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#### ABSTRACT

This environmental education strategy was developed by a Bureau of Land Management (BLM) Washington Office Task Group in collaboration with staff at all levels of the BLM. The strategy calls for the BLM to expand its efforts in educating citizens about ecosystems and ecosystem management, and to establish environmental education as an integral part of the agency's ecosystem management efforts. The BLM vision, goals, theme, guiding principles, and objectives are discussed in individual chapters. Ecosystem education, program coordination, tools, and tips on partnerships, funding, and program evaluation are also included. (Contains 36 references.) (CCM/NB)



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# Environmental Education National Strategy





## Preface

 ${f T}$ his Strategy was developed by a Bureau of Land Management (BLM) Washington Office Task Group, in concert with staff at all levels of the BLM, and after extensive consultation with other Federal resource agencies and leaders in the environmental education field. In keeping with the recommendations of field officials, this Strategy builds on the diversity of many excellent agency initiatives already in place. It also reflects the general framework for the BLM's national environmental education efforts that was approved by the BLM Director on August 29, 1994 (Information Bulletin 94-498). Under the approved framework, existing BLM environmental education initiatives are linked under two umbrella programs — a School Partners Program and a Public Education and Participation Program.

The Strategy calls for the BLM to expand its efforts in educating citizens about ecosystems and ecosystem management and to establish environmental education as an integral part of the agency's ecosystem management efforts. This is to be accomplished through annual or continuing ecosystem education programs for School Partners and the public, BLM Interpretation Programs, and other ongoing efforts. State Office Environmental Education Coordinators and 18 Environmental Education Support Centers will provide support to BLM field offices for these efforts.



### Abbreviations

**EE & V Team** Washington Office Environmental Education and Volunteers

Team

**EESCs** Environmental Education Support Centers

**EE Strategy Team** Authors of this Strategy

FO BLM Field Office

IRM Team Washington Office Information Resources Management Policy

**Team** 

I & I Team Washington Office Intergovernmental and International Team

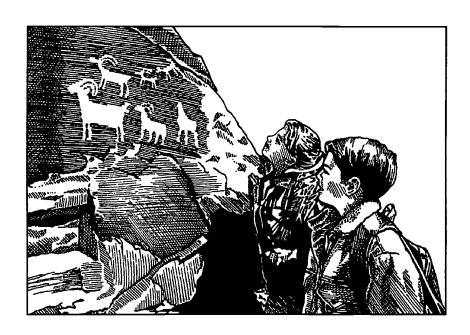
NTC National Training Center

SC BLM Service Center

**SDs** State Directors

**SOs** BLM State Offices

WO Washington Office





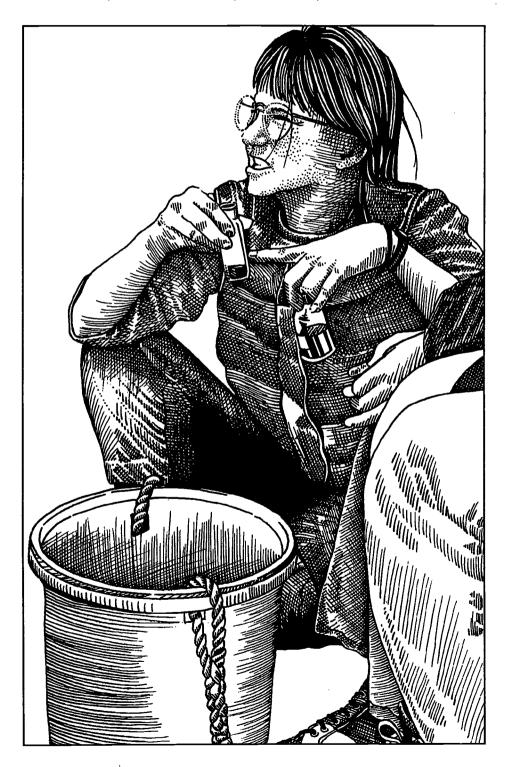
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### What is our vision?

