprofit Leave No Trace Center for Outdoor Ethics and Tread Lightly!, Inc., to develop and support new programs to teach public land users the elements of responsible behavior on the public lands. Many of these programs are tailored to specific activities such as hunting, camping, and off-highway vehicle riding.

THE ARTHUR CARHART NATIONAL WILDERNESS TRAINING CENTER MEETS WILDERNESS MANAGEMENT CHALLENGES

Established in 1993 and housed on the University of Montana campus, the Arthur Carhart National Wilderness Training Center addresses issues in wilderness management, training, and education as identified by wilderness managers from across the nation. Center staff develop comprehensive interagency solutions to wilderness challenges by working with experts at all levels of the four Federal wilderness-management agencies: the BLM, U.S. Forest Service, National Park Service, and U.S. Fish & Wildlife Service.

The Center's recent focus has been increasing online course offerings, capitalizing on technology and young talent to improve networking and communication, and initiating external outreach and education activities. A Student Conservation Association intern assisted in launching an electronic newsletter and developing print and video materials to promote training opportunities and distribute information.

In 2010, nearly 1,000 wilderness managers benefited from classroom and online courses and workshops, as well as a PowerPoint training presentation called "Wilderness Character Monitoring," one of the newest additions to the Center's "Wilderness Character Toolbox."



BUILDING *Future Leaders*

YOUTH ORGANIZATIONS such as the YMCA, 4-H, Girl Scouts of the USA, and Boy Scouts of America help the BLM engage large numbers of young people in informal educational and interpretive programs as well as volunteer projects. Youth group members have been involved in almost all BLM resource programs, from rangelands to wildlife, from minerals to cultural resources.



THE BLM WORKS WITH SCOUTS, AND VICE VERSA

The Boy Scouts of America (BSA), currently 2.7 million strong, have rendered volunteer service to the BLM since the agency's creation in 1946. Over the years, the BLM has benefited from thousands of Scout conservation projects in virtually every BLM field office. These projects have ranged from individual and troop endeavors to complex Eagle Scout advancement projects.

The BLM is also participating in a youth outreach program in cooperation with BSA and the Philmont Scout Ranch high-adventure base in New Mexico. BLM resource specialists and volunteers conduct activities in environmental education, discuss BLM careers, and provide Leave No Trace outdoor ethics training during the summer camping season.



Girl Scouts of the USA (GSUSA) serves an estimated 2.3 million girls and young women nationwide. The BLM participates in the annual National Council Session & Convention, at which BLM staff highlight agency youth programs; offer information on opportunities to engage, educate, and employ Girl Scouts; and emphasize the importance and relevance of initiatives such as America's Great Outdoors and Let's Move Outside.

THE 2010 NATIONAL SCOUT JAMBOREE: BOY SCOUTS "TOURED" BLM PUBLIC LANDS

Over a period of ten summer days in 2010, the BLM reached more than 6,500 Scouts at the National Scout Jamboree at Ft. A.P. Hill, Virginia, with two interactive exhibits along the Jamboree's "Conservation Trail."

Set in the context of the 10th anniversary of the BLM's National Landscape Conservation System (NLCS), the one-acre main BLM exhibit offered hands-on educational activities highlighting cultural resources, paleontology, caves, and the role of fire in ecosystems on the public lands. For example, Scouts had the opportunity to construct a replica of a Native American dwelling from the ground up, using only local materials such as tree branches and mud.

BLM natural and cultural resource specialists from around the nation helped to plan, design, and construct exhibit components, and were on hand to answer questions, assist Scouts with activities, and demonstrate professional techniques.

A second BLM outpost on the trail taught Scouts the principles of Leave No Trace and Tread Lightly! outdoor ethics.



GIVING BACK to the Public Lands

THE BLM'S THRIVING VOLUNTEER PROGRAM offers unique and varied opportunities for people to get outdoors and connect with the public lands. Each year, more than 30,000 BLM volunteers restore and improve natural and cultural resources, act as goodwill ambassadors to local communities, educate and engage the public, and supplement the BLM workforce with human power and enormous talent.

Volunteers work as individuals, families, groups, and partners on both short-term projects and those that require longer, sustained efforts. BLM volunteers reap the benefits of on-the-job learning, physical exercise, and a sense of stewardship, accomplishment, and belonging.

The BLM recognizes exceptional volunteers, volunteer groups, and BLM volunteer leaders via its "Making a Difference" National Volunteer Awards program, now in its 16th year. Eight individuals and couples and one BLM employee were honored in 2010.



