Mammoth Lakes Welcome Center

INTERPRETIVE PLAN

FINAL

MAY 1, 2008

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USDA FOREST SERVICE
INYO NATIONAL FOREST

MAMMOTH LAKES WELCOME CENTER
AND
MAMMOTH RANGER DISTRICT

INTERPRETIVE PLAN

This Interpretive Plan meets the intent and guiding policies of Forest Service Manual 2300 for the Mammoth Lakes Welcome Center.

Prepared and Recommended by: _____
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Date: _____

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INTRODUCTION

The Mammoth Lakes Welcome Center serves as a hub within a resort community. From this central location the visitor can choose among the region's diverse offerings: majestic barren mountains, wooded basins, or surreal, desert landscapes. The land is packed with the stories of those who came to extract resources and those who later came with a dream of creating a mountain ski resort. Through effective partnerships, the Mammoth Ranger District, Devils Postpile National Monument, US Geological Survey, CALTRANS, Town of Mammoth Lakes, and the Eastern Sierra Interpretive Association have worked together to create a visitor center located in the middle of this spectacular area. This visitor center serves to stir the imagination and fan the flame of curiosity in visitors, to encourage them to explore the many interpretive sites in the area and develop a deeper understanding and appreciation of these natural wonders as they learn about themselves and their role in caring for this important place.

The Mammoth Lakes Visitor Center in Mammoth Lakes, California has been in operation since 1969. It was recently rebuilt to improve its ability to provide information and interpretation to visitors to the Eastern Sierra Nevada and Mammoth Lakes recreation area. This plan provides the framework for the interpretation that will be created for the new facility and surrounding Ranger District.

The old visitor center was originally constructed in 1969. The building changed over the years, reducing the actual visitor center space and creating more office space for the Mammoth Ranger Station. The old facility was 1,474 square feet with information and book sales area (895 sf), and office space and storage (579 sf). The center had limited space for visitor information with limited information outside when the visitor center was closed.

The center serves as the primary information outlet for land-based outdoor recreation within the resort town of Mammoth Lakes and the Eastern Sierra region. The Mammoth Lakes Welcome Center (MLWC) serves the needs of both the potential and actual visitor to the region by providing all the information and services they need to adequately plan and participate in the region's diverse outdoor recreation opportunities. It also interprets the region's diverse cultural, geologic and biological components of the landscape and serves as a venue for providing the public with an overview of the region's primary land management agencies and their diverse roles in managing these wild lands.

The center is ideally located to serve visitors traveling into the town of Mammoth Lakes. It also serves as a destination for viewing an old cabin which served as a saloon in Old Mammoth, watching a video, or viewing artifacts and displays.

The facility is open 362 days a year and serves as a regional hub to distribute information on natural, geologic, scenic, cultural, and recreation resources to a world wide audience of visitors to the Mammoth Lakes resort town and the Eastern Sierra.

Annual operation and maintenance costs are funded by the USDA Forest Service and partners through Cooperative Agreements. The MLWC has worked with the Eastern Sierra Interpretive Association (ESIA) since 1972 to operate a book sales area at the facility. Through this partnership a portion of the proceeds is returned to the area to support operation of the center.

Geographic Area of Interest

The Mammoth Lakes Welcome Center provides outdoor recreation information to visitors to Mammoth Lakes and the Eastern Sierra Nevada. This region encompasses the Humboldt-Toiyabe National Forest, Inyo National Forest, Bodie State Park, Yosemite National Park, Devils Postpile National Monument, Manzanar National Historic Site, Sequoia National Forest, Sequoia and Kings Canyon National Parks, Death Valley National Park, Inyo and Mono Counties, and public lands administered by the Bureau of Land Management Bishop Field Office. Within this vast region there are 314,000 acres of watershed protection lands maintained by The City of Los Angeles Department (75% are open to the public for recreation activities), second largest wilderness complex in the contiguous United States (wilderness.net), National Wilderness Preservation System, Mount Whitney, the Mono Basin National Scenic Area, the Ancient Bristlecone Pine Forest, six national natural landmarks, the Pacific Crest National Scenic Trail, a National Scenic Byway, Inyo and Mono county parks and several premier winter recreation areas.

The region includes the communities of Topaz Lake, Coleville, Walker, Bridgeport, Lee Vining, June Lake, Mammoth Lakes, Crowley Lake, Benton, Bishop, Big Pine, Independence, Lone Pine, Death Valley, as well as numerous Native American communities. The tourism services provided by the Mammoth Lakes Welcome Center are an important economic asset to the region. By enhancing the services this facility provides, the cooperating agencies will make a direct and positive impact on the economy of the region.

The Need for Change

Throughout center's 39 years of operation, a variety of social, economic, political, and demographic changes have occurred within the region that have affected both the function and mission of this facility. When the center first opened, the prime focus was providing outdoor recreation information for visitors to the high country of the Sierra Nevada. Since then the center's information role has broadened and diversified. The area covered by the MLWC now provides information on one of the most visited National Parks in the lower 48 – Yosemite; as well as Devils Postpile National Monument, Death Valley National Park, and Manzanar National Monument. The region has become a destination for visitors from around the globe seeking the high summits of the Sierra and the wild open spaces of the Owens Valley. With these changes have come new challenges and demands for the facility.

In 1969 the Mammoth Lakes Visitor Center was designed to accommodate 69,000 visitors per year. Several offices are now located in a portion of what use to be the visitor center. This has further decreased the original size of the visitor center. By 2003, visitation had grown to more than 163,000 visitors and is projected to exceed

262,000 by the year 2010. In addition to the sharp increase in single vehicle visits, bus tours, nonexistent thirty five years ago, now form a rapidly growing segment of the site's total visitation. These increased demands exceeded the old Center's capacity.

The cooperating agencies are continually being challenged to provide the public with better access to information and a higher level of participation in the processes that ultimately affect the management of these wild lands. The MLWC is well positioned to serve as a clearinghouse for information that empowers the public to stay informed and involved in land management decision-making. The new MLWC helps to accommodate this important and growing demand.

Expansion in the Town of Mammoth Lakes is continuing to impact the visitation at the Welcome Center. With the building of North Village, additional condos and hotels, and possible expansion of the Mammoth-Yosemite Airport, come more visitors to the area.

Changes to the Visitor Center

The new Mammoth Lakes Welcome Center was constructed next door to the old Ranger Station facility – creating a campus look and feel. In addition to correcting the old facility's infrastructure problems, the center will be large enough to meet visitors' needs into the next decade. The new construction provides:

- An information desk
- Permit service center
- Self service trip planning area
- Interpretive exhibit areas inside
- Agency Identification area
- Book sales area
- Drinking Fountain
- Refurbished audio-visual interpretive auditorium
- Office space for a director and staff
- Storage for sales items and brochures
- Commercial tourism information

Addition of a new Interpretive Plaza during the summer of 2008 will provide:

- ADA access
- Picnic area
- New exhibits available 24 hours/day
- Informal seating area for interpretive talks
- New lighting
- Better access to the old cabin
- Bicycle racks
- Directional signage

Mission Statement

The following mission statement has been adopted for the Mammoth Lakes Welcome Center:

> The Mammoth Lakes Welcome Center will provide visitors of all ages, abilities, cultures and educational levels with easily obtainable and comprehensive information on the region's public land outdoor recreation opportunities.
>
> The Mammoth Lakes Welcome Center will assist visitors in developing an appreciation of the area's natural and cultural resources and an understanding of the agencies that manage these resources.
>
> The Mammoth Lakes Welcome Center will provide an information and education program aimed at enhancing the visitor's experience to the region while protecting the natural, cultural, and recreational resources of Mammoth Lakes and the surrounding Eastern Sierra.

Purpose and Need for the Interpretive Plan

The purpose of this planning process is to develop a guide for designing the MLWC exhibits.

The goals of this plan:

- Coordinate with other plans for building the new MLWC exhibits
- Communicate the plan for interpretation to those involved in interpretive services so that all agencies represented at the MLWC may communicate an integrated and complimentary message
- Identify the stories that will be told at the MLWC so the facility can best function as a hub to other interpretive facilities
- Ensure effective messages through well thought-out goals and sensitivity to the land and its ecosystem
- Provide education/interpretive programs that assist visitors in developing a keener awareness, appreciation, and understanding of what they are viewing or experiencing
- Develop messages that provide for visitor satisfaction, safety, and land stewardship
- Enlist the support and assistance of those who support the goals of the MLWC

Interpretive Planning Process

The interpretive planning process was dependent upon the extensive knowledge of Forest Service and Town of Mammoth Lakes Specialists. In order to fully utilize this knowledge, the Interpretive Planner (Pennie Custer) identified needs for information, organized information for the planning group and facilitated decision-making. A lot of information was utilized that had been collected prior to the start of this planning process. The group met three times and developed ideas for audience characteristics, key issues, goals and objectives, site significance, themes, exhibit design criteria, and strategies and reviewed and commented on drafts. Since there are so many great stories for this diverse area it was important to use the group's knowledge and

experience to narrow down the topics of significance. After creating a master list of things that are significant, the group participated in a nominal group process to determine the most significant topics of the area. This information was then used to provide direction for development of the primary theme and sub-themes. The planning group developed the audience categories with the help of additional information gathered from publications.

Core Team (minimum participants)

- Interpreter: Pennie Custer
- Landcape Architect: Lynn Oliver
- Recreation Planner: Adrianne Thatcher

Technical Advisory Group – this group needs to be familiar with the area and its resources. This group should get multi-agency input when appropriate.

- Interpreters: John Louth
- Geologist: Lynn Oliver
- Archaeologist/Tribal Relations: Linda Reynolds
- Fish and Wildlife Biologist: Richard Perloff
- Botanist: Kathleen Nelson
- Engineer: Ollin Beale
- Foresters: Scott Kusomoto

Key Participants

Key participants are people who need to know what is going on, to participate at certain times, review and buy into what is being produced, support and help accomplish the effort.

