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Land and Resource Management Plan

Comprehensive Evaluation Report Executive Summary

Lake Tahoe Basin Management Unit



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What is a Comprehensive Evaluation Report?

A Comprehensive Evaluation Report (CER) describes how the current conditions and trends in the Forest Plan area contribute to social, economic, and ecologic sustainability. A CER also evaluates the management direction – are the desired conditions, objectives, and guidelines still appropriate? Using this information, the CER then identifies needed changes to the Forest Plan that will better facilitate achieving the revised desired conditions, goals, and objectives.

The emphasis in this Executive Summary is on major trends and needed changes to the Forest Plan in four key issue areas identified through public and internal scoping. More detailed information is available in the full LTBMU 2006 Comprehensive Evaluation Report and the Pathway 2007 Evaluation Report and Technical Supplement.

The need for change identified in this document represents the best professional judgment of the members of the Lake Tahoe Basin Management Unit (LTBMU) Forest Plan Revision Team. The Forest Supervisor, with the advice of the Forest Leadership Team, will define the scope of the Forest Plan revision in a Management Review document. The scope of the Forest Plan revision may vary from this Executive Summary.

This evaluation covers the time period from the implementation of the 1988 Lake Tahoe Basin Management Unit Land and Resource Plan (Forest Plan) to the present. Future Comprehensive Evaluation Reports will be produced every five years, as required by the 2005 National Forest System planning regulations (36 CFR Part 219).



Forest Plans

What Is a Forest Plan?

The “Forest Plan” or Land and Resource Management Plan is the principal document that guides the decision making of forest managers. Forest Plans identify where and under what conditions an activity or project can proceed. Each time a project or activity is proposed, we must ensure that it is consistent with the plan. Forest Plans are strategic in nature, and do not make decisions about specific projects; they provide long-range management direction such as desired conditions and objectives, the kinds of uses that are suitable for various areas of the Forest, the management guidelines that apply to different kinds of activities, and the designation of special areas like Research Natural Areas. Forest Plans provide guidance and boundaries for management decisions.

Plans developed under the 2005 planning rule will not make proposals which have effects on the human environment that can be meaningfully evaluated. This means that an Environmental Impact Statement (EIS) will not be required for most Forest Plans, and Forest Plans will be categorically excluded from in-depth environmental analysis. A National Forest unit may choose to make decisions in the Forest Plan that require environmental analysis; in that case, an EIS would be required.

Forest Plan Revision Background

The responsible official, the Forest Supervisor of the Lake Tahoe Basin Management Unit, will make the plan decision within an existing framework of national, state, and local laws and policy. In addition to following the National Forest Management Act (NFMA) and the National Environmental Policy Act (NEPA), plan components must be consistent with other laws and with the Forest Service Manual and Handbooks. The Forest Service Manual and Handbooks provide national, and in some cases, regional and local guidance for all aspects of National Forest Management.

The USDA Forest Service Strategic Plan for Fiscal Years 2004-2008 establishes national goals, outcomes, performance measures, and strategies for management of National Forest lands. Forest Plan revision will take into consideration the emphasis areas in the National Strategic Plan.

Collaborative Planning – Pathway 2007

The 1988 LTBMU Forest Plan was written to be in substantial agreement with the 1987 Tahoe Regional Planning Agency (TRPA) Regional Plan. The Lahontan Regional Water Quality Control Board (Lahontan) Basin Plan was also brought into agreement with the TRPA Plan around this time. Memoranda of Understanding (MOUs) between the Forest Service and these agencies provide additional guidance for interagency relations and responsibilities. As the LTBMU Forest Plan and the TRPA and Lahontan plans and regulations have been amended over the years, areas of difference have arisen, and the plans are not as well-synchronized as they were originally.

In 2002, the Pathway 2007 process was initiated to provide a coordinated interagency planning effort to bring agency plans back into agreement, and to define common goals and delineate strategies for improving environmental and socioeconomic health and well-being in the Lake

Tahoe Basin. The Nevada Department of Environmental Protection joined the Forest Service, TRPA, and Lahontan in the Pathway 2007 process primarily to provide water quality guidance for the Nevada side of the basin.

Pathway 2007 is one of the major influences shaping the LTBMU plan revision. Interagency vision statements, desired conditions, indicators, and standards for ten resource areas have been crafted with substantial participation from local technical experts, science advisors with well-recognized expertise, a public forum representing a diverse cross-section of local and national interests, and input from public meetings, phone surveys, and focus groups throughout California and Nevada. The need for change in the Pathway Agencies' desired conditions and standards has been documented in the Pathway 2007 Draft Evaluation Report and subsequent addenda that incorporate public comment from the Pathway Forum and Technical Working Groups (www.pathway2007.org).

In 2006, the collaborative effort is focused on developing management strategies and proposing areas to implement specific strategies through a place-based planning effort that includes a series of interactive public meetings as well as discussions with the Pathway Forum. We will summarize our findings and proposals in a series of Pathway 2007 documents and the revised Forest Plan.