Public participation in BLM Environmental Education Programs will lead to healthier and more productive ecosystems and to better educated citizens willing to assist the BLM in solving and preventing complex environmental problems on public lands.





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## What are our goals?

#### Stewardship:

Educate and motivate the public to sustain the health and productivity of ecosystems on public and private lands.

#### **Education:**

Use the public land resources to provide opportunities to all citizens for lifelong learning.

#### **Community:**

Strengthen communities by providing opportunities for citizens to "experience" the outdoors and invest in their surroundings.

#### **Partnerships:**

Expand environmental education partnerships to increase effectiveness and maximize use of resources.





### What is our theme?

Our central theme is "Sustaining Healthy Ecosystems." It is tied to the central mission of the agency—to sustain healthy, productive, and naturally diverse ecological systems for the use and enjoyment of present and future generations. Through our educational programs we will expand public knowledge and understanding of the following:

- The characteristics of ecosystems
- The local and global patterns of ecosystems
- The biodiversity and productivity of ecosystems
- The physical processes that produce changes in ecosystems
- How human activities influence ecosystems
- How people can apply ecosystem concepts to understand and solve environmental issues



## What are our guiding principles?

- We consider the environment in its totality, natural and manmade, technological and social (economic, political, cultural-historical, moral, esthetic).
- We use factual information about natural resources as the basis for educational experiences.
- We provide opportunities for lifelong learning, starting at the preschool level and continuing through all formal and nonformal stages of education.
- We emphasize the complexity of environmental problems and thus the need to develop critical thinking and problem-solving skills.
- We promote the value and necessity of local, national, and international cooperation in the prevention and solution of environmental problems.
- We use an interdisciplinary approach, drawing on the specific content of each discipline in developing a holistic and balanced perspective.
- We focus on current and potential environmental situations while taking into account the historical perspective.
- We encourage and provide opportunities for citizen involvement in problem solving and prevention of new problems.
- We utilize diverse learning environments and a broad array of educational approaches to teaching, with an emphasis on practical activities and firsthand experience.
- We acknowledge cultural diversity and regional differences in perspectives as they pertain to environmental issues.
- We maximize our collective talents through team building and partnerships based on mutual trust, respect, cooperation, and communication.
- We anticipate and respond to customer and partner needs by providing quality products and services in a consistent, timely, and coordinated manner.
- We promote, support, and reward innovation and assess the inherent risks.
- We take pride in our work and are committed to the pursuit of excellence.



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## What are our objectives?

#### **Objective 1: ECOSYSTEM EDUCATION**

Expand our efforts to educate citizens about ecosystems and ecosystem management.

As our agency shifts to an ecosystem approach to managing resources, so must our environmental education efforts evolve to support this shift. Because ecosystem management relies heavily on the cooperation of citizens from both the public and private sectors, educating citizens about the importance of ecosystem health will be critical to the success of our management efforts. To achieve this we must work together at all levels of the organization to make our educational efforts an integral part of our resource management efforts and recognize that successful educational programs are sustained, long-term endeavors.

#### **Strategies:**

- Provide guidance to BLM field personnel on key ecosystem education concepts and strategies for integrating these concepts into existing environmental education efforts. In accomplishing this,

   review existing environmental education programs and activities to determine what ecosystem education materials already exist, and 2) collaborate with other resource agencies to develop innovative approaches to educating citizens about ecosystems to fill identified gaps. (EE & V Team in collaboration with Partners for Resource Education\*: FY 1995-96).
- Link existing environmental education programs under two umbrella programs, described below. Expand efforts to educate school partners and the public about ecosystems and ecosystem management.

School Partners Program: Under the School Partners Program we will promote environmental education by working with students and teachers at the primary, secondary, and college levels. We will continue the many and diverse environmental education programs and activities for students and teachers already being conducted by the agency and build on these through improved information sharing. Our long-term goal is to expand our efforts to educate students and teachers about ecosystems and offer varied opportunities for students and teachers to apply ecosystem concepts to environmental problems, particularly those affecting the health and

\* Partners for Resource Education is an interagency group established by a Memorandum of Understanding to coordinate the environmental education efforts of five resource agencies. Members of the group include the BLM, the U.S. Fish and Wildlife Service, the U.S. Forest Service, the National Park Service, and the National Resources Conservation Service.



