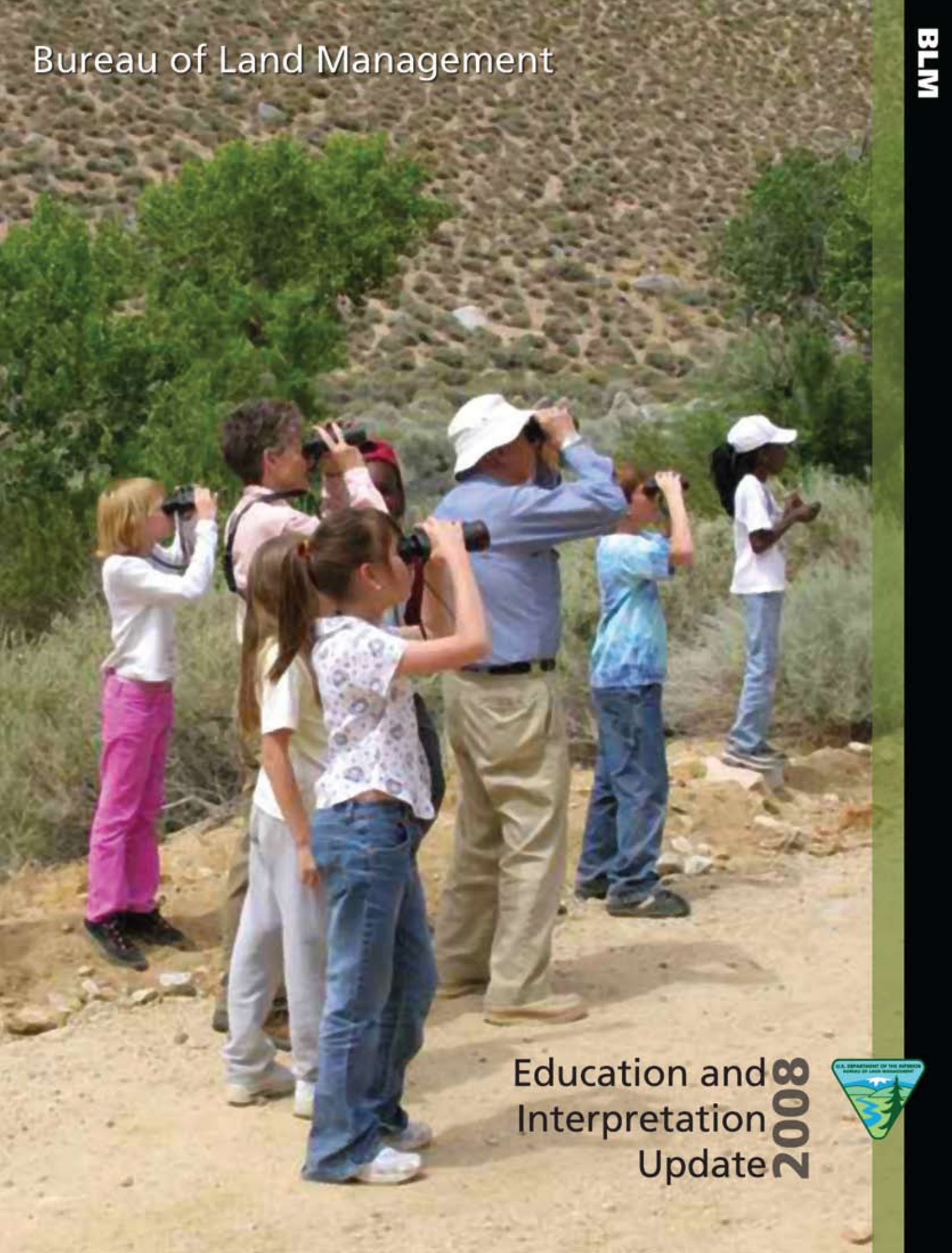


Bureau of Land Management

BLM



Education and Interpretation **2008**  
Update



*If a child is to keep alive his inborn sense of wonder, he needs the companionship of at least one adult who can share it, rediscovering with him the joy, excitement and mystery of the world we live in.*

—Rachel Carson—

## In Brief

### Brought to you by:

BLM's 2008 *Education and Interpretation Update* was produced by the Division of Education, Interpretation, and Partnerships (EIP), one of two divisions in the Office of the National Landscape Conservation System and Community Partnerships. Created in January 2008 as part of BLM's "Managing for Excellence" initiative, the new division combines the former Education & Volunteers Division with four additional BLM programs: Interpretation, Heritage Education, Tourism, and Partnerships.