Internal:

- Jon Regelbrugge, District Ranger
- Adrianne Thatcher, Dispersed Recreation
- Mike Schlafmann, District Ranger
- John Louth, South Zone Interpretive Specialist
- Nancy Upham, Inyo NF, Public Affairs Officer
- K.C. Wylie, Interagency Visitor Center, Lone Pine
- Jon Kazmierski, Scenic Area Visitor Center, Lee Vining

External:

- Debbe Eilts, ESIA, Executive Director
- Dana Stroud, Town of Mammoth Lakes
- Shannon Freeman, Town of Mammoth Lakes
- Deanna Dulen, Devils Postpile National Monument Manager
- Lisa Isaacs, Mammoth Mountain Ski Area Environmental Coordinator
- Dave Hill, US Geological Survey

GOALS AND ISSUES

Interpretive Goals

(The interpretive goals identify what the communication of the welcome center is going to accomplish, especially from a management perspective. They answer the question "What does the agency want to accomplish through communication to visitors at the MLWC".)

The overall purpose of interpretation is:

- To assist the visitor in developing a keener awareness, appreciation, and understanding of what they are viewing or experiencing.
- To accomplish management goals; to encourage thoughtful use and to minimize human impact.
- To encourage an understanding of USDA Forest Service goals and objectives.

Interpretive goals focus on management and what the Mammoth Lakes area can do for the visitor. The primary purpose of this interpretive effort is to foster, through written media and personal services, conservation values. The effort will help develop appreciation and support for resource management. The following goals are established:

1. To provide orientation and information to the Town of Mammoth Lakes and the surrounding Eastern Sierra.

2. People will have greater satisfaction from their visit through better understanding of the cultural and natural resources and recreation opportunities. To provide a safe, convenient, and enjoyable stay in the Eastern Sierra.

3. To enhance the understanding of the role of human use in shaping the past and present local landscape and environment and provide a context for understanding contemporary landscapes and natural resource. People will understand that the story continues at the various sites around the area and know where to go to gain more information.

4. People will take responsibility for helping to care for the area as a functioning, natural system through developing appreciation and respect for it. Visitors will use thoughtful recreational tactics including minimum impact, Leave No Trace, and Tread Lightly. People will be encouraged to have a better awareness and appreciation of the Eastern Sierra and other natural and cultural resources that result in a stewardship ethic to sustain and protect the area.

5. Public will understand the mission of the Forest Service – public land is open for multiple use "Healthy Forests and Watersheds."

6. The visitor's experience will be enhanced through a coordinated consistent presentation throughout the entire Mammoth Lakes Welcome Center and Mammoth Ranger District.

Objectives for the overall exhibit area

Cognitive Objectives (visitors will):

1. Understand the variety of recreation and learning opportunities in the area.
2. Understand how the geology has affected the plant and animal communities and the human inhabitants of the area.
3. Gain a better understanding of geologic processes and how they shape our land and affect human, plant, and animal communities.
4. Recognize some geologic features as they travel through the area.
5. Understand the behavior of bears and how to safely recreate in this area while protecting the wildlife.
6. Understand that a large percentage of the surrounding land is managed by multiple government agencies who work together to provide recreation opportunities and other beneficial resource uses.
7. Understand that regulations provide for resource protection and personal safety and regulations differ in different areas, due to agencies managing the land differently.
8. Understand that there are tradeoffs involved in choices for land resources like water and wilderness.
9. Understand how they can participate in decision-making and stewardship activities on public lands. “We’re all in this together” – land managers and people recreating on the land.
10. Be continuously interested through innovative, interesting, changeable, fresh exhibits.
11. Understand educational messages about these lands, the importance and proper use of them.
12. Receive good, available information on what there is to see and do in the wilderness and front country.
13. Have the ability to easily learn about all that the community has to offer – lodging, restaurants.
14. Benefit from a potential partnership with the Devils Postpile National Monument and/or Sequoia and Kings National Park.
15. Perform thoughtful recreation.

Emotional objectives (visitors will):

1. Feel excitement for learning more about the area.
2. Feel confident that they can identify geologic features in the area because they are easy to see with the limited vegetation.
3. Appreciate the role of the public agencies in providing resources and recreation opportunities for us all.
4. Feel a sense of discovery about the natural world and their place in it.
5. Feel passionate about the importance of the land and want to care for it.
6. Feel confident that they can find their way and secure in their ability to travel to their destination.
7. Feel excited about the new facilities.

Behavioral objectives (visitors will):

1. Learn more about the area after leaving the Welcome Center by going to another interpretive site.
2. Continue to learn more about the area after they leave through a book or website.
3. Practice good stewardship during their visit and during other future trips.
4. Do small maintenance (i.e. pick up a piece of litter) as they visit.
5. Return to the area again and again to continue learning about its fascinating natural and cultural history.
6. Travel safely and efficiently with adequate preparation (both information and equipment/supplies) to their destination.
7. Follow the regulations for the area they are visiting.
8. Tell others to visit the Eastern Sierra.

Key Issues Relevant to Interpretation

1. Visitors have many different needs, from getting a permit to using the restroom to obtaining general and specific information about the diverse natural and cultural history and recreation opportunities.

2. The agencies want recognition of their organizations at varying levels. It is a challenge to provide this information in detail without confusing the visitor, losing their interest so that they do not engage in learning, and decreasing the popularity of the facility.

3. The area being interpreted is so large and complex and has so many compelling stories it is difficult to provide information and still maintain a focus.

4. There are many interpretive facilities in the area and no need or desire by the agencies to provide duplication of stories that are already told in detail at other places.

5. There has been an increase in visitation since the new facility was built. There will be an additional increase in popularity due to more space and services, and because the new facility is closer to Hwy 203 and more visible.

6. All partners want to ensure that education about safety and resource protection are included in interpretation of the landscape and orientation to the area's recreation and learning opportunities.

7. The partners would like to provide high quality services for bus tours, and accepts that more will visit with the improvement of facilities, but is not interested in extensive marketing to drastically increase these groups.

8. A very important function of wilderness and other permits is to create a "teachable moment" where basic information on personal safety and resource protection can be reinforced.

BACKGROUND INFORMATION

Audience Analysis

(Since we need to make information relevant to visitors in order to communicate a message to them, we need to understand who the visitor is that will visit the MLWC. Since each individual visitor is very complex, the Audience Analysis will never perfectly describe all of the people that will visit the MLWC. Instead it serves to provide a summary of what we know about the visitors as a group, provide ways to think about this large amount of information, and provide some implications for what it means for the design of information delivery systems. When we discuss the audience we must consider both current visitor and future visitors that will be attracted to the new facilities and services.)

Market Area

The MLWC receives visitors from 5 urban areas: Los Angeles (325 miles southwest), San Francisco (300 miles northwest summer via Tioga Pass Hwy 120, 360 miles in the winter via Carson City Hwy 50), Reno (164 miles north), Las Vegas (377 miles southeast) and San Diego (400 miles southwest). Inyo and Mono counties attract Southern California residents year round.

We assume that the potential visitors to the MLWC are represented by those who are traveling through Inyo and Mono counties. The Caltrans summer 2000 survey of motor vehicle visitors to Inyo and Mono Counties found that 34% of the vehicles came from Southern California, 22% came from Nevada, 31% from northern and central California, 7% from eastern California, 4% from other states, and 2% came from out of the country. A Caltrans winter 2000 survey found that 42% of the vehicles came from Southern California, 30% from Nevada, 14% from eastern California, 10% from northern and central California and 4% from other states.

The Caltrans study showed that 2% of the summer travelers came from out of the country and that Germany was the number one foreign country of origin.

Visitation Patterns

The summer survey identified that of those surveyed, 56% named Inyo or Mono County as their destination. Of these visitors, 34% identified Mammoth as their destination and 68% said they were spending the night in Mono County. Of the visitors interviewed, 60% said that recreation was their main purpose. (Caltrans, summer 2000, Origination and Destination Study, pg. 12.)

The winter survey found that 72% named Inyo or Mono County as their destination and of these, 78% was going to Mammoth. Of the visitors interviewed in this survey, 39% said that recreation was their main purpose. (Caltrans, winter 2000 Origination and Destination Study, page 2). Recreation was given as the main purpose of the trip by 55% of all respondents.

Mammoth Lakes was the number one destination for 41% of the visitors staying in Mono and Inyo Counties. The majority (69%) of overnight visitors stay in Mono County, and 72% of the visitors staying in Inyo and Mono Counties were going to stay 1-3 nights with the majority of visitors staying 1 night.

The average occupancy per vehicle was 2.18. Of the vehicles surveyed, 54% were autos and SUV's; 31% were pick-ups, vans, and autos with trailers, 11.5% of vehicles were commercial trucks and RV's made up 3.2% of the vehicle mix.

User Groups

Because the MLWC encompasses an area of diverse geography and recreational opportunities, it attracts a wide variety of visitors. Six user groups have been identified as the primary market segments of the MLWC. They were identified through review of Caltrans studies. Major visitor categories include group tours, permit seekers, destination-focused visitors, casual visitors, recreation activity enthusiasts and pass-through travelers. A closer look at each group reveals their needs and expectations.

Group Tours

The MLWC is a popular destination for group tours. Group tours stop at the MLWC to use the restrooms, take a break from the vehicle after being on the road from Southern California, purchase souvenirs, view a video, and to get a regional perspective. Popular circuits for buses are Los Angeles to San Francisco via Mammoth Lakes and Yosemite; Death Valley to Mammoth (overnight) to Yosemite. In the winter many buses travel from Southern California to Mammoth. Tour bus use of the welcome center has the potential to be high since 1% of the traffic that travels Hwy 395 is buses (Caltrans data). Tour bus traffic is heaviest from Memorial Day to Labor Day, with July and August averaging 6-12 buses per day (IAVC data). Few buses stop at the MLWC in the winter with only approximately 1 per month. Buses currently stop for an average of 15-20 minutes. Some groups will stop for only a short time and will not have time to see exhibits. Some buses have a destination within the Eastern Sierra and others are just passing through on the way to a destination outside the area.

Many tour bus participants are foreign tourists with little or no English skills. European passengers are now often younger, with American passengers often older. Many foreign tour bus passengers return to the area after going on a tour. Other group tours are comprised mainly of senior citizens who are often interested in heritage.