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productivity of the public lands. In working with schools and universities, we will strive to offer materials and programs which support the existing curriculum requirements rather than impose additional burdens on teachers.

On a yearly or continuing basis, plan and implement at least one environmental education program involving school partners to expand understanding of ecosystem concepts. Set aside study sites on the public lands, identify a school study project, or engage students and teachers in other activities which will enhance their understanding of the importance of ecosystem health. As feasible, link these programs to "real-world" management challenges on the public lands. (SDs: yearly annual workplan process, starting FY 1996)

Public Education and Participation Program: In addition to providing learning opportunities through schools, we will provide informal environmental education opportunities for individuals and groups of all ages. Effective public education programs will encourage citizens to become actively involved with the BLM in sustaining the health and productivity of the public lands and to support the work of our professionals in the field. As with our School Partners Program, we will continue the diverse public education programs already being conducted and build on these through improved communications. Our long-term goal is to significantly expand our efforts to educate members of the public about ecosystems and ecosystem management. We recognize that building public support and understanding of our ecosystem management efforts is essential to the success of these efforts. (A good example of citizen involvement in ecosystem management is the current nature mapping effort underway in the State of Washington. Teachers and volunteers learn how to collect field observations with their students for the State's biological database. The database helps support efforts to identify areas of high ecological value that are not represented or are underrepresented in conservation areas such as BLM's National Conservation Areas.) Our field offices will look for new and innovative ways to collaborate with other government agencies and private sector partners to develop and fund educational opportunities.

On a yearly or continuing basis, plan and implement a public education program or activity in each BLM State for at least one priority ecosystem management project. To the extent possible, provide opportunities for children, families, young adults, and seniors to participate in research, monitoring, inventorying, mapping, restoration, and other activities linked to priority ecosystem management projects. (SDs: yearly annual workplan process, starting FY 1997)



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#### **Objective 2: PROGRAM COORDINATION**

Designate individuals and offices to facilitate implementation of BLM environmental education efforts.

Although the BLM is engaged in a broad range of environmental education activities, many of these are conducted on an ad hoc basis by individuals who take personal initiative to get efforts underway. To realize the full benefits of our environmental education programs, we must designate staff at the field level to provide leadership for planning and coordinating educational programs. We will achieve excellence through planned, well-coordinated educational efforts that are sustained over time and routinely evaluated.

#### **Strategies:**

 Designate a coordinator for each State who will serve as the point of contact on matters relating to environmental education. (SDs: FY 1995)

This position may be located in any BLM office and have collateral responsibilities for interpretive programs. State Coordinator responsibilities will include:

- Disseminating environmental education materials produced by BLM or other entities to address local needs;
- Networking with education groups and other partners, as well as with BLM personnel within their States, in other States, and in the Washington Office;
- Compiling information on educational programs in their States for inclusion in national publications and databases;
- Facilitating planning and implementation of public environmental education and school partner ecosystem education projects.
- For purposes of information sharing and project coordination, establish a BLM Environmental Education Outreach Team composed of the program leads for interpretation and environmental education programs that are national in scope, such as Heritage Education, Leave No Trace, Watchable Wildlife, Wilderness Education, and Tread Lightly. (EE & V Team/Interpretation Program Lead: FY 1995)
- Establish the Eastern States Office as the lead office for environmental education outreach to the eastern United States. (State Director: FY 1995)
- Establish the centers listed below as support centers for BLM environmental education programs and activities within the regional areas designated. (SDs: FY 1995-1996)



The centers identified were nominated by our Resource Area Managers as facilities which could support environmental education within a regional area (in response to Information Bulletin 94-498, dated August 29, 1994). Because of their experience and training in education and interpretation, staff and volunteers at these centers will be able to provide valuable support to BLM resource areas in planning and implementing environmental education programs and activities. As funding permits, the centers would provide leadership in the areas listed below:

