
Environmental Education Strategy for Nevada

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Executive Summary

During the past three months, the focus of the university’s efforts has included the following highlights:

- Data compiled, summarized, and analyzed from survey of existing environmental education programs in Southern Nevada.
- Planning underway for place-based education conference to be held in January 2006.
- Survey of Southern Nevada teachers developed and ready to be administered in October 2005.
- Vision, mission, and goals set for area-wide Environmental Education Committee.
- Planning for pre-service teacher training in environmental education and master’s degree environmental education program initiated.
- Coordination efforts underway between the Interagency Environmental Education Team and other interagency teams that have identified education components within their program/project efforts.
- Conducted four Discover Mojave Outdoor World events.
- Participated in the Nevada State Department of Education workshop to write test items for science proficiency exams in July 2005.
- Purchased insurance and completed hiring of 4 personnel for the Forever Earth vessel.

FOREVER EARTH PROGRAM

Several administrative hurdles associated with operation of the Forever Earth vessel by UNLV were resolved within this past quarter:

1) The cooperative agreement between the Nevada System of Higher Education on behalf of UNLV and Fun Country Marine Industries, Inc. on behalf of Forever Resorts has been signed by all parties and effective June 17, 2005.
2) Hull insurance and protection and indemnity insurance were purchased.
3) A marine survey of the Forever Earth vessel was completed and forwarded as required to the insurance company.
4) A boat captain and three deckhands were hired on an “as needed” basis for Forever Earth (see attached). The personnel meet minimum qualifications set by Coast Guard requirements as well as insurance requirements. Contractual language to address the federal Jones Act was provided by UNLV’s General Counsel.

5) The Standard Operating Procedures were updated to reflect many of the conditions contained within the insurance policy.

Forever Earth Operations

The Forever Earth vessel was scheduled and operated four times in the past three months. On June 18, 2005, Nevada Department of Environmental Protection sponsored a Project WET workshop for 15 teachers aboard the vessel. Clark County School District scheduled Forever Earth for two days, June 21 and 22, as part of a week-long High School Science Teachers Institute. On August 17, 2005, Nevada Congressional staff members were hosted by the federal managers aboard Forever Earth to review SNPLMA projects during a day-long retreat.

On August 28, 2005, Callville Bay Marina personnel assisted the Forever Earth crew with training on vessel operations and logistics. Topics included safety features and procedures; fueling procedures; and maintenance responsibilities.

Forever Earth Materials and Resources

A website to target interested user-groups, partners, and potential partners is nearing completion and should be launched in the next quarter. Group leaders will find all necessary information about scheduling Forever Earth as well as links to additional resources, research, and contact information. Although a scheduling protocol was established in year one, a web-based protocol and database will be completed in year two. Another key component of the website will be activities and resource information for students.

One of the educational goals is to incorporate technology, where appropriate, into student programs and activities aboard Forever Earth. Another goal relating to the research purpose of Forever Earth includes upgrading the quality of equipment available to researchers. Through the assistance of Outside Las Vegas Foundation, a digital microscope and a digital stereoscope were purchased. Both instruments make it possible for groups to view images on a computer screen and/or television monitor. Students and researchers will also be able to download images onto CDs for further reference or inclusion into presentations.

As educational activities and programs are developed next quarter, additional resources and materials will be identified, prioritized, and purchased to support these programs. It is also important to continue to identify needs for research-quality instruments and equipment and continue to upgrade these resources for research studies and activities.

A number of supply needs were identified by the marine survey and by the newly-hired Forever Earth crew. Examples of supplies and materials that have been purchased this quarter include two-way radios for communications between the captain and deckhand; line for flotation rings; and flare kit.

Marketing Plan

A draft marketing plan was completed during Year 1 that identified potential user groups and avenues for marketing Forever Earth to these groups. As more is learned during the next quarter
about program capabilities and potential, ideas and recommendations will be incorporated. The plan will be reviewed by key partners and Public Lands Institute staff and finalized during Year 2.

DISCOVER MOJAVE OUTDOOR WORLD

Year 2 Events

Four events were conducted this quarter (see attached details). Fifth-grade students in the Paradise Elementary after-school club participated in three events to complete their spring schedule of activities. One of the activities, Art Adventure, included asking students to apply their knowledge of desert plant and animal adaptations to become “Mojave Architects.” They designed playground equipment that may be considered for use at Red Rock Desert Learning Center. These drawings will be compiled into an album for display purposes.