Education and interpretation have gained the spotlight in recent months as a result of a nationwide effort to reconnect America's young people with the natural world...to keep alive that "inborn sense of wonder." Thankfully, the Bureau of Land Management (BLM) has the assets to do just that: vast acreages to serve as outdoor classrooms, outstanding natural and cultural resources to inspire active exploration, and dedicated staff and volunteers to deliver a wide array of programs that help young and old alike to share in the "excitement and mystery" of our public lands.

As part of the interagency "Children and Nature" initiative, BLM offices and diverse partner organizations have joined forces to encourage kids to "Take It Outside!" (TIO). From permanent visitor centers to kiosks at remote outposts, along desert trails and mountain streams, young people are learning, getting fit, and experiencing the wonders of their public lands. Web-based and other distance-learning programs are stimulating interest in BLM lands and resources. And each year, more students and teachers are taking their learning outside through high-quality, standards-based educational programs offered at BLM Hands on the Land (HOL) sites. This interagency network of field classrooms is not only meeting the needs of teachers and students; it may well provide BLM with the next generation of natural resource professionals.

The following pages provide just a sampling of noteworthy educational activities, materials, initiatives, and events compiled by BLM's Division of Education, Interpretation, and Partnerships (EIP). Readers are invited to visit our web site for complete and updated information on educational and other programs offered nationwide. Nearly 400 separate programs are included. Web address information is provided on the last page.

## National Programs and Events

### Hands on the Land



The interagency Hands on the Land (HOL) network now numbers some 70 field classroom sites across the country, including 30 from BLM. Like the EIP Division, HOL also has a new web site featuring a growing number of educator resources, environmental monitoring databases, and distance learning opportunities. Several BLM sites won HOL awards in 2007-2008: Alder Creek Children's Forest (OR) for its Web Resources; Sand Canyon Environmental Education Program (CA) for Outstanding Community Collaboration; and King Range National Conservation Area (CA) for Fostering Community Partnerships through participation in the Phytoplankton Monitoring Network, a program sponsored by the National Oceanic and Atmospheric Administration.

### Take It Outside! Connect with your Public Lands

A component of the interagency "Children and Nature" initiative, BLM's "Take It Outside!" (TIO) program responds to growing national concerns about the disconnection of America's children from nature as well as the health risks associated with childhood inactivity. TIO offers kids and their families



*Riparian sampling, Empire Ranch, Arizona*



*750 student volunteers with a message, South Spit Cooperative Management Area, California*



*Learning about wetlands, San Luis Valley, Colorado*

opportunities for vigorous, hands-on outdoor experiences on the public lands. In 2008, the TIO grant program awarded funding to nearly 60 BLM field projects that reached more than 35,000 kids and their families. Donations (both cash and in-kind) from more than 250 TIO partners matched BLM's investment at a ratio of almost 10:1.

### **National Public Lands Day (NPLD)**

BLM's participation in NPLD has grown each year since the program's 1994 beginnings. In 2008 alone, BLM hosted 10,000+ volunteers at 127 sites administered by 86 Field Offices in 18 states. For younger participants in particular, NPLD projects offer the perfect setting to "learn by doing." Environmental/heritage education, interpretation, and outdoor ethics are key components of many NPLD events.

### **Youth Groups and Urban Programs**

BLM continues to work with a variety of youth groups through programs such as "Linking Girls to the Land," an interagency effort on behalf of Girls Scouts of the USA. Many Girl Scout troops are enthusiastic participants in National Public Lands Day, for example. And Field Offices in Anchorage (AK) and Roseburg (OR) have regularly scheduled programs with Girls Scouts. BLM offices in Virginia and California sponsor camping trips for urban youth through the Wonderful Outdoor World outdoor recreation program. And the Milwaukee Field Office works in partnership with numerous local and federal agencies to sponsor the Urban Tree House, which reaches some 3,000 young people each year.

## **Resource Education Highlights**

The following education initiatives focus on specific BLM resource areas:

### **Energy Education**

- "Get Energized!" kiosks for BLM visitor centers and educational CD-Rom versions of "Get Energized!" are now available in Alaska, California, Colorado, New Mexico, and Wyoming. In addition, the National Energy Education Development (NEED) project provided 11 educator workshops using BLM's new "Teacher's Guide to Energy on Public Lands."
- "Renewable Energy: POWERful Choices," a web-based electronic field trip, debuted in the fall 2006. Since then, students from around the country have participated in two on-line "Ask the Experts" sessions, during which BLM energy experts answered more than 600 student questions.