"I encourage all Americans to give their time and energy to care for—and to go out and enjoy—our public lands. Together, we can build upon our history of stewardship so our unique landscapes are preserved for countless generations to come."

President Barack Obama
National Public Lands Day 2010 proclamation

NATIONAL PUBLIC LANDS DAY BLENDS VOLUNTEER SERVICE WITH "TEACHABLE MOMENTS"

On Saturday, September 25, 2010, thousands of BLM volunteers participated in more than 120 National Public Lands Day (NPLD) projects in 16 states from Alaska to Florida. For such service-minded individuals and groups, the annual celebration of NPLD—the nation's premier workday on behalf of our nation's public lands—offered an opportunity to support America by enhancing its natural and cultural resources. The BLM hosted an extraordinary variety of work and educational activities, ranging from petroglyph inventory to cave cleaning to mangrove potting.

Several of the BLM's NPLD events were officially connected with the First Lady's Let's Move Outside initiative. Projects and programs at those sites combined service work with activities designed to be both educational and physically energizing.





NURTURING *Conservation Leaders*

IN LAUNCHING THE OFFICE OF YOUTH in the Great Outdoors, Secretary of the Interior Ken Salazar pledged to create a 21st-Century Youth Conservation Corps, providing opportunities for youth from all backgrounds to contribute to the work of the Department.

Increasing youth employment was established as one of the Department's five high-priority goals for 2010. The Secretary challenged the BLM to increase youth employment by 35 percent over 2009 levels; the BLM rose to the challenge at both the national and State levels.

Systems for tracking the work of youth corps members and other partner-supported hires were established, agreement templates were developed, and weekly youth employment reports were provided to the BLM Executive Leadership Team, the top management in the agency. Several BLM States developed new, comprehensive assistance agreements with youth corps organizations, combining funds provided by the BLM Youth Program with those furnished by BLM resource programs.

The BLM not only met but exceeded its 2010 goal, hiring more than 3,100 young people through partner organizations and BLM Student Educational Employment Programs. In addition, the BLM's National Centralized Recruitment Program was adopted as a model by the Department's Office of Youth in the Great Outdoors as part of a Department-wide effort to provide career pathways for young people from diverse backgrounds. The BLM Branch of Recruitment and Retention coordinated hiring events at several conferences, including that of the League of United Latin American Citizens, and participated in numerous other recruitment events at Historically Black Colleges and Universities, Hispanic Serving Institutions, and Tribal Colleges and Universities. BLM Headquarters provided funding for salary expenses, orientation, tuition, and travel for 26 new Student Career Experience Program (SCEP) students

and approximately 60 returning SCEP students. As in previous fiscal years, the funding incentive was intended for the hiring of students from typically under-represented groups.

These and other national and State initiatives helped to involve youth from diverse backgrounds in the complex work associated with BLM's multiple-use mission. The examples described here represent only a sample of the many ways in which youth were employed by the BLM.

YOUNG ALASKA VOCATIONAL STUDENTS CONSTRUCT TRAIL SHELTERS

Across Alaska, vocational employment programs provided opportunities for almost 200 young adults to learn resource management skills as interns and employees for the BLM's Hydrology, Cultural Resources, Recreation, Range, and Weed Management Programs, as well as others.



“Every one of the students enjoyed it . . . They got to feel a real sense of ownership.”

Cleve Robinson,
Construction Industry
Supervisor for Iditarod
Trail Project

Funding from the American Recovery and Reinvestment Act (ARRA) was used to construct four safety shelter cabins along the Iditarod National Historic Trail.

The project created temporary jobs in rural communities along the trail and provided hands-on training for rural Alaskan youth from villages in the region. The BLM worked with several partners, including the non-profit Alaska Youth Restoration Corps, the Alaska Job Corps, and the Iditarod Historic Trail Alliance, as well as the State of Alaska and several local communities.

In addition to constructing actual shelters along the trail, a group of 27 students and two instructors from the Alaska Job Corps Center’s carpentry and electrical trade programs constructed an exact replica of an Iditarod Trail safety shelter cabin and transported it to the Alaska State Fairgrounds. The structure served as the BLM public information and exhibit site for the 2010 State Fair, providing thousands of fair-goers the opportunity to learn about the Iditarod Trail and try out an actual safety shelter.

INTERNS TACKLE TRASH IN TUCSON AREA

Interns from the Student Conservation Association (SCA) assisted with resource protection in the BLM’s Ironwood Forest National Monument and San Pedro Riparian National Conservation Area by removing vast amounts of trash that had been dumped illegally. The interns were also heavily involved in road and vegetation rehabilitation projects to eliminate unauthorized all-terrain-vehicle trails and prevent other illegal activities.