Revising Forest Plans

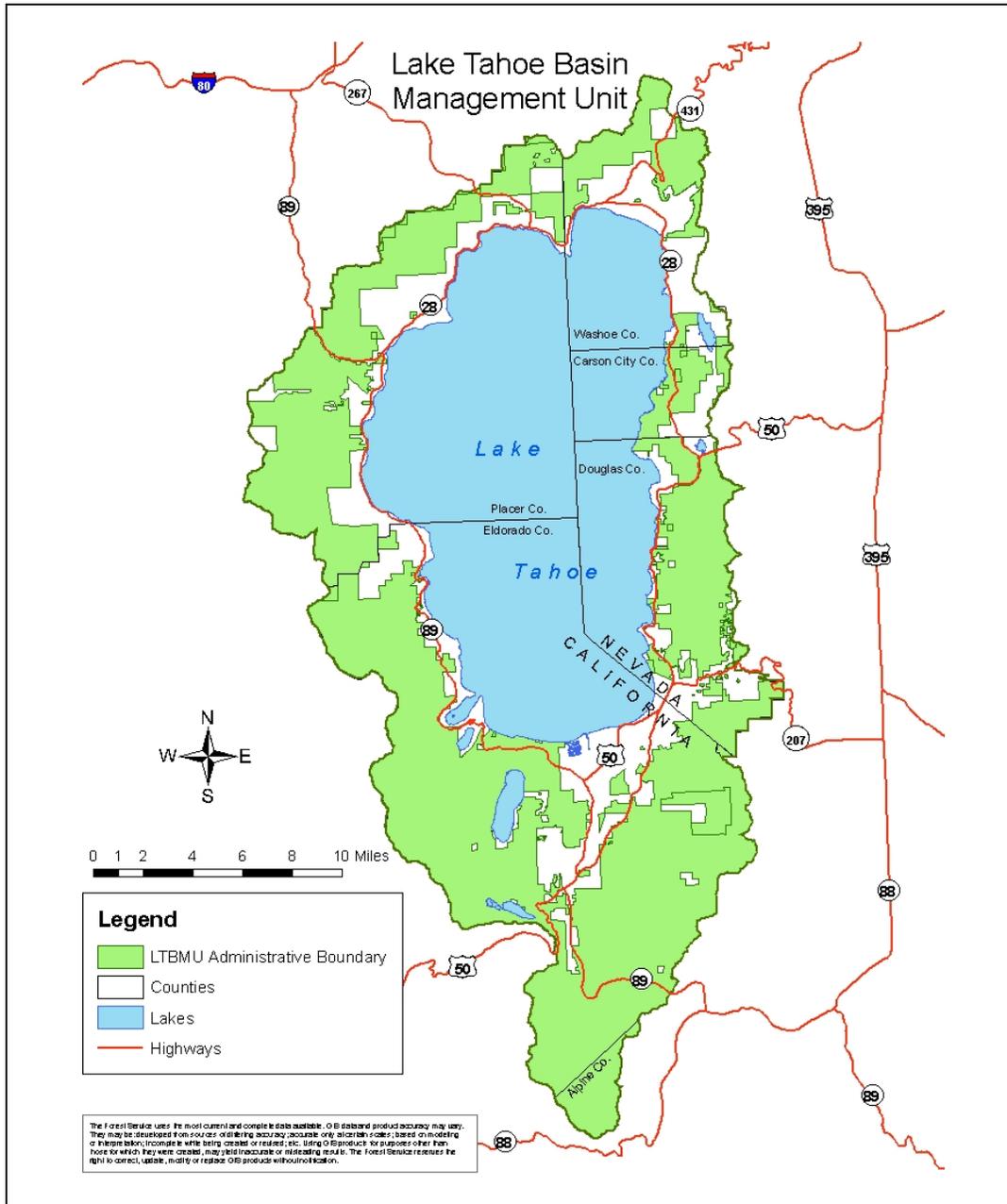
The National Forest Management Act (NFMA) of 1976 requires National Forests to develop forest plans and to update or revise them every 15 years, or when conditions significantly change. Forest Plans must be revised to take advantage of new science and monitoring, and changing laws, policies and direction, as well as changing trends and uses in a world of constant change.

Under the 2005 planning rule, Forest Plans will still be revised at least every 15 years, but needed changes requiring plan amendments may be identified through project-level environmental analysis, annual monitoring evaluation reports, or 5-year Comprehensive Evaluation Reports. This approach will facilitate adaptive management by enabling plans to keep pace with rapidly advancing scientific understanding and findings, and with changes in how forest lands and resources are used and valued.