### **Biological Resources Education**

- "Holding onto the GREEN Zone," a riparian education module for middle school students, was completed and made available on-line and in printed format. A Student Guide, Leader Guide, and poster were produced in collaboration with the University of Wisconsin-Extension, the National Riparian Service Team, and the USDA Cooperative State Research, Education, and Extension Service. In coming months, the curriculum will be the focus of teacher workshops, which are being developed with several partner groups.
- BLM's electronic field trip "Keeping Habitats Healthy: We All Can Help!" premiered in the spring 2008. During the 3-day "Ask the Experts" session, nearly 100 students submitted questions to BLM wildlife experts.
- BLM joined the Chicago Botanic Garden and numerous other partners in Project BudBurst, a national campaign to enlist the public in collecting climate change data related to the timing of leafing and flowering of native flowers and trees. During the pilot year of the project, participants filed more than 900 reports.
- As part of the North American Pollinator Protection Campaign, BLM partnered with other Federal agencies to promote MonarchLIVE, a year-long distance learning adventure focusing on the Monarch butterfly and the important role that monarchs and all pollinators play in our daily lives.



*Planting native prairie plants at the Urban Tree House, Eastern States-Milwaukee*



*Vecinos del Rio Petroglyph Recording Project, Taos, New Mexico*



*Photographing barrel cactus, Santa Rosa and San Jacinto Mountains National Monument, California*

## Cultural Resources Education

- The "Adventures in the Past" heritage resources web site continued to expand its diverse multimedia "virtual site tours."
- For the 2006 centennial of the Antiquities Act, BLM-managed heritage resources were featured in a Smithsonian Institution photo exhibit entitled "America's Priceless Heritage: Snapshots in Time."
- The fourth *History Mystery*, "Mysterious Lighthouses and Light Beacons," was launched and distributed through visitor centers, public rooms, and on-line.
- BLM heritage education activities, events, and materials reached more than 420,000 people in 2006 and 2007 through presentations to students, public site tours, web pages, and collegiate field schools.
- In 2007, 419 educators in 16 states received Project Archaeology (PA) instruction and materials. To date, more than 7,000 educators have received PA materials via 442 workshops involving 23 State and regional partners. PA also piloted a new national curriculum, *Investigating Shelter*.

## Visitor Education and Interpretation

- A staff of 138 BLM employees serve as Master Educators of "Leave No Trace" outdoor ethics, and 69 BLM employees are educators of "Tread Lightly!" outdoor ethics.
- Nearly 1 million public land users have been educated about public land stewardship, outdoor ethics, and environmental awareness.
- In partnership with the Western Slope Youth Conservation Corps and the Colorado "Stay the Trail" program, BLM constructed outdoor recreation ethics message signs for billboards along Colorado highways.
- Both facilitated and self-guided education and interpretive programs were delivered on BLM public lands and at visitor/interpretive centers to more than 7 million visitors.
- In partnership with the National Geographic Society's geotourism program, several "MapGuides" to special regions have been produced, including the bi-national "Arizona-Sonora Desert Region" and "Crown of the Continents."

## "Excellence in Interpretation or Environmental Education" Award Winners

Each year, in conjunction with the National Association for Interpretation's National Workshop, BLM joins other federal agencies in recognizing outstanding interpreters and educators for employee-conducted programs that enhance understanding of public lands resources and management issues.

### The 2006 winners were:

Tracy Albrecht, Santa Rosa and San Jacinto Mountains National Monument, California (Gold)  
Jeff Brune, Campbell Creek Science Center, Alaska  
Jay Moeller, Yaquina Head Outstanding Natural Area, Oregon  
Tracy Rowland, San Joaquin River Gorge, California

### The 2007 winners were:

Tammy Jakl, Hollister Field Office, California (Gold)  
Diane Drobka, Safford Field Office, Arizona  
Joy Fatooh, Bishop Field Office, California  
Brenda Wilkinson, Socorro Field Office, New Mexico

### The 2008 winners were:

Victoria Atkins, Anasazi Heritage Center, Colorado (Gold)  
David Sisson, Cottonwood Field Office, Idaho (Gold)  
Jane Childress, Las Cruces Field Office, New Mexico  
Luise Woelflein, Campbell Creek Science Center, Alaska



*Planting sage, Jackpot, Nevada*



*Agua Fria Festival, Arizona*



*World Water Monitoring Day, 2008, Washington, DC*

## State Highlights

### Alaska

Long summer evenings in Anchorage provide opportunities for young and old alike to participate in the Midsummer Night's Science Series. More than 100 attended a series of lectures and then extended their learning through hands-on experiences—with GPS units, macroinvertebrates in Campbell Creek, and wildflowers, to name but a few topics covered.

