2-28-2007


Environmental Education Strategy for Nevada

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Executive Summary

- Forever Earth was scheduled and operated for 21 days; it benefited 398 individuals.
- Newly developed grade 4 activities from the Forever Earth curriculum were field tested.
- Three Discover Mojave Outdoor World events were conducted. A partnership with Big Brothers Big Sisters of Southern Nevada is under development; when finalized, this partnership will markedly increase participation in the program. Similar partnership discussions are also being held with local leadership of the local Boy Scouts of America and Girl Scouts of the USA.
- A work plan has been established for Conservation, Education, and Interpretation Program Manager.
- Cultural Inclusiveness workshops were held in January for area-wide educators.
- Continued progress has occurred for the Environmental Education and Interpretation Certification Program; to date it is 50 percent complete.

Summary of Attachments

1. Lee Meadows Environmental Education and Interpretation Project meeting notes (January 16, 2007)
2. Lee Meadows Environmental Education and Interpretation Project meeting notes (February 20, 2007)
3. Education about the Environment Cultural Inclusiveness Initiative meeting notes (January 2007)
4. Education about the Environment Cultural Inclusiveness Initiative agenda (March 1, 2007)
5. Nevada Certification Program for Environmental Education and Interpretation meeting notes
6. Partners for Education about the Environment meeting notes

FOREVER EARTH PROGRAM

Forever Earth Operations
This quarter, Forever Earth was scheduled and operated for 21 days (see table below). Eight groups scheduled Forever Earth for educational purposes; the NPS utilized the vessel for research
purposes. Almost 400 individuals -- teachers, students, and researchers -- benefited from using Forever Earth this quarter.

### Forever Earth Bookings – Year 3 – 3rd Quarter 2006/2007

<table>
<thead>
<tr>
<th>Date(s)</th>
<th>Group</th>
<th>Group Type</th>
<th>Trip Purpose</th>
<th>Length of Trip</th>
<th># of Adults</th>
<th># of Students</th>
<th>Total Pass.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dec. 1</td>
<td>Jeffers Elementary (grade 5)</td>
<td>Education</td>
<td>Student field trip</td>
<td>5 hrs. (2 trips)</td>
<td>8</td>
<td>24</td>
<td>32</td>
</tr>
<tr>
<td>Dec. 2</td>
<td>Lake Mead Boat Owners Association</td>
<td>Education</td>
<td>Community Outreach</td>
<td>5 hrs.</td>
<td>18</td>
<td>5</td>
<td>23</td>
</tr>
<tr>
<td>Dec. 3</td>
<td>UNLV Geoscience Department</td>
<td>Education</td>
<td>Development trip for teacher workshops</td>
<td>7 hrs.</td>
<td>10</td>
<td>2</td>
<td>12</td>
</tr>
<tr>
<td>Dec. 5</td>
<td>Brinley Middle School (grade 8)</td>
<td>Education</td>
<td>Student field trip</td>
<td>3.5 hrs.</td>
<td>7</td>
<td>16</td>
<td>23</td>
</tr>
<tr>
<td>Dec. 6-18</td>
<td>National Park Service – Cultural Resources</td>
<td>Research</td>
<td>Submerged Cultural Resources Surveys</td>
<td>13 trip days</td>
<td>104</td>
<td>0</td>
<td>104</td>
</tr>
<tr>
<td>Jan. 26</td>
<td>Mabel Hoggard Elementary (grade 5) / with Las Vegas Wash Coordination Committee</td>
<td>Education</td>
<td>Student field trip</td>
<td>4 hrs. (2 trips)</td>
<td>10</td>
<td>24</td>
<td>34</td>
</tr>
<tr>
<td>Feb. 10</td>
<td>UNLV Geoscience Department</td>
<td>Education</td>
<td>Teacher Workshop</td>
<td>7.5 hrs.</td>
<td>8</td>
<td>0</td>
<td>8</td>
</tr>
<tr>
<td>Feb. 21</td>
<td>Grant M. Bowler Elementary, Logandale (grade 4)</td>
<td>Education</td>
<td>Student field trip</td>
<td>3.5 hrs. (3 trips)</td>
<td>21</td>
<td>55</td>
<td>76</td>
</tr>
<tr>
<td>Feb. 22</td>
<td>Grant M. Bowler Elementary, Logandale (grade 4)</td>
<td>Education</td>
<td>Student field trip</td>
<td>3.5 hrs. (3 trips)</td>
<td>24</td>
<td>61</td>
<td>85</td>
</tr>
</tbody>
</table>

Highlights of Forever Earth Use (this quarter):

- **Submerged Cultural Resources Surveys**: The National Park Service utilized Forever Earth as a support boat for 13 trip days (December 6-18, 2006) while conducting surveys.
- **Teacher Workshop**: Four elementary teachers from Clark County School District (CCSD) participated in a pilot geology workshop aboard Forever Earth (February 10, 2007). The workshop, designed to increase interest and knowledge about local geology among elementary school teachers, was facilitated by Dr. Kim Johnson and Robyn Howley, (Department of Geoscience, UNLV) and funded by a National Science Foundation grant. Project Manager Daphne Sewing assisted with the workshop. A future workshop is planned.
- **Middle School Curriculum**: J. Harold Brinley Middle School “Gear Up” program students participated in Forever Earth field trips (grade 6, November 28, 2006 and grade 8, December 5, 2006). Program facilitators included Amanda Rowland, National Park Service and, from the Public Lands Institute, Program Manager Daphne Sewing, Dr. Allison Brody, Michelle Weibel (Graduate Assistant). Leaders of the “Gear Up” program arranged for these fieldtrips.
- **Elementary Curriculum**: Fifth grade students from Jay Jeffers Elementary School participated in activities on Forever Earth and on shore (December 1, 2006). Newly
developed grade 4 activities (see also Forever Earth Curriculum & Assessment, below) were field tested; programming occurred aboard Forever Earth and on shore for four classes from Grant M. Bowler Elementary, Logandale, NV (February 21 and 22, 2007). Program facilitators included Amanda Rowland, National Park Service, and, from the Public Lands Institute, Program Manager Daphne Sewing, Dr. Allison Brody, Michelle Weibel (Graduate Assistant).

Forever Earth Curriculum & Assessment
As reported in prior quarterly reports, activities for grades 5, 6, and 7 of the Forever Earth curriculum have been completed and implemented. The Grade 4 curriculum was developed over the past year by Ms. Sewing along with Dr. Brody, Jennell M. Miller, Ph.D., and Michelle Weibe, graduate assistant (PLI); Mary Weisenmiller and Cheryl Wagner (CCSD); and Ellen Anderson and Amanda Rowland (NPS). Visual interpretation was done by Dr. Miller. Grade 4 curriculum focuses on the water cycle and the importance of Lake Mead to regional water supplies. In addition to the ecological water cycle, students also trace the cycle of Colorado River water use by humans in the Southern Nevada area. Students also discover the multi-use nature of Lake Mead through observational surveys and conduct age-appropriate water-quality assessments. Grade 4 programming and activities were field tested this quarter.

The discovery of invasive quagga mussels within Lake Mead, necessitates revision of the activities within the grade 6 Forever Earth curriculum, Alien Invaders. The activities and associated materials for grade 6 programming had centered on zebra mussels as a potential alien invader to Lake Mead. These revisions will be completed and field tested during the fourth quarter.