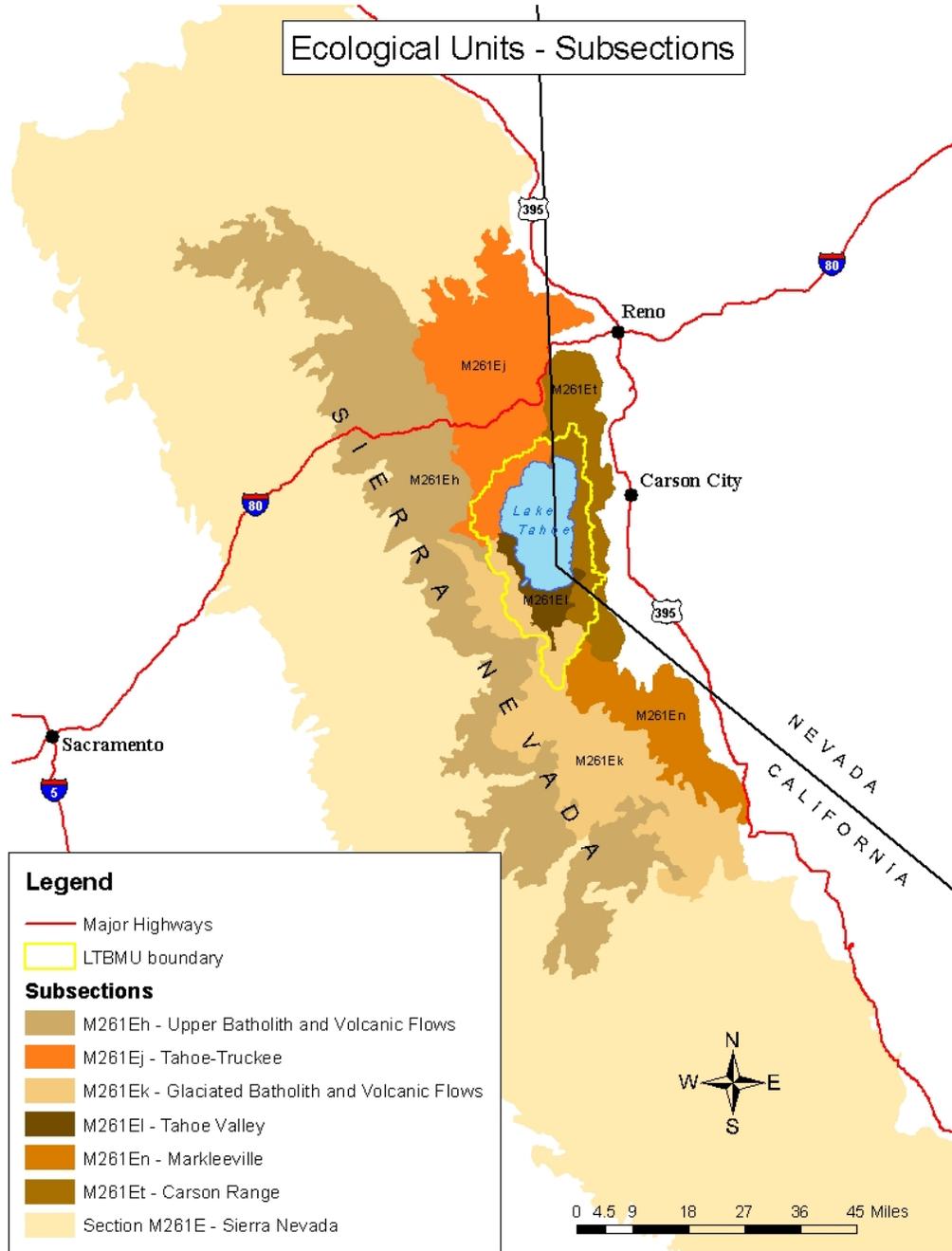
The Plan Area

Forest planning takes place on several spatial scales. We most commonly think of the plan as applying to the administrative boundary of the Lake Tahoe Basin Management Unit (below). While most of our management direction is applied at this scale, planning for some of the unique



places in the basin requires a smaller scale view, and we need to look at scales broader than the administrative boundaries for some aspects of planning. Wildlife species don't care about administrative boundaries, so we need to consider the home ranges of various species in planning for ecological sustainability. Similarly, coordination with neighboring Forests and other jurisdictions is important for vegetation management, wildfire suppression, and fuel reduction.

The Sierra Nevada Forest Plan Amendment (SNFPA, Sierra Nevada Framework) was developed to address such regional needs. The Terrestrial Ecologic Unit Inventory describes ecological types over a wide range of scales in a nested framework. Subsections are the broadest classification units at the Forest level - the Lake Tahoe Basin includes portions of four ecological subsections (below).



The Lake Tahoe Basin Management Unit

Until 1973, the National Forest lands within the Lake Tahoe Basin were managed by three separate National Forests, the Eldorado, Tahoe, and Toiyabe National Forests. The LTBMU was formed in 1973 from these National Forest lands to facilitate their unified management.

One of the stated goals in the 1988 Forest Plan was to bring more of the non-urbanized lands in the Lake Tahoe Basin under public ownership to protect the environment from the adverse effects of development and to expand or protect public outdoor recreation opportunities. National Forest System lands have increased from around 148,000 acres in 1988 to 165,000 acres in 2006 and now comprise 80% of the total land in the basin, while the total land area in public ownership has increased to about 85%. Some of the LTBMU land acquisitions are large parcels, like the High Meadows purchase, but most are individual lots interspersed throughout urban areas. The Forest Service purchases urban lots on sensitive lands unsuitable for development. These lots provide additional open space, wildlife habitat, and watershed function.

Social and Economic Setting

The 2005 Planning Rule places an increased emphasis on National Forests' contributions to social and economic sustainability, which will result in an increased focus on these areas in the revised Forest Plan and possibly in subsequent management actions. The LTBMU's key management priorities are restoration, fire and fuels, and recreation, which are reflective of the social values associated with the Lake Tahoe Basin. Within each of these priorities the social and economic nature of the basin is affected directly and indirectly.

Restoring and maintaining ecological integrity of the basin's ecosystems is a guiding principle in LTBMU's projects and activities, which have multi-scale impacts. As the world's 11th largest lake by volume, preserving the quality of Lake Tahoe's waters supports the well-being of the global commons. Restoration also contributes to the resilience of forest ecosystems by mitigating global climate change through carbon sequestration benefits. On a local level, restoration enhances and preserves natural amenities such as lake clarity, scenic beauty, and air quality, which are some of the basic qualities that drive the basin's dominant industry: tourism. Recreation tourism is the most common way people interact with public lands. As visitor use continues to increase, methods of defining recreational capacity that balance social, ecological and economic goals must be developed. Locally, managing to maintain a high amenity setting elevates property values which may limit access to housing for basin workers. As a federal land management agency, representing the public interest of all Americans, how can we best make resources equitably accessible to both resident and visitor populations? These are some of the larger issues the LTBMU is facing.

Social Equity and Economic Sustainability

The LTBMU contributes to the local economy by providing a range of employment opportunities within the agency, while also stimulating employment opportunities outside of the agency through Special Use Permitting. The recent rise in housing costs has forced many Lake Tahoe Basin employees to live outside of the basin, as wages earned in the basin have not kept pace with the real estate market. The imbalance between wages and the cost of living raises issues of social equity and economic sustainability. Employees unable to afford local housing incur additional personal costs such as increased commuting time and increased auto expenses.