- Serving as a two-way "clearinghouse" for information sharing between the BLM and educators;
- Preparing an implementation plan to outline strategies for supporting and implementing environmental education projects and programs within their designated areas;
- Coordinating environmental education efforts with the environmental education coordinators for the States within their jurisdiction;
- Planning and pilot testing program activities and materials;
- Conducting training sessions for program leaders and teachers;
- Developing partnerships and funding support for projects;
- Assisting with program evaluation;
- Establishing local interagency groups to collaboratively promote and support environmental education efforts;
- Coordinating environmental education efforts with adjoining BLM State Offices and centers with overlapping jurisdictions;
- Providing information and guidance to Resource Area offices on available educational resource materials, dissemination strategies, and other environmental education contacts;
- Identifying the need for multi-lingual materials for specialized audiences.



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#### **Environmental Education Support Centers:**

#### Anasazi Heritage Center Dolores, Colorado

Geographic Area: Colorado, Utah, Arizona, New Mexico

## BLM National Historic Oregon Trail Interpretive Center Vale, Oregon

Geographic Area: Eastern Oregon/Boise Valley Area

## California Desert Information Center Barstow, California

Geographic Area: Southern California (Desert Region)

#### Campbell Creek Environmental Education Center Anchorage, Alaska

Geographic Area: Alaska

## Cascade Streamwatch: An Aquatic Education Complex Salem, Oregon

Geographic Area: Northwest Oregon and Southwest Washington, Portland

#### Chama Gateway Interpretive Center Abiquiu, New Mexico

Geographic Area: North-Central New Mexico

#### Edge of the Cedars Monticello, Utah

Geographic Area: Southeast Utah

## El Malpais National Conservation Area Visitor Center Grants, New Mexico

Geographic Area: Northwest New Mexico

#### Jackson District Office Environmental Education Camp Crows Neck, Mississippi

Geographic Area: Alabama, Mississippi, and Other Southeastern States

#### Illinois Valley Visitor Center Medford, Oregon

Geographic Area: Illinois Valley

## Lewis and Clark Visitor Information Center (USFS - Planned) Great Falls, Montana

Geographic Area: North-Central/Northwestern Montana

#### Mineral Ridge Site Coeur d'Alene, Idaho

Geographic Area: Northern Idaho/Eastern Washington

## National Bighorn Sheep Interpretive Center Lander, Wyoming

Geographic Area: Wyoming/Eastern Idaho

Pompey's Pillar Miles City, Montana

Geographic Area: Central/Eastern Montana



#### Red Rock Canyon Visitor Center Las Vegas, Nevada

Geographic Area: Las Vegas and Southern Nevada

#### San Pedro Project Office Tucson, Arizona

Geographic Area: Southeastern Arizona

## St. George Interagency Information Center St. George, Utah

Geographic Area: Southern Utah, Northern Arizona, Southern Nevada

#### West Eugene Wetlands Eugene, Oregon

Geographic Area: Pacific Northwest Oregon/Washington/Northern California





#### **Objective 3: PROGRAM TOOLS**

Assemble program information and quality educational materials for use by BLM specialists in developing and implementing environmental education programs.

Effective quality environmental education materials have been developed throughout the country. Many excellent materials have been produced by BLM. However, because of lack of time, training, poor communication channels, or other reasons, knowledge of and access to these materials varies remarkably. In addition, materials currently in use by BLM specialists lack an overarching theme. A coordinated effort to assemble and disseminate quality educational materials and information will ensure that our resource professionals have the tools they need to do an effective job and reduce redundant efforts.

#### **Strategies:**

- Conduct a needs assessment to identify the types of educational materials needed by BLM professionals to support their resource management efforts.\* (EE & V Team: FY 1995)
- Based on the results of the needs assessment and inventory, develop a Bureauwide environmental education "tool kit" for use by BLM professionals. (EE & V Team/ EESCs: FY 1996)
- Identify exemplary environmental education reference materials and disseminate information about these to appropriate BLM field staff. (EE & V Team/EESCs: starting FY 1995)
- \* An inventory of all Federal educational programs and materials is being developed by the Eisenhower National Clearinghouse. To the fullest extent possible, materials in the kit would be drawn from the best of existing materials developed by BLM or other leaders in the field.