Educational groups are another category of group tours. They are different because they usually arrive in cars and vans rather than buses. These groups often gather outside for a lecture and to refine their trip plans based on current road conditions and weather information available at the Welcome Center.

Pass-Through Travelers

These groups use the MLWC as a rest stop on their way to and from locations outside the Eastern Sierra region. They use the restrooms, stretch, and take a break from driving. These visitors may find the interpretive information interesting, making their stop more enjoyable, and possibly enticing them to come back and visit the area.

Permit Seekers

The primary purpose of the permits required by the Forest Service is to establish a direct contact with the visitor and to create an opportunity to educate the visitor about safe and environmentally responsible use of the land.

The MLWC distributes a number of permits for area use. These include snow park permits, fire permits, fuelwood permits, Christmas tree permits and Interagency Passes. The MLWC distributes wilderness permits for the Sierra Nevada, including John Muir and Ansel Adams Wildernesses. Sierra Nevada wilderness permits will be the majority of permits issued. Visitors who are seeking a permit have already determined their activity. They often need further information about the specific location of the trip. Often they will have time constraints and will not want to spend extra time at the Welcome Center.

The actual indoor count for visitors at the MLWC is presently around 112,000 per year. At the old visitor center, only the leader of a group or the head of a family would often come inside for information because the space was so small that it did not allow all who stopped to get in the door. There is a potential for this number of visitors to double (224,000 visitors per year) because the new facility has the space for group members to feel that they can comfortably enter.

Destination-Focused Visitors

These visitors are drawn to specific destinations that the region has to offer. Major destinations for this group are Death Valley, Yosemite, the Sierra, Mount Whitney, Mono Basin National Scenic Area, Reds Meadow area and Mammoth Mountain. Death Valley is a popular destination in the spring and winter, attracting 65% of destination-focused visits during that time. Many spring and fall visitors are retirees who wish to avoid summer crowds.

Casual Visitors

Many visitors have no specific destination in mind when they visit the MLWC. Many in this group are shoulder-season retirees (spring and fall visitors) and national and international travelers. Most have a set amount of time to spend in the area but no set plans or schedule for destinations. They are very open to learning about the natural and cultural history of the area and other places to visit that suit their interests.

Recreation Activity Enthusiasts

With areas ranging from mountains to desert, the Eastern Sierra region has much to offer the recreation activity enthusiast. Vehicle sightseeing, climbing, skiing, biking, OHV use, and fishing are popular activities for both the national and international visitor. These visitors are interested in information about where they can participate in their activity.

Current Visitor Use of the Existing Facility

The following is an analysis of the current use of the MLWC. Once the new Interpretive Plaza and interpretive programs are expanded and improved, MLWC use is expected to increase.

Annual Visitation
Studies show MLWC visitation has grown steadily during the past decade. In 1991, the MLWC attracted 72,000 visitors; in 1995, 80,000 visitors were recorded, and in 2007, the numbers were 112,000. The busiest months are July and August, which make up about 50% of the total annual visitation.

The number of visitors is expected to continue to climb throughout the next twenty years. MLVC makes the following predictions:

In 2010, there will be 137,000 visitors.
In 2015, there will be 192,000 visitors.
In 2020, there will be 269,000 visitors.

These statistics show an average annual growth of approximately 7% per year.

Post 9/11 Visitation
"Apparently the terrorist attacks had little effect on travel plans, other than in the immediate post event period when fears were running highest, airport check-in lines were long and slow, and travel was restricted." "Almost 86% (surveyed) responded that they had not and did not intend to postpone or cancel trips." "For several activities, participation remained virtually the same." (H. Ken Cordell, Outdoor Recreation for 21st Century America, Copyright 2004)

Death Valley National Park visitation increased from 618,140 in 1980 to 1,227,583 in 1999, an average annual increase of 30,461 visitors per year (The Town of Mammoth Lakes, Mammoth Yosemite Airport Expansion Project, 10/2000, Draft Environmental Assessment, App.IV-5.). The past few season has seen a decrease is visitation to National Parks nationwide.

Death Valley is an increasingly popular destination for the tour bus industry. Tour buses have increased from 342 in 1983 to 2,185 in 1995, an increase of 64%. Historically, November, March and April have shown the highest number of tour bus visitors.

According to a July 1990 survey, 21% of all Death Valley National Park visitors are from California. A breakdown of foreign visitors shows that 72% were from France, Germany and Switzerland. In summer the percentage of European visitors is higher, approximately 70% (comment from Terry Baldino, NPS). These visitors arrive in San Francisco, travel to the Sierra, then through Death Valley and end up in Las Vegas. They are also travel from Las Vegas driving through Death Valley to get to the Sierra.

Bureau of Land Management (BLM), Bishop Area, states the estimated visitor use was 1,275,000 in 1999 and 1,490,000 in 2000, an increase of 215,000 visitors in one year (Bureau of Land Management, Recreation Management Information, phone communication). Visitor use is expected to continue to rise. The BLM mad the following predictions:

- Estimated visitor use in 2010 is 3,640,000
- Estimated visitor use in 2015 is 4,715,000
- Estimated visitor use in 2020 is 5,790,000

Yosemite National Park visitor use rose from 2,490,282 in 1980 to 3,493,607 in 1999, an increase of 1,003,325 visitors. The average annual increase was 50,166 visitors per year. However, visitor numbers are down from a high of 4,046,207 in 1996. The estimated visitor use is expected to decrease by 3.7% in 2001 (Town of Mammoth Lakes, Mammoth Yosemite Airport Expansion Project, 10/2000, Draft Environmental Assessment, App. IV-5). This decline may be the result of new park policies curtailing vehicles and an increase in visitor fees. Because of highly variable visitor rates and changes in park policy affecting visitors, a steady state model to predict future visitor use is guesswork.

Manzanar National Historic Site is located 11 miles north on U.S. 395. The site reports that between October 2000 and May 2001, it had 5,129 cars or 12,791 visitors. Preliminary visitor projections for 2010 are 230-290,000 visitors. Peak use is predicted to occur in the summer (Manzanar National Historic Site, 8/1996, General Management Plan and Environmental Impact Statement, page 44).

Mammoth Mountain Ski Resort total skier day use statistics vary greatly due to fluctuations in snow conditions. Generally, heavy snow years will attract more skiers to Mammoth than years with little snow. As an example, in the 1985-86 season, Mammoth logged 1,532,883 total skier visits. The next year, Mammoth logged only 839,873 total skier visits, almost half the total of the previous year. Roughly the same percentage drop occurred between the 1989-90 season and 1990-91 season. Overall, total skier visits increased an average of 4.3% between 1960 and 1999 (Town of Mammoth Lakes, Mammoth Yosemite Airport Expansion Project, 10/2000, Draft Environmental Assessment, App. 1V-5). 2001 to 2004 saw seen a steady increase in skiers (see chart below – figures from Alex Fabbro, Mammoth Mountain). Additionally, Mammoth Mountain has a lot of summer use in the bike park.

YEAR	Mammoth Mountain Ski Area	June Mountain Ski Area
1997	709,414	Unavailable
1998	819,754	60,099
1999	908,618	51,120
2000	895,293	33,766
2001	1,121,902	34,033
2002	1,154,441	59,751
2003	1,284,110	81,691
2004	1,310,107	89,536

Inyo National Forest recreational day use visitor numbers are variable. The available statistics are from 1990, and 1992 through 1997. Recreation Visitor Day (RVD) numbers in 1990 were 8,034,100 and fell to 7,470,000 in 1995. Inyo National Forest recorded a high of 8,880,000 RVD's in 1994 and then dropped by 1,880,000 to a low of 7,000,000 RVD's in 1996. In 1997, RVD's rose to 7,810,774 (Jan Cutts, 4/13/01 - Inyo National Forest Fires, late season openings, and ski area conditions can affect forest visitation numbers.) Forest future visitation is estimated between 7 and 9 million RVD's per year.

Presently, the MLWC has approximately 112,000 actual visitors per year. We should see more visitors as we expand exhibits and begin showing movies again.

Inyo and Mono County Residents
Inyo County population continues to slowly raise, from 17,895 in 1980 to 18,484 in 1998, an increase in population of 589 people in 18 years. Inyo County's estimated population for the year 2010 is 19,447; in 2020 it is estimated to be 20,694.

There are more males (51%) than females (49%) in Inyo County. The proportion of residents over 65 years and older is nearly double that of California as a whole.

Mono County population increased from 10,034 in 1990 to an estimated 10,891 in 2000, an increase of 857 people. Mono County's estimated population for the year 2010 is 12,561. It is expected to reach 14,166 by 2020. Both Inyo and Mono County predicted average annual change are less than 2% per year.

Mammoth Lakes Residents
Mammoth Lakes is seeing an increase in full time residents, from 4,785 during the 1990 census to 7,093 during the 2000 census. There has been a push to offer low income housing to local residents which will continue to increase the number of service workers living in the area.

City of Los Angeles Department of Water and Power
75% of the 312,000 acres of land held by the Department of Water and Power are open to the public for dispersed recreation. DWP estimates that they receive over 1 million visitors per year for both dispersed recreation and at lands leased to other agencies for camping, golfing, and other attractions.