Most recently, the SCA interns were key players in one of the BLM’s priority initiatives in Arizona, “Reclaiming Our American Monuments.” The effort relies on SCA interns to record information on

“We cannot always build the future for our youth, but we can build our youth for the future.”

President Franklin D. Roosevelt

sites negatively impacted by illegal immigrant travel and drug smuggling, and in turn to take action to rehabilitate these areas.

“NICK’S INTERNS” CARRY ON THE WORK OF A YOUNG CALIFORNIA CONSERVATIONIST

The parents of Nick Raphael founded “Nick’s Interns” in memory of their late son, who worked with the BLM King Range National Conservation Area (NCA) trail crew and local conservation organizations throughout his high school and college years.

The organization exposes southern Humboldt County youth to environmental careers and positive adult role models—very important in a rural, economically-



depressed area that presents few career opportunities apart from those offered by the “underground economy.”

Nick’s parents raise money each year to hire high school interns and fund a college intern to work as the assistant crew leader. Since its inception in 2004, the Nick’s Interns program has employed over 100 youths.

In 2010, a college intern hired through the Student Temporary Employment Program (STEP) provided day-to-day leadership for 20 interns. Nick’s Interns members worked alongside professional natural resource specialists from the BLM and four non-profit conservation organizations to accomplish a variety of projects in the NCA. Work areas included watershed restoration, stream flow monitoring, reforestation, steelhead surveys, invasive weed removal, recreation site maintenance, trail construction, and interpretive programs.

“Let’s tell young people the best books are yet to written; the best painting, the best government the best of everything is yet to be done by them.”

John Erskine, American author

VETERANS CONTINUE THEIR PUBLIC SERVICE IN COLORADO

Members of the Veterans Green Corps were hired and trained by the Southwest Conservation Corps to assist with the BLM’s Fire Program in Colorado. The

Green Corps members, all of whom had served in the military in Iraq or Afghanistan, were trained in fuels reduction and other aspects of the Fire Program to prepare them to work as part of a sustainable forestry team. Several of the veterans have since been hired as firefighters on the San Juan Public Lands of southwestern Colorado.



STUDENT EMPLOYEES CONDUCT RIVER ISLAND STUDIES

Wisconsin youth employed through the BLM’s Student Temporary Employment Program conducted island studies and led outreach programs on BLM-managed islands on the Chippewa, Flambeau, and Wisconsin Rivers. The student employees assessed the recreation potential of islands in several stretches of those rivers, conducted biological inventories of ephemeral ponds and other island habitats, and helped with invasive plant species control by removing buckthorn shrubs.



During a very busy summer, the student employees also conducted educational activities for groups of young people affiliated with local youth organizations.

“I wanted to get kids involved so they would develop a sense of stewardship and respect for our natural resources.”

YEP Founder
Steve Adams

BLM SAYS “YEP” TO IDAHO YOUTH CREWS

The Youth Employment Program, Inc. (YEP), a non-profit corporation established in 1994, promotes educational development and provides employment opportunities for

Lemhi and Custer county youth from 14-25 years old. In 2010, the BLM’s Salmon and Challis Field Offices employed YEP crews to complete a wide range of projects, including improving sage grouse habitat; assisting with rangeland monitoring; eradicating and controlling noxious weeds; and thinning hazardous fuels to reduce the danger of wildfire. The group also constructed an off-highway vehicle training area and a bighorn sheep viewing station.

In addition to helping youth establish connections with the outdoors and with natural resources, YEP helps the BLM foster stronger relationships with youth and local communities. Director Bob Abbey recognized YEP’s contributions to the BLM with the 2010 Director’s Excellence Through Leadership Award.

BOOTSTRAPS PROGRAM IMPARTS WORKPLACE SKILLS TO NEVADA AT- RISK YOUTH

American Recovery and Reinvestment Act funding was used in Nevada to support several projects that employed youth from the Bootstraps Program. This program, developed by the University of Nevada Cooperative Extension, helps unemployed, at-risk youth to develop good work ethics, obtain General Equivalency Diplomas, and write resumes, and teaches them what is expected in the work



environment. Bootstraps youth worked on BLM projects to fence more than 50 acres of sage grouse riparian habitat in Lander and Eureka Counties and to thin piñon and juniper trees on 1,500 additional acres of sage grouse habitat. BLM supplemental funding enabled youth from the Bootstraps Program to complete several jobs for the Tonopah Field Office as well, including weed

inventory, treatment, and monitoring projects.