## Objective 4: COMMUNICATIONS & PUBLIC AWARENESS

Improve information sharing within the BLM. Improve service to educators and other customers.

The BLM has pursued a wide range of environmental education activities for many years and developed an array of educational materials. However, many successful programs have not been replicated elsewhere in the BLM because we have not done a good job with information sharing. Nor have we developed comprehensive information for the public about the educational programs and materials the agency offers. To strengthen our efforts to disseminate information, we must also provide information to educators and establish systems that allow us to communicate with one another, our partners, and other publics in easily accessible formats on a regular basis at the national, regional, and local levels.

#### **Strategies:**

- Establish an automated system for BLM employees to communicate
  with one another and with their counterparts in other agencies
  during the development and formulation of environmental education programs, projects, activity plans, and strategies. This system
  would facilitate informal communications for shaping ideas, rather
  than serving as a system for sharing and providing resource materials to outside parties. (IRM Team/EE & V Team: FY 1995)
- Publish a general information brochure outlining BLM education contacts for individual programs. (EE & V Team/SC: FY 1995)
- Publish a simple, easily updated brochure/order form listing BLM educational publications available to the public. (EE & V Team/SC: FY 1996)
- Publish a state-by-state guide to educational opportunities offered on the BLM public lands. (EE & V Team/SC: starting FY 1996)
- To reach audiences on the east coast and others not familiar with the BLM, disseminate informational materials about BLM education programs at national and regional conferences, in BLM public rooms, at visitor/interpretive environmental education centers, and electronically through Internet. (EE & V Team/SOs: ongoing, starting FY 1995)
- Develop a database of educational resource publications which is electronically accessible to employees, teachers, and other members of the public through Internet. Update the database annually. (EE & V Team/Eisenhower National Clearinghouse\*: FY 1995-96)
- \* The Eisenhower National Clearinghouse for Science and Math Education (ENC) is located at Ohio State University and is funded by the U.S. Department of Education. The purpose of ENC is to improve access to mathematics and science resources available to teachers, students, parents, and others.



- Develop a database of educational programs sponsored or supported by the BLM; provide electronic access for teachers and other members of the public through Internet. Update the database annually. (EE & V Team/Eisenhower National Clearinghouse: FY 1995)
- Develop an exhibit for use at national teacher conferences and other forums to disseminate information about BLM educational programs and materials. As feasible, provide the exhibit to field offices for use at local events. (EE & V Team/BLM Oregon SO: FY 1995)
- Expand efforts to provide information to the general media on program opportunities and successes. (WO and SO Public Affairs Staff: starting FY 1995)
- Participate in BLM interdisciplinary staff conferences (national/ regional) to share ideas and information. (EE & V Team/State EE Coordinators: starting FY 1995)



#### **Objective 5: RECOGNITION & AWARDS**

Establish a mechanism to reward and recognize employees for superior performance and acknowledge the contributions of partners and sponsors.

Acknowledging the contributions of partners and sponsors, and recognizing those individuals who excel in expanding the quality and number of environmental education programs, improves employee morale and heightens the visibility of successful programs which can serve as models for others.

#### **Strategies:**

 Establish a mechanism to provide recognition of outstanding environmental education efforts, outstanding bureaus or staffs, outstanding partners, outstanding volunteers, and outstanding sponsors. (EE & V Team: FY 1995-96)





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## Objective 6: TRAINING & PROFESSIONAL DEVELOPMENT

Provide professional training and development opportunities for staff and management involved in implementing environmental education programs and developing educational partnerships.

 ${f T}$ o ensure that our environmental education programs are effective and educationally sound, we must provide relevant training opportunities to staff and management involved in the development and implementation of our programs and materials. Many individuals engaged in environmental education throughout the BLM do not have formal training as educators and an understanding of how environmental education can support management goals and objectives. Providing these individuals with training on such topics as integrating programs and materials with school curriculum, working effectively with educators, using effective teaching techniques, evaluating programs, and developing educational partnerships will strengthen our efforts.