Implications for Interpretation and Building Design

Implications According to the User Groups and Major Components of the Mission:

User Groups	Recreation Opportunities Information	Appreciate Natural and Cultural Resources	Geologic Information
Group Tours	Since these groups are on a set itinerary, their interest in recreation opportunities will be limited to planning for return visits.	Group Tours will likely be interested in an overview of the regional stories to help them understand how their visits to other areas fit together into a larger story.	Groups that have an educational focus or are composed of foreign visitors will likely be interested in the geology of the Long Valley Caldera.
Pass-Through Travelers	This group will be interested in recreation opportunities for planning future trips to the area.	This group has potential to become interested in the story of the natural and cultural resources if it is relevant to them in some way.	This group may find geology displays interesting and may return to spend time investigating the area.
Permit Seekers	This group has most likely planned which activity they will participate in and may or may not know the specific location of their trip. They will be interested in information about their activity and the areas they can do it in.	This group is focused on their activity however, there is a chance to engage them into the story of the area through natural and cultural history to make their trip a learning experience	This group will have to pass by displays and may return when they have more time.
Destination-Focused Visitors	This group will know where they are going but may be interested in additional destinations.	This group will be interested in the natural and cultural history from the context of how their destination and interests fit into the overall story of the region.	This group will be interested in the geology of the Long Valley Caldera and may tour sites that are interpreted.
Casual Visitors	This group will be interested in all of the things to do in the area in order to determine which activities they will participate in.	Since this group has not selected their destination or activities, they are most likely very open to learning about the area.	This group has the potential to be interested in geology if they find it relevant to them.
Recreation Activity Enthusiasts	This group will want specific information about their activity as far as where they can do it and any regulations they must follow.	This group will be most interested in natural and cultural history in the area that they plan to participate in their activity and may want to increase the learning component of their trip.	This group may be interested geology if it relates to their destination or activity.

Overall Implications

We must plan for both current visitors and our perceived future visitors that will be attracted to the new facilities and services.

Visitor destinations are diverse, including all of the areas of the region. The Inyo National Forest will be the main recreation destination in the eastern Sierra Nevada. Yosemite National Park and the Bureau of Land Management will continue to attract more visitors. DWP lands will also see increasing use in the future. Mammoth Lakes will be the main destination for winter travelers along U.S. 395. This highway will increase in traffic at approximately 1% per year.

The visitation at the Welcome Center will increase by a number of groups including group tours, permit seekers, pass through travelers, and local residents. Overall, people familiar with Mammoth Lakes will know there is something new and different and will stop to see what it is. Over time, repeat stops will increase because the quality of the facility will become known.

Tour groups will increase because the new facility will allow tour busses to stop and have their customers obtain good information, use clean restrooms, and enjoy quality interpretation and videos. This will increase the visitation in the winter as well as the summer.

Increased highway traffic and improved facilities should make it possible to attract more pass-through and casual visitors. There will be some increase because the visual design of the facility will draw people off the highway onto this attractive campus.

European visitors have increased over time and will most likely continue to do so. They will be interested in geology and the history of the early settlers.

The cultural diversity of visitors is likely to increase over time, reflecting state and national trends. These visitors will not be familiar with public lands policies, natural ecosystems, and safety needs and may be more interested in programmed experiences.

Currently 80% of the visitors use the restrooms. These facilities are important to visitors and to the effectiveness of the communication process.

Resources

(This section provides a summary of the stories of the Eastern Sierra. It is essentially a snapshot of what the area is about. This does not reflect any decisions that have been made about significance of stories, but instead serves to provide a representative picture of what is here.)

Recreation Opportunities and Destinations

The diversity of the area has created many opportunities for recreation activities (see list in appendix). The area provides for recreation opportunities throughout all of the seasons – spring, summer, fall, and winter. 97% of the land is available for public use. Because this diverse landscape has so many interesting stories of cultural and natural history, there are a multitude of visitor centers and museums (see complete list in appendix). The diversity of the area and extremes in the environments creates the need for a wide range of resource protection messages. Also, information about safety, road conditions, and weather is needed for the diverse landscapes. There are many special events. Permits are needed to visit many of the areas.

Physical Environment

The first geologists in the region were hit-and-miss prospectors. Now high-tech geologists study the area to put together the fascinating puzzle of geologic processes. Without deep soils and thick vegetation, the geology of the region is easy to see. It has changed much throughout time. At different periods in geologic history it has looked like the Canadian Rockies, the Badlands, the Sahara Desert, and Mount St. Helens.

This remarkable land is part of the Sierra Nevada Mountain Range, located between the Owens Valley and the San Joaquin Valley. The Great Basin, directly east of the Sierra, contains a quarter million square miles without a single river draining to the sea. Three distinct regions – the Great Basin, Mojave Desert, and the Sierra Nevada Mountains converge just south of here. Many interesting features in the Eastern Sierra Nevada include fault zones, fault scarps, sand dunes, glaciers, alluvial fans, old lakes, hot springs, cinder cones, calderas, and geothermal features.

Scientists believe that once a flat plane, the Sierra Nevada was formed 225 million years ago when two tectonic plates collided, uplifting huge blocks of earth. From about 225 to 65 million years ago, repeated plate movement caused molten rock to rise to the surface and solidify, eventually forming vast granite cores under the mountains. Active fault zones in the east side of the Sierra thrust the mountain up and tilted it to the west, creating a steep eastern escarpment and gentle western slope. At the same time, active fault zones at the base of the White-Inyo range also pushed upward, forcing the land between the ranges to drop down, creating the Owens Valley. The valley currently has 10,000 feet of vertical relief on the east and west, earning it the nickname “the deepest valley”. Over the years, sediment from mountain erosion has collected on the valley floor, raising it up. Underneath this sediment, the original bedrock can be found, three miles down.

The Sierra Nevada is still an active region. The range continues to rise at the rate of 2 inches every 10 years, and small earthquakes have been frequently recorded. In 1872 a powerful earthquake struck, leveling the town of Lone Pine. Displacement along the earthquake fault reached 17 feet.

In 1980, three 6.0 or larger earthquakes hit the Long Valley Caldera. These earthquakes gave residents of Mammoth Lakes a wake up call regarding the area they call home.

More than 50 extinct or dormant volcanoes can be found along the fault zones. The fault zones allow magma to move close to the earth's surface, creating craters, cinder cones, lava domes, lava flows and hot springs.

Weathering and erosion contribute to the mountains' unique features. Water, ice and wind are continually shaping the face of the Eastern Sierra. Because the area receives little rain, vegetation is sparse, making the effects of erosion more dramatic. When rain does fall, it comes in the form of short intense storms, efficiently eroding the mountains and creating alluvial fans at the base. Alluvial materials (silt and rocks) are eventually carried down to the valley floors. When strong winds blow, these particles are scattered across the desert floor. Barriers like ridges or vegetation cause the particles to accumulate until they form large sand dunes. The valley sediments made good farmland in the few areas where water was (is) available to irrigate them.

Differences in the amounts of weathering and erosion account for the differences between the Inyo-White Mountain Ranges and the Sierra Nevada Mountains. Glaciers shaped the Sierra. They have not played a major role in shaping the arid White-Inyo Range, making it more rounded and less sculpted than the Sierra.

One of the greatest factors in the creation of the Sierra landscape was the formation of glaciers. During the Pleistocene ice age, snowfields grew larger and deeper, eventually forming huge glaciers. As the glaciers melted, they became great rivers of ice that carved lake basins and U-shaped valleys as they flowed downhill. As the glacial rivers flowed, they picked up huge boulders and other debris, which eventually formed into glacial moraines. The area between Bridgeport and Bishop offer some of the finest viewing of glacial moraines in North America.

At the close of the ice age, water from the mountain glaciers ran through several basins from Mono Bain to the Owens Valley to Death Valley, creating a series of lakes such as Owens Lake, China Lake, Searles Lake and Panamint Lake. The largest, Lake Manley, was 600 feet deep and 100 miles long. As the climate grew warmer, the water eventually evaporated and the lush landscape became semi-desert. These dry lakes with no outlets would have filled with sediments long ago if they had not been sinking faster than the sediments could accumulate.

Biological Environment

The ecosystems of the Sierra Nevada, the Great Basin and the Mojave Desert converge in the Eastern Sierra region, creating habitats with a tremendous diversity of species of plants and animals. The area contains 12 (needs clarification) life zones, from alpine ecosystem to desert basin. In transition zones, plant and animal life from several zones intermingle, creating a rich variety of natural communities in a single area. Features like sand dunes, glacial peaks and mountain lakes are within close proximity, due to steep and varied topography. Another factor affecting the area is a "rain shadow". As moist air moves from east to west across the area, the moisture condenses and creates precipitation as it rises to cross the mountains, leaving dry air on the other side. In the shadow of these mountains, this dry air produces little rain. The rain shadow is responsible for differences in plant communities at similar elevations of the mountain ranges in the region.

The Eastern Sierra region contains a wide variety of mammals, birds, fish, and reptiles. There are more than 80 species of mammals from varying habitats, including bears, mountain lions, deer, tule elk, beaver and bighorn sheep. The area is also home for, or is visited by, at least 300 species of birds; of these, 70 species are year-around residents. Hawks, owls, shrikes, jays, grouse and magpies are among the bird species usually present. The rivers and lakes contain 14 species of fish, including trout, carp and catfish. Nearly 40 species of reptile and amphibian have been identified. There are also many threatened and endangered species in the area including the Lahontan and Paiute cutthroat trout (relictual populations in isolated springs), the Owens tui chub and Owens pupfish, the bald eagle, and the Sierra Nevada Bighorn Sheep.

Few regions in the United States encompass a range of flora comparable to the Eastern Sierra. Sharp changes in elevation allow for up to 12 life zones to coexist. Scrub brush covers the basins and lower elevations, woods and forests are found in middle elevations, and alpine fell-fields are found above treeline. The plants have a variety of adaptations with the changing environment, and a number of rare plants have been identified within the region. In some areas, noxious weeds (non-native species) choke out native vegetation. Xeroscape gardening and backyard wildlife habitat gardens in local communities benefit the environment.

Cultural Resources

Native American History

Paiute people inhabited the Eastern Sierra for approximately 1,000 to 1,500 years, and there is evidence that other groups lived here previously. Owens Valley Paiute occupied the area from Owens Lake to Round Valley, and the Mono Lake Paiute's inhabited areas north of Owens Valley. Living off a variety of food sources, as varied as the land itself, these migratory people moved with the seasons to take advantage of available food. Owens Valley Paiute lived on 40 different plant foods, and the Northern Paiute are said to have harvested 150 different plants, seeds and nuts. They utilized the abundant water supply through some of the earliest and most sophisticated irrigation systems, as they practiced an early form of agriculture by irrigating wild plants.