"In Bootstraps, the answer is simple: there is work to be done, and these young adults NEED work. And not just a paycheck . . . Bootstraps gives them the confidence and work ethic skills needed to move forward in the workplace."

Rodney Davis,
Lander County Extension
Educator

ROCKY MOUNTAIN YOUTH CORPS MEMBERS PUT QUESTA, NEW MEXICO, "ON THE MAP"

In 2010, the Las Vistas de Questa Trail was constructed under a partnership among the Village of Questa, Chevron Mining, Inc., and the Rocky Mountain Youth Corps (RMYC). Citizens of Questa are seeking to make their village the gateway to the BLM's Wild Rivers Recreation Area near Taos. Several RMYC crews were involved in

constructing 6½ miles of trail over the course of the summer.

Connecting the village with more than 20 miles of gorge rim and river trails within the Recreation Area, the trail will provide non-motorized recreation opportunities for residents and visitors, as well as economic development opportunities for the village itself.

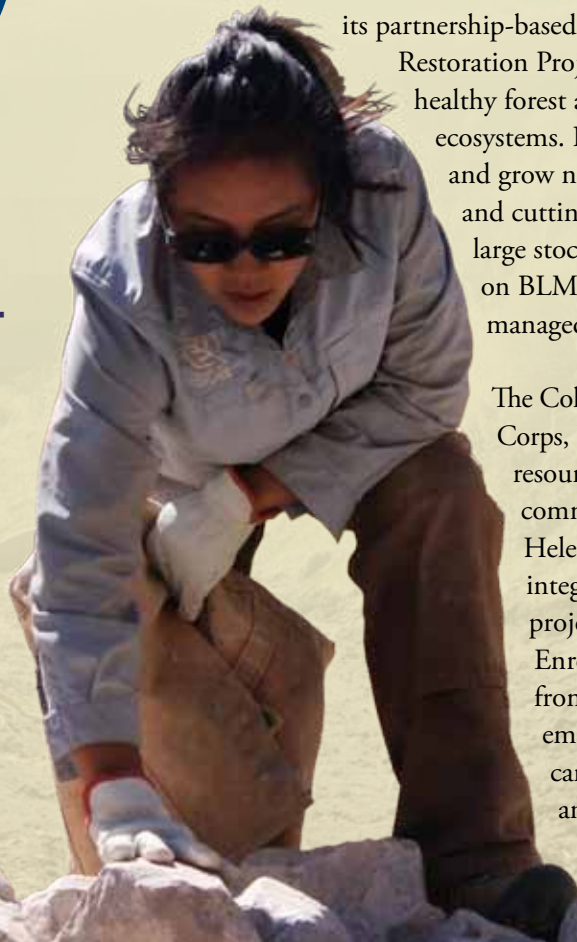
"We have been working on trails at Wild Rivers and have really made a big impact on the trail and the safety of the visitors."

RMYC crew member

YOUTH CORPS MEMBERS STOCK NATIVE SEEDS FOR OREGON ECOSYSTEM RESTORATION

The Tillamook Resource Area continued its partnership-based Riparian Restoration Project to promote healthy forest and riparian ecosystems. Participants collect and grow native plant seeds and cuttings to develop large stocks for restoration on BLM- and partner-managed lands.

The Columbia River Youth Corps, based in the small, resource-dependent community of St. Helens, Oregon, is an integral part of the project's success. Enrollees benefit from meaningful employment, career mentoring, and educational experiences.



"The minute you begin to do what you really want to do, it's really a different kind of life."

**Buckminster Fuller, Engineer, Author,
Designer, Inventor, and Futurist**

The BLM also worked with other youth corps in Oregon and Washington, including the Northwest Youth Corps, Americorps, Jefferson County Conservation Corps, Central Oregon Interagency Council, Josephine County Conservation Corps, Heart of Oregon Youth Corps, and Lopez Island Youth Corps.

APPRENTICE PARK RANGERS ASSIST WITH SIGNAGE, FENCING, AND TRAIL WORK IN MOAB

In 2010, a member of the Utah Conservation Corps served as an apprentice park ranger with the BLM, assisting with signage, fencing, vegetative restoration projects, and tracking of travel plan accomplishments in the Moab area.

At the Sand Flats Recreation Area, apprentices hired from the local Moab community helped make improvements to trailheads, trails, and campgrounds. They also participated in educational training on a wide range of topics, including archaeology, history, geology, global positioning systems, search and rescue, and first aid.