When wages earned in the basin are exported to outlying communities, Lake Tahoe Basin communities' ability to capture and recirculate these dollars in the local economy is lost, decreasing the potential for economic diversification, a goal identified by basin stakeholders. In addition, locating employees who will commute for low-wage jobs has also been identified as an emerging issue for some permit holders. The role the Forest Service can play in helping the basin communities achieve their self-stated goals is being clarified through the collaborative Pathway 2007 process and the related Place-Based Planning project.

Recreation

The LTBMU supports the basin's tourism industry by providing facilities and managing the natural setting on Forest Service lands. The availability of developed and dispersed recreation affects area businesses' ability to capture dollars from day-use and overnight visitors. In addition, special use permits, which are contracts between the Forest Service and private businesses, which provide needed goods and services, also create local business and employment opportunities, as well as tax revenues.

Community Protection from Wildfire

Fire and fuels management is a critical concern for basin residents and homeowners. As a public land manager, the Forest Service is responsible for reducing urban wildfire threat on National Forest System lands, thus reducing the potential for housing loss and other related economic and social costs as the result of uncontained wildfire in urban communities. Effective vegetation management in the Wildland Urban Interface (WUI) provides increased personal safety and property protection for residents. Although the fire and fuels program provides a social and economic benefit, fuel treatments using prescribed burns have encountered public resistance in the past, slowing project implementation and the timeliness of reducing wildfire threat to urban communities. Addressing and resolving these issues are central to ensuring public safety in the face of wildfire threat.



Physical Setting

The Land and the Lake

The Lake Tahoe Basin is 506 square miles (~323,739 acres), with the lake covering 38% or 192 square miles of the total area. Approximately 330 smaller lakes dot the basin's landscape. Elevation ranges from lake level at approximately 6225 feet to over 10,000 feet above sea level. The land portion of the Lake Tahoe Basin is 314 square miles, with sixty-three watersheds that discharge directly into Lake Tahoe. The only outflow from Lake Tahoe is at the northwestern portion of the lake near Tahoe City, where the lake drains into the Truckee River and eventually feeds Pyramid Lake.



With a maximum depth of 1645 feet, Lake Tahoe is the second deepest lake in the United States. It is one of a very few ultra-oligotrophic lakes in the world, meaning that the inputs of nitrogen and phosphorous from the surrounding lands is minimal, resulting in a lake that supports little microscopic and vegetative life, and thus has very clear water. Lake Tahoe's water is 99.9% pure, and in order to provide additional water quality protection, the lake has been designated as an Outstanding Natural Resource Water by the State of California.

Geologic Setting

The Lake Tahoe Basin is located in a geologic transition zone between the Sierra Nevada mountain range to the west, and the Carson range and the Great Basin to the east. Although the watershed is within the Sierra Nevada geographic region, its geology is characteristic of the basin and range. The Lake Tahoe Basin is composed of three relatively distinct geologic landscapes - tertiary and quaternary volcanics and metavolcanics (northwest watershed), glaciated granite with significant moraine deposition features (west & southwest) and non-glaciated granites mantled by unconsolidated decomposed granite (east).

Climate

The climate in the Lake Tahoe watershed is considered typical Sierran weather, with the summers dominated by long dry periods with an occasional convective storm. Often there is little to no precipitation occurring from June to September. During winter months, strong frontal systems from the Pacific Ocean, influenced by local topography, deliver the majority of the annual precipitation in the form of snow. A significant east-west mountain range-induced gradient creates substantial differences in the amount of precipitation received on each side of the lake. Average annual precipitation ranges from up to 80 inches in the far western portions of the basin to lows of 15 inches at the center of the lake, while the eastern side ranges from 20 to

35 inches of precipitation. Average monthly temperatures at a Tahoe City weather station range from 38.5° F in January to 77.7° F in July.

Ecological Setting

Animal and Plant Species

Physical and climatic conditions in the Lake Tahoe Basin provide environmental conditions and habitats for a diverse list of animals, plants, and habitats. At least 289 terrestrial and aquatic vertebrates occur in the Lake Tahoe Basin as residents or regular visitors. This total represents



217 bird, 59 mammal, 5 amphibian, 28 fish, and 8 reptile species. An additional 57 terrestrial species have been recorded in the basin as accidental visitors or as potentially extirpated species from the basin. Vegetation includes 1438 species, subspecies, and varieties of vascular plants. In addition, 115 nonvascular species or bryophytes and 612 species of lichen and fungi were determined to occur or potentially occur in the basin.

The three main vegetation zones in the basin, the montane, upper montane and subalpine zones, provide 24 different wildlife habitat types.

Forest Structure

Since the 19th century, white fir and incense cedar have doubled in relative abundance, whereas Jeffrey pine has declined by half. Tree density is currently 184% of historic conditions, most of which is comprised of trees less than 16” in diameter. Current research suggests the majority of terrestrial vegetation communities in Lake Tahoe Basin has greater than 50% departure from historic fire return interval. Fire suppression management has resulted in a substantial departure from historic structural and species composition characteristics for most terrestrial vegetation types. High tree density and dominance of species intolerant to disturbance have several potential negative impacts which will not be improved under the current trend:

- Understory herbaceous and shrub growth and regeneration are suppressed.
- Trees are more vulnerable to effects of drought, and insect and disease outbreaks.
- Large high-intensity, high-severity, stand-replacing fires are more likely, which could reduce habitat diversity and availability, and alter soil properties.
- Habitat diversity is decreased. For example, shade tolerant conifer species, namely white fir, have encroached and become established in meadows and aspen stands. In some cases, conifer encroachment will result in a conversion of vegetation and habitat types if the current trend continues and conservation actions are not taken.