#### **Strategies:**

- Complete a training needs analysis to identify courses to support implementation of the Bureau's environmental education efforts. (NTC/EE & V Team/EESCs: FY 1995);
- In concert with other resource agencies and BLM partners, establish a training module for BLM, other agency staff, and volunteers involved in environmental education initiatives. Integrate this training with core training requirements for employees. (NTC/EE & V Team: FY 1996)
- In concert with BLM partners, design and deliver a training course on effective partnership development. (NTC: FY 1996)
- Conduct a skills inventory to identify BLM staff with education credentials or experience who can assist in training, materials development, and environmental education program efforts. (EE & V Team: FY 1996)



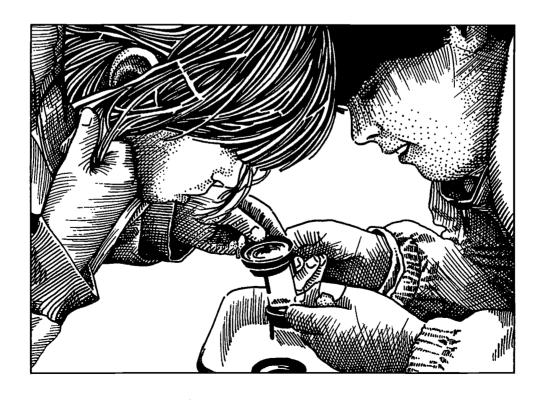
#### **Objective 7: PARTNERSHIPS**

Sustain and enhance the BLM's ability to develop quality environmental education programs through partnerships and coalitions with public and private agencies and entities.

Partnerships can expand the BLM's ability to deliver quality environmental education programs. By sharing resources and coordinating efforts with other public and private entities and agencies, we can expand our environmental education projects, leverage our limited financial and personnel resources, and enhance the quality of our programs. Through our partnerships, we can also broaden public awareness of the BLM and its mission; build an active, supportive constituency; and make students aware of careers in natural and cultural resource management.

#### **Strategies:**

- Identify potential funding partners and grant foundations; negotiate and develop partnerships and cooperative agreements to support joint environmental education projects. (EE & V Team/State Education Coordinators/EESCs: ongoing starting FY 1995)
- Continue and expand national level partnerships from which field offices can develop partnerships at the local and State levels. (EE & V Team: starting FY 1995)





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#### **Objective 8: VOLUNTEERS**

Increase the involvement of volunteers in BLM environmental education initiatives.

**B**y increasing and expanding the use of volunteers to deliver our educational programs to diverse audiences, we can significantly broaden the impact of our environmental education efforts. Volunteers who serve the BLM in this capacity will carry our educational messages to their friends, families, and other citizens in their communities.

#### **Strategies:**

- Develop basic orientation materials for selected BLM volunteers to expand their knowledge and understanding of ecosystem management and effective methodologies for educating diverse publics about environmental issues. (NTC: FY 1996)
- Conduct targeted recruitment of volunteers with diverse backgrounds who have expertise or a strong interest in environmental education (such as retired educators). (Volunteer Coordinators: ongoing, starting FY 1995)
- Identify environmental education opportunities for volunteers for inclusion in national and State volunteer opportunities catalogs. (EE & V Team/Volunteer Coordinators: FY 1996)
- Develop partnerships with volunteer organizations, such as Earthwatch, Environmental Association for Senior Involvement, and Student Conservation Association, which use volunteers as environmental educators to share information and resources. (EE & V Team/SDs: FY 1996)
- At the local level, establish opportunities for high school and college students to earn credit for the following: hands-on contributions on the public lands, development of teacher resource materials linked to natural and cultural resource management, and service as instructors/leaders of BLM environmental education programs. (SDs: starting FY 1996)



