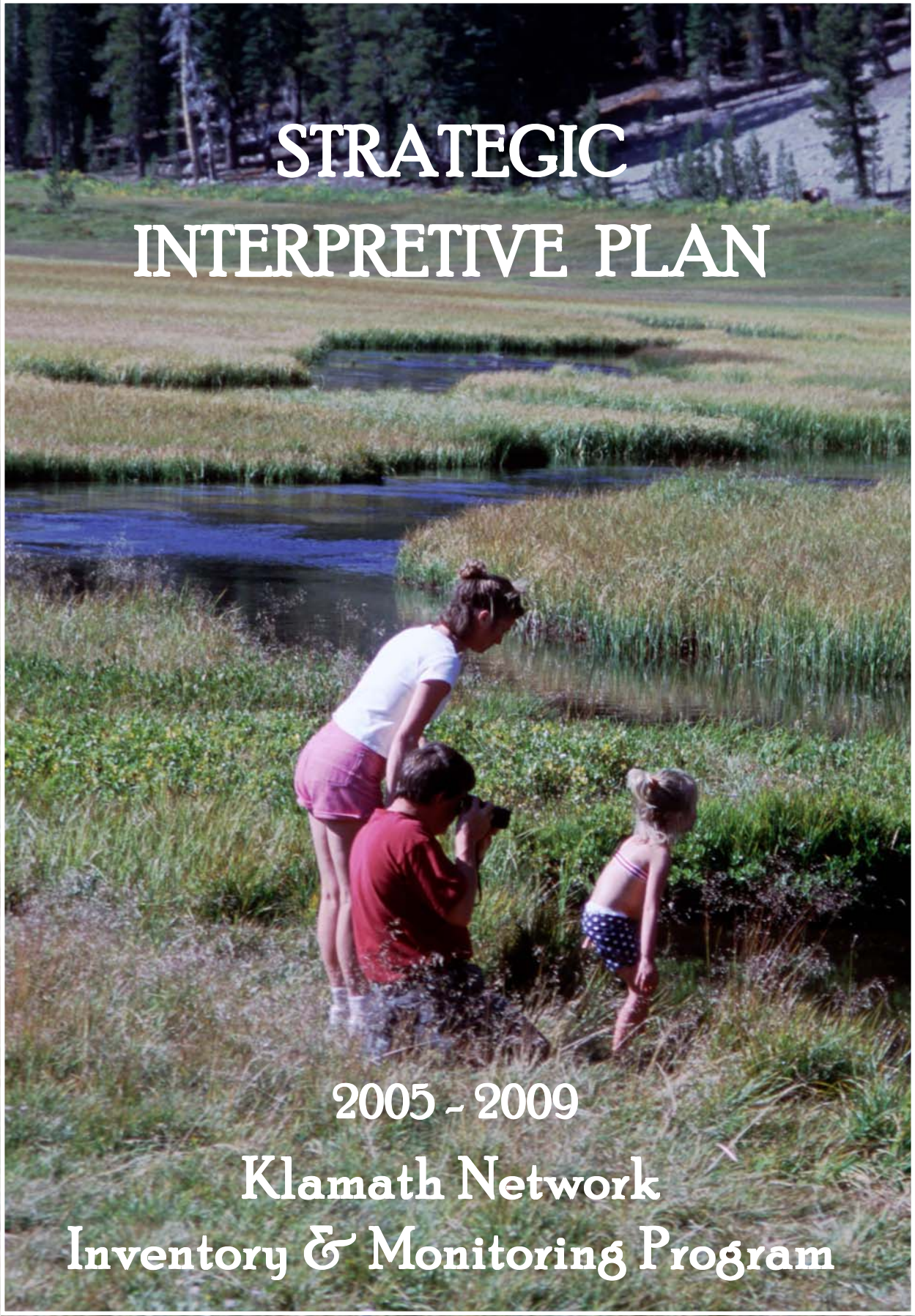




STRATEGIC INTERPRETIVE PLAN

2005 - 2009

Klamath Network
Inventory & Monitoring Program



Prepared By the National Park Service, Summer 2005

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This plan is intended for a wide audience including NPS park managers, NPS regional offices, Inventory and Monitoring (I&M) and Interpretation and Education (I&E) staff at various levels, faculty and students of educational partners, and stakeholders. Because of the potential for a broad audience, the interpretive plan includes foundational information for both NPS I&M and I&E Programs. An extensive appendix provides readers with support documents addressing a wide range of topics.