Aquatic Ecosystems

Aquatic ecosystems may be divided into lentic (flowing water) and lotic (water bodies). Lentic ecosystems provide eight habitat types ranging from fens to small ponds and lakes to Lake Tahoe. Lotic ecosystems provide nine habitat types ranging from intermittent alpine snow melt streams to small forest or meadow associated streams to large perennial rivers. In general, since the adoption of the 1988 Forest Plan, functional characteristics of aquatic ecosystems have improved as a result of stream restoration efforts and reduced grazing pressure. However, managers are increasingly concerned with the spread of non-native and invasive plants and animals throughout aquatic environments, and fire suppression has allowed some riparian areas to become overly dense with shade-tolerant conifers.

Need for Change – Forest Plan Revision Themes

The 1988 Forest Plan has served us well, and much of the direction it contains is still valid today. We will keep the parts of the plan that are working well, and limit our revision to areas where new regulations and policy, science, and other information, and changing social, economic, and ecologic conditions and trends have created a need for updated guidance. Our revision effort will focus on four major themes identified through internal and public scoping:

- Ecosystem restoration,
- Recreation management,
- Land use, and
- Planning and adaptive management.

Ecosystem Restoration

For the purposes of this report, we have divided ecosystem restoration into two main topics, (1) restoring natural watershed processes to disturbed lands, and (2) reducing wildfire hazard and restoring a more natural forest structure. In reality, these are not separate, and a big part of our need for change is more complete integration of work in these areas. Better integration will also further our efforts to restore Lake Tahoe's native natural history by reestablishing endangered, threatened, and sensitive plant and animal species populations.

Another important component of ecosystem restoration is improving water quality through the restoration and maintenance of our infrastructure – roads, trails, and developed sites. We have demonstrated significant progress since 1988. Based on our roads analysis and risk assessment, we decommissioned 80 miles of roads, converted 12 miles of roads to trails, and upgraded 290 miles of road to meet current Best Management Practice standards. Developed facilities and trails are now being similarly addressed. There is a strong positive trend, and little need for change.

Ecosystem Restoration: Restoring Degraded Watersheds

The need for a single Federal administrative voice and unified resource planning coordination was a principal reason why the LTBMU was established. The delicate watershed systems that resulted in the famed clarity of the lake were critically disturbed for more than a century, followed by rapid urban development in the 1960s and 1970s. Restoration also includes improving forest vegetation health and diversity, wildlife habitats, and fisheries, and the reintroduction of native species such as Lahontan cutthroat trout. Restoration usually improves the quality of recreational experiences.

Evolution of Watershed Restoration

In 1988, the LTBMU's primary ecosystem restoration goals were to reverse the downward trend in the quality of water flowing into Lake Tahoe from tributary streams on National Forest lands, enhance and protect natural riparian function, and maintain and protect soil productivity. Over a 12-year period (1988-2000), approximately 500 acres of Stream Environment Zone (SEZ) lands were treated. Many treatments were small in scale and most were site specific, e.g., stabilization of excessively eroding stream banks. This approach was a reflection of limited funding levels and of watershed resource management thinking at that time. Most treatments have exhibited some degree of success with respect to meeting program goals.

These goals and desired conditions were expanded and given more of an ecosystem context by the SNFPA, which directs Forests throughout the Sierras to restore and maintain physical, chemical, and biological processes in riparian and meadow lands that lead to healthy, self-sustaining ecosystems. The SNFPA added a wealth of guidance for Riparian Conservation Areas (RCAs), which are similar in definition to SEZs, but usually include much broader buffer zones.

Riparian Conservation Area Guidance

Unlike current SEZ regulations, RCA guidance does not prohibit any types of management activities in RCAs if analysis is conducted that shows that the project will meet the Riparian Conservation Objectives (RCOs) and the RCA standards and guidelines. The RCO analysis process is very sound and largely meets the LTBMU's needs for Forest Plan revision. The RCA desired conditions and objectives were incorporated into the SEZ desired conditions in the Pathway 2007 process.

Current Restoration Trends

The 1988 Forest Plan goals have been accomplished and restoration projects now focus on the broader goal of restoring ecosystem function, which requires a more interdisciplinary approach not reflected in the current Forest Plan. Desired conditions, strategies and objectives in the revised plan need to reflect this approach. For example, recent completed landscape and watershed analyses have identified encroachment of conifers on meadow environments as a significant threat to meadow ecosystem function. Historic land use is an explanation for this condition.

Landscape and watershed analysis has also found that cessation of natural fire regimes in and adjacent to some Stream Environment Zones is a potential threat to ecosystem function. Similar to our vegetation management strategy in the rest of the forest, we need to mimic natural disturbance processes in SEZs by including vegetation manipulation and prescribed fire in our

restoration toolbox. The drought and subsequent bark beetle infestation in the late 1980s and early 1990s resulted in high rates of lodgepole pine mortality in riparian areas. Many of the affected riparian areas are within the wildland-urban interface and constitute a fire hazard. While limited handwork has been done to reduce fuel accumulations, local regulations substantially restrict the use of methods other than hand cutting and oversnow logging, so the vast majority of these areas remain untreated at present.



Moving Forward – Goals and Challenges

While it is now generally recognized that the need for SEZ restoration goes beyond water quality objectives to include vegetation manipulation for fuels reduction, wildlife habitat improvement, and fisheries enhancement, current regulations do not fully recognize or support these needs, often making these types of projects extremely difficult to implement. Since most of the major stream channel restoration work is now in progress on National Forest lands, many future projects will focus

more on the terrestrial components of SEZs. Implementation of these projects would be facilitated by local regulations that support these kinds of projects.