In the 1860s, Europeans settled in the area, affecting the Paiute way of life. Thousands of sheep and cattle were brought in to the Eastern Sierra, negatively impacting the Paiute's food supply. Cattle grazing quickly destroyed native grasses, whose seeds were a major food source. Miners clear cut tracts of pinyon pine to use as fuel, depleting the Native American's winter food source of pine nuts. Hunting by settlers reduced the amount of wild game available to the native people. Eventually, the Paiute began stealing cattle to survive, escalating tension between native Indians and settlers and touching off a long series of battles. As more and more settlement occurred, the native Indian lifestyle was forever changed.

Settlement History

In the 1830s and '40s, small groups of trappers and explorers were the only white men to travel through the region. But in the 1860's, miners and ranchers began to pour into the Eastern Sierra in search of minerals and land. The region's economy grew rapidly and many mining camps sprang up, bolstered by the discovery of two of California's richest mineral lodes. Cerro Gordo, a hill located above Owens Lake, was the richest silver mine in California history. Rich gold deposits were uncovered in the Bodie Hills, soon creating a mining camp with a population of 6,000.

The Mammoth Lakes area experienced a major gold rush from 1878 to 1881 and new mining ventures were launched in the years following, but, disappointed at not finding their dreamed-of fortunes, most of these miners soon abandoned their claims and moved on to new adventures.

Mining created the stimulus for ranching, farming, logging and road construction, which lasted through the 1890s. Produce and livestock were raised in Bridgeport Valley, Mono Basin, and Owens Valley, primarily for sale to hungry miners. Sawmills were established to provide lumber and firewood to miners and ranchers, and roads were built throughout the region. In 1883 a narrow gauge railroad line hooked the Eastern Sierra to the national railway system for transport of supplies into and out of the area. Overall farmers, ranchers, and miners settled the area and made further use of the abundant water supply. Land transferred from federal ownership for mining claims and homestead settlement.

In the 1920's, leaders of the city of Los Angeles realized that they would need water in order for the city to grow and looked north to the abundant water supply in the Eastern Sierra. The city purchased 312,000 acres of settled land to obtain the water rights and allowed the irrigated farmland to revert to dry grazing land. The President withdrew federal public lands from further settlement or disposal to protect the watershed. The city built an aqueduct that would carry water 233 miles to the growing city. Local citizens, who had mistakenly believed that they sold their land for use for an irrigation project, fueled the controversy about the use of water from the Eastern Sierra. The aqueduct, which was completed in 1913, is considered one of the most impressive engineering feats of its time.

In the 1920s and 1930s, local community leaders began to look to tourism to turn the depressed economy around. *Inyo Register* publisher W.A. Chalfant and California's traveling priest Father Crowley spearheaded a movement to increase tourism in the region, and the Inyo Good Roads Club campaigned for the creation of better roads to the Eastern Sierra. Their efforts resulted in the creation of El Camino Sierra, now part of U.S. 395.

Current Cultural Environment

Ironically, the diversion of the areas valuable water to Los Angeles resulted in little development, which has become one of the regions' greatest assets. The purchase of private land prevented its further development and returned farmland to grazing land and the withdrawal of public land prevented additional homesteading and other transfers of public land into private ownership. Without diversion of water to LA, the Owens Valley would be settled with urban areas and large-scale agriculture similar to the Central Valley. However, tension regarding water and its use, like so many land use issues, continues.

Today, numerous walking trails and vehicle routes are available for exploring the region. The John Muir Trail and the Pacific Crest Trail traverse the area, and there are many small trails to specific scenic areas and landmarks. By car, tourists can view the region traveling down the Eastern Sierra Scenic Byway, mountain passes and U.S. 395. Continued road improvements, new recreation facilities and the rising popularity of outdoor sports has made the Eastern Sierra the playground of surrounding urban areas, providing opportunities for hiking, fishing, skiing, biking and hang gliding, and is a popular destination for today's national and international tourists.

Today the city of LA owns 312,000 acres of land in the Eastern Sierra. 80% of DWP land is leased for grazing and alfalfa production and the City's long-standing land use policy requires that 75% of these leased lands remain open to the public for recreational use. DWP land is leased to other government agencies for campgrounds, golf courses, museums, airports, and scientific projects.

Since the days of settlement, the land management agencies have been working to maintain a balance between using the resources of the land and making the recreation experience more interesting and maintaining the land's visual and biological components. Some of the most significant projects are on DWP lands.

The Mono Basin water diversions began to affect Mono Lake, which became increasingly saline. Water diversions from the Mono Basin have been significantly reduced, and Mono Lake is now on its way to returning to its 1976 level providing ecological restoration to the basin.

Other ecosystem protection and restoration projects include the BLM working to limit the affect of bouldering on raptor nesting at Chalk Bluffs. The Forest Service has decreased timber harvesting. Caltrans has developed better ways to construct and maintain highways. The counties recognize that open space is its most valuable commodity. All of the agencies work to maintain and enhance threatened and endangered species and work to reduce noxious weeds.

THEMES AND STRATEGIES

Interpretive Themes

(The interpretive themes are very important as they define the messages that will be presented at the MLWC. These themes should not be confused with storyline, in that they do not represent the flow of information. Instead they identify what we want to communicate to visitors. The themes are like an engine for a vehicle. They are extremely important as far as making the vehicle go, but not something the visitor necessarily sees.)

These are all ideas that were offered by the team: Wildlife, Geology (Glaciers, Hot Creek, Volcanism), Mining History, Geography, Wilderness, Glaciations, John Muir and Ansel Adams - due to wilderness areas, Native Americans, History, Human History, Children's Books, Scenic places, Recreation Opportunities (Mt. Biking, Hiking, Fishing, All winter recreation uses), Archaeology, the seasons. Following are the accepted themes.

Primary Theme

The Local Landscape: The local landscape of the Eastern Sierra Nevada is very diverse and has created many recreation opportunities.

--Extremes in the landscape have created a high diversity of outdoor recreation opportunities.
--The diverse landscape has shaped the characteristics and locations of the communities, which support the recreation opportunities and provide places to visit.
--The extremes in the landscape can create dangerous situations for visitors.
--The diverse landscape creates magnificent scenery for sightseeing and photography.
--Recreation opportunities are available during all of the seasons.
--The availability of this land for recreation use depends upon its care and management.
--Visitors can volunteer to help with the care of the landscape.
--We can all participate in the making decisions about how the landscape is used and cared for.

Sub-Themes

1. **Geology:** Highly visible geologic features provide the clues to a dramatic story of the geologic processes that have forged, molded and carved this dynamic landscape.

--The geologic features are diverse including Horseshoe Lake CO2 area, Earthquake Fault, Hot Creek Geologic Site, Inyo Craters, volcanic features (cinder cones, lava domes, lava flows, volcanic ash, columnar basalt, obsidian, pumice), and weathering and erosion features.
--The features are easy to see due to the arid climate, which causes limited soil and vegetation, and the limited human development.

--Geologic processes that gorged, molded, and carved the landscape include volcanoes, uplifting, erosion by wind, water, and chemical weathering, tension and slipping by blocks along faults, and glacial carving.
--The landscape is dynamic since it has changed so much and continues to change.
--Miners chose a rugged lifestyle of exploration and remoteness.
--The discovery of mineral deposits brought many people to the valley,

2. **Thoughtful Recreation:** Visitors should be educated in ways to perform thoughtful recreation.

--Help ensure that future generations may also experience a pristine wilderness by teaching the "Minimum Impact – Leave No Trace" techniques.
--The two wildernesses adjacent to the Mammoth Lakes Area are named after two famous environmental pioneers, Ansel Adams and John Muir.

3. **Natural Environment:** The diverse landscape includes many types of habitats that support a wide variety of plants and animals.

--The characteristics of the landscape affecting diversity include elevation, climate, water, and substrate material.
--The diversity of plants and animals is created by the coming together of 3 major regions – Sierra Nevada, Great Basin, and Mohave Desert.
--Diverse landscapes create many extremes in a relatively small area.
--We need to help take care of these diverse wildlife and plant communities.

Storyline Concepts

(The storyline packages the information in the way that the visitor will experience it. Now we are getting to the shape and style of the vehicle. This section lists some storyline alternatives that package the information in different ways. They all communicate the messages identified in the themes. Of course there can be many storylines to communicate the themes. The storylines are divided in two categories – Orientation with a focus on recreation opportunities and Interpretive Exhibits with a focus on introducing the natural and cultural history of the regions.)

Storyline for Recreation Opportunities Information

Information to present

- Geographic orientation (maps)
- Activities – information about recreation opportunities
- Resource protection information
- Visitor safety information
- Seasons
- Recreation Opportunities
- Learning Opportunities (botany, geology, Native American History, Settlement History, wildlife, mining)

- Places - land based locations (i.e. Crowley Lake, Mount Whitney), Access routes (roads, trails), facilities and attractions (i.e. museums, interpretive trails),
- Services - recreation services (rentals, guides, pack stations), hospitality services (restaurants, hotels)
- Volunteer Opportunities

The two major categories of information about recreation opportunities are setting (desert, alpine, valley) and activities.

Settings

- Sierra Nevada
- Owens Valley
- Mono County
- San Joaquin Valley
- Wilderness

Information presented specific to each setting

- The wonder and benefits of the setting
- Behaviors that can benefit resource protection in that setting
- Regulations
- Safety information
- Current weather information
- Short-term information about closures and regulations (changeable)
- Volunteer Opportunities (changeable)
- Current Events (changeable)
- Agencies responsible for the land in that setting
- Map of the setting
- Learning opportunities specific to that setting (no matter which activity a visitor will participate in, they will be able to learn about the area.)
- Changes with the seasons

Activities

- backpacking
- alpine hiking
- desert hiking
- skiing
- snowshoeing
- snowmobiling
- kite boarding
- mountain biking
- climbing and bouldering
- aerial gliding (hang gliding, gliders)
- floating (rafting, canoeing, boating)
- driving for scenery

- hot springs
- OHV
- fishing
- learning (landscape, history, scientific research, geology)

Alternatives for presentation of information about activities

1. Opportunities for an activity are divided by setting. The information is attached to the setting showing the opportunities that are available in that specific setting.

   Benefit - People will engage in the safety and resource protection messages while they are determining where to do their activities.
   Drawback - There is less chance of visitors learning about doing their activities in other settings.