The Klamath Network is an organizational unit of the National Park Service, Pacific West Region. It includes six national parks: Crater Lake National Park, Lassen Volcanic National Park, Lava Beds National Monument, Oregon Caves National Monument, Redwood National and State Parks, and Whiskeytown National Recreation Area.

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OVERVIEW

Background

While increasingly sophisticated bodies of knowledge about park resources grow and change, challenges associated with sharing and interpreting this information with park staff and visitors grow as well. Individual parks and interpreters/educators struggle to keep program information up-to-date and relevant but two primary obstacles prevent them from consistently achieving this goal. The first is an information gap that exists between resource specialists and education specialists. A second obstacle is that of increasingly tight budgets, which make it difficult to expand interpretive programs beyond basic needs.

Initial Meeting

On April 21-22, 2005, three groups, representing three different communities (NPS Interpretation, the NPS I&M Program, and an outside educational institution) came together on the campus of Southern Oregon University with the goal of overcoming these obstacles. The initial meeting objectives were as follows:

- Familiarize NPS I&E staff with overall I&M Program activities and key findings.
- Familiarize NPS I&E staff with the current I&M relationship to Southern Oregon University (SOU) and their Environmental Education Program.
- Familiarize I&M Coordinator and SOU faculty with NPS I&E Program and practices.
- As a group, work to identify key I&M issues that may be interpreted to the public.
- As a group, develop a sustainable 'road map' to collaboratively produce interpretive products that address key I&M topics.

Educating One Another

Dan Sarr, Program Coordinator for Klamath network I&M presented the group with a summary of the I&M program, including key findings and accomplishments from 2002 to present. Stewart Janes, Chair of the SOU Biology Department and Co-chair of the Environmental Education Program, spoke about the University's collaborative relationship with the NPS I&M program and provided ideas and possibilities for future endeavors. Klamath network Chiefs of Interpretation explained the importance of developing interpretive themes as a means by which to contextualize and interpret I&M data.

To begin a discussion about appropriate topics to interpret, the group identified key I&M issues within the Klamath network. Based on their relative importance to the Klamath region, and on the availability of research, the list of issues was prioritized. This process began to break down some of the barriers between the scientific community (I&M program) and the interpretive community and allowed all groups to agree on a clear direction forward. NPS I&M agreed to invest in a graduate level student to develop an interpretive product from existing I & M funds to help bridge the information gap.

With a number of clear objectives on the table, the group agreed to focus their energies on the creation of a planning document that would inform and direct future efforts.



The Need for an Interpretive Plan

The primary purpose for this interpretive plan is to build a framework for the creation of thoughtful and meaningful interpretive products to the parks, residents, and visitors to the Klamath region. The plan will guide the development of I&M topic-based interpretive themes, broad enough to fit all network parks. It is also a tool to facilitate ongoing and focused collaboration between the I&M Program, park interpreters/educators and university partners. The development of a five-year strategic interpretive plan satisfied the group's desire to create a sustainable program.

At a follow up meeting on July 18th and 19th 2005, the same group met at Southern Oregon University to comment on the draft Plan and to discuss changes needed. The second goal for the meeting was to craft an interpretive theme for the first of five I&M topics; the framework around which an interpretive product would be based.



KLAMATH NETWORK I&M PROGRAM

The Natural Resource Challenge

The Klamath Network is one of thirty-two national ‘vital signs’ networks established through the Natural Resource Challenge in 1999 to facilitate sharing of scientific staff for natural resource inventories and long-term monitoring. Under the Natural Resource Challenge, the NPS I&M Program received increased funding to accelerate resource inventories and to expand monitoring efforts. Core inventory objectives include:

- To document through existing, verifiable data and targeted field investigations the occurrence of at least 90 percent of the species of vertebrates and vascular plants currently estimated to occur in the park.
- To describe the distribution and relative abundance of species of special concern, such as Threatened and Endangered species, exotic/invasive, and other species of special management interest occurring within park boundaries.
- To provide the baseline information needed to develop a general monitoring strategy and design that can be implemented by parks once inventories have been completed, tailored to specific park threats and resource issues.
- To develop a coordinated network data management effort which results in readily available biological resource information for within-park management, as well as regional resource managers, scientists, and the public.

Klamath Network I & M Program

In initial scoping meetings in 2001, the Klamath Network identified a series of key inventory needs. NPS I&M Coordinator for the Klamath Network, Daniel Sarr, helped to complete an Inventory Study Plan (Acker *et. al.*, 2002) and executed the plan from 2002-2005, using park and network staff, contracts, and cooperative agreements with regional universities. The following table lists the major inventories completed by the program between 2002-2005.