On June 18, 2005, a canoeing event was conducted at Sunset Park for 10 youths, ages 10-12. Water safety and canoeing basics were demonstrated before the participants enjoyed canoeing lessons on Sunset Lake. The youths also applied their new skills by navigating a simulated river set up alongside the lake, where they had to avoid potential hazards such as rocks and downed trees and make decisions on how to minimize their impacts on fishermen, endangered species habitat, and private property.

Although a schedule has not been completed for the rest of Year 2, events are being planned with Clark County Parks and Community Services’ RecMobile program and with Paradise Professional Development School. A meeting has been scheduled for September 15, 2005 with Spring Mountains Youth Camp (Smyc) to discuss the partnership possibilities. SYMC has expressed interest in participating in an event in combination with performing a service project on public land. Informal discussions have been occurred with the director of the Boys and Girls Club located on the UNLV campus. Contacts with Shade Tree, a shelter for homeless women and children, and with North Las Vegas Community Center are also planned for this quarter. An estimated 20-25 events will occur in Year 2.

Marketing, Partnerships, and Community Outreach

A website for the Discover Mojave Outdoor World program, www.discovermojave.org, has been created and launched. The audiences for this effort are 1) parents who want to learn and understand what types of activities are offered in the program and 2) potential partners who may want to offer this opportunity as part of an existing program.

Dr. Peg Rees, Executive Director of the Public Lands Institute, received a letter of thanks from Dr. Wanda Oden, Principal at Paradise Professional Development School (see attached). Dr. Oden related her observations of how the program has positively affected her students. She noted that students benefited from the physical activity; experienced recreational activities that for these students are considered “non-traditional,” and learned new recreational skills. She also requested that the program continue next year at Paradise.

Kelly Woods and Sharon Steele, Clark County Parks and Community Services, presented Daphne Sewing, Project Manager, with a Certificate of Appreciation (see attached) at the canoeing event conducted at Sunset Park. They thanked Ms. Sewing for her support of the RecMobile program.
and expressed their desire to continue the mutually beneficial partnership that has been established between RecMobile and the Public Lands Institute.

A DVD video has been created to document and market the Discover Mojave Outdoor World program. The video focuses on the fun and excitement of the youth participating in the activities conducted this past spring. It will be used to introduce the Outdoor World program to perspective partners and sponsors, and it will be shown to current partners, interested groups, and federal agency personnel. For example, the video was recently shown to the Nevada Congressional staff at the August 2005 retreat at Lake Mead NRA. A more comprehensive, documentary-style video will be compiled for future marketing purposes.

In early June, Project Manager Daphne Sewing facilitated an initial meeting between Markus Tracy, Coordinator of New Directions Youth Arts for the City of Las Vegas, and Lola Henio, Sloan Canyon National Conservation Area, Bureau of Land Management. New Directions Youth Arts had arranged an invited Native American performer, Bill Miller, to conduct a workshop for at-risk teenagers, and he wanted to include an experiential walk on public lands. On June 22, 2005, Ms. Henio led an interpretive walk for Mr. Miller and 15 teens to a petroglyph site in Sloan Canyon. Students experienced the sights and smells of walking in this natural setting and later compared those experiences to being in more urban settings such as a city park and a downtown Las Vegas street. Both Mr. Tracy and Mr. Miller were very complimentary of Ms. Henio’s efforts to make the Sloan Canyon hike such a meaningful experience for the teens.

### STATUS OF YEAR 2 DELIVERABLES

The project manager for the Forever Earth and Discover Mojave Outdoor World programs was hired in February 2005. The following table summarizes the status of Year Two Deliverables.