"SEEDS OF SUCCESS" PARTICIPANTS COLLECT WYOMING NATIVE SEEDS

Three Wyoming Conservation Corps (WCC) crews each spent ten days in the field collecting native seeds for the national "Seeds of Success (SOS)" program. SOS is a national wildland seed collection network of 39 organizations that have created over 9,000 collections representing more than 3,000 species of wildland native seeds. The crews worked closely with BLM staff and Conservation and Land Management interns hired under an agreement with the Chicago Botanic Gardens.

WCC crew members also assisted the BLM with numerous other projects related to energy, wildlife, recreation, forest management, historic restoration, and water resources management.

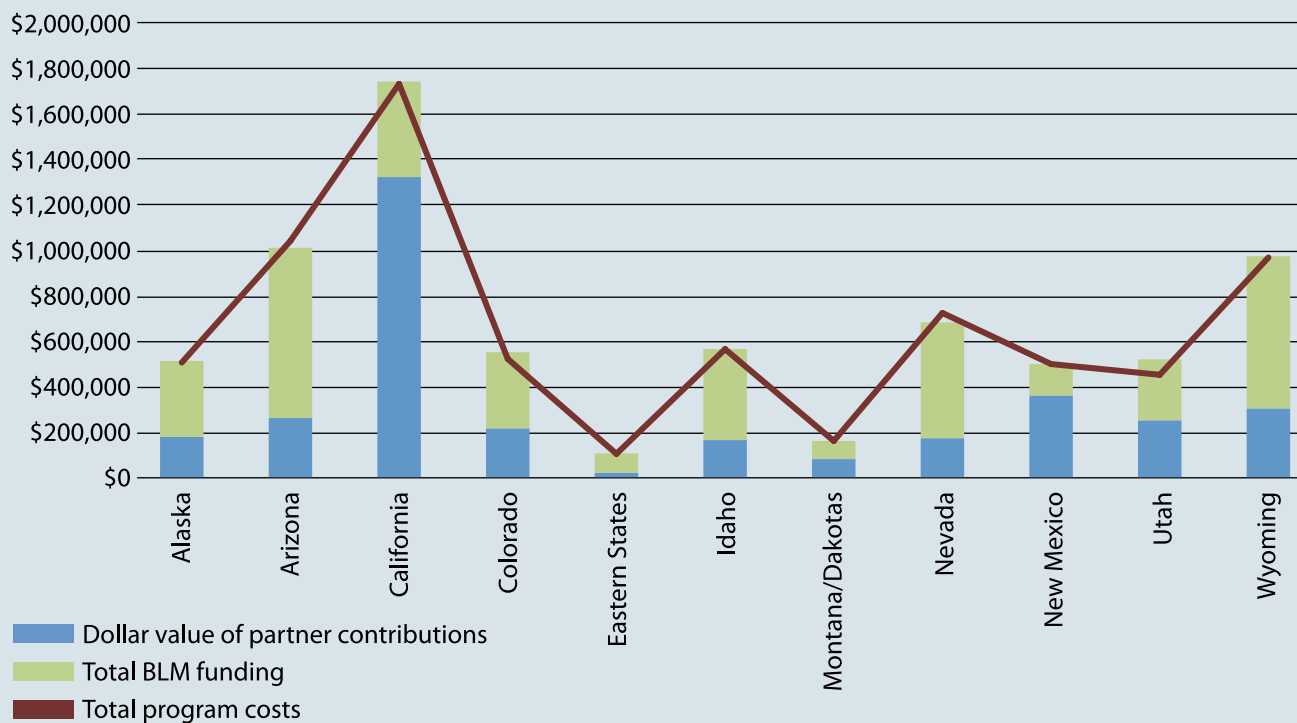


APPENDIX

The Education Program chart and graphs in this report are based only on data submitted in December 2010 by BLM State and Field Offices on FY 2010 projects and programs that