In addition to regulatory changes, other interagency processes present challenges to our ability to work towards achieving desired conditions for SEZs. Efficient project planning and implementation requires (1) collaboration early in the planning process to ensure more streamlined project and permit review, and (2) consistent interpretation of regulatory guidelines by agency personnel.

Specific Need for Change

- Address the natural disturbance processes that create and perpetuate diversity (such as fire, avalanche, flooding) and consider how past, present, and future management activities may influence such processes.
- Provide guidance for mimicking disturbance processes in stream environment zones as well as in upland areas.
- Establish guidance for plant communities of concern not covered by the SNFPA for aquatic, riparian, and meadow ecosystems. This guidance should include urban lots.
- Propose use of the Riparian Conservation Objective analysis process for identifying appropriate management activities in SEZs.
- Remove language about the Watershed Improvement Needs (WIN) inventory; all work in this inventory has been completed.
- Revise special status species list to be consistent with current directives.

Ecosystem Restoration: Reducing Hazardous Fuels and Restoring Forest Health

Catastrophic wildfire is a significant threat to the natural, scenic and community values within the Lake Tahoe Basin, including lake water clarity. Reducing forest densities and heavy fuel loading is a necessary first step towards forest ecosystem restoration. Once fuel loads are under control, we can focus more on restoring forest stand structure and using prescribed fire to mimic natural disturbance. Forest health is also a significant factor in maintaining scenic values and quality habitat.

Evolution of Fuels Management

Our understanding of fuels management has changed considerably since 1988. The recognition that a century of fire suppression has created unnaturally dense conditions in forests of the western United States has come gradually. The 1995 Federal Wildland Fire Management Policy and the 2003 Interagency Strategy for the Implementation of Federal Wildland Fire Management Policy provided guiding principles, policy statements, and implementation actions. These were followed by the Healthy Forests Restoration Act (HFRA) in December of 2003.

Fire Regime and Fuel Hazards

Several factors have combined to significantly change the fire regime and fuel hazards in the basin. Without sources of disturbance such as fire or timber harvesting, forest vegetation continued to grow. As a result, there were a large number of all size classes of trees in forest stands that create a ladder of flammable vegetation from the ground to the overstory canopy. Conifer trees invaded meadows and other openings, increasing fuel loadings. Since 1975, three periods of drought increased mortality in forest and riparian vegetation. The limbs from dying trees and dead trees fell to the ground and increased surface fuels. Small trees of shade-tolerant species, such as white fir, created ladder fuels in forest stands. As a result, fuel hazards may be the highest they have been in over 100 years.



Current and Future Actions

Public opinion is now consistent with National Forest management policies, and provided support for developing the Community Wildfire Protection Plans that are now in place. Current Forest Service efforts focus on reducing hazardous fuel loads in the Wildland Urban Interface (WUI). This work is expected to be substantially complete within the next 10-15 years. At that

time, hazardous fuels reduction work will shift to a less aggressive maintenance mode and the LTBMU will be able to focus more vegetation management resources on reducing stand densities outside the WUI and other forest management strategies such as increasing the range of stand development stages in the forest to provide a more natural mix of young and old trees.

Specific Need for Change

- Develop integrated desired conditions and objectives that incorporate fire protection, hazardous fuels management, vegetation management, wildlife habitat conservation, and fire ecology, emphasizing the role of fire as a necessary disturbance agent that shapes the composition and structure of Lake Tahoe’s forests.
- Update guidance for smoke management. Although the current plan provides guidelines and mitigations for reducing smoke emissions and impacts, some of the options for slash disposal now conflict with scientific knowledge and current management practices. The revised Forest Plan needs to consider potential smoke emissions from these sources and alternative methods of biomass removal, disposal, and utilization.

Recreation Management

The Lake Tahoe Basin is socially and economically dependent on recreation and tourism. The LTBMU, the primary land management agency, provides a wide variety of high quality outdoor recreation opportunities in a beautiful alpine setting. Maintaining recreation quality in the face of an expanding population of residents and visitors presents a number of management challenges. These challenges include protecting the scenic qualities of the landscape setting, improving the infrastructure necessary to support increasing visitor use, and protecting natural and cultural resources.

Current Condition - Trends: Recreation Capacity

Recreation capacity has emerged as a significant management challenge for plan revision. While the 1988 Forest Plan estimated that recreation demand would increase 1% per year, the current projection from the National Visitor Use Monitoring (NVUM) analysis is an increase of 1.6% per year, or 50,000 additional visitors each year for the next 20 years. With 19.7 visits per acre, the LTBMU already has the highest concentration of use of any National Forest. Some recreation sites, such as near Emerald Bay and at lakeshore campgrounds and beaches, are commonly at capacity not only during peak holiday periods, but also throughout much of the busy summer season. Traffic congestion, insufficient parking, and alternative transportation solutions are the most common issues raised in public workshops.

Although the 1988 Forest Plan prescribed increased visitor use in most developed sites, and reserved capacity for future development in some areas, few increases in capacity have been implemented. In fact, the emphasis has not been on expanding site capacity, but on repairing worn out facilities, improving visitor service and implementing water quality best management practices. Most new capital investment is directed at meeting current codes and standards, such as universal accessibility requirements. The LTBMU focus has remained on improving quality and not on increasing quantity.