<table>
<thead>
<tr>
<th>Year Two Deliverables (June 2005 – May 2006)</th>
<th>Percent Complete as of August 31, 2005</th>
<th>Plan for Completion in Year Two</th>
</tr>
</thead>
<tbody>
<tr>
<td>Write curricula for Forever Earth and WOW/Discover Mojave</td>
<td>30 percent complete.</td>
<td>A meeting is scheduled for September 14 with NPS education staff to begin developing a process for writing curricula for Forever Earth. Additional Outdoor World curricula will be developed for different skill levels of events.</td>
</tr>
<tr>
<td>Produce marketing plan for Forever Earth</td>
<td>0 percent complete.</td>
<td>The draft marketing plan will be reviewed by key partners and Public Lands Institute personnel and finalized with the Project Manager’s input.</td>
</tr>
<tr>
<td>Coordinate Forever Earth uses according to operations plan</td>
<td>80 percent complete.</td>
<td>On-going revisions will be made as more is learned about the program.</td>
</tr>
<tr>
<td>Revise and update Forever Earth operations plan as needed.</td>
<td>90 percent complete.</td>
<td>The SOP document continues to be revised as needed to reflect needs of the program and vessel operations.</td>
</tr>
<tr>
<td>Manage Forever Earth lab; procure and maintain necessary supplies/equipment</td>
<td>60 percent complete.</td>
<td>Additional needs will be identified throughout the year.</td>
</tr>
<tr>
<td>Record, preserve, and share data collected from vessel.</td>
<td>0 percent complete.</td>
<td>Data will be collected as groups schedule Forever Earth; a database will be created and accessed through the website.</td>
</tr>
</tbody>
</table>
Coordinate 10 southern Nevada WOW/Discover Mojave events. 40 percent complete. Additional audience groups are being identified; more events will be scheduled throughout Year 2.

Operate Forever Earth according to the operations plan. 10 percent complete. Educational programs and activities will be developed and field tested through the next three quarters.

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**EDUCATION IN THE ENVIRONMENT STRATEGY**

The Education in the Environment Strategy envisions the most effective messages and methods so that every resident and visitor will understand, appreciate and take care of southern Nevada’s environment.

The first phase in the Education in the Environment strategy (a Round 4 project) entailed coordinating the completion of a strategic planning process for the development of a five-year outdoor education strategy. The Phase I strategy is intended to provide the framework for the activities that will ultimately reflect distinct aspects of the inherent value of the public lands in southern Nevada. The basis for this framework is a matrix of desired future interagency educational programming; this matrix, in turn, serves as the starting point from which an Interagency Outdoor Educational Strategy (Phase I) is being built.

The approach of the Phase I strategy is predicated on the idea that education is cumulative. For example, in addition to the federal agencies, a variety of other informal place-based education institutions throughout the Las Vegas valley offer environmental and cultural information and education. Even the simplest learning situation can add to a person’s understanding and attitude toward southern Nevada’s public lands. Thus, only by working closely with the educators at these other institutions and understanding what programs they offer can we effectively frame learning experiences within the larger context of desired future educational programming.
SURVEY OF EXISTING ENVIRONMENTAL EDUCATION PROGRAMS

The first step in the Phase I strategy was to determine what types of programs are being offered by local organizations – including the federal agencies, museums, zoos, aquariums, state parks, and others -- and to correlate these programs with the matrix components. In Year One, 31 education institutions were contacted (see attached list) and asked to analyze their programs using a program analysis sheet (see attached). Program Manager Allison Brody met with several educators individually and helped them complete the analysis sheets. Seven institutions chose not to participate in this process.

The information from the 24 participating place-based education organizations was entered into an Access database and analyzed by comparing all programs by venue, program type, audience, materials/resources given, program goals, delivery methods, and themes. Analysis of this database gives insights into gaps and overlaps in existing programs, as well as areas of the matrix that are not being addressed. After sharing the database analysis with the Interagency Environmental Education Team on August 11, 2005, parts of the database analysis were presented to the Outside Las Vegas Environmental Education Committee on August 25.

The database currently consists of 218 different “educational programs” conducted by the 24 institutions. An “educational program” is defined as any means by which an environmental or cultural message is given to an audience. These educational programs include formal programs as well as other interpretive services such as ranger-led talks, publications, and other informational media. Thus, a program can refer to an organized tour, a teacher kit, a website, an exhibit, an interpretive sign, a brochure, etc. (see Table 1).

Each educational program may contain several parts. That is, when comparing programs by category, a program can fall into more than one category. For example, there could be a web-based component to a tour or curricular material associated with a third-grade program. The result is that the total number of programs analyzed varies from graph to graph.