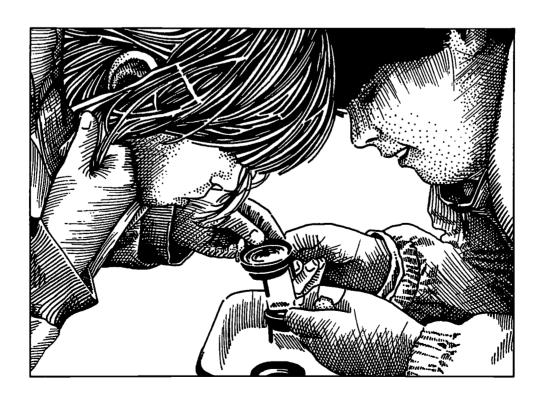
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#### **Objective 9: FUNDING**

Provide sustained funding for BLM environmental education programs to ensure program growth and continuous improvement.

**M**any of our managers view the Bureau's environmental education efforts as nice to have, but not essential. As we shift to an ecosystem approach to resource management, we must also adjust our thinking about environmental education. We can no longer view it as nonessential, but must recognize that our success in implementing ecosystem management will depend, in very large part, on our ability to gain support from private landowners, user groups, and other citizens through successful long-term, educational outreach and other efforts.

#### **Strategies:**

- Include proposed training and workload accomplishments in environmental education in annual budget plans for support centers and other offices. Justifications for environmental education programs should clarify how environmental education activities will support resource management objectives. (SDs: annually, starting FY 1996)
- In conjunction with other Federal agencies, coordinate budget submissions so that other Federal partners simultaneously request money through their appropriations process. (SDs: annually, starting FY 1997)



#### **Objective 10: PROGRAM EVALUATION**

Develop and implement an evaluation system to assess the effectiveness of BLM environmental education programs and materials and to encourage continuous improvement.

As environmental education efforts expand, there is an increased need to evaluate the effectiveness of the various educational methods in use. Basic research into methodologies and documentation of successes and failures are necessary to develop additional support for environmental education and to ensure that programs are conceptually sound. Evaluation of the educational programs and methods also will ensure that the limited amount of money available for educational programming is being effectively spent on sound programs reaching a wide and diverse audience.

#### **Strategies:**

- Provide guidance to BLM field offices on program evaluation based on suggested guidelines issued at the Departmental level. (EE & V Team: FY 1995)
- For existing environmental education programs, plan and implement evaluations. (SDs: starting FY 1996)
- Monitor evaluations and recommend adjustments as needed. (Management Improvement and Evaluation Team: ongoing, starting FY 1997)



## Objective 11: INTERNATIONAL COLLABORATION

Reach across international boundaries to develop environmental education partnerships and disseminate environmental education materials.

We recognize that environmental problems transcend national boundaries and that other nations have developed effective ways to educate their publics about environmental education issues and problems and promote citizen involvement. Protecting human health and the environment in the United States requires coordination at the national and international levels. To strengthen our education efforts, we must reach out and establish information exchanges and joint training ventures, especially with our neighbors to the north and the south.

#### **Strategies:**

- In concert with other partners, conduct environmental education programs with other countries to promote the exchange of research and expertise on the use of environmental education to promote healthy ecosystems. (Lead Project Office/I & I Team: ongoing, starting FY 1995)
- Identify international environmental education conferences at which the BLM should be represented, and coordinate the BLM's participation. (EE & V Team/ I & I Team: ongoing, starting FY 1995)
- Working with BLM school partners, participate in programs such as the GLOBE Project\* or similar programs that involve.K-12 students in worldwide environmental monitoring efforts. (FOs: starting FY 1996)
- Develop educational materials for dissemination to students, teachers, and other audiences both here and abroad on BLM international resource projects, such as those involving neotropical birds and desertification. (EE & V Team/Lead Project Office: ongoing, starting FY 1996)
- Collaborate with students and teachers in Mexico and Canada on the development of environmental education programs, materials, and training opportunities. (Lead Project Office/EESCs: ongoing, starting FY 1995)
- \* The GLOBE Project (Global Learning and Observations to Benefit the Environment) is a new Federal initiative bringing students, teachers, and scientists together to monitor the environment. As part of this program, selected students will gather information on weather, air, chemistry, ecology, and geology.



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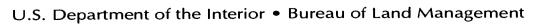
















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