2. Divided by activities, showing all opportunities for the entire region.

   Benefits – Greater chance that people will learn about opportunities in other settings for future trips thus spreading out use from popular areas.
   Drawbacks – There is less connection to the setting specific information, and the related safety and resource protection information.

Media Proposals and Strategies

(This section provides concepts for the different spaces of the welcome center that will provide interpretation. It is not intended to cover all of the options for media but instead documents the suggested ideas for media. The specific media concepts will be developed during the exhibit design process.) Capture people with great visuals, w/ scenics – text should be minimal.

Overall the MLWC will provide orientation (information about recreation opportunities, safety, and resource protection) and interpretation (natural and cultural history interpretation that will assist visitors with understanding and motivation for safety and resource protection). In all areas visitors will learn about further learning opportunities: leave no trace, tread lightly, safety and transportation access.

The Welcome Center was designed in a way that decreases the temptation to create a cluttered atmosphere. In an effort to provide the best service, the temptation is there to keep adding more information. If this can be resisted, then the communication will be more effective through visitors feeling a sense of harmony and credibility for the partners if they are perceived as good managers.

Orientation Information

(Including the Information Desk, Permit Desk, map area, information boards, and Trip Planning Area) This area needs to provide visitors with an efficient way to find and understand information about the area and topic of their interest. Visitors will be able to learn about recreation opportunities, regulations, safety and resource protection messages (Wilderness Ethics), weather and seasons, road and trail access (and closures), special events, and spatial orientation. Visitors will see that there are a lot of things to see and do, no matter what time of year, and see a focus on what is closed. The information will be conveyed through mounted exhibit panels, maps (smaller areas of the region or a large map unit of the entire area) and publications on counters. Some of the information will need to change with varying degrees of frequency. The Permit Desk will be for issuing permits and have limited orientation information. Additionally the information desk will need to have a lot of space for handouts of flyers and brochures but limited displayed information. Videos may be shown in several areas.

A regional map will portray the entire region in one continuous area or in sections. The design will be useful to tour guides or group leaders as a prop for telling stories about the area.

Temporary Exhibits

Temporary Exhibits will interpret various types of land stewardship projects and issues in the area including: specific projects, new or highlighted places to visit, land use planning issues, and volunteer opportunities. Moveable display boards will display photos and text. Design standards for the exhibits will ensure that they are of high quality as they are changed over time. Exhibits can be seasonal, short term, and long term.

Bookstore

The retail area will provide an extension of the exhibits to provide natural and cultural history and orientation information for more in-depth and off-site learning. It will be considered as another kind of exhibit. The atmosphere of the store will complement the Welcome Center. It will be inviting, attractive, and entertaining.

Auditorium

This facility will be used to show an audio-visual presentation that introduces the visitor to Mammoth Lakes and the surrounding area. This story will portray the primary theme and serve as an introduction to the interpretation at the Welcome Center. Videos/DVD's from other surrounding areas may be shown when other visitor centers are closed, i.e. Bristlecone Pine Forest or Mono Basin videos.

Children's Area

An area designed for children will be located within the welcome center, possibly as part of the store. This will be for small groups of children, with highly interactive components. It can be portable. It should involve things to function as a catalyst for children's imagination about topics that relate to the landscape. It can provide a

sculptural element. It could be a small version of a mountain or other feature of the landscape.

Outdoor Areas
The outdoor exhibits will include geology panels, a changeable display window, the historic cabin, thoughtful recreation and natural environment exhibits and a native plant garden.

The Native Plant, Geology and Wildlife Habitat Garden will include native plants with labels (including their common, Latin, and Native American names) and stone specimens. The stones and plants can be arranged to portray the different types of life zones in the region. This may include bird and bat boxes. An interpretive trail may be included. This area can demonstrate zeroscape gardening and backyard wildlife habitat gardens that visitors can create at their home.

Exhibit Design Criteria

(These criteria are the guidelines for the design of the exhibits.)

These guidelines should be used to define standards and maintain consistency in development of interpretive media. Guidelines should be adhered to throughout media development phases.

Adherence to high quality design standards is critical to the success of interpretive media. Visitors are more inclined to read information and abide by forest regulations if presented clearly, aesthetically and professionally.

1. All exterior sign exhibits should be fabricated of similar materials using porcelain enamel. Porcelain enamel is very weather resistant, easy to clean, chip and scratches can be repaired, can be any number of colors or even use full color photos, look new for a long time, and letters can be built up high enough to be felt by those with poor vision.

2. All interpretive media should blend harmoniously with the interior and exterior environment, using design elements consistent with Recreation Opportunity Spectrum (ROS), local resources, and limit impacts to cultural and natural resources.

3. Interpretive media must strictly adhere to federal accessibility standards. Written material should be available in large print and audio format whenever possible.

4. Graphics for all media should be consistent, i.e., produced by the same artist and graphic designer, and follow a design theme including a logo.

5. Use of images and 3-D objects that cross language barriers as much as possible. Use multiple languages when possible, i.e. English, German, French and Spanish.

6. All interior and exterior exhibits should be designed to be easy to use and maintain, and should be vandal resistant.

7. Use simple technology for the exhibits. Wire the building for future complex technology. Avoid high tech because of initial expense, frequent breakdown rates, and high maintenance cost and skill required. Design to be durable for use by millions of people. All exhibits should be able to be maintained and repaired by local businesses or employees.

8. Predominately playful. This place is fun.

9. Convey ideas through a blend of artistic and literal means.

10. Orientation and temporary exhibits are easy to update and change. Need to be able to provide seasonal changes for information. Anything that is changeable needs to be easily stored. Careful design needs to reduce the risk of the spaces becoming cluttered.

11. Flexible.

12. Some experiential, interactive, touchable, exploration based. Provide for auditory, tactile, and visual opportunities.

13. Energy efficient.

APPENDICES

Interpretive Sites of the Region

Interpretive/Significant sites in close proximity to the Welcome Center

(These places are within close proximity to the Welcome center and provide an opportunity for visitors to immediately participate in on-site interpretation while the messages from the welcome center are still fresh.)

Larger Museums/Interpretive Facilities in the Region

Bodie Historic State Park
Mono Basin Visitor Center – Lee Vining
Interagency Visitor Center – Lone Pine
Manzanar National Monument

Museums/Interpretive Facilities with a Cultural History Focus

Bodie State Historic Park, Bridgeport, CA
Cultural Resource Center (C.A.A.R.P.), Big Pine, CA
Eastern California Museum, Independence, CA
Laws Railroad Museum and Historic Site, Bishop, CA
Mammoth Museum, Mammoth Lakes, CA
Mammoth Ski Museum, Mammoth Lakes, CA
Manzanar National Historic Site, Independence, CA
Mono County Museum, Bridgeport, CA
Mono Lake Committee Information Center, Lee Vining, CA
Old School House – Mono Basin Historical Museum, Lee Vining, CA
Paiute/Shoshone Indian Cultural Center, Bishop, CA

Museums/Interpretive Facilities with a Natural History Focus

Death Valley National Park Visitor Center
Devils Postpile National Monument
Interagency Visitor Center, Lone Pine, CA
Mono Basin National Forest Scenic Area Visitor Center, Lee Vining, CA
Schulman Grove Visitor Center, Ancient Bristlecone Pine Forest

Comprehensive List of Interpretive Facilities in the Region

Alabama Hills Movie Trail
Ancient Bristlecone Pine Forest, Schulman Grove Visitor Center
Antelope Valley State Poppy Reserve
Bodie State Historic Park
Calico Ghost Town
Cultural Resource Center (C.A.A.R.P.)
China Lake Weapon Center Museum
Death Valley National Park, Scotty's Castle
Death Valley National Park Visitor Center
Desert Interagency Visitor Center,
Desert Tortoise Preserve (Wayside Exhibits)
Devils Postpile National Monument
Eastern California Museum
Eastern Sierra Scenic Byway
Highway 190 National Scenic Byway
Jawbone Station Regional OHV Facility
Kern River Preserve Visitor Center
Laws Railroad Museum and Historical Site
Lee Vining Canyon Scenic Byway
Lone Pine Film Museum
Mammoth Museum
Mammoth Mountain Resort Nature Center
Mammoth Ski Museum
Manzanar National Historic Site (interpretive center to be completed April 2003)
Maturango Museum
Mohave National Preserve (Planning Visitor Center)
Mono Basin National Forest Scenic Area Visitor Center
Mono County Museum
Mono Lake Committee Information Center
Mt Whitney Fish Hatchery
Old School House - Mono Basin Historical Museum
Paiute/Shoshone Indian Museum and Cultural Center
Randsburg Mining District
Red Rock Canyon State Park Visitor Center
Route 66 Millenium Trail
Trona Historical Museum
Tufa State Reserve Interpretive Trail
US Borax Museum
Volcanic Motor Tour

Special Events

4th of July Celebrations
Art a la Carte
Arts and Craft Festivals
Bird Chautaqua (Mono Lake)
Bluesapalooza & Festival of Beers
Jazz Festival
Lone Pine Film Festival
Millpond Music Festival
Mule Days
Opening day of Fishing Season

Description of Selected Eastern Sierra Interpretive Facilities

(The information listed below is from the publication – Eastern Sierra Museums and Visitor Centers published by the Alliance of Museums and Interpretive Groups of the Eastern Sierra.)

Mono County Museum, Bridgeport, CA
Located in the former Bridgeport Elementary Schoolhouse, built in 1880. Showcase displays of early Mono County featuring open exhibits and an especially fine collection of Paiute baskets. A mining and farming equipment display is featured outdoors. (Open summers only.)

Bodie State Historic Park, Bridgeport, CA
Bodie is known as "The last of the old-time mining camps." Gold was discovered here in 1859, triggering the Eastern Sierra's greatest mining stampede. At its peak, Bodie claimed 10,000 residents, and dozens of saloons and gambling halls. Over 100 buildings remain in Bodie, the largest unrestored ghost town in the American West. Ramble through the streets of Bodie and visit its fascinating museum, where you can browse through a fine collection of related literature.