"Get Energized!" an energy education kiosk and CD-Rom developed by the Campbell Creek Science Center received a Media Award at the 2006 National Association for Interpretation's National Workshop.

Campbell Creek Science Center provided presentations on a wide variety of topics, including astronomy, glaciers, energy, tsunamis, and Alaska Native subsistence culture. And the opportunity to try snow-shoeing, cross-country skiing, and geocaching attracted nearly 500 to Winter Trails Day at Campbell Tract.

As part of Campbell Creek Science Center's Hands on the Land program, nearly 7,000 students took part in education programs at the center that were developed in coordination with local schools. From "Design-a-Science Day" to the 3-day Earth Ranger Academy, students had fun while learning outdoors.

### Arizona

Young people and adults had numerous opportunities to learn about the natural world through events such as Take a Kid Fishing Day and the Youth Fishing Derby at Lake Havasu.

BLM's Safford Field Office is one of many sponsors of the annual Wings over Willcox Birding and Nature Festival. Hundreds of people participated in bird tours, seminars, and children's activities. The Safford office also provided cultural education opportunities at the Dankworth Village Outdoor Classroom, which contains replicas of Native American structures and artifacts from prehistory to the present-day Apaches.

Biologists from the Kingman Field Office visited schools and made presentations to some 1,500 students on a variety of topics related to plants and animals in the region. These visiting biologists often brought live reptiles with them to enhance their presentations.

Forty Phoenix-area students continued to receive intensive training in fire science and wildland firefighter training in a program sponsored by BLM and Metro Tech High School.

### California

The Headwaters Forest Reserve and the Pacific Coast near Arcata welcomed hundreds of students for programs on topics ranging from habitat to local history. Service learning is an important component of these programs, too. Nearly 700 students participated in a cleanup and the removal of exotic beach grasses from the South Spit Cooperative Management Area.

The Santa Rosa and San Jacinto Mountains National Monument offered more than 160 interpretive presentations at 56 locations, on such topics as "Leave No Trace" ethics, wildflowers, mountain lions, and the endangered bighorn sheep.

The San Joaquin River Gorge continued to provide a wide array of programs focusing on local history, including studies of Native American culture, the "Miner 49ers," and the General Land Office.

The Barstow Field Office Desert Discovery Center offered two environmental education programs focusing on fostering responsible stewardship in youth. Volunteers played a major role in presenting programs to nearly 1,700 students.

The Ukiah Field Office continued to offer its popular Bald Eagle hikes, guided by BLM staff and docents, in the Cache Creek Natural Area.

The Cosumnes River Preserve served as a learning center for the Elk Grove and Galt Unified School Districts. Some 6,000 students and 200 teachers participated in field trips, education programs, and habitat restoration projects, as well as teacher training.

### Colorado

Between its museum education programs and its trunk loan programs covering archaeology, botany, and cultures, the Anasazi Heritage Center continued to reach thousands of students—not only in the



*Kids fishing day, Eastern States*



*Kids from Wonderful Outdoor World (WOW) program at Agua Fria Festival, Arizona*



*Vegetation studies, Idaho*

Dolores area, but throughout the country. And the surrounding Canyons of the Ancients National Monument provided a wide array of outdoor and classroom presentations as well as teacher workshops.

The Blanca Wetlands Education Program in the San Luis Valley, a Service First Hands on the Land site, provided age-appropriate interdisciplinary lessons on wetland ecosystems for more than 200 kindergarten through 12th-grade students.

Water is a major focus of the Colorado 4th-grade curriculum, and water festivals help students have fun while learning about this important topic. Highlights of these events included measuring stream flow with the help of a BLM hydrologist from the Uncompahgre Field Office and friendly contests with Gunnison Field Office specialists on water-related questions.

National Fishing & Boating Week also lured young and old Colorado residents outdoors to take advantage of fishing opportunities on state waterways. Many partners were involved in these events, providing equipment, lessons, and hands-on fun.

## Eastern States

The Meadowood Special Recreation Management Area, a Hands on the Land (HOL) site near the Potomac River, provided local schools with outdoor classroom programs on a wide variety of topics, including plants, animals, and watersheds.