Pre- and post-trip assessment instruments continue to be revised. Ms. Weibel visits the classrooms of participating groups to administer the pre-trip assessments and to prepare students and teachers for their field trips. During this quarter, Ms. Weibel conducted presentations to grade 7 students at Garrett Junior High School in Boulder City (field trip scheduled in January was postponed due to weather and re-scheduled for May), students (grades 4 and 5) at Goynes Elementary in Las Vegas, and students (grade 4) at Grant M. Bowler Elementary in Logandale.

A proposal was submitted and accepted to present at the 2007 National Science Teachers Association Conference in St. Louis (March 28-April 1, 2007). Cheryl Wagner and Mary Weisenmiller, K-12 Science Project Facilitators for Clark County School District and Ms. Sewing will co-present and highlight the integration of formal and informal education to develop effective curriculum for Forever Earth program.

Marketing and Community Outreach
On February 3, 2007, Ms. Sewing conducted a presentation to 60 grade 6 science teachers attending an in-service training conducted by Clark County School District science facilitators. Ms. Sewing presented an overview of the program and highlighted grade 6 concepts, learning objectives, and activities of the Forever Earth curriculum. To date, eight reservations for field trips have been made by teachers attending Ms. Sewing’s presentation.

Ms. Sewing participated in a cultural diversity and inclusiveness workshop, sponsored by Clark County Parks and Recreation (January 18-19, 2007). Incorporating effective communication and educational techniques for English Language Learners (ELL) into the Forever Earth curriculum is a high priority due to the high percentage of ELL students participating in field trips. Ms. Sewing
also met with science mentors at Jay Jeffers Elementary School (February 16, 2007). These teachers had previously attended Forever Earth field trips with their students, made observations, and provided Ms. Sewing with insights on how to modify the program to increase ELL student understanding.

**DISCOVER MOJAVE OUTDOOR WORLD**

**Outdoor World Operations**
Two successful fishing activities concluded the Environmental Science Club series of Outdoor World events for the students from Paradise Professional Development School participating in this after-school program (see table below). During the previous quarter, these students had also participated in bird watching events at Sunset Park and Clark County Wetlands Park, science and art activities aboard Forever Earth, and indoor rock climbing activities held at the Nevada Climbing Centers. Another group of students will be selected to participate in activities scheduled during the next quarter.

<table>
<thead>
<tr>
<th>DATE</th>
<th>GROUP</th>
<th>ACTIVITY</th>
<th># OF PARTICIPANTS</th>
<th>LOCATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dec. 6</td>
<td>Tarantulas Paradise Environmental Science Club</td>
<td>Fishing I</td>
<td>9</td>
<td>Sunset Park</td>
</tr>
<tr>
<td>Dec. 7</td>
<td>Tarantulas Paradise Environmental Science Club (2 activities)</td>
<td>Fishing II/Art Adventure</td>
<td>18 (9x2)</td>
<td>Sunset Park</td>
</tr>
</tbody>
</table>

**Outdoor World Curriculum & Assessment**
Activities and assessment tools for the rock climbing portion of the Outdoor World curriculum are being developed. These will be field tested during the next quarter.

UNLV professors Dr. Gregory Schraw and Dr. Lori Olafson, Ms. Weibel, and Ms. Sewing submitted a proposal to the North American Association for Environmental Education to present at the organization’s 2007 Research Symposium. The focus for the presentation will be the program assessment tools and results.

**Marketing and Community Outreach**
A partnership with Big Brothers Big Sisters of Southern Nevada continues to be explored. A meeting was held on January 31, 2007 with Deanna Kope, Partnerships and Corporate Relations Manager, to begin scheduling events. Ms. Kope reported that their insurance coverage remains to be modified to allow for participation in the variety of recreational activities offered in the Outdoor World program, especially those that involve water-based recreation. While scheduling cannot begin until the additional coverage is in place, Ms. Kope did not anticipate any problems resolving this matter and indicated that they would begin scheduling Outdoor World events for the summer months.

Discussions are being conducted with local leadership of Boy Scouts of America and Girl Scouts of the USA. *Art Adventures* has been scheduled for a Girl Scout troop on April 28, 2007. It is anticipated that more events will be planned for the next quarter.
### Status of Year 3 Deliverables – Forever Earth & Outdoor World

<table>
<thead>
<tr>
<th>Year Three Deliverables (June 2006 – May 2007)</th>
<th>Percent Complete as of February 20, 2007</th>
<th>Plan for Completion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Write curricula for Forever Earth and WOW/Discover Mojave Outdoor World</td>
<td>75 percent complete.</td>
<td>Rock climbing activities for the Outdoor World program will be developed during the fourth quarter. High school activities for Forever Earth will also be developed and field tested during the fourth quarter.</td>
</tr>
<tr>
<td>Coordinate Forever Earth uses according to operations plan</td>
<td>75 percent complete.</td>
<td>Safety drills were conducted by the Forever Earth crew; emergency procedures and assignments were added to the operations plan.</td>
</tr>
<tr>
<td>Revise and update Forever Earth operations plan as needed.</td>
<td>75 percent complete.</td>
<td></td>
</tr>
<tr>
<td>Manage Forever Earth lab; procure and maintain necessary supplies/equipment</td>
<td>75 percent complete.</td>
<td></td>
</tr>
<tr>
<td>Record, preserve, and share data collected from vessel.</td>
<td>75 percent complete.</td>
<td></td>
</tr>
<tr>
<td>Coordinate 15 southern Nevada WOW/Discover Mojave events.</td>
<td>47 percent complete.</td>
<td>Additional activities are planned for the Environmental Science Club, Boy Scouts, and Girl Scouts during the fourth quarter.</td>
</tr>
<tr>
<td>Operate Forever Earth according to the operations plan.</td>
<td>75 percent complete.</td>
<td></td>
</tr>
</tbody>
</table>

### Conservation Education and Interpretation Strategy

#### Interagency Team Meetings

In October 2007, the SNAP Board charted a new course for the Conservation Education and Interpretation (CE&I) program. The CE&I program will focus efforts to develop interagency programs and products in four focus areas: Don’t Trash Nevada, Appropriate Off-Highway Vehicle Use, Restoration, and Wilderness. The UNLV Public Lands Institute will be responsible for developing products and programs in these focus areas. The Board announced that the Interagency CE&I Team will no longer meet on a regular basis. Rather, PLI will be connected with appropriate agency personnel and teams as needed to identify projects and develop products and programs.

The following logic model details the process that will be used to create these interagency CE&I projects. Toward development of each priority focus area, audience, products, and appropriate delivery method will be identified by working with appropriate agency personnel. The logic model provides examples of the types of audience, products, and delivery methods that could be utilized for each project.

The process detailed in this logic model will be applied to the CE&I Program Manager work plan, which was approved by the SNAP Board on February 23, 2007.
Focus Areas
- Responsible recreation
- Restoration
- Take Pride
- Wilderness

Agency Staff with CE&I Project Manager, PLI staff
Suggest, guide, provide resources

Identify
- Audience
- Product
- Delivery

Focus Areas
- Responsible recreation
- Restoration
- Take Pride
- Wilderness

Delivery Approaches
- Instructional settings: class, field, community
- Teaching methods: discovery, guided, verbal learning
- Activity emphasis: explore, acquire, practice, apply
- Role of instructor
- Cognitive and affective elements
- Age appropriate methods

Audience
- School district
- Business (e.g., tour company, housing developer)
- Diverse communities (e.g., Hispanic, Asian, African American)
- Recreational (e.g., family, OHV, climber)

Product
- Curriculum Brochure
- Web-based
- Non-formal program for schools or other group
- Signage
- Interpretive trail
- Event
- Radio program
- Interpretive program delivered through technology (GPS, PDA, cell phone)
- Other?