Completed Inventories

	<i>Inventory Priorities</i>	<i>Years</i>
1.	Amphibians and Reptiles	2002-2003
2.	Mammals (small mammals)	2002-2003
3.	Mammals (bats)	2002-2005
4.	Fish (freshwater)	2004
5.	Threatened, Endangered and Sensitive Plant Species	2003
6.	Vascular Aquatic Plants	2003
7.	Vascular Terrestrial Plants (exotic species)	2003
8.	Birds (Neotropical Migrants)	2002-2003

Crosscutting, Transboundary Issues

In the course of scoping issues and conducting park inventories, the following topics emerged as important conservation issues that cut across park boundaries.

- Invasive, non-native species.
- Fire Suppression
- Human/Visitor Use Impacts
- Restoration of Degraded Habitats
- Transboundary Issues
- Fish Populations and Aquatic Habitats
- Threatened and Endangered Species
- Amphibians and Neotropical Birds

From Inventory to Monitoring

As inventories are completed, the program will progress through a series of monitoring phases. The I&M Program's core monitoring phases include:

Phase I- Summarize relevant information about park resources management, develop conceptual models, monitoring questions, lists of vital signs indicators.

Phase II- Prioritize questions and indicators, research any data gaps, implement design studies.

Phase III- Develop the Plans

- Vital signs monitoring
- Data Management/GIS
- Water Quality Monitoring



Since 2003, the Klamath Network has been developing the long-term monitoring portion of the program. This is a planning-intensive project which will be implemented on the ground by 2007. Currently, the major information ready for interpretation to the public results from the inventory projects above. Taken together, the inventories have provided important insights into species diversity and abundance distribution in the parks and region, data management tools for organizing and sharing information, and a crosswalk to important regional issues such as invasive species dynamics and amphibian declines.

I & M Topics To Interpret

The following I&M topics were prioritized according to issues of relative importance to the network/region, AND according to the availability of studies with which to analyze and interpret information to the public. The priority order provides a guide to direct the focus of projects by academic year. The team will review the topics annually to confirm (or to change) their prioritization.

Klamath Network I & M Topics Prioritized by Year				
Year	Topic	Add'l Comments	Study Status/Availability	Other
FY 05	BIODIVERSITY	Understand habitat migration routes	All parks complete Data reflects biodiversity	Klamath region is characterized by lower extinction rates than many landscapes, leading to accumulation of 'relict' species and high biodiversity.
FY 06	NON NATIVE SPECIES	Early detection program	All parks in network	USGS partnership computer modeling
FY 07	WATER QUALITY	Quantity and watershed	Inventory by USGS reports available	
FY 08	WETLANDS INVENTORY	Wildlife of Wetlands	CRLA, LAVO, REDW, WHIS	
FY 09	CLIMATE CHANGE		All parks	Topic of recent interest/ Current in the news ('05)

KLAMATH NETWORK INTERPRETIVE PROGRAM

Networks Within the Pacific West Region

Within the park's I&E programs, the "Network" model is relatively new. Prior to the 2004 Strategic Organizational Review, parks worked mostly independently to achieve park specific goals. Expanding interpretation from the park level to the network level provides new and rich opportunities to connect a larger audience to bigger and broader issues. Klamath Network Chiefs of Interpretation readily embraced and explored the network model and established monthly conference calls to share ideas. When challenged with interpreting I&M issues, the Klamath Network Chiefs of Interpretation were poised to respond.

Interpretation in the National Park Service

After years of rigorous dialogue within the profession of I&E, the following tenets were incorporated into foundational I&E training:

- Resources possess meanings and have relevance (in context).
- Visitors to parks seek something of value to themselves.
- (Effective) Interpretation facilitates a connection between the meanings of the resource and the interests of the visitor.

A tool called the Long Range Interpretive Plan (LRIP) is used by many parks to guide and direct park specific interpretive operations. Like a park's General Management Plan (GMP), the LRIP is a planning document written primarily for park managers, staff, and stakeholders. As well as informing and improving decision making with regard to I&E operations, the LRIP identifies the most significant park stories to interpret to the public. A process using the above listed tenets, enables parks to craft interpretive themes that make meaningful connections between park resources and park visitors.