Jupiter Inlet's HOL program with the Jupiter High School Environmental Research and Field Studies Academy continued to involve students in hands-on learning and service projects related to invasive plants as well as habitat inventory and restoration.

More than 350 young people and numerous volunteers from federal agencies and partner groups participated in Kids Fishing Day at Washington, DC's Constitution Gardens. Students not only learned safe fishing and boating techniques, but also had a chance to view a snapping turtle and other reptiles close up.

## Idaho

F.I.R.E. Up for Summer, a "Field Inquiry Research Experience" for high-school students, was awarded the BLM Director's Cooperative Conservation Award in December 2006. A partnership among BLM, the Meridian School District, and Northwest Nazarene University, the 3-week program engages students in fuels monitoring projects as well as structural fire hazard analyses in rural communities.

Teachers in Idaho continued to take advantage of numerous workshops offered by BLM, including Project Learning Tree and Project WET, as well as those focused on special areas such as the Snake River Birds of Prey National Conservation Area (NCA) and Craters of the Moon National Monument.

The Snow School/Winter Ecology program was delivered 18 times through the winter at the joint BLM/NPS Hands on the Land site at Craters of the Moon. More than 350 adults and students participated in this popular program.

The Snake River Birds of Prey NCA spread the word about raptors and the ecology of the region to more than 12,000 people through live raptor presentations, field trips to the NCA, and a traveling trunk.

## Montana/Dakotas

The final events of the Lewis & Clark Bicentennial were celebrated at several locations in Montana during 2006, including a "signature" event at Pompeys Pillar National Monument. Some 47,000 people visited the Monument during the 4-day event. BLM also provided educational programs on natural and cultural history as well as a traveling trailer focusing on fire and defensible space at several Bicentennial events during the year.

Kids had numerous opportunities to learn about fishing thanks to fishing days in Lewis-town, Malta, Miles City, and South Dakota. A fishing derby and fishing schools were held in North Dakota.

Feathers, instead of fins, were the subject of education programs for schoolchildren in Missoula and for the public at Glasgow's Feather Fest.

Fire education programs, including Project Learning Tree, reached nearly 200 teachers and more than 6,000 students in South Dakota. In the Butte Field Office area, Cub Scouts earned fire ecology patches, while BLM staff members visited schools to teach about this important topic.



*Taking a close-up look during a hike near Lake City, Colorado*



*Learning about salmon from BLM Biologist near Roseburg, Oregon*



*Examining plants in Sand Canyon, California*

## Nevada

Red Rock Canyon National Conservation Area (NCA) continued its varied programs to educate Las Vegas-area students about the Mojave Desert. The Mojave Max classroom education program, in conjunction with Clark County and numerous other partners, reached nearly 12,000 students. Teacher workshops prepared 150 educators to lead field trips to the NCA, which were enjoyed by more than 2,000 students.

Red Rock Canyon and nearby Sloan Canyon NCA also offered numerous public participation programs, including hikes, astronomy nights, fairs, and a photo contest.

Students in the Elko Field Office area benefited from classroom visits by BLM resource specialists, who gave presentations on topics ranging from Native American history and the gold rush, to mining reclamation, grazing, and wild horses and burros. BLM employees also helped judge high school science fairs and discussed "living with fire" with 5th graders on a field trip to Lamoille Canyon.

The Great Basin Teachers Workshop, a multi-agency effort that included BLM's Ely Field Office, provided teachers with information and lesson plans on the geology of the Great Basin.

## New Mexico

For the fifth straight year, an archaeologist from BLM's Taos Field Office worked with Vecinos del Rio, a non-profit group, and other partners on a two-week petroglyph recording project. Vecinos del Rio recruited and trained local teenagers, who used GPS, digital photography, and extensive written documentation to record about 45 panels of petroglyphs that they discovered during the inventory. This project was awarded the prestigious 2006 Pinon Award for excellence in education by the Santa Fe Community Foundation.

Staff from the Socorro Field Office presented programs to school groups on topics ranging from wildlife and conservation to fire safety and GIS. Public programs on New Mexico history and prehistory were delivered at Fort Craig and Fort Stanton and at the El Camino Real International Heritage Center. Leave No Trace principles were also the focus of numerous presentations.

The Wild Rivers Recreation Area near Taos was the site of several "Get Wild!" programs on birds, geology, astronomy, and getting oriented with maps and compasses.