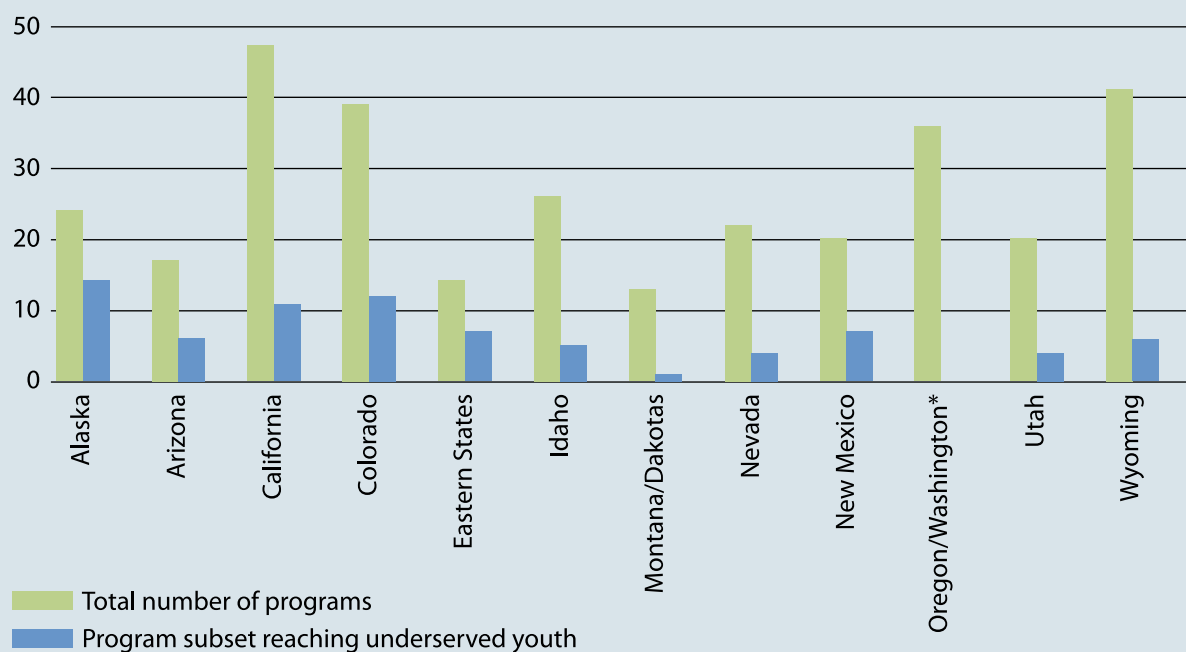
engaged or educated youth up to age 25. They do not reflect the entire scope of education and interpretation activities in which BLM offices are engaged.

FY 2010 BLM Education Program Costs and Funding Sources, by State*



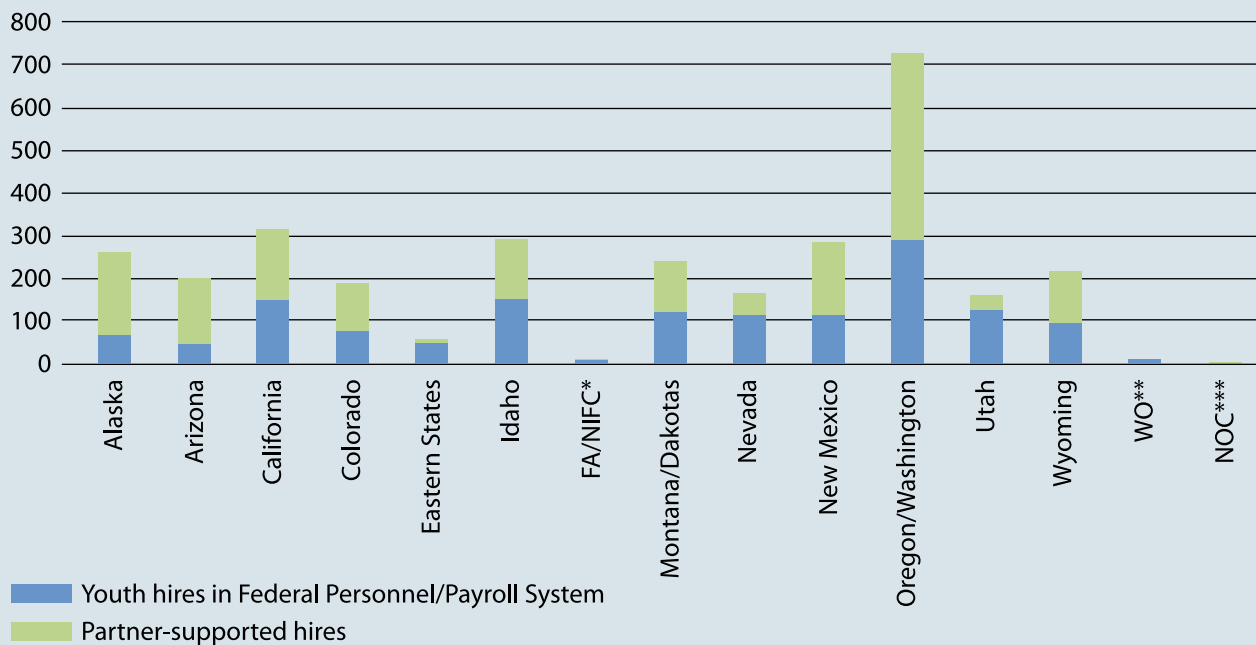
*Data for Oregon/Washington unavailable

FY 2010 BLM Education Programs, by State



*Data unavailable for program subset reaching underserved youth

Youths Ages 16-25 Hired by BLM States and Centers in FY 2010¹



¹Based on data from the Federal Personnel/Payroll System and the quarterly reports provided by the States during FY 2010