DATABASE ANALYSIS

An analysis of the data received from the survey of local organizations is provided in the following tables:

- Table 1: Program Type
- Table 2: Program Goals
- Table 3: Program Themes
- Table 4: Venue
- Table 5: Audience
- Table 6: Program Production and Delivery
**Program Type**

There were a total of 342 different types of programs offered by the 24 inventoried organizations. Nineteen percent of these programs consisted of small (< 25 people) organized groups. Small tours and passive exhibits each made up 9% of the inventoried programs. Forty-eight different types of curricular materials were made available to teachers (14%). The majority of the “other materials” (11% of the programs) consisted of brochures.

![Table 1](image)

**Table 1**

<table>
<thead>
<tr>
<th>Type of Program</th>
<th>Number of Programs</th>
</tr>
</thead>
<tbody>
<tr>
<td>tour (small)</td>
<td>32</td>
</tr>
<tr>
<td>tour (large)</td>
<td>17</td>
</tr>
<tr>
<td>organized (small)</td>
<td>26</td>
</tr>
<tr>
<td>organized (large)</td>
<td>29</td>
</tr>
<tr>
<td>exhibit (passive)</td>
<td>20</td>
</tr>
<tr>
<td>interpretive signs</td>
<td>48</td>
</tr>
<tr>
<td>curricular materials</td>
<td>8</td>
</tr>
<tr>
<td>teacher workshop</td>
<td>7</td>
</tr>
<tr>
<td>other training</td>
<td>2</td>
</tr>
<tr>
<td>discovery backpack</td>
<td>16</td>
</tr>
<tr>
<td>web, orientation</td>
<td>7</td>
</tr>
<tr>
<td>web, specific</td>
<td>4</td>
</tr>
<tr>
<td>web, interactive</td>
<td>5</td>
</tr>
<tr>
<td>clean-up, project</td>
<td>6</td>
</tr>
<tr>
<td>community event</td>
<td></td>
</tr>
<tr>
<td>other materials</td>
<td></td>
</tr>
</tbody>
</table>

n = 342
Program Goals

The defined goals of the inventoried programs are widespread, as shown in Table 2. One-third of the 218 programs either taught about animals (22%) or did not have a defined goal other than to explore the natural world (12%). An additional 12% had the goal of either providing the audience with general information or an orientation to the resource. The remaining programs dealt with subjects such as natural history, plants, geology, habitat, adaptations, careers, cultural themes, and art.

![Program Goals](image)

Table 2

Program Themes

The area-wide Environmental Education Committee has identified four overarching themes as critical to achieving our vision that *every resident and visitor will understand, appreciate and take care of southern Nevada’s environment*. These four “big picture” ideas have served as the basis for the matrix of desired future interagency educational programming:

1. **Meaningful Experiences**: Our visionary protection and transformation of the rich treasures of Southern Nevada has created opportunities for meaningful experiences, revitalization and an enhanced quality of life for visitor or resident, and contributes to a stronger economy.
2. **Ecology/Plants and Animals/ Human Impact**: Increasing human activity on highly sensitive and easily damaged lands has profoundly altered the natural environment of Southern Nevada, affecting native biota including threatened and endangered species and requiring active management of native and non-native species.
3. **Cultural Connections**: The study of intact cultural and sacred sites tell the stories of how humans have sustained their cultures in arid environments over the last 12,000 years, and provide lessons in adaptation to this environment for people today.
4. **Sustainability**: Maintaining growth and quality of life, and protecting watershed, water quality and adequate water supplies for all life in both developed and natural communities challenges people to resolve the issue of long-term sustainability.
Over half of the 218 programs (57%) meet the “Ecology/Human Impact” theme (Table 3), while 24% can not be categorized under any of the four defined themes. Eleven percent of the programs meet the theme of “Cultural Connections,” while only 8% of the programs deal with “Meaningful Experiences” or “Sustainability.”

These findings are consistent with Table 2, which indicates the predominant goal is to teach about animals. Even for those programs that do not have a defined goal, the theme appears to be something related to animals, plants, or the desert habitat. Few programs had the primary goal of having participants walk away with an enhanced view of the natural world impacting their quality of life or contributing to some meaningful experience. Fewer still had their audience examine sustainability and/or water issues.