ASSESS AND IMPROVE

Participant Outcomes
- Cognitive awareness and knowledge (ecological, issues, action strategies)
- Affective traits (attitudes, values)
- Determinants of behavior
- Individual and group behavior

Program Impacts and Benefits
- Long-term changes in behavior
- Distributed by participants?
- Effects on educational programs
- Public relations benefits
- Maintenance and improvement of the Resource
<table>
<thead>
<tr>
<th>Project</th>
<th>Product</th>
<th>Audience</th>
<th>Team(s) Involved</th>
<th>Delivery</th>
<th>Evaluation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Information for OHV Recreationists</td>
<td>Information Packet (map with messages, action skills)</td>
<td>OHV recreationists</td>
<td>Recreation; Law Enforcement</td>
<td>Staff will deliver at OHV retail stores, events, and to individual</td>
<td>Teams will help determine how we will measure success</td>
</tr>
<tr>
<td>Volunteer restoration project</td>
<td>For example: Citizen Science Project, volunteer training for restoration, research project</td>
<td>Adult volunteers; older students</td>
<td>Restoration, Volunteer</td>
<td>Citizens engaged in volunteer projects (and/or science projects) and the value of public lands</td>
<td>For example: scientific results, level of engagement, number of volunteers</td>
</tr>
<tr>
<td>Don’t Trash Nevada at Lee Meadows</td>
<td>For example: interpretive signs</td>
<td>Family recreationists; Hispanic community</td>
<td>F.S. Lee Meadows Project Team; Anti-litter team; Restoration team</td>
<td>Interpretive signs and discovery station for families</td>
<td>For example: less litter; protection of resource</td>
</tr>
<tr>
<td>Outreach campaign (initiation)</td>
<td>Varies</td>
<td>Varies</td>
<td>PAO</td>
<td>Staff, volunteers, partner organizations, technology, schools, media, other</td>
<td>Refer to industry standards</td>
</tr>
<tr>
<td>Community partners (e.g., Springs Preserve) deliver SNAP messages</td>
<td>For example, SNAP represented in Springs Preserve Partners room</td>
<td>Varies, including school, recreational, Hispanic</td>
<td>Education</td>
<td>Partner organizations</td>
<td>Partners will help determine how we will measure success</td>
</tr>
</tbody>
</table>
The SNAP Board also agreed to the following initiatives as part of the CE&I Program Manager work plan:

- expand capacity for CCSD to incorporate focus area messages;
- establish process to reach Hispanic audience with focus area messages;
- examine alternate delivery systems, especially technology;
- promote best practices among area-wide educators;
- and work with community partners, including the Springs Preserve

**Progress towards CE&I Program Goals**

Actions taken this quarter toward achieving SNAP CE&I strategic goals include:

**Goal #1a – Common messages are utilized by cooperating agencies and area-wide educators and trainers.**

Dr. Brody and Jennifer Haley met with Becky Day-Swain of the Las Vegas Springs Preserve to discuss incorporating SNAP messages in the Springs Preserve Partners room (February 12, 2007). The facility will open May 31, 2007. There are several options for presenting a variety of messages. It was agreed that Dr. Brody will pursue ideas with the Springs Preserve project manager.

Dr. Brody and Ms. Daphne Sewing agreed to work with the Spring Mountains NRA Lee Meadows Project Team to create a proposal for educational elements that will (1) inform recreationists about the Lee Meadows restoration project and (2) present anti-litter and resource protection messages. The PLI team met with the Lee Meadows Project Team (January 16, 2007) to gather information about the project, brainstorm appropriate message/story ideas, and discuss project ideas (see attached meeting notes). Based on this conversation and information gleaned from other sources, including the National Visitor Use Monitoring Results for Spring Mountains National Recreation Area, Dr. Brody and Ms. Sewing presented three conservation education and interpretation alternatives to the Lee Meadows Project Team (Feb. 20, 2007; see appendix for meeting notes).

**Goal #1c – Foster environmental stewardship in Southern Nevada by ensuring CE&I programs and services use best education and interpretive practices for each of our audiences.**

Two workshops were held in January 2007 to explore multicultural issues as they occur in the real world of conservation education and interpretation. Front-line personnel were invited to attend the January 18 workshop, while program managers were invited to the January 18 workshop (see appendix for meeting notes).

Workshop attendees agreed to attend a follow-up meeting on March 1, 2007 to plan next steps toward Cultural Inclusiveness in conservation education and interpretation. The outcome of this meeting will be to create short term and long term plans that will help us achieve the goal of the engagement of the Hispanic community to develop and deliver programs and services that will welcome and engage all visitors and residents in positive stewardship behaviors (see attached agenda).

**Goal #2: Develop and maintain a workforce with exemplary skills and knowledge of Education & Interpretive (E&I) practices, as well as knowledge about natural, historical, and cultural resources.**
The Nevada Natural Resource Education Council is partnering with the CE&I project manager to create a state-wide Nevada Certification Program in CE&I. The Certification Development Team, which includes representation from the Las Vegas area and the Reno area, met in Las Vegas (December 14, 2006), in Reno (December 21, 2006), and again in Las Vegas with remote attendance via conference call (February 15, 2007). During the course of these meetings, the Development Team agreed on the theme and guideline statements that describe the knowledge and skills that a certified CE&I professional in Nevada should possess (see attached meeting notes). The Development Team is in the process of creating the indicators for each guideline (see attached guidelines). These indicators are specific statements that will serve as the basis for the course syllabi, the internship, and the assessment of the knowledge, skills, and abilities of new professionals.

Conferment of the CE&I certificate will require successful completion of four courses (as described above, course syllabi will be based on guidelines developed by the Development Team). Additionally, each participant must complete an internship program, which will be supervised by mentors. Therefore, the Development Team is also creating a mentor-training plan/program.

Dr. Brody is working with Dr. Jennell M. Miller in developing the visual concepts and text for marketing and instructional materials for the certificate program.

**Goal #5: Maintain and participate in an area-wide cooperative CE&I effort.**

Several tools are being employed to accomplish this goal, including an educator’s listserv (see listing). Dr. Brody facilitated a meeting for Partners for Education about the Environment this quarter (January 12, 2006; see appendix for meeting notes). Enviroedexchange.org, a website created to support community educators and teachers, received 6,829 server requests and 1,139 successful requests for specific pages from January 15, 2007 through February 15, 2007.

**Community Outreach**

Dr. Brody partnered with Connecting Hands Over Life-Long Learning Adventures (CHOLLA) to present a talk entitled, “Science in the Community” at the joint conference of the Nevada Science Teachers Association and Southern Nevada Mathematics (January 27, 2007). This presentation highlighted informal science education opportunities that can be found throughout the community, including on public lands sites.
SUMMARY OF YEAR 3 DELIVERABLES – EE STRATEGY

<table>
<thead>
<tr>
<th>Year Three Deliverables (June 2006 – May 2007)</th>
<th>Percent Complete as of August 31, 2006</th>
<th>Plan for Completion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Develop Implementation Plan to include, but not limited to, a five-year work plan with annual work tasks, which becomes Section III (final section) in the area-wide Outdoor Environmental Education Strategy.</td>
<td>75% complete</td>
<td>Plans are being developed with SNAP Executive Director to identify work plan to meet SNAP Board objectives.</td>
</tr>
</tbody>
</table>

Submitted by:

<table>
<thead>
<tr>
<th>Margaret N-Rees</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Principal Investigator</td>
<td>Feb. 28, 2007</td>
</tr>
</tbody>
</table>
Lee Meadows Environmental Education and Interpretation Project meeting notes (January 16, 2007)
Meeting Notes for 1/16/07
Environmental Education/Interpretation Kick Off
FS, USFW, Public Lands Institute (PLI)
P. Schaefer  January 26, 2007

Attendance and Contact List
The following people attended the January 16, 2006 PLI/SMNRA kick-off meeting. Feel free to contact individuals for information needs, ideas, etc.