*FA/NIFC = Fire & Aviation/National Interagency Fire Center

**WO = Washington Office of the BLM, including the National Training Center

*** NOC = National Operations Center

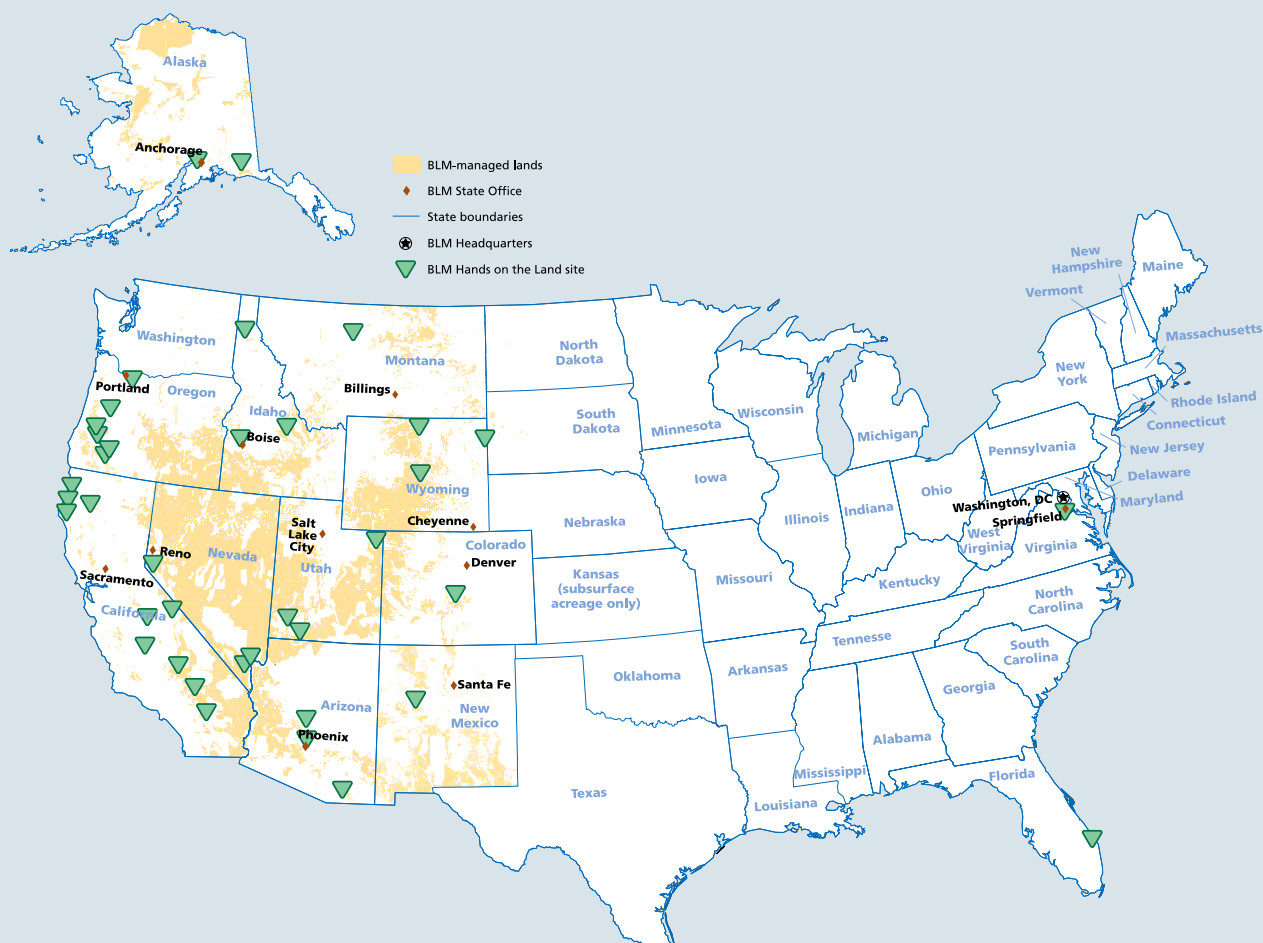
FY 2010 BLM Education Program Statistics, by State