Table 3

<table>
<thead>
<tr>
<th>Theme</th>
<th>Number of Programs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Meaningful Experiences</td>
<td>11</td>
</tr>
<tr>
<td>Ecology/Plants, Animals/Human Impact</td>
<td>125</td>
</tr>
<tr>
<td>Cultural Connections</td>
<td>23</td>
</tr>
<tr>
<td>Sustainability</td>
<td>7</td>
</tr>
<tr>
<td>Other (geology, art)</td>
<td>52</td>
</tr>
</tbody>
</table>

n = 218
**Venue**

Clearly, there is a distinction between the educational experiences typically offered in school and those that are offered by place-based educators. This distinction has more to do with the nature of the learning experience itself, not necessarily the setting. This is illustrated by the fact that while 91 programs took place outdoors (39%), 73 (31%) took place indoors. As well, a significant number of programs reached out to their audiences off-site (19%), while 11% took the form of informational media such as a website, brochure, newsletter or flyer.

![Table 4](image_url)

Table 4
**Audience**
Programs tended to be delivered either to a recreational audience (43%) or to school-based audience (42%). Some xeriscape programs were targeted to business and residential users.

![Bar chart showing audience distribution](chart.png)

**Table 5**

<table>
<thead>
<tr>
<th>Audience Type</th>
<th>Number of Programs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Recreational user</td>
<td>109</td>
</tr>
<tr>
<td>K-12</td>
<td>108</td>
</tr>
<tr>
<td>Business/Agency</td>
<td>14</td>
</tr>
<tr>
<td>Ethnic</td>
<td>0</td>
</tr>
<tr>
<td>Residential</td>
<td>25</td>
</tr>
</tbody>
</table>

n = 255
Program Production and Delivery
As the database inventory targeted all institutions charged with delivering environmental or cultural messages, a key data component was to evaluate how many programs are actually produced by federal staff. Of perhaps more interest is the actual delivery of the program. That is, the public face of the program is associated with the person delivering it, so knowing who (federal staff, non-federal staff, or volunteer) is delivering these programs will help the strategic plan identify and target future training needs.

The survey data indicate federal staff was involved in the production of 31% of the programs, while non-federal staff (state/county/private) was involved in 58% of the production, and volunteers were involved in 11%. However, volunteers were responsible for delivering 24% of these programs, while non-federal staff were involved in delivering 52% and federal staff for delivering 24% of programs.

Table 6
Who Produces Programs?

<table>
<thead>
<tr>
<th></th>
<th>Number of Programs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Federal staff</td>
<td>81</td>
</tr>
<tr>
<td>Non-federal staff</td>
<td>145</td>
</tr>
<tr>
<td>Volunteer</td>
<td>28</td>
</tr>
</tbody>
</table>
Who Delivers Programs?

<table>
<thead>
<tr>
<th>Number of Programs</th>
<th>Federal staff</th>
<th>Non-federal staff</th>
<th>Volunteer</th>
</tr>
</thead>
<tbody>
<tr>
<td>62</td>
<td>109</td>
<td>53</td>
<td></td>
</tr>
</tbody>
</table>

This analysis will allow the project manager, interagency team, and area-wide committee to complete the next steps in creating the Education in the Environment strategy. Phase 1 of the strategy includes two components: 1) writing a document that will include the identification of gaps and areas of overlap in existing programs, and 2) an assessment of the delivery of programs. The first component is completed, but the second component will require a longer process. It will require first determining and agreeing on what best practices should be in program delivery, than assessing delivery of programs based on this standard. To this end, a retreat is planned with key stakeholders from the Interagency EE team and the OLV EE committee on October 13, 2005. During this retreat we will discuss the survey findings and list priority areas, as well as begin discussions about best practices in program delivery methods and content. The Phase I document will be completed after this retreat. This will be followed by additional meetings throughout the year to address these priorities. Together, these discussions will become the goals, objectives and desired future conditions that will make up the Phase II document.

**SURVEY OF LOCAL TEACHERS**

As revealed by the aforementioned survey, school groups are an important audience for place-based education in Clark County (Table 5). For the federal agencies, school groups made up 53% of NPS programs and 43% of BLM programs. It is critical that agency educators design programs to meet the needs of this important audience within the context of supporting the agency’s mission.