Mono Basin National Forest Scenic Area Visitor Center, Lee Vining, CA
The Scenic Area Visitor Center features interpretive activities and exhibits on Mono Lake, an inland sea thought by scientists to be at least 700,000 years old. Visitors can view fanciful tufa towers, young volcanoes, huge flocks of migrating birds, and the lake's deep blue waters. Two galleries are showcased, including the "At Mono Lake" photo exhibit and a changing art exhibit. The theater presents regular showings of the film "Of Ice and Fire." The bookstore features natural and cultural history publications about the region.

Old School House – Mono Basin Historical Museum, Lee Vining, CA
The Mono Basin Historical Museum is located in Lee Vining's old school house, built in 1925. The museum displays commonplace and delightfully odd artifacts, photographs and equipment chronicling the cultural history of Mono Basin. Outside exhibits feature farming and mining equipment. (Open summer only.)

Mono Lake Committee Information Center, Lee Vining, CA
The Mono Lake Committee works to protect Mono Lake from the effects of water diversions. The center includes educational displays, free Mono Lake slide shows and interpretive tours about the protection of Mono Lake from the effects of water diversions.

Mammoth Museum, Mammoth Lakes, CA
This authentic log cabin was handcrafted by Mammoth pioneer Emmet Hayden in 1927. Exhibits feature old mining equipment, memorabilia and photos of early-day Mammoth Camp. Situated on the edge of the scenic meadow along Mammoth Creek, this picturesque site includes picnic tables and a view of the dramatic Sherwin peaks. (Open summer only.)

Mammoth Ski Museum, Mammoth Lakes, CA
The Mammoth Ski Museum is home to the Beekly International Collection of skiing art and literature. This is one of the largest single collections of ski art, literature and heritage in the world.

Devils Postpile National Monument
Devils Postpile is an outstanding example of columnar-jointed basalt, a volcanic formation well developed in only a few sites in North America. An easy 15-minute walk along the San Joaquin River takes you to the foot of the Postpile's 60-ft. tall columns. Spectacular Rainbow Falls, 101 feet high, is located two miles downstream. Offerings at the Ranger Station include: interpretive displays on volcanic geology; trees, and wildflowers; books slides, maps and postcards for sale; evening campfire programs, guided walks to the Postpile; and wilderness permits.

Laws Railroad Museum And Historical Site, Bishop, CA
The legacy of the last narrow-gauge railroad west of the Rockies is preserved at this site, containing the original 1883 Laws Depot, Laws Post Office, and Agent's House, as well as the locomotive, string of cars and exhibits of railroad memorabilia. Tour the train and museum buildings, which house fascinating collections from Owens Valley pioneer days. Reception center has gifts, books and souvenirs, with a special emphasis on railroads.

Paiute/Shoshone Indian Cultural Center, Bishop, CA
Explore the Eastern Sierra's rich Native American heritage: excellent exhibits including a winter scene of a Paiute camp, traditional willow and reed shelters, sweat house, and basketry collections, beadwork, clothing and household items. The gift shop features books and Native American arts and crafts.

Schulman Grove Visitor Center, Ancient Bristlecone Pine Forest
The oldest known continuously growing organism in the world is a 4,700-year-old bristlecone pine named Methuselah in the Schulman Grove of the Ancient Bristlecone Pine Forest. Sculpted over centuries by wind, blowing ice and sand, bristlecones develop unique and exquisite shapes of golden-hued wood. The Visitor Center offers interpretive talks, self-guided trails, displays, books and map sales.

Cultural Resource Center (C.A.A.R.P.), Big Pine, CA
The Cultural Resource Center is dedicated to the Eastern Sierra's archaeological heritage, offering artifacts displays, information center and gift store. Guided tours available to prehistoric petroglyphs, ancient living sites and unique geologic areas feature narratives of the history and culture of the Owens Valley Paiute and the settlement of the Owens Valley.

Eastern California Museum, Independence, CA

The museum offers information on natural and cultural history, with exhibits on Owens Valley pioneer days, the Carson & Colorado Railroad, 19th-century mining operations, and the Los Angeles Aqueduct construction. The museum's collection of Paiute and Shoshone artifacts, including baskets, beadwork and garments, is one of the finest in the West. Rare photographs, diagrams, and mementos are part of an exhibit on Manzanar Relocation Camp. Also displayed on museum grounds are antique wagons, tractors, mining implements, a Paiute Indian dwelling, and a reconstructed pioneer town.

Manzanar National Historic Site, Independence, Ca

Thousands of people of Japanese ancestry were interned here during World War ll. Although few traces of the camp are visible, visitors who wish to explore the site can still find walls, foundations, and the remains of some of the internees' rock gardens. A stone guardhouse with a pagoda-style roof marks the entrance to Manzanar; 2 miles away is the cemetery, marked by a white obelisk monument. Manzanar was added to the National Park System in 1992.

The Significant Topics Identified by the Planning Group

(The topics that were thought to be the most significant by the group are: Geology, Water and its history, Extremes, Biological diversity, 97% of the land is public land.)

1. 97% of the land in the Eastern Sierra is public land - This creates a lot of dialogue about how to manage the land and its resources; the valley has little human development and impacts; Los Angeles needed water so DWP bought the land and helped to ensure BLM land not become private.

2. Extremes - Highest and lowest elevation; oldest, longest stretch of uninterrupted (without roads) mountain range; largest Jeffrey Pine stand; threatened and endangered species; southernmost glacier; Bristlecone Pines are oldest trees; Mono Lake is the 2nd oldest lake. Death Valley is hottest and driest.

3. Active, visible geology - volcanic activity, craters, CO2 tree kill areas, fault zones, glaciers, earthquakes, plate tectonics, seismographs, alluvial fans, old lakes, hot springs, geothermal.

4. Birthplace of the environmental movement - John Muir, Gifford Pinchot, Ansel Adams

5. Many recreational opportunities. Playground/escape for surrounding urban areas of Los Angeles, Las Vegas, and San Francisco.

6. Biological diversity – spatial and elevation due to convergence of different bioregions (Great Basin, Northern Mojave, Sierra Nevada) and underlying geology.

7. Complex history of tradeoffs over the land, water, and resources.

8. Quest for knowledge, learning, research and explorations, research stations

9. Water and its history - Diversion of water, history of settlement in Los Angeles, construction of aqueduct, Cerro Gordo, Teddy Roosevelt – greatest need, export impacts and concerns, pre-DWP diversions, restoration efforts – Lower Owens River Gorge Project, glaciers to deserts.

10. Vegetation - 12-14 life zones, native plant garden representing life zones, rare plants, variety of adaptations with environment, noxious weeds, zeroscape gardening, wildlife habitat gardens.

11. History of Valley - Colorful characters, John Muir, Fremont, early settlers, Native Americans, federal lands for LA water, human story, miners, current demographics, Manzanar, water wars, Indian wars.

12. Responsible use of Public Lands - Tread Lightly, Leave no trace, Wilderness

13. Rain shadow - Mountain weather and summer extremes, Sierra affect on Death Valley, seasonally, temperatures.

14. Ecosystems convergence - Great Basin, Sierra Nevada, Mojave Desert, "edge" effect, transition zones, alpine ecosystem to desert basin ecosystem, 12 life zones.

15. Wildlife - Bear, bighorn sheep, golden trout, mountain lion, deer, bats, threatened and endangered.

16. Agency missions

17. Safety - Travel, road conditions and closures, weather conditions, bears, recreation activities.

18. Place names - Peaks, Paiute, pioneer names

19. Motor touring - Eastern Sierra Scenic Byway, Scenic Highways and byways, passes over mountains, history of 395, Father Crowley.

20. Native American history – Location of reservations, early irrigation, archaeological preservation, daily habits, gathering

21. Trails - John Muir Trail, Pacific Crest Trail, trails history, National Recreation Trails – Whitney and others, trails with special designations.

22. Specially designated areas - Hot creek, Mono Basin Scenic Area, California desert conservation area, BLM Fish Slough, Bighorn Zoological areas, Conway summit, wilderness areas, Devils Postpile, Manzanar, Bodie, State Tufa, Bristlecone Pine Forest, San Joaquin,

23. On the Edge – Threatened and Endangered Species, geographic provinces

24. Many uses of the land by people, plants and animals and the challenge of deciding how the land will be used.

25. The lands management in the Eastern Sierra reflects the values of society

Recreation Activities in the Eastern Sierra

Aircraft, Non-motorized
Attending Talks & Programs
Boat Launching
Boat, Powered
Bus Touring
Camping, General Day
Camping, Trailer
Camping, Tent
Camping, Vehicle
Canoeing
Diving
Fishing, Cold Water
Fishing, Ice
Games & Play
Gathering Forest Products
General Information
Hiking & Walking
Horseback Riding
Hunting, Big Game
Ice & Snow craft Travel
Ice Skating
Individual Sports
Motorcycles & Scooters
Mountain Bike
Mountain Climbing
Nature Study, Hobby and Education
OHV's
Picnicking
Recreation Cabin Use
Resorts, General
Resort Lodging
Skiing, Cross Country
Skiing, Downhill
Sledding, Tubing
Snow Play
Swimming & Water play
Tour Boat
Touring, Bike
Touring, Guided
Team Sports
Viewing Activities (Spectator)
Viewing Interpretive Exhibits
Viewing Interpretive Signs
Viewing Scenery
Viewing Wildlife
Viewing Wildflowers
Viewing Works of Humankind
Walking, Guided
Walking, Unguided
Water skiing, etc

Current Book Sales at the MLVC

The MLVC currently offers books and other items for sale to visitors. The sales are an indicator of the visitor's interests. ESIA identifies merchandise and records sales in 24 categories. The following information is based on sales prior to September 2004.

Product Category	% of Sales
Stationary:	43.0
Accessories:	12.1
Maps:	10.3
Children:	7.7
Canister Rentals	5.4
Clothing	3.2

Posters/Calendars:	3.0
Human history:	2.4
Outdoor Activity:	2.3
Wildlife:	1.9
Plant life:	1.7
Geology:	1.5
Travel:	1.4
Photographic	0.7
Postage	0.7
Audio/visual:	0.6
Miscellaneous & Sundries	0.6
Smokey:	0.5
Astronomy/Earth	0.2
Environmental Ed.	0.2
Guides	0.2
Natural History:	0.2
Snow Park Permits	0.1
Conservation	0.0

Life Zones and Native Plants of the Region

(These plants could be part of the native plants garden at the Welcome Center.)