State	Number of programs	Number of youth participants	Number of adult participants	Number of partner groups	Dollar value of partner contributions	Total BLM funding	Total program costs	Program subset reaching underserved youth
Alaska	24	2,381	839	90	\$177,827	\$334,331	\$505,258	14
Arizona	17	176	66	20	\$261,335	\$749,400	\$1,041,234	6
California	47	24,403	1,804	144	\$1,322,561	\$420,409	\$1,732,970	11
Colorado	39	8,555	760	92	\$215,090	\$335,669	\$521,040	12
Eastern States	14	3,322	114	30	\$19,750	\$85,000	\$102,750	7
Idaho	26	10,726	4,049	40	\$163,490	\$401,405	\$5644,195	5
Montana/Dakotas	13	4,817	418	33	\$79,800	\$79,828	\$159,628	1
Nevada	22	19,238	2,075	33	\$171,726	\$510,400	\$723,627	4
New Mexico	20	5,494	844	29	\$359,985	\$138,542	\$498,527	7
Oregon/Washington*	36	5,000						
Utah	20	18,932	689	58	\$250,475	\$268,828	\$451,180	4
Wyoming	41	42,791	10,903	56	\$303,023	\$670,650	\$967,883	6
TOTALS	319	145,835	22,561	625	\$3,325,062	\$3,994,462	\$7,268,292	77

*Incomplete data

BLM Hands on the Land Sites

Agua Fria National Monument (AZ)	Grand Staircase Escalante National Monument Student Explorations (UT)
Alder Creek Children's Forest (OR)	Green River Bonanza Bridge (UT)
Atwell Island (CA)	Headwaters Forest Reserve (CA)
Black Ledges Archaeology Camp (UT)	Jupiter Inlet Natural Area (FL)
Buffalo Field Office (WY)	King Range National Conservation Area (CA)
Big Morongo Canyon Preserve (CA)	Mallo Recreation Area (WY)
California Coastal National Monument Trinidad Gateway (CA)	McGregor Park (OR)
Campbell Creek Science Center (AK)	Meadowood Special Recreation Management Area (VA)
Carson City District Office (NV)	Metro Tech's Fire Science Program (AZ)
Challis Outdoor Classroom (ID)	National Historic Trails Interpretive Center (WY)
Coeur d'Alene Field Office (ID)	Red Rock Canyon National Conservation Area (NV)
Desert Discovery Center (CA)	Roseburg District (OR)
Don't Trash Nevada (NV)	San Joaquin River Gorge (CA)
El Malpais National Conservation Area (NM)	Sand Canyon Environmental Education Program (CA)
Empire Ranch (AZ)	Table Rocks (OR)
FIRE Up for Summer (ID)	Trinity County Resource Conservation District (CA)
Fish Slough (CA)	Upper Missouri River Breaks National Monument Interpretive Center (MT)
Garden Park Fossil Area (CO)	West Eugene Wetlands Education Center (OR)
Glennallen Field Office (AK)	Wildwood Recreation Site (OR)



BLM “LEARNING LANDSCAPES” WEBSITE, www.blm.gov/education

In addition to teacher workshops and other opportunities for professional development, the BLM also offers a wealth of educational resources on its Learning Landscapes website. These include numerous articles and classroom activities authored by BLM resource specialists and published in *Science & Children* magazine, a journal of the National Science Teachers Association.

The website also features highlights from BLM-developed distance learning programs, including satellite broadcasts and interactive electronic field trips, as well as educator guides developed for these programs. Not intended to replace traditional textbooks and curricula, these teacher resources typically focus on topics of particular interest to BLM land managers. Available distance learning programs, for example, focus on: excavation of dinosaur fossils in Utah; the ecology of wildland fire and fire-related issues in the wildland-urban interface; tracking habitat change; and

renewable energy. Teachers can also use the Learning Landscapes website as a portal to BLM State programs close to home.

From festivals to field trips to service learning opportunities, teachers can find details on a wide range of educational opportunities connected with America’s public lands.

OTHER WEBSITES OF INTEREST

BLM Volunteer Program – www.blm.gov/volunteer. This site provides information on BLM Volunteer Program activities, news, and projects.

Hands on the Land – www.handsontheland.org. Teachers can find Hands on the Land educational resources, view site profiles, and take virtual tours.

Volunteer.gov – www.volunteer.gov/gov. Interested citizens can search volunteer job opportunities offered by several land management agencies, including the BLM.



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