Defining Capacity

Recreation capacity can be defined as having physical, social, and institutional components. The physical components include the underlying infrastructure such as number of parking spaces, miles of roads and trails and their impacts on other environmental resources. Landscape settings such as public lakes, beaches and undeveloped backcountry enable people to have the experience they are seeking. A key component of the setting is the visitor's perception of whether it is too crowded and noisy, and whether the degree and kind of site development meets their needs and is aesthetically pleasing. Experiences are also dependent on elements such as perceived reasonableness of pricing, cleanliness, sense of security, and convenience, along with how well a site or area is managed. Institutional capacity speaks to the ability to effectively manage the people, facilities and settings.

Sustainability

Sustainability is an emerging concept relating to the continuity of economic, social, and ecological systems. The contribution of recreation to regional social and economic systems is well known. One measure of ecological and social sustainability is related to capacity. The capacity of each type of recreation activity needs to be quantified to determine sustainability. This will help us determine which component of the capacity equation is the limiting factor for a given area. Tools like "Limits of Acceptable Change" (LAC) analysis and the Visitor Experience and Protection Framework, an adaptation of LAC, can help us answer questions about how many people, how much parking, and what kinds of uses are appropriate for a given area.

Institutional Capacity

Recreation funding limits the LTBMU's capacity to manage use and maintain recreation facilities and programs. This is a common problem for National Forests across the country as demand for recreation is increasing, but recreation budgets are not keeping pace with the increased management and maintenance needs. Currently, while the LTBMU receives Southern Nevada Public Lands Management Act (SNPLMA) funds for many aspects of natural resource management, SNPLMA funding has not been available for most recreation management needs. The present recreation program is not sustainable given these trends.



Emphasis of Place in Recreation Management

The Forest Service has identified the following national role in providing recreation: **Nature-based, dispersed recreation, including undeveloped settings, built environments reinforcing natural character, and wildland settings that complement enjoyment of special places.**

Each National Forest is in the process of describing its special places and unique niche within the national system. The underlying concept is to align facilities and programs to the specific forest niche. Some recreation activities may overwhelm the resiliency of the ecosystem or may be inappropriate in the desired social setting. Each place cannot provide for every recreation activity. The place-based approach attempts to address sustainability and capacity.

Specific Need for Change

- Define the specific recreation niche or role that the LTBMU will play within the national framework.
- Align the Forest Plan with the Recreation Facilities Master Plan.
- Adopt a capacity and sustainability model using available tools such as ROS and LAC.
- Strengthen and develop additional partnerships as a possible tool to add value to existing program limitations.
- Establish priorities for potential site developments or expansions.
- Re-evaluate law enforcement needs in the context of multiple enforcement needs and trends, and identify staffing needs for Law Enforcement Officers and Forest Protection Officers.
- Include the nationally required Chief’s 10 critical tasks for wilderness stewardship in the Forest Plan.
- Remove language about evaluating the need to set an upper limit on the number of outfitter guides in wilderness. That was done in the 1998 Desolation Wilderness Management Guidelines & EIS, along with identifying ongoing efforts to monitor of air quality related values.

Land Use – Suitability of Areas

Determining the suitable uses for each part of the forest is a major part of land management planning. The suitable uses on the landscape can and do change over time. Land uses are influenced by recreation trends, social values, capacity, and the economics of communities. Suitable use designations must provide for a diversity of healthy ecosystems, protection of threatened and endangered plant and animal species, designated wilderness and special interest areas, resorts, ski areas, and other recreation opportunities, and permitted special uses such as utility corridors.

Management Areas

All the current management areas on the LTBMU are suitable for a number of different kinds of uses except specially designated areas such as Wilderness and Research Natural Areas. The SNFPA land use types have been overlain onto the existing management areas delineated in the 1988 Forest Plan. During the Pathway 2007 place-based planning phase, the original management areas will be analyzed to determine whether they still meet the LTBMU’s management needs. We will determine where management area boundaries need to change, and

adjust accordingly. Then we will develop suitable uses and place-based desired conditions for each management area, incorporating public and staff input as well as site specific ecosystem assessments and restoration planning.

Land Use Systems

We will probably retain our multi-layered system, with critical biological habitat, SEZ, and other land use types superimposed on top of management areas. We will also replace the guidance from the Bailey land capability system in the Forest Plan with the guidance from the new system to be developed by Pathway 2007 and/or other guidance based on the soil survey, and our Terrestrial Ecologic Unit Inventory.

Specific Need for Change

- Determine whether areas identified in the 1988 plan as possible Special Interest Areas should be analyzed for designation:
 - Emerald Bay (geologic and scenic resource)
 - Osgood Swamp (paleobotanical resources)
 - Freel Peak Cushion Plant Community (botanical resources)
 - Taylor Creek Wetlands (botanical and zoological resources)
- Determine whether other areas should be considered for Special Interest Area or Research Natural Area designation.
- Reassess the need for mineral withdrawals described in the 1988 Forest Plan. (A withdrawal is the withholding of an area from application of the general land laws (including the mining laws) for the purpose of limiting activities in order to maintain other public values in the area or reserve the area for a particular public purpose or program.)
- Revise the SNFPA Old Forest Emphasis Area guidance as needed to meet proposed Pathway 2007 forest stand structure goals.
- Align Forest Plan direction with existing Washoe Tribe agreements.
- Through the desired conditions and objectives, emphasize interdisciplinary, ecosystem-based restoration and management which will yield long-term improvement and sustainability of the natural function of riparian areas, including stream corridors and meadows.
- Review status of the Meiss, Cold Creek, Trout Creek, and Baldwin grazing allotments that are no longer in use or where use has been questioned, and make determinations about whether to initiate full or partial closures.
- Align management areas to correspond with partner agencies' planning boundaries.
- Remove prescriptions and prohibitions from plan language to conform to the 2005 planning regulation.
- Replace the guidance from the Bailey land capability system in the Forest Plan with the guidance from new system to be developed by Pathway 2007 and/or other guidance based on the soil survey and the Terrestrial Ecologic Unit Inventory.