PLI
- Allison Brody  895-5097  allison.brody@unlv.edu
- Daphne Sewing  895-5098  daphne.sewing@unlv.edu

FS
- Bryce Lloyd  839-5566  brucelloyd@fs.fed.us  Recreation Planner
- Bruce Lund  839-5563  blund@fs.fed.us  Planning botanist
- Kate Walker  515-5408  kwalker@fs.fed.us  Operations botanist
- Erick Walker  515-5440  ewalker02@fs.fed.us  Recreation, cultural staff
- Terrie Jarrell  515-5404  tjarrell@fs.fed.us  Assistant Forest Engineer
- Karen Harville  839-5569  kharville@fs.fed.us  Planning Wildlife Biologist
- Amy Meketi  515-5421  ameketi@fs.fed.us  Resource Staff
- Annice Ellis  515-5407  aellis@fs.fed.us  District Landscape Architect
- Paul Schaefer  839-5560  pschaefer@fs.fed.us  IDT Leader

USFW
- Christiana Manville  515-5240  christiana_manville@fws.gov  Wildlife Biologist

Next Meeting – Tuesday, February 20, 2007 in Annex Conference Room
1. PLI draft themes, ideas and products for Lee Meadows project: 1 – 2:30 pm;
2. Identifying themes for the other FS SNPLMA projects – everyone: 2:45 – 4:00 pm

General Meeting Notes
Stephanie is concerned about developing EE products that are not maintainable over time due to limits in people power etc. This should be considered when developing all projects. Not all EE products have to last forever – Some may be focused and short term. This should be identified up front during product development.
A spreadsheet handout was provided by Paul with a list of projects that may have an Environmental Education/Interpretation (EE) need into the future. The list was amended with additional projects and will be provided to the above group by e-mail – Paul - done.

The FS has a local limit of $25,000 per project that can be spent on EE type activities before having to get WO approval. This does not include routine informational signing such as “Pack it in – pack it out” etc but does apply to newly developed EE. We want to stay below this amount for all but the larger projects.

The group agreed that all EE must be provided in Spanish and English and that efforts must be taken to assure that Spanish EE is understood by the target audience.

Erick stressed the need for EE to effect behavior change of visitors.

Time was spent discussing the 24 kiosk project, what it is and what it has accomplished and planned to date. The kiosk design is accepted as is and does not need to be reinvented. Displays on the kiosk can be developed to address EE needs. Each kiosk will generally include information as well as education.

Kiosks and/or signs are not the only delivery method that we want to consider but we should also consider other methods. This may include delivery by volunteers, etc.

It was agreed that sites should focus on local specifics and try not to be all things for all people. Lee Meadows will implement this strategy, i.e. what is unique to Lee Meadows?

There are user reports including Argon and NVUM which may provide useful information to PLI and will be provided by the FS – Amy - done.

**Lee Meadows Project Meeting Notes:**

A project area map is needed by PLI – Paul done.

A considerable amount of time was spent discussing and brainstorming EE messages and ideas for Lee Meadows. PLI captured these ideas on spreadsheet that will be available to all attendees. (See appendix.)

PLI will return to this group on Tuesday, February 20 at 1 pm in the annex conference room to discuss the ideas and or alternatives they have generated for Lee Meadows.

PLI, USFW and the FS will also meet on February 20 immediately after the above meeting to identify theme or focus items for the remainder of the projects identified on the updated spreadsheet. Figure 2:45 to 4:30 in the annex.

PLI will investigate ways for the FS to reimburse cost of developing EE products for FS projects using the existing funding mechanisms in use at PLI. Allison will report back on this to Paul.

**Appendix: Brainstorming messages, ideas, and issues**

- Historical interpretation should be considered: there is a unique history associated with the recreational use of Lee Meadows, including:
Girl Scout camps with horse concessionaire
Private property to pasture horses
Bridal trails visible on historic maps
Photos may be available from a variety of stakeholders – FS already has some.

- Cultural surveys have shown no known native artifacts or use
- Also used as a baseball diamond
- Because of historical use, “Lee Playground” is basically an artificial system
  - E.g., ponderosa forest more open when fires allowed to burn
  - Private owners cut trees
- Area has been identified as a biodiversity hotspot because of high level of endemism, including
  - Butterflies
  - Plants
  - One of most unique areas in the country
- However, Lee Meadows itself has been modified so many of the endemics, while occurring in surrounding areas, no longer occur in the meadows.
- Lee Meadows will not be managed for endemics; rather, the strategy will be to concentrate people here to keep them off more sensitive areas.
- When the meadows are snow-covered, the vegetation is less vulnerable to impact – that is, until the snow is worn off.
- Education messages should foster positive behaviors, decrease undesirable behaviors, and should be bilingual. Messages should be informative and affect attitudes.
- Anti-litter messaging campaign (“Don’t Trash Nevada”) was developed by Aztec Media with the Anti-Litter/Desert Dumping team. Aztec went to border towns to better learn how to present these messages.
- Messaging should consider how to best make personal connections; take into account cultural differences. For example, Hispanic audience will be the primary minority, with Spanish being the language of comfort.
- NVUM conducted January → December 2005 – national protocols were followed; sampled campgrounds, trail heads, general use, and wilderness areas.
  - Different user groups were found at different sites.
  - Results are available – including how long recreation lasted; main activities people enjoyed (driving for pleasure, wildlife, flowers).
- Messages to consider:
  - Pack it in, pack it out (especially in the winter; litter is more concentrated; people tend to use dumpsters less in snow, even though they are empty)
  - Stay off main road when recreating (used to close road for snowbox derby, a Forest-Service sponsored event)
  - Use the restrooms (not any located in Lee Meadows, but several are close by)
  - Cross only at foot bridges
  - Safe sledding
  - Clean up after pets (perhaps provide dog-waste bags as is done at Red
Rock

Visitor Center info – hours of operation, etc.

- Any of the above messages should include an explanation – “WHY” – not just a list of rules.
- A good approach may be to address “WHAT” questions
- Perhaps interpretives could be flexible to meet changing seasons – could concessionaires take responsibility for this?
- Restoration work will not be visible during winter months; should this be interpreted? Winter is the short season.
- Experiential a plus – e.g., a nature trail.
- There is a dead fall that people are seen on all the time – this could be a good logo for the meadow
- If snow play a major use, perhaps a hill could be built in the middle of the meadow for this user group
- Question: what is the relationship between this project and Middle Kyle Canyon?
- Personal services are currently very limited, but volunteer program is growing over time.
- Bluebird houses a great way to bring wildlife to the area; perhaps a stewardship project?
- Other opportunities to present these messages should be explored; e.g., Latin Chamber of Commerce
- Remember: people (esp. families) are there to play; not necessarily motivated by desire for educational opportunities
- Relate native plant restoration to urban landscape designs that are light on the land, e.g., xeriscape initiatives; invasive species issues; historical uses
- Stream function/processes of dry streambed – foot bridges will cross these; pictures from “before” and “after” restoration.
- Interconnected role of plants, people, and ecological systems: Public lands are an important source of clean air and water.
- There is a Ponderosa Pine in Lee Meadows that holds the state record as the largest; perhaps there could be a naming contest? Other record-holders in the area include Rocky Mountain White Fir and Bristlecone Pine.
- Mountain vistas and geology can be highlighted from the area – names of mountains, peaks, and other features
- Common question: “how high are we?”
- An interesting study to embark upon might be to ask people what they are interested in.
- Spring Mountains are sacred to the Southern Paiute.
Lee Meadows Environmental Education and Interpretation Project meeting notes (February 20, 2007)
Notes – Environmental Education in the Lee Meadows Project  
February 20, 2007  
P. Schaefer with cut and paste from the PLI presentation

**Attendance:** Annice, Terrie, Amy M, Allison and Daphne (PLI), Erick, Paul, Bruce, Bryce – USFW was unable to attend

Allison and Daphne presented a power point presentation on their ideas for EE/Interpretation in the Lee Meadows project. Their ideas have incorporated themes, etc. from the SMNRA Master plan for Interpretation, EE and Visitor Information (Master Plan) and from the comments and direction provided in at the 1/16/07 meeting on this same topic. The power point is located on the N drive under N:\NEPA Projects\Project Planning\EE – PLI.