SUGGESTIONS FOR LANDSCAPING ON THE INYO NATIONAL FOREST

Fire safety and use of native plant species wherever possible are two major concerns when designing landscaping for permit holders on Forest Service lands. California State Law requires a fuelbreak for a minimum distance of 30 feet adjacent to buildings or structures. To comply with this regulation, it is suggested that at least within 10 feet of buildings, plants should be well watered low-growing ground cover or native grasses mowed to no more than 5 inches in height. Trees and shrubs may be used outside of 10 foot as long as they are placed to avoid fuel ladders and kept trimmed of all dead material. Tree branches lower than about 8 feet high must be trimmed. Shrubs should be separated from trees by at least 10 feet and from each other by at least 3 feet for each foot of height. (For example, a 2 foot high shrub should be at least 6 feet from any other shrub.) Although any plant will burn if conditions are very dry and hot, some plants are more fire resistant than other. Some characteristics of these fire resistant plants are tissues containing more moisture (succulent leaves), tissues with low amounts of volatile oils like pine resin, and plants low to the ground that produce less litter.

In addition to fire safety, the type of plants used for landscaping are of concern because of the potential for non-native species to “escape” the boundaries of resorts or vacation homes and spread into the surrounding wild lands. The issue is two-fold: 1) weedy species spreading onto adjacent lands and displacing native vegetation, and 2) species used in various wildflower mixes, such as “meadow in a can”, that may be closely related to our local native species, having the potential to hybridize with them, contaminating local gene pools. Because of these concerns, it is recommended that local native species be used for landscaping whenever possible, and non-native species used should be unrelated to local plants. A Rocky Mountain species of penstemon or columbine, for example, would be less desirable than petunias to use even though they are “wildflowers”.

The first list provided here contains native plant species, with those indicated by asterisks usually available at the California Native Plant Society sale held annually in September. Unfortunately, supplies are limited and quickly sold out at this event. Some of the local nurseries indicated they would be willing to try to grow more native species if there were a demand. Secondly, there is a list of plants that may be found in nurseries that are invasive and should not be used in landscaping.

Any questions regarding fire safe landscaping should be directed to the local Fire Prevention Officer. Questions regarding acceptable plant substitutions should be directed to botany personnel on the Forest.

List 1. Native species appropriate for landscaping on the Inyo National Forest. * indicates those usually available at the California Native Plant Society, Bristlecone Chapter, fall plant sale.

Common Name	Scientific Name	Notes
Asclepiadaceae (Milkweed Family)		
*Showy milkweed	*Asclepias speciosum*	Butterfly attractor
*Narrow-leaf milkweed	*Asclepias fascicularis*	Butterfly attractor
Apiaceae (Carrot Family)		
*Ranger's buttons	*Sphenosciadium capitellatum*	Round white flowers
Asteraceae (Sunflower Family)		
*Yarrow	*Achillea millefolium*	White flowered perennial
*Pussy toes	*Antennaria rosea*	Groundcover
*Bush sunflower	*Encelia actonii*	
*Gold buttons	*Erigeron aphanactis*	Cushion plant
White layia	*Layia glandulosa*	
California aster	*Xylorhiza tortifolia*	Violet flowered subshrub
Boraginaceae (Forget-Me-Not Family)		
*Golden forget-me-not	*Cryptantha confertiflora*	
Brassicaceae (Mustard Family)		
*Wall flower	*Erysimum capitatum*	Yellow flowers
*Desert allysum	*Lepidium fremontii*	White-flowered subshrub
*Prince's plume	*Stanleya pinnata*	Yellow flowers
Convolvulaceae (Morning Glory Family)		
*Bush morning glory	*Calystegia longipes*	
Ericaceae (Heath Family)		
Manzanita	*Arctostaphylos patula*	
Fabaceae (Pea Family)		
Scarlet milkvetch	*Astragalus coccineus*	
*Bush lupine	*Lupinus argenteus* var. *heteranthus*	
*Inyo bush lupine	*Lupinus excubitus*	
Grossulariaceae (Gooseberry Family)		
Wax currant	*Ribes cereum*	
Lamiaceae (Mint Family)		
*Mountain pennyroyal	*Monardella odoratissima*	Very fragrant herb
*Purple sage	*Salvia dorrii*	Very fragrant shrub
Linaceae (Flax Family)		
Blue flax	*Linum lewisii*	
Malvaceae (Mallow Family)		
*Apricot globe mallow	*Sphaeralcea ambigua*	Apricot flowered subshrub
Oleaceae (Olive Family)		
*Desert olive	*Forestiera pubescens*	
Onagraceae (Evening Primrose Family)		
*Fireweed	*Epilobium angustifolium*	
*Evening primrose	*Oenothera californica* ssp. *avita*	
*White evening primrose	*Oenothera caespitosa* ssp. *marginata*	
Papaveraceae (Poppy Family)		
Prickly poppy	*Argemone munita*	
Poaceae (Grass Family)		
*Needle grass	*Achnatherum speciosum*	Bunch grass
*Great basin wild rye	*Leymus cinereus*	Tall bunch grass
*Rock melic	*Melica stricta*	
Indian rice grass	*Achnatherum hymenoides*	Bunch grass
Wheeler bluegrass	*Poa wheeleri*	Rhizomatous grass

Polygonaceae (Buckwheat Family)		
*California buckwheat	*Eriogonum fasciculatum* var. *polifolium*	
*Naked stemmed buckwheat	*Eriogonum nudum* var. *nudum*	
*Sulphur buckwheat	*Eriogonum umbellatum* var. *chlorothamnus*	
*Sulphur buckwheat	*Eriogonum umbellatum* var. *nevadense*	
*Wright's buckwheat	*Eriogonum wrightii* var. *subscaposum*	
Ranunculaceae (Buttercup Family)		
*Red columbine	*Aquilegia formosa*	
*Virgin's bower	*Clematis ligusticifolia*	Vine
Rhamnaceae (Buckthorn Family)		
Snowbush, others	*Ceanothus velutinus, C.gregii, C.cordulatus*	White or blue flowers
*Coffeeberry	*Rhamnus californica*	Large shrub
Rosaceae (Rose Family)		
*Mountain mahogany	*Cercocarpus ledifolius*	Flammable
*Fern bush	*Chamaebatiaria millefolium*	White-flowered shrub
Shrubby cinquefoil	*Potentilla fruticosa*	
*Desert peach	*Prunus andersonii*	Pink-flowered shrub
*Bitterbrush	*Purshia tridentata*	Flammable
Wild rose	*Rosa woodsii*	
Salicaceae (Willow Family)		
Aspen	*Populus tremuloides*	
Cottonwood	*Populus balsamifera*	
Willow	*Salix exigua, S. lasiolepis, S.lutea, other natives*	
Scrophulariaceae (Figwort Family)		
Indian paintbrush	*Castilleja angustifolia, C. miniata, other natives*	Hummingbird flower
*Scarlet monkeyflower	*Mimulus cardinalis*	
*Yellow monkeyflower	*Mimulus guttatus*	
*Lewis' monkeyflower	*Mimulus lewisii*	
*Firecracker penstemon	*Penstemon eatonii*	Hummingbird flower
*Austin's penstemon	*Penstemon floridus* var. *austinii*	Hummingbird flower
*Rose penstemon	*Penstemon floridus* var. *floridus*	Hummingbird flower
*Desert mountain penstemon	*Penstemon fruticiformis*	Hummingbird flower
	Penstemon davidsonii	Hummingbird flower
	Penstemon heterodoxus	Hummingbird flower
	Penstemon newberryi	Hummingbird flower
*Scarlet penstemon	*Penstemon rostriflorus/bridgesii*	Hummingbird flower

For questions about the Bristlecone Chapter of the CNPS Native Plant Sale, you may contact Karen Ferrell-Ingram, (760) 387-2913, ingram@telis.org.

List 2. DO NOT USE THESE PLANTS.

Common Name	Scientific Name	Notes
Periwinkle	*Vinca major*	Invasive ground cover
Cornflower, bachelor buttons	*Centaurea* spp.	Invasive
Mock strawberry	*Duchesnea indica*	Invasive
Dalmatian toad flax	*Linaria dalmatica*	Noxious weed
Saltcedar	*Tamarix ramosissima*	Noxious weed
Scotch broom	*Cytisus scoparius*	Noxious weed
French broom	*Genista monspessulana*	Noxious weed
Spanish broom	*Spartium junceum*	Noxious weed
Ox-eye daisy	*Leucanthemum vulgare*	Invasive
Pampas grass	*Cortaderia* spp.	Noxious weed
Stork's bill geranium	*Erodium spp.*	Invasive
Mullein	*Verbascum spp.*	Noxious weed
St. Johnswort	*Hypericum spp.*	Invasive

Additional acceptable species for landscaping on National Forest lands

Common Name	Scientific Name
Trees/Shrubs	
Quaking aspen	Populus tremuloides
Mountain alder	Alnus incana ssp. tenuifolia
Serviceberry	Amelanchier alnifolia; A. utahensis
American dogwood	Cornus sericea
Blue elderberry	Sambucus mexicana
Forbs	
Mountain spirea	Spiraea densiflora
Wandering daisy	Erigeron peregrinus
Western anemone	Anemone occidentalis
Alpine columbine	Aquilegia pubescens
Aster	Aster ascendens
Giant larkspur	Delphinium glaucum
Larkspur	Delphinium gracilentum
Sierra shooting star	Dodecatheon jeffreyi
Meadow lupine	Lupinus polyphyllus
Mountain pride	Penstemon newberryi
Showy penstemon	Penstemon speciosus
Mountain meadow-rue	Thalictrum fendleri
Mountain violet	Viola purpurea
Grasses	
Squirreltail	Elymus elymoides
Indian ricegrass	Achnatherum hymenoides