Planning and Adaptive Management

New science, new monitoring strategies, adaptive management and environmental management systems have all developed since the original 1988 Forest Plan. In order to take advantage of future changes, the revised LTBMU Forest Plan will be a dynamic document. Planning will no longer be revisited every 15 years, but continuously. In order to keep pace with scientific and social change, active public-private collaborative planning will be necessary to identify changing issues and trends. This collaborative planning will include other key partner agencies, local governments, organizations and the general public both inside and outside the Lake Tahoe Basin.

Change is Constant

National Forest management must adapt to constant change from multiple sources, including new science, new funding sources, and public opinion. Adapting our management strategies to new science is a constant challenge, because significant new research findings are frequent and often result in changes in management direction. New funding sources have reshaped our program of work and our workforce – we have increased our staff and adjusted our skill sets. New laws and policy such as the Healthy Forest Restoration Act have redirected our programs of work. Public opinion often shapes National Forest management. When the 1988 Forest Plan was written, mountain biking was a new activity. As it gained in popularity, recreation management has kept pace by providing additional opportunities to enjoy this sport.

Measuring Progress

For the LTBMU, the two key means of measuring progress will be the set of Forest Plan monitoring and evaluation questions, which will be keyed to the Desired Conditions and Objectives, and the Environmental Management System (EMS). Forest Plan monitoring questions will build on and be part of the Pathway 2007 work. The EMS is a new Forest Service requirement that was established to ensure progress towards environmental goals, document improvement through a system that is transparent to the public, and provide a formal adaptive management process.

A basin-wide adaptive management system is now under development. This system will coordinate basin-wide monitoring and reporting for the standards developed through Pathway 2007, ensure that the Pathway 2007 agency plans remain synchronized through the years as plans are updated, and promote information sharing and consistent goals among the many groups working to further the social, economic, and ecologic health of the Lake Tahoe Basin.



Specific Need for Change

- Develop new Forest Plan desired conditions, objectives, and guidelines with recognition of the importance of collaboration and partnerships as tools for planning and achieving Forest Plan goals.
- Include Forest Plan language about participation in inter-agency adaptive management systems that can build upon the increased cooperation that has developed through collaborative Pathway planning.
- Develop an adaptively managed long-term monitoring and evaluation program that measures progress toward desired conditions and contributes to basin-wide monitoring and evaluation goals.
- Develop an Environmental Management System (EMS) that conforms to ISO 14001 as part of the Plan Set of Documents.
- Incorporate Forest Orders as guidelines in the Forest Plan.
- Ensure that programmatic management plans and special use permit area management plans are well-aligned with the Forest Plan.

Moving Forward – The New Forest Plan Components

Forest Plans revised and developed under the 2005 Planning Regulation (36CFR Part 219) will have a different look and feel than previous plans. Overall, they will be much simpler. The main components will be desired conditions, objectives, guidelines, and determination of suitable uses and special areas.

- Desired conditions express resource goals that, in most cases, can be achieved in 10-50 years.
- Objectives are specific, measurable, time-specific management outcomes that contribute to maintenance or achievement of desired conditions.
- Guidelines provide information and guidance for the design of projects and activities to help achieve objectives and desired conditions. Guidelines provide the recommended technical and scientific specifications to be used in the design of projects and activities to contribute to the achievement of desired conditions and objectives.
- Suitability of areas is the identification of the general suitability of an area in a National Forest unit for a variety of uses that are compatible with desired conditions and objectives for that area. The identification of an area as generally suitable for a use or uses is neither a commitment nor a decision approving activities and uses. The suitability of an area for a specific use or activity is authorized through project and activity decision making.
- Special areas are areas within the National Forest System designated for their unique or special characteristics. These areas include wilderness, wild and scenic river corridors, and research natural areas. Some of these areas are statutorily designated. Other areas may be designated through plan development, amendment, revision, or through a separate administrative process with an appropriate NEPA process.

What's in a Forest Plan?

The Plan Set of Documents will include, at a minimum, evaluation reports; documentation of public involvement; the plan, including applicable maps; applicable plan approval documents;

applicable NEPA documents, if any; the monitoring program for the plan area; and documents relating to the EMS established for the unit.

Adaptive Management

The monitoring program will be a central element of adaptive management planning in the revised Forest Plan because monitoring is the key to discovering how to make project specific decisions consistent with objectives and to discovering what ultimately may need to be changed in a plan.

To account for cumulative effects of management and natural events, the 2005 planning rule requires (1) a comprehensive evaluation for the development of a new plan or plan revision; (2) annual plan monitoring and evaluation; and (3) review of the comprehensive evaluations at least every 5 years. These evaluations, as opposed to predictive EIS's that grow increasingly stale over time, will provide timely and informed consideration of cumulative effects.

Focus on Sustainability

Sustainability is a keystone of the new planning regulations and will be a major focus in the revised Forest Plan. According to the 2005 planning regulations, Forest Plans contribute to sustainability by providing “a framework to guide on-the-ground management of projects and activities.” The revised LTBMU Forest Plan will provide strategic guidance that clearly contributes to sustaining the social, economic, and ecologic systems in the plan area. While the 1988 Forest Plan addressed each of these elements, additional analysis and content will be needed to ensure that the plan components meet both the intent and the specific requirements of the new planning regulations and directives. To provide a more complete picture of our contributions to sustainability, we propose to add several new subject areas to our Forest Plan, and to organize the plan in a way that clearly identifies how we will manage for social, economic, and ecologic sustainability.



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