The presentation included three alternatives from most “involved” EE to least “involved”. In keeping with concerns over long term maintenance and feasibility, the team selected an idea toward the least “involved” end of the spectrum. Following is the basic idea we agreed upon.

The 6 bridges will serve as entry and focus points for an opportunity to:
- engage families in discovery
- introduce upper canyon animals, plants, and vistas
- relate messages about stewardship, restoration, individual and group behaviors
- Meet goals identified in the Master Plan as follows:

| **Goal 3:** Increase awareness and understanding of the dynamic relationship between humans and the environment | **Connection to place:**  
1) Develop sense of place. Gain understanding of interrelationships (ecological and human/place) |
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Goal 4:</strong> Gain support for management of SMNRA</td>
<td><strong>Understand and support Lee Meadows restoration efforts.</strong></td>
</tr>
<tr>
<td><strong>Goal 5:</strong> Improve stewardship ethics</td>
<td><strong>Foster responsible use and stewardship behaviors</strong></td>
</tr>
</tbody>
</table>

**Management & Visitor Information Goal:**
Understand the values and issues of the largest segment of visitors (one-third Spanish speaking) – learn about cultural values and experiences so interpretation can be made more relevant to this audience.  
Communicate and connect more effectively with Hispanic visitors. (Investigations on how to do this are ongoing.)
The goals and objectives would be met using the following ideas:

- Foot bridges introduce the experience
- Activity stations – 5 or 6 spread throughout the meadow. Incorporate the use of all senses. Following are some ideas:
  - Hollow log
  - Track prints
  - Rubbings
  - Butterfly viewing bench
  - Restoration activities
  - Tree bark
- Satellite visitor center on busy weekends – use volunteer(s) for:
  - Special events,
  - talks and walks,
  - provide information
Presence will help deter litter
- Establish social norms
  - Behavior affected by social context
  - Highlights solutions, not the problem
  - Proven effective
- Signage and interpretation in the meadow would be bi-lingual in content and understanding

Next Meeting and objectives – We are planning the next meeting on March 19 at 2:30 or 20th at 1 pm in the Annex Conference Room. The date will be finalized so that Stephanie and Susan can attend as well of the IDT. PLI will flush out the above ideas to tie down the number of stations and general locations as well as the contents of each station. There will be no design work at this stage. Social norm signing would be flushed out a little more with likely locations. Ideas would be ready for incorporation into a proposed action and for inclusion in the restoration and revegetation plan. Other activities will include:
- Firming up bi lingual multi cultural information – PLI, Amy
- Investigating cooperation with concessionaires, Clark County Camp, Interpretive Association – Erick, Paul, Albert, and PLI.
- Investigating materials or methods for production of materials with an emphasis on quality materials that require minimum maintenance - PLI.
- Confirming date with Stephanie - Paul
Education about the Environment
Cultural Inclusiveness Initiative
meeting notes

(January 2007)
Notes from Cultural Inclusiveness Workshops – January 18, 2007 and January 19, 2007

Two workshops were held in January 2007 to explore multicultural issues as they occur in the real world of environmental education and interpretation. The workshops were offered by the Environmental Education and Training Partnership (EETAP) and Intercambios and were facilitated by Lisa LaRocque and Alma Galván of Intercambios. Clark County Parks and Recreation provided funding while UNLV’s Public Lands Institute provided coordination.

The workshop objectives were: to raise awareness about tendencies toward ethnocentric practices; to increase understanding about the dimensions of diversity and how they can shift with increased cultural sensitivity; to stimulate collaborative and individual reflection of one’s practices; to develop strategies to begin more ethno-relative practices; and to explore opportunities to meet the needs of underserved populations.

The workshop participant list is included at the end of these notes. Participants were given the presentation notes for the power-point that introduced culture and diversity, including the four layers of diversity and the continuum of cultural competency.

We reviewed two case studies from the book: What's Fair Got To Do With It: Diversity Cases From Environmental Educators (2004. Edited by Tania J. Madfes, and published by WestEd, NAAEE and EETAP). Participants in the January 18 workshop listed strategies to address how different cultures view their relationship to nature and stewardship, while participants from the January 19 workshop examined barriers and solutions to building effective partnerships.

**Strategies: Ways to foster relationship to nature and stewardship**

- Assumptions need to be identified and “debunked”
- Go to the audience and ask, then listen
- Understand where people are coming from
- Define success and goals based on these conversations
- Are ideas of success from your perspective, or theirs?
- Complete the communication
- Try to accommodate peoples’ abilities
- Get to know the population you are working with (values, experiences, exposures, motivations)
- Reveal the “rules”
- Find out what it means to them
- Deliver messages in ways that resonate; that are significant. Connect with their reality – their lives
- Define your target population
- Pay attention to clues

**Lessons Learned: Building effective partnerships**

- Build relationship over time
- Focus on process
- Develop plan for longevity
- Clarify objectives
- No selfish decisions
- Recognize and value differences – capitalize on these differences
- Do research on the group you are considering developing partnership with
- Adjust and/or let go of some of your agenda
- Cultivate dialogue and set example
- Evaluate past successes and failures
- Written agreement that clarifies roles and responsibilities

**Strategies: Building effective partnerships**

- Specify common objectives and work toward them
- Plan and follow-up together
- Plan strategically for agreed-upon outcomes and follow-through
- Build trust
- Clarify expectations before partnering
- Examine values and culture
- Put forward what you have to offer first
- Review your programs
- Do not assume
- Cultural differences vs. language differences
- Define your community
- Look for overlapping goals (even in different manifestations)

We also came up with a list of strategies from our “Brief Encounter” exercise, where we explored the cultural continuum by adopting the roles of Pandyas and Choilas:

**Strategies: Ways to welcome a culturally different group**

- Send an “ambassador” with questions to understand
- Slowly assess reactions
- Let go of your “cultural scoring”
- Make effort to engage
- Set up a situation that is culturally supportive
- Stretch your norm
- Be deliberate
**These are things that Reinforce Stereotypes**

<table>
<thead>
<tr>
<th>INDIVIDUALLY</th>
<th>ORGANIZATIONALLY</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Don’t accept evidence to the contrary</td>
<td>• Media reinforces stereotypes (pictures) —either by inclusion or omission</td>
</tr>
<tr>
<td>• Let it happen</td>
<td>• All size fits all</td>
</tr>
<tr>
<td>• Repeat it and embellish it</td>
<td>• Diversity committee example</td>
</tr>
<tr>
<td>• We base it on little experience</td>
<td>• Demographics</td>
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<td>• Cartoons</td>
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**Strategies: Ways to Diminish Stereotypes**