Although federal public land sites are rich in natural and cultural resources and have the potential to provide abundant opportunities for authentic learning experiences, teachers may not have the skills, time, or knowledge to capitalize on this potential. This factor, along with academic and financial pressures facing many teachers, may affect the number and types of field trips taken by teachers in the Clark County School District. Therefore, a second survey has been constructed to
investigate the use of public lands as field trip destinations by Clark County School District teachers (see attached).

The purpose of this survey is to determine how and for what reasons science teachers choose to use public lands as field-trip destinations. The results will allow the federal agencies to determine what types of science and cultural programming will be most useful to teachers, how to structure and deliver this programming, and how to best develop professional development opportunities. Of particular interest is how teachers use field trips with respect to academic and testing requirements. That is, should the agency’s education teams design field trips such that integrate with and support school curricula, or are field trips primarily used as student enrichment? As well, identifying major barriers to taking students to public lands will allow the agencies to design programs and systems to overcome these barriers. For example, if teachers cite that they cannot bring their classes to public lands because transportation is not available, then agencies can seek opportunities to provide alternative transportation options.

The information collected from the teachers’ survey will allow the agencies to create experiences that will have potentially significant and lasting impacts on student learning. The Interagency Team, Loretta Asay of the Clark County School District, and the UNLV Curriculum Advisory Team assisted in the construction of this survey instrument. The survey has been approved by both the UNLV Internal Review Board (approval received August 2005), and by the Clark County School District (pending final paperwork) (see attached documents). Targeted teachers will be able to take the survey online through the District’s InterAct website beginning October 2005. Analysis and results will be available by February 2006.

**PRE-SERVICE TEACHER TRAINING AND MASTER’S EDUCATION**

Another way to foster the skills, knowledge, and motivation of teachers is to reach them while they are taking pre-service courses towards a master’s degree in Curriculum and Instruction. UNLV Education Coordinator Jeanne Klockow facilitated a meeting in June 2005 with Dr. Charles Kotulski (UNLV Department of Curriculum and Instruction) Sky McClain (Mojave Max Project Coordinator), Kathy August (BLM), Project Manager Allison Brody, Dr. Greg Levitt (Chair, UNLV Department of Curriculum and Instruction), and Dr. Kent Crippen (Department of Curriculum and Instruction) to discuss exposing pre-service students to a BLM-managed program, Mojave Max, during a presentation in the pre-service methods course (ICE 455). This type of exposure will help pre-service teachers understand how to effectively integrate field trips to public lands into their classroom curricula. Teacher-training opportunities such as this will support the Education Strategy by exciting, motivating, and increasing teachers’ knowledge about science and the Mojave ecosystem.

As a corollary to this effort, Forever Earth Project Manager Daphne Sewing and Allison Brody met with UNLV professor Dr. Marilyn Ford in June 2005 to investigate the creation of a master’s degree program in environmental education. We plan to review environmental education master’s programs at other institutions, then continue this conversation in October 2005. An environmental education degree program will support the Education Strategy by creating and sustaining a network of skilled educators that can deliver innovative and effective place-based education programs.

**COORDINATING SNPLMA EDUCATIONAL EFFORTS**

The importance of coordinating with and helping other interagency Conservation Initiative teams has emerged, as many are tasked with completing some form of education. On June 6, 2005, Project Manager Allison Brody and the Interagency EE team initiated a meeting with
Conservation Initiative team leaders to finalize and agree upon a process for team leaders to obtain assistance and coordination from the Interagency Environmental Education team, and to clarify the EE team’s role in terms of the educational components tasked to other Conservation Initiatives (see attached meeting notes).

As a result of this meeting, Allison Brody facilitated planning meetings with the Recreation/OHV team, the Backcountry Access team, the Volunteer team, the Cultural Site Stewardship team, and the Resource Protection team. Education planning strategy sessions were held with the Recreation and Wilderness teams on July 14, 2005 (see attached). It was agreed that among other tasks, the Interagency EE team will help develop messaging and an information packet for OHV users and help develop messaging and information for Wilderness websites. Toward meeting these goals, Allison Brody is working closely with Liz Smith-Incer (RTCA Coordinator and Facilitator for the Interagency Recreation team) and LaNelda Rolley (Public Lands Institute Marketing and Communications Specialist).