Interpretive Themes

At the core of each park's LRIP are primary interpretive themes. Interpretive themes link tangible park resources (a geological formation, for example) to intangible meanings (such as erosion). Unlike topics which are frequently one word, such as 'geology' or 'biodiversity', interpretive themes are complete sentences that provide opportunities for connection to a resource—"Lassen Volcanic park has a wealth of biodiversity due to its location at the crossroads of three major geological provinces; the Sierra Nevada Range, Cascade Range, and the Modoc Plateau of the Great Basin".

An interpretive theme puts a topic, or multiple topics into a contextual framework around which interpretive products (such as guided walks, talks, exhibits, films) may be developed. Taken as a whole, park themes encompass all aspects of a site's significance, and provide thematic focus for the ongoing development of interpretive products.





Network Park Interpretive Themes and Significance Statements

Most parks have between four and six interpretive themes (or significance statements) that, as a whole, address the park's salient natural and cultural resources. In order to create an interpretive theme statement for each one of the five prioritized I&M topics, the group used existing park themes as a foundation on which to build a new theme. The matrix below lists existing park interpretive themes underneath the I&M topic to be interpreted. The matrix will be updated annually.

	FY 05 <i>BIODIVERSITY</i> <i>(Underlined words and phrases below are those that are considered key to theme statement.)</i>	FY 06 <i>NON NATIVE SPECIES</i>	FY 07 <i>WATER QUALITY</i>	FY 08 <i>WET- LANDS</i>	FY 09 <i>CLIMATE CHANGE</i>
<i>Crater Lake</i>	Crater Lake National Park is home to a diversity of plants and animals including several endangered species.				
<i>Lava Beds</i>	Because it lies at the junction of three physiographic provinces and has been relatively unaltered over the centuries, Lava Beds contains great ecological diversity. NPS, like others before, seeks to appropriately develop LAVE for recreation, education, and scientific study in a manner to leave it unimpaired for the benefit of future generations.				
<i>Lassen Volcanic</i>	The park has a wealth of biodiversity due to its location at the crossroads of three major geological provinces; the Sierra Nevada Range, Cascade Range, and the Modoc Plateau of the Great Basin. The park's natural systems and processes are valuable for research, and human influences have played significant roles in the areas of ecological integrity.				
<i>Oregon Caves</i>	The diversity of life above ground influences the diversity in the cave environment below.				
<i>Redwood</i>	The ancient coast redwood ecosystem preserved in Redwood National and State Parks protects some of the world's most majestic forests and is home to an interrelated biotic community. The coast redwood, a species that has produced some of the world's tallest individual trees, is well adapted to the environmental conditions of its range. The mosaic of habitats within Redwood Nat'l and State parks, which includes ancient forests, fresh water streams, prairies, oak woodlands, and coastal and near-shore marine environments, provides increasingly important refugia for a number of rare and endangered species.				
<i>Whiskeytown</i>	The interplay between human activity and the environment is well represented in the landscapes of Whiskeytown.				



I&M Interpretive Theme Statement

The I&M interpretive theme statement for this topic, stated below, was crafted using key ideas from the interpretive themes and significance statements on the previous page. As a bigger and broader idea, it encompasses each one of the ideas yet allows room for flexibility and applicability to each park within the network.

**BIODIVERSITY CONTRIBUTES TO THE QUALITY (RICHNESS)
OF LIFE IN THE KLAMATH REGION.**

For the above topic, the following sub-themes were developed. Sub-themes may provide specific interpretive opportunities.

- Geographic diversity and the mosaic of habitats in the parks contribute to the remarkable biodiversity within the Klamath region and support unique species (including rare and endangered species).
- Current and historic human activity influences biodiversity.
- Diversity in habitats and species assemblages provides opportunities to enjoy a range of scenic, educational, and recreational experiences.
- NPS requires science-based investigation and decision-making to sustain the ecological integrity of the parks, leaving them unimpaired for future generations.

Each year, a new matrix and a newly created I&M related interpretive theme statement will replace the one included here. The appendix will grow to archive all interpretive theme statements that are generated as part of this plan.

Interpretive Product

The I&M interpretive theme provides guidance for the creation of an interpretive product produced as part of a graduate student's thesis. It provides a context in which to communicate a multiplicity of ideas and messages. Interpretive products may be tailored to fit individual park needs or they may lend themselves to a 'broad brush' approach.



PROJECT IMPLEMENTATION

Graduate Assistantship

Each year, one graduate level student from the Environmental Education program at Southern Oregon University will work on the development of interpretive product(s) for Klamath network parks. The existing science and education partnership between the NPS and SOU provides a solid foundation for this evolving program emphasis. Course work related to interpretation may be required.