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<thead>
<tr>
<th>AS AN INDIVIDUAL</th>
<th>AS AN ORGANIZATION</th>
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<tbody>
<tr>
<td>• Speak up</td>
<td>• Go beyond awareness</td>
</tr>
<tr>
<td>• Consider positive side</td>
<td>• Evaluation, dialogue, reflection</td>
</tr>
<tr>
<td>• Find out more</td>
<td>• Evaluate right things</td>
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<td>• Include decision-makers</td>
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**Strategies: Effective practices and approaches to reach Hispanic audiences**

<table>
<thead>
<tr>
<th>Issues</th>
<th>Approaches</th>
<th>Practices that are effective</th>
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</thead>
<tbody>
<tr>
<td>• AIDS</td>
<td>• Street outreach (e.g., soccer games)</td>
<td>• Welcoming environment</td>
</tr>
<tr>
<td>• Stereotypes of Latino youth</td>
<td>• Latino media</td>
<td>• Know your audience</td>
</tr>
<tr>
<td>• Teen pregnancy</td>
<td>• Counseling to family</td>
<td>• Self-empowerment</td>
</tr>
<tr>
<td>• Gangs</td>
<td>• Mentoring</td>
<td>• Not being imposed</td>
</tr>
<tr>
<td>• Lifestyles</td>
<td>• Training program</td>
<td>• Need assessment</td>
</tr>
<tr>
<td>• Desire to increase graduation rates</td>
<td>• Bilingual program</td>
<td>• Take into account: acculturation level; preferences; language ability; norms; popular venues</td>
</tr>
<tr>
<td>• Losing cultural heritage</td>
<td>• Cable program</td>
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<td></td>
<td>• Leadership</td>
<td></td>
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<tr>
<td></td>
<td>• Dance and celebration</td>
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<tr>
<td></td>
<td>• Parenting classes</td>
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<tr>
<td></td>
<td>• Youth involvement in all aspects of program</td>
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<tr>
<td></td>
<td>• Appropriate topics</td>
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<tr>
<td></td>
<td>• Foster self-confidence</td>
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</table>
Thoughts and things that might be agenda items for follow-up workshop

- What are the strategies for being an ambassador? What does it look like; specifics; how do we implement this
- Contact information for local groups (Borderline out of UNLV)
- Go to other groups (spread out – each go to another group -- then share impressions)
- Hear from folks that have experienced our programs, been to our sites
- Representatives from different levels of Hispanic media
- Community service announcements
- Understand the different audiences that media outlets are marketing to
- Need a positive way to convey rules and regulations in Spanish
- How to present rules and regs that connect with the culture and resonate/inspire compliance (e.g., comic books, personal contacts, ambassador)

- Utilize Spanish-speaking media
- Work with Hispanic groups – e.g., Latin Chamber of Commerce
- Spanish-speaking staff members
- Needs assessment by inviting other groups to the table; hold focus groups
- Childrens’ health → possible overlapping issue – explore to see if a commonality
- Messages at events that are compatible and resonate – how are these messages created?
- Stereotypes – develop understanding around how Latino community are using Public Lands – new behavior models for both sides
- Strategies for overcoming stereotypes
- How can we better serve this audience? What are the community’s interests?
- Research – have connections made
- Forest Service has asked Latino community about Spring Mountains – how were these questions asked? What were the answers?
- SNWA has successful outreach program – includes teaching conversational Spanish to employees to impart culture
- Common ground – “family” might be a link
- Participate in outreach events – e.g., Cinco de Mayo; Winchester programs

### Attending:

<table>
<thead>
<tr>
<th>January 18</th>
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<tbody>
<tr>
<td>Callie Le’au Courtright</td>
<td>Outdoor Recreation Planner</td>
<td>US Fish and Wildlife Service</td>
</tr>
<tr>
<td>Carol Gamet</td>
<td>Interpretive Naturalist</td>
<td>Red Rock Canyon Interpretive Association</td>
</tr>
<tr>
<td>Athena Cole</td>
<td>Interpreter</td>
<td>Death Valley National Park</td>
</tr>
<tr>
<td>Margie Klein</td>
<td>Conservation Educator</td>
<td>Nevada Dept. of Wildlife</td>
</tr>
<tr>
<td>Gina Mele</td>
<td>Park Ranger</td>
<td>BLM</td>
</tr>
<tr>
<td>Daphne Sewing</td>
<td>Project Manager</td>
<td>UNLV Public Lands Institute</td>
</tr>
<tr>
<td>Stacy Irwin</td>
<td>Project Coordinator</td>
<td>Mojave Max</td>
</tr>
<tr>
<td>James Cribbs</td>
<td>Park Ranger/Volunteer</td>
<td>BLM</td>
</tr>
<tr>
<td>Name</td>
<td>Position</td>
<td>Organization</td>
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</tr>
<tr>
<td>Kitty Heckendorf</td>
<td>Coordinator</td>
<td>Clark County Museum</td>
</tr>
<tr>
<td>Christie Leavitt</td>
<td>Curator of Education</td>
<td>Clark County Museum/Wetlands Park</td>
</tr>
<tr>
<td>Ellen Anderson</td>
<td>EE Coordinator</td>
<td>Lake Mead National Recreation Area (NPS)</td>
</tr>
<tr>
<td>Sky McClain</td>
<td>Lead Field Interpreter</td>
<td>Lake Mead National Recreation Area</td>
</tr>
<tr>
<td>Allison Brody</td>
<td>Project Manager, CE&amp;I</td>
<td>UNLV Public Lands Institute</td>
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</table>

**January 19**

<table>
<thead>
<tr>
<th>Name</th>
<th>Position</th>
<th>Organization</th>
</tr>
</thead>
<tbody>
<tr>
<td>Laurrana Leigon</td>
<td>Partnership Coordinator</td>
<td>Nevada Cancer Institute</td>
</tr>
<tr>
<td>Dan Allison</td>
<td>Director</td>
<td>Nevada Natural Resource Education Council</td>
</tr>
<tr>
<td>Sandra Harris</td>
<td>Management Analyst</td>
<td>Las Vegas Wash/Southern Nevada Water Authority</td>
</tr>
<tr>
<td>Dan Wegner</td>
<td>Interpretive Special Project</td>
<td>Lake Mead National Recreation Area</td>
</tr>
<tr>
<td>Angelica Maralason</td>
<td>Public Information Coordinator</td>
<td>Southern Nevada Water Authority</td>
</tr>
<tr>
<td>Jenny Quade</td>
<td>Partnership Coordinator</td>
<td>Nevada Cancer Institute</td>
</tr>
<tr>
<td>Deborah Canestrelli</td>
<td>Education Coordinator</td>
<td>The Atlantis Aquarium</td>
</tr>
<tr>
<td>Irma Wynants</td>
<td>Cultural Specialist</td>
<td>Clark County Parks</td>
</tr>
<tr>
<td>Wilisha Daniels</td>
<td>District Coordinator</td>
<td>Conservation District of Southern Nevada</td>
</tr>
<tr>
<td>Daphne Sewing</td>
<td>Project Manager</td>
<td>UNLV Public Lands Institute</td>
</tr>
<tr>
<td>Bruce Lund</td>
<td>Botanist</td>
<td>Spring Mountains National Recreation Area</td>
</tr>
<tr>
<td>Kay Rohde</td>
<td>Chief of Interpretation</td>
<td>Lake Mead National Recreation Area (NPS)</td>
</tr>
<tr>
<td>Kathy August</td>
<td>Visitor Center Manager</td>
<td>Bureau of Land Management</td>
</tr>
<tr>
<td>Alan O'Neill</td>
<td>Executive Director</td>
<td>OLV</td>
</tr>
<tr>
<td>Elise McAllister</td>
<td>Administrator</td>
<td>Partners in Conservation</td>
</tr>
<tr>
<td>Allison Brody</td>
<td>Project Manager, CE&amp;I</td>
<td>UNLV Public Lands Institute</td>
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Education about the Environment
Cultural Inclusiveness Initiative agenda
for March 1 meeting
Education about the Environment – Cultural Inclusivity

March 1 2007
1:00 – 4:30 p.m.
Paradise Campus, Room 103A

Goal: The engagement of the Hispanic community to develop and deliver programs and services that will welcome and engage all visitors and residents in positive stewardship behaviors.