COMMUNITY PARTNERSHIPS AND OUTREACH

Dr. Brody and Ms. Sewing were invited by the Nevada Department of Education to participate in a test-item writing workshop held in Reno, July 19-22, 2005. The workshop goal was to create questions for the state-wide science proficiency exams. Dr. Brody and Ms. Sewing were asked to concentrate on creating questions to test knowledge and understanding of high school life-science concepts. This experience provided opportunities to interact with science teachers from across the state and to learn about the testing process. Their participation also points to the increasing integration of the Environmental Education Strategy into ongoing science and education efforts statewide.

The facilitation of the area-wide Environmental Education Committee continues to support and strengthen the emerging network of southern Nevada place-based educators while fostering coordination and collaboration and supporting strategic thinking and approaches. In meetings held during June and July 2005, the committee rewrote its vision and mission statements to be:

**Vision:** Every resident and visitor will understand, appreciate and take care of southern Nevada’s environment.

**Mission:** To strengthen collaborations and support integrated, effective environmental and heritage education efforts.

On August 25, 2005, the committee agreed on a set of five goals (see below). The next step is to review these goals and agree on expanded explanations for each goal, then move on to creating objectives, roles, and responsibilities for the committee (see attached meeting notes).

**Goals:**

1. Develop and implement a sustainable education in the environment strategy for southern Nevada.
2. Foster environmental stewardship in southern Nevada.
3. Coordinate resources to maximize effectiveness of education in the environment efforts.
4. Improve skill and knowledge of providers of education in the environment.
5. Celebrate successes with the southern Nevada community.
PLACE-BASED EDUCATION CONFERENCE

As stated before, only by working closely with the educators at all place-based education institutions can we effectively frame learning experiences within the larger context of the matrix of desired future educational programming. If educators at other place-based learning institutions do not support the strategy, and are not using the effective methods, tools, and products identified by the matrix, then we will be less effective in our attempts to create new patterns of behavior.

To this end, plans are underway to hold a conference for all southern Nevada place-based educators titled Our Places Tell Stories -- Making Connections with Our Audiences. This conference will set the stage for gaining support for the Environmental Education strategy. It will meet the needs of those interested in learning how to effectively connect with audiences to create informed decision-makers and motivated stewards of the environment. The conference will provide participants with successful education and interpretive strategies and techniques. Those attending the conference will not only have an understanding of the Environmental Education strategy, but will also have the skills and motivation to be a significant part of it.

The conference will be held January 24-27, 2006 at UNLV. During the course of monthly meetings, a conference planning team has developed a timeline, budget, conference themes, goals, and objectives (see attached documents). Dr. Sam Ham, a nationally known expert on interpretation, has agreed to be the keynote speaker. UNLV’s Division of Educational Outreach has agreed to assist with registration and has provided invaluable expertise and advice. The registration and information packet (draft form) is attached.

SUMMARY OF DELIVERABLES

The project manager for the Education in the Environment Strategy was hired in January 2005. The following table displays the status of remaining Year One and Year Two Deliverables.

<table>
<thead>
<tr>
<th>Pending Year One Deliverables</th>
<th>Percent Complete as of August 31, 2005</th>
<th>Plan for Completion in Year Two</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assess delivery of programs: identify and evaluate effectiveness of utilizing alternative</td>
<td>20% complete</td>
<td>Database analysis has revealed trends in delivery methods. EE stakeholders’ retreat on October 13</td>
</tr>
<tr>
<td>workforce opportunities, e.g., volunteers, contract organizations and individuals</td>
<td></td>
<td>will discuss best practices in program delivery methods and content, taking into account program</td>
</tr>
<tr>
<td></td>
<td></td>
<td>priorities revealed by database analysis.</td>
</tr>
<tr>
<td>Produce Section I of the comprehensive area-wide Outdoor Environmental Education Strategy.</td>
<td>90% complete</td>
<td>Data analysis completed. Meet with identified stakeholders to complete Section I of strategy.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Year Two Deliverables (June 2005 – May 2006)</th>
<th>Percent Complete as of August 31, 2005</th>
<th>Plan for Completion in Year Two</th>
</tr>
</thead>
<tbody>
<tr>
<td>Develop Section II of strategic plan to include goals, objectives and desired future conditions.</td>
<td></td>
<td>Will begin process October 2005 after best practices are determined and agreed upon.</td>
</tr>
</tbody>
</table>