Project Criteria

- Product(s) must facilitate (emotional/intellectual) connections between the target audience and the resources.
- Residents within the Klamath region are the primary target audience.
- Data used must come primarily from the work of the I&M program.
- The interpretive product must highlight (acknowledge in appropriate ways) the work of the I&M program.
- The product(s) must be viable for at least one year.
The annual production budget for the product will be \$1,200 (this figure will be reviewed annually).

Roles and Responsibilities

The I&M Program Manager

- Provides overall guidance
- Ensures that all CESU requirements are met. (CESU-Cooperating Ecosystem Studies)
- Provides funding and fiscal oversight
- Facilitates communication between NPS and SOU

Southern Oregon University-Environmental Education Department

- Selects and provides one qualified student annually
- Provides meeting space for group as needed.

NPS I&E Chiefs within the Klamath Network

- Provide leadership and guidance in developing appropriate and high quality interpretive products for the intended audience
- Provide additional funding for interpretive products as available
- Update and amend Interpretive Plan as needed

Graduate Student(s)

- Provide network parks with interpretive product(s) that illustrate NPS themes with I&M data
- Provide parks with background material used to develop interpretive product
- Present information to park staff at park meetings when practical





Supervision

Each student will work in collaboration with a team of three advisors. The academic advisor will provide the coursework requirements, the I&M advisor will provide research guidance and requirements, and the Interpretive advisor will provide guidance in the development of the interpretive product. The Interpretive advisor will rotate among six Chiefs of Interpretation in the Klamath network parks. One park chief will represent the network annually.

Potential Interpretive Products

Budget constraints may limit interpretive product options, however the parks may supplement the production budget. Some options include, but need not be limited to:

- Traveling exhibit(s) (mobile display can be used in various locations)
- Electronic media (DVD, Power Point, film)
- Posters, flyers, site bulletins
- Web based program/s
- Temporary exhibit in parks
- Road guide (driving tour)
- Media packet (Public Service Announcements, feature articles, CDs with images)
- Written material to be used in a variety of ways, e.g., text for park newspapers or exhibits
- Audio tour
- Park specific designed tours (walking guide, kayak tour,....others specific to park sites)

Funding—NPS I&M Program budget (Budget for FY05)

Graduate Student Stipend & Tuition (3 QTRS)	22,370 (20 hrs/wk $\frac{3}{4}$ yr)
Travel	800
Project Supplies and Media Production	1,200
Total Direct Costs	24,370
Indirect Costs @ 17.5% of TDC	4,265
Subtotal	\$28,635



Suggested Time line for Work

Project milestones will be coordinated with the academic year to provide the student sufficient time to satisfy additional academic requirements.

DATE	PROGRESS	GOALS
SUMMER <i>year one</i>	Meeting between Park Chiefs and I&M Program Manager. Select student	Develop and refine interpretive theme related to annual I&M topic. Update interpretive plan to reflect new information. Share updated plan with student.
NOV. 15	Begin research and prepare draft project proposal	Student and Faculty advisor prepare project project proposal. Gather necessary research material to support project proposal.
DEC. 15	NPS Review of Draft Proposal	NPS Interpretive Chiefs review and comment on proposal. Suggested dates for production should be provided by NPS.
JAN. 15	Submission of Final Project Proposal	Final proposal provides dates for review and production schedules.
SUMMER <i>year two</i>	Interpretive Product Complete	Student makes outreach presentation(s) to network park staffs. Interpretive product is available to target audience.





CLOSING

Our Hope

Our hope is that the Strategic Interpretive Plan for the Klamath Network Inventory and Monitoring Program will provide a bridge between many disciplines, enriching all of the individuals and organizations involved in its implementation. With a modest investment from all parties, students will use Klamath Network parks as classrooms to hone their communication skills while providing a much needed service to Klamath Network parks and their communities. If successful, the greatest benefit will be to park visitors, who will gain a fresh perspective on cutting edge science, communicated through dynamic and compelling interpretive products.

Our hope is that the plan will remain vital for up to five years regardless of changes in staff.

Our hope is that other networks within the Pacific West Region, and other regions within the NPS, find something of value in this plan that they may use to craft their own planning document. This plan is a living document that will be updated and modified annually. The appendix will maintain a record of all versions of the plan to document its evolution. The plan will be posted on the Pacific West Region's internet site under Interpretation and Education.