Outcomes:
1) Discussion about where we are
2) Agreement on where we want to go, individually and together
3) Agreement on planning goals (short term and long term)

<table>
<thead>
<tr>
<th>Topic</th>
<th>Process</th>
<th>Time</th>
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<tbody>
<tr>
<td><strong>Start-Up:</strong></td>
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<tr>
<td>o Introductions</td>
<td>Present agenda, clarify and discuss</td>
<td>1:00</td>
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<tr>
<td>o Desired outcomes</td>
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<td>o Agenda</td>
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<tr>
<td>What did you carry away from the January workshop?</td>
<td>Discussion – record answers</td>
<td>1:15-1:45</td>
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<tr>
<td>What would you like to see happen?</td>
<td>• List • Clarify • Group responses; list trends</td>
<td>1:45-2:30</td>
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<td></td>
<td>• For your organization/agency</td>
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<td></td>
<td>• In partnership with others</td>
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<tr>
<td>What do we still need? How / where will we get it?</td>
<td>List Clarify Rewrite as needed Agree</td>
<td>2:30-3:15</td>
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<tr>
<td>Propose planning goals (short term and long term. These could be the first step for developing an action plan, including roles and responsibilities for each objective)</td>
<td>Propose Clarify Agree</td>
<td>3:15-4:00</td>
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<tr>
<td><strong>Wrap-up</strong></td>
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<td>o Next meeting?</td>
<td>Propose Clarify Discuss</td>
<td>4:00-4:30</td>
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<td>o Action items?</td>
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Nevada Certification Program for Environmental Education and Interpretation meeting notes
Meeting 3 (Southern Nevada with attendance from W. Nevada via conference call)

**Background and overall objective:** The Nevada EE&I Certification Program Development Team will help produce a document, Guidelines for Nevada EE&I Certification. This document will reflect input from guidelines produced by NAAEE and other state certification programs, as well as input from several brainstorming sessions held in 2005 by a diverse group of Southern Nevada educators and other stakeholders. The Guidelines document will be produced by May 2007.

**Meeting Outcomes**

1. Agreement on indicators/performance objectives for competency guidelines that further articulate the knowledge and skills that must be mastered, as well as suggesting ways of assessing the abilities of participants
2. Feedback for marketing look
3. Agreement on a plan to develop supervised internship program (program elements to include administration, training plan for mentors/coaches, plan for placing interns, and defined standards and assessment for interns
4. Agreement on program administration – Housing the program, program costs, other


**Meeting Notes:**

There was a brief discussion about the need to clarify and define “competency” and other terms. It was agreed that:

- “Indicators” will be defined much as Nevada Dept. of Education defines “Benchmarks” – that is, those things that an educator should be able to know and do. Each indicator should include a description of what this looks like.
- “Assessment” = general statement (organize, collect data, come to a conclusion)
- “Competency” ➔ individual piece, demonstration of ability, the final outcome.
- “Performance indicators” ➔ what it looks like for a proficient student to reach the standard for each indicator
- “Educator” ➔ the participant in the certification course
- Environmental issue is defined as: resources negatively impacted by some action that could affect the environmental system
**Indicators**

The group agreed to accept the following revised theme statements (revised by both the Southern and Western Development Teams):

<table>
<thead>
<tr>
<th>NAAEE</th>
<th>Nevada</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>THEME 1 – ENVIRONMENTAL LITERACY</strong></td>
<td></td>
</tr>
<tr>
<td>1.1 Questioning, analysis and interpretation skills</td>
<td>1.1 How we learn</td>
</tr>
<tr>
<td>1.2 Knowledge of environmental processes and systems</td>
<td>1.2 Understanding of ecological systems, social systems, and their influences</td>
</tr>
<tr>
<td>1.3 Skills for understanding and addressing environmental issues</td>
<td>1.3 Understanding and addressing environmental issues</td>
</tr>
<tr>
<td>1.4 Personal and civic responsibility</td>
<td>1.4 Personal and civic responsibility</td>
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<tr>
<td><strong>THEME 2 – FOUNDATIONS OF EE&amp;I</strong></td>
<td></td>
</tr>
<tr>
<td>2.1 Fundamental characteristics and goals of environmental education</td>
<td>2.1 Compare/contrast different methods of education about the environment</td>
</tr>
<tr>
<td>2.2 How environmental education is implemented</td>
<td>2.2 Understanding of goals, theory and practice of EE&amp;I</td>
</tr>
<tr>
<td>2.3 The evolution of the field</td>
<td>2.3 Historical and current perspectives of EE&amp;I</td>
</tr>
<tr>
<td><strong>THEME 3 – RESPONSIBILITIES OF AN EE&amp;I PROFESSIONAL</strong></td>
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</tr>
<tr>
<td>3.1 Exemplary environmental education practice</td>
<td>3.1 Expectations of an EE&amp;I professional</td>
</tr>
<tr>
<td>3.2 Emphasis on education, not advocacy</td>
<td>3.2 Balance in education between factual accuracy and multiple points of view</td>
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<tr>
<td>3.3 Ongoing learning and professional development</td>
<td>3.3 Ongoing learning and professional development</td>
</tr>
<tr>
<td><strong>THEME 4 – PLANNING, IMPLEMENTING AND FOSTERING LEARNING</strong></td>
<td></td>
</tr>
<tr>
<td>4.1 Knowledge of audience</td>
<td>4.1 Knowledge of audience</td>
</tr>
<tr>
<td>4.2 Knowledge of instructional technologies</td>
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<tr>
<td>4.3 Planning for instruction</td>
<td>4.2 Planning and delivery of EE&amp;I programs and services</td>
</tr>
<tr>
<td>4.6 Settings for instruction</td>
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<td>4.7 Curriculum planning</td>
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<tr>
<td>4.4 Knowledge of environmental education materials and resources</td>
<td>4.3 Understanding of materials, resources and technology</td>
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<tr>
<td>4.5 Technologies that assist learning</td>
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<tr>
<td>5.1 A climate for learning about and exploring the environment</td>
<td>4.4 Create the learning environment</td>
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<tr>
<td>5.2 An inclusive and collaborative learning environment</td>
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<td>5.3 Flexible and responsive instruction</td>
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**THEME 5 – ASSESSMENT AND EVALUATION**

| 6.1 Learner outcomes | 5.1 Learner outcomes |
| 6.2 Assessment that is part of instruction | 5.2 Assessment that is part of instruction |
| 6.3 Improving instruction | 5.3 Improving instruction |
| 6.4 Evaluating programs | 5.4 Evaluating programs |

In general, the group agreed on these indicators for Theme #1: Environmental Literacy (it was agreed that Dan Allison and Allison Brody would ensure grammatical consistency when indicators were done for all theme statements):

**1.1 How We Learn**

1.1.1
- Appropriate use of questioning and analysis skills.
- Ability to make hypotheses; organize, interpret and synthesize information; extrapolate; and communicate explanations.
- Ability to design and carry out investigations and use appropriate tools to gather, analyze, and interpret data.
- Develop descriptions, explanations, predictions, and models using evidence.