## Oregon/Washington

BLM resource specialists from Coos Bay continued to visit local classrooms offering a wide variety of programs to some 800 students; they also participated, along with many partners, in Natural Resources Days for 300 5th graders at the South Slough National Estuarine Research Reserve. Other fortunate students visited New River Area of Critical Environmental Concern where seasonal naturalists provided hands-on learning on such topics as western snowy plovers, habitat, water quality, land management, invasive species, macroinvertebrates, and birding.

In the Salem District, thousands of students explored tidepools; watched whales, birds, and other sea animals; and learned what life was like for 19th-century lighthouse keepers while visiting the Yaquina Head Outstanding Natural Area.

From describing careers in archaeology, to exploring wetland ecology with students and local tribe members, to participating in events such as International Migratory Bird Day, Lakeview District resource specialists continued to inform the local community about the multiple resources that BLM manages.

The environmental education programs at Table Rocks and McGregor Park in the Medford District became part of the Hands on the Land network in 2006. With the support of multiple partners, BLM staff members offer preparatory classroom programs and on-line lesson plans as well as field trips with guided hikes and walks. McGregor Park also participated in the SalmonWatch program sponsored by Oregon Trout. In addition to witnessing spawning salmon, one of nature's great spectacles, SalmonWatch students participate in classroom instruction and service learning projects.

Interpreters from the National Historic Oregon Trail Interpretive Center traveled to classrooms in the Vale District for living history presentations and extended their reach even further with on-line education guides on the Oregon Trail and Northwest explorers.



*Student measuring a tree in Alder Creek Children's Forest, Oregon*



*Tipi workshop for teachers, Montana*



*Archaeology in the Classroom, Bozeman, Montana*

## Utah

Visitor Centers at Grand Staircase-Escalante National Monument attracted local residents and tourists to a variety of programs—"walk and talks," lectures, and guided auto tours focusing on the Monument's biological, cultural, and paleontological resources.

The Kanab Field Office sponsored Earth Day celebrations that included a poster contest with more than 1,000 students participating, while the annual Christmas Bird Count involved more than 100 adults and students.

More than 400 children in the Vernal Field Office area learned about fire-safe and firewise practices thanks to an interagency Smokey Bear program.

## Wyoming

Approximately 250 school classes visited the National Historic Trails Interpretive Center, where BLM staff and volunteers guided some 8,000 students through exhibit areas that focus on both cultural and natural history.

At the Red Gulch Dinosaur Tracksite, more than 200 students from nearby towns and a local community college learned about paleontological research being done in their area.

Interpretive trails at the Muddy Mountain Environmental Education Area and at the Dry Creek Petrified Tree Environmental Education Area allowed students to learn about nature as it is today and as it was long ago.

## BLM State Audience Totals

Students and Teachers Reached by BLM School Education Programs, by State and Selected Resource Program*					
	Energy	Biological Resources	Cultural Resources	Fire	Technology
AK	5,762	10,126	2,105	950	2,816
AZ		1,500	-	40	40
CA	2,362	16,344	15,502	5,507	6,287
CO	2,201	19,103	18,235	763	887
ES	1,100	2,223	2,118	200	305
ID	3,614	9,360	3,405	3,727	3,987
MT/DK	190	10,964	3,496	6,594	522
NV	4,762	17,601	5,010	4,255	1,055
NM		2,323	2,298	1,824	1,685
OR/WA	10,699	37,879	58,817	18,751	2,971
UT		6,746	4,461	420	
WY		434	6,672	1,454	
Totals	30,690	134,603	122,119	44,485	20,555

\* Based on data submitted by BLM State and Field Offices - Spring 2007

Individuals Reached by BLM School and Non-School Programs, by State*			
State	School Programs Students	School Programs Teachers	Non-School Program Participants
Alaska (AK)	11,655	950	13,277
Arizona (AZ)	1,540	-	2,673
California (CA)	17,985	245	38,620
Colorado (CO)	19,040	113	3,360
Eastern States (ES)	3,675	226	6,480
Idaho (ID)	5,817	3,543	14,387
Montana/Dakotas (MT)	10,884	323	108,910
Nevada (NV)	18,097	224	4,826
New Mexico	2,081	368	9,895
Oregon/Washington (OR)	41,447	6,266	123,704
Utah (UT)	6,900	266	1,330
Wyoming (WY)	7,672	324	1,840
Totals	146,793	12,848	329,302

\* Based on data submitted by BLM State and Field Offices - Spring 2007

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