1.1.2
- Connect new knowledge to previous ideas; support previous conceptions with new data; consolidate understand by using models – make sense of new information by connecting to things that we know.
- Communicate by connecting with something within the learner’s experience to capture interest and help them make an intellectual and emotional connection with the ____

**1.2 Understanding of ecological systems, social systems, and their influences**

1.2.1
Understand that environmental systems include the interrelationships on different scales of human societies and ecosystems.

**1.3 Understanding and addressing environmental issues**

1.3.1
Use questioning and analysis skills and content knowledge to address environmental issues. Ability to:
- identify and investigate environmental issues on different scales, and be able to relate to place
- identify and evaluate alternate solutions and courses of action;
- work with creativity, flexibility, and openness to other viewpoints
- environmental justice → “do no harm” environmental philosophy, laws and benefits are applied equitably across socio-economic boundaries

**1.4 Personal and Civic Responsibility**
Demonstrate an understanding of personal and civic responsibility, including:
• Ability to analyze shared and culturally conflicting values;
• recognition of what can be done – individually and in groups – that can make a difference;
• recognition that personal actions can have broad environmental consequences
• Understanding the role and influence of political institutions and the media

It was agreed that the group would review indicators for Themes 2, 3, 4, and 5 and provide recommendations. Allison will flush these out for the group to review at the next meeting.

**Marketing**

Allison presented a first draft of flyer elements for the group to comment on. The group liked the look of the flyer, with the following recommended adjustments: add green vegetation and some sort of representation of education; decrease water element (“pops” a little too much). The group discussed using “EE&I” as the basis for a logo.

For the flyer content, the group recommended something along the lines of: “whether you are brand new to the field or a seasoned professional, this program is for you!” And the phrase: Education about the Environment.

Marketing pieces might include rack cards (4” x 9”); PDF flyer, website. It was recommended that we utilize tactics used by the Master Gardener program. Outlets might include: word of mouth; NV Commission on Tourism; Rural Round-up in Primm; Community agencies (e.g., Boy Scouts); and diverse audiences. The question was asked if we can tap into the China connection via exchange programs.

The certification program should also include a job bank as a resource for participants. That is, a post-certification support system, with contact information for potential job openings, providing references, etc.

**The Draft Internship Plan**

The internship will consist of a supervised experience at an approved informal education site. The experience will be supervised by a designated mentor.

Some interns will already be in the profession; while others will be new to the profession.

**New to the profession:** The intent is for the intern to learn the program at the selected site and to gain experience. Therefore, it is expected that most internships will take place at one site. However, an intern can supplement this experience by participating in – or creating – an approved educational event at a different site. As well, under certain conditions, an intern might choose to split the experience between several sites.

**Already in profession:** 5 programs for the mentor to observe and assess, including at least 2 different types of programs/audiences.

For those that are new to the profession, a minimum of 48 hours will be spent in the internship.

The intern and mentor will together develop an internship plan. This plan will contain the following components:
1. Where the internship will take place. The intern may pick from a possible list of internship experiences and choose based on personal goals and professional objectives.

2. The intern will be evaluated on at least 5 programs.
   a. Some of the programs will already be developed. The intern will follow established protocols, meeting stated goals and objectives.
   b. The intern will demonstrate skills. The mentor and intern will agree on which skills will be evaluated; how these skills will be evaluated; and discuss a plan for improvement. The skills measured may vary by program.
   c. The intern will be expected to develop and conduct at least 1 new presentation. This will include creating a plan with theme, goals and objectives; learning background information; the presentation; and evaluating success.
   d. At the discretion of the mentor, more programs may be required.

Draft Mentor Training Program

Note: Need to better define who can be a mentor. That is, how do they demonstrate expertise?

The Mentor Training Program will probably consist of a workshop that will consist of the following three units.

Unit 1: Expectations

Outcomes
Mentor will agree to the standards outlined in the mentor manual.

Methods
1) PowerPoint presentation
2) Mentor manual

Objectives: Mentor will
1) Be able to relate the goals and objectives of the EE&I Certification Program
2) Agree to time commitments involved with being a mentor
3) Be able to relate the expected knowledge, skills and obligations of the mentor

Unit 2: Background

Outcomes
Mentor will know the skills that interns should possess and demonstrate.

Methods
1) PowerPoint presentation
2) Activities
3) Mentor manual

Objectives: Mentor will
1) Participate in several activities related to the Certification program themes and guidelines
2) Conduct readings and participate in activities related to the Certification Course: Reaching Our Diverse Audiences.
Unit 3: Coaching

Outcomes
Mentor will be skilled at coaching techniques. The mentor will have the knowledge and skills to provide feedback in ways that foster professional development, motivate the intern, and help produce a skilled, competent educator.

Methods
1) PowerPoint presentation
2) Activities
3) Mentor manual

Objectives: Mentor will
1) Demonstrate coaching skills and techniques by providing constructive feedback in several activities, including role play situations
2) Be able to relate the role of the mentor in developing the interns' presentation skills. Demonstrate the role of the mentor in several role-play situations
Partners for Education about the Environment meeting notes
Outcomes:
- Subcommittee Presentations – Diversity and Best Practices
- Presentation by Nevada Cancer Institute

Attending:

Meeting Notes:
1. Clark County Fair will be held April 12-15. Christina Gibson reported that there will be a designated area called “Explore Your Nevada” that members of Partners should consider either a booth or some form of educational presentation. For more information, contact Wilisha Daniels at wilisha.daniels@nv.nacdnet.net. It was also reported that mojavemax.com has been updated with a new archeology site: “Preserving the Past.”

2. Amanda Rowland and Wilisha Daniels presented results of a survey distributed to Partners members to assess individual perceptions of diversity in the workplace.

   It was agreed that the diversity subcommittee would present proposed goals and action steps for the group to consider during the March meeting. As well, the subcommittee would report on the Diversity workshops (January and March 1 follow-up).

3. Daphne Sewing said the Best Practices subcommittee has agreed to produce information summary sheets called: Review of Best Practices. Each review will address a specific topic:
   1. January: creating age appropriate programs
   2. March: experiential teaching and learning
   3. May: applying the theory of multiple intelligences to program development and delivery
   4. July and September: evaluating programs

   Daphne summarized the first Review summary: Age Appropriate Programs (see attached).

4. Lisa Roof, Jenny Quade, and Lazara Paz gave a presentation from the Nevada Cancer Institute about Chronic Disease and the Environment: Potential for Partnerships. The Nevada Cancer Institute has an Outreach and Education (O/E) Department. Among other initiatives, the group presented the idea of creating one-page flyers for various outdoor recreational opportunities that could be enjoyed by cancer patients and their families. The idea is to offer places
where connecting with nature can help reduce the burden of cancer. Existing O/E programs include: Sun Safety program; Lance Armstrong Foundation, Muticultural Health and Wellness Program, and many others. Potential partnerships envisioned include offering training sessions to recreation and outdoor leaders; offer samples of sunblock and sun safety educational materials. If you have ideas for partnership projects with O/E, contact the Outreach and Education, Partnership Program at 822-5191 or www.nevadacancerinstitute.org.